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▶ In addition to run-time support, MP/OS utility software includes a standard power-up self-checking sequence which performs initial system diagnosis. Diagnostics are followed by a bootstrap program that automatically loads the program stored on diskette into main memory. Diskette copy, diskette formatting and initialization, and file transfer functions are also supported.

Real-Time Disk Operating System (RDOS) is a full-scale operating system that supports multi-tasking, and can schedule and allocate program resources to many different subprogram tasks. It is a comprehensive, modular system with a system generation procedure allowing the user to tailor the operating system to his hardware configuration and his application.

RDOS can be used either interactively from a console keyboard or in batch mode from job streams entered via card readers, disk files, cassette files, or magnetic tape files. RDOS can simultaneously support both foreground and background tasks, so that users can run two jobs at the same time. The higher-priority job, which is normally a real-time or response-dependent application program, is run in the foreground, while the lower-priority job is run in the background. Data from a background job is typically processed while waiting for an event or for data from the foreground job. Background mode can also be used to develop new programs without interrupting ongoing jobs. Foreground and background programs can be hardware-protected from each other and from the operating system.

RDOS includes a multi-partitioning system that gives users flexibility in overlaying programs from disk into main memory. Large user programs can be segmented into disk-resident overlays to allow efficient use of main memory and to make the programs more manageable. Tasks stored on the disk occupy main memory only when they are ready for execution. The dual-processor, shared-disk feature allows RDOS users to share peripherals and to access common data and programs on disk.

RDOS operates on any Data General minicomputer (except the M/600) with 32K bytes of main memory, a teletype-writer, and a disk. In addition, RDOS can support additional memory (up to 64K bytes), four million bytes of fixed-head disk storage, 28 disk cartridges or disk pack drives, and eight magnetic tape transports (either 7- or 9-track). Card readers, line printers, communications equipment, and analog and digital conversion equipment are also supported.

Also available to RDOS users is the Batch command interpreter and job supervisor. Batch calls in and controls execution of user and system programs. Any program that an on-line user can execute interactively from the console can be called. The Batch processor is not an integral part of RDOS and occupies no main memory when it is not being run. RDOS supports Extended Basic, Extended Fortran IV, Extended Algol, Business Basic, DG/L, and optimizing Fortran 5.

The *Advanced Operating System (AOS)* is an interactive time-sharing, multiple-batch, and real-time operating system, and is Data General's first multiprogramming operating system. AOS is characterized as heuristic; that is, it continually monitors all activities in the system, whether batch or a prioritized multi-task within a group of tasks, and schedules them on the basis of their previous use and the user's requirements. AOS makes use of procedures which are said to employ memory space, CPU time, mass storage, and other peripheral devices efficiently.

In addition to its monitoring and scheduling functions, AOS provides dynamic memory management through the use of common code and overlays, extensive data management,

fully integrated synchronous and asynchronous communications through support of such devices as the DCU Communications Processor and the Multiprocessor Communications Adapter, prioritized multi-tasking to handle multiple tasks within a user program including intertask and interprocess communication, and hardware/software protection.

Several elements make up the AOS data management facilities. Hierarchical file directories and structures are respectively provided for total file security and fast file access. Dynamic disk allocation is employed to provide more efficient use of disk space. Finally, device-dependent I/O is implemented to free files from physical hardware constraints.

Convenience facilities include the Command Line Interpreter, the Intelligent Spooler, a Batch facility that supports multiple batch job streams, and hardware error logging and on-line reporting. The Command Line Interpreter allows all systems functions to be available to terminal users, while the Intelligent Spooler gives multiple users concurrent access to a single output device. The Batch facility gives operators full queue management. The hardware error logging and on-line reporting system is a valuable aid to systems maintenance. The system provides soft error handling and recovery.

AOS is process-oriented. Data General defines a process as a group of program tasks that share up to 64K bytes of memory address space and compete for system resources as a unit. A process can execute a system program such as an editor or a user application program. Each process is allocated a set of resources and privileges which define how much CPU time and memory the process can use. All processes in the system are organized into a "family tree," and a parent process can, based on its own privileges, create offspring processes and define their privileges. Processes are user-defined as either permanently memory resident, pre-emptible, or always swappable.

Through the use of prioritized multi-tasking, multiple tasks within a process can run in parallel, communicating and synchronizing their activities. Through the use of dynamic memory management and the MAP hardware, every process is allocated up to 32 pages of 2K bytes each in a maximum memory space of 1,024K bytes.

System management facilities include a User Profile Editor, an Error Logging and Reporting System, a Diagnostic Monitor, a Resource Usage Accounting System, and a Process Environment Display System. Application development facilities include Text and File Editors, a Symbolic Debugger, Binder and Library Utilities, a Macro Assembler, Fortran IV, Fortran 5, Basic, DG/L, PL/1, Cobol, RPG II, and Idea. The Binder links object files to produce an executable program file and overlay file.

An integrated hardware/software scheme is implemented to provide security at the process, file, and system levels. Process security is provided through the use of the Eclipse MAP. Data files are protected by the access control built into the family tree directory structure.

AOS supports a broad range of peripheral devices, including disk and diskette units, magnetic tape, line printers, Data General's Dasher terminal printers, DG CRT terminals, card readers, paper tape readers/punches, and plotters. For high-speed communications among multiple Data General computers, AOS supports the Multiprocessor Communications Adapter (MCA). For asynchronous/synchronous communications, it supports Data General's Communications Systems (DG/CS) and Data Control Unit (DCU).

WORD PROCESSING: Busitext text processing software is available for all CS models and for any Data General ▶

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▶ system capable of supporting Business Basic. Busitext moves, deletes, or copies specified blocks of text; finds or replaces words or text strings; provides flexible cursor positioning, uses the same display terminal for both data and text processing; and allows integration of Busitext software and Business Basic data processing files. Operating system support includes MP/OS, DOS, RDOS, AOS, and AOS/VS.

LANGUAGES: The MP/OS operating system, for the CS/5, supports Business Basic, MP/OS/Business Basic, Interactive Cobol, MP/OS Interactive Cobol, MP/Fortran IV, MP/Pascal, (a subset of SP/Pascal), and a variety of utilities and programming tools.

The CS Series 100 and 200 offer Interactive Cobol or Business Basic for use in applications development as well as in RDOS and AOS operating environments. These languages are program- and data-compatible with Data General CS systems of the same language type, or with any AOS or AOS/VS-based Information System. Other languages supported by the CS Series 100 and 200 are Fortran IV, Fortran V, and Macroassembler. The Busigen program generator and Busipen graphics utilities are also available for CS Series 100 and 200 users with Business Basic.

See the Software-Languages section of the Data General Eclipse report M11-304-201 for a description of all of the above languages except Interactive Cobol, MP/Pascal, Busigen, and Busipen. Descriptions of MP/Pascal, Interactive Cobol, Busigen, and Busipen follow.

MP/Pascal is a high-level structured programming language based on a subset of Nicklaus Wirth's Pascal language. It provides data and programming structures that can clearly represent application data and operations. MP/Pascal features structured data including arrays, strings, records and sets of data, and strong data typing including user-defined types; modular programming extensions; systems-oriented extensions and enhanced I/O. MP/Pascal operates under the MP/OS operating system, and offers real-time multitasking capabilities. SP/Pascal is a superset of Data General's MP/Pascal language, developed to run on Nova or microNova processors. MP/Pascal programs can be recompiled to run more efficiently with SP/Pascal on Eclipse processors.

Interactive Cobol is currently supported on the CS systems, and implements the Level 1 ANSI Cobol-1974 Nucleus, Table Handling, Sequential I/O, Relative I/O, Indexed Sequential (ISAM) I/O, and Library modules, and includes several Level 2 modules. It provides for complex conditions (AND, OR, NOT, and parentheses) and sign conditions, and supports the standard 96-character ASCII set and floating-point data formats. Nested IF and PERFORM UNTIL statements are provided for structured programming.

A Screen Section is included in the Data Division for entry and inquiry/response formats. Screen interaction is allowed through the ACCEPT and DISPLAY verbs.

Interactive Cobol supports sequential, relative, and indexed sequential (ISAM) access methods. ISAM allows up to five search keys. ISAM keys can be up to 100 bytes long, and records up to 4K bytes in length are allowed. Record and file lockout are provided for multi-user applications. The Printed Access Scheduling System (PASS) allows the operator to determine the printing sequence of print files. The CS/5 supports Interactive Cobol under runtime MP/OS and MP/OS Interactive Cobol in its program-development version of the MP/OS operating system. MP/OS Interactive Cobol requires 5 megabytes of disk storage.

The Busigen program generator is an interactive program which generates programs executable in Business Basic. Busigen runs under DOS, RDOS, AOS, and AOS/VS, however, within the commercial family only the CS Series 100 and 200 support Busigen. Knowledge of Business Basic is not required to use the program generator. Instead of writing code, users respond to a series of menu screen selections; Busigen thus generates programs based on the user's responses.

Busigen software also generates report writer programs to access a database file. The user creates a report format by stepping through a series of prompts which request the name of the data file the report will access, the report title, and the data fields to be used. In addition, conditional reporting and calculation routines can be incorporated into the report.

The following application programs can be developed, supported and documented with Busigen: data entry, record update, record delete, inquiry, file maintenance, and report writer. All programs are generated in a standard format and may include alpha checks, numeric checks, and range checks.

Busipen graphics software can create a variety of standardized pie charts, bar charts, and line graphs on the Dasher G300 display terminal. The optional (model 6156) graphics printer can provide hard copy reproductions of screen images from the Dasher G300 display.

Busipen software is written in Business Basic and runs under the DOS, RDOS, AOS, and AOS/VS operating systems. Users can enter interactively such specifications as titles, legends, and filters, as well as integrating pie, bar, and line chart routines—available as swappable programs—into their applications. Standardized chart formats can be stored, allowing the user to compare different data sets. Of the Commercial systems, only the CS Series 100 and 200 support Busipen.

UTILITIES: The utility library for the CS systems includes standard file sort/merge, copy, and reorganization programs as well as an RJE80 communications subsystem and a HASP workstation emulator. Program development utilities include a text editor and an interactive debugger. Special features of the text editor include text insertion from other files, global search and replace, and relocation of multiple sections. The interactive debugger allows programmers to start, stop, or suspend program execution, to set traps (break points), and to show the results of the current process on the CRT. While execution is suspended, the programmer can examine and change the contents of storage, using Cobol-like verbs, and then rerun the program from the previous breakpoint. The following standard utilities are also included: Sort/Merge, Copy, Filestats, Analyze, Reorg, Delete, Append, Rename, Xfer, and Print. Additional utilities include Busitext for word processing, Busipen for graphics, and Busigen for report and program generation.

APPLICATIONS SOFTWARE: The packaged CS systems are intended to be sold primarily to OEMs and system development houses. No separate application packages have been announced for the CS series to date.

PRICING

POLICY: Data General offers the CS Series on a purchase-only basis, with the following types of hardware maintenance: the On-Call Service contract, Per-Call Service, and Depot Service. (Additional maintenance information may be found under PRICING, in the Data General Eclipse Systems report, M11-304-201). Data General's On-Call Service contract is one of the most comprehensive and flexible in the industry. Coverage can be selected by the customer for any consecutive 9-hour period between 8 a.m. ▶

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▶ and 6 p.m., and extended coverage is available up to 24 hours a day, 7 days a week. This agreement allows for unlimited remedial maintenance and includes all parts, labor and normal travel costs. Per-Call Service offers an alternative to On-Call Service for situations where response is not so critical and monthly maintenance billing is not convenient. All service requests are billed separately for parts, labor and travel. Labor rates are currently $80 per hour, portal to portal, with no minimum charge required.

Using Depot Service, a faulty printed circuit board may be mailed to one of three Depot Centers for product repair. Depot Centers are located in Colorado Springs, Colorado; Milford, Massachusetts; and Mississauga (Toronto), Ontario. Either flat rate or time and material rate charges are available.

The Hardware Subscription Service provides automatic updates, additions, and notification of new documentation on all Data General hardware for a fixed yearly fee. It is available to any owner of Data General equipment. This includes owners who have purchased their equipment through another vendor. Initial subscriptions include updates for one year. Prices are as follows: CS processors, $980; peripherals, $920; and communications and I/O, $920. Additional log books for any of the above topics are $500 each without updates. Yearly renewal rates are $480 for CS processors, $420 for peripherals, and $420 for communications and I/O. Discounts are available for multiple subscriptions.

Data General provides training for customers in the U.S. at Westboro, Massachusetts; El Segundo, California; Chicago, Illinois; Atlanta, Georgia; Dallas, Texas; and McLean, Virginia. Training centers are also located at Victoria, Australia; Greenford, Middlesex, England; Paris, France; Frankfurt/M., West Germany; Madrid, Spain; and Stockholm, Sweden.

SOFTWARE SERVICE/SUPPORT: Data General offers separately-priced software support packages (called Software Product Service Agreements) that include toll-free telephone support, remote access and monitoring, software and documentation updates, and optional quarterly on-site preventive maintenance and on-site remedial support (North America only). A telephone call to the Software Support Center is the first point of contact for customer software support.

Three levels of SPSA are available. Level 1 includes all the services listed above; Level 2 includes all services except quarterly preventive maintenance; and, Level 3 includes all services except the two on-site services. SPSAs are component-priced. Prices range from $20 to $370 per month, depending on the software product.

Local software consulting services are also available on an hourly basis for specialized technical consulting. The Software Subscription Service (SSS), also available separately from SPSAs, provides software and documentation updates and revisions. A documentation-only SSS provides monthly newsletters and documentation, but no media.

On-site software training is available when necessary. Costs are approximately $1200 per day for instructional charges including the instructor's daily expenses, instructor's travel expenses, and $250 per weekend for subsistence when incurred. This price includes all student documentation.

The Data General User's Group provides a forum for interchange of programs. The programs are available for a fee to cover reproduction and distribution costs.

Prices have yet to be announced for conversion from earlier models (CS/10, CS/50, and CS/70) to the new CS systems, and for memory upgrades for the new CS systems. The prices that follow are for single-unit quantities. Standard OEM discounts apply, and are available from Data General on request.

EQUIPMENT PRICES

		Purchase Price	On-Call Service
BASE SYSTEMS			
CS/5			
9480	The CS/5 Base System includes a microNova processor, 64K bytes of memory, two I/O ports, dual 5¼-inch floppy diskettes with 716K bytes of total storage, and a CRT terminal/keyboard, all in a desktop cabinet.	$ 5,850	$ 63

Note: The CS/5 Base System includes the Right-to-Use (RTU) MP/OS. All CS Systems include the Right-to-Use either Interactive Cobol or Business Basic Runtime License.

CS Series 100

All CS Series 100 Base Systems include a microEclipse processor, an 8-slot chassis, and battery backup. Systems may be ordered with either a 29-inch cabinet (1148-A) or a 60-inch cabinet (1144-F).*

9820	Includes 128K bytes of memory and an 1148-A cabinet	9,450	88
9821	Same as 9820 except with an 1144-F cabinet	10,720	88
9822	Includes 256K bytes of memory and an 1148-A cabinet	10,650	112
9823	Same as 9822 except with an 1144-F cabinet	11,920	112
9824	Includes 512K bytes of memory and an 1148-A cabinet	13,950	160
9825	Same as 9824 except with an 1144-F cabinet	15,220	160

Note: All CS Series 100 Base Systems (models 9820 through 9825) include the Right-to-Use (RTU) RDOS. All CS Systems include the Right-to-Use either Interactive Cobol or Business Basic Runtime License.

*All Base CS Series systems require one master console.

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	Purchase Price	On-Call Service

► CS Series 200

The following CS Series 200A Base Systems include a microEclipse processor. Systems may be ordered with either a 29-inch cabinet (1148-A) or a 60-inch cabinet (1144-F).*

		Purchase Price	On-Call Service
9920	Includes 256K bytes of memory, a 5-slot chassis, and an 1148-A 29-inch cabinet	13,550	120
9921	Same as 9920 except with an 1144-F cabinet	14,820	120
9922	Includes 512K bytes of memory, a 5-slot chassis, and an 1148-A cabinet	17,550	160
9923	Same as 9922 except with an 1144-F cabinet	18,820	160
9924	Includes 256K bytes of memory, a 16-slot chassis, an 1144-F cabinet, and battery backup	17,320	154
9925	Same as 9924 except with 512K bytes of memory	21,320	194
9926	Includes 512K bytes of memory, a 5-slot chassis, and an 1144-F cabinet	18,820	160
9927	Same as 9926 except with a 16-slot chassis and battery backup	21,320	194

Note: The CS Series 200 Base Systems models 9920 through 9925 include the Right-to-Use (RTU) RDOS, while models 9926 and 9927 include the Right-to-Use AOS. All CS Systems include the Right-to-Use either Interactive Cobol or Business Basic Runtime License.

The following CS Series 200B Base Systems include an Eclipse processor, a 16-slot chassis, an 1144-F cabinet, and battery backup. Systems may be ordered with either a 29-inch cabinet (1148-A) or a 60-inch cabinet (1144-F).*

		Purchase Price	On-Call Service
9940	Includes 256K bytes of memory	28,710	170
9941	Includes 512K bytes of memory	30,710	212
9942	Includes 768K bytes of memory	32,710	254
9943	Includes 1M bytes of memory	34,710	296
9944	Includes 512K bytes of memory and PIT	31,660	223
9945	Includes 768K bytes of memory and PIT	33,660	265
9946	Includes 1M bytes of memory and PIT	35,660	307

Note: The CS Series 200 Base Systems models 9940 through 9943 include the Right-to-Use (RTU) RDOS, while models 9944 through 9946 include the Right-to-Use AOS. All CS Systems include the Right-to-Use either Interactive Cobol or Business Basic Runtime License.

*All Base CS Series systems require one master console.

PACKAGED SYSTEMS

CS/5

Both CS/5 Packaged Systems include a microNova processor, 64K bytes of memory, two I/O ports, dual 5¼-inch floppy diskettes with 716K bytes of total storage, and a CRT terminal keyboard, all housed in a desktop cabinet.

		Purchase Price	On-Call Service
9486	Includes a five-megabyte disk drive	10,025	97
9487	Includes a 15-megabyte disk drive	11,400	104

Note: All CS/5 Packaged Systems include a Right-to-Use (RTU) MP/OS. All CS Systems include the Right-to-Use either Interactive Cobol or Business Basic Runtime License.

CS Series 100

All CS Series 100 Packaged Systems include a microEclipse processor, a Dasher 200 VDT, and battery backup. Systems may be ordered with either a 29-inch cabinet (1148-A) or a 60-inch cabinet (1144-F).

		Purchase Price	On-Call Service
9810	Includes 128K bytes of memory, an 1148-A cabinet, and a five-megabyte disk drive with a 1.2-megabyte diskette	17,575	179
9811	Includes 128K bytes of memory, an 1148-A cabinet, a 15-megabyte disk drive with a 1.2-megabyte diskette, and a 4-line asynchronous subsystem	19,935	198
9812	Includes 128K bytes of memory, an 1148-A cabinet, a 15-megabyte disk with a 1600 bpi tape drive, and a 4-line asynchronous subsystem	24,535	207
9813	Includes 256K bytes of memory, an 1144-F cabinet, a 25-megabyte disk drive with a 1600 bpi tape drive, and a 4-line asynchronous subsystem	30,315	244

Note: All CS Series 100 Packaged Systems include a Right-to-Use (RTU) RDOS. All CS Systems include a Right-to-Use either Interactive Cobol or Business Basic Runtime License.

CS Series 200

The following CS Series 200A Packaged Systems include a microEclipse processor, 256K bytes of memory, and a Dasher 200 VDT. Systems may be ordered with either a 29-inch cabinet (1148-A) or a 60-inch cabinet (1144-F).

		Purchase Price	On-Call Service
9928	Includes a 5-slot chassis, a 15-megabyte disk drive with a 1.2-megabyte diskette, an 1148-A cabinet, and a ULM-5 4-line async mux (4241)	25,090	244
9929	Includes a 16-slot chassis, a 25-megabyte disk drive with a 1600 bpi tape drive, an 1144-F cabinet, a ULM-5 4-line async mux (4241), and battery backup	36,570	294
9930	Includes a 16-slot chassis, a 73-megabyte disk drive with a 1600 bpi tape drive, an 1144-F cabinet, a 16-line async terminal interface (4342-P31), and battery backup	47,810	346
9931	Same as 9930 except with a 147-megabyte disk drive with a 1600 bpi tape drive	53,810	376 ►

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		Purchase Price	On-Call Service

➤ **CS Series 200 (Continued)**

The following CS Series 200B Packaged Systems include an Eclipse processor, a 16-slot chassis, a Dasher 200 VDT, a 60-inch cabinet (1144-F), a 16-line async terminal interface (4342-P31), and battery backup.

		Purchase Price	On-Call Service
9932	Includes 256K bytes of memory, and a 25-megabyte disk drive with a 1600 bpi tape drive	50,110	328
9933	Same as 9932 except including a 73-megabyte disk drive with a 1600 bpi tape drive	59,200	362
9934	Same as 9932 except including 147-megabyte disk drive with a 1600 bpi tape drive	65,200	392
9935	Includes 512K bytes of memory and a 73-megabyte disk drive with a 1600 bpi tape drive	61,200	404
9936	Same as 9935 except including 147-megabyte disk drive with a 1600 bpi tape drive	67,200	434
9937	Same as 9935, also includes PIT	62,150	415
9938	Includes 512K bytes of memory and a 147-megabyte disk drive with a 1600 bpi tape drive, and PIT	68,150	445

Note: The CS Series 200 Packaged Systems models 9928 through 9936 include the Right-to-Use RDOS, while models 9937 and 9938 include the Right-to-Use AOS. All CS Systems include the Right-to-Use either Interactive Cobol or Business Basic Runtime License.

MASS STORAGE

		Purchase Price	On-Call Service
6220/-D	5-megabyte fixed-disk drive with a controller; the 6220-D includes a 1.26-megabyte diskette drive, for the CS/5 and CS Series 100	4,175/6,175	34/71
6220-TT	Table-top version of the 6220	4,175	34
6225/-D	5-megabyte fixed-disk drive with controller; the 6225-D includes a 1.26-megabyte diskette drive, for the CS Series 200 only	4,500/6,600	42/79
6222/-D	15-megabyte fixed-disk drive with controller; the 6222-D includes a 1.26-megabyte diskette drive, for the CS/5 and CS Series 100	5,600/7,600	41/78
6222-TT	Table-top version of the 6222	5,550	41
6227/-D	15-megabyte fixed-disk drive with controller; the 6227-D includes a 1.26-megabyte diskette drive, for the CS Series 200	5,900/8,000	49/86
6101	12.5-megabyte non-removable disk drive with an integral 1.26-megabyte diskette drive; for the entire CS family	8,030	74
6102	Same as 6101, except without integral diskette	5,720	45
6104	25-megabyte non-removable disk drive with an integral 1.26-megabyte diskette drive; for the entire CS family	11,220	83
6105	Same as the 6104, except without integral diskette	8,910	54
6038	315K-byte diskette drive with a controller; for the CS Series 100 only	3,510	44
6039	Dual 315K-byte diskette drives, (offering a total of 630K bytes of storage) with controller; for the CS Series 100 only	4,720	53
6095-N	10-megabyte cartridge disk subsystem offering 5 megabytes of fixed, and 5 megabytes of removable storage; includes one 5-megabyte cartridge and a controller; for the CS Series 100 only	11,535	82
6096-A	1.26-megabyte diskette drive with a controller; for the CS Series 100 and 200 only	4,400	55
6096-B	Dual 1.26-megabyte diskette drives (offering a total of 2.52 megabytes of storage) with a controller; for the CS Series 100 and 200 only	5,940	83
6096-C	1.26-megabyte add-on diskette to increase storage on 12.5- or 25-megabyte drives (6101, 6102, 6104, and 6105); for the CS Series 100 and 200 only	4,180	39
6030	Dual 315K-byte drives (offering a total of 630K bytes of storage) with a controller for up to 4 drives; for the CS Series 200 only	4,720	59
6031	315K-byte single diskette drive with a controller for up to 4 drives; for the CS Series 200 only	3,500	53
6045	10-megabyte fixed/removable disk subsystem with one 5-megabyte cartridge and a controller; for the CS Series 200 only	12,475	126
6050	10-megabyte add-on cartridge disk drive to the 6045, 6046, or 6047 disk drives; for the CS Series 200 only	11,180	84
6050-F	Same as 6050 add-on, except to 6030 or 6031 diskette drives; for the CS Series 200 only	11,890	121
6060	96-megabyte disk drive with a disk pack, controller, and adapter for up to four drives; for the CS Series 200 only	32,250	231
6060-A	Same as 6060 except allows second, third and fourth drives to be added	26,750	168
6067	50-megabyte pack disk subsystem with a controller and an adapter for up to four drives, cables, and four disk packs (1143B); for the CS Series 200 only	27,600	200
6067-A	50-megabyte pack disk subsystem allows for the addition of second, third, and fourth drives, and includes a 50-megabyte disk drive, cables, and a disk pack (1143A); for the CS Series 200 only	19,900	147
6070	20-megabyte fixed/removable cartridge disk subsystem offering 10 megabytes of fixed and 10 megabytes of removable disk storage, a controller for four drives, associated cables, and six removable disk cartridges, for the CS 200 only	15,400	147
6070-A	20-megabyte add-on cartridge disk drive with a power supply, one removable disk cartridge, and cables; for the CS Series 200 only	11,880	95
6097-A	1.26-megabyte diskette drive with a controller for 12.5- or 25-megabyte disk drives, chassis, and a power supply; for the CS Series 200 only	4,620	61
6097-B	Dual 1.26-megabyte diskette drives (offering a total of 2.52 megabytes of storage) with a controller for 12.5- or 25-megabyte disk drives, chassis, and a power supply; for the CS Series 200 only	6,160	88
6122	277-megabyte disk drive with a high-speed channel controller, an adapter for up to four drives, cables, and a disk pack; for the CS Series 200 only	43,350	240
6122-A	Same as 6122, except allows second, third, and fourth drives to be added	37,850	180
6098	12.5-megabyte non-removable disk subsystem with an integrated 1.26-megabyte diskette drive; for the CS Series 200 only	8,360	76
6099	Same as the 6098, except without diskette drive	6,050	47
6100	25-megabyte non-removable disk subsystem with an integrated 1.26-megabyte diskette drive; for the CS Series 200 only	11,220	85

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		Purchase Price	On-Call Service
MASS STORAGE (Continued)			
6103	Same as 6100, except without diskette drive	8,910	56
6160	73-megabyte high performance, non-removable disk drive, including controller and cables; for the CS Series 200 only	18,000	90
6160-A	73-megabyte add-on disk drive for the 6160 or 6161	14,500	78
6161	147-megabyte high performance non-removable disk drive, including controller and cables; for the CS Series 200 only	24,000	120
6161-A	147-megabyte add-on disk drive for the 6160 or 6161	20,500	108
MAGNETIC TAPE EQUIPMENT			
6026	Transport and controller; industry-compatible, 9-track, NRZI, 10.5-inch reels, 800/1600 bpi, 8 drives per controller	16,500	121
6123/6125	Streaming tape drive; industry-compatible, 8.5-inch reels, 1600 bpi, streams at 30 ips off-line	6,600/6,800	46
PRINTERS			
4422	Dot matrix; 150 cps, 136 columns, 96-character set, upper and lower case, serial interface, multilingual type fonts are printer-resident and switch-selectable; for the CS/5, CS Series 100 and 200	2,290	45
6041	Dot matrix; 60 cps, 132 columns, 96-character set, upper and lower case, serial interface, optional multilingual fonts; for the CS Series 100 and 200 only	2,450	29
6156	Dot matrix; 80 cps, 80 columns, 96-character set, upper and lower case, G300 interface, graphics slave printer, no multilingual type fonts; for the CS Series 100 and 200 only	1,600	32
6193	Dot matrix; 180 cps, 132 columns, 96-character set, upper and lower case, serial interface, optional multilingual type fonts; for the CS Series 100 and 200 only	4,050	54
6190-P	Dot matrix; 180 cps, 132 columns, 96-character set, upper and lower case, programmed I/O interface (PIO), optional multilingual type fonts; for the CS Series 100 only	3,750	42
6191	Dot matrix; 180 cps, 132 columns, 96-character set, upper and lower case, programmed I/O interface (PIO), optional multilingual type fonts; for the CS Series 200 only	4,450	56
6192	Same as 6191 except with data channel interface (DCH); for the CS Series 200 only	5,150	59
4354	Dot matrix; 340 cps, 132 columns, 96-character set, upper and lower case, serial interface, optional multilingual type fonts; for the CS Series 100 and 200	5,150	60
4353-P	Same as 4354 except with programmed input/output interface (PIO); for the CS Series 100 only	5,000	60
4355	Same as 4354 except with programmed input/output interface (PIO); for the CS Series 200 only	5,300	79
4356	Same as 4354 except with data channel interface (DCH); for the CS Series 200 only	5,600	90
4324-P	Band; 230 lpm, 132 columns, 96-character set, upper and lower case, programmed input/output interface (PIO), optional multilingual type fonts; for the CS Series 100 only	8,900	94
4323-P	Band; 300 lpm, 132 columns, 96-character set, upper case only, programmed input/output interface (PIO), optional multilingual type fonts; for the CS Series 100 only	8,700	94
4326	Band; 230 lpm, 132 columns, 96-character set, upper and lower case, programmed input/output interface (PIO), optional multilingual type fonts; for the CS Series 200 only	9,200	107
4328	Same as 4326 except with data channel interface (DCH); for the CS Series 200 only	9,200	111
4325	Band; 300 lpm, 132 columns, 64-character set, upper case only, programmed input/output interface (PIO), optional multilingual type fonts; for the CS Series 200 only	8,900	107
4327	Same as 4325 except with data channel interface (DCH); for the CS Series 200 only	8,900	111
4363	Band; 436 lpm, 132 columns, 96-character set, upper and lower case, data channel interface (DCH), optional multilingual type fonts; for the CS Series 200 only	13,300	160
4364	Band; 600 lpm, 132 columns, 64-character set, upper and lower case, data channel interface (DCH), optional multilingual type fonts; for the CS Series 200 only	12,900	160
4320/4322	Letter quality; 55 cps, 132 columns, 96-character set, upper and lower case, serial interface, optional multilingual type fonts; for the CS Series 100 and 200	5,900/8,100	65/100
TERMINALS			
6106	Dasher D100 terminal; 7 x 11 dot matrix, 24 lines x 80 characters; printer interface is not available; for the CS Series 100 and 200 only	1,750	19
6107	Same as the 6106 with the addition of a printer interface; for the CS Series 100 and 200 only	2,150	24
6108	Dasher D200 terminal, 7 x 11 dot matrix, 24 lines by 80 characters; printer interface is not available; for the CS Series 100 and 200 only	1,950	20
6109	Same as 6108 with the addition of a printer interface; for the CS Series 100 and 200 only	2,350	25
6130	Dasher D400 text/graphics terminal; 7 x 11 dot matrix, 24 lines by 80 or 135 columns; does not include keyboard; for the CS Series 100 and 200 only	2,000	16
6134	Dasher D450; same as 6130, except 1,024 downline loadable user-defined characters; for the CS Series 100 and 200 only	2,500	18
6131	Keyboard for 6130/4	300	4
6150	Dasher G300 graphics display; 640 x 240 picture element (pixel) matrix, does not include keyboard; for the CS Series 100 and 200	3,500	21
6151	Keyboard for 6150	400	4

Data General Commercial Systems Family

		Purchase Price	On-Call Service

► COMMUNICATIONS

		Purchase Price	On-Call Service
4255/4256	ALM-8 asynchronous line multiplexer, for the CS/5	2,520/1,570	20
4257/4258	ALM-16 asynchronous line multiplexer, for the CS/5	2,520/1,650	24
4241/4242	ULM universal line multiplexer, for the CS Series 100 and 200	1,590	18
4243	ULM universal line multiplexer for the CS Series 100 and 200	3,070	33
4226-P	Single line synchronous subsystem with CRC, for the CS Series 100	715	10
4207-S	Asynchronous interface board, for the CS Series 100	285	6
4227-P	ALM-4 programmable asynchronous line multiplexer, for the CS Series 100 only	935	12
4254	DCU/200 Data Control unit, for the AOS-based CS Series 200 with the Xodiac character or bit synchronous communication line	4,480	44
4346	Programmable synchronous interface (CSI), for AOS-based CS Series 200s for the Xodiac character communication line	1,840	16
4340	AMI-8 Asynchronous modem interface, for the CS Series 200 only	2,760	20
4342-PCA	ATI-16 Asynchronous terminal interface, for the CS Series 200 only	2,900	24
4348	BSI-1 Bit synchronous interface, for the CS Series 200 with the Xodiac bit synchronous communication	1,990	15
4078-P	Asynchronous single-line controller, for the CS Series 200	460	5

LICENSED SOFTWARE

		License Fees	
		Initial	Subsequent
30055-09H, Q, W	MP/OS Business Basic for the CS/5 only	$1,600	$ 450
30110-09H, Q, W	MP/OS Interactive Cobol for the CS/5 only (requires a minimum of 5M bytes of disk storage)	1,600	450
30140-01H, Q, W	MP/OS Busitext	1,900	250
3778-02F, Q, W, H, M	MP/Fortran IV for the CS/5 only	1,100	200
3777-09F, Q, W, H, M	MP/Pascal for the CS/5 only	2,000	350
3709-09H, Q, M	RDOS Business Basic for the CS Series 100 and 200	2,445	660
30112-09H, Q, M	RDOS Interactive Cobol for the CS Series 100 and 200	3,985	2,510
30142-01H, Q, M	RDOS Busitext for CS Series 100 and 200	2,500	500
30137-01H, Q, M	RDOS Busigen for the CS Series 100 and 200	1,675	1,000
30132-01H, Q, M	RDOS Busipen for CS Series 100 and 200	1,950	750
3888-09H, M, Q	AOS Business Basic for the CS Series 100 and 200	5,925	3,525
30113-09H, M, Q	AOS Interactive Cobol for the CS Series 100 and 200 only	4,880	2,510
30143-01H, M, Q	AOS Busitext for the CS Series 100 and 200	2,900	1,000
30138-01H, M, Q	AOS Busigen for the CS Series 100 and 200	2,950	1,000
30133-01H, M, Q	AOS Busipen for the CS Series 100 and 200	2,500	750
3626	Fortran IV for the CS Series 100 and 200	1,260	630
3627	Fortran V for the CS Series 100 and 200	3,810	2,180

COMMUNICATIONS SOFTWARE

		Initial	Subsequent
30049	MP/RJE80 for the CS/5 only	1,500	500
30088	MP/3270 for the CS/5 only	1,500	1,000
N/A	X.25 Software Package; only runs under AOS or AOS/VS operating systems	1,870	1,350 ■