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COMPUTER CHARACTERISTICS QUARTERLY

FOURTH QUARTER 1967 - FIRST QUARTER 1968

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COMPUTER CHARACTERISTICS
QUARTERLY

The *Computer Characteristics Quarterly* lists the salient features of essentially all digital computers and related peripheral devices commercially available in the free world, and indicates comparative prices for several typical system configurations.

This compilation, fully updated to include specifications of new equipment and announced changes, is reissued in its entirety four times each year. Characteristics of computers no longer being manufactured are reproduced in the *Annual Supplement* sent free to all subscribers.

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How to subscribe to the Quarterly

Subscriptions for one year (four reissues) of the *Computer Characteristics Quarterly*, including the *Annual Supplement*, cost $25.00. Single issues are $7.50, and the supplements ordered separately are $5.00 each. All prices are in U.S. funds and include U.S. or foreign postage. A 20% quantity discount applies to ten or more subscriptions or single copies mailed to the same address. Special discounts on quantities over 100 are quoted on request. An additional 50% educational discount is given to accredited universities, colleges and secondary schools, and to full-time faculty members and students thereof. All orders should be addressed to Adams Associates, Box 269, Bedford, Massachusetts 01730.

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About Adams Associates...

Though well known as the publisher of the *Computer Character-istics Quarterly*, Adams Associates is more widely recognized as one of the country's leading computer consulting and programming firms. While the services offered by Adams Associates extend to all areas of computer technology, its reputation stems primarily from outstanding accomplishments in a number of specialized fields, including:

- Computer graphic displays and man-machine interactive systems
- On-line control systems
- Data communications
- Data reduction
- Simulation
- Data management and information retrieval
- Business information systems
- System design
- Computer evaluation and selection
- Computer technology seminars

Since its inception in 1959, Adams Associates has steadily grown to the point where its technical staff now consists of almost seventy computer analysts and programmers with unusual qualifications and diversified backgrounds. In recent years the interests and capabilities of its staff and the needs of its clients have led to increasing emphasis by the firm on the development and implementation of advanced techniques for on-line time-shared computing and graphic man-machine interaction.

Being pioneers as well as specialists in these fields, Adams Associates long recognized the need for an authoritative and comprehensive source of information on and analysis of all graphic display hardware, software, applications and trends. It answered this need by applying its extensive knowledge and broad experience to the publication, in July 1966, of *The Computer Display Review*. Though only in its second year, the *Review*, which is updated every four months, has already become a highly regarded and widely used reference on the subject of alphanumeric, line-drawing and related displays.

What's new...?

Section I of this issue of the *Quarterly* introduces twenty new central processors: the Burroughs B7500, an expanded version of the B6500; General Electric 255 and 265, time-sharing versions of the 225 and 235, respectively; General Electric 405 and 420; Interdata Models 2 and 4, modified versions of the recently-announced Model 3; Raytheon 703; Telefunken TR84; Nippon NEAC 1240 and 3100; and Mitsubishi MEL-COM 9100/30.

In addition, this issue includes new models of the ICT 1900 series, the E and F versions of the 1904, 1905, 1906 and 1907; and introduces CII, Compagnie Internationale pour L'Informatique, resulting from the merger of SEA and CAE. The recent change in name from Data Machines, Inc., to Varian Data, Inc., and corresponding name changes in their product lines appear in this issue.

Six central processors, though no longer being marketed, are reported on: the Honeywell H21 and H22; General Electric 225; IBM 350/90, and ICT 1704 and 1905. Finally, thirteen central processors have been deleted: the Honeywell H610 and H620; SDS 92, 910, 920 and 925; ICT ORION 2; CAE 510 and SEA 1500 and 4000, which are not being carried by the merger forming CII; Siemens 2002 and 3003; and Electrologica EL XI.

Information on the recently-announced ELBIT 100, Israel's first entry into the commercial computer market, was received too late to be included in this issue, but it will appear in the next one.

CENTRAL

PROCESSORS

Central Processors

Price Range

Monthly in Thousand Dollars
The range of monthly rental prices from the minimum useful configuration to the maximum practical configuration.

First Delivery

Month and Year
When the first operating installation was or is expected to be made.

Processor Speed

Complete Add Time in Microseconds
The time required to acquire from memory and execute one fixed-point add instruction using all features such as overlapped memory banks, instruction look-ahead and parallel execution. The add is either from one full word in memory to a register, or from memory to memory; but not from register to register. For non-core-type machines, maximum optimization has been assumed.

Storage Cycle Time in Microseconds
For core storage, the total time to read and restore one storage word. For drum or other serial storage, the total time for one revolution.

Accumulators
The number of directly-accessible general-purpose arithmetic registers available.

Internal Storage

The primary memory of the computer from which instructions can be directly executed and data accessed by the central processor. Memory is assumed to be core unless otherwise stated.

Capacity in Thousand Words
The number of words of addressable internal storage available.

Word Size
The number and type of digits comprising one storage word (A – alphanumeric, six, seven or eight binary digits; D – decimal, four binary digits; B – binary, one binary digit).

Floating-Point Precision
The maximum number of binary digits used as the mantissa of a single-precision floating-point fraction.

Overlap
The number of available independent memory busses which can be simultaneously used to access memory from the central processor.

Instruction Set

Address Size — The maximum number of binary digits in an instruction used in directly addressing memory.

Operation Codes — The number of internal machine instructions available.

Indirect Addressing — The availability and level of indirect addressing (1 – single level, ∞ – unlimited).

Index Registers — The maximum number of special registers whose contents may be added to the address portion of an instruction to form an effective instruction address.

Extensiveness — The availability, as either standard or optional features, of byte manipulation, double precision, translate-edit capability, floating-point instructions, hardware multiply-divide, or logical operations.

Time-Sharing
The availability of hardware features primarily for, or useful to, time-shared operation.

Base Address Relocation — The ability to augment memory references by the contents of a specific base register, alterable only in the supervisor mode.

Clock — A special-purpose addressable register automatically increased or decreased by one unit at a fixed rate.

Program Interrupt — A special feature which, on the occurrence or completion of an internal or external operation, can be used to initiate a new program sequence.

Memory Protection — The ability to prevent, under program control, portions of memory from being used by programs or input-output operations.

Dynamic Page Relocation — The segmentation of internal storage into blocks whose addressing is automatically controlled by a memory-protected set of addressable registers.

Supervisor Mode — A mode of operation only under which certain operations, such as memory-protection modification instructions and input-output operations, are permitted.

Input-Output

Number of Channels — The number of individual buffered input-output channels available.

Transfer Rate — The maximum transfer rate in characters per second.

Auxiliary Storage — External mass storage devices, whether fixed or movable head, other than magnetic tape marketed by the central processor manufacturer. The manufacturer's model numbers for available devices are given.

Magnetic Tape — Available tape units marketed by the central processor manufacturer listed by the manufacturer's model number.

Peripheral Devices — Available peripheral devices marketed by the central processor manufacturer, listed by type (card reader, card punch, printer, paper-tape reader, paper-tape punch), using the manufacturer's model numbers.

Software

Algebraic Compiler — Assumed to be FORTRAN IV and available now or when the first computer is delivered, unless otherwise noted.

Monitor — The manufacturer-supplied executive or supervisory systems available now or when the first computer is delivered, unless otherwise noted.

Business Compiler — Assumed to be COBOL and available now or when the first computer is delivered, unless otherwise noted.

CENTRAL PROCESSORS COLUMN HEADINGS

Central Processors — Characteristics

Central Processor Characteristics

System	Price Range (monthly, $thousand)	First Delivery (mo/yr)	Processor Speed (add time, µs)	Storage Cycle Time (µs)	Accumulators	Internal Storage (thousand words)	Word Size	Floating-Point Precision	Overlap	Address Size	Operation Codes	Indirect Addressing	Index Registers	Extensiveness †	Time-Sharing ‡
ADAGE AMBILOG 200	.11-1.2		3	1		4-32		—		15		∞		DHL[M]	
		8/64	2				30b				—[J]		—[L]		I
AUTONETICS RECOMP II	2.5-4.5		1080	1		4[D]		39		20		—		FH	
		11/58	9000				40b[E]				75		0		—
BECKMAN 420	2.2-3		6.4	1		4-32			—	—[H]		∞		HL	
		6/64	3.2				18b				56		—[L]		IM
BIT 480	.24-.75		16	1		1-65			—	—[H]		∞		B	
		12/66	8[B]				8b	5			37		—		I
BURROUGHS B160, B170, B180	1.9-6.2		690[A]		—	4.8				18		—		BHL	
		4/64	10[B]				1a[E]				79		0		—
BURROUGHS B250	2.8-6.7		690[A]		—	4.8				18		—		BHL	
		9/61	10[B]				1a[E]				30		0		—
BURROUGHS B260, B270, B280	6.5		690[A]		—	4.8				18		—		BHL	
		7/62	10[B]				1a[E]				79		0		—
BURROUGHS B263, B273, B283	7.1		414[A]		—	4.8-9.6				18		—		BHL	
		1/64	6[B]				1a[E]				79		0		—

Input-Output, Auxiliary Storage, Peripheral Devices, Software

System	I/O Channels	Transfer Rate	Aux. Storage Fixed Head	Movable Head	Magnetic Tape	Card Reader	Card Punch	Printer	Paper-Tape Reader	Paper-Tape Punch	Algebraic Compiler	Monitor §	Business Compiler
ADAGE AMBILOG 200	—[Q]				MTP	CDR		LPR		PTP	√[X]		—
		10M							PTR				
AUTONETICS RECOMP II	2				M906	☆		—			AFPC	√[X]	
		*					☆				AFPC		
BECKMAN 420	8			☆		☆		☆			—	R	
		1.9M	—		☆								R
BIT 480	4		☆	☆		☆		☆	☆[W]		—		
		1M[Q]			☆		☆			☆[W]			
BURROUGHS B160, B170, B180	1		B430		B423[T]	B122[U]		B320[V]			—		—
		.6M					B303[U]	—					
BURROUGHS B250	1		B430		—	B122[U]		B320[V]			—		—
		.6M	—				B303[U]						
BURROUGHS B260, B270, B280	1		B430		B423[T]	B122[U]		B320[V]			—		—
		.6M					B303[U]	—					
BURROUGHS B263, B273, B283	1		B430[R]		B421[T]	B122[U]		B320[V]	B341		—		√
		.6M					B303[U]			B141			

ADAGE AMBILOG 200. J. Micro-programming of 15 bits in seven independently specified fields allows 2900 micro-instructions. L. Each word of memory can be used as an index register. M. Capable of masking and merging during register-to-register transfer. Also contains a hybrid arithmetic unit micro-programmed to handle analog and digital data in a single operation. Q. Analog/digital as required. X. TOPS I and II in addition to FORTRAN.

AUTONETICS RECOMP II. D. Internal storage is disc. E. Instructions may be stored two per word. X. SALT and SCOPAC. Note. System no longer marketed.

BECKMAN 420. H. Variable-field addressing mode. L. Each word of memory can be used as an index register. Note. System no longer marketed.

BIT 480. B. Two-microsecond memory also available. H. Variable-field addressing mode. Q. 4M with two-microsecond memory. W. ASR 33/35 teletype also available.

BURROUGHS B160, B170, B180. A. Assumes two five-character fields. B. Per byte. E. Memory is organized in six-bit characters or bytes. T. Not available on B160. U. B123 and B124 readers, and B304 punch also available. V. B321 also available.

BURROUGHS B250. A, B, E, U. See B160. V. B321 and B328 also available. Note. System designed for banking applications.

BURROUGHS B260, B270, B280. A, B, E, U. See B160. T. Not available on B260. V. See B250.

BURROUGHS B263, B273, B283. A, B, E. See B160. R. B475 disc file also available. T. B422 and B423 also available. U. B123, B124 and B129 readers, and B304 punch also available. V. B321, B325, B328 and B329 also available.

† X – all except: B – byte manipulation, D – double precision, E – translate-edit capability, F – floating-point instructions, H – hardware multiply-divide, L – logical operations.

‡ X – all except: A – base address relocation, C – clock, I – program interrupt, M – memory protection, P – dynamic page relocation, S – supervisor mode.

§ G – batch, R – real-time, T – time-sharing.

— None.   ☆ See Section II-B.   * Information unavailable.

CENTRAL PROCESSORS — CHARACTERISTICS

Price Range (Monthly, $ thousand)	First Delivery (Mo./Yr.)	Processor Speed (Add Time µs)	Storage Cycle Time (µs)	Accumulators	Internal Storage (Capacity, K words)	Word Size	Floating-Point Precision	Overlap	Address Size	Operation Codes	Indirect Addressing	Index Registers	Extensiveness †	Time-Sharing ‡	I/O Channels	Transfer Rate	Aux Storage Fixed Head	Movable Head	Magnetic Tape	Card Reader	Card Punch	Printer	Paper-Tape Reader	Paper-Tape Punch	Algebraic Compiler	Monitor §	Business Compiler
BURROUGHS B300																											
4.8-14.2		414[A]		—	4.8-19.2		—		18		—		BHL		1		B430[R]		B421[T]	B122[U]	B320[V]	B341			—		√
	7/65		6[B]			1a[E]				79		0		—		.6M				B303[U]		B141					
BURROUGHS B2500																											
4.2-12.3		64[A]		—	5-30		99[F]		24		∞		XD		4[P]		9372		9381[T]	9110[U]	9240[V]	9220			√		√
	5/67		2[B]			2a[E]				99		3[L]		XP		IM			—	9210[U]		9120				GRT	
BURROUGHS B3500																											
4.8-20		32[A]		3	5-250		99[F]		24		∞		XD		6[P]		9372		9381[T]	9110[U]	9240[V]	9220			√		√
	5/67		1[B]			2a[E]				99		3[L]		XP		2M			—	9210[U]		9120				GRT	
BURROUGHS B5500																											
16-164		2[A]		—	4-32		39		20		∞		XBE		1[P]	*	B430[R]		B421[T]	B122[U]	B320[V]	B341			√[X]		√
	11/64		4			48b		—[J]				0		XP			B475			B303[U]		B141				GRT	
BURROUGHS B6500, B7500																											
25-80		.4[A]		—	16-106[D]		39		20		∞		XBE		4[P]	*	9372		9381[T]	9110[U]	9240[V]	9220			√[X]		√
	1/68		.6			48b		—[J]				0		XP			—			9210[U]		9120				GRT	
BURROUGHS B8500																											
100-500		.2[A]		13	16-262[D]		35		18		∞		ALL		512	38M	9372		9381[T]	9110[U]	9240[V]	9220			√[X]		√
	1/67		.5[B]			48b		16		59		—[L]		ALL			—			9210[U]		9120				GRT	
COLLINS C-8500																											
2.5-3.6		4.5		1	4-65		—		18		1		BDL		32		8873		8046[T]	8861		8852	—[W]		√		—
	1/67		2			32b		4		93		3		IM		5.1M		8871			8862			—[W]			
CONTROL DATA 160																											
1.5-4		12.8		1	4		—		6		—		L		2		*		163[T]	167[U]		166[V]	—[W]		√		—
	7/60		6.4			12b				64		0		C		75K		*			415	350					

Notes

BURROUGHS B300 — A, B, E. See B160. T. B422, B423 and B424 also available. R, U, V. See B263.

BURROUGHS B2500 — A. Assumes two five-digit fields. B. Per two bytes. E. Memory is organized in eight-bit bytes or two four-bit digits. F. Decimal digits. L. For each program. P. Up to ten available. T. 9382 and 9390 series also available. U. 9111 and 9112 readers, and 9211 punch also available. V. 9241 and 9242 also available.

BURROUGHS B3500 — A, B, E, F, L, T, U, V. See B2500. P. Up to 20 available.

BURROUGHS B5500 — A. Instruction look-ahead allows increased internal speed. J. Programs are written in source language. P. Up to four floating channels available. R, U, V. See B263. T. See B300. X. ALGOL in addition to FORTRAN. Note. All B5000 systems have been field-converted to B5500 systems.

BURROUGHS B6500, B7500 — A, J, X. See B5500. D. 524 for B7500. Thin-film memory. P. Up to eight floating channels available. T. U. V. See B2500.

BURROUGHS B8500 — A. Parallel execution of instructions allows increased internal speed. B. Per four words. D. See B6500. L. Each word of memory can be used as an index register. T, U, V. See B2500. X. See B5500.

COLLINS C-8500 — T. 8047, 8048, 8049 and 8841A/1 also available. W. ASR 33/35 teletype available.

CONTROL DATA 160 — T. 603, 604 and 606 also available. U. 405 punch also available. V. 1612 also available. W. BRPE-11 teletype available.

Product	Price Range (Monthly, $ Thousand)	First Delivery (Mo./Yr.)	Processor Speed (Add Time, µs)	Storage Cycle Time (µs)	Accumulators	Internal Storage Capacity (Thousand Words)	Word Size	Floating-Point Precision	Overlap	Address Size	Operation Codes	Indirect Addressing	Index Registers	Extensiveness †	Time-Sharing ‡	I/O Channels	Transfer Rate	Aux. Fixed Head	Aux. Movable Head	Magnetic Tape	Card Reader	Card Punch	Printer	Paper-Tape Reader	Paper-Tape Punch	Algebraic Compiler	Monitor §	Business Compiler
CONTROL DATA 160A	2.2-9.3	7/61	12.8	6.4	1	8-32	12b	—	—	6	130	1	0	L	I	2	70K	*	*	163^T	167^U	415	166^V	350	—^{W}	√	—	√^{Z}
CONTROL DATA 160G	3.9-12	4/64	3	1.35	1	8-131	13b	—	—	6^H	189	—	0	—	I	8	*	*	*	604	405	415	501^V	174G	174G	√	G	√^{Z}
CONTROL DATA 924A	8-21	8/61	9.3	6.4	1	8-32	24b	—	√	15	66	∞	6	HL	CI	6^P	*	*	*	603^T	167^U	415	166^V	350	—^{W}	√		—
CONTROL DATA 1604A	30-50	1/60	4.8	6.4	1	32	48b	36	√	15	62	∞	6	FHL	IC	6^P	135K	—	*	606	405	415	1612	—^{W}	—^{W}	√	G	√
CONTROL DATA 1700	1.1-10	3/66	2.2	1.1	1	4-32	16b	—	—	15	72	∞	2	HL	IM	4	1.4M	1751	853^S	601	1729		1742	1721	1723	√	R	—
CONTROL DATA 3100	3-17	2/65	3.5	1.75	1	8-32	24b	36	—	15-17	164	∞	3	XE	CIM	4	1.1M	863	813^S	601^T	405^U	415	501^V	3691^W	3691^W	√^{X}	GR	√
CONTROL DATA 3150	8.3	/67	3.5	1.75	1	16	24b	*	*	*	*	*	*	*	*	*	*	850	*	*	405	*	3254^V	*	*	√	GRT	√
CONTROL DATA 3200	5-20	5/64	2.5	1.25	1	8-32	24b	36	—	15-17	164	∞	3	XE	CIM	8	1.9M	863	813^S	601^T	405^U	415	501^V	3691^W	3691^W	√^{X}	GR	√
CONTROL DATA 3300	5.5-30	12/65	2.75	1.25	1	8-262	24b	36	√	15	201	∞	3	ALL	ALL	8	1.8M	863	813^S	601^T	405^U	415	501^V	3691^W	3691^W	√^{X}	GRT	√

Notes

- **CONTROL DATA 160A** — T, U, V, W. See 160. Z. AUTOCOMM.
- **CONTROL DATA 160G** — H. 19b address also possible. V. 166, 505 and 1612 also available. Z. See 160A.
- **CONTROL DATA 924A** — P. Three input and three output. T. 606 also available. U, V, W. See 160. Note. System no longer marketed.
- **CONTROL DATA 1604A** — P. See 924A. W. See 160. Note. System no longer marketed.
- **CONTROL DATA 1700** — S. 854 also available. Note. No rental price announced. Prices derived from purchase price.
- **CONTROL DATA 3100** — S. 814, 852, 853 and 854 also available. T. 604 and 607 also available. U. 3142 reader also available. V. 505, 512, 3152 and 3254 also available. W. 3694 reader/punch also available. X. ALGOL in addition to FORTRAN.
- **CONTROL DATA 3150** — V. 501 and 512 also available.
- **CONTROL DATA 3200** — S, T, U, V, W, X. See 3100. Note. System no longer marketed.
- **CONTROL DATA 3300** — S, T, U, V, W, X. See 3100.

† X – all except: B – byte manipulation, D – double precision, E – translate-edit capability, F – floating-point instructions, H – hardware multiply-divide, L – logical operations.

‡ X – all except: A – base address relocation, C – clock, I – program interrupt, M – memory protection, P – dynamic page relocation, S – supervisor mode.

§ G – batch, R – real-time, T – time-sharing.

— None.   ☆ See Section II-B.   * Information unavailable.

CENTRAL PROCESSORS — CHARACTERISTICS

Model	Price Range (monthly, $K)	First Delivery	Processor Speed (add µs)	Storage Cycle Time (µs)	Accumulators	Internal Storage (K words)	Word Size	Floating-Point Precision	Overlap	Address Size	Operation Codes	Indirect Addressing	Index Registers	Extensiveness†	Time-Sharing‡	I/O Channels	Transfer Rate	Fixed Head	Movable Head	Magnetic Tape	Card Reader	Card Punch	Printer	Paper-Tape Reader	Paper-Tape Punch	Algebraic Compiler	Monitor§	Business Compiler
CONTROL DATA 3400	17-30	11/64	2.6	1.5	1	16-32 / 48b[E]	36	—		15	75	∞	6	XDE	1M	4	4M	863	813[S]	601[T]	405[U]	415	501[V]	3691[W]	3691[W]	√[X]	GR	√
CONTROL DATA 3500	6-28	6/68	1.3[A]	.8	1	8-262 / 24b	36	√	*	*	*	∞	3	BF	ALL	8	*	863	813[S]	601[T]	405[U]	415[U]	501[V]	3691[W]	3691[W]	√	GRT	√
CONTROL DATA 3600	8-66	6/63	2.07	1.4	1	32-262 / 48b	36	√		18	98	∞	6	XE	CIM	32	5.8M	863	813[S]	601[T]	405[U]	415	501[V]	3691[W]	3691[W]	√[X]	GR	√
CONTROL DATA 3800	42-70	12/65	1.0	.9	1	32-262 / 48b	36	√		18	117	∞	6	XE	ALL	32	36M	863	813[S]	604[T]	405	415	501[V]	3694	3694	√[X]	GRT	√
CONTROL DATA 6400, 6500	37-61	4/66	1.1	1	8[C]	32-131[D] / 60b	48	√		18	73	—	8[L]	XBE	ALL	12	2M	863	813[S]	604[T]	405	415	501[V]	—		√[X]	GRT	√
CONTROL DATA 6600	62-91	9/64	.3	1	8	32-131 / 60b	48	√		18	73	—	8	XBE	XP	12	2M	863	813[S]	604[T]	405	415	501[V]	—		√[X]	GRT	√
CONTROL DATA 7600	62-155	6/67	.1	.25	*	32-131 / 60b	*	√	√	*	*		8	F	1M	*	*	863	813[S]	604[T]	405	415	501	—		√[X]	*	√
CONTROL DATA 8090	*	7/64	12.8	6.4	1	8-32 / 12b	—	—		6	130	1	0	L	I	2	1M	8951[R] / 852		601[T]	405	415	501[V]	8079 / 8074[W]	—		—	√[Z]
CONTROL DATA 8092	*	/64	12	4	1	2-4 / 8b	—	—		8	42	1	—	L	I	2	.1M			601 / —	405	415	166	8291 / 8299	—			—

Notes per model:

CONTROL DATA 3400 — E. Instructions stored two per word. S, T, U, V, W, X. See 3100. Note. System no longer marketed.

CONTROL DATA 3500 — S, T, U, V, W. See 3100.

CONTROL DATA 3600 — S, T, U, V, W, X. See 3100.

CONTROL DATA 3800 — S. 814, 853 and 854 also available. T. 607 also available. V. 505 and 512 also available. X. See 3100.

CONTROL DATA 6400, 6500 — C, L. 16 for 6500. D. 65-131 for 6500. T. 607 and 626 also available. V. 512 also available. X. See 3100. Note. 6500 is dual processor version of 6400. Rental for 6500 is 38-63.

CONTROL DATA 6600 — S. See 3800. T, V. See 6400. X. See 3100.

CONTROL DATA 7600 — S. See 3800. T. See 6400. X. See 3100.

CONTROL DATA 8090 — R. 8952 also available. T. See 160. V. See 160G. W. 8075 reader also available. Z. See 160A.

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† X – all except: B – byte manipulation, D – double precision, E – translate-edit capability, F – floating-point instructions, H – hardware multiply-divide, L – logical operations.
‡ X – all except: A – base address relocation, C – clock, I – program interrupt, M – memory protection, P – dynamic page relocation, S – supervisor mode.
§ G – batch, R – real-time, T – time-sharing.
— None. ☆ See Section II-B. • Information unavailable.

Machine	Price Range (Monthly, $K)	First Delivery	Add Time (μs)	Storage Cycle (μs)	Accumulators	Internal Storage (K words)	Word Size	Floating-Point Precision	Overlap	Address Size	Operation Codes	Indirect Addressing	Index Registers	Extensiveness	Time-Sharing	I/O Channels	Transfer Rate	Fixed Head	Movable Head	Magnetic Tape	Card Reader	Card Punch	Printer	Paper-Tape Reader	Paper-Tape Punch	Algebraic Compiler	Monitor	Business Compiler
CONTROL DATA G-20	12-23	4/61	12^A	6	1	4-32	32b	42	—	15	1046	1	63	XBE	CI	*	*	*		*		*		*	*	√	G	√
CONTROL DATA LGP-21	.5-1.5	3/65	7350^A	51000	1	4^D	32b	—	—	12	23	0	—	—	—	*	*	—	—		—	*	*			√^{X}	—	—
CONTROL DATA RPC 4000	1.8-4.5	11/60	1000	17000	1	8^D	32b	—	—	—	32	1	—	HL	—	*	*	—	—	—	—	—	*	—	—	√^{X}	—	—
DIGITAL ELECTRONICS DIGIAC 3080	.37-.6	12/64	2000	17000	1	1-4^D	25b	—	—	12	38	0	—	H	—	8	.8K	—		3089			☆			√	—	
DIGITAL EQUIPMENT LINC-8	1-1.2	7/66	3.0	1.5	1^C	4-32	12b	—	—	10	8^J	1	0^L	DH	CI	64	8M	251^R	50^T		CR01C^U	☆		64^V	PC03 / PC02	—	—	—
DIGITAL EQUIPMENT PDP-1	3.6	11/60	10	5	1	4-65	18b	—	—	12	32^J	1	0	DH	CI	64	2.4M			TU55	CR01C^U	☆	750	64^V	—^{W}	√^{X}	—	—
DIGITAL EQUIPMENT PDP-4	1-6	7/62	16	8	1	4-32	18b	—	—	13	16^J	1	0^L	HL	CIM	64	2.3M			TU55	CR01C^U	☆	750	64^V	—^{W}	√	—	—
DIGITAL EQUIPMENT PDP-5	6-25	9/63	18	6	1	1-32	12b	—	—	8	8^J	1	0^L	DH	CI	54	8M			TU55	CR01C^U	☆	750	64^V	—^{W}	√	—	—

CONTROL DATA G-20. A. All arithmetic operations done in floating-point mode. Note. System no longer marketed.

CONTROL DATA LGP-21. A. Minimum execution time for any instruction. D. Internal storage is disc. Interlaced storage arrangement reduces access time. X. ACT XXI. Note. System no longer marketed.

CONTROL DATA RPC 4000. D. Internal storage is drum. X. COMPACT in addition to FORTRAN. Note. System no longer marketed.

DIGITAL ELECTRONICS DIGIAC 3080. D. Internal storage is drum. Note. No rental price announced. Prices derived from purchase price.

DIGITAL EQUIPMENT LINC-8. C. Dual processor includes Linc and PDP-8; two accumulators are independently available. J. Micro-programming increases instruction repertoire. L. 16 auto-indexing memory locations per 1024 words of memory. R. RM08 also available. T. 545 and TU55 also available. U. 451A and 451B reader also available. V. 647 also available. Note. No rental price announced. Prices derived from purchase price.

DIGITAL EQUIPMENT PDP-1. J, U, V. See Linc-8. W. BRPE-11 teletype available. X. DECAL. Note. See Linc-8. System no longer marketed.

DIGITAL EQUIPMENT PDP-4. J, U, V. See Linc-8. L. Eight auto-indexing memory locations per 4000 words of memory. W. See PDP-1. Note. See Linc-8. System no longer marketed.

DIGITAL EQUIPMENT PDP-5. J, U, V. See Linc-8. L. See PDP-4. W. See PDP-1. Note. See Linc-8. System no longer marketed.

† – all except: B – byte manipulation, D – double precision, E – translate-edit capability, F – floating-point instructions, H – hardware multiply-divide, L – logical operations.
‡ – all except: A – base address relocation, C – clock, I – program interrupt, M – memory protection, P – dynamic page relocation, S – supervisor mode.
■ – batch. R – real-time, T – time-sharing.
— None. ☆ See Section II-B. * Information unavailable.

CENTRAL PROCESSORS — CHARACTERISTICS

System	Price Range (Monthly $K)	First Delivery (Mo/Yr)	Processor Speed (Add Time µs)	Storage Cycle Time (µs)	Accumulators	Internal Storage (K words)	Word Size	Floating-Point Precision	Overlap	Address Size	Operation Codes	Indirect Addressing	Index Registers	Extensiveness †	Time-Sharing ‡	I/O Channels	Transfer Rate	Aux. Fixed Head	Movable Head	Magnetic Tape	Card Reader	Card Punch	Printer	Paper-Tape Reader	Paper-Tape Punch	Algebraic Compiler	Monitor §	Business Compiler
DIGITAL EQUIPMENT PDP-6	6.2-30	10/64	4.4[A]	1.75	16	16-262[D]	36b	27	1[G]	18	263	∞	15	XE	XP	128	1.2M		270	TU55	451	☆	64[V]	PC01	PC01	√	T	√
DIGITAL EQUIPMENT PDP-7	1.2-5	12/64	3.5	1.75	1	4-32	18b	—	—	13	16[J]	1	0[L]	HL	CIM	4	1.7M	24		TU55	CR01C		647	—[W]	750	√		—
DIGITAL EQUIPMENT PDP-8	.45-3	4/65	3.0	1.5	1	4-32	12b	—	—	8	8[J]	1	0[L]	DH	CI	7	1.3M	251[R]	50[T]		CR01C[U]	☆	64[V]	PC03	PC02	√[X]	R	—
DIGITAL EQUIPMENT PDP-8/S	.25	9 66	33	8	1	4	12b	—	—	8	8[J]	1	0[L]	DH	CI	7	1.5M				CR01C[U]	☆		PC03	PC02	√		—
DIGITAL EQUIPMENT PDP-9	.8-1.8	8/66	2	1	1	8-32	18b	—	—	13	16[J]	1	0[L]	HL	CIM	8	3M	RM09		TU55	CR01C		647	PC03	PC02	√		—
DIGITAL EQUIPMENT PDP-10 SERIES	6-30	9/67	2.1	1	16	8-262	36b	27	1[G]	18	365	∞	15	XE	XP	128	1.2M		270	TU55	451	☆	64[V]	PC01	PC01	√	GRT	√
EAI 640	.7-3	7/67	3.3	1.65	2	4-32	16b	24	—	15	62	∞	1	XBE	XAP	4	600K		250	730[T]	520	550	610	422[W]	421[W]	√		—
EAI 8400	7-22	7/65	3.1	1	1	8-64	32b	23	3	16	150	∞	7	XE	XP	7	3.2M	8494	8492	8473[T]	8452[U]	8455[U]	8461[V]	—	8441	√		—
EMR 210	3-6	4/62	6	2	1	4-8	21b	—	--	13	48	1	3	HL	I	2	2.1M	A11	—	A40		A40	A60	A20	A20	√		—

Notes:

PDP-6 — A. Add time varies between 3.3 and 4.7 microseconds depending upon memories used.   D. 16 words with 0.4-microsecond cycle time available.   G. Per module of memory.   V. See Linc-8.   Note. See Linc-8. System no longer marketed.

PDP-7 — J. See Linc-8.   L. See PDP-4.   W. See PDP-1.   Note. See Linc-8.   System no longer marketed.

PDP-8 — J, R, T, U, V. See Linc-8.   L. See PDP-4.   Note. See Linc-8.

PDP-8/S — J, U. See Linc-8.   L. See PDP-4.   Note. See Linc-8.

PDP-9 — J. See Linc-8.   L. See PDP-4.   Note. See Linc-8.

PDP-10 SERIES — G. See PDP-6.   V. See Linc-8.   Note. See Linc-8.

EAI 640 — T. 731 also available.   W. ASR 33/35 teletype also available.

EAI 8400 — T. 8475, 8477 and 8479 also available.   U. 8453 and 8454 readers and 8456 punch also available.   V. 8462 and 8463 also available.

EMR 210 — Note. System no longer marketed.

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† X - all except: B - byte manipulation, D - double precision, E - translate-edit capability, F - floating-point instructions, H - hardware multiply-divide, L - logical operations.

‡ X - all except: A - base address relocation, C - clock, I - program interrupt, M - memory protection, P - dynamic page relocation, S - supervisor mode.

§ G - batch, R - real-time, T - time-sharing.

— None.   ☆ See Section II-B.   • Information unavailable.

System	Price Range (monthly, $K)	First Delivery	Processor Speed (Add Time, µs)	Storage Cycle Time (µs)	Accumulators	Internal Storage (K words)	Word Size	Floating-Point Precision	Overlap	Address Size	Operation Codes	Indirect Addressing	Index Registers	Extensiveness[†]	Time-Sharing[‡]	I/O Channels	Transfer Rate	Fixed Head	Movable Head	Magnetic Tape	Card Reader	Card Punch	Printer	Paper-Tape Reader	Paper-Tape Punch	Algebraic Compiler	Monitor[§]	Business Compiler
EMR 2100	4-8	12/63	4	2	1	4-32	21b	—	—	13	70	∞	3	DHL	CI	8	10.5M	A11	—	A40	A64	A40	A20	A20	—	√	—	—
EMR ADVANCE 6000 SERIES	2.5-12	3/65	3.8[A]	1.9	2	4-32	24b	39	—	15	111	—	3	XBE[M]	CIM	8[P]	2.1M	60711[R], 60611	—	60501[T]	60220[U], 60241[U]	60326[V]	60040[W], 60040[W]	—	—	√	GRT	—
EMR ADVANCE 6130	1.4-9	12/67	1.5	.75	2	4-32	16b	—	1	15	97	—	3	DHL	XP	6[P]	2.6M	—	—	60501[T]	—	60326[V]	60040[W], 60040[W]	—	—	√	GRT	—
GENERAL ELECTRIC 115	1.3-8	4/66	148[A]	6.5[B]	1	4-16	1a[E]	—	2	16	38	—	0	BEL	—	2	62K	—	130	103[T]	100[U], 101[U]	100[V]	100, 100	—	—	—	—	√[Z]
GENERAL ELECTRIC 205	1.7-5.5	7/64	72	36	1	4-16	20b	30	—	13	200	—	96	XBE	I	3	42K	—	204	680[T]	225, 225	225	652, 652	—	—	√[X]	√	—
GENERAL ELECTRIC 210	10.5-36	11/60	64[A]	32[B]	1	4-8	6d[E]	—	—	16	48	—	1	—	—	3	42K	—	204	680[T]	225, 225	225	652, 652	—	—	—	—	√[Z]
GENERAL ELECTRIC 215	2.5-10	9/63	72	36	1	4-16	20b	30	—	13	200	—	96	XBE	I	3	42K	—	204	680[T]	225, 225	225[V]	652, 652	—	—	√[X]	√	—
GENERAL ELECTRIC 225, 255	2.5-26	4/61	36	18	1	4-16[D]	20b	30	—	15	300	—	96	XBE	I	8	80K	—	204	680[T]	225, 225	225[V]	652, 652	—	—	√[X]	—[Y]	—

EMR 2100 — Note. System no longer marketed.

EMR ADVANCE 6000 SERIES — A. On Model 6070 a second arithmetic unit can be used to decrease processing time of special-purpose problems. Floating-point hardware available with Models 6050 and 6070 only. M. Floating-point hardware. P. Plus one multiplexer of 16 channels. R. 60751 also available. T. 60537 and 60545 also available. U. 60232 reader and 60245 punch also available. V. 60330 and 60334 also available. W. 60045 reader/punch and ASR 33/35 teletype also available. Note. Series consists of four models: 6020, 6040, 6050, 6070.

EMR ADVANCE 6130 — P, V, W. See Advance 6000.

GENERAL ELECTRIC 115 — A. Assumes two five-character fields. B. Per byte. E. Memory is organized in eight-bit characters or bytes. T. 106 also available. U. 120 reader and 103 punch also available. V. 110 and 120 also available. Z. TAB.

GENERAL ELECTRIC 205 — T. 690 and 301 also available. X. WIZ. Note. System no longer marketed.

GENERAL ELECTRIC 210 — A. Assumes two six-digit fields. B. Per six digits. E. Memory is organized in four-bit digits. T. See 205. Z. CAP. Note. System no longer marketed.

GENERAL ELECTRIC 215 — T, X. See 205. V. 690 also available. Note. System no long marketed.

GENERAL ELECTRIC 225, 255 — D. 16 required for 255. T, X. See 205. V. See 215. Y. Time-sharing monitor available for 255. Note. 15-26 rental and 10/67 delivery date for 255. 225 no longer marketed.

[†] X – all except: B – byte manipulation, D – double precision, E – translate-edit capability, F – floating-point instructions, H – hardware multiply-divide, L – logical operations.
[‡] X – all except: A – base address relocation, C – clock, I – program interrupt, M – memory protection, P – dynamic page relocation, S – supervisor mode.
[§] G – batch, R – real-time, T – time-sharing.
— None. ☆ See Section II-B. • Information unavailable.

Model	Price Range (Monthly, $1000s)	First Delivery (Month/Year)	Processor Speed (Add Time, μs)	Storage Cycle Time (μs)	Accumulators	Internal Storage Capacity (1000s words)	Word Size	Floating-Point Precision	Overlap	Address Size	Operation Codes	Indirect Addressing	Index Registers	Extensiveness†	Time-Sharing‡	I/O Channels	Transfer Rate	Aux. Storage Fixed Head	Movable Head	Magnetic Tape	Card Reader	Card Punch	Printer	Paper-Tape Reader	Paper-Tape Punch	Algebraic Compiler	Monitor§	Business Compiler
GENERAL ELECTRIC 235, 265	6-28	4/64	12	6	1	4-16[D]	20b	30		15	300	—	96	XBE	I	8	80K	—	204	680[T]	225	225	225[V]	652	652	√[X]	—[Y]	√
GENERAL ELECTRIC 405	4-10	2/68	35	8	1	8-12	24b	—		15	80	∞	6	ALL	XPS	8	200K	—	204	150	150	100[V]	150	200	200	√	G	√
GENERAL ELECTRIC 412	*	7/62	40	20	1	4-16	20b	—		13	*	*	3	D	I	1	.4M	4220	4548	—	4244	4280	4260	4253[W]	4212[W]	√[X]	*	
GENERAL ELECTRIC 415, 420	4.8-13.5	5/64	25.1	5.8	1	8-32[D]	24b	38		15	80	∞	6	ALL	XPS	12	400K	—	204[S]	200[T]	201	100[U]	201[V]	200	200	√	G[Y]	√
GENERAL ELECTRIC 425	6-20	6/64	17.0	3.9	1	8-128	24b	38		15	80	∞	6	ALL	XPS	12	400K	200[R]	204[S]	200[T]	201	100[U]	201[V]	200	200	√	G	√
GENERAL ELECTRIC 435	8-25	9/65	12.6	2.7	1	16-128	24b	38		15	80	∞	6	ALL	XPS	12	400K	200[R]	204[S]	200[T]	201	100[U]	201[V]	200	200	√	G	√
GENERAL ELECTRIC 625	31-135	4/65	3	2[B]	1	32-262	36b	64		18	175	∞	8	ALL	XPS	64	400K	200[R]	204[S]	200[T]	201	100[U]	201	200	200	√	GRT	√
GENERAL ELECTRIC 635, 645	35-165	5/65	1.8	1[B]	1	32-1048	36b	64		18	175	∞	8	ALL	XPS[N]	64	400K	200[R]	204[S]	200[T]	201	100[U]	201	200	200	√	GRT	—
GENERAL ELECTRIC DATANET-30	1.5-4.5	10/63	14	7	1	4-16	18b	—		10	78	1	—	—	CI	128	2.4K[Q]	—	204	680[T]	930	930	225[A]	—	—	—	*	—

Notes

GENERAL ELECTRIC 235, 265 — D. 16 required for 265. T, X. See 205. V. See 215. Y. Time-sharing monitor available for 265. Note. 17-28 rental and 7/64 delivery date for 265.

GENERAL ELECTRIC 405 — V. 201 punch also available.

GENERAL ELECTRIC 412 — W. 4213 reader and ASR 33/35 teletype also available. X. COOL (Control Oriented Language).

GENERAL ELECTRIC 415, 420 — D. 32 required for 420. S. 160 and 388 also available. T. 201, 211, 300, 301, 311, 402, 403, 404, 405, 411 and 412 also available. U. See 405. V. 200 also available. Y. Time-sharing monitor also available for 420. Note. 18-25 rental and 7/67 delivery date for 420.

GENERAL ELECTRIC 425 — R. 270 also available. S, T, V. See 415. U. See 405.

GENERAL ELECTRIC 435 — R. See 425. S, T, V. See 415. U. See 405.

GENERAL ELECTRIC 625 — B. Per two words. R. See 425. S, T. See 415. U. See 405.

GENERAL ELECTRIC 635, 645 — B. See 625. N. Dynamic page relocation and supervisor mode available on 645. R. See 425. S. See 415. U. See 405.

GENERAL ELECTRIC DATANET-30 — Q. Bits per second. T. 690 also available.

† X – all except: B – byte manipulation, D – double precision, E – translate-edit capability, F – floating-point instructions, H – hardware multiply-divide, L – logical operations.

‡ X – all except: A – base address relocation, C – clock, I – program interrupt, M – memory protection, P – dynamic page relocation, S – supervisor mode.

§ G – batch, R – real-time, T – time-sharing.

— None. ☆ See Section II-B. * Information unavailable.

CENTRAL PROCESSORS — CHARACTERISTICS

Machine	Price Range (Monthly in Thousand Dollars)	First Delivery (Month and Year)	Processor Speed (Complete Add Time µs)	Storage Cycle Time (µs)	Accumulators	Internal Storage (Capacity in Thousand Words)	Word Size	Floating-Point Precision	Overlap	Address Size	Operation Codes	Indirect Addressing	Index Registers	Extensiveness †	Time-Sharing ‡	I/O Number of Channels	Transfer Rate	Aux. Storage Fixed Head	Movable Head	Magnetic Tape	Card Reader	Card Punch	Printer	Paper-Tape Reader	Paper-Tape Punch	Algebraic Compiler	Monitor §	Business Compiler
GENERAL ELECTRIC GE/PAC 4020	*	10/66	3.2	1.6	1	2-32	24b	—	—	15	28	—	7	—	IM	7	.7M	4220 / 4548	—	200[T]	4244	—	4280	4260	4212[W]	4253[W] √	*	—
GENERAL ELECTRIC GE/PAC 4040	*	4/64	16	5	1	4-16	24b	—	—	13	22	—	7	—	IM	7	.7M	4220 / 4548	—	200[T]	4244	—	4280	4260	4212[W]	4253[W] √	*	—
GENERAL ELECTRIC GE/PAC 4050 I	*	6/65	10.2	5.1	1	4-64	24b	17	—	13	36	—	7	BDF	IM	7	.7M	4220 / 4548	—	200[T]	4244	—	4280	4260	4212[W]	4253[W] √	*	—
GENERAL ELECTRIC GE/PAC 4050 II	*	6/66	6.8	3.4	1	4-64	24b[E]	17	—	13	36	—	7	BDF	IM	7	.7M	4220 / 4548	—	200[T]	4244	—	4280	4260	4212[W]	4253[W] √	*	—
GENERAL ELECTRIC GE/PAC 4060	*	6/65	3.4	1.7[B]	1	4-64	24b	17	—	13	36	—	7	BDF	IM	7	.8M	4220 / 4548	—	200[T]	4244	—	4280	4260	4212[W]	4253[W] √	*	—
HEWLETT PACKARD HP-2116A	.6-1.5	*	3.2	1.6	1	4-8	16b	23	*	10	68	∞	7	BEF	IM	16	70K	2757	D2020	—	—		—	2753A / 2737A		√[X]	—	—
HONEYWELL 200/120	1.6-4.5	2/66	69[A]	3[B]	1	2-32	1a[E]	—	1	12-18	37	∞	6	XFH	CI	3	.5M	270A / 258[S]	204	123[U]	122[V]	214/1[U]	209/2	210		√	GR	√
HONEYWELL 200/200	2.6-10	7/64	48[A]	2[B]	1	4-65	1a[E]	—	1	12-24	39	∞	15	XF	CI	4	.5M	270A / 258[S]	204	223[U]	222[V]	214/1[U]	209/2	210		√	GR	√
HONEYWELL 200/1200	5.4-20	1/66	35[A]	1.5[B]	1	16-131	1a[E]	36	1	12-24	57	∞	15[L]	ALL	XP	4	.5M	270A / 258[S]	204	223[U]	222[V]	214/1[U]	209/2	210		√	GR	√

GE/PAC 4020, 4040, 4050 I, 4050 II notes: T. See 415. W. See 412.

GE/PAC 4060 notes: B. 2.88 for memory exceeding 16K. T. See 415. W. See 412.

HP-2116A note: X. ALGOL in addition to FORTRAN.

HONEYWELL 200/120 notes: A. Assumes two five-character fields. B. Per byte. E. Memory is organized in six-bit characters or bytes. S. 259, 259A, 261 and 262 also available. U. 123/2 and 223 reader and 214/2, 224/1, 2 and 227 reader/punch also available. V. 222 series also available.

HONEYWELL 200/200 notes: A, B, E, S. See 200/120. U. 214/2, 224/1, 2 and 227 reader/punch also available. V. Entire 222 series available.

HONEYWELL 200/1200 notes: A, B, E, S. See 200/120. L. Additional 15 optionally available. U, V. See 200/200.

† X – all except: B – byte manipulation, D – double precision, E – translate-edit capability, F – floating-point instructions, H – hardware multiply-divide, L – logical operations.
‡ X – all except: A – base address relocation, C – clock, I – program interrupt, M – memory protection, P – dynamic page relocation, S – supervisor mode.
§ G – batch, R – real-time, T – time-sharing.
— None. ☆ See Section II-B. * Information unavailable.

CENTRAL PROCESSORS CHARACTERISTICS

System	Price Range (monthly, $K)	First Delivery	Processor Speed (add, μs)	Storage Cycle Time (μs)	Accumulators	Internal Storage (K words)	Word Size	Floating-Point Precision	Overlap	Address Size	Operation Codes	Indirect Addressing	Index Registers	Extensiveness†	Time-Sharing‡	I/O Channels	Transfer Rate	Aux. Fixed Head	Aux. Movable Head	Magnetic Tape	Card Reader	Card Punch	Printer	Paper-Tape Reader	Paper-Tape Punch	Algebraic Compiler	Monitor§	Business Compiler
HONEYWELL 200/2200	6.6-30	12/65	25[A]	1[B]	1	16-262 / 1a[E]	36		1	12-24	57	∞	15[L]	ALL	XP	8	1M	270A / 258[S]		204	223[U] / 214/1[U]	222[V] / 209/2	210			√	GR	√
HONEYWELL 200/4200	22.5	2/68	12[A]	.75[B]	1	131-524 / 1a[E]	36		2	12-24	57	∞	15[L]	ALL	XP	16	1.3M	270A / 258[S]		204	223[U] / 214/1[U]	222[V] / 209/2	210			√	GR	√
HONEYWELL 200/8200	35.2-80	6/68	1.75[A]	.75[B]	2	262-1048 / 1a[E]	40		4	12-24	126	∞	318	ALL	XP	34	2.83M	270A / 258[S]		204[T]	223[U] / 214/1[U]	222[V] / 209/2[W]	210[W]			√	GRT	√
HONEYWELL 400	7.6-14	12/61	111[A]	9.25[B]	1	1-4 / 12d[E]	—		1	12	64	—	3	EHL	CI	1	433K	— / —		404	427/1[U] / 427/1	422 / 409	410			√[X]	G	√
HONEYWELL 800	16-30	12/60	24[A]	6[B]	1	4-32 / 12d[E]	40		1	12	69	1	8[L]	FHL	C	16	2M	— / —		804	827/1[U] / 827/1	822/3 / 809	810			√[X]	G	√[Z]
HONEYWELL 1400	8.9-22	12/63	78[A]	6.5[B]	1	2-32 / 12d[E]	9[F]		1	12	71	1	3	XBD	CI	1	616K	— / —		404	427/1[U] / 427/1	422 / 409	410			√[X]	G	√
HONEYWELL 1800	27-60	11/63	8[A]	2[B]	1	8-65 / 12d[E]	40		1	12	71	1	8[L]	FHL	C	16	6M	— / —		804	827/1[U] / 827/1	822/3 / 809	810			√[X]	G	√[Z]
HONEYWELL DDP-24	.9-2.4	6/63	10	5	2	4-32 / 24b	—		—	14	58	∞	1[L]	HL	I	54	.1M	—		40	61 / 62	64	—[W]		50[W]	√	—	—

HONEYWELL 200/2200 — A, B, E, S. See 200/120. L. See 200/1200. U, V. See 200/200. 8 channels; 1M transfer.

HONEYWELL 200/4200 — A, E, S. See 200/120. B. Per four bytes. L. See 200/1200. U, V. See 200/200.

HONEYWELL 200/8200 — A. Assumes three eight-character fields. B. Cycle time for eight characters using word processor and four characters using character processor. E. Memory is organized in six-bit bytes or four-bit digits. S. See 200/120. T. 804 series also available. U. 214/2, 224/1, 2, 227 and 827/1 reader/punch also available. V. 222 series and 822/3 also available. W. 809 reader and 810 punch also available.

HONEYWELL 400 — A, E. See 200/8200. B. Per four bytes or six digits. U. 423/2 reader also available. X. AUTOMATH.

HONEYWELL 800 — A, E. See 200/8200. B. Per eight bytes or 12 digits. L. For each of up to eight processor states. X. See 400. Z. FACT in addition to COBOL.

HONEYWELL 1400 — A, E. See 200/8200. B, U. See 400. F. Decimal digits. X. See 400.

HONEYWELL 1800 — A, E. See 200/8200. B, L, Z. See 800. X. See 400.

HONEYWELL DDP-24 — L. Additional two optionally available. W. ASR 33/35 and BRPE-11 teletypes also available. Note. System no longer marketed.

*X – all except: B – byte manipulation, D – double precision, E – translate-edit capability, F – floating-point instructions, H – hardware multiply-divide, L – logical operations.
‡X – all except: A – base address relocation, C – clock, I – program interrupt, M – memory protection, P – dynamic page relocation, S – supervisor mode.
§G – batch, R – real-time, T – time-sharing.
— None. ☆ See Section II-B. * Information unavailable.

Central Processors — Characteristics

Processor / Internal Characteristics

System	Price Range (Monthly, $K)	First Delivery	Add Time (µs)	Storage Cycle Time (µs)	Accumulators	Internal Storage (K words)	Word Size	Floating-Point Precision	Overlap	Address Size	Operation Codes	Indirect Addressing	Index Registers	Extensiveness	Time-Sharing
HONEYWELL DDP-116	.9-2.4	4/65	3.4	1.7	2	1-32	16b	39	—	10	66	∞	1	FHL	XAP
HONEYWELL DDP-124	1.9-5	1/66	3.5	1.75	2	8-32	24b	23		15	48	∞	1[L]	FHL	XAP
HONEYWELL DDP-224	2.5-5.8	3/65	3.8	1.9	2	4-64	24b	23	—	15	64	∞	3	XBD	CI
HONEYWELL DDP-416	.4-.9	4/67	1.92	.96	1	4-16	16b	—	—	10	30	∞	0	L	XAP
HONEYWELL DDP-516	.6-1.2	10/66	1.92	.96	2	4-32	16b	—	—	10	88	∞	1	XEF	XAP
HONEYWELL H21, H22	*	10/65	12[A]	6[B]	1	2-16	18b	—	—	14	24	1	1	HL	MI
HUGHES H-3118	*	5/64	3.6	1.8	1	8-32	18b		3	15	54	1	24	HL	CIM
HUGHES H-3118M	*	1/66	3.6	1.8	1	8-131	18b		7	17	60	1	48	BHL	CIM
HUGHES H-3324	*	3/65	1.8	1.8	1	16-131	24b		7	17	104	1	24	DHL	CIM

Input-Output, Auxiliary Storage, Peripheral Devices, Software

System	I/O Channels	Transfer Rate	Aux. Storage Fixed Head	Aux. Storage Movable Head	Magnetic Tape	Card Reader	Card Punch	Printer	Paper-Tape Reader	Paper-Tape Punch	Algebraic Compiler	Monitor	Business Compiler
DDP-116	1	1.5M	—		40	61	62	64	50[w]	—[w]			
DDP-124	12	1.8M	80	85	40	65	66	70[v]	50[w]	—[w]	√		
DDP-224	14	1.8M	—		40	61	62	64	50[w]	—[w]	√		
DDP-416	24	2.6M	4400	4600	4130[T]	61		7050	50[w]	—[w]	√		
DDP-516	24	2.6M	4400	4600	4130[T]	61		7050	50[w]	—[w]	√		
H21, H22	1	2.9M	*		—				—	—[w]			
H-3118	8	.55M	—		H3107[T]	H3103		H3102	PT2[w]	PT1[w]			
H-3118M	8	.55M	—		H3107[T]	H3103		H3102	PT2[w]	—[w]	√[X]	R	
H-3324	16	.78M			H3107	H3103	H3104	H3102	—	—[w]	√	R	

Notes

- **HONEYWELL DDP-116.** W. See DDP-24. Note. System no longer marketed.
- **HONEYWELL DDP-124.** L, W. See DDP-24. V. 71 also available.
- **HONEYWELL DDP-224.** W. See DDP-24. Note. Multi-processor capability available.
- **HONEYWELL DDP-416.** T. 4140 also available. W. See DDP-24. Note. No rental price announced. Price derived from purchase price.
- **HONEYWELL DDP-516.** T. See DDP-416. W. See DDP-24. Note. See DDP-416.
- **HONEYWELL H21, H22.** A. 3.5 for H22. B. 1.75 for H22. W. ASR 33 teletype available. Note. Systems no longer marketed.
- **HUGHES H-3118.** T. H4107 also available. W. BRPE-11 teletype also available. Model numbers not yet available. Characteristics listed in appropriate sections under these code symbols. Note. Militarized computer available for commercial use.
- **HUGHES H-3118M.** T, W. See H-3118. X. JOVIAL. Note. See H-3118.
- **HUGHES H-3324.** W. BRPE-11 teletype available. Note. See H-3118.

† X – all except: B – byte manipulation, D – double precision, E – translate-edit capability, F – floating-point instructions, H – hardware multiply-divide, L – logical operations.
‡ X – all except: A – base address relocation, C – clock, I – program interrupt, M – memory protection, P – dynamic page relocation, S – supervisor mode.
§ G – batch, R – real-time, T – time-sharing.
— None. ☆ See Section II-B. * Information unavailable.

CENTRAL PROCESSORS — CHARACTERISTICS

Processor Characteristics (Price, Storage, Instruction Set)

Model	Price Range (Monthly in Thousand Dollars)	First Delivery (Month and Year)	Processor Speed (Complete Add Time, μs)	Storage Cycle Time (μs)	Accumulators	Internal Storage (Capacity in Thousand Words)	Word Size	Floating-Point Precision	Overlap	Address Size	Operation Codes	Indirect Addressing	Index Registers	Extensiveness †	Time-Sharing ‡
HUGHES HM-4118	*	3/66	2	1	1	4-131	18b	7	—	17	60	1	48	DHL	CIM
IBM 360/20	1.2-4.5	1/66	206^A	7.2^B	8	4-16	1a^E	—	—	24	36	---	—^L	XDF	I
IBM 360/30	2.7-20	5/65	39^A	1.5^B	16	8-65	1a^E	56	—	24	139	—	—^L	ALL	XAP
IBM 360/40	5-35	5/65	11.88^A	2.5^B	16	16-262	1a^E	56	—	24	139	—	—^L	ALL	XAP
IBM 360/44	5-25	10/66	1.75^A	1.75^B	16	32-262	1a^E	56	—	24	109	—	—^L	ALL	XAP
IBM 360/50	14-55	9/65	4^A	2^B	16	65-524	1a^E	56	—	24	139	—	—^L	ALL	XAP
IBM 360/65, 67	34-100	3/66	1.3^A	.75^B	16	131-1048	1a^E	56	—^G	24	139^J	—	—^L	ALL	XAP^N
IBM 360/75	47-170	11/65	.8^A	.75^B	16	262-1048	1a^E	56	√	24	139	—	—^L	ALL	XAP

Input-Output, Auxiliary Storage, Peripheral Devices, Software

Model	I/O Channels	Transfer Rate	Aux. Storage Fixed Head	Movable Head	Magnetic Tape	Card Reader	Card Punch	Printer	Paper-Tape Reader	Paper-Tape Punch	Algebraic Compiler	Monitor §	Business Compiler
HUGHES HM-4118	8	1M	—	H3107^T	—	—	—	—^W	—	PT2^W	√	R	—
IBM 360/20	1	30K	—	2311	2415	2501^U	2520^U	2203^V	—	—	—	G	√^Z
IBM 360/30	2	.4M	2301	2302^S	2401^T	2520^U	2520^U	1443^V	—	2671	√	GR	√
IBM 360/40	2	.8M	2301^R	2302^S	2401^T	2520^U	2520^U	1443^V	—	2671	√	GR	√
IBM 360/44	2	.5M	2301	2302^S	2401^T	2520^U	2520^U	1443^V	—	2671	√	GR	√
IBM 360/50	3	1.2M	2301^R	2302^S	2401^T	2520^U	2520^U	1443^V	—	2671	√	GR	√
IBM 360/65, 67	4	1.2M	2301^R	2302^S	2401^T	2520^U	2520^U	1443^V	—	2671	√	GR^Y	√
IBM 360/75	4	1.2M	2301^R	2302^S	2401^T	2520^U	2520^U	1443^V	—	2671	√	GR	√

Notes

HUGHES HM-4118
T, W. See H-3118.   Note. See H-3118.

IBM 360/20
A. Assumes two two-character fields or two 16-bit half-words.   B. Per byte.
E. Memory is organized in eight-bit characters or two four-bit digits.
L. Eight general registers are used as accumulators or index registers.
U. 1442/N2 punch and 2520 and 2560 reader/punch also available.
V. 1403/2, 7, N1 also available.   Z. REPORT GENERATOR.

IBM 360/30
A. Assumes two four-character fields or two 32-bit words.   B, E. See 360/20.   L. 16 general registers are used as accumulators or index registers.
S. 2311 and 2314 also available.   T. 2402, 2403, 2404, 2415 and 7340 also available.   U. 2501 and 1442/3 readers, 1442/5 punch, and 2540 reader/punch also available.   V. 1403/2, 3, 7, N1; 1404 and 1445 also available.

IBM 360/40
A, L, S, T, U, V. See 360/30.   B. Per two bytes.   E. See 360/20.   R. 2303 also available.

IBM 360/44
A, L, U, V. See 360/30.   B. Per four bytes.   E. See 360/20.   S. 2311 also available.   T. 2402, 2403, 2404 and 2515 also available.

IBM 360/50
A, L, S, T, U, V. See 360/30.   B. See 360/44.   E. See 360/20.   R. See 360/40.

IBM 360/65, 67
A, L, T, U, V. See 360/30.   B. Per eight bytes.   E. See 360/20.   G. Overlap available on Model 67.   J. 144 for Model 67.   N. Dynamic page relocation on Model 67.   R. See 360/40.   Y. Time-sharing monitor available on Model 67.   Note. Rental for Model 67 is 45K-150K.

IBM 360/75
A, L, S, T, U, V. See 360/30.   B. See 360/65.   E. See 360/20.   R. See 360/40.   Note. Formerly marketed as Model 70.

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† X – all except: B – byte manipulation, D – double precision, E – translate-edit capability, F – floating-point instructions, H – hardware multiply-divide, L – logical operations.
‡ X – all except: A – base address relocation, C – clock, I – program interrupt, M – memory protection, P – dynamic page relocation, S – supervisor mode.
§ G – batch, R – real-time, T – time-sharing.
— None. ☆ See Section II-B. * Information unavailable.

CENTRAL PROCESSORS — CHARACTERISTICS

Processor characteristics

System	Price Range (monthly, $ thousand)	First Delivery	Complete Add Time (μs)	Storage Cycle Time (μs)	Accumulators	Internal Storage Capacity (thousand words)	Word Size	Floating-Point Precision	Overlap	Address Size	Operation Codes	Indirect Addressing	Index Registers	Extensiveness†	Time-Sharing‡
IBM 360/90	125-250	2/67	.18[A]	.75[B]	16	512-1024[D]	56 / 1a[E]	√		24	139	—	—[L]	ALL	XAP
IBM 1130	.6-1.6	9/65	8	2.2[B]	*	4-32	16b	—		13	31	1	3	HL	I
IBM 1401	1.9-12	9/60	402[A]	11.5[B]	—	4-16	1a[E]	—		14	70	—	3	BEH	I
IBM 1410	6-32	11/61	88[A]	4.5[B]	—	10-80	1a[E]	*		17	*	*	15	BEH	I
IBM 1440	1.5-4.5	11/63	244[A]	11.1[B]	—	2-16	1a[E]	—		14	63	—	3	BEH	I
IBM 1460	3.5-16	10/63	228[A]	6[B]	—	8-16	1a[E]	—		14	70	—	3	BEH	I
IBM 1620 I, II	1.6-5	10/60	560[A]	20[B]	—	20-60	1d[E]	100[F]		16	70	∞	14	FL	*
IBM 1710 I, II	*	2/62	560[A]	20[B]	—	20-60	1d[E]	100[F]		16	70	∞	14	FL	I

Input-Output, peripheral devices and software

System	I/O Channels	Transfer Rate	Fixed Head	Movable Head	Magnetic Tape	Card Reader	Card Punch	Printer	Paper-Tape Reader	Paper-Tape Punch	Algebraic Compiler	Monitor§	Business Compiler
IBM 360/90	6	1.2M	2301[R]	2302[S]	2401[T]	2520[U]	2520[U]	1443[V]	2671	—	√	GR	√
IBM 1130	*	*	—	2310[S]	—	1442[U]	1442[U]	1132[V]	1134[W]	1055	√	—	
IBM 1401	1	*	—	1405[S]	7330[T]	1402	1402	1403[V]	1011	1012	√	—	√
IBM 1410	1	*	—	1301[S]	7330[T]	1402[U]	1402	1403	1011	—	√	*	√
IBM 1440	*	*	—	1311[S]	7335	1442[U]	1442[U]	1403[V]	1011	1012	√	*	√
IBM 1460	2	*	—	1311[S]	7330[T]	1402	1402	1403[V]	1011	1012	√	*	√
IBM 1620 I, II	1	*	—	1311		1622	1622	1443	1621	1621	√	G	—
IBM 1710 I, II	*	*	—	—		1622	1622	1403	1621	1621	*	*	—

Notes

IBM 360/90 — A, L, S, T, U, V. See 360/30. B. See 360/65. D. Up to 16M characters additional memory with eight-microsecond cycle time is available. E. See 360/20. R. See 360/40. Note. System no longer marketed.

IBM 1130 — B. 3.2 also available. S. Single 1131 drive, similar to 2310, incorporated as part of CPU. U. Models 5, 6 and 7; 2501 reader also available. V. 1403 also available. W. Models 1 and 3.

IBM 1401 — A. Assumes two five-character fields. B. Per byte. 19.3 for Model H. E. Memory is organized in six-bit characters or bytes. S. Models 1 and 2; 1311 also available. T. 729/2, 4, 5, 6 and 7340 also available. V. 1404 and 1405 also available. Note. System no longer marketed.

IBM 1410 — A, E. See 1401. B. See 360/20. S. Models 1 and 2; 1311, 2302 and 1405/1, 2 also available. T. 729/2, 4, 5, 6 and 7340 also available. U. 1442 reader also available. Note. System no longer marketed.

IBM 1440 — A, E. See 1401. B. See 360/20. S. 1301/11, 12, 21, 22 also available. U. Models 1 and 2; 1442/4 reader and 1444 punch also available. V. 1443 and 1445 also available. Note. System no longer marketed.

IBM 1460 — A, E. See 1401. B. See 360/20. S. 1301/1, 2 also available. T. See 1410. V. Models 2 and 3; 1445 also available. Note. System no longer marketed.

IBM 1620 I, II — A. Assumes two five-digit fields. 140 microseconds for Model II. B. Per digit. 10 microseconds for Model II. E. Memory is organized in six-bit digits. F. Decimal digits. Note. System no longer marketed.

IBM 1710 I, II — A, B, E, F. See 1620. Note. Industrial control version of 1620.

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† X – all except: B – byte manipulation, D – double precision, E – translate-edit capability, F – floating-point instructions, H – hardware multiply-divide, L – logical operations.
‡ X – all except: A – base address relocation, C – clock, I – program interrupt, M – memory protection, P – dynamic page relocation, S – supervisor mode.
§ G – batch, R – real-time, T – time-sharing.
— None. ☆ See Section II-B. * Information unavailable.

CENTRAL PROCESSORS — CHARACTERISTICS

Processor Characteristics

System	Price Range (Monthly in Thousand Dollars)	First Delivery (Month and Year)	Processor Speed (Complete Add Time in Microseconds)	Storage Cycle Time in Microseconds	Accumulators	Internal Storage (Capacity in Thousand Words)	Word Size	Floating-Point Precision	Overlap	Address Size	Operation Codes	Indirect Addressing	Index Registers	Extensiveness †	Time-Sharing ‡
IBM 1800	*	2/66	6 / 2[B]	*		4-32	16b	—	—	15	26	1	3	H	IM
IBM 7010	12-35	10/63	34[A] / 2.4[B]	—		40-100	1a[E]	*	3	17	180	—	15	FH	AIM
IBM 7040	9-36	4/63	16 / 8		1	4-32	36b	27	—	15	120	1	3	XE	IM
IBM 7044	20-55	7/63	5 / 2		1	8-32	36b	27	—	15	120	1	3	XE	IM
IBM 7070	12-31	6/60	60[A] / 6[B]		3	5-10	10d[E]	10[F]	2	14	200	*	99	*	I
IBM 7072	14-32	6/62	12[A] / 6[B]		*	5-30	10d[E]	10[F]	*	14	*	*	99	*	I
IBM 7074	17-36	12/61	10[A] / 4[B]		*	5-30	10d[E]	10[F]	*	14	*	*	99	*	I
IBM 7080	40-73	9/61	11[A] / 2[B]		16	80-160	1a[E]	—	3	20	*	1	0	EH	I

Input-Output, Auxiliary Storage, Peripheral Devices, Software

System	Input-Output (Number of Channels)	Transfer Rate	Auxiliary Storage (Fixed Head)	Movable Head	Magnetic Tape	Peripheral Devices (Card Reader)	Card Punch	Printer	Paper-Tape Reader	Paper-Tape Punch	Software (Algebraic Compiler)	Monitor §	Business Compiler
IBM 1800	3	.5M	—	2310	2401[T]	1442[U]	1442[U]	1443	1055	1054	*	*	—
IBM 7010	4	*	—	1311[S]	7330[T]	1402[U]	1402	1403	1011	—	√	*	√
IBM 7040	5	*	—	1301[S]	7330[T]	1622[U]	1622[U]	1403	—	—	√	G	√
IBM 7044	5	*	—	1301[S]	7330[T]	1622[U]	1622[U]	1403	—	—	√	G	√
IBM 7070	2	*	—	1301[S]	729[T]	7500	7550	7400	1011	—	√	G	√
IBM 7072	2	*	—	1301[S]	7330[T]	7501[U]	7550	7400	1011	—	√	G	√
IBM 7074	2	*	—	1301[S]	7340[T]	7501[U]	7550	7440	1011	—	√	G	√
IBM 7080	4	*	—	1301[S]	7340[T]	7502	721	716	1011	—	√	G	√

Notes

IBM 1800 — B. Four-microsecond memory available. T. 2402 also available. U. See 1130.

IBM 7010 — A, E. See 1401. B. See 360/20. S. 1301/1, 2 and 2302 also available. T. 729/2, 4, 5, 6 also available. U. See 1410. Note. System no longer marketed.

IBM 7040 — S. Models 1 and 2; 2302 also available. T. See 7010. U. 1402 reader/punch also available. Note. System no longer marketed.

IBM 7044 — S, U. See 7040. T. See 7010. Note. System no longer marketed.

IBM 7070 — A. Assumes two ten-digit fields. B. Per ten digits. E. Memory is organized in five-bit digits. F. See 1620. S. Models 1 and 2. T. Models 2, 4, 5 and 6. Note. System no longer marketed.

IBM 7072 — A, B, E, S. See 7070. F. See 1620. T. See 7010. U. 7500 also available. Note. System no longer marketed.

IBM 7074 — A, B, E. See 7070. F. See 1620. S. See 7040. T. See 7010. U. See 7072. Note. System no longer marketed.

IBM 7080 — A, E. See 1401. B. See 360/20. S. See 7040. T. See 7010. Note. System no longer marketed.

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† X – all except: B – byte manipulation, D – double precision, E – translate-edit capability, protection, P – dynamic page relocation, S – supervisor mode.

‡ X – all except: A – base address relocation, C – clock, I – program interrupt, M – memory F – floating-point instructions, H – hardware multiply-divide, L – logical operations.

§ G – batch, R – real-time, T – time-sharing.

— None. ☆ See Section II-B. * Information unavailable.

System	Price Range (Monthly in Thousand Dollars)	First Delivery (Month and Year)	Processor Speed (Complete Add Time in Microseconds)	Storage Cycle Time in Microseconds	Accumulators	Internal Storage (Capacity in Thousand Words)	Word Size	Floating-Point Precision	Overlap	Address Size	Operation Codes	Indirect Addressing	Index Registers	Extensiveness †	Time-Sharing ‡	Number of Channels	Transfer Rate	Fixed Head	Movable Head	Magnetic Tape	Card Reader	Card Punch	Printer	Paper-Tape Reader	Paper-Tape Punch	Algebraic Compiler	Monitor §	Business Compiler
IBM 7090	60-100	6/60	4.4	2.2	1	32	36b	27	*	15	200	1	3	XB	I	8	*	—	1301[S]	7340[T]	711	721	716	1011	—	√	G	√
IBM 7094 I	66-106	9/62	4	2	1	32	36b	27	2	15	200	1	7	XB	I	8	*	—	1301[S]	7340[T]	711	721	716	1011	—	√	G	√
IBM 7094 II	72-131	4/64	2.8	1.4	1	32	36b	27	2	15	200	1	7	XB	I	8	*	—	1301[S]	7340[T]	711	721	716	1011	—	√	G	√
IBM 7700	*	3/64	6	2	1	16-49	18b	—	*	18	34	1	3	HL	I	2	*	—	—	7330[T]	1442[U]	1442[U]	—	—	—	*		*
INTERDATA MODEL 2	.2-.3	4/68	45	3	16	1	16b	—	—	16	73	—	15	XFH	—	16	5K	—	—	—	510	530	550	410	—[W]	—		—
INTERDATA MODEL 3	.3-.5	3/67	34	1.8	16	32	16b	—	—	16	77	—	15	XF	—	16	100K	700	—	620[T]	510	530	550	410	—[W]	√		—
INTERDATA MODEL 4	.4-.8	4/68	3.9	1.5	16	32K	16b	24	—	16	84	—	15	ALL	—	16	150K	700	—	620[T]	510	530	550	410	—[W]	√		—
MONROE MONROBOT XI	.7-1.3	5/60	6000	12000	1	1-2[D]	32b	—	—	11	27	—	0	BH	—	4	*	—	—	—	☆	☆	—	—	—	—		—
NCR 315	3.8-30	1/62	48[A]	6[B]	1	5-40	2a[E]	—	—	18	150	1	32	BEH	I	—[P]	120K	365	353	332[T]	380[U]	376[U]	340	361	371	√	GR	√

Notes

IBM 7090 — S. See 7040. T. See 7010. Note. System no longer marketed.

IBM 7094 I — S. See 7040. T. See 7010. Note. System no longer marketed.

IBM 7094 II — S. See 7040. T. See 7010. Note. System no longer marketed.

IBM 7700 — T. See 7010. U. See 1130.

INTERDATA MODEL 2 — W. BRPE-11 teletype available.

INTERDATA MODEL 3 — T. 621 also available. W. See Model 2.

INTERDATA MODEL 4 — T. See Model 3. W. See Model 2.

MONROE MONROBOT XI — D. Internal storage is drum.

NCR 315 — A. Add time assumes two six-character fields. B. Per two bytes. E. Memory is organized into slabs of two six-bit characters or three four-bit digits.

NCR 315 (Input-Output) — P. Simultaneity unit attachable for input/output. T. 333 and 334 also available. U. 376/7, 8 reader/punches also available.

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† X – all except: B – byte manipulation, D – double precision, E – translate-edit capability, F – floating-point instructions, H – hardware multiply-divide, L – logical operations.

‡ X – all except: A – base address relocation, C – clock, I – program interrupt, M – memory protection, P – dynamic page relocation, S – supervisor mode.

§ G – batch, R – real-time, T – time-sharing.

— None. ☆ See Section II-B. • Information unavailable.

CENTRAL PROCESSORS CHARACTERISTICS

CENTRAL PROCESSORS CHARACTERISTICS

Central Processor Characteristics

Model	Price Range (Monthly $K)	First Delivery	Processor Speed (Add Time µs)	Storage Cycle Time µs	Accumulators	Internal Storage (K words)	Word Size	Floating-Point Precision	Overlap	Address Size	Operation Codes	Indirect Addressing	Index Registers	Extensiveness †	Time-Sharing ‡
NCR 315/100	2.2-9.5	11/64	48^A	6^B	1	5-40	2a^E	—	—	18	150	1	32	BEH	I
NCR 315/RMC-501	6-50	7/65	6.5^A	.8^B	1	10-80	2a^E	12^F	—	19	150	1	32	ALL	I
NCR 315/RMC-502	9-50	8/67	6.5^A	.8^B	1	40-80	2a^E	12^F	—	19	150	1	32	ALL	XP
NCR 390	1-1.9	5/61	11300^A	1200^B	1	.2	12d^E	—	—	12	19	—	0	—	—
NCR 500	.76-2.5	9/65	10260^A	1000^B	1	.2-.4	12d^E	—	—	12	50	—	0	—	—
PACIFIC DATA PDS 1020	.45-.52	2/64	2300^A	2300^B	1	2-4^D	4d^E	—	—	12	40	—	1	DHL	I
PHILCO 102, 102M	6-10	11/65	4.5	1.5	2	16-65	32b	—^F	4	18	105^J	∞	7	BL^M	IM^N
PHILCO 1000	4-15	6/63	39^A	1.5^B	1	8-32	1a^E	—	—	15	117	—	4	—	—
PHILCO 2000/210	20-60	11/58	15	10	3	8-32	48b	35	1	16	250	1	8	XDE	I

Model	I/O Channels	Transfer Rate	Aux. Fixed Head	Aux. Movable Head	Magnetic Tape	Card Reader	Card Punch	Printer	Paper-Tape Reader	Paper-Tape Punch	Algebraic Compiler	Monitor §	Business Compiler
NCR 315/100	—^P	120K	365	353	332^T	380^U	376^U	340	361	371	√	GR	√
NCR 315/RMC-501	—^P	120K	365	353	332^T	380	376^U	340	361	371	√	GR	√
NCR 315/RMC-502	8	120K	365	353	332^T	380^U	376^U	340	361	371	√	GRT	√
NCR 390	2	.8K	—	—	—	—	—	340	361	371	—	—	—
NCR 500	2	1K	—	—	582	541	577	—	561^W	571^W	—	—	—
PACIFIC DATA PDS 1020	1	75	—	—	—	—	☆	—	☆	—	—	—	—
PHILCO 102, 102M	6^P	200K	496^R	272	335	156	159	155	—^W	—^W	√	R	√
PHILCO 1000	8	2.4M	—	—	—	—	—	—	—	—	√	R	√
PHILCO 2000/210	8	6M	272	315	234^T	258^U	265^U	256^V	240^W	☆^W	√^X	R	√

Notes

NCR 315/100 — A, B, E, P, T, U. See 315.

NCR 315/RMC-501 — A, B, E, P, T. See 315. F. Decimal digits. U. Model 101 only.

NCR 315/RMC-502 — A, B, E, T, U. See 315. F. See 315/RMC-501.

NCR 390 — A. Assumes two five-digit fields. B. Per 12 digits. E. Memory is organized in four-bit digits.

NCR 500 — A, B, E. See 390. W. 562 and 563 readers and 572 punch also available.

PACIFIC DATA PDS 1020 — A. Assumes two four-digit fields. B. Per four digits. D. Internal storage is delay line. E. Memory is organized in four-bit digits.

PHILCO 102, 102M — F. 24 for 102M. J. 127 for 102M. M. XDE for 102M. N. XA for 102M. P. Up to 96 full-duplex lines can be accommodated. R. 316 also available. W. ASR 35 available. Note. 102 formerly marketed as Philco CPS. Monthly rental of 8K-12K and delivery date of 5/68 for 102M.

PHILCO 1000 — A. Assumes two four-character fields. B. Per byte. E. Memory is organized in six-bit characters or bytes.

PHILCO 2000/210 — T. 137 also available. U. 156 reader and 165 punch also available. V. 151 also available. W. 141 reader and ASR 35 teletype also available. X. ALTAC in addition to FORTRAN.

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† X – all except: B – byte manipulation, D – double precision, E – translate-edit capability, F – floating-point instructions, H – hardware multiply-divide, L – logical operations.

‡ X – all except: A – base address relocation, C – clock, I – program interrupt, M – memory protection, P – dynamic page relocation, S – supervisor mode.

§ G – batch, R – real-time, T – time-sharing.

— None. ☆ See Section II-B. • Information unavailable.

CENTRAL PROCESSORS CHARACTERISTICS

Model	Price Range (Monthly $K)	First Delivery (Mo/Yr)	Add Time (µs)	Storage Cycle (µs)	Accumulators	Internal Storage (K words)	Word Size	Floating-Point Precision	Overlap	Address Size	Operation Codes	Indirect Addressing	Index Registers	Extensiveness †	Time-Sharing ‡	I/O Channels	Transfer Rate	Fixed Head	Movable Head	Magnetic Tape	Card Reader	Card Punch	Printer	Paper-Tape Reader	Paper-Tape Punch	Algebraic Compiler	Monitor §	Business Compiler
PHILCO 2000/211	24-66		6.2		3	8-32	35			16			1	XDE		8		272		234^T	258^U		256^V	240^W	☆^W	√^X		√
		3/60		10			48b	1			250		8		I		6M		315			265^U		240^W			R	
PHILCO 2000/212	45-120		.6		3	32-65	35			16			∞	XDE		8		272		234^T	258^U		256^V	240^W	☆^W	√^X		√
		2/63		1.5			48b	1			250		8		I		56M		315			265^U		240^W			R	
PHILCO 2000/213	55-180		.55^A		3	32-2000^D	35			16			∞	XDE		8		272		334^T	258^U		256^V	240^W	☆^W	√^X		√
		—		1.15			48b	—			250		8		IM		56M		315			265^U		240^W			R	
RAYTHEON 250	1-6		24		3	1-16^D	—			14			—	DHL		4	—	☆	☆	☆				☆^W		√^X		√
		12/60		3070			22b	—			51		1		—		67K				☆		☆					
RAYTHEON 440	1.6-9		1^A		6	4-32^D	—			15			—^K	HL		4	—	☆	☆	☆				☆^W		√		—
		3/64		2			24b	√			60^J		7^L		I		6M				☆		☆				G	
RAYTHEON 520	2-11		1^A		7	4-32^D	24			15			—^K	BHL		4	—	☆	☆	☆				☆^W		√		
		10/65		1^B			24b	—			62		7^L		XA		667K				☆	☆	☆				GRT	
RAYTHEON 703	.3-1.5		3.5		4	4-32	—			16			—	BE		6	—	*	*	*				*^W		—		
		10/67		1.75			16b	—			73		1		I		571K^Q				*		*		*^W		GR	
RCA SPECTRA 70/15	2.8-6.7		48^A		—	4-8	—			16			—	BL		6	—			70/432^T	70/237		70/242^V	70/221	—	√		
		10/65		2^B			1a^E	—			26		0		I		*					70/234^U		70/221^W			G	

PHILCO 2000/211 — T, U, V, W, X. See 2000/210.

PHILCO 2000/212 — T, U, V, W, X. See 2000/210.

PHILCO 2000/213 — T, U, V, W, X. See 2000/210. Note. System will be built to meet user's requirements.
A. Four-level instruction look-ahead. D. Multi-processor system permits four main processors to access large common core storage simultaneously.

RAYTHEON 250 — D. Internal storage is magnetostrictive delay line. 16 words of 12-microsecond cycle time included. W. ASR 33 teletype available. X. ALTRAN and NELIAC in addition to FORTRAN.

RAYTHEON 440 — A. Variable from one to 11 microseconds. D. 256 to 2048 words of non-destructive BIAX memory available. 256 words standard. J. Instruction repertoire described by programmer macro-instructions. K, L. Index registers and indirect addressing available through micro-command portion of stored logic. W. See 250. Note. System no longer marketed.

RAYTHEON 520 — A. Variable from one to five microseconds. B. Two-microsecond memory available. D, K, L. See 440. W. See 250.

RAYTHEON 703 — Q. Words per second. W. See 250.

RCA SPECTRA 70/15 — A. Assumes two five-character fields. B. Per byte. E. Memory is organized in eight-bit characters or bytes. T. 70/442 and 70/445 also available. U. 70/236 punch also available. V. 70/243 and 70/248 also available. W. 70/224 reader also available.

† X – all except: B – byte manipulation, D – double precision, E – translate-edit capability, F – floating-point instructions, H – hardware multiply-divide, L – logical operations.
‡ X – all except: A – base address relocation, C – clock, I – program interrupt, M – memory protection, P – dynamic page relocation, S – supervisor mode.
§ G – batch, R – real-time, T – time-sharing.
— None. ☆ See Section II-B. * Information unavailable.

Processor Characteristics

Machine	Price Range (Monthly, $Thousand)	First Delivery (Mo./Yr.)	Complete Add Time (μs)	Storage Cycle Time (μs)	Accumulators	Capacity (Thousand Words)	Word Size	Floating-Point Precision	Overlap	Address Size	Operation Codes	Indirect Addressing	Index Registers	Extensiveness†	Time-Sharing‡
RCA SPECTRA 70/25	6-12	12/65	28[A]	1.5[B]	15	16-65	1a[E]	—	—	16	31	—	15	XDF	CI
RCA SPECTRA 70/35	6.5-25	10/66	19[A]	1.44[B]	16[C]	16-65	1a[E]	56	—	16	144	—	43	ALL	XAP
RCA SPECTRA 70/45	8-30	7/66	8.88[A]	1.44[B]	16[C]	16-262	1a[E]	56	—	16	144	—	43	ALL	XAP
RCA SPECTRA 70/46	24-70	*	8.88[A]	1.44[B]	16[C]	262	1a[E]	56	—	16	147	—	43	ALL	ALL
RCA SPECTRA 70/55	14-60	7/66	2.58[A]	.84[B]	16[C]	65-524	1a[E]	56	—	16	144	—	43	ALL	XAP
RCA 301	3.3-25	2/61	98[A]	7[B]	—	10-40	1a[E]	8[F]	—	4[H]	46	∞	3[L]	XD	—
RCA 501	11-26	11/59	360[A]	15[B]	5	16-262	1a[E]	—	—	12	50	—	7	XEF	—
RCA 3301	9-40	7/64	27.5[A]	1.5[B]	—	40-320	1a[E]	8[F]	—	4[H]	62	∞	3	XD	CI

Input-Output, Auxiliary Storage, Peripheral Devices, and Software

Machine	I/O Channels	Transfer Rate	Fixed Head	Movable Head	Magnetic Tape	Card Reader	Card Punch	Printer	Paper-Tape Reader	Paper-Tape Punch	Algebraic Compiler	Monitor§	Business Compiler
RCA SPECTRA 70/25	8[P]	.55M	—	—	70/432[T]	70/237	70/234[U]	70/242[V]	70/221	70/221[W]	—	G	√
RCA SPECTRA 70/35	2[P]	.8M		70/567 / 70/564[S]	70/432[T]	70/237	70/234[U]	70/242[V]	70/221	70/221[W]	√	GR	√
RCA SPECTRA 70/45	2[P]	.8M		70/567 / 70/564[S]	70/432[T]	70/237	70/234[U]	70/242[V]	70/221	70/221[W]	√	GR	√
RCA SPECTRA 70/46	4[P]	694K		70/567 / 70/564[S]	70/432[T]	70/237	70/234[U]	70/242[V]	70/221	70/221[W]	√	GRT	√
RCA SPECTRA 70/55	6[P]	.75M		70/567 / 70/564[S]	70/432[T]	70/237	70/234[U]	70/242[V]	70/221	70/221[W]	√	GR	√
RCA 301	2	*			382[T]	329	334	333[V]	321[W]	321[W]	√	—	√
RCA 501	4	*			581[T]	528	538	533	512[W]		—	—	√
RCA 3301	3	.47M			681[T]	329	3436	335	331	322	√	—	√

Notes

RCA SPECTRA 70/25 — A, E, T, U, V, W. See Spectra 70/15. B. Per two bytes. P. Plus one multiplexer of eight trunks.

RCA SPECTRA 70/35 — A. Assumes two four-character fields. B, P. See Spectra 70/25. C. For each of up to four processor states. E, T, U, V, W. See Spectra 70/15. S. 70/568 also available.

RCA SPECTRA 70/45 — A, C, S. See Spectra 70/35. B, P. See Spectra 70/25. E, T, U, V, W. See Spectra 70/15.

RCA SPECTRA 70/46 — A, C, S. See Spectra 70/35. B, P. See Spectra 70/25. E, T, U, V, W. See Spectra 70/15.

RCA SPECTRA 70/55 — A, C, S. See Spectra 70/35. B. Per four bytes. E, T, U, V, W. See Spectra 70/15. P. See Spectra 70/25.

RCA 301 — A. Assumes two eight-character fields. Higher speeds available. B. See Spectra 70/25. E. Memory is organized in six-bit characters or bytes. F, H. Decimal digits. L. On Models 354 and 355 only. T. 581 and 582 also available. V. 335 also available. W. 322 reader and 331 and 332 punches also available.

RCA 501 — A. See Spectra 70/15. B. See Spectra 70/55. E. See 301. T. 582 also available. W. 513 punch also available. Note. System no longer marketed.

RCA 3301 — A. See Spectra 70/15. B. See Spectra 70/25. E, F, H, T. See 301.

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† X – all except: B – byte manipulation, D – double precision, E – translate-edit capability, F – floating-point instructions, H – hardware multiply-divide, L – logical operations.

‡ X – all except: A – base address relocation, C – clock, I – program interrupt, M – memory protection, P – dynamic page relocation, S – supervisor mode.

§ G – batch, R – real-time, T – time-sharing. — None. ☆ See Section II-B. • Information unavailable.

CENTRAL PROCESSORS — Characteristics

Characteristics

Machine	Price Range (monthly in $ thousand)	First Delivery (mo./yr.)	Processor Speed — Complete Add Time (µs)	Storage Cycle Time (µs)	Accumulators	Internal Storage — Capacity (K words)	Word Size	Floating-Point Precision	Overlap	Instruction Set — Address Size	Operation Codes	Indirect Addressing	Index Registers	Extensiveness †	Time-Sharing ‡
SCIENTIFIC CONTROL 650	.4-.9	4/66	4	2	1	4-32	12b	—	—	6	16	1	1	HL	I
SCIENTIFIC CONTROL 655	.75-1.3	6/66	3.75	1.75	1	4-32	24b	—		15	128	∞	1	FHL	CIM
SCIENTIFIC CONTROL 660/2, 670/2	1.6-2.5	11/65	4	2	1	4-32	24b	—		15	128	∞	1	FHL	CIM
SCIENTIFIC CONTROL 660/5	.7-1	11/65	10	5	1	4-32	24b	—		15	128	∞	1	FHL	CIM
SCIENTIFIC CONTROL 6700	10-17.5	9/67	3.5	1.75	1^C	4-131	24b	39	4^G	14	128	∞	1	XDE	XP
SCIENTIFIC DATA SDS 930	2-10	6/64	3.5	1.75	1	4-32	24b	—	—	14	60	∞	1	HL	CI
SCIENTIFIC DATA SDS 940	25-30	4/66	3.5	1.75	1	$32\text{-}65^D$	24b	—	1	14	60	∞	1	HL	ALL
SCIENTIFIC DATA SDS 9300	3-15	12/64	1.75	1.75	1	4-32	24b	39	2	15	60	∞	3	XBE	CIM
SCIENTIFIC DATA SIGMA 2	3.1-7.1	12/66	2.25	.9	2	4-65	16b	—	—	16	37	1	2	HL	XP

Machine	Input-Output — Number of Channels	Transfer Rate	Auxiliary Storage — Fixed Head	Movable Head	Magnetic Tape	Peripheral Devices — Card Reader	Card Punch	Printer	Paper-Tape Reader	Paper-Tape Punch	Software — Algebraic Compiler	Monitor §	Business Compiler
SCIENTIFIC CONTROL 650	3	300K	—	5625	5415^T	5930^U	5955	5510^V	5210	5220^W	√		—
SCIENTIFIC CONTROL 655	3	570K	—	6625	6415^T	6930^U	6955	6510^V	6210	6220^W	√		—
SCIENTIFIC CONTROL 660/2, 670/2	3	.5M	—	6625	6415^T	6930^U	6955	6510^V	6210	6220^W	√		—
SCIENTIFIC CONTROL 660/5	3	.2M	—	6625	6415^T	6930^U	6955	6510^V	6210	6220^W	√		—
SCIENTIFIC CONTROL 6700	*	*	—	*	*	*	*	*	*	*	√	T	—
SCIENTIFIC DATA SDS 930	8^P	1.1M	9367	9165	9546	9152^U	9158	9171^V	9234	9234	$√^X$	GR	√
SCIENTIFIC DATA SDS 940	8^P	2M	9367	9165	9546	9152^U	9158	9171^V	9234	9234	$√^X$	GT	√
SCIENTIFIC DATA SDS 9300	8^P	1.1M	9367	9165	9546	9152^U	9158	9171^V	9234	9234	$√^X$	GR	√
SCIENTIFIC DATA SIGMA 2	80	.5M	7202^R		7321^T	7120^U	7160	7440^V	7060	7060	√	GR	√

Row notes:

SCIENTIFIC CONTROL 650 — T. 6410, 6420 and 6425 also available. U. 5940 reader also available. V. 5520, 5540 and 5550 also available. W. ASR 33 teletype also available.

SCIENTIFIC CONTROL 655 — T, W. See 650. U. 6940 reader also available. V. 6520, 6540 and 6550 also available.

SCIENTIFIC CONTROL 660/2, 670/2 — T, W. See 650. U, V. See 655.

SCIENTIFIC CONTROL 660/5 — T, W. See 650. U, V. See 655.

SCIENTIFIC CONTROL 6700 — C. Per processor state. G. Per memory module.

SCIENTIFIC DATA SDS 930 — P. Plus one data multiplexer. U. 9153 reader also available. V. 9379 also available. X. ALGOL in addition to FORTRAN.

SCIENTIFIC DATA SDS 940 — P, U, V, X. See SDS 930.

SCIENTIFIC DATA SDS 9300 — P, U, V, X. See SDS 930.

SCIENTIFIC DATA SIGMA 2 — R. 7204 also available. T. 7323, 7361 and 7371 also available. U. 7140 reader also available. V. 7445 also available.

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† X – all except: B – byte manipulation, D – double precision, E – translate-edit capability, F – floating-point instructions, H – hardware multiply-divide, L – logical operations.

‡ X – all except: A – base address relocation, C – clock, I – program interrupt, M – memory protection, P – dynamic page relocation, S – supervisor mode.

§ G – batch, R – real-time, T – time-sharing.

— None. ☆ See Section II-B. • Information unavailable.

CENTRAL PROCESSORS — CHARACTERISTICS

Central Processor Characteristics

System	Price Range (Monthly, $ Thousand)	First Delivery (Mo./Yr.)	Processor Speed (Add Time, μsec)	Storage Cycle Time (μsec)	Accumulators	Internal Storage Capacity (Thousand Words)	Word Size	Floating-Point Precision	Overlap	Address Size	Operation Codes	Indirect Addressing	Index Registers	Extensiveness †	Time-Sharing ‡
SCIENTIFIC DATA SIGMA 5	2.5-10	12/67	2.0	.85	16[C]	4-131	32b	56	—	17	93	1	7[L]	XBE	XAP
SCIENTIFIC DATA SIGMA 7	5-20	12/66	1.7	.85	16[C]	4-131[D]	32b	56	—	17	120	1	7[L]	ALL	XA
SEL 810A, 810B	.5-2.5	7/65	3.5[A]	1.75[B]	2	4-32	16b	—	—	10	57[J]	∞	1[L]	HL	XAP
SEL 840A, 840MP	1.1-5	7/65	3.5	1.75	2[C]	4-32	24b	37	—	15	91	∞	3	XBE	XAP
STANDARD COMPUTER IC6000	14-17	11/66	12	4	1	8-32[D]	36b[E]	27	—[G]	15	—[J]	1	7	ALL	CIS
UNIVAC 418	4-25	9/64	4	2	2	4-65	18b	—	—	10	93	1	8	HL	XMP
UNIVAC 490	18-55	12/61	9.6[A]	4.8	2	16-65	30b	—	—	15	64	—	7	——	IM
UNIVAC 491, 492	13-25	10/65	9.6	4.8	2	16-65	30b	—	—	15	64	—	7	XBF	XP

Input-Output, Auxiliary Storage, Peripheral Devices, Software

System	I/O Channels	Transfer Rate	Aux. Storage Fixed Head	Movable Head	Magnetic Tape	Card Reader	Card Punch	Printer	Paper-Tape Reader	Paper-Tape Punch	Algebraic Compiler	Monitor §	Business Compiler
SCIENTIFIC DATA SIGMA 5	256	4M	7202[R]	—	7321[T]	7120[U]	7160	7440[V]	7060	7060	√	GR	√
SCIENTIFIC DATA SIGMA 7	256	4M	7202[R]	—	7321[T]	7120[U]	7160	7440[V]	7060	7060	√	GRT	√
SEL 810A, 810B	64	1.14M[Q]	80/654	80/653	80/615	80/410[U]	80/440	80/730	80/510	—[W]	√	G[Y]	—
SEL 840A, 840MP	64	1.71M	80/654	80/653	80/615	80/410[U]	80/440	80/730	80/510	—[W]	√	GRT	—
STANDARD COMPUTER IC6000	2	90K	—	—	MTU/61[T]	CR/100[U]	—	—[V]	—	—	—[X]	—[Y]	—[Z]
UNIVAC 418	16	.2M	FH330[R]	FRII	IIA[T]	1004[U]	1004[U]	8560	903	606	√	GR	√
UNIVAC 490	14	70K	FH880	FRII	VIIIC	706	—	758	1004	1004	√	GR	√
UNIVAC 491, 492	14[P]	70K	FH880	FRII	VIC[T]	706	600	758	1004	1004	√	GR	√

Notes

SCIENTIFIC DATA SIGMA 5 — C. Expandable to 256.   L. Up to 112 optionally available.   R, T, U, V. See Sigma 2.

SCIENTIFIC DATA SIGMA 7 — C. Per 4000 words of memory.   L. Up to 224 optionally available.   R, T, U, V. See Sigma 2.

SEL 810A, 810B — A. 1.58 for 810 B.   B. 0.79 for 810B.   J. 68 for 810B.   L Two optionally available for 810B.   Q. 1.26M for 810B.   U. 80/450A reader also available.   W. BRPE teletype available.   Y. Real-time monitor available for 810B.   Note. 0.6-3K monthly rental for 810B. Delivery date is 2/68.

SEL 840A, 840MP — C. Two additional 48-bit accumulators optionally available.   U, W. See 810A.   Note. 3-16K monthly rental and 6/67 delivery date for 840MP, which has been designed for multi-processing.

STANDARD COMPUTER IC6000 — D. Expandable in 8K increments.   E. Plus parity bit.   G. Overlap exists only between main memory and unused portion of the 1K control memory.   J. System allows emulation of up to 1000 different instructions at one time.   T. MTU/91 also available.   U. CR/800 and CR/1500 also available.   V. Selectric console typewriter available.   X, Y, Z. Availability of software depends on system being emulated.   Note. Systems have been designed specifically for general-purpose emulation.

UNIVAC 418 — R. FH 880 also available.   T. III A, III C and VI C also available.   U. Model II only.

UNIVAC 490 — A. 4.8 microseconds in repeat mode.   Note. System no longer marketed.

UNIVAC 491, 492 — P. Eight channels are standard on 491.   T. VIII C also available.   Note. Systems no longer marketed.

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† X – all except: B – byte manipulation, D – double precision, E – translate-edit capability, F – floating-point instructions, H – hardware multiply-divide, L – logical operations.
‡ X – all except: A – base address relocation, C – clock, I – program interrupt, M – memory protection, P – dynamic page relocation, S – supervisor mode.
§ batch, R – real-time, T – time-sharing.
— None. ☆ See Section II-B. • Information unavailable.

CENTRAL PROCESSORS — Characteristics

Processor / Internal Storage / Instruction Set

System	Price Range (Monthly in $ Thousand)	First Delivery (Mo/Yr)	Complete Add Time (μs)	Storage Cycle Time (μs)	Accumulators	Internal Storage Capacity (Thousand Words)	Word Size	Floating-Point Precision	Overlap	Address Size	Operation Codes	Indirect Addressing	Index Registers	Extensiveness†	Time-Sharing‡
UNIVAC 494	28-45	3/66	.75[A]	.75	2	65-131 / 30b	48	2	—	16	116	—	14	XB	XP
UNIVAC 1004 I	1.5-1.8	9/63	112[A]	8[B]	1	.961[D]	1a[E]	—	—	24	36	—	0	—	I
UNIVAC 1004 II, III	1.6-2.5	6/64	91[A]	6.5[B]	1	.961[D]	1a[E]	—	—	24	36	—	0	—	I
UNIVAC 1005 I	1.8-2	2/66	256[A]	8[B]	1	2-4	1a[E]	—	—	24	36	—	0	B	I
UNIVAC 1005 II, III	1.9-2.7	2/66	208[A]	6.5[B]	1	2-4	1a[E]	—	—	24	36	1	0	B	I
UNIVAC 1050 III	2.4-14.5	9/63	117[A]	4.5[B]	2	4-32	1a[E]	—	—	15	50	—	7	XDF	I
UNIVAC 1107	32-80	9/62	4[A]	4	16	32-65 / 36b	27	2	—	16	152	∞	15	XDE	IM
UNIVAC 1108 II	45-250	12/65	.75	.75	16	62-262 / 36b	27	8	—	18	165	∞	15	XE	XP

Input-Output / Auxiliary Storage / Peripheral Devices / Software

System	Number of Channels	Transfer Rate	Fixed Head	Movable Head	Magnetic Tape	Card Reader	Card Punch	Printer	Paper-Tape Reader	Paper-Tape Punch	Algebraic Compiler	Monitor§	Business Compiler
UNIVAC 494	24	.55M	FH432[R]	FRII	VIC[T]	706	600	758[V]	1004	1004	√	GR	√
UNIVAC 1004 I	4	20.8K	—	8410		1004[U]	1004[U]	1004[V]	606	902	—		—
UNIVAC 1004 II, III	4	25.7K	—	8410	VIC[T]	1004[U]	1004[U]	1004[V]	606	902	—		—
UNIVAC 1005 I	4	20.8K	—	8410		1004[U]	1004[U]	1004[V]	606	902	—		—
UNIVAC 1005 II, III	4	25.7K	—	8410	VIC	1004[U]	1004[U]	1004[V]	606	902	—		—
UNIVAC 1050 III	8	.22M	—	FRII	IIIA[T]	706	600	755	606	903	√	GR	√
UNIVAC 1107	16	1.6M	FH880	FRII	IIA[T]	706	600	751	606	902	√[X]	GR	√
UNIVAC 1108 II	8[P]	1.4M	FH432[R]	FRII	VIC[T]	706	600	758	606	902	√[X]	GRT	√

Notes

UNIVAC 494 — A. Instruction look-ahead allows increased internal speed. R. FH 880. and FH 1782 also available. T, V. See 491, 492.

UNIVAC 1004 I — A. Assumes two five-character fields. B. Per byte. D. Plugboard serves as instruction storage unit. 961 additional positions of core memory available. E. Memory is organized in six-bit characters or bytes. U. Models IA and IB. V. Model I only. Note. System no longer marketed.

UNIVAC 1004 II, III — A, B, D, E. See 1004 I. T. Available on Model III only. U. Model II only. V. Model III only. Note. System no longer marketed.

UNIVAC 1005 I — A, B, E, U, V. See 1004 I. Note. System no longer marketed.

UNIVAC 1005 II, III — A, B, E. See 1004 I. U, V. See 1004 II, III. Note. Systems no longer marketed.

UNIVAC 1050 III — A, B. See 1004 I. E. Memory is organized in six-bit characters or bytes. T. III C and VI C also available. Note. System no longer marketed.

UNIVAC 1107 — A. Thin-film memory allows increased internal speed. T. See 418. X. AL-GOL in addition to FORTRAN. Note. System no longer marketed.

UNIVAC 1108 II — P. 16 channels also available. R. See 494. T. See 491. X. See 1107.

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† X – all except: B – byte manipulation, D – double precision, E – translate-edit capability, F – floating-point instructions, H – hardware multiply-divide, L – logical operations.
‡ X – all except: A – base address relocation, C – clock, I – program interrupt, M – memory protection, P – dynamic page relocation, S – supervisor mode.
§ G – batch, R – real-time, T – time-sharing.
— None. ☆ See Section II-B. • Information unavailable.

CENTRAL PROCESSORS CHARACTERISTICS

Processor Characteristics

Model	Price Range (Monthly, $ thousands)	First Delivery (Mo./Yr.)	Processor Speed (Add Time, µs)	Storage Cycle Time (µs)	Accumulators	Internal Storage (Capacity, thousand words)	Word Size	Floating-Point Precision	Overlap	Address Size	Operation Codes	Indirect Addressing	Index Registers	Extensiveness †
UNIVAC 9200	1-2.5	6/67	104^A	1.2^B	*	8-16	1a^E	—	11	16	35	—	16	B
UNIVAC 9300	1.7-9.3	9/67	52^A	.6^B	*	8-32	1a^E	—	11	16	35	—	16	XDF
UNIVAC SS 80/90 I, II	3.6-13	1/60	51^A	17^B	*	1.2^D	10d^E	—	1	16	51	—	9^L	L
UNIVAC UIII	16.6	6/62	8^A	4^B	19	8-32	6d^E	—	—	10	61	∞	15	HL
VARIAN DATA 610 SERIES	.3-.5	7/64	6000^A	3000^B	1	.2-4^D	12b	—	—	8	28^J	—	1^L	L
VARIAN DATA 620 I	.6	7/65	3.6	1.8	1	2-32	16b^E	—	—	9	35^J	1	2^L	BHL
WESTINGHOUSE PRODAC 50	.5-.75	8/64	18	4.5	—^{C}	4-16^D	14b	—	—	8	26	1	0	L
WESTINGHOUSE PRODAC 250	1.25	9/67	2.25	.9^B	1	4-65	16b	—	—	16	25	1	2	HL

Input-Output, Storage, Peripheral Devices, and Software

Model	Time-Sharing ‡	I/O Channels	Transfer Rate	Auxiliary Storage, Fixed Head	Movable Head	Magnetic Tape	Card Reader	Card Punch	Printer	Paper-Tape Reader	Paper-Tape Punch	Algebraic Compiler	Monitor §	Business Compiler
UNIVAC 9200	I	1	85K	—	8410	—	711	603	3030^V	—	—	—		—
UNIVAC 9300	I	1	85K	—	8410	VIC	711	603^U	3030^V	—	—	—		—
UNIVAC SS 80/90 I, II	I	4	30K	RANDEX	—	IIA	711^U		755^V	*		√		√
UNIVAC UIII	XP	12	.2M	FH880	—	IIA^T	703	652	752	901	901	√	GR	√
VARIAN DATA 610 SERIES	C	*	—	—	—	—	—	—	—	—^{W}	—	—		—
VARIAN DATA 620 I	CIM	64	—	☆	☆	☆	☆	☆	☆	☆	☆	√		—
WESTINGHOUSE PRODAC 50	CIS	64	420K	☆	—	☆	☆	☆	☆	—^{W}	☆^{W}	—		—
WESTINGHOUSE PRODAC 250	XP	20	5.6M	☆	☆	☆	☆	☆	☆	—	☆	√	GR	

Notes by model

UNIVAC 9200 — A, B. See 1004 I. E. Memory is organized in eight-bit characters or bytes. V. Model 00 only.

UNIVAC 9300 — A, B. See 1004 I. E. See 9200. U. 604 punch also available. V. Model 02 only.

UNIVAC SS 80/90 I, II — A. Assumes two ten-digit fields. B. Per ten digits. D. 2.4K to 7.6K drum memory available with 3.4-millisecond cycle time. E. Memory is organized in six-bit digits. L. Three on Model I. U, V. See 490. Note. System no longer marketed.

UNIVAC UIII — A. Assumes two six-digit fields. B. Per six digits. E. Memory is organized in four-bit digits. T. III A and III C also available. Note. System no longer marketed.

VARIAN DATA 610 SERIES — A. Model 612 has add time of 200 microseconds. B. Memory is magnetostrictive delay line. Model 612 has cycle time of 100 microseconds. D. Model 610 has 256-word memory. J. Micro-programming increases instruction repertoire. L. Model 610 has no index registers. W. ASR 33 teletype available. Note. No rental price announced. Prices derived from purchase price.

VARIAN DATA 620 I — E. Other word sizes available. J. 107 for 620 I. See 610. L. Additional 32 optionally available. Note. See 610.

WESTINGHOUSE PRODAC 50 — C. Any memory address may be used as an accumulator. D. Up to 64K words of storage available in the form of bulk core. W. ASR 35 teletype also available.

WESTINGHOUSE PRODAC 250 — B. 1.1 for memory beyond 16K. Note. A version of the Scientific Data Systems Sigma 2.

Legend

† X – all except: B – byte manipulation, D – double precision, E – translate-edit capability, F – floating-point instructions, H – hardware multiply-divide, L – logical operations.

‡ X – all except: A – base address relocation, C – clock, I – program interrupt, M – memory protection, P – dynamic page relocation, S – supervisor mode.

§ G – batch, R – real-time, T – time-sharing.

— None. ☆ See Section II-B. * Information unavailable.

England / Denmark — Central Processor Characteristics

Name / Price Range (Monthly $K)	First Delivery	Proc. Speed (Add µs)	Storage Cycle (µs)	Accum.	Internal Storage (K words)	Word Size	Floating-Pt Prec.	Overlap	Address Size	Op. Codes	Indirect Addr.	Index Reg.	Extensiveness †	Time-Sharing ‡	I/O Channels	Transfer Rate	Fixed Head	Movable Head	Magnetic Tape	Card Reader	Card Punch	Printer	Paper-Tape Reader	Paper-Tape Punch	Algebraic Compiler	Monitor §	Business Compiler
WESTINGHOUSE PRODAC 500 — 2.25	6/63	4	2	1	4-32	18b	—	—	12	92	1	1	EHL	CIS	192	2.25M	☆	☆	☆	☆	☆	☆	☆^W	—^W	—	—	—

W. See Prodac 50.

Denmark

Name / Price Range (Monthly $K)	First Delivery	Proc. Speed (Add µs)	Storage Cycle (µs)	Accum.	Internal Storage (K words)	Word Size	Floating-Pt Prec.	Overlap	Address Size	Op. Codes	Indirect Addr.	Index Reg.	Extensiveness †	Time-Sharing ‡	I/O Channels	Transfer Rate	Fixed Head	Movable Head	Magnetic Tape	Card Reader	Card Punch	Printer	Paper-Tape Reader	Paper-Tape Punch	Algebraic Compiler	Monitor §	Business Compiler
REGNECENTRALEN GIER — 3-7.5	12/61	49	6.6	*	1^D	40b	√	*	*	*	√	_L	F	I	*	*	14^R	93.3^S	GIER	—	—	GIER 2000	—	—	√^X	*	—

D. 4K core storage available as secondary storage. L. Each word of memory can be used as an index register. R, S. Indicates transfer rate in thousands of characters per second. Model numbers not yet available. X. ALGOL '60.

England

Name / Price Range (Monthly $K)	First Delivery	Proc. Speed (Add µs)	Storage Cycle (µs)	Accum.	Internal Storage (K words)	Word Size	Floating-Pt Prec.	Overlap	Address Size	Op. Codes	Indirect Addr.	Index Reg.	Extensiveness †	Time-Sharing ‡	I/O Channels	Transfer Rate	Fixed Head	Movable Head	Magnetic Tape	Card Reader	Card Punch	Printer	Paper-Tape Reader	Paper-Tape Punch	Algebraic Compiler	Monitor §	Business Compiler
ELLIOTT 903 — .7-4.5	10/65	23	6	1	8-65	18b	—	—	13	25	—	4	FH	I	8	300K	—	—	MT1^T	—	—	—	PT1^W	PT1^W	√^X	—	—
ELLIOTT 4120 — 1.9-6.5	4/65	12	6	2	8-32	42b	—	—	6-15	270	1	1	BF	I	12	154K	—	4260	4270	4240	4240	4250	4210	4210	√^X	GT	√^Z
ELLIOTT 4130 — 2.5-33	7/66	4.5	2	4	8-262	42b	—	—	6-15	270	1	1	BF	IM	14	182K	—	4260	4270	4240	4240	4250	4210	4210	√^X	GT	√^Z
ELLIOTT MCS 920B — 1.5-4.5	11/65	23	6	1	8-65	18b	—	—	13	25	—	4	FH	I	8	300K	—	—	MT1^T	—	—	—	PT1^W	PT1^W	√^X	—	—
ENGLISH ELECTRIC 4/10 — 1.8-5.8	1/67	22.5^A	1.5^B	—	8-32	1a^E	—	—	12	24	—	—	XDF	I	8	*	—	—	4430 / 4440^S	4453^T	4514^U / 4521^U	4554^V / 4580^W	4585	—	√^X	T	√^Z

ELLIOTT 903 notes: T, W. Model numbers not yet available. Characteristics listed in appropriate sections under these code symbols. X. ALGOL '60 in addition to FOR- TRAN. Note. Computer formerly marketed as MCS 920.

ELLIOTT 4120 notes: X. See 903. Z. LANGUAGE H.

ELLIOTT 4130 notes: Z. See 4120. X. See 903.

ELLIOTT MCS 920B notes: T, W, X. See 903.

ENGLISH ELECTRIC 4/10 notes: A. Assumes two four-character fields. B. Per two bytes. E. Memory is organized in eight-bit characters or bytes. S. 4425 also available. T. 4150, 4452 and 4454 also available. U. 4512, 4513 and 4515 readers and 4520 and 4522 punches also available. V. 4555, 4560 and 4561 also available. W. 4581 reader also available. X. ALGOL in addition to FORTRAN. Z. CLEO in addition to COBOL.

†X – all except: B – byte manipulation, D – double precision, E – translate-edit capability, F – floating-point instructions, H – hardware multiply-divide, L – logical operations.
‡X – all except: A – base address relocation, C – clock, I – program interrupt, M – memory protection, P – dynamic page relocation, S – supervisor mode.
§G – batch, R – real-time, T – time-sharing.
— None. ☆ See Section II-B. * Information unavailable.

CENTRAL PROCESSORS — CHARACTERISTICS

System	Price Range (Monthly, $1000)	First Delivery	Processor Speed (Add Time, μs)	Storage Cycle Time (μs)	Accumulators	Internal Storage (Capacity, 1000 words)	Word Size	Floating-Point Precision	Overlap	Address Size	Operation Codes	Indirect Addressing	Index Registers	Extensiveness†	Time-Sharing‡	I/O Channels	Transfer Rate	Fixed Head	Movable Head	Magnetic Tape	Card Reader	Card Punch	Printer	Paper-Tape Reader	Paper-Tape Punch	Algebraic Compiler	Monitor	Business Compiler
ENGLISH ELECTRIC 4/30	4-13.1	3/67	22.5[A]	1.5[B]	16	16-65 / 1a[E]	—	—	—	12	41	—	16	XDF	I	8	*	4430, 4440[S]	—	4453[T]	4574[U], 4521[U]	4554[V]	4585, 4580[W]	—	—	√[X]	T	√[Z]
ENGLISH ELECTRIC 4/50	8.2-26.2	9/67	8.9[A]	1.4[B]	16	16-262 / 1a[E]	24	—	—	12	—	*	16	ALL	IM	4	*	4430, 4440[S]	—	4453[T]	4574[U], 4521[U]	4554[V]	4585, 4580[W]	—	—	√[X]	T	√[Z]
ENGLISH ELECTRIC 4/70, 4/75	10.2-30	12/67	1.9[A]	1[B]	16	65-1048 / 1a[E]	24	√	—	12	—	*	16	ALL	IM	4	*	4430, 4440[S]	—	4453[T]	4574[U], 4521[U]	4554[V]	4585, 4580[W]	—	—	√[X]	T	√[Z]
ENGLISH ELECTRIC KDF 7	1.5-6	/65	36	6	4	4-32 / 24b	—	—	—	15	64	1	5	—	I	32	*	—	—	—	—	—	WESTREX / WESTREX	—	—	—	R	—
ENGLISH ELECTRIC KDF 9	10-35	4/63	1[A]	6	3	4-32 / 48b	—	—	—	6	155	1	60	F	IM	16	410K, MH[S]	1081[T]	CD1[U]	1040	CD1[U]	CD1[U]	1040	PT2[W]	PT1[W]	√[X]	GT	—
ENGLISH ELECTRIC LEO 326	14-35	6/65	5[A]	2.5	1	4-32 / 42b	2	—	—	13	97	1	12	BF	IM	14	.35M	MT[T]	—	☆	☆	☆	☆	☆	—	√[X]	GT	√[Z]
ENGLISH ELECTRIC LEO 360	11-27	12/64	12	6	1	4-32 / 42b	2	—	—	13	97	1	12	BF	IM	14	.35M	MT[T]	—	☆	☆	☆	☆	☆	—	√[X]	GT	√[Z]
GEC 90/2	.7-2.8	2/65	3.5	1.75	1	2-32 / 12b	—	—	—	15	45	∞	1	HL	CI	2	560[R], 7.2M	—	—	1.5-96[T]	800[U]	300[U]	1000[V], 1000[W]	150[W]	—	√	—	—

ENGLISH ELECTRIC 4/30 — A, B, E, S, T, U, V, W, X, Z. See 4/10.

ENGLISH ELECTRIC 4/50 — A, B, E, S, T, U, V, W, X, Z. See 4/10.

ENGLISH ELECTRIC 4/70, 4/75 — A, E, S, T, U, V, W, X, Z. See 4/10.   B. Per four bytes.

ENGLISH ELECTRIC KDF 7 — Note. System designed for process control.

ENGLISH ELECTRIC KDF 9 — A. Instruction look-ahead allows increased internal speed.   S, U, W. Model numbers not yet available. Characteristics listed in appropriate sections under these code symbols.   T. 1085 also available.   X. See 4/10.

ENGLISH ELECTRIC LEO 326 — T. Model numbers not yet available. Characteristics listed in appropriate section under this code number.   X, Z. CLEO.

ENGLISH ELECTRIC LEO 360 — T, X, Z. See Leo 326.

GEC 90/2 — R, T. Indicates transfer rates in thousands of characters per second. Model numbers not yet available.   U. Indicates speed in cards per minute. Model numbers not yet available.   V. Indicates speed in lines per minute. Model numbers not yet available.   W. Indicates speed in characters per second. Model numbers not yet available.   Note. A version of the Scientific Data SDS 92.

† X – all except: B – byte manipulation, D – double precision, E – translate-edit capability, F – floating-point instructions, H – hardware multiply-divide, L – logical operations.
‡ X – all except: A – base address relocation, C – clock, I – program interrupt, M – memory protection, P – dynamic page relocation, S – supervisor mode.
§ G – batch, R – real-time, T – time-sharing.
— None.   ☆ See Section II-B.   • Information unavailable.

Central Processor Characteristics

Model	Price Range (Monthly in Thousand Dollars)	First Delivery (Month and Year)	Processor Speed (Complete Add Time in Microseconds)	Storage Cycle Time in Microseconds	Accumulators	Internal Storage (Capacity in Thousand Words)	Word Size	Floating-Point Precision	Overlap	Instruction Set (Address Size)	Operation Codes	Indirect Addressing	Index Registers	Extensiveness †	Time-Sharing ‡
GEC 90/25, 30	2.1-8.4	6/64	3.5	1.75	1	4-32^D	24b	—	—	14	60	∞	1	HL	CI
GEC 90/300	6.3-14	12/64	1.75	1.75	1	4-32	24b	39	√	15	60	∞	3	XBE	CIM
GEC S.2	1.4-7.1	2/67	2.25	.9	1	4-65	16b	—	—	16	25	1	2	HL	XP
GEC S.7	5-20	10/66	1.6	.85	16^C	1-131	32b	56	1	17	120	1	7^L	ALL	ALL
ICT 1901	2.6-7.6	9/66	34	6	8	4-16	24b	37	—	15	92	1	3	FHL	IM
ICT 1902	3-10	7/65	18	6	8	4-16	24b	37	—	15	96	1	3	FHL	IM
ICT 1903	3.5-15	7/65	7	2	8	8-32	24b	37	—	15	96	1	3	FHL	IM
ICT 1904, 1904E, 1904F	6.5-20	5/65	7	2^B	8^C	8-32^D	24b	—^{F}	—	15	115	1	3^L	HL	IM^N

Model	Input-Output (Number of Channels)	Transfer Rate	Auxiliary Storage (Fixed Head)	Movable Head	Magnetic Tape	Peripheral Devices (Card Reader)	Card Punch	Printer	Paper-Tape Reader	Paper-Tape Punch	Software (Algebraic Compiler)	Monitor §	Business Compiler
GEC 90/25, 30	8^P	14.M	560^R	—	1.5-96^T	800^U / 300^U	1000^V	150^W / 1000^W			√^{X}	GR	√
GEC 90/300	8^P	14M	560^R	—	1.5-96^T	800^U / 300^U	1000^V	150^W / 1000^W			√^{X}	GR	√
GEC S.2	20	5.6M	90^R		15-60^T	800^U / 300^U	1000^V	120^W / 300^W			√	GR	—
GEC S.7	160	5.6M	90^R		15-120^T	800^U / 300^U	1000^V	120^W / 300^W			√^{X}	GRT	√^{Z}
ICT 1901	6	500K	1963 / 2801^S		2501^T	1911^U / 1922^U	2401^V	1925 / 1915^W			√	T	√^{Z}
ICT 1902	8	500K	1958 / 2801^S		1973^T	1911^U / 2151^U	1933^V	1925 / 1916^W			√^{X}	T	√^{Z}
ICT 1903	8	500K	1964^R / 2801^S		1973^T	1911^U / 2151^U	1933^V	1925 / 1916^W			√^{X}	T	√^{Z}
ICT 1904, 1904E, 1904F	5^P	500K	1964^R / 2805^S		1974^T	1911^U / 2151^U	1933^V	1925 / 1916^W			√^{X}	T^Y	√^{Z}

GEC 90/25, 30 notes. D. Maximum of 16K with 90/25.   P. Plus one data multiplexor.   R, T, U, V, W. See 90/2.   X. ALGOL in addition to FORTRAN.   Note. Versions of the Scientific Data SDS 925, 930.

GEC 90/300 notes. P, X. See 90/25, 30.   R, T, U, V, W. See 90/2.   Note. A version of the Scientific Data SDS 9300.

GEC S.2 notes. R, T, U, V, W. See 90/2.   Note. A version of the Scientific Data Sigma 2.

GEC S.7 notes. C, L. Per 4000 words of memory.   R, T, U, V, W. See 90/2.   X. PL/1 in addition to FORTRAN.   Z. PL/1.   Note. A version of Scientific Data Sigma 7.

ICT 1901 notes. S. 2802 also available.   T. 1971 also available.   U. 2102 readers and 1920 and 2151 punches also available.   V. 1932 and 1933 also available.   W. 1916 reader and 2601, 2602 reader/punches also available.   Z. NICOL and RAPIDWRITE in addition to COBOL.

ICT 1902 notes. S. 2802 also available.   T. 1971, 1972 and 2501 also available.   U, 1912 and 2102 readers and 1920 and 1922 punches also available.   V. 1932 also available.   W. 1915 reader and 2601, 2602 reader/punches also available.   X. ALGOL and EMA in addition to FORTRAN.   Z. RAPIDWRITE in addition to COBOL.

ICT 1903 notes. R. 1963 and 1958 also available.   S, T, U, V, W, X, Z. See 1902.

ICT 1904, 1904E, 1904F notes. B. 1.8 for Model E, 0.75 for Model F.   C. Per program. 16 with Model F.   D. To 256 for Models E, F.   F. Available on Models E, F.   L. 6 with Model F.   N. C also for Models E, F.   P. 12 for Model E, 24 for Model F.   R. See 1903.   S. 2801 and 2802 also available.   T. 1971, 1972, 1973, 2504 and 2505 also available.   U, V, W, X, Z. See 1902.   Y. R also with Models E, F.   Note. 1904 no longer marketed.

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† X – all except: B – byte manipulation, D – double precision, E – translate-edit capability, F – floating-point instructions, H – hardware multiply-divide, L – logical operations.

‡ X – all except: A – base address relocation, C – clock, I – program interrupt, M – memory protection, P – dynamic page relocation, S – supervisor mode.

§ G – batch, R – real-time, T – time-sharing.
— None. ☆ See Section II-B. • Information unavailable.

Table column groups: Price Range (Monthly in Thousand Dollars) · First Delivery (Month and Year) · Processor Speed (Complete Add Time in Microseconds) · Storage Cycle Time in Microseconds · Accumulators · Internal Storage (Capacity in Thousand Words) · Word Size · Floating-Point Precision · Overlap · Instruction Set (Address Size, Operation Codes, Indirect Addressing, Index Registers, Extensiveness†) · Time-Sharing‡ · Input-Output (Number of Channels) · Transfer Rate · Auxiliary Storage (Fixed Head, Movable Head) · Magnetic Tape · Peripheral Devices (Card Reader, Card Punch, Printer, Paper-Tape Reader, Paper-Tape Punch) · Software (Algebraic Compiler, Monitor§, Business Compiler)

Processor specifications (left block)

System	Price Range	First Delivery	Add Time	Storage Cycle	Accumulators	Internal Storage	Word Size	Floating-Point Precision	Overlap	Address Size	Operation Codes	Indirect Addressing	Index Registers	Extensiveness†
ICT 1905, 1905E, 1905F	7.3-21	12/64	7	2[B]	8[C]	8-32[D]	24b	37	—	15	115	1	3	FHL / IM[N]
ICT 1906, 1906E, 1906F	12-40	12/66	2.5	1[B]	8[C]	32-256	24b	—[F]	—	15	119	1	3	HL / IM[N]
ICT 1907, 1907E, 1907F	12-40	12/66	2.5	1[B]	8[C]	32-256	24b	37	—	15	119	1	3	FHL / IM[N]
ICT 1909	4.5-6	8/65	18	6	8[C]	16-32	24b	37	—	15	115	1	3	FHL / IM
ICT ATLAS 2	70	1/64	2.5	2.5	1	32-262	48b	—	4	24	100	1	128	BF / IM
PLESSEY XL9	1.8-58	5/67	5	2	2	8-65	24b	*	3	16	89	√	*	FH / IM
BULL GE 115	1.5-6.3	3/66	119[A]	6.5[B]	1	4-16	1a[E]	—	—	16	38	0	—	BEL / —

Input-output, storage, peripherals and software (right block)

System	I/O Channels	Transfer Rate	Fixed Head	Movable Head	Magnetic Tape	Card Reader	Card Punch	Printer	Algebraic Compiler	Monitor§	Business Compiler
ICT 1905, 1905E, 1905F	5[P]	500K	1964[R]	2805[S]	1974[T] / 2151[U]	1911[U]	1933[V]	1925 / 1916[W]	√[X]	T[Y]	√[Z]
ICT 1906, 1906E, 1906F	5[P]	500K	1964[R]	2805[S]	1974[T] / 2151[U]	1911[U]	1933[V]	1925 / 1916[W]	√[X]	T[Y]	√[Z]
ICT 1907, 1907E, 1907F	5[P]	500K	1964[R]	2805[S]	1974[T] / 2151[U]	1911[U]	1933[V]	1925 / 1916[W]	√[X]	T[Y]	√[Z]
ICT 1909	5	500K	1964[R]	2805[S]	1974[T] / 2151[U]	1911[U]	1933[V]	1925 / 1915[W]	√[X]	T	√[Z]
ICT ATLAS 2	16	90K	—	☆	593	582A	☆	☆	√[X]	GT	√
PLESSEY XL9	2	625K	*	*	5500[T] / —	—	☆	☆	√	GRT	√[Z]
BULL GE 115	2	153K	—	DSU130	106[T]	100RP[U] / 100RP[U]	110I51[V]	100 / 100		G	√[Z]

Notes:

ICT 1905, 1905E, 1905F — B, C, D, N, P, S, T, Y. See 1904.   R. See 1903.   U, V, W, X, Z, See 1902.   Note. 1905 no longer marketed.

ICT 1906, 1906E, 1906F — B, C, D, N, P, S, T, Y. See 1904.   R. See 1903.   U, V, W, X, Z. See 1902.

ICT 1907, 1907E, 1907F — B, C, N, P, S, T, Y. See 1904.   R. See 1903.   U, V, W, X, Z. See 1902.

ICT 1909 — C, S, T. See 1904.   R. See 1903.   U, V, X, Z. See 1902.   W. See 1901.   Note. System no longer marketed.

ICT ATLAS 2 — X. See 1902.

PLESSEY XL9 — T. 3300 also available.   Z. CORAL.

France

BULL GE 115 — A. Assumes two five-digit fields.   B. Per byte.   E. Memory is organized in six-bit characters or bytes.   T. 103 also available.   U. 100R reader and 103 punch also available.   V. 100I51 also available.   Z. RPG.   Note. A version of Olivetti GE 115.

·X – all except: B – byte manipulation, D – double precision, E – translate-edit capability, F – floating-point instructions, H – hardware multiply-divide, L – logical operations.

:X – all except: A – base address relocation, C – clock, I – program interrupt, M – memory protection, P – dynamic page relocation, S – supervisor mode.

:G – batch, R – real-time, T – time-sharing.

— None.   ☆ See Section II-B.   * Information unavailable.

System	Price Range (Monthly, $ thousand)	First Delivery	Processor Speed (Add Time, µs)	Storage Cycle Time (µs)	Accumulators	Internal Storage (thousand words)	Word Size	Floating-Point Precision	Overlap	Address Size	Operation Codes	Indirect Addressing	Index Registers	Extensiveness†	Time-Sharing‡	I-O Channels	Transfer Rate	Aux. Storage Fixed Head	Movable Head	Magnetic Tape	Card Reader	Card Punch	Printer	Paper-Tape Reader	Paper-Tape Punch	Algebraic Compiler	Monitor	Business Compiler
BULL GE 415	4.8-13.5	9/64	25.1	5.8	1	8-32	38 / 24b	—		15	80	∞	6	ALL	XPS	12	400K	200[R] / 204[S]	200[T]	201	100[U]	201	200	200		√	*	√
BULL GE 425	6-20	9/64	17	3.9	1	8-128	38 / 24b	—		15	80	∞	6	ALL	XP	12	400K	200[R] / 204[S]	200[T]	201	100[U]	201	200	200		√	*	√
BULL GE 435	8-25	12/65	12.6	2.7	1	16-128	38 / 24b	—		15	80	∞	6	ALL	XP	12	400K	200[R] / 204[S]	200[T]	201	100[U]	201	200	200		√	*	√
BULL GE GAMMA 10	1.6-2.2	6/63	217[A]	7[B]	1	1-4	1a[E]	—	—	6	55	√	0	B	—	3	*	—	—	MFU35	100RP[U] / 100RP[U]	100151	LR	—	—	—		—
BULL GE GAMMA 30	5.7-11.6	2/62	217[A]	7[B]	*	10-40	8[F] / 1a[E]			4[H]	46	∞	0	BF		2	*		DSU130	TM55	106 / 103	120[U]	1075[V] / 1000[W]	100[W]		√[X]	*	√
BULL GE GAMMA 30S	7.8-13	7/63	98[A]	7[B]	*	20-40	8[F] / 1a[E]	*		4[H]	46	∞	3	XD	—	2	*		DSU130	TM55	106 / 103	120	1075[V] / 1000[W]	100[W]		√[X]	*	√
BULL GE GAMMA 55	.8-1.7	12/66	2200[A]	7.9[B]	1	2.5-10	1a[E]	—		4[H]	66	—	10	B	I	7	*	TM55 / —	—		150[U] / 101		141[V]			—	—	—
CII 90/10	.7-5	8/65	3.5	1.75	2	2-32	12b	1		15	92	∞	1	HL	CI	3	.57M	—	2463	251	9153 / 9158	9379	2340 / 2340			√	—	

BULL GE 415 — R. 300 also available. S. 338 also available. T. 201, 211, 300, 301, 311, 402, 403, 404, 405, 411, 412 also available. U. 201 punch also available. Note. A version of General Electric 415.

BULL GE 425 — R, S, T, U. See 415. Note. A version of General Electric 425.

BULL GE 435 — R, S, T, U. See 415. Note. A version of General Electric 435.

BULL GE GAMMA 10 — A, B, E, U. See 115.

BULL GE GAMMA 30 — A, B, E. See 115. F, H. Decimal digits. V. Indicates speed in lines per minute. Model number not yet available. W. Indicates speed in characters per second. Models numbers not yet available. X. ALGOL in addition to FORTRAN. Note. A version of the RCA 301. System no longer marketed.

BULL GE GAMMA 30S — A. Assumes two eight-character fields. B, E. See Gamma 10. F, H, V, W, X. See Gamma 30. Note. See Gamma 30. System no longer marketed.

BULL GE GAMMA 55 — A. Assumes two nine-digit fields. B. See 115. E. Memory is organized in eight-bit characters or two four-bit digits. H. See Gamma 30. U. Indicates speed in cards per minute. Model number not yet available. V. 100151 also available.

CII 90/10 — Note. A version of the Scientific Data SDS 92.

† X – all except: B – byte manipulation, D – double precision, E – translate-edit capability, F – floating-point instructions, H – hardware multiply-divide, L – logical operations.
‡ X – all except: A – base address relocation, C – clock, I – program interrupt, M – memory protection, P – dynamic page relocation, S – supervisor mode.
§ G – batch, R – real-time, T – time-sharing.
— None. ☆ See Section II-B. • Information unavailable.

Model	Price Range (Monthly in Thousand Dollars)	First Delivery (Month and Year)	Processor Speed (Complete Add Time in μs)	Storage Cycle Time (μs)	Accumulators	Internal Storage (Capacity in Thousand Words)	Word Size	Floating-Point Precision	Overlap	Instruction Set (Address Size)	Operation Codes	Indirect Addressing	Index Registers	Extensiveness †	Time-Sharing ‡	Input-Output (Number of Channels)	Transfer Rate	Auxiliary Storage (Fixed Head)	Movable Head	Magnetic Tape	Card Reader	Card Punch	Printer	Paper-Tape Reader	Paper-Tape Punch	Software (Algebraic Compiler)	Monitor §	Business Compiler
CII 90/40	2.3-6.5	5/65	3.5	1.75	2	4-32	24b	—	1	15	139	∞	1	HL	CIM	10	.57M	—	251	2463	9153	9158	9379	2340	2340	√ X	GR	√
CII 90/80	4.3-11	2/65	1.75	1.75	2	4-32	24b	39	2	15	147	∞	3	XE	CIM	10	.57M	—	251	2463	9153	9158	9379	2340	2340	√ X	GR	√
CII 10010	1.6	1/68	5.5	1	2	2-32	16b	—	—	8	55	1	1	HL	—	6	330K	7204 R	271	322	140	160	445	60	60	√		—
CII 10020	1.9	11/67	2.25	.9	2	4-64	16b	—	1	8	37	1	7	HL	XP	20	.6M	7204 R	271	322	140	160	445	60	60	√	GR	√
CII 10070	3.9-20	10/67	1.4	.85	16 C	4-128	32b	56	2	17	106	1	7 L	ALL	ALL	8 Q	3M	7204 R	271	322	140	160	445	60	60	√ X	GR	√
SEREL 505	12	/65	100	14	*	1 D	20b	—	*	*	*	√	1	B	IM	*	*	_R	_S	_T	_U	_U	_V	_W	_W	—	*	—
SEREL 1001	2-6	/60	42	6	*	4-32	20b	—	*	*	*	√	2	B	IM	*	*	_R	_S	_T	_U	_U	_V	_W	_W	—	*	—
SETI PALLAS	2.8-12	6/64	25	3	*	8-131	1a	*	*	*	*	√	1	F	I	*	*	100 R	—	34 T	600 U	100 U	1200 V	300 W	110 W	√ X	*	√ Z

CII 90/40 — X. ALGOL in addition to FORTRAN.   Note. A version of the Scientific Data SDS 930.

CII 10010 — R. 7202 also available.

CII 10020 — R. See 10010.

CII 10070 — C, L, Q. Per 4000 words of memory.   R. See 10010.   X. See 90/40.   Note. A version of the Scientific Data Sigma 7.

CII 90/80 — X. See 90/40.

SEREL 505 — D. Internal storage is transfluxor type.   R, S, T, U, V, W. Will interface with any manufactured equipment.

SEREL 1001 — R, S, T, U, V, W. See 505.

SETI PALLAS — R, T. Indicates transfer rates in thousands of characters per second. Model numbers not yet available.   U. Indicates speed in cards per minute. Model numbers not yet available.   V. Indicates speed in lines per minute. Model numbers not yet available.   W. Indicates speed in characters per second. Model numbers not yet available.   X. ALGOL and MAGE II in addition to FORTRAN.   Z. GEAL.

† X – all except: B – byte manipulation, D – double precision, E – translate-edit capability, F – floating-point instructions, H – hardware multiply-divide, L – logical operations.
‡ X – all except: A – base address relocation, C – clock, I – program interrupt, M – memory protection, P – dynamic page relocation, S – supervisor mode.
§ G – batch, R – real-time, T – time-sharing.
— None. ☆ See Section II-B. * Information unavailable.

Germany (West)

Central Processor Characteristics

Processor

Model	Price Range (Monthly $K)	First Delivery	Complete Add Time (μs)	Storage Cycle Time (μs)	Accumulators	Internal Storage (K words)	Word Size	Floating-Point Precision	Overlap	Address Size	Operation Codes	Indirect Addressing	Index Registers	Extensiveness †	Time-Sharing ‡
SIEMENS 302	.8	9/67	3[A]	1.5[B]	1	8-16	4a[E]	—	—	16	23	∞	0	L	IM
SIEMENS 303	1-7.5	4/65	92[A]	8.3[B]	2	4-16	4a[E]	—	—	16	31	∞	0	L	IM
SIEMENS 304	1.8	6/68	3[A]	1.5[B]	2	8-16	4a[E]	—	—	16	41	∞	0	L	IM
SIEMENS 305	2.3	11/67	3[A]	1.5[B]	2	8-16	4a[E]	23	—	16	45	∞	0	FL	IM
SIEMENS 4004/15	2.4-8.2	10/65	56[A]	2[B]	—	4-16	1a[E]	—	—	14	26	—	0	BEL	I
SIEMENS 4004/25	4.1-20.8	1/66	33[A]	1.5[B]	15	16-65	1a[E]	—	—	16	31	—	15	XDF	CI
SIEMENS 4004/35	7.4-19	2/67	22.8[A]	1.44[B]	16[C]	16-65	1a[E]	56	—	16	144	—	43	ALL	XAP
SIEMENS 4004/45	9-33	7/66	8.88[A]	1.44[B]	16[C]	16-262	1a[E]	56	—	16	144	—	43	ALL	XAP

Input-Output, Auxiliary Storage, Peripheral Devices, Software

Model	I/O Channels	Transfer Rate	Fixed Head	Movable Head	Magnetic Tape	Card Reader	Card Punch	Printer	Paper-Tape Reader	Paper-Tape Punch	Algebraic Compiler	Monitor §	Business Compiler
SIEMENS 302	5	167K	2013[R]	—	2010, 2021	2022[V]	2006	2007			√[X]		—
SIEMENS 303	6	120K	2013[R]	—	2010, 2021	2022[V]	2006	2007			√[X]		—
SIEMENS 304	15	667K	2013[R]	2026	2010, 2021	2022[V]	2006	2007			√[X]		—
SIEMENS 305	15	667K	2013[R]	2026	2010, 2021	2022[V]	2006	2007			√[X]		—
SIEMENS 4004/15	6	250K	—	564	432[T]	237[U]	234[U]	243[V]	4225	4226[W]	—	G	
SIEMENS 4004/25	8	.67M	—	564	432[T]	237[U]	234[U]	243[V]	4225	4226[W]	—	G	
SIEMENS 4004/35	2	.69M	—	564	432[T]	237[U]	234[U]	243[V]	4225	4226[W]	√	GR	√
SIEMENS 4004/45	3	.52M	—	564	432[T]	237[U]	234[U]	243[V]	4225	4226[W]	√	GRT	√

Notes

SIEMENS 302. A. Assumes two four-character fields. B. Per four bytes. E. Memory is organized in six-bit characters or bytes. R. 2014 and 2015 also available. V. 2023, 2024 and 2025 also available. X. ALGOL in addition to FORTRAN.

SIEMENS 303. A, E, R, V, X. See 302. B. Per byte.

SIEMENS 304. A, B, E, R, V, X. See 302.

SIEMENS 305. A, B, E, R, V, X. See 302.

SIEMENS 4004/15. A. Assumes two five-character fields. B. See 303. E. Memory is organized in eight-bit characters or two four-bit digits. T. 441, 442, 4443 and 4446 also available. U. 4235 reader, 236 punch and 236 reader/punch also available. V. 4247 also available. W. 4227 reader also available. Note. A version of the RCA Spectra 70/15.

SIEMENS 4004/25. A, E, T, U, V, W. See 4004/15. B. See 302. Note. A version of the RCA Spectra 70/25.

SIEMENS 4004/35. A. See 302. B. Per two bytes. C. For each of up to four processor states. E, T, U, V, W. See 4004/15. Note. A version of the RCA Spectra 70/35.

SIEMENS 4004/45. A. See 302. B, C. See 4004/35. E, T, U, V, W. See 4004/15. Note. A version of the RCA Spectra 70/45.

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† X – all except: B – byte manipulation, D – double precision, E – translate-edit capability, F – floating-point instructions, H – hardware multiply-divide, L – logical operations.

‡ X – all except: A – base address relocation, C – clock, I – program interrupt, M – memory protection, P – dynamic page relocation, S – supervisor mode.

§ G – batch, R – real-time, T – time-sharing.

— None.   ☆ See Section II-B.   • Information unavailable.

CENTRAL PROCESSORS — CHARACTERISTICS

Each system is shown on two lines (top line / bottom line) as printed.

Processor characteristics

System	Price Range (Monthly, $1000s)	First Delivery (Mo/Yr)	Add Time (µs)	Storage Cycle (µs)	Accumulators	Internal Storage Capacity (1000 words)	Word Size	Float-Pt Precision	Overlap	Address Size	Operation Codes	Indirect Addressing	Index Registers	Extensiveness	Time-Sharing
SIEMENS 4004/55	15-50		2.58[A]	16[C]		65-524	56		—	16		—		ALL	
		12/66	.84[B]					1a[E]			144		43		XAP
TELEFUNKEN TR4	12.5-25		10	5		12-32	38	—	—	16			∞	DFL	
		/62	6				48b[E]				233		256		IM
TELEFUNKEN TR84	1.2-3.8		4	1	1	4-16		—		14			1	HL	
		8/68	2				18b				30		—		I
TELEFUNKEN TR86	2.2-12.5		2.0	.9	1	8-64				16			∞	HL	
		6/68					24b	4			30				IM
TELEFUNKEN TR440	40-125		.6	.9	5	64-256	38		16	16			∞	ALL	ALL
		6/68					48b[E]				225		256		ALL
ZUSE Z23	2-3		340	12	2	.2-8		—		13		—	—		
		/60					40b				—[J]		240		I
ZUSE Z25	1-7		85	8	2	1-20		—		10		—	—		
		4/63					18b				38		1024		I
ZUSE Z31	3-8		420	420	2	0.2-11		—		16		—	—		
		12/62					11d[E]				—[J]		10		—

Input–Output, Auxiliary & Peripheral Devices, Software

System	I/O Channels	Transfer Rate	Aux. Fixed Head	Aux. Movable Head	Magnetic Tape	Card Reader	Card Punch	Printer	Paper-Tape Reader	Paper-Tape Punch	Algebraic Compiler	Monitor	Business Compiler
SIEMENS 4004/55	6		—		432[T]	237[U]		243[V]	4225		√		√
		.78M		564			234[U]	4226[W]				GR	
TELEFUNKEN TR4	8		S500	—	252[T]	K480	480	162[V]	100[W]	150	√[X]	GT	√
		200K											
TELEFUNKEN TR84	1		—	—	—			30	60		—	R	—
		450K						30					
TELEFUNKEN TR86	8		S500[R]	900[U]	252[T]	263[V]	72	150[W]	100		√[X]	GR	√
		3M	G600[S]										
TELEFUNKEN TR440	16		S500[R]	900[U]	252[T]	263[V]	72	150	100		√[X]	GRT	√
		5M	G600[S]										
ZUSE Z23	4		59		110[T]	300		1501	5[W]		√[X]	G	√
		20K											
ZUSE Z25	23		59	5022[S]	7[T]	122	303	300[V]	1501	5[W]	√[X]	G	√[Z]
		110K											
ZUSE Z31	10		59	5022	408	122		300[V]	1501	5[W]	—	G	
		10K											

Notes

SIEMENS 4004/55: A. See 302. B, C. See 4004/35. E, T, U, V, W. See 4004/15. Note. A version of the RCA Spectra 70/55.

TELEFUNKEN TR4: E. Instructions stored two per word. T. 251 also available. V. 166, 62, 66 also available. W. 50 also available. X. ALGOL in addition to FORTRAN.

TELEFUNKEN TR86: R. S300 also available. S. G300 also available. T. 202, 201, 200 also available. U. L480 also available. V. 273, 363 also available. W. 60 also available. X. ALGOL.

TELEFUNKEN TR440: E, R, S, T, U, V, W, X. See TR4.

ZUSE Z23: J. Micro-programming allows up to 4096 instructions. T. 408 also available. W. 6 and 1001 readers also available. X. ALGOL.

ZUSE Z25: S. 7300 also available. T. 11, 507 and 509 also available. V. 1000 also available. W. See Z23. X. KOMTESS T and ALGOL. Z. KOMTESS K.

ZUSE Z31: E. Memory is organized in four-bit digits. J. Micro-programming allows up to 10000 instructions. V. See Z25. W. 6 also available.

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† X – all except: B – byte manipulation, D – double precision, E – translate-edit capability, F – floating-point instructions, H – hardware multiply-divide, L – logical operations.

‡ X – all except: A – base address relocation, C – clock, I – program interrupt, M – memory protection, P – dynamic page relocation, S – supervisor mode.

§ G – batch, R – real-time, T – time-sharing.   * Information unavailable.

— None.   ☆ See Section II-B.

CENTRAL PROCESSORS — CHARACTERISTICS

Italy

OLIVETTI GE 115

Model	Price Range (Monthly, $ thousands)	First Delivery (Mo/Yr)	Processor Speed (Add, μs)	Storage Cycle Time (μs)	Accumulators	Internal Storage (K words)	Word Size	Floating-Point Precision	Overlap	Address Size	Operation Codes	Indirect Addressing	Index Registers	Extensiveness †	Time-Sharing ‡
OLIVETTI GE 115	1.5-6.3	11/65	148^A	8^B	*	4-16	1a^E	—	*	*	*	*	0	B	—

Model	I/O Channels	Transfer Rate	Fixed Head	Movable Head	Magnetic Tape	Card Reader	Card Punch	Printer	Paper-Tape Reader	Paper-Tape Punch	Algebraic Compiler	Monitor §	Business Compiler
OLIVETTI GE 115	*	125^S	—	—	—	300^U	300^U	300^V / 500^W	100^W	—	—	*	√ Z

A. Assumes two five-digit fields.   B. Per byte.   E. Memory is organized in eight-bit bytes or two four-bit digits.   S. Indicates transfer rate in thousands of characters per second. Model numbers not yet available.   U. Indicates speed in cards per minute. Model numbers not yet available.   V. Indicates speed in lines per minute. Model numbers not yet available.   W. Indicates speed in characters per second. Model numbers not yet available.   Z. TAB in addition to COBOL.

OLIVETTI GE ELEA 4001

Model	Price Range	First Delivery	Processor Speed	Storage Cycle	Accumulators	Internal Storage	Word Size	Floating-Point Precision	Overlap	Address Size	Operation Codes	Indirect Addressing	Index Registers	Extensiveness †	Time-Sharing ‡
OLIVETTI GE ELEA 4001	1.8-4.5	11/64	530^A	8^B	*	4-65	1a^E	—	*	*	*	√	64	B	I

Model	I/O Channels	Transfer Rate	Fixed Head	Movable Head	Magnetic Tape	Card Reader	Card Punch	Printer	Paper-Tape Reader	Paper-Tape Punch	Algebraic Compiler	Monitor §	Business Compiler
OLIVETTI GE ELEA 4001	*	70^S	—	—	83^T	1500^U	300^U	1100^V	100^W	400^W	√	*	√

A, B, E, S, U, V, W. See 115.   T. Indicates transfer rate in thousands of characters per second. Model numbers not yet available.

OLIVETTI GE ELEA 6001

Model	Price Range	First Delivery	Processor Speed	Storage Cycle	Accumulators	Internal Storage	Word Size	Floating-Point Precision	Overlap	Address Size	Operation Codes	Indirect Addressing	Index Registers	Extensiveness †	Time-Sharing ‡
OLIVETTI GE ELEA 6001	4-8	2/62	421^A	5^B	*	10-100	1d^E	—	*	*	*	√	0	B	—

Model	I/O Channels	Transfer Rate	Fixed Head	Movable Head	Magnetic Tape	Card Reader	Card Punch	Printer	Paper-Tape Reader	Paper-Tape Punch	Algebraic Compiler	Monitor §	Business Compiler
OLIVETTI GE ELEA 6001	*	35^S	—	—	32.5^T	1500^U	300^U	650^V	800^W	100^W	√ X	*	√ Z

A. Assumes two ten-digit fields.   B. Per digit.   E. Memory is organized in four-bit digits.   S, U, V, W. See 115.   T. See Elea 4001.   X. APS and PALGO in addition to FORTRAN.   Z. PSICO and PAC.

OLIVETTI GE ELEA 9003

Model	Price Range	First Delivery	Processor Speed	Storage Cycle	Accumulators	Internal Storage	Word Size	Floating-Point Precision	Overlap	Address Size	Operation Codes	Indirect Addressing	Index Registers	Extensiveness †	Time-Sharing ‡
OLIVETTI GE ELEA 9003	8-14	10/60	200^A	5^B	*	20-160	1d^E	—	*	*	*	√	40	B	I

Model	I/O Channels	Transfer Rate	Fixed Head	Movable Head	Magnetic Tape	Card Reader	Card Punch	Printer	Paper-Tape Reader	Paper-Tape Punch	Algebraic Compiler	Monitor §	Business Compiler
OLIVETTI GE ELEA 9003	*	70^S	—	—	65^T	1500^U	300^U	650^V	800^W	50^W	√ X	*	√ Z

A, B, E, X, Z. See Elea 6001.   S, U, V, W. See 115.   T. See Elea 4001.

Japan

FUJITSU FACOM 212

Model	Price Range	First Delivery	Processor Speed	Storage Cycle	Accumulators	Internal Storage	Word Size	Floating-Point Precision	Overlap	Address Size	Operation Codes	Indirect Addressing	Index Registers	Extensiveness †	Time-Sharing ‡
FUJITSU FACOM 212	.8	6/59	4500	150	*	56	13d	—	*	*	*	—	0	—	—

Model	I/O Channels	Transfer Rate	Fixed Head	Movable Head	Magnetic Tape	Card Reader	Card Punch	Printer	Paper-Tape Reader	Paper-Tape Punch	Algebraic Compiler	Monitor §	Business Compiler
FUJITSU FACOM 212	*	—	—	—	567A / 682A/R	—	—	80^V	—	—	—	*	—

V. Indicates speed in lines per minute. Model numbers not yet available.

FUJITSU FACOM 222

Model	Price Range	First Delivery	Processor Speed	Storage Cycle	Accumulators	Internal Storage	Word Size	Floating-Point Precision	Overlap	Address Size	Operation Codes	Indirect Addressing	Index Registers	Extensiveness †	Time-Sharing ‡
FUJITSU FACOM 222	10-16	9/61	160	10	*	10	13d	*	*	*	*	*	99	F	—

Model	I/O Channels	Transfer Rate	Fixed Head	Movable Head	Magnetic Tape	Card Reader	Card Punch	Printer	Paper-Tape Reader	Paper-Tape Punch	Algebraic Compiler	Monitor §	Business Compiler
FUJITSU FACOM 222	*	67K	—	603C	664A/R / 682A/R	—	—	643A/B	766A / 749A	—	√ X	*	√ Z

X. ALGOL and FAST.   Z. FASP.

FUJITSU FACOM 230/10

Model	Price Range	First Delivery	Processor Speed	Storage Cycle	Accumulators	Internal Storage	Word Size	Floating-Point Precision	Overlap	Address Size	Operation Codes	Indirect Addressing	Index Registers	Extensiveness †	Time-Sharing ‡
FUJITSU FACOM 230/10	.27-.7	11/65	150^A	2.2^B	*	4-8	1a^E	*	*	*	*	*	—	BFH	I

Model	I/O Channels	Transfer Rate	Fixed Head	Movable Head	Magnetic Tape	Card Reader	Card Punch	Printer	Paper-Tape Reader	Paper-Tape Punch	Algebraic Compiler	Monitor §	Business Compiler
FUJITSU FACOM 230/10	1	1.67K	623A^R / 631	603G^T	567A^U / 682A/R^U	—	—	641A^V	766A^W / 749E^W	—	√	—	√

A. Assumes two five-character fields.   B. Per byte.   E. Memory is organized in eight-bit characters or two four bit digits.   R. 624A, 627A also available.   T. 606A, 603B, C, D, E, F also available..   U. 663 and 664A/R readers and 683A/R punch also available.   V. 642A/B and 643A/B also available.   W. 750A, 748A and 749 readers and 767A punch also available.

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† X – all except: B – byte manipulation, D – double precision, E – translate-edit capability, F – floating-point instructions, H – hardware multiply-divide, L – logical operations.

‡ X – all except: A – base address relocation, C – clock, I – program interrupt, M – memory protection, P – dynamic page relocation, S – supervisor mode.

§ G – batch, R – real-time, T – time-sharing.

— None.   ☆ See Section II-B.   • Information unavailable.

Price Range (Monthly in Thousand Dollars)	First Delivery (Month and Year)	Processor Speed (Complete Add Time in µs)	Storage Cycle Time (µs)	Accumulators	Internal Storage (Capacity in Thousand Words)	Word Size	Floating-Point Precision	Overlap	Address Size	Operation Codes	Indirect Addressing	Index Registers	Extensiveness †	Time-Sharing ‡	Number of Channels	Transfer Rate	Fixed Head	Movable Head	Magnetic Tape	Card Reader	Card Punch	Printer	Paper-Tape Reader	Paper-Tape Punch	Algebraic Compiler	Monitor §	Business Compiler
FUJITSU FACOM 230/20 1.2	9/66	78^A / 1.8^B		2	4-65	1a^E	*	*		*	*	1 / 2	BFH / IM		4	96K	623A^R / 631	603G^T	567A^U	641A^V / 682A/R^U	766A^W / 749E^W				√	—	√

A, E, R, T, U, V, W. See Facom 230/10.   B. Per digit.

FUJITSU FACOM 230/30 2	3/65	58.3^A / 2.2^B		*	8-65	1a^E	*	*		*	*	1 / 2	XDF / IM		4	96K	623A^R / 631	603G^T	567A^U	641A^V / 682A/R^U	766A^W / 749E^W				√	*	√

A, B, E, R, T, U, V, W. See Facom 230/10.

FUJITSU FACOM 230/40 2.5	67	1.97 / .75		*	128	1a^E	*	*		*	*	1 / —	BF / IM		8	96K	623A^R / 631	603G^T	567A^U	641A^V / 682A/R^U	766A^W / 749E^W				√	*	√

E, R, T, U, V, W.   See Facom 230/10.

FUJITSU FACOM 230/50 3.5	3/66	4.4 / 2.2		*	16-65	27 / 42b	*	*	16	*	∞	7	ALL / IMS		7	96K	623A^R / 631	603G^T	567A^U	641A^V / 682A/R^U	766A^W / 749E^W				√	T	√

R, T, U, V, W.   See Facom 230/10.

FUJITSU FACOM 230/60 4.5	67	1.15 / .92		*	128	42b	*	*		*	*	1 / 7	BF / IM		32	96K	623A^R / 631	603G^T	567A^U	641A^V / 682A/R^U	766A^W / 749E^W				√	*	√

R, T, U, V, W. See Facom 230/10.

FUJITSU FACOM 231 .8-4.8	5/63	495 / 15		*	32	1a^E	—	*		*	*	1 / 0	B	*		10K	—	—	664A/R / 682A/R	643A/B / 749A	766A				√^{X}	*	√^{Z}

E. See Facom 230/10.   X. ALGOL and FAST.   Z. FASP.

FUJITSU FACOM 241 5-8	12/62	120 / 10		*	9	8d^E	—	*		*	*	8 / 8		*		28K	—	—	664A/R / 682A/R	643A/B / 749A	766A				—	*	√^{Z}

E. Memory is organized in four-bit digits.   Z. See Facom 231.

FUJITSU FACOM 270/10 *	3/66	200 / 2.2		*	1-4	18b	*	*		*	*	1 / 3	—	*		*	—	—	—	—	—	*			√^{X}	—	√^{Z}

X. See Facom 222.   Z. FASP.

FUJITSU FACOM 270/20 2.2	9/66	4.8 / 2.4		*	4-32 '	18b	*	*		*	*	1 / 3	F / IM	*		*	623A^R / 631	603G^T	567A^U	641A^V / 682A/R^U	766A^W / 749E^W				√^{X}	*	√^{Z}

R, T, U, V, W. See Facom 230/10.   X. See Facom 222.   Z. See

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† ‡ - all except: B - byte manipulation, D - double precision, E - translate-edit capability, F - floating-point instructions, H - hardware multiply-divide, L - logical operations.
† † - all except: A - base address relocation, C - clock, I - program interrupt, M - memory protection, P - dynamic page relocation, S - supervisor mode.
‡ - batch, R - real-time, T - time-sharing.
— None. ☆ See Section II-B. • Information unavailable.

Model	Price Range (Monthly, $000)	First Delivery (Mo./Yr.)	Processor Speed (Add Time µs)	Storage Cycle Time (µs)	Accumulators	Internal Storage (Cap. 000 Words)	Word Size	Floating-Point Precision	Overlap	Address Size	Operation Codes	Indirect Addressing	Index Registers	Extensiveness †	Time-Sharing Input-Output ‡	No. of Channels	Transfer Rate	Aux. Fixed Head	Movable Head	Magnetic Tape	Card Reader	Card Punch	Printer	Paper-Tape Reader	Paper-Tape Punch	Algebraic Compiler	Monitor §	Business Compiler
FUJITSU FACOM 270/30	5.6	/68	1.5	.75	*	8-65	18b	*	*				1	F	CID	3	*			623A[R] / 631	603G[T]	567A[U]	641A[V] / 682A/R[U]	766A[W] / 749E[W]		√[X]	*	√[Z]
HITACHI HIPAC 103	2.6-6.7	11/61	400	85	1	1-4	48b	√	—	13	119	√	3	F		1	12K	—		8432[T]	—		8245[V]	167[W]	176[W]	√[X]	G	—
HITACHI HITAC 201	.7-2.5	6/61	4000	3300	1	4[D]	12d[E]	—	—	16	42	—	8	—		1	23K	—		8432[T]	—		8244	167[W]	176[W]		G	—
HITACHI HITAC 3010	3.4-25	5/62	94[A]	3.5[B]	—	10-40	1a[E]	8[F]	—	4[H]	46	∞	3	XD		2	286K	—	—	3485[T]	8238	8235	8246[V]	8222[W]	8222[W]	√[X]	G	√
HITACHI HITAC 3030	*	12/62	12	10	1	4-16	40b	—	1	14	72	√	4	—		10	500K	—		8432[T]	—		8244	167[W]	176[W]	—		—
HITACHI HITAC 4010	9-40	11/64	27.4[A]	1.5[B]	—	40-160	1a[E]	8[F]	—	4[H]	62	∞	3	XD	C	3	3.5M	1123	—	3485[T]	8238	8235	8246[V]	8222[W]	8222[W]	√	GR	√
HITACHI HITAC 5020	12-42	3/65	8	2	14	8-65	32b	56	—	16	127	√	7	BF	I	14	1M	—		3485[T]	8238	8235	8246[V]	8222[W]	8222[W]	√[X]	GR	—
HITACHI HITAC 5020E	25-100	12/66	1.6	1.5	14	12-262	32b	56	√	18	127	√	7	BF	I	14	5M	—		3485[T]	8233	8234	8246[V]	167[W]	176[W]	√[X]	GR	√

FUJITSU FACOM 270/30 — R, T, U, V, W. See Facom 230/10.　X. See Facom 222.　Z. See Facom 270/10.

HITACHI HIPAC 103 — T. 8442 and 8422 also available.　V. 8244 also available.　W. 8221 reader-punch also available.　X. HARP 103.

HITACHI HITAC 201 — D. Internal storage is drum.　E. Memory is organized in four-bit digits.　T, W. See Hipac 103.

HITACHI HITAC 3010 — A. Assumes two five-character fields.　B. Per byte.　E. Memory is organized in six-bit characters or bytes.　F, H. Decimal digits.　T. 8445 also available.　V. 333 also available.　W. 322 reader and 167 punch also available.　X. UMAC in addition to FORTRAN.　Note. A version of the RCA 301.

HITACHI HITAC 3030 — T, W. See Hipac 103.

HITACHI HITAC 4010 — A, B, E, F, H, T, V, W. See Hitac 3010.

HITACHI HITAC 5020 — T, V, W. See Hitac 3010.　X. HARP 5020 and ALGOL.

HITACHI HITAC 5020E — T, V. See Hitac 3010.　W. See Hipac 103.　X. See Hitac 5020.

† X – all except: B – byte manipulation, D – double precision, E – translate-edit capability, F – floating-point instructions, H – hardware multiply-divide, L – logical operations.

‡ X – all except: A – base address relocation, C – clock, I – program interrupt, M – memory protection, P – dynamic page relocation, S – supervisor mode.

§ G – batch, R – real-time, T – time-sharing.

— None.　☆ See Section II-B.　* Information unavailable.

CENTRAL PROCESSORS CHARACTERISTICS

Price Range (Monthly $K)	First Delivery	Processor Speed (Add Time µs)	Storage Cycle Time (µs)	Accumulators	Internal Storage (K Words)	Word Size	Floating-Point Precision	Overlap	Address Size	Operation Codes	Indirect Addressing	Index Registers	Extensiveness †	Time-Sharing ‡	I/O Channels	Transfer Rate	Aux. Fixed Head	Movable Head	Magnetic Tape	Card Reader	Card Punch	Printer	Paper-Tape Reader	Paper-Tape Punch	Algebraic Compiler	Monitor §	Business Compiler
HITACHI HITAC 8100																											
1-3.3	12/66	63.7[A] / 1.5[B]	—		4-8	1a[E]	—		13	31	—	0	B		2	.2M	—	8568	8432[T]	8239	8239	8245[V]	167[W]	176[W]	√	G	√[Z]
HITACHI HITAC 8200																											
2.2-7	9/66	56[A] / 2[B]	—		4-16	1a[E]	—		14	26	—	0	B		2	.25M	—	—	3485[T]	8238	8235	8246[V]	8222[W]	8222[W]	√	G	√
HITACHI HITAC 8300																											
5.6-1.67	1/67	19.68[A] / 1.44[B]	16[C]		16-65	56 1a[E]			16	144	—	43	BF	I M	2	.69M	8566	8564	3485[T]	8238	8235	8246[V]	8222[W]	8222[W]	√	G	√
HITACHI HITAC 8400																											
8.3-27.8	11/67	8.88[A] / 1.44[B]	16[C]		16-262	56 1a[E]			16	144	—	43	BF	I M	3	.5M	8566	8564	3485[T]	8238	8235	8246[V]	8222[W]	8222[W]	√	GRT	√
HITACHI HITAC 8500																											
11-50	12/67	1.79[A] / .84[B]	16[C]		65-524	56 1a[E]			16	144	—	43	BF	I M	6	1M	8566	8564	3485[T]	8238	8235	8246[V]	8222[W]	8222[W]	√	*	√
MATSUSHITA MADIC IIA																											
1.2-1.7	9/61	1000 / 11000	*		4[D]	33b	*	*	*	*	—	2	F		*	*	—	—	—	—	—	70[W] / 200[W]	—	—	√[X]		—
MATSUSHITA MADIC III																											
2-7.5	11/63	540 / 10	*		4-32	36b	*	*	*	*	√	64	F		*	*	—	—	—	400[U] / 100[U]		500[V] / 400[W]	100[W]		√[X]		—
MATSUSHITA MADIC 500																											
*	/64	10200 / 20000	*		3-6[D]	7d	—	*	—	*	*	0	—		*	*	—	—	—	15[U] / 15[U]		100[V] / 100[V]	12[W]	200[W]	—	—	—

HITACHI HITAC 8100 — A. Assumes two five-digit fields. B. See Hitac 3010. E. Memory is organized in eight-bit characters or two four-bit digits. T, V, W. See Hipac 103. Z. POP (Problem Oriented Package) in addition to COBOL.

HITACHI HITAC 8200 — A, E. See Hitac 8100. B, T, V, W. See Hitac 3010.

HITACHI HITAC 8300 — A. Assumes two four-character fields. B. Per two bytes. C. For each processor state. E. See Hitac 8100. T, V, W. See Hitac 3010.

HITACHI HITAC 8400 — A, B, C. See Hitac 8300. E. See Hitac 8100. T, V, W. See Hitac 3010.

HITACHI HITAC 8500 — A, C. See Hitac 8300. B. Per four bytes. E. See Hitac 8100. T, V, W. See Hitac 3010.

MATSUSHITA MADIC IIA — D. Internal storage is drum. W. Indicates speed in characters per second. Model numbers not yet available. X. ALGOL.

MATSUSHITA MADIC III — U. Indicates speed in cards per minute. Model numbers not yet available. V. Indicates speed in lines per minute. Model numbers not yet available. W, X. See Madic IIA.

MATSUSHITA MADIC 500 — D, W. See Madic IIA. U, V. See Madic III.

† - all except: B - byte manipulation, D - double precision, E - translate-edit capability, F - floating-point instructions, H - hardware multiply-divide, L - logical operations.
‡ - all except: A - base address relocation, C - clock, I - program interrupt, M - memory protection, P - dynamic page relocation, S - supervisor mode.
§ - batch, R - real-time, T - time-sharing.
— None. ☆ See Section II-B. * Information unavailable.

CENTRAL PROCESSORS CHARACTERISTICS

Machine	Price Range (Monthly, $ thousand)	First Delivery	Processor Speed (Add Time, μs)	Storage Cycle Time (μs)	Accumulators	Internal Storage (thousand words)	Word Size	Floating-Point Precision	Overlap	Address Size	Operation Codes	Indirect Addressing	Index Registers	Extensiveness†	Time-Sharing I/O	No. of Channels	Transfer Rate	Fixed Head	Movable Head	Magnetic Tape	Card Reader	Card Punch	Printer	Paper-Tape Reader	Paper-Tape Punch	Algebraic Compiler	Monitor§	Business Compiler
MITSUBISHI MELCOM 1101F	2.1	3/60	310	7800	1	4^D	24 / 33b		—	12	80	—	4	XBE	—	—	—	—	—	—	400^W	—	20^W			√	X	—
MITSUBISHI MELCOM 1530	4-20	1/64	12	6	1	8-32	36 / 18b		—	18	300	1	—^{L}	XB	I	1	.2M	47^R	116^S	15-42^T	1650^U	300^U	750^V	150^W	1000^W	√	*	
MITSUBISHI MELCOM 3100/10, 30, 50	2-20	9/66	3.5	1.75	1	12-96	36 / 18b		—	18	155	1	—^{L}	XB	I	4	.6M	47^R	116^S	30-120^T	800^U	300	1000^V	120^W	1200^W	√	*	√
MITSUBISHI MELCOM 9100/30	4-14	3/68	2.5	.8	2	4-65	24 / 16b		—	16	134	1	12	ALL / XF		5	1.6M	122^R	156^S	30-96^T	800^U	250^U	1250^V	120^W	1200^W	√		GR
NIPPON ELECTRIC NEAC 1210	.4	10/64	40000	20000	—	3d^D	6d	—	1	3d	24	—	0	—	—	—	—	—	—	—	—	—	16.7^W	9.3^W			
NIPPON ELECTRIC NEAC 1240	.5-1.3	2/67	210	5.3	—	8-16	7d	—	—	4d	38	—	0	H	—	—	—	M271	—	M223	—		M211^W / M211^W			√		—
NIPPON ELECTRIC NEAC 2200/50	.8-2.2	5/67	63^A	2^B	—	4-16	1a^E	—	—	18	36	∞	6	B		3	167K	E271 / E261	E204	E214 / E214	E206	E209	E210			√	√	G
NIPPON ELECTRIC NEAC 2200/100	1.4-5.6	11/66	63^A	2^B	1	2-32	1a^E	—	1	12-18	36	∞	6	XFH	CI	3	.9M	N271 / N259^S	N204	—	N123^U	N214^U	N122^V	N110^W	N109^W	√		GR

MITSUBISHI MELCOM 1101F — D. Internal storage is drum. W. Indicates speed in characters per second. Model numbers not yet available. X. MUSE.

MITSUBISHI MELCOM 1530 — L. Unlimited number available through micro-command portions of stored logic. R, S, T. Indicates transfer rate in thousands of characters per second. Model numbers not yet available. U. Indicates speed in cards per minute. Model numbers not yet available. V. Indicates speed in lines per minute. Model numbers not yet available. W. See Melcom 1101F.

MITSUBISHI MELCOM 3100/10, 30, 50 — L, R, S, T, U, V. See Melcom 1530. W. See Melcom 1101F. Note. Model 50 delivered 12/66.

MITSUBISHI MELCOM 9100/30 — R, S, T, U, V. See Melcom 1530. W. See Melcom 1101F.

NIPPON ELECTRIC NEAC 1210 — D. Internal storage is drum. W. Indicates speed in characters per second. Model numbers not yet available.

NIPPON ELECTRIC NEAC 1240 — W. M209 reader and M210 punch also available.

NIPPON ELECTRIC NEAC 2200/50 — A. Assumes two five-character fields. B. Per byte. E. Memory is organized in eight-bit characters or bytes.

NIPPON ELECTRIC NEAC 2200/100 — A, B, E. See Neac 2200/50. S. N261, N262 also available. U. N223 reader, N224 punch, and N227 and N214 reader/punches. V. N206 and N222 also available. W. N209 reader and N210 punch also available. Note. A version of the Honeywell 200/120.

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† – all except: B – byte manipulation, D – double precision, E – translate-edit capability, F – floating-point instructions, H – hardware multiply-divide, L – logical operations.
‡ – all except: A – base address relocation, C – clock, I – program interrupt, M – memory protection, P – dynamic page relocation, S – supervisor mode.
§ – batch, R – real-time, T – time-sharing.
— None. ☆ See Section II-B. * Information unavailable.

NIPPON ELECTRIC — CENTRAL PROCESSORS CHARACTERISTICS

Processor characteristics

Machine	Price Range (Monthly, $thousand)	First Delivery	Add Time (µs)	Cycle Time (µs)	Accumulators	Internal Storage Capacity (K words)	Word Size	Floating-Point Precision	Overlap	Address Size	Operation Codes	Indirect Addressing	Index Registers	Extensiveness	Time-Sharing
NEAC 2200/200	2.2–13.9	7/64	44[A]	2[B]	1	4–65	—	1a[E]	1	12–24	38	∞	15	XF	CIS
NEAC 2200/300	4.2–28.6	2/67	31.5[A]	1.5[B]	1	16–131	36	1a[E]	1	12–24	56	∞	15	ALL	XF
NEAC 2200/400	6.9–41.7	10/66	22[A]	1[B]	1	16–262	36	1a[E]	1	12–24	56	∞	30	ALL	XF
NEAC 2200/500	11–55.5	11/66	6[A]	1[B]	1	65–524	36	1a[E]	4	12–24	71	∞	30	ALL	XF
NEAC 2206	3.3–25.3	3/62	50	10	3	4–10	40	12d	1	12	315	∞	18	BF	IM
NEAC 2230	2–13.1	3/63	100	10	2	2–4	40	12d	1	12	93	1	3	F	IN
NEAC 2400	7.2–16.1	2/63	120	9.25	—	1–4	—	12d	1	12	60	—	3	—	—
NEAC 2800	15–36	/64	24	6	1	4–32	40	12d	1	11	—[J]	1	16	BF	

Input/Output, Auxiliary Storage, Peripheral Devices, Software

Machine	Number of Channels	Transfer Rate	Fixed Head	Movable Head	Magnetic Tape	Card Reader	Card Punch	Printer	Algebraic Compiler	Monitor $	Business Compiler
NEAC 2200/200	4	.9M	N271	N259[S]	N204	N223[U], N214[U]	N206[V], N209	N210	√	GR	√
NEAC 2200/300	4	.9M	N271	N259[S]	N204	N223[U], N214[U]	N206[V], N209	N210	√	GR	√
NEAC 2200/400	8	.5M	N271	N259[S]	N204	N223[U], N214[U]	N206[V], N209	N210	√	GR	√
NEAC 2200/500	16	.5M	N271	N259[S]	N204	N223[U], N214[U]	N206[V], N209	N210	√	GRT	√
NEAC 2206	—	—	523	544	543	406[U], 407[U]	402, 104[W]	381	√[X]	G	√
NEAC 2230	—	—	523	544	543	406[U], 407[U]	352[V], 104[W]	381	√[X]	G	—
NEAC 2400	*	.86M	—	N460	N404	N423, N427	N422, N409	N410	√[X]	G	√
NEAC 2800	*	1.3M	N271	N860[S]	N804[T]	N823[U], N824[U]	N822[V], N809[W]	N810[W]	√[X]	GR	√

Notes

NEAC 2200/200 — A, B, E. See Neac 2200/50. S. See Neac 2200/100. U. N224 punch, and N227 and N214 reader/punches also available. V. N222 also available. Note. A version of the Honeywell 200/200.

NEAC 2200/300 — A, B, E. See Neac 2200/50. S. See Neac 2200/100. U, V. See Neac 2200/200. Note. A version of the Honeywell 200/1200.

NEAC 2200/400 — A, B, E. See Neac 2200/50. S. See Neac 2200/100. U, V. See Neac 2200/200. Note. A version of the Honeywell 200/2200.

NEAC 2200/500 — A, B, E. See Neac 2200/50. S. See Neac 2200/100. U, V. See Neac 2200/200. Note. A version of the Honeywell 200/4200.

NEAC 2206 — U. 411 reader, 412 punch and 401 reader/punch also available. W. 121 and 151 punches also available. X. NARC.

NEAC 2230 — U, W, X. See Neac 2206. V. 402 also available.

NEAC 2400 — X. AUTOMATH.

NEAC 2800 — J. Up to 59 optionally. S. N859 and N860 also available. T. N204 also available. U. N223 reader, N214 and N224 punches, and N277 and N214 reader/punches also available. V, W. See Neac 2200/100. X. See Neac 2400.

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† – all except: B – byte manipulation, D – double precision, E – translate-edit capability, F – floating-point instructions, H – hardware multiply-divide, L – logical operations.

‡ – all except: A – base address relocation, C – clock, I – program interrupt, M – memory protection, P – dynamic page relocation, S – supervisor mode.

‖ – batch, R – real-time, T – time-sharing. — None. ☆ See Section II-B. • Information unavailable.

System	Price Range (Monthly, $1000)	First Delivery	Processor Speed (Add Time, μs)	Storage Cycle Time (μs)	Accumulators	Internal Storage (1000 Words)	Word Size	Floating-Point Precision	Overlap	Address Size	Operation Codes	Indirect Addressing	Index Registers	Extensiveness	Time-Sharing / Input-Output	No. of Channels	Transfer Rate	Fixed Head	Movable Head	Magnetic Tape	Card Reader	Card Punch	Printer	Paper-Tape Reader	Paper-Tape Punch	Algebraic Compiler	Monitor	Business Compiler
NIPPON ELECTRIC NEAC 3100	.7-2.8	5/67	4	2	—	2-32	18b			6-15	45	√	5	DHL	IMS	4	.5M	E271 / E261	E204	E214	E214	E206	E209		E210	√	GR	
NIPPON ELECTRIC NEAC 3800	35	11/63	8A	2	1	8-65	12d	40	1	12	71	1	8L	FHL	C	16	375K	—	—	—	—	—	—	—	—	√X	GR	√Z
OKI ELECTRIC OKITAC 5090D	5.2	3/62	400	10	*	1-8	12d	*	—	*	*	*	1	F	—	*	*	—		25T	500U	150U	500V	400W	150W	√X	—	
OKI ELECTRIC OKITAC 5090H	8	3/63	35	10	*	8-16	42b	*	—	*	*	√	15	F		*	*	—		62.5T	800U	250U	1000V	400W	150W	√X	√	
OKI ELECTRIC OKITAC 5090M	6.9	9/63	400	10	*	1-8	12d	*	—	*	*	*	1	F		*	*	—		42T	500U	150U	500V	400W	150W	√X	√	
TOSHIBA TOSBAC 3300	1.5-3	11/63	260	10	1	4-8	24b	33		13b	60	1	1	F	IN	8	*			771		117	518		217	√X		*
TOSHIBA TOSBAC 3400	3.3-22	12/64	4.5	.8B	1	8-262	24b	38		14	152	∞	3	F	IN	8	.3M	772	731	716	317U	431U	516V	118	218	√X	GRT	√
TOSHIBA TOSBAC 4200	4-9	3/62	330A	15B	1	4-40	1aE	—		*	60		6			—	—			715	313	416	514V	115	213	—	—	√Z

NIPPON ELECTRIC NEAC 3800 — A. For three operand addition. L. For each of up to eight programs. X. AUTOMATH 800 and AUTOMATH 1800 (FORTRAN-type). Z. FACT in addition to COBOL. Note. A version of the Honeywell 1800.

OKI ELECTRIC OKITAC 5090D — T. Indicates transfer rates in thousands of characters per second. Model numbers not yet available. U. Indicates speed in cards per minute. Model numbers not yet available. V. Indicates speed in lines per minute. Model numbers not yet available. W. Indicates speed in characters per second. Model numbers not yet available. X. ALGOL in addition to FORTRAN. Note. System no longer marketed.

OKI ELECTRIC OKITAC 5090H — T, U, V, W, X. See Okitac 5090D. Note. System no longer marketed.

OKI ELECTRIC OKITAC 5090M — T, U, V, W, X. See Okitac 5090D. Note. System no longer marketed.

TOSHIBA TOSBAC 3300 — X. ALGOL in addition to FORTRAN.

TOSHIBA TOSBAC 3400 — B. Four-microsecond memory available. U. 318 reader and 433 punch also available. V. 517/C, D also available. X. KT-TAP, ALPS 34 and ALGOL '60 in addition to FORTRAN.

TOSHIBA TOSBAC 4200 — A. Assumes two five-character fields. B. Per byte. E. Memory is organized in eight-bit characters or two four-bit digits. V. 515 and 517B also available. Z. TAP.

·X – all except: B – byte manipulation, D – double precision, E – translate-edit capability, F – floating-point instructions, H – hardware multiply-divide, L – logical operations.
‡X – all except: A – base address relocation, C – clock, I – program interrupt, M – memory protection, P – dynamic page relocation, S – supervisor mode.
§ – batch, R – real-time, T – time-sharing. — None. ☆ See Section II-B. * Information unavailable.

Model	Price Range (Monthly, $ thousand)	First Delivery (Mo./Yr.)	Processor Speed (Add Time, μs)	Storage Cycle Time (μs)	Accumulators	Internal Storage (Capacity, thousand words)	Word Size	Floating-Point Precision	Overlap	Address Size	Operation Codes	Indirect Addressing	Index Registers	Extensiveness †	Time Sharing / Input-Output ‡	No. of Channels	Transfer Rate	Fixed Head	Movable Head	Magnetic Tape	Card Reader	Card Punch	Printer	Paper-Tape Reader	Paper-Tape Punch	Algebraic Compiler	Monitor §	Business Compiler
TOSHIBA TOSBAC 4300	4-9	12/64	220[A]	10[B]	1	10-80	1a[E]	—	*			120		8	—	√	—	—	—	—	715	312[U]	416	514[V]	213	115	√	—	√[Z]
TOSHIBA TOSBAC 5100/20	3-12	12/66	46[A]	1.8[B]	1	4-65	1a[E]	—		17	27	—	3	—		16	74K	—	5116	0074[T]	5109	5102	5103[V]	5102[W]	5110	√	—	√
TOSHIBA TOSBAC 5100/30	3.5-15	9/67	30[A]	.8[B]	1	4-65	1a[E]	—		17	27	—	3			16	74K	—	5116	0074[T]	5109	5102	5103[V]	5102[W]	5110	√		√
TOSHIBA TOSBAC 5200	2.5-26	1/65	36	18	1	4-16	20b	30		15	200		96	XBE	IM	8	80K	—	216	680[T]	225	225	690	651	651	√	—	√
TOSHIBA TOSBAC 5300	6-28	6/65	12	6	1	4-16	20b	30		15	300	—	96	BE		8	.4M	—	216	680[T]	225	235	690	651	651	√	*	√
TOSHIBA TOSBAC 5400/10	4.8-13.5	6/65	17.4	5.8	1	4-32	24b[E]	38		15	80	∞	—[L]	ALL	IMS	12	.4M	—	204[S]	107[T]	200	100[U]	200[V]	200	200	√	—	√
TOSHIBA TOSBAC 5400/20	3-25	9/65	17	3.9	1	4-131	24b[E]	38		15	80	∞	—[L]	ALL	IMS	12	.4M	—	204[S]	107[T]	200	100[U]	200[V]	200	200	√	*	√
TOSHIBA TOSBAC 5400/30	9-35	12/66	8.8	2.7	1	8-32	24b[E]	38		15	80	∞	—[L]	ALL	IMS	12	.4M	—	204[S]	107[T]	200	100[U]	200[V]	200	200	√	*	√
TOSHIBA TOSBAC 7000/60	7-17[A]	6/67	3.2	1.6	1	16	24b	17	—	14	98	3	7	BF	IM	4	*	7220	7548	112	7244	7282	7262	7253	7213	√	R	—

TOSBAC 4300 notes: A, B, E, V. See Tosbac 4200.   U. 315 reader also available.   Z. AUTO-TAP in addition to COBOL.

TOSBAC 5100/20 notes: A, B, E. See Tosbac 4200.   T. 0094, 0111, and 0121 also available.   V. 5104, 5105 and 5107 also available.   W. 5115 also available.

TOSBAC 5100/30 notes: A, B, E. See Tosbac 4200.   T, V, W. See Tosbac 5100/20.

TOSBAC 5200 notes: T. 690 also available.

TOSBAC 5300 notes: T. See Tosbac 5200.

TOSBAC 5400/10 notes: E. Up to quadruple precision instructions included.   L. Any word of memory can be used as an index register.   S. 250 and 600 also available.   T. 109, 111 and 112 also available.   U. 150 and 200 punches also available.   V. 204, 206 and 208 also available.   Note. Formerly marketed as Tosbac 5415.

TOSBAC 5400/20 notes: E, L, S, T, U, V. See Tosbac 5400/10.   Note. Formerly marketed as Tosbac 5425.

TOSBAC 5400/30 notes: E, L, S, T, U, V. See Tosbac 5400/10.

TOSBAC 7000/60 notes: A. No rental price announced. Price derived from purchase price.

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† – all except: B – byte manipulation, D – double precision, E – translate-edit capability, F – floating-point instructions, H – hardware multiply-divide, L – logical operations.
‡ – all except: A – base address relocation, C – clock, I – program interrupt, M – memory protection, P – dynamic page relocation, S – supervisor mode.
§ – batch, R – real-time, T – time-sharing.
— None.   ☆ See Section II-B.   * Information unavailable.

Sweden

Price Range (Monthly $000)	First Delivery (Mo/Yr)	Processor Speed (Add Time µs)	Storage Cycle Time (µs)	Accumulators	Internal Storage (Capacity 000 Words)	Word Size	Floating-Point Precision	Overlap	Instr. Set Address Size	Operation Codes	Indirect Addressing	Index Registers	Extensiveness †	Time-Sharing ☆	I/O Number of Channels	Transfer Rate	Aux. Storage Fixed Head	Movable Head	Magnetic Tape	Card Reader	Card Punch	Printer	Paper-Tape Reader	Paper-Tape Punch	Algebraic Compiler	Monitor §	Business Compiler
DATASAAB D21 5-14	12/62	9.6	4.8	1	8-32	24b	—	1	15	43	∞	0	DHL	I	6	.19M	—	—	2131[T]	2119[U]	2132	2129[V]	2113	2144[W]	√[X]	G	√[Z]
DATASAAB D22 8-60	5/68	3.2	1.6	1	16-262	24b	40	1	18	108	∞	3	ALL	IM	18	.75M	—	2123-2[S]	2131[T]	2119[U]	2132	2129[V]	2113	2144[W]	√[X]	GRT	√[Z]

DATASAAB D21 — T. 2117 also available.   U. 2135 and 2160 also available.   V. 2128 also available.   W. 2112 also available.   X. DAC and ALGOL-GENIUS.   Z. DAC and ALGOL-GENIUS (multi-purpose).

DATASAAB D22 — S. 2153 also available.   T, U, V, W. See D21.   X. DAC and ALGOL-GENIUS in addition to FORTRAN.   Z. DAC and ALGOL-GENIUS in addition to COBOL.

The Netherlands

Price Range (Monthly $000)	First Delivery (Mo/Yr)	Processor Speed (Add Time µs)	Storage Cycle Time (µs)	Accumulators	Internal Storage (Capacity 000 Words)	Word Size	Floating-Point Precision	Overlap	Instr. Set Address Size	Operation Codes	Indirect Addressing	Index Registers	Extensiveness †	Time-Sharing ☆	I/O Number of Channels	Transfer Rate	Aux. Storage Fixed Head	Movable Head	Magnetic Tape	Card Reader	Card Punch	Printer	Paper-Tape Reader	Paper-Tape Punch	Algebraic Compiler	Monitor §	Business Compiler
ELECTROLOGICA EL X2, X4 1.9-11	6/66	38.75	5	4	4-32	27b	40	1	15	89	√	6	BF	IM	16	.2M[Q]	1410[R], 1630	1510[T]	1230[U], 1220[U]	1310	1130	1140			√[X]	GT	√
ELECTROLOGICA EL X8 6.5-34	3/65	5	2.5	4	16-262	27b	40	2	15	89	√	6	BF	IM	32	.4M[Q]	1410[R], 1630	1510[T]	1240[U], 1220[U]	1310	1130	1140			√[X]	GT	√

ELECTROLOGICA EL X2, X4 — Q. Words per second.   R. 1412 and 1413 also available.   T. 1520, 1530, 1540, 1550, and 1560 also available.   U. 1230 also available.   X. ALGOL '60 in addition to FORTRAN.

ELECTROLOGICA EL X8 — Q, R, T, U. See EL X2, X4.   X. ALGOL '60 and ZEBRA in addition to FORTRAN.

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† X – all except: B – byte manipulation, D – double precision, E – translate-edit capability, F – floating-point instructions, H – hardware multiply-divide, L – logical operations.
‡ X – all except: A – base address relocation, C – clock, I – program interrupt, M – memory protection, P – dynamic page relocation, S – supervisor mode.
§ B – batch, R – real-time, T – time-sharing.   — None.   ☆ See Section II-B.   • Information unavailable.

PERIPHERAL
DEVICES

Part A

Part B

CHARACTERISTICS OF DEVICES

Auxiliary Storage

EXPLANATION OF COLUMN HEADINGS

Unit Rental

Monthly — The monthly rental price of a single unit, including required control devices. A factor of forty is used for deriving rentals when only purchase prices are available.

Type — The type of access to storage used: fixed (F) or movable (M) head.

Character Size — The number of binary digits in a single character in the storage device.

Sectors — The smallest addressable portion of an auxiliary storage track or band.

Tracks (Bands) — The portion of auxiliary storage which can be accessed without incurring seek time delays.

Unit

Capacity in Millions of Characters — The total storage capacity of a single storage unit.

Access Time

Seek Time in Milliseconds Minimum - Maximum — The time required to make the auxiliary storage unit ready to access a specified location by selection or positioning. The range is from the minimum time for the best possible case to the maximum time for the worst possible case.

Rotational Time in Milliseconds — The time required for the unit to make one complete revolution.

Parity — A check ($\sqrt{}$) indicates that parity is verified by the unit on data readout.

Transfer Rate

Thousands of Characters per Second — The speed at which data may be read from or written to the unit, exclusive of seek or latency delays.

BRYANT 4000 SERIES and others — Page 88

Model	Unit Rental Monthly	Type	Character Size	Sectors Number per Track	Capacity per Sector in Characters	Tracks (Bands) Number per Cylinder	Number per Unit	Capacity per Track in Thousands of Characters	Unit Capacity in Millions of Characters	Access Time Seek Time in Milliseconds Minimum — Maximum	Rotational Time in Milliseconds	Parity	Transfer Rate Thousands of Characters per Second
BRYANT 4000 SERIES	*	M	8[C]	*	*	—	76800	1.8	472	30-180	50	√	142.5
BRYANT 5000 SERIES	*	F	8[C]	*	*	288	288	1.5	1.45	—	5	√	315
BRYANT 10000 SERIES	*	F	8[C]	*	*	576	576	3.1	1.8	—	12.5	√	252
BRYANT 75000 SERIES	*	F	8[C]	*	*	288	288	.23	.68	—	10	√	235
BRYANT 185000 SERIES	*	F	8[C]	*	*	1024	1024	5.8	5.9	—	16.7	√	347
BRYANT PhD SERIES	*	M	8[C]	*	*	*	5504	7.8	43.2	22-50	33.3	√	1200
BURROUGHS 9372 DISC FILE	850	F	8	85	100	150	1200	8.3	10	—	40	√	200
BURROUGHS B430	1700	F	56	6	86	64	64	512	.032	—	17	√	123
BURROUGHS B475 DISC FILE	1700	F	48	32[D]	240	150	1200	7.68[H]	9.6	—	40	√	100

C. Variable to suit customer's needs. (BRYANT 4000 SERIES)

C. See 4000 series. (BRYANT 5000, 10000, 75000, 185000, PhD SERIES)

D. For middle zone; 24 and 44, respectively, for inner and outer zones.
H. For middle zone; 5.76 and 10.56, respectively, for inner and outer zones.

COLLINS 8871 SERIES and others — Page 89

Model	Unit Rental Monthly	Type	Character Size	Sectors Number per Track	Capacity per Sector in Characters	Tracks (Bands) Number per Cylinder	Number per Unit	Capacity per Track in Thousands of Characters	Unit Capacity in Millions of Characters	Access Time Seek Time in Milliseconds Minimum — Maximum	Rotational Time in Milliseconds	Parity	Transfer Rate Thousands of Characters per Second
COLLINS 8871 SERIES	*	M	8	64[D]	8672	128	8192[G]	8.6	67[J]	25-185	50	√	160
COLLINS 8873A SERIES	*	F	8	4[D]	1024	1024	1024[G]	4.3	4.46[J]	17-35	35	√	123
CONTROL DATA 813	3450	M	6	32	256	*	12288	8	100	34-110	50.8	√	196
CONTROL DATA 814	5500	M	6	32	256	*	24576	8	200	34-110	50.8	√	196
CONTROL DATA 852	390	M	7	20	100	100	1000	2	2	30-145	40	√	77.7
CONTROL DATA 853	350	M	6	16	256	100	1000	4	4.1	30-145	25	√	208
CONTROL DATA 854	520	M	6	16	256	200	2000	4	8.2	30-165	25	√	208
CONTROL DATA 863	2750	F	6	*	*	832	832		4	—	34	√	2000
CONTROL DATA 1751	780[A]	F	8	*	*	*	*	*	.5	—	17	√	250
CONTROL DATA 6603	5900	M	6	128[D]	704	512	1024	90[H]	74.7	201-268	66.7	√	143[Q]

COLLINS 8871 SERIES — D. 124 also available.   G. 15,872 also available.   J. 128 also available.

COLLINS 8873A SERIES — D. 7 and 13 also available.   G. 512 and 256 also available.   J. 2.23 and 1.11 also available.

CONTROL DATA 1751 — A. No rental price announced. Price derived from purchase price.

CONTROL DATA 6603 — D. For two outer zones; 100 for two inner zones.   H. For two outer zones; 70.4 for two inner zones.   Q. For two outer zones; 111 for two inner zones.

— None.   • Information unavailable.

AUXILIARY STORAGE CHARACTERISTICS

Unit Rental Monthly / Type	Character Size	Sectors Number per Track	Capacity per Sector in Characters	Tracks (Bands) Number per Cylinder	Number per Unit	Capacity per Track in Thousands of Characters	Unit Capacity in Millions of Characters	Access Time Seek Time in Milliseconds Minimum — Maximum	Rotational Time in Milliseconds	Parity	Transfer Rate Thousands of Characters per Second
CONTROL DATA 6638											
8300 / M	6	814	256	814	24576	200	131-167	25-110	50.8	√	196
CONTROL DATA 8951											
790 / F	12	2	512	32	32	1	.03	—	34	√	32
CONTROL DATA 8952											
1050 / F	12	2	512	64	64	1	.06	—	34	√	32
DATA DISC F.75, F1.5, F3, F6											
* / F	8^C	64^D	1960	8	8^G	12.5	.8^J	1	33.4	√	375
DATA DISC M6											
* / M	8^C	*	*	130	260	6.25	1.62	125-358	83.3	√	112.5
DATA PRODUCTS 5022											
4730 / M	8^C	64^D	55	*	8192	3.4	27.5	55-250	52	√	700
DATA PRODUCTS 5025											
6780 / M^B	8^C	64^D	55	*	8192	3.38	27.5	55-250	52	√	1400
DATA PRODUCTS 5026											
5455 / M	8^C	64^D	55	*	8192	3.38	27.5	55-250	52	√	700
DATA PRODUCTS 5045 II											
7150 / M	8^C	64^D	110	*	8192	6.7	54.5	50-250	52	√	2400
DATA PRODUCTS 5045 III											
7855 / M	8^C	64^D	110	*	16384	6.7	109	50-250	52	√	2400
DIGITAL DEVELOPMENT 7301/1, 2											
3000^A / F	6	—^D	128	128	—^E	5	.6	—	17	√	300
DIGITAL DEVELOPMENT 7302											
—^A / F	6	—^D	512	128	—^E	5	2.56	—	17	√	300
DIGITAL DEVELOPMENT 7303											
—^A / F	6	—^D	1024	128	—^E	5	5.12	—	17	√	300
EAI 250											
400^A / M	8	64	88	128	128	5.6	1.44	105-740	50	—^M	125

C, D. Variable to suit customer's needs. G. 16 for F1.5, 32 for F3, and 64 for F6. J. 1-6 for F1.5, 3.2 for F3, and 6.4 for F6. (DATA DISC F.75, F1.5, F3, F6)

C. Variable to suit customer's needs. D. Variable from four to 64. (DATA PRODUCTS 5022)

B. 96 fixed heads optionally available. C, D. See 5022. (DATA PRODUCTS 5025)

C, D. See 5022. (DATA PRODUCTS 5026)

C, D. See 5022. (DATA PRODUCTS 5045 II)

C, D. See 5022. (DATA PRODUCTS 5045 III)

A. Variable depending on configuration used. No rental prices announced. Prices derived from purchase prices. D, E. Variable up to 1024 sectors and 1024 characters per sector. (DIGITAL DEVELOPMENT 7301/1, 2)

A, D, E. See 7301/1. (DIGITAL DEVELOPMENT 7302)

A, D, E. See 7301/1. (DIGITAL DEVELOPMENT 7303)

A. No rental price announced. Price derived from purchase price. M. Cyclic redundancy check. (EAI 250)

DIGITAL EQUIPMENT 24
Modified version of Vermont Research Ten-Inch drum.

DIGITAL EQUIPMENT 251
Modified version of Vermont Research Fifteen-Inch drum.

DIGITAL EQUIPMENT 270
Modified version of Data Products 5022.

DIGITAL EQUIPMENT RM08
Modified version of Vermont Research Ten-Inch drum.

DIGITAL EQUIPMENT RM09
Modified version of Vermont Research Fifteen-Inch drum.

EAI 8492
Modified version of Control Data 853.

AUXILIARY STORAGE CHARACTERISTICS

— None. * Information unavailable.

AUXILIARY STORAGE CHARACTERISTICS

Unit	Unit Rental Monthly	Type	Character Size	Sectors Number per Track	Capacity per Sector in Characters	Tracks (Bands) Number per Cylinder	Number per Unit	Capacity per Track in Thousands of Characters	Unit Capacity in Millions of Characters	Access Time Seek Time in Milliseconds Minimum — Maximum	Rotational Time in Milliseconds	Parity	Transfer Rate Thousands of Characters per Second
EAI 8494 — Modified version of General Precision 3800.													
EMR 60611 — Modified version of Burroughs B475 disc file.													
EMR 60711 — Modified version of Vermont Research Ten-Inch drum.													
EMR 60751 — Modified version of Vermont Research Fifteen-Inch drum.													
GENERAL ELECTRIC 160	1130	M	6	10	200	384	2000	3.8	7.68	30-165	52	√	208
GENERAL ELECTRIC 200	3435	F	6	32	400	385	400	12	4.7	—	34	√	370
GENERAL ELECTRIC 204	1170	M	6	8[D]	250	256	2048	2[H]	23.4	95-305	52	√	62.5
GENERAL ELECTRIC 270	1500	F	6	16[D]	3600	384	3600	6.1[H]	15.36	26	56	√	333
GENERAL ELECTRIC 388	3855	M	6	—[D]	64	—[E]	131072	2.6	341	145-170	60	√	80
GENERAL ELECTRIC 4220	700	F	24	*	260	*	260	1	.26	—	16	√	31
GENERAL ELECTRIC 4548/1	690	M	24	16	100	64	1000	1	1	*	25	√	52
GENERAL ELECTRIC 4548/2	1130	M	24	16	100	64	2000	1	2	*	25	√	52
GENERAL PRECISION 3800	*	F	8[C]	*	4196	*	4196	5.8	25	—	30	√	141
GENERAL PRECISION 4800	*	F	8[C]	*	5484	*	5484	9.9	50	—	70	√	141
GENERAL PRECISION L110-8/1	2495[A]	F	8[C]	*	49	*	49	6.1	.04	—	34	√	.045
GENERAL PRECISION L210-8/3	5995[A]	F	8[C]	*	132	*	132	2	.026	—	34	√	.125
GENERAL PRECISION L416-17/21	500	F	8[C]	*	270	*	270	6	1.5	—	34	—	.19
GENERAL PRECISION L416-17/41	800	F	8[C]	*	540	*	540	6	3	—	34	—	.19
GENERAL PRECISION L424-17/41	1300	F	8[C]	*	1080	*	1080	6	6	—	34	—	.19
HEWLETT PACKARD 2757	*	F	8	85	32[F]	128	32[G]	1.08[H]	.35[J]	—	16.7	√	35.2

GENERAL ELECTRIC 204 — D. For inner tracks; 16 for outer tracks. H. For inner tracks; four for outer tracks.

GENERAL ELECTRIC 270 — D, H. Variable depending on zone.

GENERAL ELECTRIC 388 — D, E. Units is card random-access system.

GENERAL PRECISION 3800 — C. Variable to suit customer's needs.

GENERAL PRECISION 4800 — C. See 3800.

GENERAL PRECISION L110-8/1 — A. Excluding electronics. C. See 3800.

GENERAL PRECISION L210-8/3 — A. See L110-8/1. C. See 3800.

GENERAL PRECISION L416-17/21 — C. See 3800.

GENERAL PRECISION L416-17/41 — C. See 3800.

GENERAL PRECISION L424-17/41 — C. See 3800.

HEWLETT PACKARD 2757 — F, G. 64 also available. H. 2.16 also available. J. .70 also available.

— None. * Information unavailable.

HONEYWELL 258

Unit Rental Monthly	Type	Character Size	Sectors Number per Track	Capacity per Sector in Characters	Tracks (Bands) Number per Cylinder	Number per Unit	Capacity per Track in Thousands of Characters	Unit Capacity in Millions of Characters	Access Time Seek Time in Milliseconds Minimum — Maximum	Rotational Time in Milliseconds	Parity	Transfer Rate Thousands of Characters per Second
365[A]		6	10		10		4.6	4.6	30-125		—[N]	208
	M			483		1040				25		

A. Control unit is additional 545.   N. Validity-check for reading operations. Verify-read and file protection for writing operations.

HONEYWELL 259

Unit Rental Monthly	Type	Character Size	Sectors Number per Track	Capacity per Sector in Characters	Tracks (Bands) Number per Cylinder	Number per Unit	Capacity per Track in Thousands of Characters	Unit Capacity in Millions of Characters	Access Time Seek Time in Milliseconds Minimum — Maximum	Rotational Time in Milliseconds	Parity	Transfer Rate Thousands of Characters per Second
515[A]		6	10		10		4.6	9.2	30-150		—[N]	208
	M			483		2030				25		

A, N. See 258.

HONEYWELL 259A

Unit Rental Monthly	Type	Character Size	Sectors Number per Track	Capacity per Sector in Characters	Tracks (Bands) Number per Cylinder	Number per Unit	Capacity per Track in Thousands of Characters	Unit Capacity in Millions of Characters	Access Time Seek Time in Milliseconds Minimum — Maximum	Rotational Time in Milliseconds	Parity	Transfer Rate Thousands of Characters per Second
475[A]		6	10		10		4.6	9.2	30-150		—[N]	147.5
	M			483		2030				35		

A, N. See 258.   Note. Available only on certain Honeywell 200 series central processors.

HONEYWELL 261

Unit Rental Monthly	Type	Character Size	Sectors Number per Track	Capacity per Sector in Characters	Tracks (Bands) Number per Cylinder	Number per Unit	Capacity per Track in Thousands of Characters	Unit Capacity in Millions of Characters	Access Time Seek Time in Milliseconds Minimum — Maximum	Rotational Time in Milliseconds	Parity	Transfer Rate Thousands of Characters per Second
3700[A]		6	*		128		8.4	135	15-120		—[N]	190
	M			*		16384				51.4		

A. Control unit is additional 600.   N. See 258.

HONEYWELL 262

Unit Rental Monthly	Type	Character Size	Sectors Number per Track	Capacity per Sector in Characters	Tracks (Bands) Number per Cylinder	Number per Unit	Capacity per Track in Thousands of Characters	Unit Capacity in Millions of Characters	Access Time Seek Time in Milliseconds Minimum — Maximum	Rotational Time in Milliseconds	Parity	Transfer Rate Thousands of Characters per Second
6300[A]		6	*		128		8.4	270	15-120		—[N]	190
	M			*		32768				51.4		

A. See 261.   N. See 258.

HONEYWELL 270A/1, 2, 3

Unit Rental Monthly	Type	Character Size	Sectors Number per Track	Capacity per Sector in Characters	Tracks (Bands) Number per Cylinder	Number per Unit	Capacity per Track in Thousands of Characters	Unit Capacity in Millions of Characters	Access Time Seek Time in Milliseconds Minimum — Maximum	Rotational Time in Milliseconds	Parity	Transfer Rate Thousands of Characters per Second
1030[A]		6	40		512		5.12	2.6[J]	—		—[N]	111
	F			128		512				53		

A. 1740 for Model 2 and 2450 for Model 3.   J. 5.2 for Model 2 and 7.8 for Model 3.   N. Validity-check for reading operations. Manual switches allow or inhibit writing.

HONEYWELL 4400 SERIES

Unit Rental Monthly	Type	Character Size	Sectors Number per Track	Capacity per Sector in Characters	Tracks (Bands) Number per Cylinder	Number per Unit	Capacity per Track in Thousands of Characters	Unit Capacity in Millions of Characters	Access Time Seek Time in Milliseconds Minimum — Maximum	Rotational Time in Milliseconds	Parity	Transfer Rate Thousands of Characters per Second
782		8	1		64		3	.2[J]	—		√	177
	F			3072		64[G]				17		

G. Up to 512 also available.   J. Up to 1.6 also available.

HONEYWELL 4600 SERIES

Unit Rental Monthly	Type	Character Size	Sectors Number per Track	Capacity per Sector in Characters	Tracks (Bands) Number per Cylinder	Number per Unit	Capacity per Track in Thousands of Characters	Unit Capacity in Millions of Characters	Access Time Seek Time in Milliseconds Minimum — Maximum	Rotational Time in Milliseconds	Parity	Transfer Rate Thousands of Characters per Second
712		8	1		10		3.6	3.6[J]	30-140		√	156
	M			3600		1000[G]				25		

G. 2000 also available.   J. 7.2 also available.

IBM 1301/1, 2

Unit Rental Monthly	Type	Character Size	Sectors Number per Track	Capacity per Sector in Characters	Tracks (Bands) Number per Cylinder	Number per Unit	Capacity per Track in Thousands of Characters	Unit Capacity in Millions of Characters	Access Time Seek Time in Milliseconds Minimum — Maximum	Rotational Time in Milliseconds	Parity	Transfer Rate Thousands of Characters per Second
3000[A]		6	*		40		2.8	28[J]	50-180		—	90
	M			*		10000[G]				34		

A. 4,400 for Model 2.   G. 20,000 for Model 2.   J. 56 for Model 2.

IBM 1301/11, 12, 21, 22

Unit Rental Monthly	Type	Character Size	Sectors Number per Track	Capacity per Sector in Characters	Tracks (Bands) Number per Cylinder	Number per Unit	Capacity per Track in Thousands of Characters	Unit Capacity in Millions of Characters	Access Time Seek Time in Milliseconds Minimum — Maximum	Rotational Time in Milliseconds	Parity	Transfer Rate Thousands of Characters per Second
2350[A]		6	20		40		2.5	25.4[J]	50-180		—	77
	M			100		10000[G]				34		

A. 3,850 for Models 12 and 22.   G. 20,000 for Models 12 and 22.   J. 50.8 for Models 12 and 22.

IBM 1302/N1, N2

Unit Rental Monthly	Type	Character Size	Sectors Number per Track	Capacity per Sector in Characters	Tracks (Bands) Number per Cylinder	Number per Unit	Capacity per Track in Thousands of Characters	Unit Capacity in Millions of Characters	Access Time Seek Time in Milliseconds Minimum — Maximum	Rotational Time in Milliseconds	Parity	Transfer Rate Thousands of Characters per Second
*		8	*		300		5	58[J]	50-180		—	156
	M			*		11700[G]				34		

G. 23,400 for Model N2.   J. 116 for Model N2.

IBM 1311

Unit Rental Monthly	Type	Character Size	Sectors Number per Track	Capacity per Sector in Characters	Tracks (Bands) Number per Cylinder	Number per Unit	Capacity per Track in Thousands of Characters	Unit Capacity in Millions of Characters	Access Time Seek Time in Milliseconds Minimum — Maximum	Rotational Time in Milliseconds	Parity	Transfer Rate Thousands of Characters per Second
400[A]		6	*		10		2	2	250-400		—	77
	M			*		10000				*		

A. Up to 1,050 depending on number of drives.

IBM 1405/1, 2

Unit Rental Monthly	Type	Character Size	Sectors Number per Track	Capacity per Sector in Characters	Tracks (Bands) Number per Cylinder	Number per Unit	Capacity per Track in Thousands of Characters	Unit Capacity in Millions of Characters	Access Time Seek Time in Milliseconds Minimum — Maximum	Rotational Time in Milliseconds	Parity	Transfer Rate Thousands of Characters per Second
1000[A]		6	5		200		1	10[J]	*		—	*
	M			200		10000[G]				*		

A. 1,575 for Model 2.   G. 20,000 for Model 2.   J. 20 for Model 2.

IBM 2301

Unit Rental Monthly	Type	Character Size	Sectors Number per Track	Capacity per Sector in Characters	Tracks (Bands) Number per Cylinder	Number per Unit	Capacity per Track in Thousands of Characters	Unit Capacity in Millions of Characters	Access Time Seek Time in Milliseconds Minimum — Maximum	Rotational Time in Milliseconds	Parity	Transfer Rate Thousands of Characters per Second
4650		8	*		200		20.5	4	—		—	1200
	F			*		200				17.5		

IBM 2302/1, 2

Unit Rental Monthly	Type	Character Size	Sectors Number per Track	Capacity per Sector in Characters	Tracks (Bands) Number per Cylinder	Number per Unit	Capacity per Track in Thousands of Characters	Unit Capacity in Millions of Characters	Access Time Seek Time in Milliseconds Minimum — Maximum	Rotational Time in Milliseconds	Parity	Transfer Rate Thousands of Characters per Second
6450[A]		8	*		40		5	113[J]	50-180		—	156
	M			*		20000[G]				34		

A. 8,750 for Model 2.   G. 40,000 for Model 2.   J. 226 for Model. 2.

IBM 2303

Unit Rental Monthly	Type	Character Size	Sectors Number per Track	Capacity per Sector in Characters	Tracks (Bands) Number per Cylinder	Number per Unit	Capacity per Track in Thousands of Characters	Unit Capacity in Millions of Characters	Access Time Seek Time in Milliseconds Minimum — Maximum	Rotational Time in Milliseconds	Parity	Transfer Rate Thousands of Characters per Second
3500		8	*		800		5	4	—		—	312
	F			*		800				17		

IBM 2310/A1, A2, A3

Unit Rental Monthly	Type	Character Size	Sectors Number per Track	Capacity per Sector in Characters	Tracks (Bands) Number per Cylinder	Number per Unit	Capacity per Track in Thousands of Characters	Unit Capacity in Millions of Characters	Access Time Seek Time in Milliseconds Minimum — Maximum	Rotational Time in Milliseconds	Parity	Transfer Rate Thousands of Characters per Second
375[A]		16	*		2		2.5	.5	35-520		√	36
	M			*		200				*		

A. 600 for Model A2 and 875 for Model A3.   Note: One, two and three drives for Models A1, A2 and A3, respectively.

— None.   * Information unavailable.

IBM 2311/11, 12

Unit Rental Monthly	Type	Character Size	Sectors Number per Track	Capacity per Sector in Characters	Tracks (Bands) Number per Cylinder	Number per Unit	Capacity per Track in Thousands of Characters	Unit Capacity in Millions of Characters	Access Time Seek Time in Milliseconds Minimum–Maximum	Rotational Time in Milliseconds	Parity	Transfer Rate Thousands of Characters per Second
*		8	—		10		2.7	2.7^J	30-185		—	156
	M			—		1000^G				25		

G. 2,000 for Model 12. J. 5.4 for Model 12.

IBM 2314

Unit Rental Monthly	Type	Character Size	Sectors Number per Track	Capacity per Sector in Characters	Tracks (Bands) Number per Cylinder	Number per Unit	Capacity per Track in Thousands of Characters	Unit Capacity in Millions of Characters	Access Time Seek Time in Milliseconds Minimum–Maximum	Rotational Time in Milliseconds	Parity	Transfer Rate Thousands of Characters per Second
5400		8	*		20		7.1	20	25-135		—	312
	M			*		3600				25		

INTERDATA 700 SERIES

Modified versions of Data Disc F series.

NCR 353/1

Unit Rental Monthly	Type	Character Size	Sectors Number per Track	Capacity per Sector in Characters	Tracks (Bands) Number per Cylinder	Number per Unit	Capacity per Track in Thousands of Characters	Unit Capacity in Millions of Characters	Access Time Seek Time in Milliseconds Minimum–Maximum	Rotational Time in Milliseconds	Parity	Transfer Rate Thousands of Characters per Second
950		12^C	$—^D$		7^F		3.1	5.5	200		√	100
	M			$—^E$		1792				43		

C. 12-bit slabs are either two six-bit characters or three four-bit digits.
D, E. Storage unit is a Card Random Access Memory File (CRAM).
F. Indicates number of tracks per card.

NCR 353/2

Unit Rental Monthly	Type	Character Size	Sectors Number per Track	Capacity per Sector in Characters	Tracks (Bands) Number per Cylinder	Number per Unit	Capacity per Track in Thousands of Characters	Unit Capacity in Millions of Characters	Access Time Seek Time in Milliseconds Minimum–Maximum	Rotational Time in Milliseconds	Parity	Transfer Rate Thousands of Characters per Second
700		12^C	$—^D$		56^F		1.12	8	200		√	38
	M			$—^E$		7168				43		

C, D, E, F. See 353/1.

NCR 353/3

Unit Rental Monthly	Type	Character Size	Sectors Number per Track	Capacity per Sector in Characters	Tracks (Bands) Number per Cylinder	Number per Unit	Capacity per Track in Thousands of Characters	Unit Capacity in Millions of Characters	Access Time Seek Time in Milliseconds Minimum–Maximum	Rotational Time in Milliseconds	Parity	Transfer Rate Thousands of Characters per Second
825		12^C	$—^D$		56^F		1.12	16	200		√	38
	M			$—^E$		14336				43		

C, D, E, F. See 353/1.

NCR 353/5

Unit Rental Monthly	Type	Character Size	Sectors Number per Track	Capacity per Sector in Characters	Tracks (Bands) Number per Cylinder	Number per Unit	Capacity per Track in Thousands of Characters	Unit Capacity in Millions of Characters	Access Time Seek Time in Milliseconds Minimum–Maximum	Rotational Time in Milliseconds	Parity	Transfer Rate Thousands of Characters per Second
1350		12^C	$—^D$		144^F		1.5	83	110		√	50
	M			$—^E$		55296				43		

C, D, E, F. See 353/1.

NCR 365

Unit Rental Monthly	Type	Character Size	Sectors Number per Track	Capacity per Sector in Characters	Tracks (Bands) Number per Cylinder	Number per Unit	Capacity per Track in Thousands of Characters	Unit Capacity in Millions of Characters	Access Time Seek Time in Milliseconds Minimum–Maximum	Rotational Time in Milliseconds	Parity	Transfer Rate Thousands of Characters per Second
1340		12^C	6		64		3.3	2	—		√	120
	F			556		512				33.4		

C. See 353/1.

PHILCO 272

Modified version of Bryant 4000.

PHILCO 315

Modified version of Bryant 185000.

PHILCO 316

Unit Rental Monthly	Type	Character Size	Sectors Number per Track	Capacity per Sector in Characters	Tracks (Bands) Number per Cylinder	Number per Unit	Capacity per Track in Thousands of Characters	Unit Capacity in Millions of Characters	Access Time Seek Time in Milliseconds Minimum–Maximum	Rotational Time in Milliseconds	Parity	Transfer Rate Thousands of Characters per Second
316		8	32		128		8	16	—		√	244
	F			256		2048				25		

PHILCO 496

Unit Rental Monthly	Type	Character Size	Sectors Number per Track	Capacity per Sector in Characters	Tracks (Bands) Number per Cylinder	Number per Unit	Capacity per Track in Thousands of Characters	Unit Capacity in Millions of Characters	Access Time Seek Time in Milliseconds Minimum–Maximum	Rotational Time in Milliseconds	Parity	Transfer Rate Thousands of Characters per Second
496		8	256		320		21.5	6.9	—		√	300
	F			84		320				25		

RCA 70/564

Unit Rental Monthly	Type	Character Size	Sectors Number per Track	Capacity per Sector in Characters	Tracks (Bands) Number per Cylinder	Number per Unit	Capacity per Track in Thousands of Characters	Unit Capacity in Millions of Characters	Access Time Seek Time in Milliseconds Minimum–Maximum	Rotational Time in Milliseconds	Parity	Transfer Rate Thousands of Characters per Second
575		8	1		10		3.66	7.25	30-145		√	156
	M			3660		2030				25		

RCA 70/567 SERIES

Unit Rental Monthly	Type	Character Size	Sectors Number per Track	Capacity per Sector in Characters	Tracks (Bands) Number per Cylinder	Number per Unit	Capacity per Track in Thousands of Characters	Unit Capacity in Millions of Characters	Access Time Seek Time in Milliseconds Minimum–Maximum	Rotational Time in Milliseconds	Parity	Transfer Rate Thousands of Characters per Second
2885^A		8	1		8		5.2	4.1^J	8.6		√	333
	F			5193		800^G				—		

A. 5770 for Model 16. G. 1600 for Model 16. J. 8.2 for Model 16.

RCA 70/568

Unit Rental Monthly	Type	Character Size	Sectors Number per Track	Capacity per Sector in Characters	Tracks (Bands) Number per Cylinder	Number per Unit	Capacity per Track in Thousands of Characters	Unit Capacity in Millions of Characters	Access Time Seek Time in Milliseconds Minimum–Maximum	Rotational Time in Milliseconds	Parity	Transfer Rate Thousands of Characters per Second
3175		8	1		8		2239	561	136-235		√	70
	M			2239		2048				60		

Note. Unit is a card random-access system.

SCIENTIFIC CONTROL 5625, 6625

Unit Rental Monthly	Type	Character Size	Sectors Number per Track	Capacity per Sector in Characters	Tracks (Bands) Number per Cylinder	Number per Unit	Capacity per Track in Thousands of Characters	Unit Capacity in Millions of Characters	Access Time Seek Time in Milliseconds Minimum–Maximum	Rotational Time in Milliseconds	Parity	Transfer Rate Thousands of Characters per Second
*		12	*		*		*	.25	17		—	*
	M			*		*				*		

Note. Unit not manufactured by Scientific Control.

SCIENTIFIC DATA 7202

Unit Rental Monthly	Type	Character Size	Sectors Number per Track	Capacity per Sector in Characters	Tracks (Bands) Number per Cylinder	Number per Unit	Capacity per Track in Thousands of Characters	Unit Capacity in Millions of Characters	Access Time Seek Time in Milliseconds Minimum–Maximum	Rotational Time in Milliseconds	Parity	Transfer Rate Thousands of Characters per Second
650		8	16		128		5.76	0.75	—		√	188
	F			360		128				34		

SCIENTIFIC DATA 7204

Unit Rental Monthly	Type	Character Size	Sectors Number per Track	Capacity per Sector in Characters	Tracks (Bands) Number per Cylinder	Number per Unit	Capacity per Track in Thousands of Characters	Unit Capacity in Millions of Characters	Access Time Seek Time in Milliseconds Minimum–Maximum	Rotational Time in Milliseconds	Parity	Transfer Rate Thousands of Characters per Second
1075		8	16		512		5.76	3	—		√	188
	F			360		512				34		

SCIENTIFIC DATA 9165

Modified version of Data Disc F.

SCIENTIFIC DATA 9366, 9367

Unit Rental Monthly	Type	Character Size	Sectors Number per Track	Capacity per Sector in Characters	Tracks (Bands) Number per Cylinder	Number per Unit	Capacity per Track in Thousands of Characters	Unit Capacity in Millions of Characters	Access Time Seek Time in Milliseconds Minimum–Maximum	Rotational Time in Milliseconds	Parity	Transfer Rate Thousands of Characters per Second
4000		6	8		4000		2	8	—		√	468
	F			256		4000				35		

SEL 80-653A

Modified version of Control Data 8951.

—None. * Information unavailable.

SEL 80-654

Modified version of Digital Development 7301/2.

Device	Unit Rental Monthly	Type	Character Size	Sectors Number per Track	Capacity per Sector in Characters	Tracks (Bands) Number per Cylinder	Number per Unit	Capacity per Track in Thousands of Characters	Unit Capacity in Millions of Characters	Access Time Seek Time in Milliseconds Minimum—Maximum	Rotational Time in Milliseconds	Parity	Transfer Rate Thousands of Characters per Second
UNIVAC 8410	830	M	8	160	100	100	100	16	1.6	46-242	50	—	125
UNIVAC FH330	1655	F	6	256	6	256	256	3	.8	—	34	√	75
UNIVAC FH432	820	F	6	432	6	432	432	4.3	1.5	—	8.5	√	1440
UNIVAC FH880	1645	F	6	880	6	880	880	5.2	4.7	—	34	√	360
UNIVAC FH1782	2265	F	6	1782	6	1782	1782	49	12	—	34	√	1440
UNIVAC FR II (FASTRAND)	3165	M	30	64	180	64	6144	10752	132	30-86	35	√	156
VERMONT RESEARCH TEN-INCH	*	F	8C	*	*	2048	2048	3.75	7.7	—	17	√	1300
VERMONT RESEARCH FIFTEEN-INCH	*	F	8C	*	*	2048	2048	5.6	11.5	—	17	√	3000
VERMONT RESEARCH TWENTY-INCH	*	F	8C	*	*	2048	2048	7.5	15.4	—	34	√	2000

C. Variable to suit customer's needs. (VERMONT RESEARCH TEN-INCH)

C. See Ten-inch. (VERMONT RESEARCH FIFTEEN-INCH)

C. See Ten-inch. (VERMONT RESEARCH TWENTY-INCH)

England

Device	Unit Rental Monthly	Type	Character Size	Sectors Number per Track	Capacity per Sector in Characters	Tracks (Bands) Number per Cylinder	Number per Unit	Capacity per Track in Thousands of Characters	Unit Capacity in Millions of Characters	Access Time Seek Time in Milliseconds Minimum—Maximum	Rotational Time in Milliseconds	Parity	Transfer Rate Thousands of Characters per Second
ELLIOTT 4260 SERIES	1120	M	6	16	100	256	4	1000	4.1	30-145	250	√	208
ENGLISH ELECTRIC 4425	*	M	6	10	*	288	2000	2.88	5.75	30-145	25	—	156
ENGLISH ELECTRIC 4430	*	F	6	*	*	*	*	*	1	—	40	—	820
ENGLISH ELECTRIC 4440	*	M	6	4	*	2100	16000	93	300	20-110	40	—	275
ENGLISH ELECTRIC MH1	*	M	6	*	*	*	500	.68	.32	10	20	√	409
ENGLISH ELECTRIC MH2	*	M	6	*	*	*	8448	3.7	32	185	60	√	45-90
ICT 1962	—A	F	6	8	128	512	1	128	.13	—	20	√	50
ICT 1963	—A	F	6	8	256	512	2	256	.5	—	20	√	100
ICT 1964	—A	F	6	8	512	512	4	512	2	—	40	√	100
ICT 2801	—A	M	6	8	100	512	4	1000	4	85	25	√	208

A. Prices quoted only on a particular system configuration. (ICT 1962)

A. See 1962. (ICT 1963)

A. See 1962. (ICT 1964)

A. See 1962. (ICT 2801)

— None. * Information unavailable.

Unit Rental Monthly	Type	Character Size	Sectors Number per Track	Capacity per Sector in Characters	Tracks (Bands) Number per Cylinder	Number per Unit	Capacity per Track in Thousands of Characters	Unit Capacity in Millions of Characters	Access Time Seek Time in Milliseconds Minimum — Maximum	Rotational Time in Milliseconds	Parity	Transfer Rate Thousands of Characters per Second

ICT 2802

| —A | M | 6 | 8 | 512 | 200 | 2000 | 4 | 8 | 85 | 25 | √ | 208 |

A. See 1962.

ICT 2805

| —A | M | 6 | 256 | 128 | 1536 | 12800 | 33 | 419 | 65-240 | 50 | √ | 150 |

A. See 1962.

France

BULL GE 200
A modified version of General Electric 200.

BULL GE 204
A modified version of General Electric 204.

BULL GE 300
A modified version of General Electric 300.

BULL GE 338
A modified version of General Electric 388.

BULL GE DSU 130

| 575 | M | 6C | 20 | 2980 | 100 | 1000 | 1000 | 2.98 | 35-145 | 40 | √ | 77.7 |

C. 8 also available.

BULL GE TM55

| 400 | F | 8 | 1 | 700 | 128 | 128 | .7 | .09 | — | 10 | √ | 125 |

CII 251

| .78 | M | 6 | 16 | 256 | 10 | 1000 | 4 | 4 | 160 | 25 | √ | 160 |

CII 7200 SERIES

| 780A | F | 8 | 16 | 360 | 32 | 128G | 5.76 | .75J | — | 40 | √ | 156 |

A. 1779 for 7204. G. 512 for 7204. J. 3 for 7204.

AUXILIARY STORAGE CHARACTERISTICS

Germany (West)

Unit Rental Monthly	Type	Character Size	Sectors Number per Track	Capacity per Sector in Characters	Tracks (Bands) Number per Cylinder	Number per Unit	Capacity per Track in Thousands of Characters	Unit Capacity in Millions of Characters	Access Time Seek Time in Milliseconds Minimum — Maximum	Rotational Time in Milliseconds	Parity	Transfer Rate Thousands of Characters per Second

SIEMENS 564

| 630 | M | 8 | 1 | 3626 | 10 | 2000 | 3.6 | 7.25 | 87.5 | 25 | — | 156 |

SIEMENS 568

| 3265 | M | 8 | 1 | 2048 | 8 | 128 | 2 | 537 | 523 | 60 | — | 70 |

SIEMENS 2013

| 750 | F | 6 | 1 | 4096 | 64 | 64 | 4 | .26 | — | 62 | — | 72 |

SIEMENS 2014

| 900 | F | 6 | 1 | 4096 | 128 | 128 | 4 | .52 | — | 62 | — | 72 |

SIEMENS 2015

| 1050 | F | 6 | 1 | 4096 | 256 | 256 | 4 | 1 | — | 62 | — | 72 |

SIEMENS 2026

| 1120 | M | 6 | 1 | 3600 | 10 | 2000 | 3.6 | 7.25 | 88 | 25 | — | 208 |

TELEFUNKEN S300

| * | F | 8 | 100 | 100 | 200 | 200 | 10 | 2 | — | 34 | √ | 291 |

TELEFUNKEN S500

| * | F | 8 | 51 | 768 | 200 | 1000 | 39 | 39 | — | 40 | √ | 979 |

TELEFUNKEN G300

| * | M | 8 | 28 | 768 | 256 | 768 | 300 | 220 | 40-240 | 50 | √ | 586 |

TELEFUNKEN G600

| * | M | 8 | 28 | 768 | 256 | 1536 | 300 | 440 | 40-240 | 50 | √ | 586 |

ZUSE 59

| 275 | F | 6 | 32 | 6 | 256 | 256 | 211 | .05 | — | 5 | — | 124 |

— None. * Information unavailable.

Model	Unit Rental Monthly	Type	Character Size	Sectors Number per Track	Capacity per Sector in Characters	Tracks (Bands) Number per Cylinder	Number per Unit	Capacity per Track in Thousands of Characters	Unit Capacity in Millions of Characters	Access Time Seek Time in Milliseconds Minimum — Maximum	Rotational Time in Milliseconds	Parity	Transfer Rate Thousands of Characters per Second
ZUSE 5022	3400	M	6	12	255	128	8192	3060	33.5	—	200^L	—	300
ZUSE 7300	2000	M	6	1054	3	512	512	3162	1.6	—	10^L	—	1000

L. Indicates total access time. (ZUSE 5022)

L. See 5022. (ZUSE 7300)

Japan

Model	Unit Rental Monthly	Type	Character Size	Sectors Number per Track	Capacity per Sector in Characters	Tracks (Bands) Number per Cylinder	Number per Unit	Capacity per Track in Thousands of Characters	Unit Capacity in Millions of Characters	Access Time Seek Time in Milliseconds Minimum — Maximum	Rotational Time in Milliseconds	Parity	Transfer Rate Thousands of Characters per Second
FUJITSU FACOM 622/B, C	*	F	9	*	*	*	*	*	.13	—	20	√	25
FUJITSU FACOM 623A, 624A, 627A	*	F	9	*	*	*	*	*	.26^J	—	*	√	50
FUJITSU FACOM 631 SERIES	*	M	9	*	*	*	*	*	33^J	*	*	√	56^Q
HITACHI HITAC 1123	1665	F	32	1	512	512	512	0.6	.26	—	17.2	√	123
HITACHI HITAC 8564	575	M	8	1	3660	10	2030	3.66	7.25	25-135	25	√	156
HITACHI HITAC 8566	2500	F	8	1	3097	512	512	3.1	1.56	—	17.2	√	210
HITACHI HITAC 8568	—	M	8	1	2048	8	32768	2	537	397-559	40	√	70

J. 2 for 624A, 0.5 for 627A. (FUJITSU FACOM 623A, 624A, 627A)

J. 67 for Model B, 134 for Model C.　　Q. 100 for Models B and C. (FUJITSU FACOM 631 SERIES)

Model	Unit Rental Monthly	Type	Character Size	Sectors Number per Track	Capacity per Sector in Characters	Tracks (Bands) Number per Cylinder	Number per Unit	Capacity per Track in Thousands of Characters	Unit Capacity in Millions of Characters	Access Time Seek Time in Milliseconds Minimum — Maximum	Rotational Time in Milliseconds	Parity	Transfer Rate Thousands of Characters per Second
NIPPON ELECTRIC 523	605	F	6	25	60	200	200	.05	.01	—	45	√	12.5
NIPPON ELECTRIC 544/1	*	M	6	12	256	*	*	*	12	33-86	67	√	39-97
NIPPON ELECTRIC E261	250	M	6	16	100	8	512	.16	.8	200	33	√	70
NIPPON ELECTRIC E271	167	F	6	40	128	64	64	1.25	.08	—	17	√	103
NIPPON ELECTRIC M271	*	F	6	*	*	*	*	*	.07	—	20	*	*
NIPPON ELECTRIC N259	513	M	6	—^{D}	—^{E}	10	2000	.46	9.2	25-165	25	√	208

D, E. Variable to suit customer's needs.

Model	Unit Rental Monthly	Type	Character Size	Sectors Number per Track	Capacity per Sector in Characters	Tracks (Bands) Number per Cylinder	Number per Unit	Capacity per Track in Thousands of Characters	Unit Capacity in Millions of Characters	Access Time Seek Time in Milliseconds Minimum — Maximum	Rotational Time in Milliseconds	Parity	Transfer Rate Thousands of Characters per Second
NIPPON ELECTRIC N260A	*	M	6	12	256	8	32768	.512	134	25-220	50	√	69-119
NIPPON ELECTRIC N261	*	M	6	*	16384	128	*	9.216	150	40-78	50.8	*	196
NIPPON ELECTRIC N262	*	M	6	*	32768	128	*	9.216	300	40-78	50.8	*	196
NIPPON ELECTRIC N271	638	F	6	40	128	512	512	5	2.6	—	55	√	106
NIPPON ELECTRIC N271A	500	F	6	10	128	256	256	1.25	.327	—	17	√	103

— None.　* Information unavailable.

Device	Unit Rental Monthly	Type	Character Size	Sectors Number per Track	Capacity per Sector in Characters	Tracks (Bands) Number per Cylinder	Number per Unit	Capacity per Track in Thousands of Characters	Unit Capacity in Millions of Characters	Access Time Seek Time in Milliseconds Minimum — Maximum	Rotational Time in Milliseconds	Parity	Transfer Rate Thousands of Characters per Second
NIPPON ELECTRIC N460A, N860A	*	M	6	12	256	8	32768	.512	16.7	25-200	50	√	7.7-13.5
NIPPON ELECTRIC N460B, N860B	*	M	6	12	256	8	32768	.512	67	25-200	50	√	7.7-13.5
TOSHIBA 204	1125	M	6	8^D	256	256	2048	2^H	23.5	95-205	52	√	62.5
TOSHIBA 216	2240	M	8	*	*	256	4096	7	28	180	50	—	62.5
TOSHIBA 250	*	M	8	*	*	256	8192	25	200	116	*	—	300
TOSHIBA 600	*	M	8	*	*	320	320	26	7.8	96	*	—	259
TOSHIBA 731A	575	M	8	10	488	200	2000	4.9	9.8	35.143	25	√	216
TOSHIBA 731C	1000	M	8	8	512	512	512	4	2.1	8.3	16	√	61
TOSHIBA 771C	792	F	8	1	512	325	325	.5	.16	—	17	√	30
TOSHIBA 772G	890	F	8	1	512	512	512	1.5	.26	—	17	√	64
TOSHIBA 5116	—	M	8	—	—	200	1200	6	7.25	97.5	25	—	156
TOSHIBA 7220	700	F	8	1000	1000	60	260	1	.26	—	17	√	31
TOSHIBA 7548	690	M	8	16	64	100	1000	1	1	225	25	√	52

D. For inner tracks, 16 for outer tracks.　　H. For inner tracks, four for outer tracks.

Sweden

Device	Unit Rental Monthly	Type	Character Size	Sectors Number per Track	Capacity per Sector in Characters	Tracks (Bands) Number per Cylinder	Number per Unit	Capacity per Track in Thousands of Characters	Unit Capacity in Millions of Characters	Access Time Seek Time in Milliseconds Minimum — Maximum	Rotational Time in Milliseconds	Parity	Transfer Rate Thousands of Characters per Second
DATASAAB 2123-2	638	M	8	1^D	3645^E	10	2000	3.4	7.25^J	15-190	25	√	156
DATASAAB 2153	5791	M	8	10	852	200	51200	8.52	437	15-245	50	√	57-182

D. 4 also available.　　E. 852 also available.　　J. 6.82 also available.

The Netherlands

ELECTROLOGICA 1410, 1412, 1413

Modified versions of Bryant 185000 series.

Device	Unit Rental Monthly	Type	Character Size	Sectors Number per Track	Capacity per Sector in Characters	Tracks (Bands) Number per Cylinder	Number per Unit	Capacity per Track in Thousands of Characters	Unit Capacity in Millions of Characters	Access Time Seek Time in Milliseconds Minimum — Maximum	Rotational Time in Milliseconds	Parity	Transfer Rate Thousands of Characters per Second
ELECTROLOGICA 1430	1179	M	27	20	1086	10	2000	21.72	.217	25-165	25	√	43.4

Note. Device manufactured by Control Data.

— None.　* Information unavailable.

Magnetic Tape

EXPLANATION OF COLUMN HEADINGS

Unit Rental

Monthly — The monthly rental price of a single unit, exclusive of independent control devices. A factor of forty is used for deriving rentals when only purchase prices are available.

Transfer Rate

Thousands of Characters per Second — Range — The speed at which data may be read from or written to the device, from the lowest to the highest speed and density available.

Speed

in Inches per Second — The rate at which the tape moves past the recording head during a data transfer.

Dimensions

Density in Bits per Inch — The number of bits which may be written per inch in a single track.

Tracks — The number of bits which may be written in a single position across the width of the tape, including parity bits.

Width in Inches — The physical width of the magnetic tape used by the unit.

Interrecord Gap in Inches — The length of the unused recording area between records written by the unit.

Read Reverse — A check ($\sqrt{}$) indicates that the unit can read tape under program control in either direction.

Control Unit — The unit, including associated buffering, for controlling the operation of the magnetic tape transport.

Monthly Rental — The monthly rental price of the control unit only.

Number of Devices — The number of tape transports which can be attached to a single control unit.

Unit Rental Monthly	Transfer Rate (Thousands of Characters per Second — Range)	Speed in Inches per Second	Dimensions (Density in Bits per Inch)	Tracks	Width in Inches	Interrecord Gap in Inches	Read Reverse	Control Unit Monthly Rental	Number of Devices
ADAGE MTP									
760-1470	10-96	50-120	200 556 800	7	.5	.75	—	—J	3

J. Each device contains its own control unit.

AMPEX TM7									
*	2-36	45	200 556 800	7E	.5	.75G	√	—	—

E. Nine also possible. G. .6 also possible.

AMPEX TM9									
*	9-60	75	200 556 800	7E	.5F	.75G	√	—	—

E, G. See TM7. F. 1.0 also possible.

AMPEX TM11									
*	12-96	120	200 556 800	7E	.5	.75G	√	—	—

E, G. See TM7.

AMPEX TM12									
*	12-120	150	200 556 800	7E	.5	.75G	√	—	—

E, G. See TM7.

AMPEX TM16									
*	15-120	75C	200 556 800	7E	.5	.75G	√	—	—

C. 112.5 and 150 also available. E. G. See TM7.

AUTONETICS M906									
400	1.85	9.25	200	7	.5	.75	—	—	—
BURROUGHS 9381									
900	9-36	45	200 800	9	.5	.75	√	200	4
BURROUGHS 9382									
1100	9-72	45	200 800 1600	9	.5	.75	√	200	4

BURROUGHS 9390									
480	18-50	90	200 556	7	.5	.75	√	250	1
BURROUGHS 9391									
575	18-72	90	200 556 800	7	.5	.75	√	250	1
BURROUGHS 9392									
575	18-72	90	200 800	7	.5	.75	√	450	—
BURROUGHS 9393									
650	18-144	90	200 800 1600	7	.5	.75	√	450	1
BURROUGHS B421									
700	18-50	90	200 556	7	.5	.75	√	155	6
BURROUGHS B422									
800	24-66.6	120	200 556	7	.5	.75	√	155	6
BURROUGHS B423									
495	24	120	200	7	.5	.75	√	155	6
BURROUGHS B425									
850	18-72	90	200 556 800	7	.5	.75	√	155	6

COLLINS 8046, 8048									
*	15-41.7B	75	200D 556	7	.5	.75	—	*	10

B. To 60 for Model 8048.   D. 800 also available for Model 8048.

COLLINS 8047, 8049									
*	22.5-62.5B	112.5	200D 556	7	.5	.75	—	*	10

B. To 90 for Model 8049.   D. See 8046.

COLLINS 8841									
*	120	150	800	9	.5	.6	—	*	10

MAGNETIC TAPE CHARACTERISTICS

— None. • Information unavailable.

CONTROL DATA 163

Unit Rental Monthly	Transfer Rate (Thousands of Characters per Second — Range)	Speed (in Inches per Second)	Dimensions (Density in Bits per Inch)	Tracks	Width in Inches	Interrecord Gap in Inches	Read Reverse	Control Unit Monthly Rental	Number of Devices
1000	30	150	200	7	.5	.75	—	—J	1

J. Each device contains its own control unit.

CONTROL DATA 164

890	15	75	200	7	.5	.75	—	—J	1

J. See 163.

CONTROL DATA 601

300	7.5-20.8	37.5	200 556	7	.5	.75	—	335	8

CONTROL DATA 603

870	15-41.7	75	200 556	7	.5	.75	—	530	4

CONTROL DATA 604

630	15-60	75	200 556 800	7	.5	.75	√	1450	8

CONTROL DATA 606

580	30-83.4	150	200 556	7	.5	.34	—	740	8

CONTROL DATA 607

920	30-120	150	200 556 800	7	.5	.75	√	1450	8

CONTROL DATA 626

1150	240	150	800	14	1.0	1.0	—	590	4

CONTROL DATA 1607

5300A	30	150	200	7	.5	.75	√	—J	4

A, J. Rental price includes control and four transports.

DATAMEC D2020

*	9-36	45	200 556 800	7E	.5	.75	√	—	—

E. Nine also possible.

DATAMEC D3030

*	15-60	75	200 556 800	7E	.5	.75	√	—	—

E. See D2020.

DIGITAL EQUIPMENT 50
Modified version of Potter 906 Mark II.

DIGITAL EQUIPMENT 545
Modified version of Datamec D2020.

DIGITAL EQUIPMENT TU55 DECTAPE

Unit Rental Monthly	Transfer Rate (Thousands of Characters per Second — Range)	Speed (in Inches per Second)	Dimensions (Density in Bits per Inch)	Tracks	Width in Inches	Interrecord Gap in Inches	Read Reverse	Control Unit Monthly Rental	Number of Devices
59A	15	80	—D	10E	.62	—	√	185J	8

A, J. No rental price announced. Price derived from purchase price.
D. Variable.   E. Two sets of redundant tracks. Each set includes three data tracks, one word mark track and one timing track.

EAI 730

350A	25-36	45	200 556 800	9	.5	.75	√	450J	4

A, J. No rental price announced. Price derived from purchase price.

EAI 731

300A	25-36	45	200 556 800	7	.5	.75	—	450J	4

A, J. See 730.

EAI 8470 SERIES
Modified versions of Ampex TM7, 9, 11 and 12.

EMR 60501
Modified version of Potter 906 Mark II.

EMR 60517
Modified version of Potter SC series.

EMR 60537, 60545
Modified versions of Datamec D2020, D3030.

EMR A-11
Modified version of Potter 906 Mark II.

GENERAL ELECTRIC 103, 106

340A	30B	37.5	200 556 800	7E	.5	.6	√	475	6

A. 495 for 106.   B. 60 for 106.   E. Nine also possible.

GENERAL ELECTRIC 150

1300A	21	37.5	556	7	.5	.75	√	—J	5

A, J. Rental price includes control and four transports.

— None.   • Information unavailable.

GENERAL ELECTRIC 200, 300

Unit Rental Monthly	Transfer Rate	Speed in Inches per Second	Dimensions Density in Bits per Inch	Tracks	Width in Inches	Interrecord Gap in Inches	Read Reverse	Control Unit Monthly Rental	Number of Devices
305[A]	7-21[B]	37.5	200[D] 556	7	.5	.75	√	940[J]	16

A. 420 for 300.   B. 30 maximum for 300.   D. 800 maximum for 300.
J. Single-channel; dual-channel control available for 1,435.

GENERAL ELECTRIC 201, 301

505[A]	15-42[B]	75	200[D] 556	7	.5	.75	√	940[J]	16

A. 615 for 301.   B. 60 maximum for 301.   D. 800 maximum for 301.
J. See 200.

GENERAL ELECTRIC 211, 311

730[A]	30-83[B]	150	200[D] 556	7	.5	.75	√	940[J]	16

A. 845 for 311.   B. 120 maximum for 311.   D. 800 maximum for 311.
J. See 200.

GENERAL ELECTRIC 402, 403

305[A]	10-28[B]	37.5	200[D] 556	7[E]	.5	.6	√	1010[J]	16

A. 420 for 403.   B. 40 maximum for 403.   D. 800 maximum for 403.
E. Nine also possible.   J. Single-channel; dual-channel control available for 1,545.

GENERAL ELECTRIC 404, 405

505[A]	20-56[B]	75	200[D] 556	7[E]	.5	.6	√	1010[J]	16

A. 615 for 405.   B. 80 maximum for 405.   D. 800 maximum for 405.
E, J. See 402.

GENERAL ELECTRIC 411, 412

730[A]	40-111[B]	150	200[D] 556	7[E]	.5	.6	√	1010[J]	16

A. 845 for 412.   B. 160 maximum for 412.   D. 800 maximum for 412.
E, J. see 402.

GENERAL ELECTRIC 680

850	15	75	200	7	.5	.75	√	800	8

GENERAL ELECTRIC 690

1030	15-42	75	200 556	7	.5	.75	√	1030	8

HEWLETT PACKARD D2020

375	6-16.7	30	556	7	.5	*	*	__J	*

J. Control is physically in central processor.

HONEYWELL 40 SERIES

Modified versions of Control Data 600 series.

HONEYWELL 204A/1

450	31.76	60	400[D]	10	.75	.67	—	265	4

D. Density in eight-bit frames per inch.

HONEYWELL 204A/2

900	63.52	120	400[D]	10	.75	.67	—	265	4

D. See 204A/1.

HONEYWELL 204A/3

900	88.8	120	556[D]	10	.75	.67	—	380	4

D. See 204A/1.

HONEYWELL 204B/1, 2

335[A]	7.2-20	36	200 556	7	.5	.45	√	405	8[K]

A. 290 for Model 2.   K. Control accommodates one 204B/1 and up to seven 204B/2 units.

HONEYWELL 204B/3, 4

475[A]	16-44.5	80	200 556	7	.5	.6	√	405	8[K]

A. 425 for Model 4.   K. Control accommodates one 204B/3 and up to seven 204B/4 units.

HONEYWELL 204B/5

670	24-66.7	120	200 556	7	.5	.7	√	405	8

HONEYWELL 204B/7

380	7-28.8	36	200 556 800	7	.5	.45	√	405	8

HONEYWELL 204B/8

570	16-64	80	200 556 800	7	.5	.6	√	405	8

HONEYWELL 204B/9

760	24-96	120	200 556 800	7	.5	.7	√	405	8

— None. * Information unavailable.

Unit Rental Monthly	Transfer Rate Thousands of Characters per Second — Range	Speed in Inches per Second	Dimensions Density in Bits per Inch	Tracks	Width in Inches	Interrecord Gap in Inches	Read Reverse	Control Unit Monthly Rental	Number of Devices
HONEYWELL 204B/11, 12									
265[A]	4.8-13.3	24	200 556	7	.5	.45	√	290	4[K]

A. 210 for Model 12.   K. Control accommodates one 204B/11 and up to three 204B/12 units.

HONEYWELL 204C/13, 14									
425	28.8	36	800	9	.5	.6	—	350	2[K]

K. Control accommodates one 204C/13 and one 204C/14.

HONEYWELL 404/1									
900	64	120	400	10	.75	.67	—	—[J]	—[K]

J. Control is physically in central processor.   K. Eight on Honeywell 400; 16 on Honeywell 1400.

HONEYWELL 404/2									
900	88.67	120	555	10	.75	.67	—	—[J]	—[K]

J, K. See 404/1.

HONEYWELL 404/3									
450	32	60	400	10	.75	.67	—	—[J]	—[K]

J, K. See 404/1.

HONEYWELL 804/1									
900	64	120	400	10	.75	.67	√	2000	8
HONEYWELL 804/2									
900	88.87	120	555	10	.75	.67	√	3100	8
HONEYWELL 804/3									
450	32	60	400	10	.75	.67	√	2000	8
HONEYWELL 4130 SERIES									
375	7-28	36	200 556 800	7	.5	.75	√	253	4
HONEYWELL 4140 SERIES									
580	16-64	80	200 556 800	7	.5	.75	√	253	4

HUGHES H-3107

Modified version of Datamec D3030.

HUGHES HM-4107

Modified version of Potter SC series.

Unit Rental Monthly	Transfer Rate Thousands of Characters per Second — Range	Speed in Inches per Second	Dimensions Density in Bits per Inch	Tracks	Width in Inches	Interrecord Gap in Inches	Read Reverse	Control Unit Monthly Rental	Number of Devices
IBM 729/2, 5									
725[A]	15-41.7[B]	75	200[D] 556	7	.5	.75	—	—[J]	6[K]

A. 775 for Model 5.   B. 60 maximum for Model 5.   D. 800 maximum for Model 5.   J. Varies from 1,000 to 4,350 depending on central processor used.   K. Up to ten depending on central processor used.

IBM 729/4, 6									
930[A]	22-62[B]	112.5	200[D] 556	7	.5	.75	—	—[J]	10[K]

A. 1,000 for Model 6.   B. 90 maximum for Model 6.   D. 800 maximum for Model 6.   J, K. See 729/2, 5.

IBM 2401, 2402, 2403, 2404									
—[A]	30-180	37.5[C]	800 1600	7[E]	.5	.6	√	—[J]	8[K]

A. Varies from 1,350 to 1,750 depending on model used.   C. 75 and 112.5 also possible.   E. Nine also possible.   J. Variable depending on central processor used.   K. Seven for 2403 and 2404.

IBM 2415/1, 2, 3, 4, 5, 6									
—[A]	15[B]	18.75	800[D]	7[E]	.5	.6	√	—	2[K]

A. Varies from 775 to 2,075 depending on model used.   B. 30 maximum for Models 4, 5 and 6.   D. 1,600 maximum for Models 4, 5 and 6.   E. See 2401.   K. Four for Models 2 and 5; and six for Models 3 and 6.

IBM 7330									
475	7-20	36	200 556	7[E]	.5	.75	—	—[J]	6[K]

E. See 2401.   J. Varies from 500 to 1,500 depending on central processor used.   K. Six if attached to a 1401 or 1460; ten if attached to a 1410, 7010, 7040 or 7044.

IBM 7335									
700[A]	20	36	556	7[E]	.5	.75	—	—	2

A. 1,100 for Model 2.   E. See 2401.

IBM 7340									
1300[A]	170-340	112.5	1511 3022	9	1	.38	√	—[J]	4[K]

A. 1,050 for Model 2 and 1,350 for Model 3.   J. Varies from 2,150 to 3,475 depending on central processor used.   K. Up to 20 depending on central processor used.

INTERDATA 620

Modified version of Ampex TM 11.

INTERDATA 621

Modified version of Ampex TM 9.

MAGNETIC TAPE CHARACTERISTICS

— None. • Information unavailable.

Unit Rental Monthly	Transfer Rate Thousands of Characters per Second — Range	Speed in Inches per Second	Dimensions Density in Bits per Inch	Tracks	Width in Inches	Interrecord Gap in Inches	Read Reverse	Control Unit Monthly Rental	Number of Devices
MIDWESTERN 4000 SERIES									
600	15-120	37^C	200 556 800	7^E	.5	.75	√	—	8

C. 75, 112.5 and 150 also available.   E. Nine also possible.

MIDWESTERN 4700 SERIES									
400-460	15-90	75^C	200 556 800	7	.5	.75	—	—	8

C. 112.5 also available.

MIDWESTERN 4800 SERIES									
400-600	15-179	75^C	200 556 800 1600	7^E	.5	.6^G	√	—	8

C. See 4700 series.   E. See 4000 series.   G. .75 also possible.

NCR 332/204									
700	24-66	120	200 556	7	.5	.75	—	—^{J}	1

J. Each device contains its own control unit.

NCR 333/101, 102									
975^A	83-120^B	150	200 556 800	7	.5	.75	—	—^{J}	1

A. 825 for 333/102.   B. 30-83 for 333/102.   J. See 332/204.

NCR 334/103									
225	12-33	60	200 556	7	.5	.75	—	75	4

PHILCO 137 SERIES

Modified versions of Datamec D2020 and D3030.

PHILCO 234/2

Modified version of Ampex TM7.

PHILCO 335

Modified version of Datamec 2020.

POTTER 906 MARK II									
*	6-120	150	200 556 800	7^E	.5	.75^G	√	—	8

E. Nine also possible.   G. .6 also possible.

Unit Rental Monthly	Transfer Rate Thousands of Characters per Second — Range	Speed in Inches per Second	Dimensions Density in Bits per Inch	Tracks	Width in Inches	Interrecord Gap in Inches	Read Reverse	Control Unit Monthly Rental	Number of Devices
POTTER MT SERIES									
*	6-60	75	200 556 800	7^E	.5	.75	√	—	—

E. See 906 Mark II.

POTTER SC SERIES									
*	12-120	150	200 556 800 1600	7^E	.5^F	.75	√	—	—

E. See 906 Mark II.   F. 1.0 also possible.

RCA 70/432									
600	30	75	800	9^E	.5	.6	√	720^J	8^K

E. 7 also available.   J. 1390 for 16.   K. 16 also available.

RCA 70/442									
900	60	75	800	9^E	.5	.6	√	770^J	8^K

E, K. See 70/432.   J. 1440 for 16.

RCA 70/445									
775	120	150	800	9^E	.5	.65	√	770^J	8^K

E, K. See 70/432.   J. See 70/442.

RCA 382/3, 4, 6									
*	20-30	60	556	7	.5	.34	√	*	2

RCA 581									
544	33.3	100	333.3	16	.75	.34	√	—^{J}	1

J. Control unit is integral part of tape unit.

RCA 582									
865	33.3	100	333.3	16	.75	.34	√	—^{J}	1

J. See 581.

RCA 681									
*	120	225	556	9	.75	.34	√	*	1

SCIENTIFIC CONTROL 5415, 6410, 6415

Modified versions of Datamec D2020.

SCIENTIFIC CONTROL 6420, 6425

Modified versions of Datamec D3030.

— None.   * Information unavailable.

Unit Rental Monthly	Transfer Rate Thousands of Characters per Second — Range	Speed in Inches per Second	Dimensions Density in Bits per Inch	Tracks	Width in Inches	Interrecord Gap in Inches	Read Reverse	Control Unit Monthly Rental	Number of Devices
SCIENTIFIC DATA 7321									
650	60	75	800	9	.5	.75	√	500	8
SCIENTIFIC DATA 7323									
950	120	150	800	9	.5	.75	√	500	8
SCIENTIFIC DATA 7361									
550	20	37.5	556	7	.5	.75	—	175	2
SCIENTIFIC DATA 7371									
650	60	75	800	7	.5	.75	—	550	8
SCIENTIFIC DATA 9546 SERIES									
600	15-96	75^C	200 556 800	7	.5	.75	—	285	8

C. 120 also possible.

SEL 80-615/7, 9, 11, 12
Modified versions of Ampex TM7, 9, 11, 12.

Unit Rental Monthly	Transfer Rate	Speed	Dimensions	Tracks	Width	Interrecord Gap	Read Reverse	Control Unit	Number of Devices
STANDARD COMPUTER MTU/61, MTU/91									
500^A	42-60^B	75^C	556 800	7^E	.5	.75	√	—^{J}	8

A. 650 for MTU/91.   B. 62K-90K for MTU/91.   C. 112.5 for MTU/91.
E. Nine also possible.   J. Varies depending on central processor used.

Unit Rental Monthly	Transfer Rate	Speed	Dimensions	Tracks	Width	Interrecord Gap	Read Reverse	Control Unit	Number of Devices
UNIVAC IIA									
320	12.5-25	100	125 250	8	.5	1.05 2.40	√	1875	6
UNIVAC IIIA									
535	100-133	100	1000	9	.5	.4-.6	√	585	6
UNIVAC IIIC									
615	22.5-62.5	112	200 556	7	.5	.75	—	1740	8^N
UNIVAC VIC									
385	8-34	42.7	200 556 800	7^E	.5	.75^G	√	690	4

E. Nine also possible.   G. .6 also possible.

Unit Rental Monthly	Transfer Rate	Speed	Dimensions	Tracks	Width	Interrecord Gap	Read Reverse	Control Unit	Number of Devices
UNIVAC VIIIC									
630	24-96	120	200 556 800	7^E	.5	.75^G	√	1205	16

E, G. See VIC.

Denmark

Unit Rental Monthly	Transfer Rate	Speed	Dimensions Density in Bits per Inch	Tracks	Width	Interrecord Gap	Read Reverse	Control Unit	Number of Devices
REGNECENTRALEN GIER									
400	7.2-28.8	*	200 556 800	7, 9	.5	.75	—	*	*

England

Unit Rental Monthly	Transfer Rate	Speed	Dimensions	Tracks	Width	Interrecord Gap	Read Reverse	Control Unit	Number of Devices
ELLIOTT MT1									
445	9	45	200	7	.5	.75	—	—^{J}	4

J. Each device contains its own control unit.

Unit Rental Monthly	Transfer Rate	Speed	Dimensions	Tracks	Width	Interrecord Gap	Read Reverse	Control Unit	Number of Devices
ELLIOTT 4270 SERIES									
556-1110	12-96	60-120	200 556 800	7	.5	.75	—	—^{J}	8

J. See MT1.

Unit Rental Monthly	Transfer Rate	Speed	Dimensions	Tracks	Width	Interrecord Gap	Read Reverse	Control Unit	Number of Devices
ENGLISH ELECTRIC 1081									
*	40	100	400	16	.5	.45	√	*	*
ENGLISH ELECTRIC 1085									
*	77	100	770	16	.5	.45	√	*	*
ENGLISH ELECTRIC 4450									
*	15-60	75	200 556 800	7	.5	.75	√	*	8
ENGLISH ELECTRIC 4452									
*	60	150	800	9	.5	.6	√	*	8
ENGLISH ELECTRIC 4453									
*	120	150	800	9	.5	.6	√	*	8
ENGLISH ELECTRIC 4454									
*	30	37.5	800	9	.5	.5	√	*	8
ENGLISH ELECTRIC MT1									
*	25-45	75	375	7	.5	.75	—	*	*
ENGLISH ELECTRIC MT2									
*	60-96	120	800	7	.5	.75	—	*	*

MAGNETIC TAPE   CHARACTERISTICS

— None.   * Information unavailable.

Unit Rental Monthly	Transfer Rate (Thousands of Characters per Second — Range)	Speed in Inches per Second	Dimensions (Density in Bits per Inch)	Tracks	Width in Inches	Interrecord Gap in Inches	Read Reverse	Control Unit Monthly Rental	Number of Devices
ICT 1971									
—A	7.5-20.8	37.5	200 556	7	.5	.75	—	—J	6

A, J. Prices quoted only on a particular system configuration.

ICT 1972									
—A	15-41.7	75	200 556	7	.5	.75	—	—J	6

A, J. See 1971.

ICT 1973									
—A	15-60	75	200 556 800	7	.5	.75	—	—J	6

A, J. See 1971.

ICT 1974									
—A	24-96	120	200 556 800	7	.5	.75	√	—J	1

A, J. See 1971.

ICT 2501									
—A	10	120	533	8	1	—	—	—J	4

A, J. See 1971.

ICT 2504									
—A	80	37	200 556 800	9	.5	.6	√ H	—J	4

A, J. See 1971.   H. Only when interfaced with 1906, 1907.

ICT 2505									
—A	160	75	200 556 800	9	.5	.6	√ H	—J	4

A, J. See 1971.   H. See 2504.

PLESSEY 330									
*	11.2	150	600	8	1	.6	√	*	4

PLESSEY 5500									
*	1.5-15	150	200 556 800	7E	.5	.6	√	*	1

E. Nine also available.

France

Unit Rental Monthly	Transfer Rate (Thousands of Characters per Second — Range)	Speed in Inches per Second	Dimensions (Density in Bits per Inch)	Tracks	Width in Inches	Interrecord Gap in Inches	Read Reverse	Control Unit Monthly Rental	Number of Devices
BULL GE 103									
320	30	37.5	800D	9E	.5	.6	√	450	6

D. 200, 556, 800 available with 7-track tape.   E. 7 also possible.

BULL GE 106									
470	60	75	800D	9E	.5	.6	√	450	6

D, E. See 103.

BULL GE 200, 300
Modified versions of General Electric 200, 300.

BULL GE 201, 301
Modified versions of General Electric 201, 301.

BULL GE 211, 311
Modified versions of General Electric 211, 311.

BULL GE 402, 403
Modified versions of General Electric 402, 403.

BULL GE 404, 405
Modified versions of General Electric 404, 405.

BULL GE 411, 412
Modified versions of General Electric 411, 412.

BULL GE MFU35									
415	1.2-2.4	40	100	4	1.4	0	—	—J	2

J. Each device contains its own control unit.

CII 322									
556	60	75	800	9	.5	.75	—	615	8
CII 2463									
300	15-60	75	200 556 800	7	.5	.75	—	445	8

Germany (West)

SIEMENS 432									
675	30	37.5	800	7E	.5	.65	√	790	16

E. Nine also possible.

— None.   * Information unavailable.

SIEMENS 441 / etc.

Unit Rental Monthly	Transfer Rate Thousands of Characters per Second — Range	Speed in Inches per Second	Dimensions Density in Bits per Inch	Tracks	Width in Inches	Interrecord Gap in Inches	Read Reverse	Control Unit Monthly Rental	Number of Devices
SIEMENS 441									
800	20-30	60	333 500	7	.5	.54	√	955	16
SIEMENS 442									
1000	60	75	800	7E	.5	.65	√	790	16
E. See 432.									
SIEMENS 4443									
500	60	75	800	7E	.5	.65	√	790	16
E. See 432.									
SIEMENS 4446									
875	120	150	800	7E	.5	.65	√	790	16
E. See 432.									
TELEFUNKEN 251									
*	55	100	556	8	.5	.45	√	—	1
TELEFUNKEN 252									
*	12-69	100	200 556 800	7,8,9	.5	.71	√	—	1
ZUSE 7									
250	9-36	45	200 556 800	7	.5	.75	—	250	4
ZUSE 110									
550	17.5	40	450	16	1	.8	—	670	4
ZUSE 408									
460	17.5	75	230	8	.5	1.5	—	565	4
ZUSE 507									
450	22.5-62.5	114	200 556	7	.5	.75	—	500	4
ZUSE 509									
450	40-110	200	200 556	7	.5	.75	—	500	4

Japan

Unit Rental Monthly	Transfer Rate Thousands of Characters per Second — Range	Speed in Inches per Second	Dimensions Density in Bits per Inch	Tracks	Width in Inches	Interrecord Gap in Inches	Read Reverse	Control Unit Monthly Rental	Number of Devices
FUJITSU FACOM 603B									
*	15-42	75	200 556	7	.5	.75	—	*	6
FUJITSU FACOM 603C									
*	24-66	120	200 556	7	.5	.75	—	*	6
FUJITSU FACOM 603D									
*	41-60	75	556 800	7	.5	.75	—	*	6
FUJITSU FACOM 603E									
*	67-96	120	556 800	7	.5	.75	—	*	6
FUJITSU FACOM 603F									
*	60	75	800	9	.5	.75	√	*	6
FUJITSU FACOM 603G									
*	96	120	800	9	.5	.75	√	*	6
FUJITSU FACOM 606A									
*	15-25	45	333 556	7	.5	.75	—	*	6
HITACHI HITAC 3485									
860	120	150	800	7	.5	.75	√	440	8
HITACHI HITAC 8422									
445	15	37.5	400	9	.5	.72	√	445	8
HITACHI HITAC 8432									
610	30	37.5	800	9	.5	.6	√	1750	16
HITACHI HITAC 8442									
390	60	75	800	9	.5	.6	√	1750	16
HITACHI HITAC 8445									
750	120	150	800	9	.5	.6	√	1750	16
NIPPON ELECTRIC 543A, 543B									
578A	90B	157C	381	7	.5	1.77	—	814	10
A. 407 for 543B.		B. 45 for 543B.			C. 79 for 543B.				

— None.   * Information unavailable.

Left column

NIPPON ELECTRIC E204/1, 2, 3

Unit Rental Monthly	Transfer Rate (Thousands of Characters per Second — Range)	Speed in Inches per Second	Dimensions (Density in Bits per Inch)	Tracks	Width in Inches	Interrecord Gap in Inches	Read Reverse	Control Unit Monthly Rental	Number of Devices
83[A]	8.9	16	556	7	.5	.75	—	111	3

A. 139 for Model 2, 111 for Model 3.

NIPPON ELECTRIC N204A/1, 2, 3

| 389 | 32-88 | 120[C] | 533 740 | 10 | .67 | .67 | — | 111 | 4 |

C. 60 for Model 1.

NIPPON ELECTRIC N204B/1, 2, 7

| 264[A] | 7-20[B] | 36 | 200[D] 556 | 7 | .5 | .45[G] | — | 425 | 8 |

A. 333 for Model 7.   B. 28 maximum for Model 7.   D. 800 maximum for Model 7.   G. 0.75 also available.

NIPPON ELECTRIC N204B/3, 4, 8

| 389[A] | 16-44[B] | 80 | 200[D] 556 | 7 | .5 | .6[G] | — | 425 | 8 |

A. 472 for Model 8.   B. 64 maximum for Model 8.   D. 800 maximum for Model 8.   G. See N204B/1.

NIPPON ELECTRIC N204B/5, 9

| 583[A] | 24-66[B] | 120 | 200[D] 556 | 7 | .5 | .7[G] | — | 425 | 8 |

A. 597 for Model 9.   B. 96 maximum for Model 9.   D. 800 maximum for Model 9.   G. See N204B/1.

NIPPON ELECTRIC N204B/11, 12

| 204[A] | 13.3 | 24 | 556 | 7 | .5 | .45[G] | — | 56 | 3 |

A. 208 for Model 12.   G. See N204B/1.

NIPPON ELECTRIC N404/1A, N804/1A, 2A

| 625[A] | 96[B] | 120 | 400[D] | 10 | .67 | .67 | — | 1200 | 8 |

A. 870 for N404/1A.   B. 133 for N804/2A.   D. 556 for N804/2A.

NIPPON ELECTRIC N404/3, N804/3A

| 456 | 48 | 60 | 400 | 10 | .67 | .67 | — | 1200 | 8 |

TOSHIBA 0074

| 1170 | 30 | 37.5 | 800 | 9 | .5 | .75 | — | 250 | 8 |

TOSHIBA 0094

| 1670 | 60 | 75 | 800 | 9 | .5 | .75 | — | 250 | 8 |

TOSHIBA 107

| 292 | 7.5-30 | 37.5 | 200 556 800 | 7 | .5 | .75 | — | 485 | 8 |

Right column

TOSHIBA 109

| 445 | 15-60 | 75 | 200 556 800 | 7 | .5 | .75 | — | 485 | 8 |

TOSHIBA 111

| 556 | 24-96 | 120 | 200 556 800 | 7 | .5 | .75 | — | 540 | 8 |

TOSHIBA 0111

| 640 | 96 | 120 | 800 | 9 | .5 | .75 | — | 372 | 8 |

TOSHIBA 112

| 666 | 30-120 | 150 | 200 556 800 | 7 | .5 | .75 | — | 540 | 8 |

TOSHIBA 0112

| 780 | 120 | 150 | 800 | 9 | .5 | .75 | — | 372 | 8 |

TOSHIBA 680

| 851 | 15 | 75 | 200 | 7 | .5 | .75 | — | 800 | 8 |

TOSHIBA 690

| 1300 | 41.6 | 75 | 556 | 7 | .5 | .75 | — | 1030 | 8 |

TOSHIBA 715A

| 262 | 30 | 75 | 400 | 8 | .5 | .75 | — | 212 | 8 |

TOSHIBA 716B/2, 4

| 1044[A] | 7-28 | 35.1 | 200 556 800 | 7 | .5 | .75 | — | 248 | 8 |

A. 908 for Model 4.

TOSHIBA 716C/4

| 444 | 15-60 | 75 | 200 556 800 | 7 | .5 | .75 | — | 261 | 8 |

TOSHIBA 716D

| 556 | 24-96 | 120 | 200 556 800 | 7 | .5 | .75 | — | 261 | 8 |

— None.   * Information unavailable.

Unit Rental Monthly	Transfer Rate Thousands of Characters per Second — Range	Speed in Inches per Second	Dimensions Density in Bits per Inch	Tracks	Width in Inches	Interrecord Gap in Inches	Read Reverse	Control Unit Monthly Rental	Number of Devices
TOSHIBA 716E									
*	30-120	150	200 556 800	7	.5	.75	—	261	8

Sweden

DATASAAB 2117									
711[A]	36	120	300	16	1	1	—	—[J]	8

A. Price is for two tape drives.   J. Varies from 685 to 1078 depending on central processor used.

DATASAAB 2131/1, 2131/2									
522[A]	9-36[B]	45[C]	200 556 800	9[E]	.5	.6[G]	√[H]	—[J]	32

A. 582 for Model 2.   B. 15 to 60 for Model 2.   C. 75 for Model 2.
E. Seven tracks also available.   G. 0.75 for 7-track tape.   H. No read reverse when connected to Datasaab D21.   J. Varies from 400 to 1100 depending on central processor and number of tracks used.

The Netherlands

ELECTROLOGICA 1510, 1520

Modified versions of Datamec D2020.

ELECTROLOGICA 1530

Modified version of Control Data 604.

ELECTROLOGICA 1540, 1560

592[A]	60[B]	75[C]	800	9	.5	.6	√	601	8

A. 850 for 1560.   B. 120 for 1560.   C. 150 for 1560.   Note. Devices manufactured by Control Data.

ELECTROLOGICA 1550

Modified version of Control Data 607.

Card Equipment

EXPLANATION OF COLUMN HEADINGS

Unit Rental

Monthly — The monthly rental price of a single unit, exclusive of independent control devices. A factor of forty is used for deriving rentals when only purchase prices are available.

Type — Indicates the unit's function: reader only (RD), punch only (PN), or reader-punch combination (RP).

Speed — The rate, in cards per minute, at which cards may be read or punched by the unit.

Columns — The number of columns read or punched per card.

Checking — The type of validity checking performed by the unit.

Multiple Stacking — A check (√) indicates that multiple stackers may be individually selected under program control.

Control Unit — The unit for controlling the operation of the card-handling device.

Monthly Rental — The monthly rental price of the control unit only. If the control unit is an integral part of the card-handling device, the price of the unit is included in the device rental.

Number of Devices — The number of card-handling devices which can be attached to a single control unit.

Buffering — A check (√) indicates that the control unit contains an independent memory buffer.

ADAGE CDR

Monthly	Type	Speed	Input—Cards per Min.	Output—Cards per Min.	Columns	Check In	Check Out	Multiple Stacking	Control Unit Rental	No. of Devices	Buffering
*	RD	100	—		80	*	—	*	*	*	*

BURROUGHS 9110

Monthly	Type	Speed	Input—Cards per Min.	Output—Cards per Min.	Columns	Check In	Check Out	Multiple Stacking	Control Unit Rental	No. of Devices	Buffering
175	RD	200	—		80[E]	PV	—	—	50	1	—

E. 51, 60 and 66 also possible.

BURROUGHS 9111

Monthly	Type	Speed	Input—Cards per Min.	Output—Cards per Min.	Columns	Check In	Check Out	Multiple Stacking	Control Unit Rental	No. of Devices	Buffering
325	RD	800	—		80[E]	PV	—	—	100	1	—

E. See 9110.

BURROUGHS 9112

Monthly	Type	Speed	Input—Cards per Min.	Output—Cards per Min.	Columns	Check In	Check Out	Multiple Stacking	Control Unit Rental	No. of Devices	Buffering
450	RD	1400	—		80[E]	PV	—	—	50	1	—

E. See 9110.

BURROUGHS 9210

Monthly	Type	Speed	Input—Cards per Min.	Output—Cards per Min.	Columns	Check In	Check Out	Multiple Stacking	Control Unit Rental	No. of Devices	Buffering
350	PN	—		100	80[E]	—	P	—	50	1	—

E. See 9110.

BURROUGHS 9211

Monthly	Type	Speed	Input—Cards per Min.	Output—Cards per Min.	Columns	Check In	Check Out	Multiple Stacking	Control Unit Rental	No. of Devices	Buffering
515	PN	—		300	80[E]	—	P	√	100	1	—

E. See 9110.

BURROUGHS B122

Monthly	Type	Speed	Input—Cards per Min.	Output—Cards per Min.	Columns	Check In	Check Out	Multiple Stacking	Control Unit Rental	No. of Devices	Buffering
150	RD	200	—		80	V	—	—	*	*	—

BURROUGHS B123

Monthly	Type	Speed	Input—Cards per Min.	Output—Cards per Min.	Columns	Check In	Check Out	Multiple Stacking	Control Unit Rental	No. of Devices	Buffering
320	RD	475	—		80[E]	V	—	—	*	*	—

E. See 9110.

BURROUGHS B124

Monthly	Type	Speed	Input—Cards per Min.	Output—Cards per Min.	Columns	Check In	Check Out	Multiple Stacking	Control Unit Rental	No. of Devices	Buffering
400	RD	800	—		80[E]	V	—	—	*	*	—

E. See 9110.

BURROUGHS B129

Monthly	Type	Speed	Input—Cards per Min.	Output—Cards per Min.	Columns	Check In	Check Out	Multiple Stacking	Control Unit Rental	No. of Devices	Buffering
500	RD	1400	—		80[E]	V	—	—	*	*	—

E. See 9110.

BURROUGHS B303

Monthly	Type	Speed	Input—Cards per Min.	Output—Cards per Min.	Columns	Check In	Check Out	Multiple Stacking	Control Unit Rental	No. of Devices	Buffering
450	PN	—		100	80[E]	—	H	—	*	*	—

E. See 9110.

BURROUGHS B304

Monthly	Type	Speed	Input—Cards per Min.	Output—Cards per Min.	Columns	Check In	Check Out	Multiple Stacking	Control Unit Rental	No. of Devices	Buffering
650	PN	—		300	80[E]	—	H	√	*	*	—

E. See 9110.

COLLINS 8861A

Modified version of Control Data 405.

COLLINS 8862A

Modified version of Control Data 415.

CONTROL DATA 167

Monthly	Type	Speed	Input—Cards per Min.	Output—Cards per Min.	Columns	Check In	Check Out	Multiple Stacking	Control Unit Rental	No. of Devices	Buffering
420-485	RD	250	—		80	—	—	—	—[J]	1	—

J. Each device contains its own control unit.

CONTROL DATA 405

Monthly	Type	Speed	Input—Cards per Min.	Output—Cards per Min.	Columns	Check In	Check Out	Multiple Stacking	Control Unit Rental	No. of Devices	Buffering
420	RD	1200	—		80	D	—	—	235	1	√

CONTROL DATA 415

Monthly	Type	Speed	Input—Cards per Min.	Output—Cards per Min.	Columns	Check In	Check Out	Multiple Stacking	Control Unit Rental	No. of Devices	Buffering
310	PN	—		250	80	—	R	—	475	1	√

CONTROL DATA 1729

Monthly	Type	Speed	Input—Cards per Min.	Output—Cards per Min.	Columns	Check In	Check Out	Multiple Stacking	Control Unit Rental	No. of Devices	Buffering
225[A]	RD	100	—		80	—	—	—	—[J]	1	—

A. No rental price announced. Price derived from purchase price.   J. See 167.

CONTROL DATA 3142

Monthly	Type	Speed	Input—Cards per Min.	Output—Cards per Min.	Columns	Check In	Check Out	Multiple Stacking	Control Unit Rental	No. of Devices	Buffering
335	RD	100	—		80	—	—	—	—[J]	1	—

J. See 167.

DIGITAL ELECTRONICS 3089

Modified version of NCR 582.

DIGITAL EQUIPMENT 451A

Modified version of Burroughs B122.

DIGITAL EQUIPMENT 451B

Modified version of Burroughs B124.

DIGITAL EQUIPMENT CR01C

Modified version of NCR 582.

EAI 8452

Modified version of Uptime SR 400.

EAI 8453

Modified version of Uptime SR 800.

EAI 8454

Modified version of Uptime SR 1500.

† - activation verification, D - dual read/dual punch, E - echo, H - hole count, P - parity, R - read after write, V - validity.
— None. * Information unavailable.

EAI 8455, 8456
Modified versions of Uptime SP 120.

EMR 60220 SERIES
Modified versions of Burroughs B120 series.

EMR 60232
Modified version of NCR 582.

EMR 60241
Modified version of Soroban SDT-111A.

EMR 60245
Modified version of Soroban SDT-111B.

EMR A-40 SERIES
Modified versions of IBM 1402 series.

Unit	Rental (Monthly)	Type	Speed	Input — Cards per Minute	Output — Cards per Minute	Columns	Checking Input	Checking Output	Multiple Stacking	Control Unit Rental	Number of Devices	Buffering
GENERAL ELECTRIC 100 PUNCH	520	PN		—	100	80	—	PR	—	—	1	√
GENERAL ELECTRIC 100 READER	140	RD		300	—	80	P	—	—	—	1	√
GENERAL ELECTRIC 100 READER/PUNCH	590	RP		300	300	80	P	PR	√	—	1	√
GENERAL ELECTRIC 101	315	PN		—	60-200	80	—	R	—	—	1	√
GENERAL ELECTRIC 103	605	PN		—	300	80	—	R	√	—	1	√
GENERAL ELECTRIC 120	315	RD		600	—	80	P	—	√	—	1	√
GENERAL ELECTRIC 150	450	RD		600	—	80	P	—	—	—	1	√
GENERAL ELECTRIC 201 PUNCH	860	PN		—	300	80	—	PR	—	—	1	√
GENERAL ELECTRIC 201 READER	680	RD		900	—	80	V	—	√	—	1	√
GENERAL ELECTRIC 225/B, F	375A	RD		400	—	80	P	—	—	—	1	—
GENERAL ELECTRIC 225/C, D	810A	RD		1000	—	80	P	—	—	—	1	—
GENERAL ELECTRIC 225/K	400	PN		—	100	80	—	P	—	—	1	—
GENERAL ELECTRIC 225/M	825	PN		—	300	80	—	HR	—	—	1	—
GENERAL ELECTRIC 930 PUNCH	420	PN		—	100	80	—	—	—	—	1	—
GENERAL ELECTRIC 930 READER	405	RD		300	—	80	—	—	—	—	1	—
GENERAL ELECTRIC 4244/C10	250	RD		300	—	80	—	—	—	*	*	—
GENERAL ELECTRIC 4244/C11	200	RD		200	—	80	—	—	—	*	*	—
GENERAL ELECTRIC 4244/C12	150	RD		100	—	80	—	—	—	*	*	—
GENERAL ELECTRIC 4280/A1	310	PN		—	100	80	—	P	—	*	*	—

GENERAL ELECTRIC 225/B, F — A. 390 for Model F.

GENERAL ELECTRIC 225/C, D — A. 860 for Model D.

GENERAL ELECTRIC 4244/C10 — Note. Unit not manufactured by General Electric.

GENERAL ELECTRIC 4244/C11 — Note. See 4244/C10.

GENERAL ELECTRIC 4244/C12 — Note. See 4244/C10.

GENERAL ELECTRIC 4280/A1 — Note. See 4244/C10.

HONEYWELL 61, 65
Modified versions of Burroughs 120 series readers.

HONEYWELL 62, 66
Modified versions of Burroughs B300 series readers.

Unit	Rental (Monthly)	Type	Speed	Input — Cards per Minute	Output — Cards per Minute	Columns	Checking Input	Checking Output	Multiple Stacking	Control Unit Rental	Number of Devices	Buffering
HONEYWELL 123, 123/2	285A	RD		400C	—	80E	V	—	—	—J	1	√
HONEYWELL 214/1	290	PN		—	400	80	—	A	—	145	1	√

HONEYWELL 123, 123/2 — A. 235 for Model 2. C. 600 for Model 2. E. 51 also possible. J. Control is physically in central processor.

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† – activation verification. D – dual read/dual punch, E – echo, H – hole count, P – parity, R – read after write, V – validity.
— None. * Information unavailable.

Unit Rental Monthly	Type	Speed	Input — Cards per Minute	Output — Cards per Minute	Columns	Checking† Input	Output	Multiple Stacking	Control Unit Rental	Number of Devices	Buffering
HONEYWELL 214/2											
335	RP	400	400	80	V	A	—	215	1	√	

HONEYWELL 223											
290	RD	800	—	90^E	V	—	—	$—^J$	1	√	

E. 51 and 88 also possible.   J. Each device contains its own control unit.

HONEYWELL 224/1											
320	RP	300	270	80	DV	$—^G$	√	145^J	1	√	

G. See 214/1.   J. For punch; 215 for reader.

HONEYWELL 224/2											
440	RP	400	360	80	DV	$—^G$	√	145^J	1	√	

G. See 214/1.   J. See 224/1.

HONEYWELL 227											
660	RP	800	250	80	HV	D	√	425^J	1	√	

J. 225 for punch and 200 for reader.

HONEYWELL 423/2											
325	RD	650	—	80	DV	—	√	$—^J$	1		

J. See 123.

HONEYWELL 427/1											
560	RP	800	250	80^E	DV	D	√	$—^J$	1		

E, J. See 123.

HONEYWELL 827/1											
560	RP	800	250	80^E	D	E	√	1100	1	√	

E. See 123.

HUGHES H-3103
Modified version of Uptime SR 1500.

HUGHES HM-3104
Modified version of Uptime SP 120.

IBM 024											
*	RP	15^C	15^D	80	—	—	—	*	*	—	

C, D. For full 80-column card. Unit operates at 20 columns per second.

IBM 026											
*	RP	13.3^C	13.3^D	80	—	—	—	*	*	—	

C, D. For full 80-column card. Unit operates at 18 columns per second.

Unit Rental Monthly	Type	Speed	Input — Cards per Minute	Output — Cards per Minute	Columns	Checking† Input	Output	Multiple Stacking	Control Unit Rental	Number of Devices	Buffering
IBM 711											
325	RD	250	—	72	—	—	—	$—^J$	1		

J. Each device contains its own control unit.

IBM 721											
625	PN	—	100	72	—	—	—	$—^J$	1		

J. See 711.

IBM 1402/1, 2, 3, 4, 5											
575^A	RP	800^C	250	80^E	H	H	√	$—^J$	1	—	

A. 640, 580, 425 and 400 for Models 2, 3, 4 and 5, respectively.   C. 450 for Models 4 and 5.   E. 51 also possible.   J. See 711.

IBM 1442/1, 2, N1											
290^A	RP	300^C	60^D	80	—	—	√	$—^J$	1	—	

A. 405 for Model 2 and 535 for Model N1.   C. Up to 400 for Models 2 and N1.   D. Up to 120 for Models 2 and N1.   J. See 711.

IBM 1442/3, 4											
260^A	RD	400	—	80	—	—	√	$—^J$	1	—	

A. 210 for Model 4.   J. See 711.

IBM 1442/5, N2											
265^A	PN	—	91	80	—	V	√	$—^J$	1	—	

A. 390 for Model N2.   J. See 711.

IBM 1442/6, 7											
275^A	RP	300^C	50^D	80	—	V	√	$—^J$	1	—	

A. 390 for Model 7.   C. 400 maximum for Model 7.   D. 91 maximum for Model 7.   J. See 711.

IBM 1444											
385	PN	—	250	80	—	H	√	$—^J$	1	—	

J. See 711.

IBM 1622/1, 2											
525^A	RP	250^C	125^D	80	P	P	√	—	*	√	

A. 780 for Model 2.   C. 500 for Model 2.   D. 250 for Model 2.

IBM 2501/A1, A2, B1, B2											
200^A	RD	600^C	—	80	V	—	√	$—^J$	1	—	

A. 265, 270 and 330 for Models A2, B1 and B2, respectively.   C. 1,000 for Models A2 and B2.   J. See 711.

IBM 2520											
550	RP	500	500	80	D	D	√	$—^J$	1	—	

J. See 711.

† – activation verification, D – dual read/dual punch, E – echo, H – hole count, P – parity, R – read after write, V – validity. — None. * Information unavailable.

Unit Rental Monthly	Type	Speed Input — Cards per Minute	Output — Cards per Minute	Columns	Checking† Input	Output	Multiple Stacking	Control Unit Rental	Number of Devices	Buffering
IBM 2540										
675	RP	1000	300	80	DH	DH	√	—J	1	√

J. See 711.

IBM 2560										
585	RP	500	120	80	—	—	√	—	*	*

Note. Multi-function card machine: collater, interpreter and printer.

IBM 7500										
410	RD	500	—	80	V	—	√	—	*	—
IBM 7501										
80	RD	60	—	80	V	—	—	—	*	—
IBM 7502										
285	RD	60	—	80	V	—	—	—	*	—
IBM 7550										
575	PN	—	250	80	—	R	—	—	*	—

INTERDATA 510
Modified version of Burroughs B122.

INTERDATA 530
Modified version of Uptime SP-120.

NCR 376/7										
375	RP	300	50D	80	—	E	√	150	2	√

D. Up to 270.

NCR 376/8										
500	RP	400	91D	80	—	E	√	150	2	√

D. Up to 360.

NCR 376/101										
400	PN	—	250	80	—	P	√	150	1	√
NCR 380/3										
750	RD	2000	—	80E	P	—	√	*	1	√

E. Simultaneous reading of 80- and 90-column cards is possible.

NCR 577										
125	PN	—	100	80	—	—	—	—	130	2	—
NCR 582										
35	RD	100	—	80	—	—	—	—	65	2	—

PHILCO 156
Modified version of Uptime SR 400.

PHILCO 165/1
Modified version of Control Data 415.

PHILCO 258
Modified version of Uptime SR 1500.

PHILCO 265
Modified version of IBM 721.

RCA 70/234										
450	PN	—	100	80	—	H	—	—J	1	√

J. Each device contains its own control unit.

RCA 70/236										
750	PN	—	300	80	—	H	—	—J	1	√

See 70/234.

RCA 70/237										
550	RD	1435	—	80	H	—	√	—J	1	√

See 70/234.

RCA 329										
—A	RD	1470	—	80E	—F	—	√	—J	1	—

A. J. No prices available.   E. 51 optionally available.   F. Checking by photodiode test.

RCA 334										
—A	PN	—	100	80	—	R	—	—J	1	—

A. J. See 329.

RCA 528, 538
Modified versions of IBM 2540.

RCA 3436										
—A	PN	—	300	80	—	R	√	—J	1	√

A. J. See 329.

SCIENTIFIC CONTROL 5930, 6930										
*	RD	100	—	80	—	—	—	*	1	√

Note. Units are not manufactured by Scientific Control.

SCIENTIFIC CONTROL 5940, 6940										
*	RD	400	—	80	—	—	—	*	1	√

Note. See 5930.

SCIENTIFIC CONTROL 5955, 6955										
*	PN	—	100	80	—	—	—	*	1	√

Note. See 5930.

† - activation verification, D – dual read/dual punch, E – echo, H – hole count, P – parity, R – read after write, V – validity.
— None.   * Information unavailable.

Unit Rental Monthly	Type	Speed	Input — Cards per Minute	Output — Cards per Minute	Columns	Checking† Input	Output	Multiple Stacking	Control Unit Rental	Number of Devices	Buffering

SCIENTIFIC DATA 7120
Modified version of Univac 711/02.

SCIENTIFIC DATA 7140
Modified version of Uptime SR1500.

SCIENTIFIC DATA 7160, 9158
Modified versions of Univac 600.

SCIENTIFIC DATA 9150/2, 3
Modified versions of Univac 700 series readers.

SEL 80-410A
Modified version of Burroughs B122.

SEL 80-440A
Modified version of Uptime SP 120.

SEL 80-450A
Modified version of Uptime SR 400.

Unit Rental Monthly	Type	Speed	Input — Cards per Minute	Output — Cards per Minute	Columns	Checking† Input	Output	Multiple Stacking	Control Unit Rental	Number of Devices	Buffering
SOROBAN SDT 110											
176^A	RD	240	—	80	P	—	—	—	—	—	—

A. No rental price announced. Price derived from purchase price.

| **SOROBAN SDT 111A** | | | | | | | | | | | |
| —^{A} | PN | — | 110 | 80 | — | E | — | — | — | — | — |

A. Prices quoted only on a particular system configuration.

| **SOROBAN SDT 111B** | | | | | | | | | | | |
| 500^A | PN | — | 220 | 80 | — | E | — | — | — | — | — |

A. See SDT 110.

| **STANDARD COMPUTER CR/100** | | | | | | | | | | | |
| —^{A} | RD | 100 | — | 80 | — | — | — | — | — | 1 | √ |

A. Price included with central processor.

| **STANDARD COMPUTER CR/800, CR/1500** | | | | | | | | | | | |
| 415^A | RD | 800^C | — | 80 | DV | — | — | — | — | 1 | √ |

A. 615 for CR/1500.   C. 1500 for CR/1500.

UNIVAC 600											
415	PN	—	300	80	—	HV		√	550	2	√
UNIVAC 603/04											
120	PN	—	75-200	80	—	EV		√	—	1	√

Unit Rental Monthly	Type	Speed	Input — Cards per Minute	Output — Cards per Minute	Columns	Checking† Input	Output	Multiple Stacking	Control Unit Rental	Number of Devices	Buffering
UNIVAC 604											
120	PN	—	200	80	—	H		√	—	1	√
UNIVAC 652											
505	PN	—	300	80	—	HV		√	635	2	√
UNIVAC 703											
540	RD	700	—	80	HV		—	√	635	2	√
UNIVAC 706											
250	RD	900	—	80	HV		—	√	550	2	√
UNIVAC 711/00											
90	RP	400	400	80	—	HV		—	—	1	√
UNIVAC 711/02											
280	RD	600	—	80	HV		—	—	1410	1	√
UNIVAC 1004/IA											
—^{A}	RP	400	200	80^E	—	H		√^{H}	—^{J}	1	√

A, J. Unit is integral part of central processor.   E. 90 also possible.   H. Output only.

| **UNIVAC 1004/IB** | | | | | | | | | | | |
| 125 | RD | 400 | — | 80^E | — | — | | √ | — | 1 | — |

E. See 1004/IA.

| **UNIVAC 1004/II** | | | | | | | | | | | |
| —^{A} | RP | 615 | 200 | 80^E | — | H | | √^{H} | —^{J} | 1 | √ |

A, E, H, J. See 1004/IA.

| **UPTIME SP 120** | | | | | | | | | | | |
| 285^A | PN | — | 100^D | 80 | — | H | | √ | — | — | — |

A. No rental price announced. Price derived from purchase price.   D. Up to 316 possible.

| **UPTIME SR 400** | | | | | | | | | | | |
| 235^A | RD | 400 | — | 80 | DV | | — | — | — | — | — |

A. See SP 120.

| **UPTIME SR 800** | | | | | | | | | | | |
| 290^A | RD | 800 | — | 80 | DV | | — | — | — | — | — |

A. See SP 120.

| **UPTIME SR 1500** | | | | | | | | | | | |
| 300^A | RD | 1500 | — | 80 | DV | | — | — | — | — | — |

A. See SP 120.

† A – activation verification, D – dual read/dual punch, E – echo, H – hole count, P – parity, R – read after write, V – validity.
— None. * Information unavailable.

England

ELLIOTT 4240 SERIES

Unit Rental Monthly	Type	Speed	Input — Cards per Minute	Output — Cards per Minute	Columns	Checking† Input	Output	Multiple Stacking	Control Unit Rental	Number of Devices	Buffering
334-667	RP	400	100-300	80	P	P	—	—ᴶ	1	—	

J. Each device contains its own control unit.

ENGLISH ELECTRIC 4512

	RD	800	—	80	—	—	—	*	1	—	
*											

ENGLISH ELECTRIC 4513

| * | RD | 800 | — | 80ᴱ | — | — | — | * | 1 | — |

E. 51 also possible.

ENGLISH ELECTRIC 4514

| * | RD | 1435 | — | 80 | — | — | — | * | 1 | — |

ENGLISH ELECTRIC 4515

| * | RD | 1435 | — | 80ᴱ | — | — | — | * | 7 | — |

E. See 4513.

ENGLISH ELECTRIC 4520

| * | PN | — | 100 | 80 | — | R | — | * | 1 | — |

ENGLISH ELECTRIC 4521

| * | PN | — | 300 | 80 | — | R | — | * | 1 | — |

ENGLISH ELECTRIC 4522

| * | PN | — | 300 | 80 | — | R | — | * | 1 | — |

ENGLISH ELECTRIC CD1

| * | RP | 600 | 300 | 80 | P | P | — | * | * | — |

ICT 1911

| —ᴬ | RD | 900 | — | 80 | D | — | — | —ᴶ | 1 | — |

A, J. Prices quoted only on a particular system configuration.

ICT 1912

| —ᴬ | RD | 300 | — | 80 | — | — | — | —ᴶ | 1 | — |

A, J. See 1911.

ICT 1920

| —ᴬ | PN | — | 100 | 80 | — | — | — | —ᴶ | 1 | √ |

A, J. See 1911.

ICT 1922

| —ᴬ | PN | — | 33 | 80 | — | — | — | —ᴶ | 1 | — |

A, J. See 1911.

ICT 2102

| —ᴬ | RD | 300 | — | 80 | — | — | — | —ᴶ | 1 | — |

A, J. See 1911.

ICT 2151

| —ᴬ | PN | — | 300 | 80 | — | H | — | —ᴶ | 1 | √ |

A, J. See 1911.

France

BULL GE 100

Modified version of General Electric 100.

BULL GE 100R

| 135 | RD | 300 | — | 80 | P | — | — | — | 1 | — |

BULL GE 100RP

| 690 | RP | 300 | 300 | 80 | P | PHR | √ | — | 1 | √ |

BULL GE 103

| 595 | PN | — | 300 | 80 | — | R | — | — | 1 | √ |

BULL GE 120

| 270 | RD | 600 | — | 80ᴱ | A | — | √ | — | 1 | — |

E. 51 also possible.

BULL GE 201

Modified version of General Electric 201.

CII 9153

| 581 | RD | 800 | — | 80 | * | — | * | * | * | * |

CII 9158

| 744 | PN | — | 300 | 80 | — | * | * | * | * | * |

CII 140

| 637 | CR | 1200 | — | 80 | * | — | * | * | * | * |

CII 160

| 637 | CP | — | 300 | 80 | — | * | * | * | * | * |

Germany (West)

SIEMENS 234

| 500 | PN | — | 100 | 80 | — | H | — | —ᴶ | 1 | √ |

Each device contains its own control unit.

† - activation verification, D - dual read/dual punch, E - echo, H - hole count, P - parity, R - read after write, V - validity. — None. * Information unavailable.

Unit Rental Monthly	Type	Speed	Input—Cards per Minute	Output—Cards per Minute	Columns	Checking† Input	Checking Output	Multiple Stacking	Control Unit Rental	Number of Devices	Buffering
SIEMENS 236/10											
850	PN		—	300	80	—	H	√	—J	1	√
J. See 234.											
SIEMENS 236/20											
1125	RP		300	300	80	H	H	√	—J	1	√
J. See 234.											
SIEMENS 237											
750	RD		1435	—	80	H	—	√	—J	1	—
J. See 234.											
SIEMENS 2010											
330	RD		670	—	80	H	—	√	—J	1	—
J. See 234.											
SIEMENS 2021											
375	PN		—	110	80	—	H	√	—J	1	—
J. See 234.											
SIEMENS 4235											
390	RD		670	—	80	H	—	√	—J	1	—
J. See 234.											
TELEFUNKEN 72											
*	PN		—	100	80	—	EH	—	—J	1	—
J. Each device has its own control unit.											
TELEFUNKEN K480											
*	RP		800	250	80	H	H	√	—J	1	—
J. See 72.											
TELEFUNKEN L480, 900											
*	RD		800C	—	80	DV	—	—	—J	1	—
C. 1500 for 900. J. See 72.											
ZUSE 122											
350	RD		200	—	80	—	—	—	—J	1	—
J. Each device contains its own control unit.											
ZUSE 303											
790	PN		—	100	80	—	—	—	—J	1	—
J. See 122.											

Japan

Unit Rental Monthly	Type	Speed	Input—Cards per Minute	Output—Cards per Minute	Columns	Checking† Input	Checking Output	Multiple Stacking	Control Unit Rental	Number of Devices	Buffering
FUJITSU FACOM 567A											
*	RD		100	—	80	—	—	—	*	*	—
FUJITSU FACOM 663A/R, 664A/R											
*	RD		800C	—	80E	D	—	—	*	*	—
C. 560 also possible for 664A/R. E. 90 also possible.											
FUJITSU FACOM 682A/R, 683A/R											
*	PN		—	250	80E	—	DR	√	*	*	—
E. See Facom 663A/R.											
HITACHI HITAC 8233											
445	RD		750	—	80	√	—	—	—J	1	—
J. Each device contains its own control unit.											
HITACHI HITAC 8234											
445	PN		—	100	80	—	H	—	—J	1	√
J. See Hitac 8233.											
HITACHI HITAC 8235											
750	PN		—	250	80	—	H	—	—J	1	√
J. See Hitac 8233.											
HITACHI HITAC 8238											
640	RD		1470	—	80	√	—	—	—J	1	—
J. See Hitac 8233.											
HITACHI HITAC 8239											
500	RP		400	100	80	—	—	√	—J	1	—
J. See Hitac 8233.											
NIPPON ELECTRIC 401/2A											
1650	RP		600	250	80	D	DR	—	264	3	—
NIPPON ELECTRIC 406/1											
353	RD		200	—	80	D	—	—	264	3	—
NIPPON ELECTRIC 406/2A											
763	RD		650	—	80	—	—	—	264	3	—
NIPPON ELECTRIC 407/1, 2A											
532A	PN		—	100D	80	—	DR	—	264	3	—
A. 1,080 for Model 2A. D. 250 for Model 2A.											

† A – activation verification, D – dual read/dual punch, E – echo, H – hole count, P – parity, R – read after write, V – validity.
— None. * Information unavailable.

Unit Rental Monthly	Type	Input — Cards per Minute	Output — Cards per Minute	Columns	Checking† Input	Checking† Output	Multiple Stacking	Control Unit Rental	Number of Devices	Buffering
NIPPON ELECTRIC 411/1										
380	RD	200	—	90	—	—	—	264	3	—
NIPPON ELECTRIC 412/1										
491	PN	—	100	90	—	DR	—	264	3	—
NIPPON ELECTRIC E214										
500	RP	400	100ᴰ	80	V	V	—	264	1	—
D. 400 also possible.										
NIPPON ELECTRIC N123										
200	RD	400	—	80ᴱ	V	—	—	264	1	—
E. 51 also possible.										
NIPPON ELECTRIC N214/1										
300	PN	—	100ᴰ	80	—	P	—	150	1	—
D. See E214.										
NIPPON ELECTRIC N214/2										
350	RP	400	100ᴰ	80	V	V	—	225	1	—
D. See E214.										
NIPPON ELECTRIC N223										
389	RD	800	—	90ᴱ	V	—	—	—	1	—
E. 51 and 80 also possible.										
NIPPON ELECTRIC N224A/1										
217	PN	—	100	90ᴱ	—	H	—	211	1	—
E. 80 also possible.										
NIPPON ELECTRIC N224A/2										
389	PN	—	250	80	—	H	—	211	1	—
NIPPON ELECTRIC N227										
716	RP	800	250	90ᴱ	HV	HV	—	450	1	—
E. See N224A/1.										
NIPPON ELECTRIC N423/2, N823/2										
*	RD	650	—	80	HV	—	—	—	1	—
NIPPON ELECTRIC N424/2, N824/2										
*	PN	—	250	80	—	DP	—	—	1	—
NIPPON ELECTRIC N427, N827										
*	RP	800	250	80	DHP	DHP	—	—	1	—

Unit Rental Monthly	Type	Input — Cards per Minute	Output — Cards per Minute	Columns	Checking† Input	Checking† Output	Multiple Stacking	Control Unit Rental	Number of Devices	Buffering
TOSHIBA 100										
500	PN	—	100	80	—	HV	—	—	1	—
TOSHIBA 150										
567	PN	—	200	80	—	HV	—	—	1	—
TOSHIBA 200 PUNCH										
825	PN	—	300	80	—	HV	—	—	1	√
TOSHIBA 200 READER										
650	RD	900	—	80ᴱ	V	—	—	—	1	—
E. 90 also possible.										
TOSHIBA 225C										
810	RD	1500	—	80	V	—	—	—	1	—
TOSHIBA 225F										
390	RD	400	—	80	V	—	—	—	1	—
TOSHIBA 225K										
400	PN	—	100	80	—	H	—	—	1	—
TOSHIBA 312A										
707	RD	200	—	80	H	—	—	—	1	√
TOSHIBA 313A										
813	RD	600	—	80	H	—	—	—	1	√
TOSHIBA 315A										
785	RD	600	—	90	H	—	—	—	1	√
TOSHIBA 317A										
650	RD	900	—	80ᴱ	V	—	—	—	1	—
E. See 200 reader.										
TOSHIBA 318A										
180	RD	100	—	80	V	—	—	—	1	—
TOSHIBA 416A, 416B										
383ᴬ	PN	—	100	80ᴱ	—	H	—	—	1	—
A. 440 for 416B. E. 90 for 416B.										
TOSHIBA 431A										
825	PN	—	300	80	—	H	—	—	1	—
TOSHIBA 433A										
567	PN	—	200	80	—	H	—	—	1	—

† A – activation verification, D – dual read/dual punch, E – echo, H – hole count, P – parity, R – read after write, V – validity.
— None.   • Information unavailable.

Unit Rental Monthly	Type	Speed	Input—Cards per Minute	Output—Cards per Minute	Columns	Checking Input	Checking Output	Multiple Stacking	Control Unit Rental	Number of Devices	Buffering
TOSHIBA 5102											
528	PN	—		200	80	—	H	—	—	1	—
TOSHIBA 5109											
472	RD	900	—		80E	V		—	—	1	—
TOSHIBA 7244											
388	RD	100	—		80	—		—	—	1	—
TOSHIBA 7282											
310	PN	—		100D	80	—	P	—	—	1	—

E. See 200 reader.

D. 300 also possible.

Sweden

Unit Rental Monthly	Type	Speed	Input—Cards per Minute	Output—Cards per Minute	Columns	Checking Input	Checking Output	Multiple Stacking	Control Unit Rental	Number of Devices	Buffering
DATASAAB 2119											
449	RD	1500	—		80	√		√	154	1	—
DATASAAB 2132											
308	PN	—		300	80	—	AP	—	146	1	—
DATASAAB 2135, 2160											
295	RD	800	—		80E	√		—	154	1	—

E. 90 also possible with 2160.

The Netherlands

Unit Rental Monthly	Type	Speed	Input—Cards per Minute	Output—Cards per Minute	Columns	Checking Input	Checking Output	Multiple Stacking	Control Unit Rental	Number of Devices	Buffering
ELECTROLOGICA 1220											
604	PN	—		250	8	—	R	—	145	6	√
ELECTROLOGICA 1230											
445	RP	120	120		80	D	R	—	145	6	√
ELECTROLOGICA 1240											
454	RD	1600	—		80	D		—	145	6	√

Note. Device manufactured by Control Data.

Note. Device manufactured by Bull Ge.

Note. Device manufactured by Control Data.

Line Printers

EXPLANATION OF COLUMN HEADINGS

Unit Rental

Monthly — The monthly rental price of a single unit, exclusive of independent control devices. A factor of forty is used for deriving rentals when only purchase prices are available.

Speed

Printing in Lines per Minute — Range — The rate at which the unit operates when actually printing data, ranging from the slowest to the fastest speed of the unit.

Skipping in Inches per Second — The rate at which the unit advances a form through the carriage without printing.

Print Positions — The maximum number of characters which can be printed on a single line.

Character Set

Minimum-Maximum — The range of character set sizes available.

Printing Technique — The method by which the unit produces hard copy: impact-type (I) or non-impact-type (N), the latter implying an electrostatic process.

Control Unit — The unit for controlling the operation of the printer.

Monthly Rental — The monthly rental price of the control unit only. If the control unit is an integral part of the printer, the price of the unit is included in the printer rental.

Number of Devices — The number of printers which can be attached to a single control unit.

Buffering — A check (√) indicates that the control unit contains an independent memory buffer.

Unit Rental (Monthly)	Speed	Printing in Lines per Minute — Range	Skipping in Inches per Second	Print Positions	Character Set Minimum	Maximum	Printing Technique	Control Unit Rental	Number of Devices	Buffering
ADAGE LPR										
*	300-1000	*	136	64	64	I	*	*	√
ANELEX 4000 SERIES										
252^A	300-375	21	160^D	64	128	I	161	1	√

A. No rental price announced. Price derived from purchase price. D. 120, 132 also available.

ANELEX 5000 SERIES (Medium Speed)										
398^A	600-750	25	160^D	64^E	128	I	210	1	√

A, D. See 4000 series. E. 96 also available.

ANELEX 5000 SERIES (High Speed)										
516^A	1000-1250	75	160^D	64^E	128	I	218	1	√

A, D. See 4000 series. E. See 5000 series (medium speed).

BURROUGHS 9240										
800	700	25	120	—	64	I	150	1	√
BURROUGHS 9241										
900	1040	25	120	—	64	I	75	1	√
BURROUGHS 9242										
850	815	25	120	—	64	I	75	1	√
BURROUGHS B320										
810	475	25	120	—	64	I	200	2	—
BURROUGHS B321, B325										
1200^A	700	25	120^D	—	64	I	200	2	—

A. 1275 for B325. D. 132 for B325.

BURROUGHS B328, B329										
1325^A	1040	25	120^D	—	64	I	200	2	1

A. 1400 for B329. D. 132 for B329.

COLLINS 8852A

Modified version of Data Products Printer.

CONTROL DATA 166										
720	150-600	*	120	16	64	I	$—^H$	1	√

H. Each device contains its own control unit.

CONTROL DATA 501										
910	800-1000	25	136	48	64	I	540	1	√
CONTROL DATA 505										
670	500	25	136	—	64	I	540	1	√
CONTROL DATA 512										
*	1200-1500	70	*	48	64	I	$—^H$	1	√

H. See 166.

CONTROL DATA 1612										
1910	1000	25	120	—	64	I	$—^H$	1	√

H. See 166.

CONTROL DATA 1742										
975^A	300	*	136	—	64	I	$—^H$	1	√

A. No rental price announced. Price derived from purchase price. H. See 166.

CONTROL DATA 3152										
660	150	*	120	—	64	I	$—^H$	1	√

H. See 166.

CONTROL DATA 3254										
925	300	*	136	—	64	I	$—^H$	1	√

H. See 166.

DATAMARK 200 SERIES										
300^A	150-400	10	136	64	128	I	$—^H$	1	√

A. No rental prices announced. Prices derived from purchase prices. H. Each device contains its own control unit.

DATAMARK 300 SERIES										
450^A	300	10	160	64	128	I	$—^H$	1	√

A, H. See 200 series.

DATAMARK 500 SERIES										
600^A	300-1200	25	160	64	128	I	$—^H$	1	√

A, H. See 200 series.

DATA PRODUCTS PRINTER										
1000	360-1000	25	132	48	128	I	$—^H$	1	√

H. Each device contains its own control unit.

DIGITAL EQUIPMENT 64

Modified version of Anelex 4000.

DIGITAL EQUIPMENT 647

Modified version of Anelex 5000.

— None. * Information unavailable.

Unit Rental Monthly	Speed Printing in Lines per Minute — Range	Skipping in Inches per Second	Print Positions	Character Set Minimum	Character Set Maximum	Printing Technique	Control Unit Rental	Number of Devices	Buffering

EAI 610

| 700^A | 300 | 25 | 120 | — | 64 | I | —^H | 1 | √ |

A. No rental price announced. Price derived from purchase price.
H. Each device contains its own control unit.

EAI 8460 SERIES

Modified versions of Anelex 4000.

EMR 60326, 60330

Modified versions of Data Products Printer.

EMR 60334

Modified version of Control Data 505.

EMR A-60

Modified version of Control Data 3254.

GENERAL ELECTRIC 100

| 525 | 300 | 14.5 | 136 | — | 64 | I | — | 1 | — |

GENERAL ELECTRIC 110

| 745 | 600 | 64.5 | 136 | — | 64 | I | — | 1 | — |

GENERAL ELECTRIC 120

| 1050 | 780 | 64.5 | 136 | — | 64 | I | — | 1 | √ |

GENERAL ELECTRIC 150

| 1050 | 600 | 27.5 | 136 | 46 | 64 | I | — | 1 | √ |

GENERAL ELECTRIC 200

| 1770 | 1900 | 25 | 144^D | — | 24 | I | — | 4 | √ |

D. Simultaneously lists six tapes at 24 positions per list.

GENERAL ELECTRIC 201

| 1460 | 1200 | 27.5 | 136 | 46 | 64 | I | — | 1 | √ |

GENERAL ELECTRIC 215

| 775 | 450 | 25 | 120 | 50 | 64 | I | — | 1 | — |

GENERAL ELECTRIC 225

| 1295 | 900 | 25 | 120 | 50 | 64 | I | — | 1 | √ |

GENERAL ELECTRIC 690

| 1700 | 1900 | 25 | 144^D | — | 24 | I | — | 1 | √ |

D. See 200.

GENERAL ELECTRIC 4260/2

| 970 | 300 | * | 120 | — | 64 | I | * | * | — |

Note. Unit not manufactured by General Electric.

HONEYWELL 64, 70, 71, 7050

Modified versions of Anelex 4000.

HONEYWELL 122

| 465 | 400-450 | 50 | 120^D | 55 | 63 | I | —^H | 1 | √ |

D. 132 also available. H. Control is physically in central processor.

HONEYWELL 222/1

| 760 | 550-1300 | 50 | 96 | 17 | 63 | I | —^H | 1 | √ |

H. Each device contains its own control unit.

HONEYWELL 222/2

| 805 | 550-1300 | 50 | 108 | 17 | 63 | I | —^H | 1 | √ |

H. See 222/1.

HONEYWELL 222/3

| 855 | 550-1300 | 50 | 120^D | 17 | 63 | I | —^H | 1 | √ |

D. See 122. H. See 222/1.

HONEYWELL 222/4

| 1210 | 750-1300 | 50 | 120^D | 17 | 63 | I | —^H | 1 | √ |

D. See 122. H. See 222/1.

HONEYWELL 222/5

| 615 | 400-450 | 50 | 120^D | 55 | 63 | I | —^H | 1 | √ |

D. See 122. H. See 222/1.

HONEYWELL 422/3

| 1550 | 900 | 21 | 160^D | — | 56 | I | —^H | —^J | — |

D. 120 active positions for any given print run are chosen by plugboard wiring. H. See 122. J. One for Honeywell 400; two for Honeywell 1400.

HONEYWELL 422/4

| 1050 | 900 | 21 | 120 | — | 56 | I | —^H | —^J | — |

H. See 122. J. See 422/3.

HONEYWELL 822/3

| 1550 | 900 | 20 | 160^D | — | 56 | I | 1450 | 1 | √ |

D. See 422/3.

HUGHES H-3102

Modified version of Data Products Printer.

IBM 716

| 1250 | 150 | * | 72 | — | 47 | I | — | 1 | — |

— None. * Information unavailable.

Left column

Unit Rental Monthly	Speed Printing in Lines per Minute — Range	Skipping in Inches per Second	Print Positions	Character Set Minimum	Maximum	Printing Technique	Control Unit Rental	Number of Devices	Buffering
IBM 1132									
275	80-110	10	120	—	48	I	*	1	—
IBM 1403									
425^A	600-1100	75	120^D	48	240	I	—^{H}	3	√

A. Up to 950 depending on model used.   D. 132 also possible.   H. Variable depending on central processor used.

IBM 1404									
1625	600	*	132	*	*	I	—^{H}	2	√

H. Varies from 1000 to 1640 depending on central processor used.

IBM 1443									
325^A	200-600	15	120	13	63	I	—^{H}	1	√

A. 475 for Model 2 and 925 for Model 3.   H. Each device contains its own control unit.

IBM 1445									
1275^A	190-525	15	113	14	56	I	—^{H}	1	√

A. 1,475 for Model N1.   H. See 1443.

IBM 2203									
525	300-750	15	120	13	63	I	—^{H}	1	*

H. See 1443.

IBM 7400									
980	150	*	120^D	—	47	I	—^{H}	1	—

D. 144 also possible.   H. See 1443.

INTERDATA 550
Modified version of Potter 3502.

NCR 340/301									
1150	680-1000	90	120	—	56	I	—^{H}	1	√

H. Each device contains its own control unit.

NCR 340/503									
650	800	90	120	—	56	I	—^{H}	1	—

H. See 340/301.

NCR 340/601									
1350	1000	90	120	—	56	I	—^{H}	1	√

H. See 340/301.

NCR 340/632									
1450	1000	90	132	—	56	I	—^{H}	1	√

H. See 340/301.

Right column

Unit Rental Monthly	Speed Printing in Lines per Minute — Range	Skipping in Inches per Second	Print Positions	Character Set Minimum	Maximum	Printing Technique	Control Unit Rental	Number of Devices	Buffering
NCR 541									
280	125	12	96	—	40	I	125	1	√

PHILCO 151
Modified version of Anelex 4000.

PHILCO 155
Modified version of Anelex 5000.

PHILCO 256
Modified version of Anelex 5000.

POTTER 3502									
777	120-800	16.5	132	16	192	I	—^{H}	1	√

H. Each device contains its own control unit.

RCA 70/242									
700	625	33	132^D	—	64	I	—^{H}	1	√

D. 160 also possible.   H. Each device contains its own control unit.

RCA 70/243-10									
1000	1250	33	132^D	—	64	I	—^{H}	1	√

D, H. See 70/242.

RCA 333									
*	800-1000	150	120	47	64	I	*	1	√

RCA 335									
*	835-1075	150	160	47	64	I	*	1	√

RCA 533
Modified version of Anelex 4000.

SCIENTIFIC CONTROL 5500/10, 20, 30, 40; 6500/10, 20, 30, 40
Modified versions of Data Products Printer.

SCIENTIFIC DATA 7440
Modified version of NCR 340/503.

SCIENTIFIC DATA 7445
Modified version of NCR 340/601.

SCIENTIFIC DATA 9171
Modified version of NCR 541.

SCIENTIFIC DATA 9379
Modified version of NCR 340/301.

— None.   * Information unavailable.

LINE PRINTERS   CHARACTERISTICS

SEL 80-730A SERIES
Modified versions of Anelex 5000 series.

Unit Rental (Monthly)	Speed (Printing in Lines per Minute — Range)	Skipping in Inches per Second	Print Positions	Character Set (Minimum)	Character Set (Maximum)	Printing Technique	Control Unit (Rental)	Number of Devices	Buffering
UNIVAC 0752/00									
1165	700-900	20	128	—	51	I	—	1	√
UNIVAC 0755/01									
340	600-750	20	132	—	63	I	—	1	√
UNIVAC 0755/05									
575	700-900	20	132	—	63	I	1640	1	√
UNIVAC 1004/I									
—A	400	20	132	—	63	I	—H	1	√

A, H. Printer is integral part of central processor.

UNIVAC 1004/III									
—A	600	20	132	—	63	I	—H	1	√

A, H. See 1004/I.

UNIVAC 3030/00									
—A	250-500	25	96D	48	63	I	—H	1	√

A, H. See 1004/I.   D. 120 and 132 also available.

UNIVAC 3030/02									
—A	600-1200	25	120D	16	63	I	—H	1	√

A, H. See 1004/I.   D. 132 also available.

UNIVAC 8560									
—A	250	25	80D	—	63	I	—H	1	√

A, H. See 1004/I.   D. See 3030/02.

Denmark

Unit Rental (Monthly)	Speed (Range)	Skipping in Inches per Second	Print Positions	Character Set (Minimum)	Character Set (Maximum)	Printing Technique	Control Unit (Rental)	Number of Devices	Buffering
REGNECENTRALEN GIER									
980	600-1200	27.5C	160	—	64	I	*	*	—

C. 75 optionally available.

England

Unit Rental (Monthly)	Speed (Range)	Skipping in Inches per Second	Print Positions	Character Set (Minimum)	Character Set (Maximum)	Printing Technique	Control Unit (Rental)	Number of Devices	Buffering
ELLIOTT 4250 SERIES									
600-1200	300-1250	15-27.5	80D	56	64	I	—H	1	√

D. 160 also available.   H. Each device contains its own control unit.

ENGLISH ELECTRIC 1040

Unit Rental (Monthly)	Speed (Range)	Skipping in Inches per Second	Print Positions	Character Set (Minimum)	Character Set (Maximum)	Printing Technique	Control Unit (Rental)	Number of Devices	Buffering
*	800-1000	25	80D	—	55	I	*	*	—

D. 160 also available.

ENGLISH ELECTRIC 4554									
*	1350	33C	160	—	64	I	—	1	√

C. 75 optionally available.

ENGLISH ELECTRIC 4555									
*	1350	33C	132	—	64	I	*	1	√

C. See 4554.

ENGLISH ELECTRIC 4560									
*	750	33C	160	—	64	I	*	1	√

C. See 4554.

ENGLISH ELECTRIC 4561									
*	750	33C	132	—	64	I	*	1	√

C. See 4554.

ICT 1931									
—A	300	31	120D	—	64	I	—H	1	—

A, H. Prices quoted only on a particular system configuration.   D. 96 also available.

ICT 1932									
—A	600	31	120D	—	64	I	—H	1	—

A, D, H. See 1931.

ICT 1933									
—A	1100-1350	31	120D	48	64	I	—H	1	√

A, H. See 1931.   D. 96 and 160 also available.

ICT 2401									
—A	300	24	120D	—	64	I	—H	1	—

A, D, H. See 1931.

France

Unit Rental (Monthly)	Speed (Range)	Skipping in Inches per Second	Print Positions	Character Set (Minimum)	Character Set (Maximum)	Printing Technique	Control Unit (Rental)	Number of Devices	Buffering
BULL GE 100I51									
450	300	16	136	64	64	I	—	1	—
BULL GE 110I51									
550	600	16	136	64	64	I	—	1	—

— None.   * Information unavailable.

Unit Rental Monthly	Speed / Printing in Lines per Minute — Range	Skipping in Inches per Second	Print Positions	Character Set Minimum	Character Set Maximum	Printing Technique	Control Unit Rental	Number of Devices	Buffering
BULL GE 201									
Modified version of General Electric 201.									
BULL GE 141									
330	100-200	16	128	48	64	I	—	1	—
CII 445									
1227	760-996	15	132	*	*	I	*	*	*
CII 9379									
2098	630-800	*	132	*	*	I	*	*	*

Germany (West)

Unit Rental Monthly	Speed / Printing in Lines per Minute — Range	Skipping in Inches per Second	Print Positions	Character Set Minimum	Character Set Maximum	Printing Technique	Control Unit Rental	Number of Devices	Buffering
SIEMENS 243									
1125	1000-1250	75	160	48	64	I	—H	1	√
H. Each device contains its own control unit.									
SIEMENS 2022									
905	750-1500	26	120	—	48	I	—H	1	√
H. See 243.									
SIEMENS 2023									
800	290-960	14	120D	—	48	I	—H	1	√
D. 104 also available. H. See 243.									
SIEMENS 2024									
500	290-960	14	80D	—	48	I	—H	1	√
D. 72 also available. H. See 243.									
SIEMENS 2025									
245	290-960	14	40D	—	48	I	—H	1	√
D. 24 and 32 also available. H. See 243.									
SIEMENS 4247									
975	620-1500	26	132	51	64	I	—H	1	√
H. See 243.									
TELEFUNKEN 62, 66, 162, 166									
*	960-1200	*	120D	—	61	I	*	1	√
D. 160 for 66, 166.									
TELEFUNKEN 263									
*	800-1000	*	132	63	115	I	*	1	√
TELEFUNKEN 273									
*	445-1000	*	132	63	115	I	*	1	√
TELEFUNKEN 363									
*	925-1000	*	132	63	115	I	*	1	↗
ZUSE 300									
985	300	25	120D	—	49	I	—H	1	—
D. 136 and 160 also available. H. Each device contains its own control unit.									
ZUSE 1000									
1350	1000	75	120D	—	49	I	—H	1	—
D, H. See 300.									

Japan

Unit Rental Monthly	Speed / Printing in Lines per Minute — Range	Skipping in Inches per Second	Print Positions	Character Set Minimum	Character Set Maximum	Printing Technique	Control Unit Rental	Number of Devices	Buffering
FUJITSU FACOM 641A									
*	540-1100	*	120	50	100	I	*	*	—
FUJITSU FACOM 642A/B									
*	1000-1500	*	136	62	109	I	*	*	—
FUJITSU FACOM 643A/B, 643C/D									
*	240-480	8.5	80E	—	50	I	*	*	—
E. 136 for Model D.									
HITACHI HITAC 333									
805	800-1000	25	120	47	63	I	442	1	—
HITACHI HITAC 8244									
500	150-300	22	132	63	110	I	—H	1	—
H. Each device contains its own control unit.									
HITACHI HITAC 8245									
595	300-600	22	132	51	110	I	—H	1	√
H. See Hitac 8244.									
HITACHI HITAC 8246									
1000	625-1250	25-75	132	47	110	I	—H	1	√
H. See Hitac 8244.									
NIPPON ELECTRIC 352, 402/1									
222A	200	6	120	—	96	I	131	1	—
A. 693 for 402/1.									

— None. * Information unavailable.

Unit Rental Monthly	Speed	Printing in Lines per Minute — Range	Skipping in Inches per Second	Print Positions	Character Set Minimum	Character Set Maximum	Printing Technique	Control Unit Rental	Number of Devices	Buffering
NIPPON ELECTRIC 402/2, 3, 4										
2460[A]	900	21		120[D]	—	56[F]	I	131	1	—

A. 1490 for Model 2.   D. 160 also available.   F. 58 for Model 4.

NIPPON ELECTRIC 402/5										
1530	500	25		120[D]	—	96	I	131	1	—

D. See 402/2.

NIPPON ELECTRIC E206										
500	200	16.7		120[D]	—	109	I	131	1	—

D. 132 also available.

NIPPON ELECTRIC N122A/1, N206A/1										
500[A]	420	21		120[D]	—	109	I	—	1	—

A. 656 for N206A/1.   D. See E206.

NIPPON ELECTRIC N206										
1055	900	21		120[D]	—	56	I	—	1	—

D. See E206.

NIPPON ELECTRIC N222/4										
1180	950	35-55		120[D]	—	63	I	—	1	—

D. See E206.

NIPPON ELECTRIC N422/3, 3K, 4; N822/3										
1810[A]	900	21		120[D]	—	56	I	—	1	—

A. 1050 for 422/4.   D. See 402/2.

TOSHIBA 200N										
1250	938	14		120	—	50	I	—	1	√
TOSHIBA 204										
1250	743	14		136	—	96	I	—	1	√
TOSHIBA 206										
1140	790	16		136	—	64	I	—	1	√
TOSHIBA 208										
1140	510	16		136	—	109	I	—	1	√
TOSHIBA 514B										
687	200	40		130	—	99	I	—	1	√
TOSHIBA 515C										
908	280	18		130	—	96	I	—	1	√
TOSHIBA 516										
583	410	27		132	—	52	I	—	1	√
TOSHIBA 517B										
1538	1000	16		120	—	64	I	—	1	√
TOSHIBA 517C										
807	1000	16		120	—	64	I	—	1	√
TOSHIBA 517D										
807	600	16		120	—	96	I	—	1	√
TOSHIBA 518A										
508	350	2.75		128	—	52	I	—	1	—
TOSHIBA 690A										
3090	900	16		120	—	50	I	—	1	√
TOSHIBA 5103										
610	342	25.5		120	—	96	I	—	1	√
TOSHIBA 5104										
610	478	25.5		120	—	64	I	—	1	√
TOSHIBA 5105										
750	510	16		136	—	96	I	—	1	√
TOSHIBA 5107										
750	790	16		136	—	64	I	—	1	√
TOSHIBA 7262										
450	300	16		120	—	64	I	—	1	—

Sweden

DATASAAB 2128, 2129										
736[A]	666[B]	28		132[D]	64	64	I	248	2	√

A. 856 for 2129.   B. 1250 for 2129.   D. 120 and 160 also available.
Note. Prices quoted are for 132 print positions with printer connected to Datasaab D22.

The Netherlands

ELECTROLOGICA 1310, 1320, 1330
Modified versions of Anelex 5000 series.

— None.   • Information unavailable.

Paper-Tape Equipment

Unit Rental

Monthly
: The monthly rental price of a single unit, exclusive of independent control devices. A factor of forty is used for deriving rentals when only purchase prices are available.

Type
: Indicates the unit's function: reader only (RD), punch only (PN), or reader-punch combination (RP).

Speed
: The rate, in characters per second, at which the unit reads or punches paper tape.

Channels
: The number of positions across the tape used to represent a character, including parity if any.

Checking
: The type of validity checking performed by the unit.

Control Unit
: The unit for controlling the operation of the paper-tape device.

Monthly Rental
: The monthly rental price of the control unit only. If the control unit is an integral part of the paper-tape device, the price of the unit is included in the device rental.

Number of Devices
: The number of paper-tape devices which can be attached to a single control unit.

Buffering
: A check ($\sqrt{}$) indicates that the control unit contains an independent memory buffer.

PAPER-TAPE EQUIPMENT CHARACTERISTICS

Unit Rental Monthly	Type	Speed	Input — Characters per Second	Output — Characters per Second	Channels	Checking† Input	Checking Output	Control Unit Monthly Rental	Number of Devices	Buffering
ADAGE PTP										
—A	PN	—	110	8	—	—	—H	1	√	

A. Prices quoted only on a particular system configuration.   H. Each device contains its own control unit.

Unit Rental Monthly	Type	Speed	Input	Output	Channels	Chk In	Chk Out	Control Unit	Devices	Buf
ADAGE PTR										
—A	RD	300	—	8	—	—	—H	1	√	

A, H. See PTP.

AUTONETICS AFPC										
400	RP	600	150	5, 6, 7, 8	P	EP	*	*	—	
BURROUGHS 9120										
300	RD	500C	—	5, 6, 7, 8	P	—	50	1		

C. Up to 1,000 possible.

BURROUGHS 9220										
260	PN	—	100	5, 6, 7, 8	—	P	50	1	√	
BURROUGHS B141										
400	RD	500C	—	5, 6, 7, 8	P	—	120	8	—	

C. See 9120.

BURROUGHS B341										
190	PN	—	100	5, 6, 7, 8	—	P	120	8	√	
CONTROL DATA 174G										
320	RP	350	120	8	—	—	—H	1		

H. Each device contains its own control unit.

CONTROL DATA 350										
*	RD	350	—	5, 7, 8	—	—	*	*		
CONTROL DATA 1721, 1722										
112A	RD	400	—	8	—	—	—H	1		

A. 150 for 1722. No rental price announced. Price derived from purchase price.   H. See 174G.   Note. 1722 is a 1721 with supply and take-up reels.

CONTROL DATA 1723, 1724										
125A	PN	—	120	8	—	—	—H	1		

A. 187 for 1724. No rental price announced. Price derived from purchase price.   H. See 174G.   Note. 1724 is a 1723 with supply and take-up reels.

CONTROL DATA 3691										
325	RP	350	120	8	P	—	—H	1		

H. See 174G.

CONTROL DATA 3694										
680	RP	1000	120	8	P	—	—H	1	√	

H. See 1721.

CONTROL DATA 8074										
105	RD	350	—	5, 7, 8	—	—	—H	1	—	

H. See 1721.

CONTROL DATA 8075										
135	RD	120	—	5, 7, 8	—	—	—H	1	—	

H. See 1721.

CONTROL DATA 8079										
145	PN	—	120	8	—	—	—H	1	—	

H. See 1721.

CONTROL DATA 8291										
*	PN	—	110	5, 6, 7, 8	—	—	*	1	—	
CONTROL DATA 8299										
*	RD	350	—	8	—	—	*	1	—	

DIGITAL EQUIPMENT 750
Modified version of Digitronics B2500.

DIGITAL EQUIPMENT PC01										
—A	RP	300	50	8	—	—	—H	1	√	

A, H. Standard equipment in processor configuration.

DIGITAL EQUIPMENT PC02										
—A	RD	300	—	8	—	—	—H	1	√	

A. No rental price announced. Price derived from purchase price.   H. Each device contains its own control unit.

DIGITRONICS 2540, B2540										
—A	RD	400	—	5, 6, 8	—	—	—	1	—	

A. for B2540. No rental prices announced. Prices derived from purchase price.   Note. B2540 is bidirectional reader.

DIGITRONICS 3000										
	RD	700	—	5, 6, 7, 8	—	—	—	1	—	

No rental price announced. Price derived from purchase price.

DIGITRONICS B2500										
	RD	300	—	5, 6, 7, 8	—	—	—	1	—	

See 3000.

verification, D – dual read/dual punch, E – echo, H – hole count, P – parity, ... after write, V – validity.   — None.   * Information unavailable.

Unit Rental Monthly	Type	Speed	Input — Characters per Second	Output — Characters per Second	Channels	Checking† Input	Checking† Output	Control Unit Monthly Rental	Number of Devices	Buffering
DIGITRONICS B3000										
42^A	RD	1000	—		5, 6, 7, 8	—	—	—	1	—

A. See 3000.

EAI 421										
38^A	RD	300	—		5, 7, 8	P	—	135^H	2	√

A, H. No rental price announced. Price derived from purchase price.

EAI 422										
40^A	PN	—		110	5, 7, 8	—	—	135^H	2	√

A, H. See 421.

EAI 8441
Modified version of Remex RR-1002R.

EMR A-20 SERIES
Modified combinations of the Digitronics readers and Tally punches.

EMR 60040
Modified combination of Digitronics B3000 reader and Tally P150 Punch.

EMR 60045
Modified combination of Digitronics B3000 reader and Tally P120 punch.

GENERAL ELECTRIC 100 PUNCH										
120	PN	—		100	5, 6, 7, 8	—	R	—	1	—
GENERAL ELECTRIC 100 READER										
120	RD	400	—		5, 6, 7, 8	P	—	—	1	
GENERAL ELECTRIC 200 PUNCH										
585	PN	—		150	5, 6, 7, 8	—	P	—	1	
GENERAL ELECTRIC 200 READER										
520	RD	500	—		5, 6, 7, 8	P	—	—	1	
GENERAL ELECTRIC 200 READER/PUNCH										
990	RP	500	150		5, 6, 7, 8	P	P	—	1	
GENERAL ELECTRIC 652 READER										
355	RD	500	—		5, 6, 7, 8	P	—	—	1	
GENERAL ELECTRIC 652 READER/PUNCH										
535	RP	500	150		5, 6, 7, 8	P	P	—	1	
GENERAL ELECTRIC 4212										
80	RD	100	—		8	P	—	*	*	

Note. Unit not manufactured by General Electric.

GENERAL ELECTRIC 4213										
105	RD	200	—		8	P	—	*	*	

Note. See 4212.

GENERAL ELECTRIC 4253										
105	PN	—		120	8	—	P	*	*	—

Note. See 4212.

HEWLETT PACKARD HP-2737 SERIES										
52	RD	300	—		5, 6, 7, 8	*	—	—^J	*	*

J. Control is physically in central processor.

HEWLETT PACKARD HP 2753A										
102	PN	—		120	5, 6, 7, 8	—	*	—^J	*	*

J. See HP-2737.

HONEYWELL 50
Modified version of Digitronics B2500.

HONEYWELL 209/2										
315	RD	600	—		5, 6, 7, 8	P	—	—^H	1	√

H. Each device contains its own control unit.

HONEYWELL 210										
215	PN	—		120	5, 6, 7, 8	—	P	—^H	1	√

H. See 209/2.

HONEYWELL 409										
40	RD	1000	—		5, 6, 7, 8	P	—	—^H	1	

H. See 209/2.

HONEYWELL 410										
40	PN	—		110	5, 6, 7, 8	—	P	—^H	1	—

See 209/2.

HONEYWELL 809										
0	RD	1000	—		5, 6, 7, 8	P	—	—^H	1	√

See 209/2.

HONEYWELL 810										
	PN	—		110	5, 6, 7, 8	—	P	—^H	1	√

See 209/2.

HES PT1
...ified version of Tally R500.

HES PT2
...fied version of Soroban SDT-114.

Model	Unit Rental Monthly	Type	Speed	Input — Characters per Second	Output — Characters per Second	Channels	Checking† Input	Output	Control Unit Monthly Rental	Number of Devices	Buffering
IBM 1011	520	RD	500	—		5, 6, 7, 8	P	—	—	*	—
IBM 1012	480	PN	—	150	5, 6, 7, 8	—	R	—	*	*
IBM 1054	30	RD	14.8	—	6	P	—	80	2	—
IBM 1055	40	PN	—	14.8	6	—	P	80	2	—
IBM 1134/1, 2	40^A	RD	60	—	8	—	—	—	1	—

A. 65 for Model 2.

Model	Unit Rental Monthly	Type	Speed	Input	Output	Channels	Checking† Input	Output	Control Unit	Number of Devices	Buffering
IBM 1621/1	195	RD	150	—	8	P	—	—	1	—
IBM 1621/2	225	RP	150	15	8	P	PV	—	1	—
IBM 2671	150	RD	1000	—	5, 6, 7, 8	P	—	225	1	—

INTERDATA 410
Modified version of Digitronics 2500.

Model	Unit Rental Monthly	Type	Speed	Input	Output	Channels	Checking† Input	Output	Control Unit	Number of Devices	Buffering
NCR 361/201	250	RD	600	—	5, 7, 8	—	—	—^H	1	√

H. Each device contains its own control unit.

| NCR 371/201 | 250 | PN | — | 120 | 5, 7, 8 | — | — | —^H | 1 | √ |

H. See 361/201.

| NCR 561/1 | 215 | RD | 400 | — | 5 | P | — | —^H | 2 | — |

H. See 361/201.

| NCR 561/2 | 240 | RD | 600 | — | 5 | P | — | —^H | 2 | — |

H. See 361/201.

| NCR 562 | 185 | RD | 650 | — | 5 | P | — | —^H | 2 | — |

H. See 361/201.

| NCR 563 | 35 | RD | 50 | — | 5 | P | — | —^H | 2 | — |

H. See 361/201.

| NCR 571 | 140 | PN | — | 120 | 5 | — | P | —^H | 1 | — |

H. See 361/201.

| NCR 572 | 60 | PN | — | 30 | 5 | — | P | —^H | 1 | — |

H. See 361/201.

PHILCO 141, 240
Modified versions of Burroughs B141.

| RCA 70/221 | 500 | RP | 200 | 100 | 5, 6, 7, 8 | P | P | —^H | 1 | — |

H. Each device contains its own control unit.

| RCA 70/224 | 550 | RD | 1000 | — | 5, 6, 7, 8 | P | — | —^H | 1 | — |

H. See 70/221.

| RCA 321 | —^A | RP | 100 | 100 | 5, 7 | P | AP | —^H | 2 | √ |

A. H. No price available.

| RCA 322 | —^A | RD | 1000 | — | 5, 6, 7, 8 | P | — | —^H | 2 | √ |

A. H. See 321.

| RCA 331 | —^A | PN | — | 100 | 5, 6, 7 | — | AP | —^H | 2 | √ |

A. H. See 321.

| RCA 332 | —^A | PN | — | 300 | 7 | — | AP | —^H | 2 | √ |

A. H. See 321.

| RCA 512 | —^A | PN | — | 60 | 5, 7 | — | P | —^H | 1 | — |

See 70/221.

| RCA 513 | —^A | PN | — | 300 | 5, 7 | — | P | —^H | 1 | — |

See 70/221.

...tion verification, D – dual read/dual punch, E – echo, H – hole count, P – parity, ? – read after write, V – validity.
— None.   * Information unavailable.

Model	Unit Rental (Monthly)	Type	Speed	Input — Characters per Second	Output — Characters per Second	Channels	Checking† Input	Checking Output	Control Unit (Monthly Rental)	Number of Devices	Buffering
REMEX RR-1002R	33[A]	RD		1000	—	5, 6, 7, 8	—	—	—	—	—
REMEX RRS 302	30[A]	RD		300	—	5, 6, 7, 8	—	—	—	—	—
ROYTRON 200 SERIES PUNCHES	*	PN		—	23[D]	5, 6, 7, 8	—	P	—	—	—
ROYTRON 200 SERIES READERS	*	RD		23[D]	—	5, 6, 7, 8	—	—	—	—	—
ROYTRON 500 SERIES PUNCHES	25[A]	PN		—	50	5, 6, 7, 8	—	P	—	—	—
ROYTRON 500 SERIES READERS	*	RD		50	—	5, 6, 7, 8	—	—	—	—	—
ROYTRON 700 SERIES PUNCHES	30[A]	PN		—	75	5, 6, 7, 8	—	P	—	—	—
ROYTRON 700 SERIES READERS	*	RD		75	—	5, 6, 7, 8	—	—	—	—	—
SCIENTIFIC CONTROL 5210, 6210	*	RD		300	—	8	—	—	*	1	√
SCIENTIFIC CONTROL 5225, 6225	*	PN		—	120	8	—	—	*	1	√
SOROBAN SDT 114	180[A]	PN		—	150	5, 6, 7, 8	—	HP	—	—	—
SOROBAN SDT 115	500[A]	RP		300	150	5, 6, 7, 8	P	P	—	—	—
SOROBAN SDT 116	100[A]	RD		300	—	5, 6, 7, 8	P	—	—	—	—
TALLY 420	300[A]	PN		—	60	5, 6, 7, 8	—	—	—	—	—
TALLY 424	5[A]	RD		60	—	5, 6, 7, 8	—	—	—	—	—
TALLY 464A	3[A]	RD		120	—	5, 6, 7, 8	—	—	—	—	—
TALLY 500	5[A]	RD		500	—	5, 6, 7, 8	—	—	—	—	—
TALLY 625	—	RD		25	—	5, 6, 7, 8	—	—	—	—	—
TALLY P120	—	PN		—	120	5, 6, 7, 8	—	EP	—	—	—
TALLY P150A	—	PN		—	150	5, 6, 7, 8	—	EP	—	—	—
TALLY R30	—	RD		30	—	5, 6, 7, 8	—	—	—	—	—

REMEX RR-1002R — A. No rental price announced. Price derived from purchase price.

REMEX RRS 302 — A. See RR-1002R.

ROYTRON 200 SERIES PUNCHES — D. Asynchronously to 17 cps.

ROYTRON 200 SERIES READERS — D. See 200 series punches.

ROYTRON 500 SERIES PUNCHES — A. No rental price announced. Price derived from purchase price.

ROYTRON 700 SERIES PUNCHES — A. See 500 series punches.

SCIENTIFIC CONTROL 5210, 6210 — Note. Unit not manufactured by Scientific Control.

SCIENTIFIC CONTROL 5225, 6225 — Note. See 5210.

SCIENTIFIC DATA 7060 — Modified combination of Remex RRS 302 reader and Tally P120 punch.

SCIENTIFIC DATA 9234 — Modified combination of Remex RR-1002R reader and NCR 371 punch.

SEL 80-510A — Modified version of Digitronics B2500.

SOROBAN SDT 114 — A. No rental price announced. Price derived from purchase price.

SOROBAN SDT 115 — A. See SDT 114.

SOROBAN SDT 116 — A. See SDT 114.

TALLY 420 — A. No rental price announced. Price derived from purchase price.

TALLY 424 — A. See 420.

TALLY 464A — A. See 420.

TALLY 500 — A. See 420.

TALLY 625 — A. See 420.

TALLY P120 — A. See 420.

TALLY P150A — A. See 420.

TALLY R30 — A. See 420.

† validation verification, D – dual read/dual punch, E – echo, H – hole count, P – parity, † – read after write, V – validity. — None. * Information unavailable.

Unit Rental Monthly	Type	Speed	Input — Characters per Second	Output — Characters per Second	Channels	Checking† Input	Checking† Output	Control Unit Monthly Rental	Number of Devices	Buffering
TALLY R150A										
21 A	RD	150	—		5, 6, 7, 8	—	—	—	—	—

A. See 420.

Unit Rental Monthly	Type	Speed	Input — Characters per Second	Output — Characters per Second	Channels	Checking† Input	Checking† Output	Control Unit Monthly Rental	Number of Devices	Buffering
UNIVAC 606										
95	PN	—	110		5, 6, 7, 8	—	P	140	2	√
UNIVAC 901										
1305	RP	1500	110		5, 6, 7, 8	P	P	*	1	√
UNIVAC 902										
120	RD	400	—		5, 6, 7, 8	P	—	*	*	—
UNIVAC 903/00										
225	RD	1000	—		5, 6, 7, 8	P	—	140	2	√
UNIVAC 903/01										
120	RD	300	—		5, 6, 7, 8	P	—	140	2	√
UNIVAC 1004										
480	RP	400	110		5, 6, 7, 8	P	P	—H	1	√

H. Each device contains its own control unit.

Denmark

Unit Rental Monthly	Type	Speed	Input — Characters per Second	Output — Characters per Second	Channels	Checking† Input	Checking† Output	Control Unit Monthly Rental	Number of Devices	Buffering
REGNECENTRALEN 2000										
200	RD	2000	—		5, 6, 7, 8	—	—	*	*	—

England

Unit Rental Monthly	Type	Speed	Input — Characters per Second	Output — Characters per Second	Channels	Checking† Input	Checking† Output	Control Unit Monthly Rental	Number of Devices	Buffering
ELLIOTT PT1										
—A	RP	250	110		5, 6, 7, 8	P	P	—H	3	√

A, H. Device is integral part of central processor.

Unit Rental Monthly	Type	Speed	Input — Characters per Second	Output — Characters per Second	Channels	Checking† Input	Checking† Output	Control Unit Monthly Rental	Number of Devices	Buffering
ELLIOTT 4210 SERIES										
356	RP	1000	110		5, 6, 7, 8	P	P	*	1	√
ENGLISH ELECTRIC 4580/4581										
*	RD	1500	—		5, 7, 8	—	—	*	4	—
ENGLISH ELECTRIC 4585										
*	PN	150			5, 7, 8	—	—	*	1	—
ENGLISH ELECTRIC PT1										
*	RD	1000	—		5, 7	P		*	*	—
ENGLISH ELECTRIC PT2										
*	PN	—	110		8	—	—	*	*	—
ENGLISH ELECTRIC WESTREX										
*	RP	1000	110		5, 7, 8	P	P	*	*	—
FERRANTI TR6										
*	RP	300	110		5, 7, 8	P	—	*	*	—
ICT 1915										
—A	RD	300	—		5, 6, 7, 8	P	—	—H	1	—

A, H. Prices quoted only on a particular system configuration.

Unit Rental Monthly	Type	Speed	Input — Characters per Second	Output — Characters per Second	Channels	Checking† Input	Checking† Output	Control Unit Monthly Rental	Number of Devices	Buffering
ICT 1916										
—A	RD	1000	—		5, 6, 7, 8	P	—	—H	1	—

A, H. See 1915.

Unit Rental Monthly	Type	Speed	Input — Characters per Second	Output — Characters per Second	Channels	Checking† Input	Checking† Output	Control Unit Monthly Rental	Number of Devices	Buffering
ICT 1925										
—A	PN	—	110		5, 6, 7, 8	—	E	—H	1	—

A, H. See 1915.

Unit Rental Monthly	Type	Speed	Input — Characters per Second	Output — Characters per Second	Channels	Checking† Input	Checking† Output	Control Unit Monthly Rental	Number of Devices	Buffering
ICT 2601										
—A	RP	250	110		5, 6, 7, 8	P	P	—H	1	—

A, H. See 1915.

Unit Rental Monthly	Type	Speed	Input — Characters per Second	Output — Characters per Second	Channels	Checking† Input	Checking† Output	Control Unit Monthly Rental	Number of Devices	Buffering
ICT 2602										
—A	RP	1000	110		5, 6, 7, 8	P	P	—H	1	—

A, H. See 1915.

France

Unit Rental Monthly	Type	Speed	Input — Characters per Second	Output — Characters per Second	Channels	Checking† Input	Checking† Output	Control Unit Monthly Rental	Number of Devices	Buffering
BULL GE 100 PUNCH										
110	PN	—	60		5, 6, 8	—	E	—	1	—
BULL GE 100 READER										
111	RD	500C	—		5, 6, 8	P	—	—	1	—

C. 400 for six-channel tape.

Unit Rental Monthly	Type	Speed	Input — Characters per Second	Output — Characters per Second	Channels	Checking† Input	Checking† Output	Control Unit Monthly Rental	Number of Devices	Buffering
BULL GE 200										

Modified version of General Electric 200.

Unit Rental Monthly	Type	Speed	Input — Characters per Second	Output — Characters per Second	Channels	Checking† Input	Checking† Output	Control Unit Monthly Rental	Number of Devices	Buffering
BULL GE LR										
162	RD	300	—		5, 6, 8	P	—	—	1	—
CAB 60										
	RP	300	50		9	P	P	*	*	*
CAB 2340										
	RP	300	50		7	P	P	*	*	*

* – activation verification, D – dual read/dual punch, E – echo, H – hole count, P – parity, R – read after write, V – validity.
— None. * Information unavailable.

Unit Rental (Monthly)	Type	Speed	Input — Characters per Second	Output — Characters per Second	Channels	Checking† Input	Checking† Output	Control Unit (Monthly Rental)	Number of Devices	Buffering
Germany (West)										
SIEMENS 2006										
150	RD	400		—	5, 6, 7, 8	P	—	—H	1	—
SIEMENS 2007										
175	PN	—		100	5, 6, 7, 8	—	P	—H	1	—
SIEMENS 4225										
185	PN	—		100	5, 6, 7, 8	—	P	180	2	—
SIEMENS 4226										
155	RD	400		—	5, 6, 7, 8	P	—	180	2	—
SIEMENS 4227										
245	RD	500C		—	5, 6, 7, 8	P	—	180	2	—
TELEFUNKEN 30										
*	RD	300		—	8	√	—	*	1	√
TELEFUNKEN 50, 100										
*	RD	500C		—	5, 6, 7, 8	√	—	*	1	—
TELEFUNKEN 60										
*	PN	—		*	8	—	√	*	1	√
TELEFUNKEN 150										
*	PN	—		150	5, 6, 7, 8	—	√	*	1	—
ZUSE 5, 6										
70	RD	300		—	5, 6, 7, 8	—	—	—H	1	—
ZUSE 1001										
120	RD	1000		—	5, 6, 7, 8	—	—	—H	1	—
ZUSE 1501										
140	PN	—		150	5, 6, 7, 8	—	—	—H	1	—
Japan										
FUJITSU FACOM 748A										
*	RD	1000		—	6, 8	D	—	*	*	—
FUJITSU FACOM 749A										
*	RD	200C		—	6, 8	D	—	*	*	—
FUJITSU FACOM 749E										
*	RD	600C		—	6, 8	D	—	*	*	—
FUJITSU FACOM 750A										
*	RD	240		—	6, 8	D	—	*	*	—
FUJITSU FACOM 766A, 767A										
*	PN	—		200D	6, 8	—	R	*	*	—
FUJITSU FACOM 767A										
*	PN	—		100	6, 8	—	R	*	*	—
HITACHI HITAC 167										
158	PN	—		100	8	—	P	222	1	—
HITACHI HITAC 176										
*	RD	200		—	8	P	—	222	1	—
HITACHI HITAC 322										
*	RD	1000		—	5, 6, 7, 8	P	—	222	1	—
HITACHI HITAC 8221										
*	RP	200		100	5, 6, 7, 8	P	P	—H	1	—
HITACHI HITAC 8222										
*	RP	1000		100	5, 6, 7, 8	P	P	—H	1	—
NIPPON ELECTRIC 104										
*	RD	200		—	6, 8	DP	—	16	2	—
NIPPON ELECTRIC 121										
*	RD	1000		—	6, 8	DP	—	16	2	—
NIPPON ELECTRIC 151										
*	RD	300		—	6, 8	DP	—	16	2	—

Germany (West) notes

H. (SIEMENS 2006) Each device contains its own control unit.
H. (SIEMENS 2007) See 2006.
C. (SIEMENS 4227) Up to 1000 possible.
C. (TELEFUNKEN 50, 100) 1000 for 100.
H. (ZUSE 5, 6) Each device contains its own control unit.
H. (ZUSE 1001) See 5.
H. (ZUSE 1501) See 5.

Japan notes

C. (FUJITSU FACOM 749A) Up to 400 possible.
C. (FUJITSU FACOM 749E) Up to 1,200 possible.
D. (FUJITSU FACOM 766A, 767A) 100 for 767A.
H. (HITACHI HITAC 8221) Each device contains its own control unit.
H. (HITACHI HITAC 8222) See Hitac 8221.

† ...ation verification, D – dual read/dual punch, E – echo, H – hole count, P – parity, R – read after write, V – validity.
— None. * Information unavailable.

Unit Rental Monthly	Type	Speed	Input — Characters per Second	Output — Characters per Second	Channels	Checking† Input	Checking† Output	Control Unit Monthly Rental	Number of Devices	Buffering
NIPPON ELECTRIC 381										
61	PN	—		60	6, 8	—	PR	31	2	—
NIPPON ELECTRIC E209										
28	RD	300	—		5, 6, 7, 8	DP	—	69	1	—
NIPPON ELECTRIC E210										
83	PN	—		110	5, 6, 7, 8	—	P	69	1	—
NIPPON ELECTRIC M209/1, M209/2										
83	RD	300	—		8	P	—	*	*	*
NIPPON ELECTRIC M210										
111	PN	—		110	8	—	P	*	*	*
NIPPON ELECTRIC M211										
278	RP	900	800		8	P	P	*	*	*
NIPPON ELECTRIC N109A/1, N209A/1										
33[A]	RD	300	—		5, 6, 7, 8	DP	—	*	1	—
A. 97 for N209A/1.										
NIPPON ELECTRIC N110A/1, N210A/1										
93[A]	PN	—		60	5, 6, 7, 8	—	P	*	1	—
A. 125 for N210A/1.										
NIPPON ELECTRIC N209										
275	RD	600	—		5, 6, 7, 8	P	—	*	1	—
NIPPON ELECTRIC N209A/2										
291	RD	1000	—		5, 6, 7, 8	DP	—	*	1	—
NIPPON ELECTRIC N210										
445	PN	—		120	5, 6, 7, 8	—	P	*	1	—
NIPPON ELECTRIC N210A/2										
445	PN	—		110	5, 6, 7, 8	—	P	*	1	—
NIPPON ELECTRIC N409A, N809A										
539	RD	500	—		6, 8	P	—	*	1	—
NIPPON ELECTRIC N410A, N810A										
*	PN	—		110	5, 6, 7, 8	—	P	*	1	—
TOSHIBA 115A										
49	RD	400	—		8	P	—	—	1	—
TOSHIBA 117A										
30	RD	200[C]	—		8	P	—	—	1	—
C. Up to 400 possible.										

Unit Rental Monthly	Type	Speed	Input — Characters per Second	Output — Characters per Second	Channels	Checking† Input	Checking† Output	Control Unit Monthly Rental	Number of Devices	Buffering
TOSHIBA 118A										
36	RD	400	—		6, 8	P	—	42	1	—
TOSHIBA 118H										
70	RD	500[C]	—		6, 8	P	—	42	1	—
C. Up to 1,000 possible.										
TOSHIBA 200 PUNCH										
558	PN	—		150	8	—	P	—	1	—
TOSHIBA 200 READER										
500	RD	500	—		8	P	—	—	1	—
TOSHIBA 213A										
86	PN	—		67	6, 8	—	P	—	1	—
TOSHIBA 217A										
153	PN	—		100	8	—	P	—	1	—
TOSHIBA 218A										
22	PN	—		15	6, 8	—	P	42	1	—
TOSHIBA 218B										
172	PN	—		100	8	—	P	42	1	—
TOSHIBA 651B										
260	RD	250[C]	—		8	P	—	—	—	—
C. See 118H.										
TOSHIBA 651C, 651E										
190	PN	—		110	6, 7, 8[E]	—	P	—	1	—
E. Five channels only on 651E.										
TOSHIBA 5102										
56	PN	—		20	8	—	P	—	1	—
TOSHIBA 5110										
	RD	1000	—		8	P	—	—	1	—
TOSHIBA 5115										
	PN	—		150	8	—	P	—	1	—
TOSHIBA 7213										
	RD	200	—		8	P	—	—	1	—
TOSHIBA 7253										
	PN	—		120	8	—	P	—	1	—

† – activation verification, D – dual read/dual punch, E – echo, H – hole count, P – parity,
? – read after write, V – validity.
— None. * Information unavailable.

Unit Rental Monthly	Type	Speed Input—Characters per Second	Output—Characters per Second	Channels	Checking† Input	Checking† Output	Control Unit Monthly Rental	Number of Devices	Buffering
Sweden									
DATASAAB 2112									
68	RD	1000	—	5, 6, 7, 8	P	—	47ᴴ	1	—

H. Price quoted for connection with Datasaab D22.

DATASAAB 2113									
77	PN	—	150	5, 6, 7, 8	—	—	26ᴴ	2	—

H. See 2112.

DATASAAB 2144									
120	RD	2000	—	5, 6, 7, 8	P	—	45ᴴ	2	√

H. See 2112.

The Netherlands									
ELECTROLOGICA 1130									
145	RD	1000	—	5, 7, 8	—	—	—ᴴ	1	√

H. Each device contains its own control unit.

ELECTROLOGICA 1133									
*	RD	1000	—	5, 7, 8	√	—	—	1	√
ELECTROLOGICA 1140									
266	PN	—	150	5, 6, 7, 8	—	—	—ᴴ	1	√

H. See 1130.   Note. Unit not manufactured by Electrologica.

Display Equipment

EXPLANATION OF COLUMN HEADINGS

Unit Rental

Monthly — The monthly rental price of a single unit. A factor of forty is used for deriving rentals when only purchase prices are available.

Display Size

Horizontal — The width, in inches, of the display area of the cathode ray tube.

Vertical — The height, in inches, of the display area of the cathode ray tube.

Alphanumeric Displays

Display Capacity

Characters per Line — The maximum number of characters which can be displayed on each line.

Character Lines per Frame — The maximum number of lines of characters which can be displayed.

Editing Features — The methods available for editing: function switch (F) or keyboard (K).

Control Unit — The device for controlling the operation of the display equipment.

Monthly Rental — The monthly rental price of the control unit only. If the control unit is an integral part of the display device, the price of the unit is included in the device rental.

Number of Devices — The number of display devices which can be attached to a single control unit.

Line-Drawing Displays

Raster Count

Horizontal — The number of coordinate positions addressable across the width of the cathode ray tube.

Vertical — The number of coordinate positions addressable across the height of the cathode ray tube.

Refresher Rate — The manufacturer's recommended number of frames per second for regenerating the display.

Display Capacity

Points per Frame — Range — The minimum and maximum number of points which can be drawn flicker-free at the manufacturer's recommended refresher rate.

Two-Inch Lines per Frame — The maximum number of two-inch lines which can be drawn flicker-free at the manufacturer's recommended refresher rate.

Characters per Frame — The maximum number of whole characters which can be drawn flicker-free at the manufacturer's recommended refresher rate.

Input Devices — The methods available for data input: function switch (F), keyboard (K), light pen or pointer (P), or stylus (S).

Control Unit — The device for controlling the operation of the display equipment.

Monthly Rental — The monthly rental price of the control unit only. If the control unit is an integral part of the display device, the price of the unit is included in the device rental.

Number of Devices — The number of display devices which can be attached to a single control unit.

Buffer Size — Range — The minimum and maximum number of words reserved for display units and used, with automatic refreshing, to present a flicker-free picture.

Buffer Word Length — The number of binary bits comprising one word of buffer memory.

Character Generator — A check (√) indicates that a character generator is available.

Remote Operation — A check (√) indicates that remote connection to an interfacing computer by Dataphone or Dataset is possible.

Alphanumeric Displays

Unit Rental Monthly	Display Size Horizontal	Vertical	Display Capacity Characters per Line	Character Lines per Frame	Editing Features	Control Units Monthly Rental	Number of Devices
BUNKER-RAMO TELEREGISTER 200							
50	7	5	64	12	FK[F]	285	216[H]

F. Consoles available with either numeric or alphanumeric keys or both. H. At 32 characters per console.   Note. Can interface over Dataphone.

BUNKER-RAMO TELEREGISTER 400							
67	7	5	32	12	FK	305	16

Note. See Teleregister 200.

BURROUGHS BIDS							
*	12	9	80	25	*	*	*
CII 7550							

Modified version of SDS 7550.

COLLINS C-8835A-1							
*	11.5	8.25	80	17	FK	*	*
COMPUTER COMMUNICATIONS CC-30							
1	—B	—C	40	20	FKP	165	1

B, C. Console display is slightly modified TV receiver.   Note. Can also display graphics, and interface over Dataphone.

CONRAC 201							
175	7.5	8.5	37	24	K	—L	1

L. Each device contains its own control unit.

CONTROL DATA 200							
125	8	6	50	20	K	725	12

Note. Can interface over Dataphone.

DATASAAB 2163-1							
*	8.5	6.5	40	13	FK	*	64
DATASAAB 2163-2							
*	8.5	6.5	80	13	FK	*	64
FERRANTI 50/60							
*	8	6	64	13	FK	1040	16

— None. * Information unavailable.

Unit Rental Monthly	Display Size Horizontal	Vertical	Display Capacity Characters per Line	Character Lines per Frame	Editing Features	Control Units Monthly Rental	Number of Devices
GENERAL ELECTRIC DATANET 760							
55	9.3	7	46	26	FK	460	32[H]

H. At 184 characters per console.   Note. Can interface over Dataphone.

HONEYWELL S54							

Modified version of Sanders 720.

IBM 2260							
51	9[B]	4[C]	80	12	K	391	24[H]

B, C. Console display is slightly modified TV receiver.   H. At 184 characters per console.   Note. Can interface over Dataphone.

LFE SM-2A							
*	14	10	125	64	FKP	*	10

LSI 810							
*	12.3	9.3	32	20	K	*	1

MARCONI TABULAR							
*	*	*	70	64	—	*	12

NCR 795							

Modified version of Sanders 720.

PHILCO CUE							
*	9	7	25	20	FK	*	36

Note. Can interface over Dataphone.

PLESSEY 100 SERIES							
*	*	*	72	32	KFP	*	32

RAYTHEON DIDS-400							
167[A]	8.5	6.5	80	13	FK	—[G]	64

A. For self-contained display and controller, Model 402.   G. Each device contains its own control unit.   Note. Interfaces over Dataphone only.

RAYTHEON DIDS-500							
*	15	15	80	34	FKS	*	1

Unit Rental Monthly	Display Size Horizontal	Vertical	Display Capacity Characters per Line	Character Lines per Frame	Editing Features	Control Units Monthly Rental	Number of Devices
RCA 70/752							
190	8	6	54	20	K	—[G]	1

G. Each device contains its own control unit.   Note. Can interface over Dataphone.

RCA DIVCON							
*	—[B]	—[C]	32	16	K	*	2

B, C. Console display is modified TV receiver.   Note. Teletype interface available.

SANDERS 720							
120	9.4	7	64	32	FK	259	12

Note. Can interface over Dataphone.

SCIENTIFIC DATA 7550/7555							
225	11	8.5	86	32	K	—[G]	1

G. Each device contains its own unit.

SEL 541							
117	4.9	3.4	12	8	—	—[G]	1

G. Each device contains its own control unit.

SINTRA TE 500							
*	6	4	40	13	K	*	64

SINTRA TE 4000							
153	10.2	7.6	64	32	FK	*	8

STROMBERG-CARLSON 1110 DESC							
*	7	9	40	35	K	—	1

TEC-LITE							
*	*	*	16	8	K	*	*

UNIVAC UNISCOPE 300							
*	10	5	64	16	FK	*	48

— None.   * Information unavailable.

Line-Drawing Displays

Unit Rental (Monthly)	Display Size Horiz.	Display Size Vert.	Raster Count Horiz.	Raster Count Vert.	Refresher Rate	Display Capacity Points/Frame — Range	Two-Inch Lines per Frame	Characters per Frame	Input Devices	Control Unit (Monthly Rental)	Number of Devices	Buffer Size — Range	Buffer World Length	Character Generator	Remote Operation
ADAGE GRAPHICS TERMINAL															
*	12		*		*	*	*		FKPS	*		4-32K		√	
	12		*				*				1		30		√
BBN TELEPUTER															
125	3.1		1024		—F	—G	—H		FKS	500		—		—	
	3.1		1024				—J				32		8		√
BUNKER-RAMO BR-90															
3175	13.2		1024		60	444	888		FKPS	—L		8K		√	
	13.2		1024				3030				1		12		√
CONTROL DATA 250															
1400	12		1024		60	5128	2898		FKP	2470		4-8K		√	
	12		1024			6666	6666				6		24		—
CONTROL DATA 270															
1025	20.5B		4096		30	1333	6466		FP	3975		40K N		—	
	20.5		4096			10000	3333				3		12		—
CONTROL DATA 274															
1100	20.5		4096		30	1333	6466		FP	1125		4-8K		√	
	20.5		4096			10000	3333				1		16		—
CONTROL DATA DD16C															
925	10		1024		30	1111	—H		P	—L		—		—	
	10		1024								1		12		—
DIGITAL EQUIPMENT 338															
1375	9.37		1024		30	687	235		FKP	—L		4-32K		√	
	9.37		1024			2222	666				9		12		√
DIGITAL EQUIPMENT 340															
984	9.37		1024		30	877	170		P	—L		—		√	
	9.37		1024			952					5		18		—
EAI 8482															
765	10		1024		30	2200	1000		FKP	—L		4-32K		√	
	10		1024				833				1		16		—
ELLIOTT 4280															
945	10		1024		10	1000	947		FKP	—L				√	
	10		1024			20000	4000				4		24		√
FERRANTI 30/40															
980	16		1024		16.6	1363	7185		FKS	846		4K		√	
	12		768			10000	3243				12		24		√
HONEYWELL S50															
IBM 2250/I															
2550	12		1024		40	200	2252		FKP	—L		4-8K		√	
	12		1024			2475	2100				1		8		—
IBM 2250/III															
1825	12		1024		40	207	3115		FKP	4000		16K		√	
	12		1024			3105	2100				4		16		
IBM 2250/IV															
2625	12		1024		40	242	2083		FKP	—L		—		√	
	12		1024			2890	2155				1		16		—
ICT 1830															
*	10		1024		10	126	925		P	*		4-8K		√	
	10		1024			3921	2857				1		6		—
IDI CM10000 SERIES															
440	13		1024		30	1666	2777		FKP	—L		—N		√	
	13		1024			3703	2380				—M		—P		√

Notes (left column):

F. Storage CRT is used for image retention. G, H, J. Not applicable.
Note. Can interface over Dataphone.

L. Each device contains its own control unit. Note. Can interface over Dataphone.

B. Circular scope face is inscribed in raster area. N. 20,000 words per console.
sole at 30 fps; 40,000 words at 15 fps.

H. Lines may be drawn in two lengths and either vertically or horizontally.
L. Each device contains its own control unit.

L. Each device contains its own control unit. Note. Can interface over Dataphone.

Notes (right column):

L. See 338.

L. Each device contains its own control unit.

L. Each device contains its own control unit.

Modified version of IDI CM 10000 series.

L. Each device contains its own control unit.

L. Variable depending on user's needs. M, N, P. As desired.

— None. • Information unavailable.

Unit Rental Monthly	Display Size Horizontal	Display Size Vertical	Raster Count Horizontal	Raster Count Vertical	Refresher Rate	Display Capacity Points per Frame — Range	Two-Inch Lines per Frame	Characters per Frame	Input Devices	Control Unit Monthly Rental	Number of Devices	Buffer Size — Range	Buffer Word Length	Character Generator	Remote Operation
IDI IDIIOM															
1700	13		1024		30	1557	3058		FKPS	—L	1	4-16K	16	√	√
		13		1024		4901	2398								

L. Each device contains its own control unit.

INFORMATION INTERNATIONAL 1050															
368	10		1024		30	595	4166		FKPS	2553	12	4K	8	√	—
		10		1024		5555	5376								

ITT MACC															
*	12		1024		40	614	701		FKPS	*	1	$9.2K^N$	7	√	—
		12		1024			3072								

N. Buffer memory is divided into three pages of 3,072 words each. Only one page may be displayed at a time.

MARCONI X2000															
*	*		1024		16.6	*	*		P	*	10	1-4K	24	√	—
		*		1024											

PHILCO READ															
*	9		1024		30	1252	641		FKP	*	15	—	18	√	—
		9		1024		5291	2777								

RAYTHEON DIDS-1500															
*	12		512		48	596	1360		FK	*	1	4K	18	√	—
		12		512		1365	4096								

RCA 6320															
*	12		1024		60	555	1111		FKS	*	1	$2.7K^N$	12	√	—
		12		1024			3333								

N. Buffer memory is divided into two pages of 1,360 words each. Only one page may be displayed at a time.

SANDERS 960															
*	14		1024		60	2380	4166		FKPS	*	4	2-8K	32	√	*
		14		1024		8333	11111								

SCIENTIFIC DATA 9185															
190	10		1024		30	1666	1666		P	285	1	—	24	√	—
		10		1024		3703	416								

SEL 816A															
1876	10		1024		60	1190	1190		FKP	—L	1	4-16K	24	√	√
		10		1024			1190								

L. Each device contains its own control unit.

STROMBERG-CARLSON 1090															
*	12.6		512		30	1041	410		FKPS	*	1	$—^N$	18	√	—
		12.6		512		1666									

N. As desired.

TASKER 9000 SERIES															
1730	17.5		2048		60	1000	5000		FKPS	—L	8	.25-16K	12	√	√
		13		1404		2500	4000								

L. Each device contains its own control unit. Note. Can interface over Dataphone.

TELEFUNKEN SAP 200															
754	20^B		512		60	666	2564		FKP	2899	1	1K	24	√	√
		20^C		512		2222	2083								

B, C. Circular scope face is inscribed in raster area.

TELEFUNKEN SAP 300															
961	20^B		512		60	490	2777		FKP	—	1	—	24	√	
		20^C		512		2084	3333								

B, C. Circular scope face is inscribed in raster area.

TELEFUNKEN SIG 100															
330	12		512		25	476	1666		FKP	—	1	—	6	√	
		12		512		3327	3327								

— None. * Information unavailable.

DEVICE INTERFACE CHARTS

The two charts that follow show commercially-available peripheral devices that can be interfaced with the central processors of other manufacturers. Except for the display equipment on the second chart, no attempt has been made to include peripheral devices which either are supplied by the central processor manufacturer or, though available, serve only to supplement its own product line.

DEVICE INTERFACE CHARTS

	Auxiliary Storage									Magnetic Tape							Card Equipment																Line Printers					Paper-Tape Equipment								
	Bryant 185000 Series	Burroughs B475	Burroughs 9370	CDC 852	Data Products 5025	Digital Development 7300 Series	SDS 7201, 7211	Univac FH330, FH880	Vermont Research Drums	Ampex TM 7, 9, 11, 12	Burroughs B420 Series	CDC 607	Datamec D2020, D3030	Midwestern 4000 Series	Potter 906 Mark II	SDS 7300 Series	Burroughs B122	Burroughs B124	Burroughs B129	Burroughs B303	IBM 24, 26	IBM 1402	NCR 376	NCR 582	Soroban SDT 111	Uptime SR 400	Uptime SR 800	Uptime SR 1500	Univac 600	Univac 703, 706	ICT 582	ICT 593	Anelex 4000	Anelex 5000	Holley 207	NCR 340	Potter 3502	Digitronics B2500	GE 210	Remex RRS 302	Roytron 200, 500, 700	Soroban SDT 115	Tally Punches	Elliott PT1	Elliott PT2	Ferranti TR6
1. RECOMP II																		●																						●					
2. Beckman 420																	●																	●							●	●				
3. BIT 480						●									●							●	●							●								●			●	●				
4. DEC PDP-6, -10	●																																													
5. DEC Linc-8, PDP-1, -4, -5, -8																									●																					
6. DIGIAC 3080						●				●																																				
7. DMI 620, 620 I										●								●					●	●									●													
8. IC 6000										●						●		●											●						●											
9. MONROBOT XI																																														
10. PDS 1020							●																																		●					
11. Philco 2000 Series																																														
12. PRODAC 50, 500							●			●			●									●	●							●			●	●		●					●	●				
13. PRODAC 250							●			●												●	●		●			●	●				●			●					●	●				
14. Raytheon 250, 440				●									●	●	●							●	●																			●				
15. Raytheon 520								●					●	●	●							●	●												●							●				
16. English Electric Leo 326, 360															●	●		●									●			●															●	
17. ICT Atlas 2							●									●																	●												●	
18. ICT Orion 2																●																		●											●	
19. Plessey XL9	●		●												●																			●										●	●	

Alphanumeric

Column headers (left to right):
CC 130 · CDC 200 · DIDS 500 · IBM 2260 · Philco CUE · Plessey 100 · RCA 70/752 · Sanders 720 · SDS 7550/7555 · Teleregister 200

Line-Drawing

Column headers (left to right):
BBN Teleputer · B-R 90 · CDC 250 · CDC 270 · CDC 274 · CDC dd16C · DEC 338 · DEC 340 · Elliott 4280 · IBM 2250/I, II · IBM 2250/IV · ICT 1830 · IDI 10000 · IDI IDIIOM · I1 1050 · Philco READ · RCA 6320 · SAP 200-4 · SANDERS 960 · S-C 1090 · SDS 9185 · SEL 816A · Tasker 9000

System rows (left-side and right-side labels, identical):

- Burroughs B5500
- CDC G-21
- CDC 160, 1604
- CDC 160A
- CDC 1700
- CDC 1800
- CDC 3000 Series
- CDC 6000 Series
- CDC 8090
- DEC PDP-1
- DEC PDP-4
- DEC PDP-5
- DEC PDP-6, -10
- DEC PDP-7
- DEC PDP-8
- DEC PDP-9
- Elliott 4120, 4130
- GE 225
- GE 235
- GE 425
- GE 635
- GE Datanet-30
- Honeywell DDP Series
- IBM 360 Series
- IBM 1130
- IBM 1401
- IBM 1410
- IBM 1460
- IBM 1620
- IBM 1800
- IBM 7010
- IBM 7040
- IBM 7044
- IBM 7070
- IBM 7074
- IBM 7080
- IBM 7090
- IBM 7094
- ICT 1900 Series
- NCR 315
- Plessey XL Series
- Philco 102
- Raytheon 250, 440
- RCA Spectra 70 Series
- SDS 930
- SDS 940
- SDS 9300
- SDS Sigma Series
- SEL 810, 840
- TR 4
- Univac 418
- Univac 490
- Univac 1107
- Univac 1108
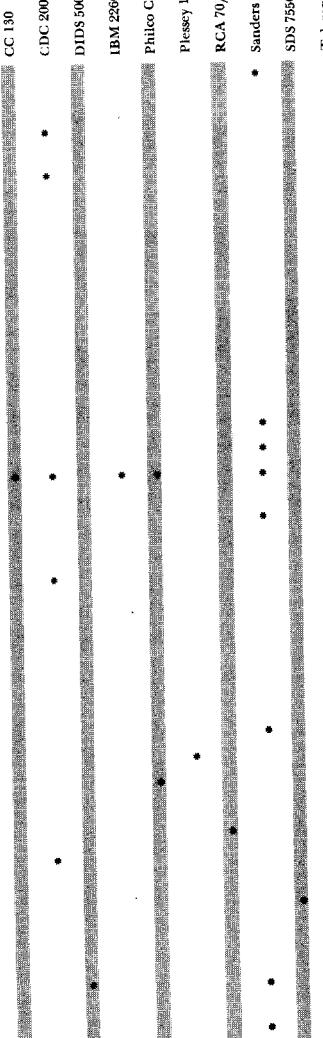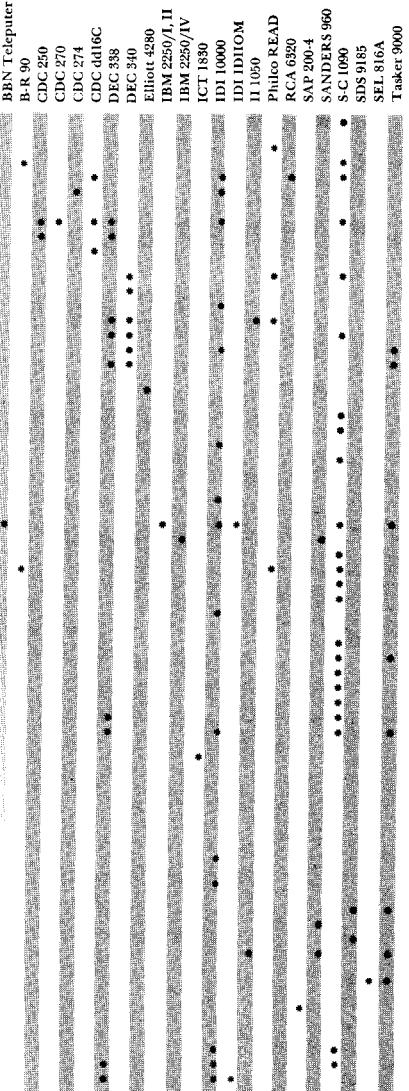
DEVICE INTERFACE CHARTS

CATEGORIZATIONS

SYSTEM CONFIGURATIONS

The tables on the following pages list the monthly rental price, generally based on a five-year lease, for the commercially-available U.S.-manufactured central processors and related peripheral devices in each of the four system configurations described in italics. Prices include the cost of peripheral controllers and interfaces where required. Central processors that are no longer being marketed, fall entirely outside the range of these configurations, or for which price information is unavailable have been omitted.

Since most central processors are modular with respect to internal memory expansion and versatile insofar as attachable peripherals are concerned, some processors may appear under more than one configuration. Reasonable variance from the configurations defined has been allowed, but any excessive difference is footnoted.

BASIC CARD SYSTEM

Central processor: 4,000 words or 16,000 bytes of memory. Card reader: 800-1,000 cards per minute. Card punch: 250-300 cards per minute. Line printer: 700-1,000 lines per minute.

Burroughs B263	4,570
Burroughs B283	4,750
Burroughs B300	4,570
Burroughs B2500	3,910
Burroughs B3500	4,510
Burroughs B5500	12,625
Control Data 160	3,590[1]
Control Data 160A	4,340[1]
Control Data 160G	6,990
Control Data 1700	2,200
Control Data 8090	4,540
Control Data 8092	2,920
Digital Equipment PDP-8	4,150[2]
EMR Advance 6000 Series	6,275
EMR Advance 6130	2,790
General Electric 115	2,650[3]
General Electric 225, 255	5,200
General Electric 235,265	6,050[4]
General Electric 405	4,160
General Electric 415, 420	5,140
General Electric GE/PAC 4040	2,575[2,3,5]
General Electric GE/PAC 4050 I, II	2,870[2,3,5]
Honeywell 200/120	2,405[4,18]
Honeywell 200/200	3,280[4]
Honeywell 200/1200	3,835[4]
Honeywell 200/2200	4,775[4]
Honeywell 400	7,675
Honeywell 800	13,210
Honeywell 1400	8,960
Honeywell DDP-224	3,450[2,5,20]
Honeywell DDP-416	1,215[2,6,20]
Honeywell DDP-516	1,420[2,6,20]
IBM 360/20	2,750
IBM 360/30	3,450
IBM 360/40	4,400
IBM 1130	1,280[4,7,17]
IBM 1710 I, II	3,210
Interdata Model 3	1,490[2,20]
Interdata Model 4	1,564[2,20]
NCR 315	4,950
NCR 315/100	4,150
NCR 315/RMC-501	5,950
Raytheon 250	2,930
Raytheon 520	4,075
RCA Spectra 70/25	4,220
RCA Spectra 70/35	4,325
RCA Spectra 70/45	5,875
RCA 301	4,040
Scientific Control 650	2,200[4,5]
Scientific Control 655	2,525[4,5]
Scientific Control 660/2	3,060[4,5]
Scientific Control 660/5	2,450[4,5]
Scientific Control 670/2	3,410[4,5]
Scientific Data SDS 930	4,720
Scientific Data SDS 940	7,920
Scientific Data SDS 9300	5,970
Scientific Data Sigma 2	3,250
Scientific Data Sigma 5	4,180
Scientific Data Sigma 7	6,240
SEL 810A	2,060[5]
SEL 840A	2,825[5]
Univac 418	3,225
Univac 1005 III	2.680
Univac 9200	1,370
Univac 9300	1,610

[1] 250 cpm reader
[2] 300 lpm printer
[3] 300 cpm reader
[4] 400 cpm reader
[5] 100 cpm punch
[6] No punch available
[7] 120 cpm punch
[17] 110 lpm printer
[18] 450 lpm printer
[20] 200 cpm reader

BASIC TAPE SYSTEM

Central processor: 8,000 words or 32,000 bytes of memory. Card reader: 800-1,000 cards per minute. Card punch: 250-300 cards per minute. Line printer: 700-1,000 lines per minute. Four magnetic tape units: 60kc-90kc.

Burroughs B2500	7,740
Burroughs B3500	8,390
Burroughs B5500	17,440
Control Data 160A	8,340[1,8]
Control Data 160G	10,960
Control Data 1700	4,240[9]
Control Data 3100	11,100
Control Data 3300	11,900
Control Data 3600	19,450
Control Data 3800	20,360
Control Data 8090	7,600
Digital Equipment PDP-8	8,550[2]
Digital Equipment PDP-10 Series	7,270[5,10]
EMR Advance 6000 Series	9,975
EMR Advance 6130	5,450
General Electric 225, 255	10,400
General Electric 235, 265	12,200
General Electric 405	5,460[9]
General Electric 415, 420	8,540
General Electric 425	9,520
General Electric GE/PAC 4020	6,120[2,3,5]
General Electric GE/PAC 4040	6,080[2,3,5]
General Electric GE/PAC 4050 I, II	6,450[2,3,5]
General Electric GE/PAC 4060	6,790[2,3,5]
Honeywell 200/120	4,195[4,18,19]
Honeywell 200/200	6,385[4]
Honeywell 200/1200	7,785[4]
Honeywell 200/2200	8,405[4]
Honeywell 800	18,610[8]
Honeywell 1400	12,360[8]
Honeywell 1800	24,510[8]
Honeywell DDP-124	6,995[2,5,20]
Honeywell DDP-224	6,180[2,5,20]
Honeywell DDP-416	4,200[2,6,20]
Honeywell DDP-516	4,395[2,6,20]
IBM 360/30	7,470
IBM 360/40	8,420
IBM 360/44	8,320
IBM 1800	6,300

Interdata Model 3	3,806[2,8,20]
Interdata Model 4	3,881[2,8,20]
NCR 315	9,050
NCR 315/100	8,750
NCR 315/RMC-501	9,680
Raytheon 250	6,090
Raytheon 520	7,375
RCA Spectra 70/25	10,650
RCA Spectra 70/35	11,150
RCA Spectra 70/45	12,225
RCA 301	7,400
RCA 3301	10,910
Scientific Control 650	4,830[4,5]
Scientific Control 655	5,170[4,5]
Scientific Control 660/2	5,750[4,5]
Scientific Control 660/5	5,090[4,5]
Scientific Control 670/2	6,190[4,5]
Scientific Data SDS 930	7,780
Scientific Data SDS 940	10,980
Scientific Data SDS 9300	9,080
Scientific Data Sigma 2	6,370
Scientific Data Sigma 5	7,410
Scientific Data Sigma 7	9,470
SEL 810A	4,460[5]
SEL 840A	5,375[5]
SEL 840MP	5,370[5]
Univac 418	4,440
Univac 9300	3,460

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1 250 cpm reader
2 300 lpm printer
3 300 cpm reader
4 400 cpm reader
5 100 cpm punch
6 No punch available
7 30kc tapes
8 20.8kc tapes
10 15kc tapes
11 120kc tapes
18 450 lpm printer
19 13.3kc tapes
20 200 cpm reader

BASIC SECONDARY STORAGE SYSTEM

Central processor: 16,000 words or 64,000 bytes of memory. Card reader: 800-1,000 cards per minute. Card punch: 250-300 cards per minute. Line printer: 700-1,000 lines per minute. Four magnetic tape units: 60kc-90kc. Secondary storage: 7-10 million bytes.

Burroughs B2500	10,560
Burroughs B3500	11,360
Burroughs B5500	21,170
Burroughs B6500	24,890
Control Data 3100	13,410
Control Data 3300	14,010
Control Data 3600	20,510
Control Data 3800	21,420
Control Data 6600	53,920
Digital Equipment PDP-10 Series	11,570[8,10]
General Electric 235,265	13,300[4,12]
General Electric 415, 420	11,890[12]
General Electric 425	12,870[12]
General Electric 435	15,780[12]
General Electric GE/PAC 4020	7,390[2,3,5]
General Electric GE/PAC 4040	7,780[2,3,5]
General Electric GE/PAC 4050 I, II	8,220[2,3,5]
General Electric GE/PAC 4060	8,590[2,3,5]
Honeywell 200/200	8,580[4]
Honeywell 200/1200	10,235[4]
Honeywell 200/2200	11,125[4]
Honeywell 200/4200	16,600[4]
IBM 360/30	9,840
IBM 360/40	10,790
IBM 360/44	10,690
IBM 360/50	14,450
NCR 315	13,250[13]
NCR 315/100	12,450[13]
NCR 315/RMC-501	12,520[13]
NCR 315/RMC-502	15,150[13]
Raytheon 250	8,190
Raytheon 520	9,600
RCA Spectra 70/25	13,040
RCA Spectra 70/35	13,430
RCA Spectra 70/45	14,770
RCA Spectra 70/55	17,890
Scientific Data SDS 930	12,140
Scientific Data SDS 940	15,340
Scientific Data SDS 9300	13,640
Scientific Data Sigma 2	8,930
Scientific Data Sigma 5	10,290
Scientific Data Sigma 7	12,350
SEL 810A	6,820
SEL 840A	8,025
SEL 840MP	7,700
Univac 418	9,180[14]

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2 300 lpm printer
3 300 cpm reader
4 400 cpm reader
5 100 cpm punch

10 15kc tapes
12 23M bytes of secondary storage
13 CRAM used as secondary storage
14 132M bytes of secondary storage

TYPICAL SECONDARY STORAGE SYSTEM

Central processor: 32,000 words or 128,000 bytes of memory. Card reader: 800-1,000 cards per minute. Card punch: 250-300 cards per minute. Line printer: 700-1,000 lines per minute. Eight magnetic tape units: 60kc-90kc. Secondary storage: 25 million bytes.

Burroughs B3500	17,360
Burroughs B5500	27,675
Burroughs B6500	32,340
Control Data 3100	19,320
Control Data 3300	19,870
Control Data 3600	34,370
Control Data 3800	37,480
Control Data 6400	35,480
Control Data 6600	57,480
Digital Equipment PDP-10 Series	20,640[8,10]
General Electric 415	16,850
General Electric 425	16,790
General Electric 435	20,120
General Electric 625	27,450
General Electric 635, 645	28,120
General Electric GE/PAC 4020	13,360[2,3,5]
General Electric GE/PAC 4050 I, II	14,050[2,3,5]
General Electric GE/PAC 4060	14,340[2,3,5]
Honeywell 200/1200	15,420[4]
Honeywell 200/2200	16,805[4]
Honeywell 200/4200	22,635[4]
Honeywell 200/8200	35,065[15]
IBM 360/40	15,690
IBM 360/44	15,580
IBM 360/50	19,340
IBM 360/65	29,390
IBM 360/67	36,210
IBM 360/75	41,800[15]
NCR 315/RMC	22,470[13]
Raytheon 520	17,475
RCA Spectra 70/45	21,910
RCA Spectra 70/55	25,250
Scientific Data SDS 930	23,540
Scientific Data SDS 940	26,740
Scientific Data SDS 9300	25,540
Scientific Data Sigma 2	16,460
Scientific Data Sigma 5	18,700
Scientific Data Sigma 7	20,920
SEL 810A	12,690
SEL 840A	14,475
SEL 840MP	13,170
Univac 418	11,220[14]
Univac 494	30,920[14]
Univac 1108 II	49,825[14]

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2 300 lpm printer
3 300 cpm reader
4 300 cpm punch
5 90kc tapes
9 35kc tapes

13 CRAM used as secondary storage
14 132M bytes of secondary storage
15 262K bytes of internal memory
16 Six tape units

APPLICATIONS

The five tables in this part show the application areas in which the commercially-available U.S.-manufactured central processors listed are generally used. Where appropriate, some processors appear in more than one category.

SMALL-MEDIUM BUSINESS

Central Processor	Minimum Monthly Rental	First Delivery Date
BURROUGHS		
B160, B170, B180	1,900	Apr. 64
B250	2,800	Sep. 61
B260, B270, B280	6,500	Jul. 62
B263, B273, B283	7,100	Jan. 64
B300	4,800	Jul. 65
B2500	4,200	May 67
B3500	4,800	May 67
CONTROL DATA		
3100	3,000	Feb. 65
3200*	5,000	May 64
3300	5,500	Dec. 65
GENERAL ELECTRIC		
115	1,300	Apr. 66
205*	1,700	Jul. 64
210*	10,500	Nov. 60
215*	2,500	Sep. 63
225*	2,500	Apr. 61
235	6,000	Apr. 64
255	15,000	Oct. 67
265	17,000	Jul. 64
405	5,120	Feb. 68
415	4,800	May 64
420	18,000	Jul. 67
425	6,000	Jun. 64
435	8,000	Sep. 65
HONEYWELL		
200/120	1,600	Feb. 66
200/200	2,600	Jul. 64
200/1200	5,400	Jan. 66
200/2200	6,600	Dec. 65
400*	7,600	Dec. 61
1400	8,900	Dec. 63
IBM		
360/20	1,200	Jan. 66
360/30	2,700	May 65
360/40	5,000	May 65
1401*	1,900	Sep. 60
1410*	6,000	Nov. 61
1440*	1,500	Nov. 63
1460*	3,500	Oct. 63
7010*	12,000	Oct. 63
MONROE		
Monrobot XI	700	May 60

Central Processor	Minimum Monthly Rental	First Delivery Date
NCR		
315	3,800	Jan. 62
315/100	2,200	Nov. 64
315/RMC-501	6,000	Jul. 65
315/RMC-502	9,000	Aug. 67
390	1,000	May 61
500	760	Sep. 65
PHILCO		
1000	4,000	Jun. 63
RCA		
Spectra 70/15	2,800	Oct. 65
Spectra 70/25	6,000	Dec. 65
Spectra 70/35	6,500	Oct. 66
301	3,300	Feb. 61
501*	11,000	Nov. 59
3301	9,000	Jul. 64
UNIVAC		
1004 I*	1,500	Sep. 63
1004 II, III*	1,600	Jun. 64
1005 I*	1,800	Feb. 66
1005 II, III*	1,900	Feb. 66
1050 III*	2,400	Sep. 63
9200	1,000	Jun. 67
9300	1,700	Sep. 67
SS 80/90 I, II*	3,600	Jan. 60
UIII*	16,600	Jun. 62

* System no longer marketed

MEDIUM-LARGE BUSINESS

Central Processor	Minimum Monthly Rental	First Delivery Date
BURROUGHS		
B5500	16,000	Nov. 64
B6500, B7500	25,000	Jan. 68
B8500	100,000	Jan. 67
CONTROL DATA		
3400*	17,000	Nov. 64
3500	6,000	Jun. 68
G-20*	12,000	Apr. 61
GENERAL ELECTRIC		
625	31,000	Apr. 65
635, 645	35,000	May 65
HONEYWELL		
200/4200	22,500	Feb. 68
200/8200	35,200	Jun. 68
800	16,000	Dec. 60
1800	27,000	Nov. 63
IBM		
360/50	14,000	Sep. 65
360/65, 67	34,000	Mar. 66
360/75	47,000	Nov. 65
360/90*	125,000	Feb. 67
7070*	12,000	Jun. 60
7072*	14,000	Jun. 62
7074*	17,000	Dec. 61
RCA		
Spectra 70/45	8,000	Jul. 66
Spectra 70/46	24,000	— —
Spectra 70/55	14,000	Jul. 66
SCIENTIFIC DATA		
Sigma 7	5,000	Dec. 66
UNIVAC		
490*	18,000	Dec. 61
491, 492*	13,000	Oct. 65
494	28,000	Mar. 66

* System no longer marketed

SMALL-MEDIUM SCIENTIFIC

Central Processor	Minimum Monthly Rental	First Delivery Date
ADAGE		
Ambilog 200	1,100	Aug. 64
AUTONETICS		
Recomp II*	2,500	Nov. 58
BECKMAN		
420*	2,200	Jun. 64
BIT		
480	240	Dec. 66
CONTROL DATA		
160	1,500	Jul. 60
160A	2,200	Jul. 61
160G	3,900	Apr. 64
924A*	8,000	Aug. 61
3100	3,000	Feb. 65
3150	—	— —
3200*	5,000	May 64
3300	5,500	Dec. 65
LGP-21*	500	Mar. 65
RPC 4000*	1,800	Nov. 60
DIGITAL ELECTRONICS		
Digiac 3080	370	Dec. 64
DIGITAL EQUIPMENT		
PDP-1*	3,600	Nov. 60
PDP-4*	1,000	Jul. 62
PDP-5*	6,000	Sep. 63
PDP-7*	1,200	Dec. 64
PDP-8	450	Apr. 65
PDP-8/S	250	Sep. 66
PDP-9	800	Aug. 66
EMR		
210*	2,000	Apr. 62
2100*	2,500	Dec. 63
Advance 6000 Series	2,500	Mar. 65
Advance 6130	1,400	Dec. 67
GENERAL ELECTRIC		
225*	2,500	Apr. 61
255	15,000	Oct. 67
415	4,800	May 64
420	18,000	Jul. 67
425	6,000	Jun. 64
435	8,000	Sep. 65

Central Processor	Minimum Monthly Rental	First Delivery Date
HONEYWELL		
DDP-24*	900	Jun. 63
DDP-116*	900	Apr. 65
DDP-124	1,900	Jan. 66
DDP-224	2,500	Mar. 65
DDP-416	400	Apr. 67
DDP-516	600	Oct. 66
IBM		
360/44	5,000	Oct. 66
1130	600	Sep. 65
1620*	1,600	Oct. 60
INTERDATA		
Model 2	200	Apr. 68
Model 3	300	Mar. 67
Model 4	400	Apr. 68
PACIFIC DATA		
PDS 1020	450	Feb. 64
RAYTHEON		
250	1,000	Dec. 60
440*	1,600	Mar. 64
520	2,000	Oct. 65
703	300	Oct. 67
SCIENTIFIC CONTROL		
650	400	Apr. 60
655	750	Jun. 66
660/2, 670/2	1,600	Nov. 65
660/5	700	Nov. 65
6700	10,000	Sep. 67
SCIENTIFIC DATA		
SDS 930	2,000	Jun. 64
Sigma 2	3,100	Dec. 66
Sigma 5	2,500	Dec. 67
SEL		
810A	500	Jul. 65
810B	600	Feb. 68
840A, 840MP	1,100	Jul. 65
STANDARD COMPUTER		
IC 6000	14,000	Nov. 66
UNIVAC		
418	4,000	Sep. 64
VARIAN DATA		
610 Series	300	Jul. 64
620, 620 I	600	Jul. 65

* System no longer marketed

MEDIUM-LARGE SCIENTIFIC

Central Processor	Minimum Monthly Rental	First Delivery Date
BURROUGHS		
B5500	16,000	Nov. 64
B6500, B7500	25,000	Jan. 68
B8500	100,000	Jan. 67
CONTROL DATA		
1604A*	30,000	Jan. 60
3400*	17,000	Nov. 64
3500	6,000	Jun. 68
3600	38,000	Jun. 63
3800	42,000	Dec. 65
6400	37,000	Apr. 66
6500	38,000	— 67
6600	62,000	Sep. 64
7600	62,000	Jun. 67
G-20*	12,000	Apr. 61
DIGITAL EQUIPMENT		
PDP-6*	6,200	Oct. 64
PDP-10 Series	6,000	Sep. 67
EAI		
EAI 8400	7,000	Jul. 65
GENERAL ELECTRIC		
235	6,000	Apr. 64
265	17,000	Jul. 64
625	31,000	Apr. 65
635, 645	35,000	May 65
HONEYWELL		
200/4200	22,500	Feb. 68
200/8200	35,200	Jun. 68
800	16,000	Dec. 60
1400	8,900	Dec. 63
1800	27,000	Nov. 63
IBM		
360/50	14,000	Sep. 65
360/65, 67	34,000	Mar. 66
360/75	47,000	Nov. 65
360/90*	125,000	Feb. 67
7040*	9,000	Apr. 63
7044*	20,000	Jul. 63
7090*	60,000	Jun. 60
7094 I*	66,000	Sep. 62
7094 II*	72,000	Apr. 64

Central Processor	Minimum Monthly Rental	First Delivery Date
PHILCO		
2000/210	20,000	Nov. 58
2000/211	24,000	Mar. 60
2000/212	45,000	Feb. 63
2000/213	55,000	— —
RCA		
Spectra 70/45	8,000	Jul. 66
Spectra 70/46	24,000	— —
Spectra 70/55	14,000	Jul. 66
SCIENTIFIC DATA		
SDS 940	25,000	Apr. 66
Sigma 7	5,000	Dec. 66
UNIVAC		
494	28,000	Mar. 66
1107*	32,000	Sep. 62
1108 II	45,000	Aug. 65

* System no longer marketed

Central Processor	Minimum Monthly Rental	First Delivery Date
ADAGE		
Ambilog 200	1,100	Aug. 64
BECKMAN		
420*	2,200	Jun. 64
BIT		
480	240	Dec. 66
COLLINS		
C-8500	2,500	Jan. 67
CONTROL DATA		
924A*	8,000	Aug. 61
1700	1,100	Mar. 66
8090	—	Jul. 64
8092	—	— 64
DIGITAL ELECTRONICS		
Digiac 3080	370	Dec. 64
DIGITAL EQUIPMENT		
Linc-8	1,000	Jul. 66
PDP-4*	1,000	Jul. 62
PDP-5*	6,000	Sep. 63
PDP-7*	1,200	Dec. 64
PDP-8	450	Apr. 65
PDP-8/S	250	Sep. 66
PDP-9	800	Aug. 66
EAI		
640	700	Jul. 67
8400	7,000	Jul. 65
EMR		
Advance 6130	800	Dec. 67
GENERAL ELECTRIC		
412	—	Jul. 62
Datanet-30	1,500	Oct. 63
GE/PAC 4020	—	Oct. 66
GE/PAC 4040	—	Apr. 64
GE/PAC 4050 I	—	Jun. 65
GE/PAC 4050 II	—	Jun. 66
GE/PAC 4060	—	Jun. 65
HEWLETT PACKARD		
HP-2116A	600	— 67
HONEYWELL		
DDP-116*	900	Apr. 65
DDP-416	400	Apr. 67
DDP-516	600	Oct. 66
H21, H22*	—	Oct. 65

Central Processor	Minimum Monthly Rental	First Delivery Date
HUGHES		
H-3118	—	May 64
H-3118M	—	Jan. 66
H-3324	—	Mar. 65
HM-4118	—	Mar. 66
IBM		
1710 I, II	—	Feb. 62
1800	—	Feb. 66
7700	—	Mar. 64
INTERDATA		
Model 2	200	Apr. 68
Model 3	300	Mar. 67
Model 4	400	Apr. 68
PHILCO		
102	6,000	Nov. 65
102M	8,000	Apr. 68
RAYTHEON		
520	2,000	Oct. 65
SCIENTIFIC CONTROL		
650	400	Apr. 60
655	750	Jun. 66
660/2, 670/2	1,600	Nov. 65
660/5	700	Nov. 65
SCIENTIFIC DATA		
SDS 930	2,000	Jun. 64
Sigma 2	3,100	Dec. 66
STANDARD COMPUTER		
IC 6000	14,000	Nov. 66
SEL		
810A	500	Jul. 65
810B	600	Feb. 68
UNIVAC		
490*	18,000	Dec. 61
491, 492*	13,000	Oct. 65
VARIAN DATA		
610 Series	300	Jul. 64
620, 620 I	600	Jul. 65
WESTINGHOUSE		
Prodac 50	500	Aug. 64
Prodac 250	1,250	Sep. 67
Prodac 500	2,250	Jun. 63

* System no longer marketed

INTERNAL STORAGE CHARACTERISTICS

In the first of the two tables that follow, central processors have been segmented according to the number of information bits transferred in the cycle times given by the manufacturer, and ordered within each segment according to ascending cycle times. In the second table, central processors are arranged in descending order according to the number of information bits transferred per microsecond. Only commercially-available central processors are included in these tables.

BITS PER CYCLE

Bits per Cycle	Central Processor	Cycle Time (in microseconds)	Bits per Microsecond
4	OLIVETTI GE ELEA 6001	5.0	0.80
	OLIVETTI GE ELEA 9003	5.0	0.80
6	HONEYWELL 200/2200	1.0	6.00
	HITACHI HITAC 4010	1.5	4.00
	HONEYWELL 200/1200	1.5	4.00
	HONEYWELL 200/200	2.0	3.00
	IBM 7080*	2.0	3.00
	IBM 7010*	2.4	2.50
	HONEYWELL 200/120	3.0	2.00
	SETI PALLAS	3.0	2.00
	HITACHI HITAC 3010	3.5	1.71
	PHILCO 1000	3.5	1.71
	IBM 1410*	4.5	1.33
	UNIVAC 1050 III*	4.5	1.33
	BURROUGHS B263, B273, B283	6.0	1.00
	BURROUGHS B300	6.0	1.00
	CII 4000	6.0	1.00
	IBM 1460*	6.0	1.00
	BULL GE GAMMA 10	7.0	0.86
	BULL GE GAMMA 30*	7.0	0.86
	BULL GE GAMMA 30s*	7.0	0.86
	TELEFUNKEN TR10	8.0	0.75
	UNIVAC 1004 I*	8.0	0.75
	UNIVAC 1005 I*	8.0	0.75
	BURROUGHS B160, B170, B180	10.0	0.60
	BURROUGHS B250	10.0	0.60
	BURROUGHS B260, B270, B280	10.0	0.60
	IBM 1620 II*	10.0	0.60
	IBM 1710 II	10.0	0.60
	IBM 1401*	11.5	0.51
	IBM 1440*	11.5	0.51
	IBM 1620 I*	20.0	0.30
	IBM 1710 I	20.0	0.30
8	UNIVAC 9300	0.6	13.34
	FUJITSU FACOM 2304/0	0.75	10.53
	TOSHIBA TOSBAC 5100/30	0.8	10.00
	NIPPON ELECTRIC NEAC 2200/400	1.0	8.00
	NIPPON ELECTRIC NEAC 2200/500	1.0	8.00
	UNIVAC 9200	1.2	6.67
	HITACHI HITAC 8100	1.5	5.33
	IBM 360/30	1.5	5.33
	NIPPON ELECTRIC NEAC 2200/300	1.5	5.33
	FUJITSU FACOM 230/20	1.8	4.44
	TOSHIBA TOSBAC 5100/20	1.8	4.44
	HITACHI HITAC 8200	2.0	4.00
	NIPPON ELECTRIC NEAC 2200/50	2.0	4.00
	NIPPON ELECTRIC NEAC 2200/100	2.0	4.00
	NIPPON ELECTRIC NEAC 2200/200	2.0	4.00
	RCA SPECTRA 70/15	2.0	4.00
	FUJITSU FACOM 230/10	2.2	3.64

* System no longer marketed

Bits per Cycle	Central Processor	Cycle Time (in micro-seconds)	Bits per Micro-second
	FUJITSU FACOM 230/30	2.2	3.64
	CONTROL DATA 8092	4.0	2.00
	INTERDATA MODEL 3	4.0	2.00
	BULL GE 115	6.5	1.21
	GENERAL ELECTRIC 115	6.5	1.21
	UNIVAC 1004 II, III*	6.5	1.21
	UNIVAC 1005 II, III*	6.5	1.21
	IBM 360/20	7.2	1.11
	BULL GE GAMMA 55	7.9	1.01
	BIT 480	8.0	1.00
	OLIVETTI GE 115	8.0	1.00
	OLIVETTI GE ELEA 4001	8.0	1.00
	TOSHIBA TOSBAC 4300	10.0	0.80
	TOSHIBA TOSBAC 4200	15.0	0.34
12	NCR 315/RMC-501	0.8	15.00
	NCR 315/RMC-502	0.8	15.00
	DIGITAL EQUIPMENT LINC-8	1.5	8.00
	DIGITAL EQUIPMENT PDP-8	1.5	8.00
	RCA 3301	1.5	8.00
	CII 90/10	1.75	7.00
	GEC 90/2	1.75	7.00
	SCIENTIFIC CONTROL 650	2.0	6.00
	RCA 301	4.8	2.50
	DIGITAL EQUIPMENT PDP-5*	6.0	2.00
	NCR 315	6.0	2.00
	NCR 315/100	6.0	2.00
	CONTROL DATA 160	6.4	1.88
	CONTROL DATA 160A	6.4	1.88
	CONTROL DATA 8090	6.4	1.88
	DIGITAL EQUIPMENT PDP-8/S	8.0	1.50
	NCR 500	1000.0	0.012
	NCR 390	1200.0	0.010
	VARIAN DATA 610 SERIES	3000.0	0.004
13	CONTROL DATA 160G	3.0	4.33
14	WESTINGHOUSE PRODAC 50	4.5	3.12
16	EMR ADVANCE 6130	0.75	21.33
	SEL 810B	0.79	20.25
	MITSUBISHI MELCOM 9100/30	0.8	20.00
	SIEMENS 4004/55	0.84	19.05
	CII 10020	0.9	17.78
	GEC S.2	0.9	17.78
	SCIENTIFIC DATA SIGMA 2	0.9	17.78
	WESTINGHOUSE PRODAC 250	0.9	17.78
	HONEYWELL DDP-416	0.96	16.65
	HONEYWELL DDP-516	0.96	16.65
	BURROUGHS B3500	1.0	16.00
	CII 10010	1.0	16.00
	ENGLISH ELECTRIC 4/70, 4/75	1.0	16.00
	CONTROL DATA 1700	1.1	14.50
	ENGLISH ELECTRIC 4/50	1.4	11.43
	HITACHI HITAC 8300	1.44	11.15

Bits per Cycle	Central Processor	Cycle Time (in micro-seconds)	Bits per Micro-second
	HITACHI HITAC 8400	1.44	11.15
	RCA SPECTRA 70/35	1.44	11.15
	RCA SPECTRA 70/45	1.44	11.15
	RCA SPECTRA 70/46	1.44	11.15
	SIEMENS 4004/35	1.44	11.15
	SIEMENS 4004/45	1.44	11.15
	ENGLISH ELECTRIC 4/10	1.5	10.67
	ENGLISH ELECTRIC 4/30	1.5	10.67
	INTERDATA MODEL 4	1.5	10.67
	RCA SPECTRA 70/25	1.5	10.67
	HEWLETT PACKARD HP-2116A	1.6	10.00
	EAI 640	1.65	9.70
	HONEYWELL DDP-116*	1.7	9.40
	RAYTHEON 703	1.75	9.14
	SEL 810A	1.75	9.14
	INTERDATA MODEL 3	1.8	8.80
	VARIAN DATA 620, 620 I	1.8	8.80
	BURROUGHS B2500	2.0	8.00
	IBM 1800	2.0	8.00
	IBM 1130	2.2	7.27
	IBM 360/40	2.5	6.40
	INTERDATA MODEL 2	3.0	5.33
	PACIFIC DATA 1020	2300.0	0.007
18	FUJITSU FACOM 270/30	0.75	24.00
	DIGITAL EQUIPMENT PDP-9	1.0	18.00
	HUGHES HM-4118	1.0	18.00
	DIGITAL EQUIPMENT PDP-7*	1.75	10.22
	HONEYWELL H22*	1.75	10.22
	MITSUBISHI MELCOM 3100/10, 30, 50	1.75	10.22
	HUGHES H-3118	1.8	10.00
	HUGHES H-3118M	1.8	10.00
	IBM 7700	2.0	9.00
	NIPPON ELECTRIC NEAC 3100	2.0	9.00
	TELEFUNKEN TR84	2.0	9.00
	UNIVAC 418	2.0	9.00
	WESTINGHOUSE PRODAC 500	2.0	9.00
	FUJITSU FACOM 270/10	2.2	8.18
	FUJITSU FACOM 270/20	2.4	7.08
	BECKMAN 420*	3.2	5.61
	DIGITAL EQUIPMENT PDP-1*	5.0	3.60
	ELLIOTT 903	6.0	3.00
	ELLIOTT MCS 920B	6.0	3.00
	HONEYWELL H21*	6.0	3.00
	MITSUBISHI MELCOM 1530	6.0	3.00
	GENERAL ELECTRIC DATANET-30	7.0	2.57
	DIGITAL EQUIPMENT PDP-4*	8.0	2.25
	ZUSE Z25	8.0	2.25
20	GENERAL ELECTRIC 235, 265	6.0	3.33
	SEREL 1001	6.0	3.33
	TOSHIBA TOSBAC 5300	6.0	3.33
	SEREL 505	14.0	1.46

* System no longer marketed

Bits per Cycle	Central Processor	Cycle Time (in micro-seconds)	Bits per Micro-second
	GENERAL ELECTRIC 225*, 255	18.0	1.11
	TOSHIBA TOSBAC 5200	18.0	1.11
	GENERAL ELECTRIC 412	20.0	1.00
	GENERAL ELECTRIC 205*	36.0	0.56
	GENERAL ELECTRIC 215*	36.0	0.56
21	EMR 210*	2.0	10.50
	EMR 2100*	2.0	10.50
22	RAYTHEON 250	3070.0	0.007
24	HONEYWELL 200/4200	0.75	32.00
	ICT 1904F	0.75	32.00
	ICT 1905F	0.75	32.00
	ICT 1906F	0.75	32.00
	ICT 1907F	0.75	32.00
	TOSHIBA TOSBAC 3400	0.8	30.00
	TELEFUNKEN TR86	0.9	26.64
	ICT 1906	1.0	24.00
	ICT 1907	1.0	24.00
	RAYTHEON 520	1.0	24.00
	CONTROL DATA 3200*	1.25	19.20
	CONTROL DATA 3300	1.24	19.20
	CONTROL DATA 3500	1.3	18.45
	SIEMENS 302	1.5	16.00
	SIEMENS 304	1.5	16.00
	SIEMENS 305	1.5	16.00
	DATASAAB D22	1.6	15.00
	GENERAL ELECTRIC GE/PAC 4020	1.6	15.00
	TOSHIBA TOSBAC 7000/60	1.6	15.00
	GENERAL ELECTRIC GE/PAC 4060	1.7	14.10
	CII 90/40	1.75	13.71
	CII 90/80	1.75	13.71
	CONTROL DATA 3100	1.75	13.71
	CONTROL DATA 3150	1.75	13.71
	GEC 90/25	1.75	13.71
	GEC 90/30	1.75	13.71
	GEC 90/300	1.75	13.71
	HONEYWELL DDP-124	1.75	13.71
	HONEYWELL DDP-224	1.75	13.71
	SCIENTIFIC CONTROL 655	1.75	13.71
	SCIENTIFIC CONTROL 6700	1.75	13.71
	SCIENTIFIC DATA SDS 930	1.75	13.71
	SCIENTIFIC DATA SDS 940	1.75	13.71
	SCIENTIFIC DATA SDS 9300	1.75	13.71
	SEL 840A, 840MP	1.8	13.33
	HUGHES H-3324	1.8	13.33
	ICT 1904E	1.8	13.33
	ICT 1905E	1.8	13.33
	ICT 1906E	1.8	13.33
	ICT 1907E	1.8	13.33
	EMR ADVANCE 6000 SERIES	1.9	12.69
	ICT 1903	2.0	12.00
	ICT 1904*	2.0	12.00
	ICT 1905*	2.0	12.00
	RAYTHEON 440*	2.0	12.00
	SCIENTIFIC CONTROL 660/2, 670/2	2.0	12.00

Bits per Cycle	Central Processor	Cycle Time (in micro-seconds)	Bits per Micro-second
	BULL GE 435	2.7	8.89
	GENERAL ELECTRIC 435	2.7	8.89
	TOSHIBA TOSBAC 5400/30	2.7	8.89
	GENERAL ELECTRIC GE/PAC 4050 II	3.4	7.05
	BULL GE 425	3.9	6.15
	GENERAL ELECTRIC 425	3.9	6.15
	TOSHIBA TOSBAC 5400/20	3.9	6.15
	UNIVAC III*	4.0	6.00
	DATASAAB D21	4.8	5.05
	HONEYWELL DDP-24	5.0	4.80
	GENERAL ELECTRIC GE/PAC 4040	5.0	4.80
	SCIENTIFIC CONTROL 660/5	5.0	4.80
	GENERAL ELECTRIC GE/PAC 4050 I	5.1	4.71
	BULL GE 415	5.8	4.15
	GENERAL ELECTRIC 415, 420	5.8	4.15
	TOSHIBA TOSBAC 5400/10	5.8	4.15
	ENGLISH ELECTRIC KDF7	6.0	4.00
	ICT 1901	6.0	4.00
	ICT 1902	6.0	4.00
	ICT 1909	6.0	4.00
	CONTROL DATA 924A*	6.4	3.75
	HONEYWELL 1400	6.5	3.7
	GENERAL ELECTRIC 405	8.0	3.00
	SIEMENS 303	8.3	2.89
	HONEYWELL 400	9.25	2.62
	TOSHIBA TOSBAC 3300	10.0	2.40
	RCA 501*	15.0	1.60
	GENERAL ELECTRIC 210*	32.0	0.75
	NIPPON ELECTRIC NEAC 1210	20000.0	.0012
25	DIGITAL ELECTRONICS DIGIAC 3080	1700.0	0.0015
27	ELECTROLOGICA EL X8	2.5	10.80
	ELECTROLOGICA EL X2, X4	5.0	5.40
28	NIPPON ELECTRIC NEAC 1240	5.3	5.28
	MATSUSHITA MADIC 500	20000.0	0.0014
30	UNIVAC 494	0.75	40.00
	ADAGE AMBILOG 200	2.0	15.00
	UNIVAC 490*	4.8	6.25
	UNIVAC 491, 492*	4.8	6.25
32	HITACHI HITAC 8500	0.84	38.00
	RCA SPECTRA 70/55	0.84	38.00
	CII 10070	0.85	37.75
	GEC S.7	0.85	37.75
	SCIENTIFIC DATA SIGMA 5	0.85	37.75
	SCIENTIFIC DATA SIGMA 7	0.85	37.75
	EAI 8400	1.0	32.00
	IBM 360/44	1.0	32.00
	HITACHI HITAC 5020E	1.5	21.67
	PHILCO 102, 102M	1.5	21.67
	SIEMENS 4004/25	1.5	21.67
	COLLINS C-8500	2.0	16.00

* System no longer marketed

Bits per Cycle	Central Processor	Cycle Time (in micro-seconds)	Bits per Micro-second
	HITACHI HITAC 5020	2.0	16.00
	IBM 360/50	2.0	16.00
	SIEMENS 4004/15	2.0	16.00
	CONTROL DATA G-20*	6.0	5.33
	FUJITSU FACOM 241	10.0	3.20
	MONROE MONROBOT XI	12000.0	0.003
	CONTROL DATA RPC 4000*	17000.0	0.002
	CONTROL DATA LGP 21*	51000.0	0.0006
33	MITSUBISHI MELCOM 1101F	7800.0	0.004
	MATSUSHITA MADIC 11A	11000.0	0.003
36	UNIVAC 1108 II	0.75	48.00
	DIGITAL EQUIPMENT PDP-10 SERIES	1.0	36.00
	IBM 7094 II*	1.4	25.07
	DIGITAL EQUIPMENT PDP-6	1.75	20.06
	IBM 7094 I*	2.0	18.00
	FUJITSU FACOM 230/50	2.2	16.38
	IBM 7090*	2.2	16.38
	IBM 7044*	2.5	14.40
	STANDARD COMPUTER IC 6000	4.0	9.00
	UNIVAC 1107*	4.0	9.00
	IBM 7040*	8.0	4.50
	MATSUSHITA MADIC III	10.0	3.60
40	REGNECENTRALEN GIER	6.6	6.06
	HITACHI HITAC 3030	10.0	4.00
	ZUSE Z23	12.0	3.34
	AUTONETICS RECOMP II*	9000.0	0.004
42	FUJITSU FACOM 230/60	0.92	45.65
	ELLIOTT 4120	2.0	21.00
	ELLIOTT 4130	2.0	21.00
	ENGLISH ELECTRIC LEO 326	2.5	16.80
	ENGLISH ELECTRIC LEO 360	6.0	7.00
	OKI ELECTRIC OKITAC 5090H	10.0	4.20
44	ZUSE Z31	420.0	0.15
48	BURROUGHS B6500, B7500	0.6	80.00
	HONEYWELL 200/8200	0.75	64.00
	CONTROL DATA 3800	0.88	54.80
	TELEFUNKEN TR440	0.9	53.38
	PHILCO 2000/213	1.15	41.70
	CONTROL DATA 3600	1.4	34.40
	CONTROL DATA 3400*	1.5	32.00
	PHILCO 2000/212	1.5	32.00
	HONEYWELL 1800	2.0	24.00
	ICT ORION 2	2.0	24.00
	NIPPON ELECTRIC NEAC 3100	2.0	24.00
	ICT ATLAS 2	2.5	19.21
	BURROUGHS B5500	4.0	12.00
	ENGLISH ELECTRIC KDF9	6.0	8.00
	HONEYWELL 800	6.0	8.00
	NIPPON ELECTRIC NEAC 2800	6.0	8.00
	TELEFUNKEN TR4	6.0	8.00

Bits per Cycle	Central Processor	Cycle Time (in micro-seconds)	Bits per Micro-second
	CONTROL DATA 1604A*	6.4	7.50
	NIPPON ELECTRIC NEAC 2206	10.0	4.80
	NIPPON ELECTRIC NEAC 2230	10.0	4.80
	NIPPON ELECTRIC NEAC 2400	10.0	4.80
	OKI ELECTRIC OKITAC 5090D	10.0	4.80
	OKI ELECTRIC OKITAC 5090M	10.0	4.80
	PHILCO 2000/210	10.0	4.80
	PHILCO 2000/211	10.0	4.80
	HITACHI HIPAC 103	85.0	0.57
	HITACHI HITAC 201	3300.0	0.014
50	IBM 7074*	4.0	12.50
	IBM 7070*	6.0	8.33
	IBM 7072*	6.0	8.33
52	FUJITSU FACOM 222	10.0	5.20
	FUJITSU FACOM 212	150.0	0.34
60	CONTROL DATA 7600	0.25	240.00
	CONTROL DATA 6400	1.0	60.00
	CONTROL DATA 6500	1.0	60.00
	CONTROL DATA 6600	1.0	60.00
	UNIVAC SS 80/90 I, II*	17.0	3.51
64	IBM 360/65, 67	0.75	88.33
	IBM 360/75	0.75	88.33
	IBM 360/90*	0.75	88.33
72	GENERAL ELECTRIC 635, 645	1.0	72.00
	GENERAL ELECTRIC 625	2.0	36.00
192	BURROUGHS B8500	0.5	384.00

* System no longer marketed

BITS PER MICROSECOND

Bits per Micro-second	Central Processor	Cycle Time (in micro-seconds)	Bits per Cycle
384.00	BURROUGHS B8500	0.5	192
240.00	CONTROL DATA 7600	0.25	60
88.33	IBM 360/65, 67	0.75	64
88.33	IBM 360/75	0.75	64
88.33	IBM 360/90*	0.75	64
80.00	BURROUGHS B6500, B7500	0.6	48
72.00	GENERAL ELECTRIC 635, 645	1.0	72
64.00	HONEYWELL 200/8200	0.75	48
60.00	CONTROL DATA 6400	1.0	60
60.00	CONTROL DATA 6500	1.0	60
60.00	CONTROL DATA 6600	1.0	60
54.80	CONTROL DATA 3800	0.88	48
53.38	TELEFUNKEN TR440	0.9	48
48.00	UNIVAC 1108 II	0.75	36
45.65	FUJITSU FACOM 230/60	0.92	42
41.70	PHILCO 2000/213	1.15	48
40.00	UNIVAC 494	0.75	30
38.00	HITACHI HITAC 8500	0.84	32
38.00	RCA SPECTRA 70/55	0.84	32
37.75	CII 10070	0.85	32
37.75	GEC S.7	0.85	32
37.75	SCIENTIFIC DATA SIGMA 5	0.85	32
37.75	SCIENTIFIC DATA SIGMA 7	0.85	32
36.00	DIGITAL EQUIPMENT PDP-10 SERIES	1.0	72
36.00	GENERAL ELECTRIC 625	2.0	72
34.00	CONTROL DATA 3600	1.4	48
32.00	CONTROL DATA 3400*	1.5	48
32.00	EAI 8400	1.0	32
32.00	HONEYWELL 200/4200	0.75	24
32.00	IBM 360/44	1.0	32
32.00	ICT 1904F	0.75	24
32.00	ICT 1905F	0.75	24
32.00	ICT 1906F	0.75	24
32.00	ICT 1907F	0.75	24
32.00	PHILCO 2000/212	1.5	48
30.00	TOSHIBA TOSBAC 3400	0.8	24
26.64	TELEFUNKEN TR86	0.9	24
25.07	IBM 7094 II*	1.4	36
24.00	FUJITSU FACOM 270/30	0.75	18
24.00	HONEYWELL 1800	2.0	48
24.00	ICT 1906	1.0	24
24.00	ICT 1907	1.0	24
24.00	ICT ORION 2	2.0	48
24.00	NIPPON ELECTRIC NEAC 3800	2.0	48
24.00	RAYTHEON 520	1.0	24

* System no longer marketed

Bits per Micro-second	Central Processor	Cycle Time (in micro-seconds)	Bits per Cycle
21.67	HITACHI HITAC 5020E	1.5	32
21.67	PHILCO 102, 102M	1.5	32
21.67	SIEMENS 4004/25	1.5	32
21.33	EMR ADVANCE 6130	0.75	16
21.00	ELLIOTT 4120	2.0	42
21.00	ELLIOTT 4130	2.0	42
20.25	SEL 810B	0.79	16
20.06	DIGITAL EQUIPMENT PDP-6*	1.75	36
20.00	MITSUBISHI MELCOM 9100/30	0.8	16
19.21	ICT ATLAS 2	2.5	48
19.20	CONTROL DATA 3200*	1.25	24
19.20	CONTROL DATA 3300*	1.25	24
19.05	SIEMENS 4004/55	0.84	16
18.45	CONTROL DATA 3500	1.3	24
18.00	DIGITAL EQUIPMENT PDP-9	1.0	18
18.00	HUGHES HM-4118	1.0	18
18.00	IBM 7094 I*	2.0	36
17.78	CII 10020	0.9	16
17.78	GEC S.2	0.9	16
17.78	SCIENTIFIC DATA SIGMA 2	0.9	16
17.78	WESTINGHOUSE PRODAC 250	0.9	16
16.80	ENGLISH ELECTRIC LEO 326	2.5	42
16.65	HONEYWELL DDP-416	0.96	16
16.65	HONEYWELL DDP-516	0.96	16
16.38	FUJITSU FACOM 230/50	2.2	36
16.38	IBM 7090*	2.2	36
16.00	BURROUGHS B3500	1.0	16
16.00	CII 10010	1.0	16
16.00	COLLINS C-8500	2.0	32
16.00	ENGLISH ELECTRIC 4/70, 4/75	1.0	16
16.00	HITACHI HITAC 5020	2.0	32
16.00	IBM 360/50	2.0	32
16.00	SIEMENS 302	1.5	24
16.00	SIEMENS 304	1.5	24
16.00	SIEMENS 305	1.5	24
16.00	SIEMENS 4004/15	2.0	32
15.00	ADAGE AMBILOG 200	2.0	30
15.00	DATASAAB D22	1.6	24
15.00	GENERAL ELECTRIC GE/PAC 4020	1.6	24
15.00	NCR 315/RMC-501	0.8	12
15.00	NCR 315/RMC-502	0.8	12
15.00	TOSHIBA TOSBAC 7000/60	1.6	24
14.50	CONTROL DATA 1700	1.1	16
14.40	IBM 7044*	2.5	36
14.10	GENERAL ELECTRIC GE/PAC 4060	1.7	24
13.71	CII 90/40	1.75	24
13.71	CII 90/80	1.75	24
13.71	CONTROL DATA 3100	1.75	24
13.71	CONTROL DATA 3150	1.75	24
13.71	GEC 90/25	1.75	24

Bits per Micro-second	Central Processor	Cycle Time (in micro-seconds)	Bits per Cycle
13.71	GEC 90/30	1.75	24
13.71	GEC 90/300	1.75	24
13.71	HONEYWELL DDP-124	1.75	24
13.71	HONEYWELL DDP-224	1.75	24
13.71	SCIENTIFIC CONTROL 655	1.75	24
13.71	SCIENTIFIC CONTROL 6700	1.75	24
13.71	SCIENTIFIC DATA SDS 930	1.75	24
13.71	SCIENTIFIC DATA SDS 940	1.75	24
13.71	SCIENTIFIC DATA SDS 9300	1.75	24
13.71	SEL 840A, 840MP	1.75	24
13.33	HUGHES H-3324	1.8	24
13.33	ICT 1904E	1.8	24
13.33	ICT 1905E	1.8	24
13.33	ICT 1906E	1.8	24
13.33	ICT 1907E	1.8	24
13.34	UNIVAC 9300	0.6	8
12.69	EMR ADVANCE 6000 Series	1.9	24
12.50	IBM 7074*	4.0	50
12.00	BURROUGHS B5500	4.0	48
12.00	ICT 1903	2.0	24
12.00	ICT 1904*	2.0	24
12.00	ICT 1905*	2.0	24
12.00	RAYTHEON 440*	2.0	24
12.00	SCIENTIFIC CONTROL 660/2, 670/2	2.0	24
11.43	ENGLISH ELECTRIC 4/50	1.4	16
11.15	HITACHI HITAC 8300	1.44	16
11.15	HITACHI HITAC 8400	1.44	16
11.15	RCA SPECTRA 70/35	1.44	16
11.15	RCA SPECTRA 70/45	1.44	16
11.15	RCA SPECTRA 70/46	1.44	16
11.15	SIEMENS 4004/35	1.44	16
11.15	SIEMENS 4004/45	1.44	16
10.80	ELECTROLOGICA EL X8	2.5	27
10.67	ENGLISH ELECTRIC 4/10	1.5	16
10.67	ENGLISH ELECTRIC 4/30	1.5	16
10.67	INTERDATA MODEL 4	1.5	16
10.67	RCA SPECTRA 70/25	1.5	16
10.53	FUJITSU FACOM 230/40	0.75	8
10.50	EMR 210*	2.0	21
10.50	EMR 2100*	2.0	21
10.22	DIGITAL EQUIPMENT PDP-7*	1.75	18
10.22	HONEYWELL H22*	1.75	18
10.22	MITSUBISHI MELCOM 3100/10, 30, 50	1.75	18
10.00	HEWLETT PACKARD HP-2116A	1.6	16

* System no longer marketed

Bits per Micro-second	Central Processor	Cycle Time (in micro-seconds)	Bits per Cycle
10.00	HUGHES H-3118	1.8	18
10.00	HUGHES H-3118M	1.8	18
10.00	TOSHIBA TOSBAC 5100/30	0.8	8
9.70	EAI 640	1.65	16
9.40	HONEYWELL DDP-116*	1.7	16
9.14	RAYTHEON 703	1.75	16
9.14	SEL 810A	1.75	16
9.00	IBM 7700	2.0	18
9.00	NIPPON ELECTRIC 3100	2.0	18
9.00	STANDARD COMPUTER IC6000	4.0	36
9.00	TELEFUNKEN TR84	2.0	18
9.00	UNIVAC 418	2.0	18
9.00	UNIVAC 1107*	4.0	36
9.00	WESTINGHOUSE PRODAC 500	2.0	18
8.89	BULL GE 435	2.7	24
8.89	GENERAL ELECTRIC 435	2.7	24
8.89	TOSHIBA TOSBAC 5400/30	2.7	24
8.80	INTERDATA MODEL 3	1.8	16
8.80	VARIAN DATA 620, 620 I	1.8	16
8.33	IBM 7070*	6.0	50
8.33	IBM 7072*	6.0	50
8.18	FUJITSU FACOM 270/10	2.2	18
8.00	BURROUGHS B2500	2.0	16
8.00	DIGITAL EQUIPMENT LINC-8	1.5	12
8.00	DIGITAL EQUIPMENT PDP-8	1.5	12
8.00	ENGLISH ELECTRIC KDF9	6.0	48
8.00	HONEYWELL 800	6.0	48
8.00	IBM 1800	2.0	16
8.00	NIPPON ELECTRIC NEAC 2200/400	1.0	8
8.00	NIPPON ELECTRIC NEAC 220/500	1.0	8
8.00	NIPPON ELECTRIC NEAC 2800	6.0	48
8.00	RCA 3301	1.5	12
8.00	TELEFUNKEN TR4	6.0	48
7.50	CONTROL DATA 1604A*	6.4	48
7.27	IBM 1130	3.6	16
7.08	FUJITSU FACOM 270/20	2.4	18
7.05	GENERAL ELECTRIC GE/PAC 4050 II	3.4	24
7.00	CII 90/10	1.75	12
7.00	ENGLISH ELECTRIC LEO 360	6.0	42
7.00	GEC 90/2	1.75	12
6.67	UNIVAC 9200	1.2	8
6.40	IBM 360/40	2.5	16
6.25	UNIVAC 490*	4.8	30
6.25	UNIVAC 491, 492*	4.8	30
6.15	BULL GE 425	3.9	24
6.15	GENERAL ELECTRIC 425	3.9	24
6.15	TOSHIBA TOSBAC 5400/20	3.9	24
6.06	REGNECENTRALEN GIER	6.6	40
6.00	HONEYWELL 200/2200	1.0	6
6.00	SCIENTIFIC CONTROL 650	2.0	12

Bits per Micro-second	Central Processor	Cycle Time (in micro-seconds)	Bits per Cycle
6.00	UNIVAC III*	4.0	24
5.61	BECKMAN 420*	3.2	18
5.40	ELECTROLOGICA EL X2, X4	5.0	27
5.33	CONTROL DATA G-20*	6.0	32
5.33	HITACHI HITAC 8100	1.5	8
5.33	IBM 360/30	1.5	8
5.33	INTERDATA MODEL 2	3.0	16
5.33	NIPPON ELECTRIC NEAC 2200/300	1.5	8
5.28	NIPPON ELECTRIC NEAC 1240	5.3	28
5.20	FUJITSU FACOM 222	10.0	52
5.00	DATASAAB D21	4.8	24
4.80	GENERAL ELECTRIC GE/PAC 4040	5.0	24
4.80	HONEYWELL DDP-24*	5.0	24
4.80	NIPPON ELECTRIC NEAC 2206	10.0	48
4.80	NIPPON ELECTRIC NEAC 2230	10.0	48
4.80	NIPPON ELECTRIC NEAC 2400	10.0	48
4.80	OKI ELECTRIC OKITAC 5090D	10.0	48
4.80	OKI ELECTRIC OKITAC 5090M	10.0	48
4.80	PHILCO 2000/210	10.0	48
4.80	PHILCO 2000/211	10.0	48
4.80	SCIENTIFIC CONTROL 660/5	5.0	24
4.71	GENERAL ELECTRIC GE/PAC 4050 I	5.1	24
4.50	IBM 7040*	8.0	36
4.44	FUJITSU FACOM 230/20	1.8	8
4.44	TOSHIBA TOSBAC 5100/20	1.8	8
4.33	CONTROL DATA 160G	3.0	13
4.20	OKI ELECTRIC OKITAC 5090H	10.0	42
4.15	BULL GE 415	5.8	24
4.15	GENERAL ELECTRIC 415, 420	5.8	24
4.15	TOSHIBA TOSBAC 5400/10	5.8	24
4.00	ENGLISH ELECTRIC KDF7	6.0	24
4.00	HITACHI HITAC 3030	10.0	40
4.00	HITACHI HITAC 4010	1.5	6
4.00	HITACHI HITAC 8200	2.0	8
4.00	HONEYWELL 200/1200	1.5	6
4.00	ICT 1901	6.0	24
4.00	ICT 1902	6.0	24
4.00	ICT 1909	6.0	24
4.00	NIPPON ELECTRIC NEAC 2200/50	2.0	8
4.00	NIPPON ELECTRIC NEAC 2200/100	2.0	8
4.00	NIPPON ELECTRIC NEAC 2200/200	2.0	8
4.00	RCA SPECTRA 70/15	2.0	8
3.75	CONTROL DATA 924A*	6.4	24
3.70	HONEYWELL 1400	6.5	24
3.64	FUJITSU FACOM 230/10	2.2	8

* System no longer marketed

Bits per Micro-second	Central Processor	Cycle Time (in micro-seconds)	Bits per Cycle
3.64	FUJITSU FACOM 230/30	2.2	8
3.60	DIGITAL EQUIPMENT PDP-1*	5.0	18
3.60	MATSUSHITA MADIC III	10.0	36
3.51	UNIVAC SS 80/90 I, II*	17.0	60
3.34	ZUSE Z23	12.0	40
3.33	GENERAL ELECTRIC 235, 265	6.0	20
3.33	SEREL 1001	6.0	20
3.33	TOSHIBA TOSBAC 5300	6.0	20
3.20	FUJITSU FACOM 241	10.0	32
3.12	WESTINGHOUSE PRODAC 50	4.5	14
3.00	ELLIOTT 903	6.0	18
3.00	ELLIOTT MCS 920B	6.0	18
3.00	GENERAL ELECTRIC 405	8.0	24
3.00	HONEYWELL 200/200	2.0	6
3.00	HONEYWELL H21*	6.0	18
3.00	IBM 7080*	2.0	6
3.00	MITSUBISHI MELCOM 1530	6.0	18
2.89	SIEMENS 303	8.3	24
2.62	HONEYWELL 400	9.25	24
2.57	GENERAL ELECTRIC DATANET-30	7.0	18
2.50	IBM 7010*	2.4	6
2.50	RCA 301	4.8	12
2.40	TOSHIBA TOSBAC 3300	10.0	24
2.25	DIGITAL EQUIPMENT DDP-4	8.0	18
2.25	ZUSE Z25	8.0	18
2.00	CONTROL DATA 8092	4.0	8
2.00	DIGITAL EQUIPMENT PDP-5*	6.0	12
2.00	HONEYWELL 200/120	3.0	6
2.00	INTERDATA MODEL 3	4.0	8
2.00	NCR 315	6.0	12
2.00	NCR 315/100	6.0	12
2.00	SETI PALLAS	3.0	6
1.88	CONTROL DATA 160	6.4	12
1.88	CONTROL DATA 160A	6.4	12
1.88	CONTROL DATA 8090	6.4	12
1.71	HITACHI HITAC 3010	3.5	6
1.71	PHILCO 1000	3.5	6
1.60	RCA 501*	15.0	24
1.50	DIGITAL EQUIPMENT PDP-8/S	8.0	12
1.46	SEREL 505	14.0	20
1.33	IBM 1410*	4.5	6
1.33	UNIVAC 1050 II*	4.5	6
1.21	BULL GE 115	6.5	8
1.21	GENERAL ELECTRIC 115	6.5	8
1.21	UNIVAC 1004 II, III*	6.5	8
1.21	UNIVAC 1005 II, III*	6.5	8
1.11	GENERAL ELECTRIC 225*, 255	18.0	20
1.11	IBM 360/20	7.2	8
1.11	TOSHIBA TOSBAC 5200	18.0	20
1.01	BULL GE GAMMA 55	7.9	8

Bits per Micro-second	Central Processor	Cycle Time (in micro-seconds)	Bits per Cycle
1.00	BIT 480	8.0	8
1.00	BURROUGHS B263, B273, B283	6.0	6
1.00	BURROUGHS B300	6.0	6
1.00	CII 4000	6.0	6
1.00	GENERAL ELECTRIC 412	20.0	20
1.00	IBM 1460*	6.0	6
1.00	OLIVETTI GE 115	8.0	8
1.00	OLIVETTI GE ELEA 4001	8.0	8
0.86	BULL GE GAMMA 10	7.0	6
0.86	BULL GE GAMMA 30*	7.0	6
0.86	BULL GE GAMMA 30S	7.0	6
0.80	OLIVETTI GE ELEA 6001	5.0	4
0.80	OLIVETTI GE ELEA 9003	5.0	4
0.80	TOSHIBA TOSBAC 4300	10.0	8
0.75	GENERAL ELECTRIC 210*	32.0	24
0.75	TELEFUNKEN TR10	8.0	6
0.75	UNIVAC 1004 I*	8.0	6
0.75	UNIVAC 1005 I*	8.0	6
0.60	BURROUGHS B160, B170, B180	10.0	6
0.60	BURROUGHS B250	10.0	6
0.60	BURROUGHS B260, B270, B280	10.0	6
0.60	IBM 1620 II	10.0	6
0.60	IBM 1710 II	10.0	6
0.57	HITACHI HIPAC 103	85.0	48
0.56	GENERAL ELECTRIC 205*	36.0	20
0.56	GENERAL ELECTRIC 215*	36.0	20
0.53	TOSHIBA TOSBAC 4200	15.0	8
0.51	IBM 1401*	11.5	6
0.51	IBM 1440*	11.5	6
0.34	FUJITSU FACOM 212	150.0	52
0.30	IBM 1620 I*	20.0	6
0.30	IBM 1710 I	20.0	6
0.15	ZUSE Z31	420.0	44
0.014	HITACHI HITAC 201	3300.0	48
0.012	NCR 500	1000.0	12
0.010	NCR 390	1200.0	12
0.007	PACIFIC DATA 1020	2300.0	16
0.007	RAYTHEON 250	3070.0	22
0.004	AUTONETICS RECOMP II*	9000.0	40
0.004	MITSUBISHI MELCOM 1101F	7800.0	33
0.004	VARIAN DATA 610 SERIES	3000.0	12
0.003	MATSUSHITA MADIC IIA	11000.0	33
0.003	MONROE MONROBOT XI	12000.0	32
0.002	CONTROL DATA RPC 4000*	17000.0	32
0.0015	DIGITAL ELECTRONICS DIGIAC 3080	17000.0	25
0.0014	MATSUSHITA MADIC 500	20000.0	28
0.0012	NIPPON ELECTRIC NEAC 1210	20000.0	24
0.0006	CONTROL DATA LGP-21*	51000.0	32

* System no longer marketed

DIRECTORY
OF
MANUFACTURERS

DIRECTORY
OF
MANUFACTURERS

ADAGE
Adage, Incorporated
1079 Commonwealth Avenue
Boston, Massachusetts 02115

AMPEX
Ampex Corporation
Computer Products Division
9937 West Jefferson Boulevard
Culver City, California 90230

ANELEX
Anelex Corporation
150 Causeway Street
Boston, Massachusetts 02114

AUTONETICS
Autonetics, A Division of North
  American Aviation, Incorporated
3330 Miraloma Avenue
Anaheim, California 92803

BBN
Bolt, Beranek & Newman, Inc.
Data Equipment Division
15808 Wyandotte Street
Van Nuys, California 91406

BECKMAN
Beckman Instruments, Inc.
Systems Division
2400 Harbor Boulevard
Fullerton, California 92631

BIT
Business Information Technology, Inc.
3 Erie Drive
Natick, Massachusetts 01760

BRYANT
Bryant Computer Products
Div. of Ex-Cello-O Corporation
850 Ladd Road
Walled Lake, Michigan 48088

BUNKER-RAMO
Bunker-Ramo Corporation
8433 Fallbrook Avenue
Canoga Park, California 91304

BURROUGHS
Burroughs Corporation
6071 Second Avenue
Detroit, Michigan 48200

COLLINS
Collins Radio Company
Comm. and Data Systems Division
Dallas, Texas 75207

COMPUTER COMMUNICATIONS
Computer Communications, Inc.
701 W. Manchester Boulevard
Inglewood, California 90301

CONRAC
Div. of Giannini Controls Corporation
600 North Rimsdale
Covina, California 91722

CONTROL DATA
Control Data Corporation
8100 34th Avenue South
Minneapolis, Minnesota 55420

Control Data Corporation
Data Display Division
2401 North Fairview Avenue
St. Paul, Minnesota 55113

DATA DISC
Data Disc, Incorporated
1275 California Avenue
Palo Alto, California 94304

DATAMARK
Datamark, Incorporated
Cantiague Road
Westbury, New York 11590

DATAMEC
Datamec Corporation
345 Middlefield Road
Mountain View, California 94040

DATA PRODUCTS
Data Products Corporation
8535 Warner Drive
Culver City, California 90231

DIGITAL DEVELOPMENT
Digital Development Corporation
5575 Kearny Villa Road
San Diego, California 92123

DIGITAL ELECTRONICS
Digital Electronics, Inc.
Ames Court — Engineers Hill
Plainview, New York 11803

DIGITAL EQUIPMENT
Digital Equipment Corporation
Main Street
Maynard, Massachusetts 01754

DIGITRONICS
Digitronics Corporation
Albertson Avenue
Albertson, New York 11507

EAI
Electronic Associates, Inc.
West Long Branch
New Jersey 07764

EMR
EMR Computer Division
8001 Bloomington Freeway
Minneapolis, Minnesota 55420

GENERAL ELECTRIC
Information Systems
13430 N. Black Canyon Highway
Phoenix, Arizona 85029

Memory Equipment Department
Post Office Box 12313
400 N.W. 39th Street
Oklahoma City, Oklahoma 73112

GENERAL PRECISION
General Precision
Librascope Group
1100 Frances Court
Glendale, California 91201

HEWLETT PACKARD
Hewlett Packard
Dymec Division
395 Page Mill Road
Palo Alto, California 94306

HONEYWELL
Honeywell
Computer Control Division
Old Connecticut Path
Framingham, Massachusetts 01701

Honeywell
Electronic Data Processing Div.
60 Walnut Street
Wellesley Hills, Massachusetts 02181

HUGHES
Hughes Aircraft Company
Data.Processing Products Division
Fullerton, California 92634

IBM
International Business Machines
  Corporation
Data Processing Division
112 East Post Road
White Plains, New York 10600

IDI
Information Displays, Inc.
102 East Sandford Boulevard
Mount Vernon, New York 10550

INFORMATION INTERNATIONAL
Information International, Inc.
200 Sixth Street
Cambridge, Massachusetts 02142

INTERDATA
Interdata
2 Crescent Place
Oceanport, New Jersey 07757

ITT
International Telephone & Tele-
  graph Company
Federal Laboratories
3700 East Pontiac Street
Fort Wayne, Indiana 46803

LFE
Laboratory for Electronics, Inc.
Electronics Division
1075 Commonwealth Avenue
Boston, Massachusetts 02215

LSI
Lear Siegler, Inc.
Electronic Instruments Division
714 North Brookhurst Street
Anaheim, California 92803

MIDWESTERN
Midwestern Instruments, Inc.
41st Street & Sheridan Road
Tulsa, Oklahoma 74135

MONROE
Monroe Calculating Machine Co.
555 Mitchell Street
Orange, New Jersey 07050

NCR
National Cash Register Co.
1324 South Paterson Boulevard
Dayton, Ohio 45400

PACIFIC DATA
Pacific Data Systems, Inc.
644 Young Street
Santa Ana, California 92705

PHILCO
Philco Corporation
Subsidiary of Ford Motor Co.
3900 Welsh Road
Willow Grove, Pennsylvania 19090

POTTER
Potter Instruments Co., Inc.
151 Sunnyside Boulevard
Plainview, Long Island, N.Y. 11803

RAYTHEON
Raytheon Computer
2700 South Fairview Street
Santa Ana, California 92704

RCA
Radio Corporation of America
Camden, New Jersey 08101

REMEX
Remex Electronics
5250 W. El Segundo Boulevard
Hawthorne, California 90250

ROYTRON
Roytron Division
Royal Typewriter Company, Inc.
150 New Park Avenue
Hartford, Connecticut 06101

SANDERS
Sanders Associates, Inc.
95 Canal Street
Nashua, New Hampshire 03060

SCIENTIFIC CONTROL
Scientific Control Corporation
14008 Distribution Way
Dallas, Texas 75234

SCIENTIFIC DATA
Scientific Data Systems
1649 Seventeenth Street
Santa Monica, California 90404

SEL
Systems Engineering Laboratories, Inc.
Post Office Box 9148
Fort Lauderdale, Florida 33310

SOROBAN
Soroban Engineering, Inc.
Post Office Box 1690
Melbourne, Florida 32902

STANDARD COMPUTER
Standard Computer Corporation
1411 West Olympic Boulevard
Los Angeles, California 90015

STROMBERG-CARLSON
Stromberg-Carlson Corporation
Data Products Division
Post Office Box 2449
San Diego, California 92112

TALLY
Tally Corporation
13110 Mercer Street
Seattle, Washington 98109

TASKER
Tasker Industries
7838 Orion Avenue
Van Nuys, California 91409

TEC-LITE
Transistor Electronics Corporation
Post Office Box 6191
Minneapolis, Minnesota 55424

UNIVAC
Sperry Rand Corporation
UNIVAC Division
Sperry Rand Building
New York, New York 10019

UPTIME
Uptime Corporation
15910 W. 5th Avenue
Golden, Colorado 80401

VARIAN DATA
Varian Data Machines
A Varian Subsidiary
1590 Monrovia Avenue
Newport Beach, California 92660

VERMONT RESEARCH
Vermont Research
Precision Park
North Springfield, Vermont 05150

WESTINGHOUSE
Westinghouse Electric Corporation
Research and Development Center
Pittsburgh, Pennsylvania 15200

Denmark

REGNECENTRALEN
A/S Regnecentralen
Rialto
2 Smallegade
Copenhagen F

England

ELLIOTT
Elliott Automation
Elstree Way
Borehamwood, Herts.

ENGLISH ELECTRIC
English Electric Computers, Ltd.
Portland House
Stag Place, London, S.W. 1

FERRANTI
Ferranti, Ltd.
Automation Systems Division
Simonsway, Wythemshawe
Manchester 22

GEC
G.E.C. Computers & Automation, Ltd.
East Lane
Wembley, Middlesex

ICT
International Computers & Tabulators
Ltd.
Putney Bridge House
London, S.W. 6

MARCONI
Marconi Company, Limited
Automation Division
Chelmsford, Essex
England

PLESSEY
Plessey Electronics Group
Davis Road
Chessington, Surrey

France

BULL GE
Compagnie Bull General Electric
94 Avenue Gambetta
Paris 20

CII
Compagnie Internationale
pour l'Informatique
101 Boulevard Murat
75-Paris 16e

SEREL
Societe d'Exploitation et de
Recherches Electroniques
Aubergenville

SETI
Societe Europeene pour le
Traitement de l'Information
100 Route de Paris
Massy, Seine et Oise

SINTRA
Societe Industrielle des Nouvelles
Techniques Radioelectriques
26, rue Malakoff
92 Asnieres
France

Germany (West)

SIEMENS
Siemens and Halske AG
Hofmannstrasse 51
8 Munchen 25

TELEFUNKEN
Allgemeine Electrinictätis-Gesellschaft
AEG-Telefunken
Fachbereigh Anlagen Informationstechnir
775 Konstanz

ZUSE
Zuse KG
Grosse Industriestrasse 19 u. 21
Bad Hersfeld

Italy

OLIVETTI GE
Olivetti-General Electric S.p.A.
Via Pirelli 32
Milano

Japan

FUJITSU
Fujitsu Limited
2-8 Marunouchi
Chiyoda-ku, Tokyo

HITACHI
Hitachi, Ltd.
4, 2-Chome, Otemachi
Chiyoda-ku, Tokyo

MATSUSHITA
Matsushita Communication Indus-
trial Corporation
Tsunashima, Yokohama

MITSUBISHI
Mitsubishi Electric Corporation
2-12 Marunouchi
Chiyoda-ku, Tokyo

NIPPON ELECTRIC
Nippon Electric Company, Ltd.
33-7 Gochome, Shiba
Minato-ku, Tokyo

OKI ELECTRIC
Oki Electric Industry Co., Ltd.
10 Shiba, Takahama-cho
Minato-ku, Tokyo

TOSHIBA
Tokyo Shibaura Electric Co., Ltd.
1, 1-Chome, Uchisaiwai-cho
Chiyoda-ku, Tokyo

Sweden

DATASAAB
Computer Division of
SAAB AKTIEBOLAG
Linkoping

The Netherlands

ELECTROLOGICA
N V Electrologica
4 Bordewijkstraat
Post Office Box 4576
Rijswijk (Z.H.)

Bits per Cycle	Central Processor	Cycle Time (in microseconds)	Bits per Microsecond
	GENERAL ELECTRIC 225*, 255	18.0	1.11
	TOSHIBA TOSBAC 5200	18.0	1.11
	GENERAL ELECTRIC 412	20.0	1.00
	GENERAL ELECTRIC 205*	36.0	0.56
	GENERAL ELECTRIC 215*	36.0	0.56
21	EMR 210*	2.0	10.50
	EMR 2100*	2.0	10.50
22	RAYTHEON 250	3070.0	0.007
24	HONEYWELL 200/4200	0.75	32.00
	ICT 1904F	0.75	32.00
	ICT 1905F	0.75	32.00
	ICT 1906F	0.75	32.00
	ICT 1907F	0.75	32.00
	TOSHIBA TOSBAC 3400	0.8	30.00
	TELEFUNKEN TR86	0.9	26.64
	ICT 1906	1.0	24.00
	ICT 1907	1.0	24.00
	RAYTHEON 520	1.0	24.00
	CONTROL DATA 3200*	1.25	19.20
	CONTROL DATA 3300	1.24	19.20
	CONTROL DATA 3500	1.3	18.45
	SIEMENS 302	1.5	16.00
	SIEMENS 304	1.5	16.00
	SIEMENS 305	1.5	16.00
	DATASAAB D22	1.6	15.00
	GENERAL ELECTRIC GE/PAC 4020	1.6	15.00
	TOSHIBA TOSBAC 7000/60	1.6	15.00
	GENERAL ELECTRIC GE/PAC 4060	1.7	14.10
	CII 90/40	1.75	13.71
	CII 90/80	1.75	13.71
	CONTROL DATA 3100	1.75	13.71
	CONTROL DATA 3150	1.75	13.71
	GEC 90/25	1.75	13.71
	GEC 90/30	1.75	13.71
	GEC 90/300	1.75	13.71
	HONEYWELL DDP-124	1.75	13.71
	HONEYWELL DDP-224	1.75	13.71
	SCIENTIFIC CONTROL 655	1.75	13.71
	SCIENTIFIC CONTROL 6700	1.75	13.71
	SCIENTIFIC DATA SDS 930	1.75	13.71
	SCIENTIFIC DATA SDS 940	1.75	13.71
	SCIENTIFIC DATA SDS 9300	1.75	13.71
	SEL 840A, 840MP	1.8	13.33
	HUGHES H-3324	1.8	13.33
	ICT 1904E	1.8	13.33
	ICT 1905E	1.8	13.33
	ICT 1906E	1.8	13.33
	ICT 1907E	1.8	13.33
	EMR ADVANCE 6000 SERIES	1.9	12.69
	ICT 1903	2.0	12.00
	ICT 1904*	2.0	12.00
	ICT 1905*	2.0	12.00
	RAYTHEON 440*	2.0	12.00
	SCIENTIFIC CONTROL 660/2, 670/2	2.0	12.00

Bits per Cycle	Central Processor	Cycle Time (in microseconds)	Bits per Microsecond
	BULL GE 435	2.7	8.89
	GENERAL ELECTRIC 435	2.7	8.89
	TOSHIBA TOSBAC 5400/30	2.7	8.89
	GENERAL ELECTRIC GE/PAC 4050 II	3.4	7.05
	BULL GE 425	3.9	6.15
	GENERAL ELECTRIC 425	3.9	6.15
	TOSHIBA TOSBAC 5400/20	3.9	6.15
	UNIVAC III*	4.0	6.00
	DATASAAB D21	4.8	5.05
	HONEYWELL DDP-24	5.0	4.80
	GENERAL ELECTRIC GE/PAC 4040	5.0	4.80
	SCIENTIFIC CONTROL 660/5	5.0	4.80
	GENERAL ELECTRIC GE/PAC 4050 I	5.1	4.71
	BULL GE 415	5.8	4.15
	GENERAL ELECTRIC 415, 420	5.8	4.15
	TOSHIBA TOSBAC 5400/10	5.8	4.15
	ENGLISH ELECTRIC KDF7	6.0	4.00
	ICT 1901	6.0	4.00
	ICT 1902	6.0	4.00
	ICT 1909	6.0	4.00
	CONTROL DATA 924A*	6.4	3.75
	HONEYWELL 1400	6.5	3.7
	GENERAL ELECTRIC 405	8.0	3.00
	SIEMENS 303	8.3	2.89
	HONEYWELL 400	9.25	2.62
	TOSHIBA TOSBAC 3300	10.0	2.40
	RCA 501*	15.0	1.60
	GENERAL ELECTRIC 210*	32.0	0.75
	NIPPON ELECTRIC NEAC 1210	20000.0	.0012
25	DIGITAL ELECTRONICS DIGIAC 3080	1700.0	0.0015
27	ELECTROLOGICA EL X8	2.5	10.80
	ELECTROLOGICA EL X2, X4	5.0	5.40
28	NIPPON ELECTRIC NEAC 1240	5.3	5.28
	MATSUSHITA MADIC 500	20000.0	0.0014
30	UNIVAC 494	0.75	40.00
	ADAGE AMBILOG 200	2.0	15.00
	UNIVAC 490*	4.8	6.25
	UNIVAC 491, 492*	4.8	6.25
32	HITACHI HITAC 8500	0.84	38.00
	RCA SPECTRA 70/55	0.84	38.00
	CII 10070	0.85	37.75
	GEC S.7	0.85	37.75
	SCIENTIFIC DATA SIGMA 5	0.85	37.75
	SCIENTIFIC DATA SIGMA 7	0.85	37.75
	EAI 8400	1.0	32.00
	IBM 360/44	1.0	32.00
	HITACHI HITAC 5020E	1.5	21.67
	PHILCO 102, 102M	1.5	21.67
	SIEMENS 4004/25	1.5	21.67
	COLLINS C-8500	2.0	16.00

* System no longer marketed