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The small business computer market continues to grow at a phenomenal rate. In 1978 it was estimated that the value of small business computers shipped in 1977 was approximately $930 million, and by 1982 this figure would increase to about $3.9 billion, and that the number of small business computers shipped in 1982 would approach the 50,000 mark, almost three times the number shipped in 1977.

In 1979, a DEC spokesman projected that the number of small business systems shipped in 1980 would exceed 60,000, climb to over 500,000 in 1985, and soar to about three million by the end of the decade. He also estimated that the dollar value of units shipped would be about $3.5 billion in 1980, be approximately $13 billion by 1985, and reach $50 billion in 1990.

According to the spokesman, these numbers are in reach considering the buying potential. Looking at businesses with revenues of more than $100,000, he estimated that there were over two million prospects in 1979 and only 120,000 installations, or a 6 percent saturation. Looking five years ahead, these prospects will number 2.5 million, but only 1.4 million installations will exist, or slightly more than a 50 percent saturation. Over and above these prospective customers, small business system vendors will find some 12 million companies with revenues under $100,000, each a prospective customer for their first computer.

There is no doubt that the small business computer will be a common sight in most small business firms—perhaps as commonplace as an office copier or telephone switchboard. The ever-increasing costs and complexities of doing business are forcing small businessmen to find new ways to cut their labor costs and gain tighter control over their operations, and a wisely chosen small computer system can help immeasurably in both these critical areas.

The current products of 67 suppliers of small business computers are represented in this comprehensive report. Detailed characteristics, features, and prices of 278 systems are presented in convenient comparison chart form. In addition, the report includes buying hints and discussions of new technologies.

In price and performance, the small business computers span a wide range that fills the gap between conventional accounting machines at one extreme and medium-scale computer systems at the other. Though the current small business systems differ widely in their architecture, data formats, peripheral equipment, and software, they are generally characterized by purchase prices in the $5,000 to $100,000 range and by a strong orientation, in both their equipment and software, toward conventional business data processing applications.

In its basic configuration, today's small business computer typically consists of a central processor, a keyboard/CRT unit for data entry, a disk unit for file storage, and a serial printer for hard-copy output. Beyond that, the increasing number and diversity of systems on the market make it difficult to generalize about components, speeds, capacities, and expansion possibilities. A capsule summary of some of the key characteristics of the 278 models represented in this year's report is as follows:

- Approximately one-half of the systems offered are based on 16-bit central processors and one-third use 8-bit machines. Also represented are 12-bit, 24-bit, 32-bit, and 64-bit computers.
- Approximately 88 percent of the systems offer MOS memory, and all the rest use core memory, with the exception of two older NCR models that use thin-film memory.

The Hewlett-Packard HP 3000 Series 44 Business Computer System features one megabyte of main storage, a 1600-bpi reel-to-reel tape drive, an HP 2680 laser printer, and a maximum of 1.92 gigabytes of disk storage. The purchase price of the basic system is $109,445.

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- Minimum memory capacities range from 4K to 2M bytes. Approximately 15 percent have a minimum of 16K bytes, 14 percent a minimum of 32K bytes, 30 percent a minimum of 64K bytes, and 13 percent a minimum of 128K bytes.

- Maximum memory capacities range from 8K to 8 million bytes. Approximately 28 percent of the systems offered have a maximum capacity of 64K bytes, 14 percent a maximum of 128K bytes, and 18 percent a maximum of 256K bytes.

- To provide random-access storage for data files and programs, 73 percent of the systems offer floppy disk units, 75 percent offer cartridge disk units, 46 percent offer pack disk drives, and 23 percent offer fixed-head disk or drum units.

- To produce printed reports, 39 percent of the systems offer a serial printer and 16 percent offer a line printer as part of their basic configurations.

- To provide for communication with remote terminals and/or larger computers, 94 percent of the systems offer at least one data communications line, and about one-third can be equipped with from two to eight lines.

The business data processing systems included in this report are known by various names, such as business minicomputers, electronic accounting machines, office computers, or electronic billing computers. To simplify matters, we have chosen to use the term "small business computers" (SBCs) throughout this report.

This report is designed to bring you, in concise comparison-chart form, the up-to-date hardware and software characteristics of the small business computer systems that are currently being marketed in the United States. For guidance in selecting and acquiring the particular system that will best meet your needs, we urge you to consult Report M07-100-201, *Selection and Installation of Business Minicomputers.* Also keep in mind that DATAPRO REPORTS ON MINICOMPUTERS contains detailed individual reports on most of the popular small business computer systems, as listed in the Index or Table of Contents.

The Small Business Computer Marketplace

The small business computer market is served by four distinct types of vendors. The first type is the "Fortune 500" companies such as Burroughs, Honeywell, IBM, NCR, and Sperry Univac, all of whom have vast product lines and resources. For these companies, the small business computer is just one of a broad line of products (although in the cases of NCR and Burroughs, business minicomputers now account for a very sizeable portion of total corporate sales revenues).

A second group consists of minicomputer manufacturers such as Digital Equipment Corporation (DEC), Data General, Computer Automation, Hewlett-Packard, Wang Laboratories, and others. This group has watched the small business computer marketplace mushroom in size, and now wants a piece of the action. Their answer to this segment of the marketplace is a packaged configuration consisting of a minicomputer and associated peripherals from their current product line, usually accompanied by some applications software. Most minicomputer vendors also offer assemblers and compilers for the user who wants to do his own programming or solve business problems that cannot be handled by packaged software.

System houses or turnkey vendors, such as Qantel, STC Systems, and many others, comprise the third group of suppliers of small business computers. This group is very similar to the second group except that the turnkey vendors generally buy minicomputers and/or peripheral devices from the manufacturers, package the configurations, and supply their own software. The prime appeal of a full turnkey system is that all software is written by the vendor; therefore, the user is not required to employ a high-priced programming staff. Basic/Four Corporation, which started out as a systems house using Microdata minicomputers, is now building its own central processors and is one of the leading suppliers of small business computers.

Microcomputer companies are beginning to appear on the scene as the fourth group of SBC suppliers. Companies such as BRD, CADO Systems Corporation, and others are offering microprocessor-based small business systems that sell for $20,000 or less. This group is still in its infancy, but seems destined to be a major force int he SBC marketplace in the near future.

Most of the current members of the last two groups sell small business computers and services exclusively, and in many cases are themselves small businesses. However, what they lack in size and resources is often more than compensated for by their quick reaction time to problems, general expertise, and eagerness to satisfy.

IBM, a long-time laggard in the small business computer sector of the EDP marketplace, has climbed into its accustomed position of market leadership during the last few years on the strength of four highly significant product offerings: the System/3, System/32, System/34, and System/38.

The IBM System/3, introduced in 1969, now occupies a position at the upper end of the SBC market segment. It is offered in numerous models at system purchase prices ranging from about $20,000 to more than $300,000. With over 50,000 installations worldwide, the System/3 ranks as one of the fastest-selling computers in history.

The IBM System/32 was unveiled in January 1975 as the smallest and lowest-priced general business computer ever announced by the industry giant. All components of the System/32—processor, main storage, keyboard, display,

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The Data General CS/70 can support up to 17 display terminals and up to 760 MB of disk storage. The purchase price of the basic system containing 128K bytes of main storage memory, 1.2 megabytes of floppy disk storage, 25 megabytes of fixed-head disk storage, a 180-cps serial printer, and a 300-lpm line printer is $53,050.

printer, disk storage unit, and diskette drive—are housed in a single compact, desk-sized cabinet. What's more, IBM is billing the System/32 as a "programmer-less" machine whose software, for most users, will consist entirely of preprogrammed Industry Application Packages supplied by IBM. With equipment purchase prices beginning at $26,870 and monthly rentals beginning at $1,047, the System/32 has already convinced thousands of small businesses that it's time to take their first step into computer usage. The availability of the System/32, backed by IBM's powerful marketing forces, has substantially enlarged the total market for small business computers and generated increased sales for both IBM and many of its competitors.

The IBM System/34, introduced in April 1977, represents the next logical step in IBM's succession of small business computer systems. As compared with the System/32, the new system features more processing power, larger memory capacity, larger disk storage capacity, and the ability to attach a number of independent multiprogramming workstations to the basic system. This last feature is the most significant difference between the two systems, since the biggest single drawback to the System/32 for most potential users has been the fact that it is rigidly restricted to serving one user at a time. Thus, with the System/34, IBM has strongly endorsed the concept of multi-user, multi-terminal SBC systems of the type that have long been offered, with considerable success, by vendors such as Basic Four, Datapoint, and Microdata.

The IBM System/38, introduced in October 1978, is the largest and most powerful member of the IBM General Systems Division's expanding line of business data processing systems. Featuring interactive operation, integrated data base support, and an extended RPG programming language, the System/38 represents an attractive migration path for current users of the smaller IBM System/34 and the aging, batch-oriented System/3. The System/38 is available in 48 packaged models that offer from 512K to 1536K bytes of main memory, 64.5 to 387 million bytes of nonremovable disk storage, a diskette magazine drive, and a system console with keyboard and display.

Burroughs and NCR, the perennial leaders in the SBC marketplace until the IBM onslaught, are still strong contenders. Both firms offer a broad range of products backed by extensive marketing and service organizations.

Sperry Rand is another of the "Fortune 500" companies to announce a bold thrust into the SBC market. The firm's Sperry Univac Division, which had long lacked an effective SBC to complement its strong line of larger computers, corrected that oversight by introducing the Univac BC/7 in January 1977. A cardless system designed for turnkey operations, the BC/7 can consist of a processor with 48K, 64K, 128K, or 256K bytes of MOS main memory; an operator's console; up to eight workstations, each with CRT display and optional non-impact page printer; up to 6 million bytes of floppy disk storage; up to 40 million bytes of cartridge disk storage; one or two tape drives; and one or two printers. Purchase prices for the BC/7 packaged systems range from about $14,000 up to about $40,000. Sperry Univac's new commitment to the SBC field is underscored by the fact that at the time of the BC/7 announcement, nearly $25 million had already been invested in the associated organization, facilities, people, and product. Then, in June 1977, Sperry Univac purchased Varian Data Machines, a major manufacturer of minicomputers since 1967. There's little doubt that the technology developed by Varian will show up in future Univac offerings in the small business computer marketplace.

Digital Equipment Corporation, the leading builder of

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scientific minicomputers, offers business-oriented users its Datasystem 300 and 500 Series systems based upon the popular DEC PDP-8 and PDP-11 minicomputers. The most recent addition to the Datasystem 300 line is the Datasystem 356. The system offers a maximum main storage capacity of 256K bytes, and a disk storage capacity of 224 megabytes. Other options include a 180-cps serial printer, a 240- to 900-lpm line printer, and a reel-to-reel tape drive. The basic system price for the Datasystem 356 is $40,400.

Hewlett-Packard and General Automation are other major suppliers of scientific minicomputers that now offer "packaged" hardware/software configurations oriented toward business data processing applications. Wang Laboratories, which has elected to specialize in serving the SBC market, is now one of the foremost suppliers of these systems.

European-made equipment is making a much greater impact upon the small business computer market than in any other segment of the U.S. computer market. ICL, Olivetti, and Nixdorf are marketing equipment which they manufacture in Great Britain, Italy, and Germany, respectively.

Buying Guidance

As with all categories of data processing equipment, the watchword in selecting a small business computer is "Buyer beware." These machines come in a wide range of types, sizes, and capabilities—with price tags to match—and there's a great deal to be gained through systematic selection of the most appropriate system for your particular needs.

Alternatives

There are several other alternatives you might want to consider before deciding that a small computer system is the answer to all your problems. Many small companies (fewer than 200 employees and sales of less than $5 million) have selected programmable calculators, computer service bureaus, or time-sharing companies to provide the same or comparable services. Each user must decide which alternative provides the most cost-effective solution to his problems. Beyond that, decisions must be made regarding expandability, flexibility, ease of operation, reliability, turnaround time, compatibility with present operations, and the desirability of keeping all operations in-house. After careful consideration is given to these aspects and any other factors peculiar to your operations, an informed decision can be made as to which approach will work best in your company.

But all too often, the buyers of this class of equipment have little or no understanding of data processing principles and are likely to buy the wares of the salesman who arrives first or sells hardest.

No company should *ever* buy a computer from the first salesman who comes through the door. It's always far wiser to check out the offerings of at least a few of the other major suppliers, and you shouldn't hesitate to play one vendor against another in an effort to get the most for your money. Just remember that all promises of extra software, technical support, or other concessions should be specifically included in the final contract.

Before seriously considering the acquisition of any busines minicomputer, you should demand:

- Detailed specifications of all the pertinent hardware and software.
- A full-scale demonstration of the equipment on at least one of your own principal applications—or, if that's not practical, on a demonstration program whose functions are similar enough to your own needs so that you can draw realistic conclusions about the system's processing speed and ease of programming and operation.
- A detailed proposal that spells out exactly what *equipment, software,* and *technical support* will be supplied, estimated processing times for each of your applications, all responsibilities of both the vendor and the buyer, and the total purchase price or monthly rental price.
- A list of users in your geographical area who are employing the system for applications similar to yours. Talk to several of these users and find out as much as you can about their experiences. While they may not be able to give you much help in developing a sophisticated comparison to other alternative systems, they *can* give you a good idea of what pitfalls to watch out for in installing and using that particular system.

A critically important area to be evaluated is *software*—the programming packages and languages used to program the computer and thereby direct its operations. It is important that you carefully investigate the available software. This investigation should include the programming languages, preprogrammed utility packages such as payrolls, inventory, control, general ledger, etc.

Vendors' claims and promises concerning the availability and capability of software should be carefully checked. This is particularly true of software that has been announced but not yet released. Vendors have frequently failed to live up to their marketing publicity.

Since SBC users typically start with no programming staffs of their own, it is important that appropriate program packages be available to fit your specific requirements. If not, you should require the vendor to take on full responsibility to write and test the initial programs you'll need. Otherwise, you'll have to either recruit and train your own programmers or pay an

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outside software firm to develop your programs. If not kept under strictest control, software costs can accumulate until they equal, or even exceed, hardware costs. Potential dollar savings can be quickly devoured by software costs.

The availability of reliable and qualified vendor support for both equipment mainteance and software aid is another vitally important factor in the business minicomputer environment. The limited resources generally available to small computer users make you depend heavily on your vendor for such assistance. In many cases the vendor will even design the initial system and make any required changes to his program packages for you. Thus, the ability of the vendor to render competent and continuing service in these matters is a vital concern to you.

Some vendors do not offer equipment maintenance and/or software to complement their hardware offerings. In this case, the user must deal with independent firms in order to complete the package. In one respect this is good, because overall costs may well be lower. However, when a problem occurs, the finger-pointing game can begin: one vendor blaming the other for the system's malfunction. Fortunately, this kind of reaction is in the minority, and despite the potential for problems, the multi-vendor approach can work well. If it didn't, the independent equipment maintenance and software firms would disappear, and that just isn't happening.

Most potential users of an SBC naturally raise the question of purchase versus lease. The single most important consideration is the length of time that this particular system is likely to be able to handle the data processing requirements of your company. Is there room for system expansion, with regard to both the processor and the peripherals, or is this the top of the line? In most cases, it is not a wise decision to make your first system the most powerful system offered by a particular vendor. If your company's operations expand, how will you expand the system? Will you have to acquire a new and more expensive processor? Or, worse yet, will you have to change vendors? Generally, if you are confident that a particular system can handle your data processing needs for five years or more, then purchasing the system will be advantageous. However, if you have selected the top of the line or if there are fewer than five years of potential life in the system, you will probably be better off to lease.

For a detailed discussion of all the aspects of selecting, acquiring, installing, and converting to a low-cost business data processing system, be sure to see Report M07-100-201, *Selection and Installation of Business Minicomputers.*

The Comparison Charts

The principal characteristics of 278 small business computers from 67 vendors are presented in the accompanying comparison charts. All of these systems are currently being marketed in the United States. Nearly all of the information in the charts was supplied and/or verified by the manufacturers or U.S. suppliers during November and December 1980; their close cooperation with the Datapro Research staff in the preparation of these charts is gratefully acknowledged.

No report on today's small business computers could be totally complete. The field of suppliers is just too large and growing too fast. We have, however, made every reasonable effort to include all of the major suppliers and a high proportion of the smaller ones as well. The absence of any company's products from these comparison charts means either that the company was unknown to us or that it failed to respond to our repeated requests for information; however, an addendum to this report will be published in the March supplement of DATAPRO REPORTS ON MINICOMPUTERS for those companies who required more time to answer the mailed survey.

The comparison chart entries and their significance to potential users of small business computers are explained in the following paragraphs, together with some useful guidelines for selecting the equipment that will most effectively meet your needs.

Data Formats

This section of the comparison charts describes the formats used to store and process data within each system.

Word length is the number of bits (binary digits) of data that can be stored in or retrieved from the internal storage unit during a single cycle. Some SBCs have a "fixed word length," meaning that each machine word or operand always has the same number of bits, digits, or characters. Others have a "variable word length," meaning that their operands may consist of a variable number of bits, digits, or characters. In the latter case, the "word length" entry shows the number of data bits used to represent each byte or character within the variable-length operands.

CPU

Model indicates the manufacturer and model of the minicomputer used as the system's central processing unit (CPU). In some cases this entry will be identical with the entry at the top of the chart; however, in the case of a packaged turnkey system, the entries will differ.

Add time is the time required, in microseconds, to develop the arithmetic sum of two operands. It is a widely used measure of computer performance—but a figure that turns out to be of comparatively little importance in the selection of many SBCs. The reason is that the overall speed of many of these systems is largely determined by the operator's keying speed. Add times for the systems covered in our survey span the range from a few microseconds to more than half a second—yet in many applications the key question is still whether the operator can "beat the

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machine." If not, the machine is probably as fast as it needs to be for these keyboard-oriented business applications. (It should be noted that for larger equipment configurations, in applications where there are two or more operators at separate terminals or where the transaction data is prerecorded on cards, or tape, add times—and internal speeds in general—become highly significant considerations.)

Number of I/O ports is an indication of the input/output capability and expandability of the system. Generally, each port allows the user to interface one peripheral device to the system, although multiple disks, CRTs or communication lines are often interfaced to one I/O port. Two numbers are given wherever possible, the first indicating the number of ports included on the basic system and the second showing the maximum number of ports that can optionally be included. Some of the figures are quite large and indicate that the vendors took into consideration the use of multiple-device interfaces and the maximum number of terminal devices theoretically connectable. It should be noted that additional hardware, in the form of expansion chassis and power supplies, may have to be added to achieve the maximum I/O capability.

Internal Storage

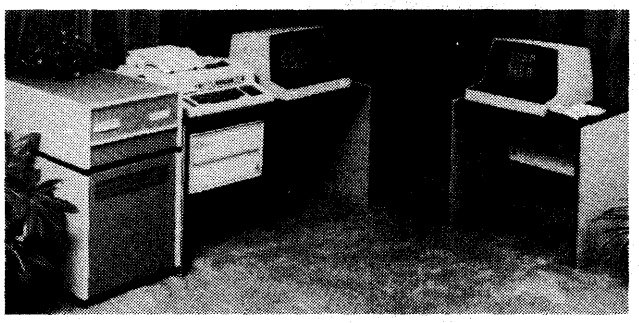
One of the principal characteristics that distinguishes computers from adding machines and conventional accounting machines is the provision of an internal storage unit capable of holding and selectively retrieving a significant quantity of data and/or instructions. This section of the comparison charts describes each system's internal storage facilities.

Type indicates whether the system uses core or MOS (semiconductor) memory. Magnetic core storage has been widely used for more than a decade, and has proved to be fast, flexible, and reliable. Semiconductor storage, which is rapidly superseding core storage as the principal storage medium for large computers, is becoming quite popular in business minicomputers as well. When both types of memory are available for a system, we've made every attempt to denote the specifications for both.

Capacity of basic system specifies the amount of memory, in bytes, included in the basic system. The amount of internal storage is one of the most significant characteristics in appraising the power of any computer. The amount of productive processing that a computer can perform during any one run is largely determined by the number of instructions and/or operands it can hold.

Maximum capacity, bytes shows the largest memory size available for this model; *increment size, bytes* indicates the size of the memory modules that can be added to expand the basic system.

Cycle/access time, microseconds. Cycle time is the minimum time interval that must elapse between the starts of two successive accesses to any one storage location. The storage cycle time normally ranges with word length as one of the most significant individual indicators of a computer's performance potential. However, as discussed earlier, the throughput of the equipment covered in this report is frequently determined by the operator's keying speed rather than by the machine's internal performance. *Access time* is the actual elapsed time between the CPU's request for data and the time when that data is received (read). In core memory, the access time is usually one-half the cycle time; MOS memories do not display a similar relationship.



Alpha Micro's AM-1031 Computer Business System, shown here with two terminals and a desk printer, features up to 2 megabytes of MOS RAM. Options include floppy disk drives (4.8 MB), cartridge disk drives (360 MB), and pack disk drives (2400 MB).

Mass Storage Capabilities

The inclusion of mass storage devices (magnetic disk units) can greatly increase the data storage and processing capabilities of a business data processing system. Disk units enable millions of characters of information to be constantly accessible to the computer. Moreover, any desired record can be retrieved, updated, and re-recorded on the disk, usually within a fraction of a second.

By replacing or augmenting slower, less flexible file storage media such as punched cards, paper tape, or magnetic ledger cards, disk units can enable small business computers to handle applications and processing volumes that would otherwise be impossible. The principal disadvantages of disk units are their comparatively high costs and the software complexities that are encountered by users who attempt to harness their full potential. One or both of these considerations may make disk units impractical for many small computer buyers, despite the obvious appeal of disk-oriented data processing.

The diskette, or "floppy disk," is an innovation that can significantly reduce the cost of disk-oriented data processing. The diskette, or "floppy disk," is an innovation that can significantly reduce the cost of disk-oriented data processing. The diskette itself consists of a flexible Mylar disk, about 8 inches in diameter, that is permanently housed in a plastic envelope. It can serve as an input/output and/or random-access storage medium that is considerably smaller in capability and slower in performance than conventional disk units—but also far lower in cost. Introduced by IBM in 1972, diskettes and diskette drive

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units are now being produced by dozens of vendors and are finding their way into numerous small business computer systems, such as the IBM System/32 and DEC Datasystem 315. Recent enhancements to the floppy disk concept include more concentrated data storage and "flippies" (floppy disks that utilize both sides of the diskette), allowing more data to be stored on-line.

The other, more conventional types of mass storage devices, cartridge and disk pack drives, provide access to far more data and at significantly faster rates. Unfortunately, they also carry price tags several times higher than their floppy counterparts. Most of these units employ cartridges or disk packs that can easily be removed from the drive units and interchanged in much the same manner as magnetic tape reels.

Some cartridge-type units either use nonremovable media or use two cartridges, one fixed and the other removable. Nonremovable disks impose two important limitations. First, the system's file storage capacity is effectively limited to the amount of information that can be stored on-line. Second, disk dumps to create backup files for efficient restart procedures in case of catastrophe are not available to the user.

Interchangeable disks, conversely, provide great flexibility and make it practical to use small business computers effectively for both sequential and random data processing applications. In sequential applications, files of virtually unlimited size can be handled through the use of multiple disk packs or cartridges.

Fixed-head (head-per-track) disk and drum units can provide much faster access to on-line data than any other type of mass storage device. The reason is that there is no loss of time due to head positioning because a head is provided for each track. The only delay is rotational delay (latency), or the time required for the desired data to move under the read/write head. But the price of this type of equipment is higher than that of the preceding varieties, and less data can be stored on-line. Fixed-head devices are used when data bases are relatively small and very rapid access to the information is required. Most SBC users are not faced with such demanding requirements, but for those who need them, the devices are offered by some vendors.

Entries in this section of the charts fall into four categories: *floppy disk drive, cartridge disk drive, pack disk drive,* and *fixed-head disk/drum.* The entries indicate which devices are standard on the basic system and which devices are standard on the basic system and which ones are optional or not available.

Some SBCs are not marketed as packaged systems; thus, the user is required to pick and choose the particular devices that best suit his needs. In this case, all peripherals are indicated as optional, and this should be reflected in a lower "basic system" price.

These entries also specify the maximum storage capacity of the particular type of unit that is directly accessible to the computer at any one time. The indicated figure may be the capacity of a single disk drive or the total capacity of two or more (typically, four to eight) drives that can be connected to one controller. The maximum capacity entries show the total diskette storage and hard disk storage that can be configured with the model.

Workstations

Maximum number is the largest number of workstations that can be configured with this model.

Recommended number is the number of workstations that the manufacturer recommends be on line with this model for efficient performance.

Keyboard style is the type of keyboard used with the workstation. Most are alphanumeric (typewriter) style, with or without numberic keyboards.

The Workstation printer entry indicates whether or not a printer can be attached to a workstation for hard copy output, and if it is a standard or optional item.

Input/Output Devices

Most SBCs can be equipped with additional input/output devices, the most common of these being printers, reel-to-reel or cassette tape drives, and CRTs. Chart entries depict which of these devices are standard on the basic system and which are optional or not available. Once again, non-packaged systems will have all the available I/O devices listed as optional. The comparison charts also indicated the rated speeds or sizes, or a range, available for the peripheral device wherever the information could be obtained.

Other types of I/O devices, such as punched card and paper tape equipment, are indicated in the *Other* entry on the chart. This entry indicates whether this type of equipment is available or not, and if so, as standard or optional equipment. In some cases the type of equipment available is specified.

Serial (character-at-a-time) printers are enjoying increased popularity with the prolific growth of the small business computer marketplace. The main reason is price; serial printers can provide excellent-quality hard-copy reports for far less money than the line-at-a-time printers used with larger computers. However, for users who require faster printing capabilities, line printers are also available for many SBCs. Serial printers generally range in speed from about 30 to 600 or more characters per second (cps), while line printers operate at speeds of 100 to 2000 or more lines per minute (lpm). The user who needs faster printed output can obviously get it, but he must be willing to pay the higher price tag associated with the line printers.

CRTs are becoming increasingly important to the small business computer. Many systems now include a CRT

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display and its associated keyboard as the principal means of entering data into the system. In fact, on many SBCs, one or more CRT/keyboard units represent the *only* way to enter data into the system. The comparison charts indicate the capacity of the CRT, in number of lines and characters per line, whenever possible.

Communications Capabilities

Communications capabilities enable some of the small business computers to function as "intelligent terminals" in data communications networks. An interface equips the small computer to send and receive data over a common-carrier communications link, usually to a larger central computer installation. The small computer's internal processing and storage capabilities enable it to do some data processing locally and to handle a variety of code translation, editing, and control functions in connection with the data communications activities.

Maximum no. of lines indicates how many communications lines can be handled by a particular system. The types of lines are specified in the next two entries.

Synchronous and *asynchronous* have entries of standard, optional, or no, indicating their availability, and also a notation as to the speed of each line in bits per second (bps). Most entries will be of the type "to 9600 bps," indicating one or more transmission speeds up to a maximum of 9600 bps.

Protocols supported indicates the type of communication protocols accommodated by hardware and software for the model.

Network architecture indicates the communications network architecture support by this model. Entries may include, for example, Burroughs' NDL, DEC's DECnet, or IBM's SNA.

RJE terminals emulated indicates whether there is software available from the vendor for this SBC to enable it to function as a "look-alike" for remote job entry terminals. The terminals for which support is provided is indicated. IBM 3270 emulation is listed as a separate entry as a result of an increasing amount of interest from our users concerning the emulation of the IBM 3270 Information Display System.

Software Support

Virtually as important as the computer hardware are the software and technical support each manufacturer furnishes to aid the user in utilizing the hardware effectively. The available software (if any), together with the pricing policies for both software and support, are summarized in this section of the comparison charts.

COBOL (COmmon Business Oriented language), *RPG* (Report Program Generator, *FORTRAN* (FORmula TRANslator), and *BASIC* (Beginners All-purpose Symbolic Instruction Code) entries specify whether a particular compiler is available or not.

A *compiler* is a software tool designed to shift part of the program preparation task from the user to the computer itself by converting programs written in a simplified, procedure-oriented language into machine-language object programs. Compilers are now used in virtually all large and medium-scale computer installations because of their demonstrated ability to slash programming costs—and they are becoming increasingly available for the small business computers. This trend is possible because of the more powerful central processors now being used, since compilation is an intricate process that requires more storage space and processing power than the earlier small business computers provided. Where compilers are offered, however, they frequently limit the programmer to restricted subsets of the standard programming languages and/or require the use of a larger computer to perform the compilation process.

An *assembler* is a special-purpose program that uses the computer's power to facilitate the preparation of other programs. It enables the programmer to write his own program in a simplified format that uses mnemonic operation codes and symbolic operand addresses. The assembler program then converts these symbolic instructions into their machine-language equivalents, producing computer programs ready for loading and execution. Entries here indicate the availability of an assembler or, in some cases, a macro assembler.

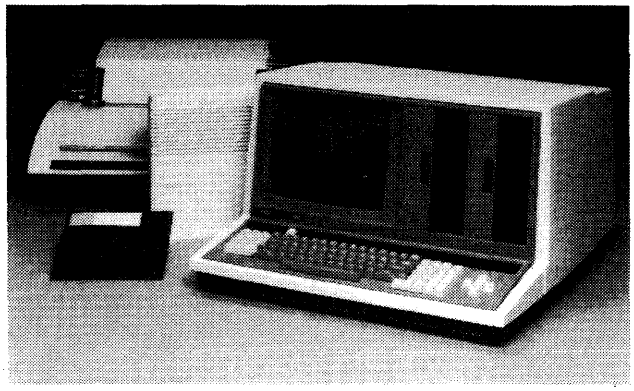
A macro assembler is another software tool to aid the programmer and make his job a little easier. Macro routines can be called by the programmer and copied right into his program. This saves the programmer from having to recode the routine each time it is used and also eliminates the possibility of keying errors when that part of the program is entered. As usual, there is a price to pay: the use of macros usually wastes memory space.

Other programming languages specifies languages such as ALGOL, SNOBOL, or proprietary languages that are available from a vendor for use on a particular SBC. The key word of warning here is that if you use a language that is unique to a vendor, you will be faced with a big problem if someday you decide to change vendors. Your investment in software will be lost, since the programs will not operate on any other system without extensive conversion work.

Multiprogramming gives an indication as to the power of the small business computer. Entries here stipulate yes or no, and, if multiprogramming is available, the number of partitions in memory. Multiple partitions allow for concurrent operation of several programs, thus permitting more processing to be accomplished in less time.

Maximum number of jobs that can run concurrently indicates the number of different independent job streams that can be running in the system simultaneously. This number may or may not be the same as the number of

Small Business Computer Specifications



The Xerox 510 features up to 64K bytes of main memory, 2.5 megabytes of floppy disk storage, a standard 35- to 200-cps serial printer, and a 1920-character CRT display. Optionally, the 510 offers synchronous and asynchronous data transmission protocols at 9600 bps.

partitions in memory, since multiple jobs may be able to function within the same partition.

Language implemented in firmware and *operating system implemented in firmware* tell the reader whether or not the language processor and/or the operating system are contained in microcode. The entries stipulate yes, partially, or no to indicate the extent of firmware implementation. An advantage to the user is that a language and/or operating system implemented in firmware frees up more memory space for the user's programs and data. Also, the microcode is usually inaccessible to the user (generally contained in read-only memory), eliminating any possible tampering with the language processor or operating system and reducing chances for error. A third advantage derived from firmware implementation is the ability to create more sophisticated and complex system functions at the hardware level. Microcode routines can be substituted for often-used subroutines, thereby increasing system performance.

General accounting packages indicates the availability of already-written software to handle the normal accounting functions of a company. The most common business functions include payroll, accounts payable, accounts receivable, inventory control, and general ledger accounting. If available, and if these programs can be tailored to meet the requirements of a particular company, they will allow the user to become operational in far less time and at a substantial saving in software development costs.

Industry application areas denotes specific areas where each vendor specializes. Turnkey vendors often take one segment of the marketplace and develop in-house expertise to the point that their hardware and software combination becomes a ready-made answer to the problems of a large class of users. Some current areas of specialization include hospitals, automobile dealers, the distribution industry, trucking firms, and the financial industry. If the vendor's specialized software can be tailored to the user's exact needs, or if the user can learn to live within the constraints of the existing software, thousands of dollars worth of programming effort can be saved. A library of pertinent applications programs can be a valuable asset when selecting an SBC. Space precludes a complete listing of available applications software in the charts, so the entries attempt to summarize and present the vendor's areas of heaviest concentration.

The availability of a *data base management system* is becoming more important to users of small business computers. A DBMS is a software system that is intended to manage and maintain data in a nonredundant structure for the purpose of being processed by multiple applications. It organizes data elements in some predefined structure and retains relationships between different data elements within the data base. The main advantage to the user of a data base management system is that information retrieval and report generation are made much easier with one common data base.

File access methods supported tells the user which methods are supported by the software available for a particular system. The entries include random, sequential, indexed sequential, and direct access. These four file access methods are the most popular, but there are others in use. In most instances it is desirable to have several access methods supported so that you can choose the one most suitable for each application.

Software separately priced tells whether the software described in the preceding entries, and any other available software, is included in the equipment price or offered at some additional cost. Some systems have the entry "some," which usually indicates that the company provides the operating systems and language processors bundled with the hardware, but charges for applications software packages. Separate pricing of software was virtually unheard of in the computer field until June 1969, when IBM "unbundled" by placing separate price tags on many of its software products and professional services. Since then, the various manufacturers have adopted a wide range of software pricing policies. Separate pricing of software, of itself, is neither good nor bad; the buyer must carefully assess the cost of the total package consisting of the equipment and all the software and support his installation will require.

Technical help separately priced indicates whether the services of the manufacturer's technical support staff are included in the equipment cost or separately priced. Nearly every company that is installing a computer for the first time will need a good deal of help from the equipment maker's systems analysts, programmers, and/or instructors (or, alternatively, from an independent consulting firm). In fact, the equipment supplier does *all* the programming for the majority of small business computer installations (more than 90 percent, in the case of one major supplier). The additional cost of these services, if any, should be carefully estimated and considered in all equipment comparisons.

Lease/Maintenance Options

Lease plans available indicates whether the model is

Small Business Computer Specifications

available for lease from the vendor or other sources, and the term length of the lease plans.

Maintenance plans available depicts the type of maintenance contracts available from the vendor, or whether maintenance is handled by a third party.

Pricing and Availability

Purchase price of basic system shows the minimum purchase price of a system equipped to perform basic business data processing functions. All of the facilities identified as "standard" in the charts (but none of the "optional" ones) are included in the listed prices. The addition of expanded storage capacities or optional input/output capabilities can lead to large price increases in nearly every case. Any additional information about the basic system or packaged system (if one exists) not covered in specific chart entries appears in the *Comments* section. For detailed pricing information, the manufacturers should be contacted directly.

Monthly rental of basic system specifies the monthly rental for the basic configuration of each system, as described above. All rental prices are based on a one-year lease and include equipment maintenance unless otherwise indicated. Longer-term leases are frequently available at lower monthly charges. Some systems are not available on a rental basis from the vendor and are so specified by an entry of "purchase only." In such cases, a prospective user can nearly always obtain a full-payout lease for the SBC of his choice from an independent leasing firm.

Monthly maintenance price of basic system shows the maintenance costs of the basic system as described above, while Monthly maintenance bundled with rental indicates whether or not the rental price given includes the cost of maintenance.

Purchase price of additional memory modules, printers, and *workstations* shows the cost of each additional unit when added to the basic system configuration, if available.

Discounts available indicates the types of discounts offered by the vendor for this model. This entry will vary by model for many manufacturers with multiple lines of systems.

Date of first U.S. delivery tells when the first production models of each system were delivered (or are scheduled to be delivered) to customers in the United States.

Number installed in U.S. to date shows how many systems of each type had been delivered to U.S. customers as of approximately December, 1980. Nearly all of the figures were supplied by the manufacturers themselves.

Comments

This final entry on the comparison charts is used to explain or amplify the preceding entries and to provide other pertinent information about each system's hardware, software, pricing, or applications.

Suppliers

Listed below, for your convenience in obtaining additional information, are the full names, addresses, and telephone numbers of the 67 suppliers whose products are listed in the comparison charts that follow.

A.K. Industries, Inc., 23 Abbeyview Avenue, Willow Grove, Pennsylvania 19090. Telephone (215) 659-2510.

Alpha Micro, 17881 Sky Park North, P.O. Box 18347, Irvine, California 92713. Telephone (714) 957-1404.

Applied Data Processing, Inc., 33 Bernhard Road, North Haven, Connecticut 06473. Telephone (203) 787-4107.

Applied Digital Communications, 214 Flynn Avenue, Moorestown, New Jersey 08057. Telephone (609) 234-3666.

Applied Digital Data Systems (ADDS), 100 Marcus Boulevard, Hauppauge, New York 11787. Telephone (516) 231-5400.

Ardent Computer Products, 145 Palasades, Dobbs Ferry, New York 10522. Telephone (914) 347-3922.

Bainridge Research & Development (BRD), Inc., 12715A Miller Road, N.E., Bainridge Island, Washington 98110. Telephone (206) 842-4777.

Basic/Four Corporation, 14101 Myford Road, Tustin, California 92680. Telephone (714) 731-5100.

BTI Computer Systems, Inc., 870 West Maude Avenue, Sunnyvale, California 94086. Telephone (408) 733-1122.

Burroughs Corporation, Burroughs Place, Detroit, Michigan 48232. Telephone (313) 972-7000.

Business Controls Corporation, 507 Boulevard, Elmwood Park, New Jersey 07407. Telephone (201) 791-7661.

CADO Systems Corporation, 2771 Toledo Drive, Torrance, California 90503. Telephone (213) 320-9660.

Centurion Computer Corporation, (formerly Warrex Computer Corporation), 1780 Jay Ell Drive, Richardson, Texas 75081. Telephone (214) 699-8400.

Century Computer Corporation, Spring Valley Business Center, 4410 Spring Valley Road, Dallas, Texas 75240. Telephone (214) 233-3238.

Compal Computer Systems, 6300 Variel Avenue, Suite E, Woodland Hills, California 91367. Telephone (213) 992-4425.

Complete Computer Systems, 159 Gibraltar Road, Horsham, Pennsylvania 19044. Telephone (215) 441-4200.

Compucorp, 1901 South Bundy Drive, Los Angeles, California 90025. Telephone (213) 820-2503.

Computer Automation, Inc., 18651 Von Karman, Irvine, California 92713. Telephone (714) 833-8830.

Computer Data Access (CDA), Inc., 1373 Broad Street, Clinton, New Jersey 07011. Telephone (201) 473-4700.

Computer Designed Systems, Inc., 8085 Wayzata Boulevard, Minneapolis, Minnesota 55426. Telephone (612) 545-2855.

Computer Hardware, Inc., 4111 North Freeway Boulevard, Sacramento, California 95834. Telephone (916) 929-2020.

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Control Data Corporation, Data Systems La Jolla Division, 4455 Eastgate Mall, La Jolla, California 92037. Telephone (714) 452-6000.

Cybertek, 6133 Bristol Parkway, Culver City, California 90230. Telephone (213) 649-2450.

Data Communications Corporation, 3000 Directors Row, Memphis, Tennessee 38131. Telephone (901) 345-3544.

Data General Corporation, 4400 Computer Drive, Westboro, Massachusetts 01581. Telephone (617) 366-8911.

Data General Corporation, Synergist Business Systems, 2221 Rosecrans Avenue, Suite #230, El Segundo, California 90245. Telephone (213) 644-3611.

Datapoint Corporation, 9725 Datapoint Drive, San Antonio, Texas 78284. Telephone (512) 699-7000.

Dicom Industries, Inc., 715 North Pastoria Avenue, Sunnyvale, California 94086. Telephone (408) 732-1060.

Digi-Log Systems, Inc., Babylon Road, Horsham, Pennsylvania 19044. Telephone (215) 672-0800.

Digital Equipment Corporation, 129 Parker Street, Maynard, Massachusetts 01754. Telephone (617) 897-5111.

Digital Systems Corporation, P.O. Box 158, Walkersville, Maryland 21793. Telephone (301) 845-4141.

Dimis, Incorporated, 1060 Highway 35, Middletown, New Jersey 07748. Telephone (201) 671-1011.

Display Data Corporation, Executive Plaza IV, Hunt Valley, Maryland 21031. Telephone (301) 667-9211.

Distribution Management Systems, Inc., 11 De Angelo Drive, Bedford, Massachusetts 01730. Telephone (617) 275-2000.

Dynabyte Business Computers, 115 Independence Drive, Menlo Park, California 94025. Telephone (415) 329-8021.

EZdata, Incorporated, Newington Industrial Park, Newington, New Hampshire 03801. Telephone (603) 436-1100.

Four-Phase Systems, Inc., 10700 North De Anza Boulevard, Cupertino, California 95014. Telephone (408) 255-0900.

Hewlett-Packard, Data Systems Division, 11000 Wolfe Road, Cupertino, California 95014. Telephone (408) 257-7000.

Hewlett-Packard, GSD Division, 19420 Homestead, Cupertino, California 95014. Telephone (408) 725-8111.

Hewlett-Packard, Information Systems Division, (same address as GSD Division).

Honeywell Information Systems, Inc., 200 Smith Street, Waltham, Massachusetts 01821. Telephone (617) 890-8400.

IBM Corporation, General Systems Division, P.O. Box 2150, Atlanta, Georgia 30301. Telephone (404) 238-2000.

Industrial Micro Systems, Inc., 628 N. Eckhoff Street, Orange, California 92668. Telephone (714) 978-6966.

Infotecs Computer Systems, One Perimeter Road, Manchester, New Hampshire 03103. Telephone (603) 624-2700.

Logical Machine Corporation, 1294 Hammerwood Avenue, Sunnyvale, California 94086. Telephone (408) 744-1290.

MCM Computers Ltd., 6700 Finch Avenue, Suite 600, Rexdale, Ontario M9W 5P5. Telephone (416) 675-1353.

Mercator Business Systems, 1294 Lawrence Station Road, Sunnyvale, California 94086. Telephone (408) 734-5134.

Mylee Digital Sciences, Inc., 155 Weldon Parkway, Maryland Heights, Michigan 63043. Telephone (314) 567-3420.

NCR Corporation, Main and K Streets, Dayton, Ohio 45479. Telephone (513) 449-2000.

New England Digital Corporation, P.O. Box 305, Norwich, Vermont 05055. Telephone (802) 649-5183.

Nixdorf Computer Inc., 168 Middlesex Turnpike, Burlington, Massachusetts 01803. Telephone (617) 273-0480.

Northern Telecom Systems Corporation, P.O. Box 1222, Minneapolis, Minnesota 55440. Telephone (612) 932-8000.

Olivetti Corporation of America, 155 White Plains Road, Tarrytown, New York 10591. Telephone (914) 631-8100.

Point 4 Computer Corporation, 2569 McCabe Way, Irvine, California 92714. Telephone (714) 754-4114.

PolyMorphic Systems, 460 Ward Drive, Santa Barbara, California 93111. Telephone (805) 967-0468.

Prime Computer, Inc., Prime Park, Natick, Massachusetts 01760. Telephone (617) 655-8000.

Qantel Corporation, 4142 Point Eden Way, Hayward, California 94545. Telephone (415) 887-7777.

Quodata Corporation, 196 Trumball Street, Hartford, Connecticut 06103. Telephone (203) 728-6777.

Rexon Business Machines Corporation, 5800 Uplander Way, Culver City, California 90230. Telephone (213) 641-7110.

Scientific Data Systems, Inc., 344 Main Street, Venice, California 90291. Telephone (213) 390-8673.

Sentinel Computer Corporation, 9902 Carver Road, Cincinnati, Ohio 45242. Telephone (513) 984-6622.

Sperry Rand Corporation, Sperry Univac Division, P.O. Box 500, Blue Bell, Pennsylvania 19424. Telephone (215) 542-4011.

STC Systems, Inc., Nine Brook Avenue, Maywood, New Jersey 07607. Telephone (201) 845-0500.

Stratmar Business Solutions Corporation, 385 Madison Avenue, New York, New York 10017. Telephone (212) 838-1155.

Synergist Business Systems, (see Data General Corporation, Synergist Business Systems).

Systel Computers, Incorporated, 20370 Town Center Lane, Cupertino, California 95014. Telephone (408) 253-0992.

Technico, Incorporated, 9057 Red Branch Road, Columbia, Maryland 21045. Telephone (301) 995-1995.

Texas Instruments, Incorporated, P.O. Box 290, Austin, Texas 78769. Telephone (512) 250-7305.

Wang Laboratories, Inc., One Industrial Avenue, Lowell, Massachusetts 01851. Telephone (617) 459-5000.

Xerox Corporation, 4400 Oakmead Parkway, Sunnyvale, California 94086. Telephone (408) 733-2300.□

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MANUFACTURER AND MODEL	A.K. Industries Inc. AKI 903	Alpha Micro AM-1010	Alpha Micro AM-1011	Alpha Micro AM-1030	Alpha Micro AM-1031
WORD LENGTH, BITS	8-bit byte	16	16	16	16
CPU					
Model	Zilog Z-80	Western Digital-16	Western Digital-16	Western Digital-16	Western Digital-16
Add time, microseconds	—	7	3.7	7	3.7
No. of I/O ports on basic sys. and max.	3	6 std. (12 max.)	2 std. (14 max.)	6 std. (24 max.)	2 std. (24 max.)
INTERNAL STORAGE					
Type	MOS, RAM	MOS, RAM	MOS, RAM	MOS, RAM	MOS, RAM
Capacity of basic system, bytes	2K (ROM); 64K (RAM)	64K	64K	64K	64K
Maximum capacity, bytes	256K	640K	768K	2048K	2048K
Increment size, bytes	16K	64K and 128K	64K and 128K	64K and 128K	64K and 128K
Cycle/access time, microseconds	0.4/0.25	.5/.5	.3/.3	.5/.5	.3/.3
MASS STORAGE					
Floppy disk (diskette) drive	Standard; (2) 1M byte	Standard; (2.4MB)	Standard (2.4MB)	Opt.; to 4.8MB	Opt.; to 4.8MB
Maximum diskette storage	2M bytes	2 units; 2.4 MB	2 units; 2.4MB	Opt.; to 4.8MB	Opt.; to 4.8MB
Cartridge disk drive	No	Optional; 10-360 MB	Optional; 10-360MB	10MB (std.); 360MB	10MB (std.); 360MB
Pack disk drive	No	Opt.; 25-2400 MB	Optional; 25-2400MB	Opt.; 25-2400MB	Opt.; 25-2400MB
Fixed-head disk/drum	Opt.; 5M bytes	No	No	No	No
Maximum disk storage	30M bytes	2400MB	2400MB	2400MB	2400MB
WORKSTATIONS					
Maximum number connectable	16	24	24	24	24
Recommended maximum number	8	—	—	—	—
Keyboard style	Type.; num. key.	—	—	—	—
Workstation printer	—	—	—	—	—
INPUT/OUTPUT DEVICES					
Serial printer	Std.; 120 cps	RS-232-comp. prntrs.	RS-232-comp. prntrs.	RS-232-comp. prntrs.	RS-232-comp. prntrs.
Line printer	Std.; 84 lpm	Opt.; up to 900 lpm	Opt.; up to 900 lpm	Opt.; up to 900 lpm	Opt.; up to 900 lpm
Reel-to-reel tape drive	Optional	Opt. 4 units; 37.5 ips	Opt. 4 units; 37.5 ips	Opt. 4 units; 37.5 ips	Opt. 4 units; 37.5 ips
Cassette/cartridge tape drive	No	—	—	—	—
CRT	Std.; 24 x 80 chars.	Opt.; RS-232-comp.	Opt.; RS-232-comp.	Opt.; RS-232-comp.	Opt.; RS-232-comp.
Other	ECRs, badge readers	—	—	—	—
COMMUNICATIONS					
Maximum no. of lines	8	12	14	24	24
Synchronous	Opt.; 9600 bps	6 std.	6 std.	6 std.	6 std.
Asynchronous	Std.; 9600 bps	6 std.	6 std.	6 std.	6 std.
Protocols supported	Bisync	2780/3780	2780/3780	2780/3780	2780/3780
Network architecture supported	SDLC	Via AlphaLINK	Via AlphaLINK	Via AlphaLINK	Via AlphaLINK
RJE terminals emulated	2780/3780	(Currently in devel.)	(Currently in devel.)	(Currently in devel.)	(Currently in devel.)
IBM 3270 emulation	No	(Currently in devel.)	(Currently in devel.)	(Currently in devel.)	(Currently in devel.)
SOFTWARE SUPPORT					
COBOL	Yes	Optional	Optional	Optional	Optional
RPG	No	No	No	No	No
FORTRAN	Yes	Optional	Optional	Optional	Optional
BASIC	Yes	Yes (std.)	Yes (std.)	Yes (std.)	Yes (std.)
Assembler	Yes	Yes	Yes	Yes	Yes
Other programming languages	PAS., FORTH, PL/1	PASCAL, LISP (std.)	PASCAL, LISP (std.)	PASCAL, LISP (std.)	PASCAL, LISP (std.)
Multiprogramming	Yes; 16 partitions	Yes, (no. not restr.)	Yes (no. not restr.)	Yes (no. not restr.)	Yes (no. not restr.)
Max. no. of jobs run concurrently	16	Not restricted	Not restricted	Not restricted	Not restricted
Language complemented in firmware	No	No	No	No	No
Op. sys. implemented in firmware	No	No	No	No	No
General accounting packages	Yes	Yes	Yes	Yes	Yes
Industry application areas	Whsl., act'g., mfg. inv.	Yes	Yes	Yes	Yes
Data base management system	No	Yes	Yes	Yes	Yes
File access methods supported	Seq., random	Random, seq., ISAM	Random, seq., ISAM	Random; seq., ISAM	Random, seq., ISAM
Software separately priced	Yes	No	No	No	No
Technical help separately priced	Yes	No	No	No	No
LEASE/MAINTENANCE OPTIONS					
Lease plans available	Contact vendor	Contact vendor	Contact vendor	Contact vendor	Contact vendor
Maintenance plans available	On-site, on-call	Contact vendor	Contact vendor	Contact vendor	Contact vendor
PRICING & AVAILABILITY					
Purchase price of basic system, $	9,000	Contact vendor	Contact vendor	Contact vendor	Contact vendor
Monthly rental of basic system, $	350	Contact vendor	Contact vendor	Contact vendor	Contact vendor
Monthly maint. price of basic system, $	100	Contact vendor	Contact vendor	Contact vendor	Contact vendor
Monthly maint. bundled with rental, $	—	Contact vendor	Contact vendor	Contact vendor	Contact vendor
Purchase price of:					
additional memory module, $	900 (64K)	Contact vendor	Contact vendor	Contact vendor	Contact vendor
additional workstations, $	1,000	Contact vendor	Contact vendor	Contact vendor	Contact vendor
additional printer, $	1,000 (84 lpm)	Contact vendor	Contact vendor	Contact vendor	Contact vendor
Discounts available	Quantity	Contact vendor	Contact vendor	Contact vendor	Contact vendor
Date of first U.S. delivery	January 1979	June 1978	June 1978	June 1978	June 1978
Number installed to date	NA	NA	NA	NA	NA
COMMENTS	Turnkey systems; no programmers or DP Personnel req'd.; 300 lpm printer opt.	Includes the Alpha Micro Operating System (AMOS); supports any RS-232-compatible peripherals; over 150 application programs available	Includes the Alpha Micro Operating System (AMOS); supports any RS-232-compatible peripherals; over 1500 application programs available	Includes the Alpha Micro Operating System (AMOS); supports any RS-232-compatible peripherals; over 150 application programs available	Includes the Alpha Micro Operating System (AMOS); supports any RS-232-compatible peripherals; over 150 application programs available

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MANUFACTURER AND MODEL	Alpha Micro AM-1050	Alpha Micro AM-1051	Applied Data Processing Resource/100	Applied Digital Communications 102	Applied Digital Communications 103
WORD LENGTH, BITS	16	16	16	16	16
CPU					
Model	Western Digital-16	Western Digital-16	DG Nova 3	DG MP-100	Perkin-Elmer 3220
Add time, microseconds	7	3.7	1.35 (1 word)	2.4 (1 word)	1.2
No. of I/O ports on basic sys. and max.	6 min. (24 max.)	2 min. (24 max.)	8, 16	9, 18	1, 256
INTERNAL STORAGE					
Type	MOS, RAM	MOS, RAM	Core	MOS, RAM	MOS, RAM
Capacity of basic system, bytes	64K	64K	64K	64K	64K
Maximum capacity, bytes	1920K	2048K	256K	64K	1M
Increment size, bytes	64K and 128K	64K and 128K	32K	—	—
Cycle/access time, microseconds	.5/.5	.3/.3	1.0/0.5	0.96/NA	0.6/0.4
MASS STORAGE					
Floppy disk (diskette) drive	Opt.; to 4.8MB	Opt.; to 4.8MB	No	Optional	Optional
Maximum diskette storage	Opt.; to 4.8MB	Opt.; to 4.8MB	No	—	—
Cartridge disk drive	90MB; 360MB (opt.)	90MB; 360MB (opt.)	No	Std.; 10M bytes	No
Pack disk drive	Opt.; 25-2400MB	Opt.; 25-2400MB	Std.; 320M bytes	No	Yes
Fixed-head disk/drum	No	No	No	No	No
Maximum disk storage	2400MB	2400MB	320M bytes	—	—
WORKSTATIONS					
Maximum number connectable	24	24	16	—	—
Recommended maximum number	—	—	16	—	—
Keyboard style	—	—	Type.; num. key.	Type.; num. key	Type.; num. key.
Workstation printer	—	—	Optional	—	—
INPUT/OUTPUT DEVICES					
Serial printer	RS-232-comp. prntrs.	RS-232-comp. prntrs.	Std.; 165, 330 cps	Std.; 120 cps	Std.; 120 cps
Line printer	Opt.; up to 900 lpm	Opt.; up to 900 lpm	Opt.; 300, 600 lpm	Optional	Opt.; 600 lpm
Reel-to-reel tape drive	Opt. 4 units; 37.5 ips	Opt. 4 units; 37.5 ips	Optional	No	Optional
Cassette/cartridge tape drive	—	—	No	No	Optional
CRT	Opt.; RS-232-comp.	Opt.; RS-232-comp.	Std.; 27 x 74 char.	Std.; 1920 char.	Std.; 1920 char.
Other	—	—	Optional	Paper tape & card	Paper tape & card
COMMUNICATIONS					
Maximum no. of lines	24 (plus)	24 (plus)	7	—	256
Synchronous	6 std.	6 std.	No	No	Optional
Asynchronous	6 std.	6 std.	Std.; 1200 bps	Yes	Optional
Protocols supported	2780/3780	2780/3780	Bisync	Bisync	Bisync
Network architecture supported	Via AlphaLINK	Via AlphaLINK	—	—	None
RJE terminals emulated	(Currently in devel.)	(Currently in devel.)	2780	—	None
IBM 3270 emulation	(Currently in devel.)	(Currently in devel.)	No	No	No
SOFTWARE SUPPORT					
COBOL	Optional	Optional	No	Yes	Yes
RPG	No	No	No	No	Yes
FORTRAN	Optional	Optional	No	Yes	Yes
BASIC	Yes (std.)	Yes (std.)	Yes	Yes	Yes
Assembler	Yes	Yes	Yes	Yes	Yes
Other programming languages	PASCAL, LISP (std.)	PASCAL, LISP (std.)	Extended BASIC	No	No
Multiprogramming	Yes (no. not restr.)	Yes (no. not restr.)	Yes	Yes	Yes
Max. no. of jobs run concurrently	Not restricted	Not restricted	16	1	—
Language complemented in firmware	No	No	No	No	No
Op. sys. implemented in firmware	No	No	No	No	Partially
General accounting packages	Yes	Yes	Yes	Yes	Yes
Industry application areas	Yes	Yes	Dist.; mfg.	Distrib., mfg.	General purpose
Data base management system	Yes	Yes	Yes	No	No
File access methods supported	Random, seq., ISAM	Random, seq., ISAM	Rand., seq., ind.	Rand., seq., ISAM	Seq., random
Software separately priced	No	No	Yes	Yes	Yes
Technical help separately priced	No	No	Yes	Yes	Yes
LEASE/MAINTENANCE OPTIONS					
Lease plans available	Contact vendor	Contact vendor	Contact vendor	Contact vendor	Contact vendor
Maintenance plans available	Contact vendor	Contact vendor	—	—	—
PRICING & AVAILABILITY					
Purchase price of basic system, $	Contact vendor	Contact vendor	32,500	18,000 up	75,000 up
Monthly rental of basic system, $	Contact vendor	Contact vendor	NA	—	—
Monthly maint. price of basic system, $	Contact vendor	Contact vendor	325	—	—
Monthly maint. bundled with rental, $	Contact vendor	Contact vendor	NA	—	—
Purchase price of:					
additional memory module, $	Contact vendor	Contact vendor	4,500 (65K bytes)	—	—
additional workstations, $	Contact vendor	Contact vendor	2,400	—	—
additional printer, $	Contact vendor	Contact vendor	8,000 (300 lpm)	—	—
Discounts available	Contact vendor	Contact vendor	NA	—	—
Date of first U.S. delivery	June 1979	June 1979	June 1976	1978	1978
Number installed to date	NA	NA	NA	NA	NA
COMMENTS	Includes the Alpha Micro Operating System (AMOS); supports any RS-232-compatible peripherals; over 150 application programs available	Includes the Alpha Micro Operating System (AMOS); supports RS-232-compatible peripherals; over 150 application programs available	Resource/100 Extended Operating Systems are said to meet 95% of most users' needs for business applications	For pricing and availability, contact vendor; price includes accounting software	Includes accounting system, job cost control, invoicing, personnel reports, solid audit trail, multitasking, civil engineering, CAD application, and report gen. packages

Small Business Computer Specifications

MANUFACTURER AND MODEL	Applied Digital Communications 104	Applied Digital Communications 202	Applied Digital Communications 400	Applied Digital Communications 401	Applied Digital Data Systems, Inc. (ADDS) MULTIVISION
WORD LENGTH, BITS	16	16	12	16	8
CPU					
Model	DG MP-100	DG Nova 4	DEC PDP-8	DEC PDP-11/03-23	Intel 8085A-2
Add time, microseconds	2.4 (1 word)	1.2	1	—	—
No. of I/O ports on basic sys. and max.	9, 18	12 std.	Unibus	Unibus	3, 8
INTERNAL STORAGE					
Type	MOS, RAM	MOS, RAM	MOS, Core	Core	MOS
Capacity of basic system, bytes	64K	64K	8K	64K	64K
Maximum capacity, bytes	64K	256K	32K	256K	256K
Increment size, bytes	—	32K	4K	8K	64K
Cycle/access time, microseconds	0.960	0.4/NA	1/1	0.75/0.275	150 ns.
MASS STORAGE					
Floppy disk (diskette) drive	Optional	Optional	Opt.; 1M byte	Optional	Standard (700KB)
Maximum diskette storage	—	—	4M bytes	1.0M bytes	700K bytes
Cartridge disk drive	Std.; 10M bytes	Std.; 10M bytes	Optional	Std.; 5M bytes	—
Pack disk drive	No	No	Optional	—	—
Fixed-head disk/drum	No	No	Optional	—	5-10M bytes
Maximum disk storage	—	—	—	—	10M bytes
WORKSTATIONS					
Maximum number connectable	—	—	—	1	4
Recommended maximum number	—	—	—	—	4
Keyboard style	Type.; num. key.	Type.; num. key.	Type.; num. key.	Type.; num. key.	Typewriter, num.
Workstation printer	—	—	—	—	—
INPUT/OUTPUT DEVICES					
Serial printer	Std.; 120 cps	Std.; 120 cps	Std.; 120 cps	Std.; 120 cps	Optional
Line printer	Optional	Opt.; to 600 lpm	Opt.; to 600 lpm	Opt.; to 600 lpm	Optional
Reel-to-reel tape drive	No	Optional	Opt.; DECtape	Optional	No
Cassette/cartridge tape drive	No	No	No	Cass.; optional	No
CRT	Std.; 1920 char.	Std.; 1920 char.	Optional	Std.; 1920 char.	24 x 80 (1920 char.)
Other	Paper tape & card	Paper tape & card	Paper tape & card	Paper tape	No
COMMUNICATIONS					
Maximum no. of lines	—	64	NA	256	Optional
Synchronous	No	No	No	Optional	—
Asynchronous	Yes	Yes	No	Optional	—
Protocols supported	Bisync	None	None	Bisync	—
Network architecture supported	—	None	None	—	—
RJE terminals emulated	—	None	None	—	—
IBM 3270 emulation	No	No	No	—	No
SOFTWARE SUPPORT					
COBOL	Yes	Yes	No	No	CP/M-compatible
RPG	No	No	No	No	No
FORTRAN	Yes	Yes	Yes	Yes	CP/M-compatible
BASIC	Yes	Yes	Yes	Yes	Yes
Assembler	Yes	Yes	Yes	Yes	Yes
Other programming languages	No	Algol	None	None	—
Multiprogramming	Yes	Yes	No	No	Yes, 4 partitions
Max. no. of jobs run concurrently	1	—	—	—	4
Language complemented in firmware	No	No	No	No	No
Op. sys. implemented in firmware	No	No	No	Partially	No
General accounting packages	Yes	Yes	Yes	Yes	No
Industry application areas	Distrib., mfg.	Distrib., mfg.	Manufacturing	—	Word processing
Data base management system	No	No	No	TOTAL	Yes
File access methods supported	Seq., random, ISAM	Seq., rand., ISAM	Seq., rand.	Seq., random, ISAM	Random, ISAM
Software separately priced	Yes	Yes	Yes	Yes	Yes
Technical help separately priced	Yes	Yes	Yes	Yes	Yes
LEASE/MAINTENANCE OPTIONS					
Lease plans available	Contact vendor	Contact vendor	Contact vendor	Contact vendor	No
Maintenance plans available	—	—	—	—	Via dealer
PRICING & AVAILABILITY					
Purchase price of basic system, $	18,000 up	25,000 up	13,000 up	15,000 up	3,785
Monthly rental of basic system, $	—	—	—	—	—
Monthly maint. price of basic system, $	—	—	—	—	—
Monthly maint. bundled with rental, $	—	—	—	—	—
Purchase price of:					
additional memory module, $	—	—	—	—	1,947
additional workstations, $	—	—	—	—	—
additional printer, $	—	—	—	—	—
Discounts available	—	—	—	—	Yes
Date of first U.S. delivery	1978	1978	NA	1979	May 1980
Number installed to date	NA	NA	40+	5	NA
COMMENTS	Medical 3-party billing, appointment scheduling, Accounts Rec. & Pay., General Ledger, Payroll, word processing, medical forms, billing history	Same as Model 102 but faster & greater capacity; price includes accounting software	Computer-aided design for Numeric Control manufacturing operations, and NC tape verification; piece part drawings can be retrofit into existing computer	Manufacturing and accounting software CAD systems for Numeric Control mfg. operations, NC tape verification, NC tape translation; piece part drawings with incremental plotter	Available through dealer network

Small Business Computer Specifications

MANUFACTURER AND MODEL	Applied Digital Data Systems, Inc. (ADDS) MENTOR 4000	Ardent Computer Products Ardent/10	Ardent Computer Products Ardent/CMD	BRD Dolphin	BRD Porpoise
WORD LENGTH, BITS	16	16	16	8-16-64	8-16-64
CPU					
Model	Zilog Z8001	Ardent	Ardent	Motorola 6800	Motorola 6800
Add time, microseconds	750 ns. (1-3 words)	—	—	100 (15 digits)	100 (15 digits)
No. of I/O ports on basic sys. and max.	4, 16	2, 2	8, 16	2	2
INTERNAL STORAGE					
Type	MOS	—	—	MOS	MOS
Capacity of basic system, bytes	128K	64K	64K	8K	4K
Maximum capacity, bytes	512K	64K	128K	64K	64K
Increment size, bytes	128K	—	64K	8K	4K
Cycle/access time, microseconds	150 ns.	—	—	3/100	3/100
MASS STORAGE					
Floppy disk (diskette) drive	NA	—	—	Std.; dual	Std.; dual
Maximum diskette storage	NA	—	—	1.2M bytes	0.6M bytes
Cartridge disk drive	—	10M bytes	32M bytes	No	No
Pack disk drive	—	10M bytes	32M bytes	10M bytes	10M bytes
Fixed-head disk/drum	30-60M bytes	—	80M bytes	No	No
Maximum disk storage	120M bytes	10M bytes	160M bytes	—	—
WORKSTATIONS					
Maximum number connectable	16	2	16	8	1
Recommended maximum number	16	2	8	1	1
Keyboard style	TTY, Typewriter	TTY	TTY	Typewriter/10 key	Typewriter/10 key
Workstation printer	—	1	2	Std.	Std.
INPUT/OUTPUT DEVICES					
Serial printer	Optional	60 cps	150 cps	Std.; 45 cps/abs. tab	Std.; 80 cps
Line printer	Optional	300 lpm	300 lpm	No	No
Reel-to-reel tape drive	Standard, 100 ips	—	—	No	No
Cassette/cartridge tape drive	No	—	—	No/No	No/No
CRT	24 x 80 (1920 char.)	2000 char.	2000 char.	Opt.; 1920 char.	Opt.; 1920 char.
Other	No	—	—	—	—
COMMUNICATIONS					
Maximum no. of lines	16	—	—	1	1
Synchronous	Optional	—	—	No	No
Asynchronous	Optional	Standard	Standard	Std.; 1200 bps	Std.; 300 bps
Protocols supported	—	—	—	Programmable	Programmable
Network architecture supported	—	—	—	No	No
RJE terminals emulated	—	—	—	No	No
IBM 3270 emulation	—	—	—	No	No
SOFTWARE SUPPORT					
COBOL	No	Yes	Yes	No	No
RPG	No	No	No	No	No
FORTRAN	No	Yes	Yes	No	No
BASIC	Yes	Yes	Yes	Yes	Yes
Assembler	—	No	No	B.A.L.	B.A.L.
Other programming languages	English, Proc	—	—	ALPHABASE/ERAM	ALPHABASE/ERAM
Multiprogramming	Yes, 16 partitions	Yes	Yes	No	No
Max. no. of jobs run concurrently	16	3	3	1	1
Language complemented in firmware	No	—	—	B.A.L. (fully)	B.A.L. (fully)
Op. sys. implemented in firmware	No	No	No	Fully	Fully
General accounting packages	No	Yes	Yes	Yes	Yes
Industry application areas	Runoff (WP)	Yes	Yes	Util., acct.	Util., acct.
Data base management system	Yes	No	No	Yes	Yes
File access methods supported	Random, seq., ISAM	Yes	Yes	Ind. Seq., Linked list	Ind. Seq., Linked list
Software separately priced	No	Yes	Yes	Yes	Yes
Technical help separately priced	Yes	Yes	Yes	Yes	Yes
LEASE/MAINTENANCE OPTIONS					
Lease plans available	No	No	No	2 to 5 years	2 to 5 years
Maintenance plans available	Yes	Yes	Yes	On-call, factory	On-call, factory
PRICING & AVAILABILITY					
Purchase price of basic system, $	NA	5,990	8,990	15,000 to 25,000	10,000 to 15,000
Monthly rental of basic system, $	—	—	—	375	250
Monthly maint. price of basic system, $	—	—	—	100	75
Monthly maint. bundled with rental, $	—	—	—	No	No
Purchase price of:					
additional memory module, $	—	NA	Contact vendor	800 (8K)	400 (4K)
additional workstations, $	—	Contact vendor	Contact vendor	4,000	NA
additional printer, $	—	Contact vendor	Contact vendor	—	—
Discounts available	—	Up to 40 percent	Up to 40 percent	Education/15%	Education/15%
Date of first U.S. delivery	December 1980	December 1980	December 1980	July 1977	July 1977
Number installed to date	NA	—	—	350 (all systems)	—
COMMENTS	Sold through authorized dealer network			Complete small bus. sys. with integrated word processing and data base mgmt. software; over 20 applications packages complete	See BRD-Dolphin

Small Business Computer Specifications

MANUFACTURER AND MODEL	BRD Small Fry	Basic Four Corporation Model 200	Basic Four Corporation Model 410	Basic Four Corporation Model 510	Basic Four Corporation Model 610
WORD LENGTH, BITS	8-16-64	8-bit byte	8-bit byte	8-bit byte	8-bit byte
CPU					
Model	Motorola 6800	BFC 1345	BFC 1345	BFC 1345	BFC 1345
Add time, microseconds	100 (15 digits)	7.4	7.4	7.4	7.4
No. of I/O ports on basic sys. and max.	2	—	11 (above req.)	11 (above reg.)	11 (above req.)
INTERNAL STORAGE					
Type	MOS	MOS	MOS	MOS	MOS
Capacity of basic system, bytes	4K	40K	40K	64K	64K
Maximum capacity, bytes	64K	64K	128K	256K	192K
Increment size, bytes	4K	8K, 16K, 24K	24K, 32K	32K, 64K	32K, 64K, 128K
Cycle/access time, microseconds	3/100	0.6/0.4	0.6/0.4	0.6/0.4	0.6/0.4
MASS STORAGE					
Floppy disk (diskette) drive	No	No	No	No	No
Maximum diskette storage	—	—	—	—	—
Cartridge disk drive	No	No	No	No	Standard
Pack disk drive	No	No	No	Std.; 20M bytes	Std.; 35M bytes
Fixed-head disk/drum	No	Std.; 14M bytes	Std.; 14M bytes	No	No
Maximum disk storage	—	20M bytes	40M bytes	300M bytes	300M bytes
WORKSTATIONS					
Maximum number connectable	1	2	8	16	16
Recommended maximum number	1	—	—	—	—
Keyboard style	—	Type.; 10-key pad	Type.; 10-key pad	Type.; 10-key pad	Type.; 10-key pad
Workstation printer	Std.	Std.; 120 cps	Std.; 120 cps	Std.; 120 cps	Std.; 160 cps
INPUT/OUTPUT DEVICES					
Serial printer	Std.; 30 cps	Std.; 120 cps	Std.; 120 cps	Std.; 120 cps	Std.; 160 cps
Line printer	No	Opt.; 150 lpm	Opt.; 150-600 lpm	Opt.; 300 lpm	Opt.; 150-600 lpm
Reel-to-reel tape drive	No	No	Opt.; 10KBS	Opt.; 10KBS	Opt.; 10KBS
Cassette/cartridge tape drive	No/No	Cart.; 2.3M bytes	Cart.; 9.2M bytes	Cart.; 9.2M bytes	Cart.; 9.2M bytes
CRT	No	Std.; 24 x 80 char.	Std.; 24 x 80 char.	Std.; 24 x 80 char.	Std.; 24 x 80 char.
Other	—	No	No	No	No
COMMUNICATIONS					
Maximum no. of lines	1	1	8	16	16
Synchronous	No	Opt.; 9600 bps	Opt.; 9600 bps	Opt.; 9600 bps	Opt.; 9600 bps
Asynchronous	Std.; 300 bps	Std.; 9600 bps	Std.; 9600 bps	Opt.; 9600 bps	Std.; 9600 bps
Protocols supported	Programmable	Bisync	Bisync	Bisync	Bisync
Network architecture supported	No	Business Info. Net.	Business Info. Net	Business Info. Net.	Business Info. Net.
RJE terminals emulated	No	2780/3780	2780/3780	2780/3780	2780/3780
IBM 3270 emulation	No	No	No	No	No
SOFTWARE SUPPORT					
COBOL	No	No	No	No	No
RPG	No	No	No	No	No
FORTRAN	No	No	No	No	No
BASIC	Yes	Yes	Yes	Yes	Yes
Assembler	B.A.L.	No	No	No	No
Other programming languages	ALPHABASE	None	None	None	None
Multiprogramming	No	No	Yes; 8 partitions	Yes; 8 partitions	Yes; 18 partitions
Max. no. of jobs run concurrently	1	4	12	12	24
Language complemented in firmware	B.A.L. (fully)	No	No	No	No
Op. sys. implemented in firmware	Fully	Partially	Partially	Partially	Partially
General accounting packages	Yes	Yes	Yes	Yes	Yes
Industry application areas	Banking	Bus., med., dist.	Gen. business, med.	Gen. business, med.	Bus., med., dist.
Data base management system	NA	No	No	No	No
File access methods supported	NA	Seq., random	Seq., random	Seq., random	Seq. random
Software separately priced	Yes	Yes	Yes	Yes	Yes
Technical help separately priced	Yes	Yes	Yes	Yes	Yes
LEASE/MAINTENANCE OPTIONS					
Lease plans available	2 to 5 years	Contact vendor	Contact vendor	Contact vendor	Contact vendor
Maintenance plans available	On-call, factory	Third party	Third party	Third party	Third party
PRICING & AVAILABILITY					
Purchase price of basic system, $	6,500	24,990	32,500	44,000	51,400
Monthly rental of basic system, $	200	Contact vendor	Contact vendor	Contact vendor	Contact vendor
Monthly maint. price of basic system, $	50	260	280	—	424
Monthly maint. bundled with rental, $	No	—	—	—	—
Purchase price of:					
additional memory module, $	400 (4K)	2,000 (8K bytes)	2,500 (16K bytes)	2,500 (16K bytes)	3,900 (32K bytes)
additional workstations, $	NA	6,400	6,400	6,400	6,400
additional printer, $	—	—	7,900 (150 lpm)	11,900 (300 lpm)	7,900 (150 lpm)
Discounts available	Education/15%	NA	NA	NA	NA
Date of first U.S. delivery	March 1979	January 1978	1978	1980	1978
Number installed to date	—	9,000 (all models)	9,000 (all models)	9,000 (all models)	9,000 (all models)
COMMENTS	Ledger-card based acctg. sys. ROM based removable program cartridges; programmable also from keyboard in B.A.L. or high level alphabase		Performance upgrade package; memory expansion to 256K, increase no. of comm. lines to 12. Available June 1981.		

Small Business Computer Specifications

MANUFACTURER AND MODEL	Basic Four Corporation Model 730	BTI 5000	BTI 5000/ES	BTI 8000	Burroughs B 80
WORD LENGTH, BITS	8-bit byte	16	16	32	8
CPU					
Model	BFC 1350	BTI 5010	BTI 5010	BTI 8110 (8 CPUs)	B80/20/30/40/50
Add time, microseconds	3	20	20	3.2	60
No. of I/O ports on basic sys. and max.	9 (above req.)	7	7	4 to 32	8, 11
INTERNAL STORAGE					
Type	MOS	MOS	MOS	Core	MOS
Capacity of basic system, bytes	96K	64K	64K	256K	32K/60K
Maximum capacity, bytes	256K	64K	64K	8M	60K/124K
Increment size, bytes	32K, 64K, 128K	None	None	128K	4K/16K
Cycle/access time, microseconds	0.6/0.4	0.65/0.3	0.65/0.3	0.67/0.4	1.0/0.5
MASS STORAGE					
Floppy disk (diskette) drive	No	No	No	No	Opt.; 6M bytes
Maximum diskette storage	—	NA	NA	NA	27.6M bytes
Cartridge disk drive	No	No	No	No	Opt.; 27.6M bytes
Pack disk drive	Std.; 150M bytes	27 to 63M bytes	10M bytes	Std.; 33M bytes	No
Fixed-head disk/drum	No	No	No	No	Opt.; 37.6M bytes
Maximum disk storage	300M bytes	468M bytes	262M bytes	8,000M bytes	65.6MB
WORKSTATIONS					
Maximum number connectable	32	32	32	512	—
Recommended maximum number	—	24	24	128	—
Keyboard style	Type.; 10-key pad	Any	Any	Any	Type.; num. key
Workstation printer	Std.; 300 cpm	Opt.	Opt.	Optional	Optional
INPUT/OUTPUT DEVICES					
Serial printer	Opt.; 80, 120, 160 cps	Optional	Optional	No	Std.; 60, 180 cps
Line printer	Std.; 300 lpm	Opt.; 300-900 lpm	Opt.; 300-900 lpm	Opt.; 300-900 lpm	Opt.; 160, 250 lpm
Reel-to-reel tape drive	Opt.; 10KBS	Opt.; to 72KBS	Opt.; to 72KBS	Opt.; 200KBS	No
Cassette/cartridge tape drive	Opt.; 9.2M bytes	No	No	No	Std.; 1KBS/No
CRT	Std.; 24 x 80 char.	Optional	Optional	Optional	Std.; 8 x 32 char.
Other	No	—	—	—	—
COMMUNICATIONS					
Maximum no. of lines	32	8 std.; 32 opt.	4 std.; 32 opt.	8 std.; 160 opt.	4
Synchronous	Opt.; 9600 bps	No	No	No	Opt.; to 4800 bps
Asynchronous	Std.; 9600 bps	9600 bps	9600 bps	19.2 bps	Opt.; to 9600 bps
Protocols supported	Bisync	User-programmable	User-programmable	User-programmable	Bisync; BDLC
Network architecture supported	Business Info. Net.	NA	NA	NA	Async., sync.
RJE terminals emulated	2780/3780	NA	NA	NA	—
IBM 3270 emulation	No	No	No	No	—
SOFTWARE SUPPORT					
COBOL	No	No	No	Yes	Yes
RPG	No	No	No	No	Yes
FORTRAN	No	No	No	Yes	No
BASIC	Yes	Yes	Yes	Yes	No
Assembler	No	No	No	Yes	No
Other programming languages	None	No	No	PASCAL	DSC/MPL/NDL
Multiprogramming	Yes, 36 partitions	No	No	Demand-paged VM	Yes; to 3 programs
Max. no. of jobs run concurrently	40	32	32	16	1
Language complemented in firmware	No	Partially	Partially	No	Fully
Op. sys. implemented in firmware	Partially	Partially	Partially	Partially	Fully
General accounting packages	Yes	Yes	Yes	Yes	Yes
Industry application areas	Gen. business, med.	Mfg., bus., school	Mfg., bus., school	Mfg., gen. bus., educ.	Whosl., dist., med., fin
Data base management system	No	Yes	Yes	Yes	No
File access methods supported	Seq., random	Rand., seq., ISAM	Rand., seq., ISAM	Rand., seq., ISAM	Rand., seq., ISAM
Software separately priced	Yes	Yes	Yes	Yes	Yes
Technical help separately priced	Yes	No	No	No	Yes
LEASE/MAINTENANCE OPTIONS					
Lease plans available	Contact vendor	Purchase only	Purchase only	Purchase only	1, 3, 5-year
Maintenance plans available	Third party	24 hours	24 hours	24 hours	On-site contract, on-call
PRICING & AVAILABILITY					
Purchase price of basic system, $	95,100	38,950	29,950	86,850	17,520
Monthly rental of basic system, $	Contact vendor	Purchase only	Purchase only	Purchase only	669 (1-yr. lease)
Monthly maint. price of basic system, $	766	225	225	650	129
Monthly maint. bundled with rental, $	—	NA	NA	NA	—
Purchase price of:					
additional memory module, $	3,900 (32K bytes)	—	—	9,000 (128K bytes)	412 (4K bytes)
additional workstations, $	6,400	900-2,400	900-2,400	—	—
additional printer, $	11,900 (300 lpm)	—	—	3,950	9,270 (160 lpm)
Discounts available	NA	Quantity	Quantity	Quantity	Dollar volume
Date of first U.S. delivery	1978	March 1978	September 1979	April 1980	April 1976
Number installed to date	9,000 (all models)	2,500	2,500	NA	Over 4000
COMMENTS		Up to 32 user terminals can run concurrently	Up to 32 user terminals can run concurrently	Variable resource architecture permits expansion to mainframe capacity; up to 160 users	

Small Business Computer Specifications

MANUFACTURER AND MODEL	Burroughs B 90	Burroughs B 730/B 720	Burroughs B 801	Burroughs B 810/B 820	Burroughs B 920
WORD LENGTH, BITS	8	64	64	64	64
CPU					
Model	B 91, B 92 SYS/CYS	B 731	B 800	B 800	B 900-2
Add time, microseconds	—	430	—	—	—
No. of I/O ports on basic sys. and max.	6, 8/10, 12	6, 8	7	7	—
INTERNAL STORAGE					
Type	MOS	MOS	MOS	MOS	MOS
Capacity of basic system, bytes	64K/128K	32K	32K	64K	640K
Maximum capacity, bytes	524K/524K	80K	80K	131K	1.5M
Increment size, bytes	64K/128K	8K	8K	8K	64K or 128K
Cycle/access time, microseconds	0.5/0.015 ns.	1.0/0.5	1.0/0.5	1.0/0.5	1.0/0.5
MASS STORAGE					
Floppy disk (diskette) drive	Opt.; 6M bytes	Opt.; 243K bytes	Opt.; 486K bytes	Opt.; 2M bytes	Opt.; 6M bytes
Maximum diskette storage	27.6M bytes	36.8M bytes	36.8M bytes	368M bytes	27.6M bytes
Cartridge disk drive	Opt.; 27.6M bytes	Opt.; 36.8M bytes	Opt.; 36.8M bytes	Opt.; 368M bytes	Opt.; 9.2M bytes
Pack disk drive	No	No	No	Opt.; 521M bytes	Opt.; 130.4M bytes
Fixed-head disk/drum	Opt.; 37.6M bytes	No	No	No	Opt.; 232M bytes
Maximum disk storage	37.6M bytes	36.8M bytes	36.8M bytes	521.6M bytes	240M bytes
WORKSTATIONS					
Maximum number connectable	—	—	—	—	—
Recommended maximum number	—	—	—	—	—
Keyboard style	Type.; num. key.	Type.; num. key	Type.; num. key	Type.; num. key	Type.; num. key.
Workstation printer	—	Optional	Optional	Optional	Optional
INPUT/OUTPUT DEVICES					
Serial printer	Std.; 90 cps	Std.; 60 cps	Std.; 120 cps	Opt.; 120 cps	Opt.; 120 cps
Line printer	Opt.; 250-600 lpm	Opt.; 85-400 lpm	Opt.; 85-400 lpm	Opt.; 85-750 lpm	Opt.; 250-600 lpm
Reel-to-reel tape drive	No	Opt.; 10KBS	Opt.; 10KBS	Opt.; 10KBS	Opt.; 40K bytes
Cassette/cartridge tape drive	Optional/No	Opt.; 1KBS/No	Opt.; 1KBS/No	Opt.; 1KBS/No	Opt.; 1KBS/No
CRT	Std.; 480 or 1920 ch.	Opt.	Opt.	Opt.	Optional
Other	—	—	—	—	—
COMMUNICATIONS					
Maximum no. of lines	4	1	4	4	4
Synchronous	Opt.; to 4800 bps	Opt.; to 9600 bps	Opt.; to 9600 bps	Opt.; to 9600 bps	Opt.; to 9600 bps
Asynchronous	Opt.; to 1800 bps	Opt.; to 9600 bps	Opt.; to 9600 bps	Opt.; to 9600 bps	Opt.; to 1800 bps
Protocols supported	BDLC, Bisync	Bisync., BDLC	Bisync., BDLC	Bisync., BDLC	BDLC, Bisync
Network architecture supported	Async, bisync	Async., sync.	NDL	NDL	Async., sync.
RJE terminals emulated	—	IBM 3780	—	—	—
IBM 3270 emulation	—	—	—	—	—
SOFTWARE SUPPORT					
COBOL	Yes	Yes	Yes	Yes	Yes
RPG	Yes	Yes	Yes	Yes	Yes
FORTRAN	No	No	No	No	No
BASIC	No	No	No	No	No
Assembler	No	No	No	No	No
Other programming languages	NDL/MPL II	AEL	AEL, MPL, NDL	AEL, MPL, NDL	NDL, MPL II
Multiprogramming	Yes	Yes; see Comments	Yes	Yes	Yes
Max. no. of jobs run concurrently	1	—	—	—	—
Language complemented in firmware	—	Fully	Fully	Fully	Fully
Op. sys. implemented in firmware	—	Fully	Fully	Fully	Fully
General accounting packages	Yes	Yes	Yes	Yes	Yes
Industry application areas	Dist., fin., etc.	All business	All bus. acctg. applic.	All bus. acctg. applic.	General purpose
Data base management system	No	No	No	No	No
File access methods supported	Random, seq., ISAM	Rand. seq., ISAM	Rand., seq., ISAM	Rand., seq., ISAM	Random, seq., ISAM
Software separately priced	Yes	Yes	Yes	Yes	Yes
Technical help separately priced	Yes	Yes	Yes	Yes	Yes
LEASE/MAINTENANCE OPTIONS					
Lease plans available	1, 3, or 5 years	1, 3, 5-year	1, 3, 5-year	1, 3, 5-year	1, 3 or 5 years
Maintenance plans available	On-site contract, on-call	On-site contract, on-call	On-site contract, on-call	On-site contract, on-call	On-site contract, on-call
PRICING & AVAILABILITY					
Purchase price of basic system, $	7,900/11,708	26,500	35,045	40,450	60,500
Monthly rental of basic system, $	293/434 (1-year)	997 (1-yr. lease)	1,047 (1-yr. lease)	1,210 (1-yr. lease)	1,956 (3 years)
Monthly maint. price of basic system, $	56/83	—	198	233	—
Monthly maint. bundled with rental, $	—	—	—	—	—
Purchase price of:					
additional memory module, $	2,550 (128K)	—	—	—	1,350 (64K)
additional workstations, $	—	3,515 (data entry)	—	—	—
additional printer, $	8,490 (250 lpm)	8,755 (85 lpm)	28,840 (750 lpm)	—	8,490 (250 lpm)
Discounts available	—	Dollar volume	Dollar volume	Dollar volume	—
Date of first U.S. delivery	December 1979	May 1973	April 1977	April 1977	October 1980
Number installed to date	NA	NA	NA	NA	NA
COMMENTS		AEL programs can execute concurrently with RPG or COBOL programs; B 730 supports up to 4 Direct Data Entry stations			$2,550 for 128K-byte memory increment

Small Business Computer Specifications

MANUFACTURER AND MODEL	Burroughs B1815	Burroughs B1855	Burroughs B1860 CMS	Burroughs B1885	Burroughs B 1900 Series
WORD LENGTH, BITS	16	16	16	16	16
CPU					
Model	B 1800	B 1800	B 1800	B 1800	B 1900
Add time, microseconds	—	—	—	—	—
No. of I/O ports on basic sys. and max.	1; 14	1; 14	1; 14	1; 14	6
INTERNAL STORAGE					
Type	MOS/LSI	MOS/LSI	MOS/LSI	MOS/LSI	MOS
Capacity of basic system, bytes	131K	524K	64K	524K	128K to 524K
Maximum capacity, bytes	262K	1,048K	512K	1,048K	524K to 2M
Increment size, bytes	131K	262K	262K	262K	128K or 256K
Cycle/access time, microseconds	1.2	—	—	—	167-250 ns.
MASS STORAGE					
Floppy disk (diskette) drive	Opt.; 486K bytes	Opt.; 486K bytes	Opt.; 486K bytes	Opt.; 486K bytes	Std.; 243K bytes
Maximum diskette storage	1M bytes	1M bytes	1M bytes	1M bytes	1M bytes
Cartridge disk drive	74.4M bytes	74.4M bytes	74.4M bytes	74.4M bytes	—
Pack disk drive	Opt.; 697.6M bytes	Opt.; 697.6M bytes	Opt.; 697.6M bytes	Opt.; 697.6M bytes	Opt.; 130.4M bytes
Fixed-head disk/drum	No	Opt.; 11.8M bytes	Opt.; 11.8M bytes	Opt.; 11.8M bytes	Opt.; 200M bytes
Maximum disk storage	697.6M bytes	697.6M bytes	697.6M bytes	697.6M bytes	402M bytes
WORKSTATIONS					
Maximum number connectable	16	16	16	16	—
Recommended maximum number	—	—	—	—	—
Keyboard style	Typewriter	Typewriter	Typewriter	Typewriter	Type., num. key.
Workstation printer	Yes	Yes	Yes	Yes	Optional
INPUT/OUTPUT DEVICES					
Serial printer	No	No	No	No	Optional
Line printer	Opt.; 85-1500 lpm	Opt.; 85-1500 lpm	Opt.; 85-1500 lpm	Opt.; 85-1500 lpm	Std.; 320 lpm
Reel-to-reel tape drive	Opt.; 10-120KBS	Opt.; 10-120KBS	Opt.; 10-120KBS (4)	Opt.; 10-120KBS	Opt.; 40-120KBS
Cassette/cartridge tape drive	Cass.; 1KBS	Cass.; 1KBS	Cass.; 1KBS	Cass.; 1KBS	Opt.; 1KBS/No
CRT	Std.; 24 x 80 char.	Std.; 24 x 80 char.	Std.; 24 x 80 char.	Std.; 24 x 80 char.	Std.; 24 x 80 char.
Other	Card reader	Card reader	Card reader	Card reader	Card readers/MICR units
COMMUNICATIONS					
Maximum no. of lines	4	4	8 std.; 24 opt.	32	2 to 32
Synchronous	Opt.; 50,000 bps	Opt.; 50,000 bps	Opt.; 50,000 bps	Opt.; 50,000 bps	Opt.; to 50,000 bps
Asynchronous	Opt.; 9600 bps	Opt.; 9600 bps	Opt.; 9600 bps	Opt.; 9600 bps	Opt.; to 9600 bps
Protocols supported	Bisync, BDLC	Bisync, BDLC	Bisync, BDLC	Bisync, BDLC	BDLC, Bisync
Network architecture supported	BNA	BNA	BNA	BNA	Async., sync.
RJE terminals emulated	HASP	HASP	HASP	HASP	—
IBM 3270 emulation	—	—	—	—	—
SOFTWARE SUPPORT					
COBOL	Yes	Yes	Yes	Yes	Yes
RPG	Yes	Yes	Yes	Yes	Yes
FORTRAN	Yes	Yes	Yes	Yes	Yes
BASIC	Yes	Yes	Yes	Yes	Yes
Assembler	No	No	No	No	No
Other programming languages	NDL, UPL, AEL	NDL, UPL, AEL	NDL, UPL, AEL	NDL, UPL, AEL	NDL, MIL, SDL, others
Multiprogramming	Yes	Yes	Yes	Yes	Yes
Max. no. of jobs run concurrently	—	—	—	—	—
Language complemented in firmware	Fully	Fully	Fully	Fully	Fully
Op. sys. implemented in firmware	Fully	Fully	Fully	Fully	Fully
General accounting packages	Yes	Yes	Yes	Yes	Yes
Industry application areas	All business acct'g.	All business acct'g.	All business acct'g.	All business acct'g.	General purpose
Data base management system	Yes	Yes	Yes	Yes	Yes
File access methods supported	Rand., seq., ISAM	Rand., seq., ISAM	Rand., seq., ISAM	Rand., seq., ISAM	Random, seq., ISAM
Software separately priced	Yes	Yes	Yes	Yes	Yes
Technical help separately priced	Yes	Yes	Yes	Yes	Yes
LEASE/MAINTENANCE OPTIONS					
Lease plans available	1-, 5-year	1-, 5-year	1-, 5-year	1-, 5-year	1 or 5 years
Maintenance plans available	Various	Various	Various	Various	On-site contract, on-call
PRICING & AVAILABILITY					
Purchase price of basic system, $	60,000	91,928	90,000	133,000	71,500-148,960
Monthly rental of basic system, $	1,075 (5-yr.)	2,145 (5-yr.)	2,500 (5-yr.)	3,132 (5-yr.)	2,440-4,824 (1-yr.)
Monthly maint. price of basic system, $	360	500	485	600	410-648
Monthly maint. bundled with rental, $	Yes	Yes	Yes	Yes	—
Purchase price of:					
additional memory module, $	10,000	5,000	7,000	7,000	3,450 (128K)
additional workstations, $	2,700	2,700	2,700	2,700	—
additional printer, $	9,300	9,300	9,300	9,300	11,500 (320lpm)
Discounts available	No	No	No	No	—
Date of first U.S. delivery	June 1978	June 1978	Second qtr. 1977	June 1978	March 1980
Number installed to date	NA	NA	NA	NA	NA
COMMENTS			150 cpm card punch, 300-1400 cpm card readers opt.		$5,750 for 256K-byte memory increment

Small Business Computer Specifications

MANUFACTURER AND MODEL	Business Control System 8/11	Business Controls System 80/8	CADO Systems Corporation CADO C.A.T. (System 20/21)	CADO Systems Corporation System 20/22	CADO Systems Corporation System 20/24
WORD LENGTH, BITS	16	12	8	8	8
CPU					
Model	DEC PDP-11/23 to 70	DEC PDP-81A, E	Intel 8085A	Intel 8085A	Intel 8085A
Add time, microseconds	8.24 (8 digits)	2.6-3.0 (word)	—	—	—
No. of I/O ports on basic sys. and max.	4; 24	2; 12	1	2	4
INTERNAL STORAGE					
Type	COS, MOS, bipolar	Core	NMOS	NMOS	NMOS
Capacity of basic system, bytes	64K	32K	32K	32K	32K
Maximum capacity, bytes	1M	256K	32K	32K	48K
Increment size, bytes	16K	16K	—	—	16K
Cycle/access time, microseconds	0.98/0.49	1.2/0.6	1.3	1.3	1.3
MASS STORAGE					
Floppy disk (diskette) drive	Opt.; 2048K bytes	Opt.; 670K bytes	Std.; (2) 1.2M bytes	Std.; (1) 1.2M bytes	Std.; (1) 2.4M bytes
Maximum diskette storage	—	—	2.4M bytes	3.6M bytes	4.8M bytes
Cartridge disk drive	Std.; 1.4B bytes	40M bytes	No	Opt.; to 52M bytes	Opt.; to 52M bytes
Pack disk drive	Opt.; 1400M bytes	No	No	No	No
Fixed-head disk/drum	Opt.; 8M bytes	No	No	Opt.; to 76M bytes	Opt.; to 76M bytes
Maximum disk storage	—	—	—	76M bytes	76M bytes
WORKSTATIONS					
Maximum number connectable	—	—	1	1	2
Recommended maximum number	—	—	1	1	2
Keyboard style	Type.; num. key.	Type.; num. key.	Type., num. key.	Type., num. key.	Type., num. key.
Workstation printer	—	—	Standard	Standard	Standard
INPUT/OUTPUT DEVICES					
Serial printer	Opt.; 180 cps	Opt.; 180 cps	Std.; 150 cps	Std., 150 cps	Std.; 150 cps
Line printer	Opt.; 250-1200 lpm	Opt.; 250-600 lpm	No	Opt.; to 300 lpm	Opt.; to 300 lpm
Reel-to-reel tape drive	Opt.; 10-72KBS	Opt.; 36KBS	No	No	No
Cassette/cartridge tape drive	Opt.; 4KBS	Cass.; 3KBS	No/No	No/No	No/No
CRT	Std.; 960-1584 char.	Std.; 24 x 80 char.	Std.; 24 x 80 char.	Std.; 24 x 80 char.	Std.; 24 x 80 char.
Other	Opt.	Card, p. tape	—	—	—
COMMUNICATIONS					
Maximum no. of lines	64	16	—	—	1
Synchronous	Opt.; to 50K bps	Opt.; to 4800 bps	—	—	Opt.; to 9600 bps
Asynchronous	Opt.; to 9600 bps	Opt.; to 9600 bps	—	—	Opt.; to 9600 bps
Protocols supported	Bisync; SDLC	IBM 2780	—	—	2770/2780/3780
Network architecture supported	DECnet	—	—	—	—
RJE terminals emulated	—	—	—	—	2780/3780
IBM 3270 emulation	—	—	—	—	Yes
SOFTWARE SUPPORT					
COBOL	Yes	No	No	No	No
RPG	Yes	No	No	No	No
FORTRAN	Yes	Yes	No	No	No
BASIC	Yes	Yes	No	No	No
Assembler	Yes	Yes	No	No	No
Other programming languages	DIBOL, DECform	DIBOL, COM	CADOL II*	CADOL II*	CADOL II*
Multiprogramming	Yes, 63 partitions	Yes; 15 partitions	No	No	No
Max. no. of jobs run concurrently	—	—	—	—	—
Language complemented in firmware	No	No	Partially	Partially	Partially
Op. sys. implemented in firmware	No	No	Partially	Partially	Partially
General accounting packages	Yes	—	Yes	Yes	Yes
Industry application areas	Retail, mfg., dist.	Retail, mfg., dist.	Acctg., WP, mes. pro.	Acctg., WP, mes. pro.	Acctg., WP, mes. pro.
Data base management system	DBMS-11	No	Yes	Yes	Yes
File access methods supported	Rand., seq., index	Rand., seq., index	Rand., seq., ISAM	Rand., seq., ISAM	Rand., seq., ISAM
Software separately priced	No	No	Yes	Yes	Yes
Technical help separately priced	No	No	—	—	—
LEASE/MAINTENANCE OPTIONS					
Lease plans available	—	—	Third-party	Third party	Third-party
Maintenance plans available	—	—	—	—	—
PRICING & AVAILABILITY					
Purchase price of basic system, $	40,000	29,990	13,990	17,330	24,740
Monthly rental of basic system, $	800	600	—	—	—
Monthly maint. price of basic system, $	—	—	140	170	240
Monthly maint. bundled with rental, $	—	—	—	—	—
Purchase price of:					
additional memory module, $	—	—	Contact vendor	Contact vendor	Contact vendor
additional workstations, $	—	—	Contact vendor	Contact vendor	Contact vendor
additional printer, $	—	—	Contact vendor	Contact vendor	Contact vendor
Discounts available	—	—	Contact vendor	Contact vendor	Contact vendor
Date of first U.S. delivery	1976	1971	July 1980	July 1980	July 1980
Number installed to date	120	NA	NA	NA	NA
COMMENTS	Supports all DEC operating systems, sorts, etc.		*CADOL II combines BASIC with a CADO-designed I/O and format control system; includes Just Ask II, an English-like manage./inquiry sys.	*CADOL II combines BASIC with a CADO-designed I/O and format control system; includes Just Ask II, an English-like manage./inquiry system	*CADOL II combines BASIC with a CADO-designed I/O and format control system; includes Just Ask II, an English-like manage./inquiry system

Small Business Computer Specifications

MANUFACTURER AND MODEL	CADO Systems Corporation System 20/28	Centurion Computer Corp. Centurion III	Centurion Computer Corp. Centurion 100	Centurion Computer Corp. Centurion 200	Centurion Computer Corp. Centurion Series 6000
WORD LENGTH, BITS	8	8	8	8	8
CPU					
Model	Intel 8085A	Centurion CPU-5	Centurion CPU-6	Centurion CPU-5	Centurion CPU-6
Add time, microseconds	—	3.0 (16 bit)	3.0 (16 bit)	3.0 (16 bit)	1.6 (16 bit)
No. of I/O ports on basic sys. and max.	8	512 used, 4K max.	512 used; 4K max.	512 used; 4K max.	512 used, 4K max.
INTERNAL STORAGE					
Type	NMOS	MOS	MOS	MOS	MOS
Capacity of basic system, bytes	32K	32K	32K	32K	64K
Maximum capacity, bytes	96K	64K	64K	64K	256K
Increment size, bytes	16K	32K	32K	32K	32K, 64K, 128K
Cycle/access time, microseconds	1.3	0.8/0.2	0.8/0.2	0.8/0.2	0.8/0.2
MASS STORAGE					
Floppy disk (diskette) drive	Std.; (1) 2.4M bytes	Opt.; 600K bytes	Std.; 1.2M bytes	No	Opt.; 1.2M bytes
Maximum diskette storage	7.2M bytes	383.6M bytes	3; 3.6M bytes	—	3; 3.6M bytes
Cartridge disk drive	Opt.; to 52M bytes	Opt; 10M bytes	No	Std.; 10.4M bytes	Opt.; 10.4M bytes
Pack disk drive	No	No	No	No	No
Fixed-head disk/drum	Opt.; to 76M bytes	No	No	No	No
Maximum disk storage	76M bytes	4; 83.2M bytes	—	2; 41.6M bytes	8; up to 635M bytes
WORKSTATIONS					
Maximum number connectable	4	16	12	12	40
Recommended maximum number	4	4	2	4	32
Keyboard style	Type., num. key.	Data entry, num. key	Data entry, num. key	Data entry, num. key.	Data entry, num. key
Workstation printer	Standard	Optional	Standard	Standard	Optional
INPUT/OUTPUT DEVICES					
Serial printer	Std.; 150 cps	Opt.; 45-150 cps	Opt.; 45-150 cps	Opt.; 45-150 cps	Opt.; 45-150 cps
Line printer	Opt.; to 300 lpm	Opt.; 120-600 lpm	Opt.; 120-200 lpm	Opt.; 120-600 lpm	Opt.; 120-600 lpm
Reel-to-reel tape drive	No	No	No	No	Opt.; 9K cps
Cassette/cartridge tape drive	No/No	No	No	No	No
CRT	Std.; 24 x 80 char.	Std.; 24 x 80 char.	Std.; 24 x 80 char.	Std.; 24 x 80 char.	Std.; 24 x 80 char.
Other	—	No	No	No	No
COMMUNICATIONS					
Maximum no. of lines	1	3	1	3	32
Synchronous	Opt.; to 9600 bps	No	No	No	No
Asynchronous	Opt.; to 9600 bps	Std.; 1200 bps	Std.; 1200 bps	Std.; 1200 bps	Std.; 1200 bps
Protocols supported	2770/2780/3780	None	None	None	No
Network architecture supported	—	None	None	None	None
RJE terminals emulated	2780/3780	None	None	None	No
IBM 3270 emulation	Yes	No	No	No	No
SOFTWARE SUPPORT					
COBOL	No	No	No	No	Yes (ANSI 74)
RPG	No	No	No	No	No
FORTRAN	No	No	No	No	No
BASIC	No	No	No	No	Yes
Assembler	No	Yes	Yes	Yes	Yes
Other programming languages	CADOL II*	CPL, SMART, JCL	CPL, SMART, JCL	CPL, SMART, JCL	CPL, SMART, JCL
Multiprogramming	No	Yes (1-16 part.)	Yes (1 to 16 part.)	Yes (1-16 part.)	Yes (1-64 part.)
Max. no. of jobs run concurrently	—	16	16	16	64
Language complemented in firmware	Partially	No	No	No	No
Op. sys. implemented in firmware	Partially	No	No	No	No
General accounting packages	Yes	Yes	Yes	Yes	Yes
Industry application areas	Acctg., WP, mes. pro.	Any	Any	Any	Any
Data base management system	Yes	No	No	No	No
File access methods supported	Rand., seq., ISAM	Rand., seq., index	Rand., seq., index	Rand., seq., index	Rand., seq., index
Software separately priced	Yes	Some	Some	Some	Some
Technical help separately priced	—	Yes	Yes	Yes	Yes
LEASE/MAINTENANCE OPTIONS					
Lease plans available	Third-party	Third party	Third party	Third party	Third party
Maintenance plans available	—	Contract	Contract	Contract	Contract
PRICING & AVAILABILITY					
Purchase price of basic system, $	45,410	30,367	15,408	27,335	18,048
Monthly rental of basic system, $	—	—	—	—	—
Monthly maint. price of basic system, $	435	304	154	273	NA
Monthly maint. bundled with rental, $	—	—	—	—	—
Purchase price of:					
additional memory module, $	Contact vendor	2,400 (32K)	2,400 (32K)	2,400 (32K)	2,400 (32K)
additional workstations, $	Contact vendor	2,492	2,492	2,492	2,492
additional printer, $	Contact vendor	—	—	—	—
Discounts available	Contact vendor	—	—	—	—
Date of first U.S. delivery	July 1980	1975	Second qtr. 1979	Second qtr. 1979	Fourth qtr. 1979
Number installed to date	NA	Over 950	200	150	100
COMMENTS	*CADOL II combines BASIC with a CADO-designed I/O and format control system; includes Just Ask II, an English-like manage./inquiry system	Price includes printer; English-oriented JCL; large selection of applications	Price includes printer; English-oriented JCL; large selection of applications	Price includes printer; English-oriented JCL; large selection of applications	Price includes printer; English-oriented JCL; large selection of applications

Small Business Computer Specifications

MANUFACTURER AND MODEL	Century Computer Century 300	Century Computer Century 400	Century Computer Century 700	Century Computer Century 900	Century Computer Century X-1000
WORD LENGTH, BITS	8, 16	8, 16	8, 16	8, 16	8, 16, 24
CPU					
Model	Century 200	Century 400	Century 400	Century 400	X-1000
Add time, microseconds	1.4 (16 bits)	1.4 (16 bits)	1.4 (16 bits)	1.4 (16 bits)	1.6 (24 bits)
No. of I/O ports on basic sys. and max.	2; 256	2; 256	2; 256	2; 256	256
INTERNAL STORAGE					
Type	MOS	MOS	MOS	MOS	MOS
Capacity of basic system, bytes	32K	64K	96K	16K	64K
Maximum capacity, bytes	64K	256K	512K	1M	1M
Increment size, bytes	32K, 64K	32K, 64K	32K, 64K	32K, 64K	64K
Cycle/access time, microseconds	.4/.2	.4/.2	.4/.2	.4/.2	1.1
MASS STORAGE					
Floppy disk (diskette) drive	No	No	No	No	—
Maximum diskette storage	—	—	—	—	—
Cartridge disk drive	10M bytes	10M bytes	10M bytes	10M bytes	—
Pack disk drive	80M bytes	80M bytes	80M bytes	80M bytes	—
Fixed-head disk/drum	No	No	No	No	—
Maximum disk storage	150M bytes	420M bytes	600M bytes	900M bytes	—
WORKSTATIONS					
Maximum number connectable	6	15	20	32	20
Recommended maximum number	4	12	20	32	15
Keyboard style	Type.; num. key.	Type.; num. key.	Type.; num. key.	Type.; num. key.	Type.; num. key.
Workstation printer	Opt.; 4	Opt.; 8	Opt.; 20	Opt.; 32	Opt.; 20
INPUT/OUTPUT DEVICES					
Serial printer	No	Opt.; 165 cps	No	No	—
Line printer	Std.; 300 lpm	Opt.; 300, 600 lpm	Opt.; 300 lpm	Opt.; 600 lpm	Opt. 300 lpm
Reel-to-reel tape drive	Opt.; 36KBS	Opt.; 36KBS	Opt.; 36KBS	Opt.; 160KBS	800/1600 BPI, 45 ips
Cassette/cartridge tape drive	Optional	Optional	Optional	Optional	Optional, 30 ips
CRT	Std.; 24 x 80 char.	Std.; 24 x 80 char.	Std.; 24 x 80 char.	Std.; 24 x 80 char.	Std.; 24 x 80 char.
Other	No	No	No	No	—
COMMUNICATIONS					
Maximum no. of lines	4	8	20	32	4
Synchronous	Opt.; to 9600 bps	Opt.; to 9600 bps	Opt.; to 9600 bps	Opt.; to 9600 bps	—
Asynchronous	19,200 bps	19,200 bps	19,200 bps	19,200 bps	9600 bps
Protocols supported	—	—	—	—	3780
Network architecture supported	No	No	No	No	—
RJE terminals emulated	IBM 3780	IBM 3780	IBM 3780	IBM 3780	—
IBM 3270 emulation	Yes, optional	Yes, optional	Yes, optional	Yes, optional	Yes, optional
SOFTWARE SUPPORT					
COBOL	No	No	No	No	No
RPG	No	No	No	No	No
FORTRAN	No	No	No	No	Yes
BASIC	Yes	Yes	Yes	Yes	Yes
Assembler	Yes	Yes	Yes	Yes	Yes
Other programming languages	CPL, PASCAL	CPL, PASCAL	CPL, PASCAL	CPL, PASCAL	PASCAL
Multiprogramming	Yes, 4 partitions	Yes, 8 partitions	Yes; 20 partitions	Yes, 32 partitions	Yes, 15 partitions
Max. no. of jobs run concurrently	4	8	20	32	8
Language complemented in firmware	No	No	No	No	Yes
Op. sys. implemented in firmware	No	No	No	No	Yes
General accounting packages	Yes	Yes	Yes	Yes	Yes
Industry application areas	Finance, gen. bus.	—	—	—	Yes
Data base management system	Yes	Yes	No	No	Yes
File access methods supported	Rand., seq., index	Rand., seq., index	Rand., seq., index	Rand., seq., index	ISAM
Software separately priced	Yes	Yes	Yes	Yes	Yes
Technical help separately priced	Yes	Yes	Yes	Yes	Yes
LEASE/MAINTENANCE OPTIONS					
Lease plans available	Contact vendor	Contact vendor	Contact vendor	Contact vendor	3-, 5-, 6-year
Maintenance plans available	On-site, on-call, factory, third party	On-site, on-call, factory, third party	On-site, on-call, factory, third party	On-site, on-call, factory, third party	Yes
PRICING & AVAILABILITY					
Purchase price of basic system, $	Contact vendor	Contact vendor	Contact vendor	Contact vendor	40,000-60,000
Monthly rental of basic system, $	Purchase only	Purchase only	Purchase/lease	Purchase/lease	800-1,200
Monthly maint. price of basic system, $	—	—	—	—	500-1,000
Monthly maint. bundled with rental, $	Yes	Yes	Yes	Yes	—
Purchase price of:					
additional memory module, $	—	—	—	—	—
additional workstations, $	—	—	—	—	—
additional printer, $	—	—	—	—	—
Discounts available	OEM	OEM	OEM	OEM	OEM
Date of first U.S. delivery	June 1975	June 1975	June 1975	June 1975	August 1980
Number installed to date	NA	NA	NA	NA	18
COMMENTS					

Small Business Computer Specifications

MANUFACTURER AND MODEL	Compal 8100	Compal 8200	Complete Computer Systems #9	Complete Computer Systems #10	Complete Computer Systems #11
WORD LENGTH, BITS	8	8	16 + 1	16 + 1	16 + 1
CPU					
Model	Intel 8080	Zilog Z-80	DG Nova 4C	DG microNova 3/12	DG Nova 3/12
Add time, microseconds	2.4	2.4	0.2	0.7 (1 word)	0.7 (1 word)
No. of I/O ports on basic sys. and max.	3; 4	3; 4	2.6	3; 34	4; 34
INTERNAL STORAGE					
Type	MOS	MOS	MOS	MOS	MOS
Capacity of basic system, bytes	56K	56K	64K	64K	64K
Maximum capacity, bytes	56K	112K	64K	256K	256K
Increment size, bytes	—	8K	16K or 32K	32K	32K
Cycle/access time, microseconds	1.6/1.4	1.6/.4	0.4/0.2	0.70/0.35	0.70/0.35
MASS STORAGE					
Floppy disk (diskette) drive	Std.; 630K bytes	Std.; 630K bytes	Opt.; 1.2M bytes	Opt.; 1.2M bytes	Opt.; 1.2M bytes
Maximum diskette storage	2.4M bytes	2.4M bytes	4.8M bytes	—	—
Cartridge disk drive	No	No	No	Std.; 10M bytes	Std.; 10M bytes
Pack disk drive	No	No	Std.; 10M bytes	No	No
Fixed-head disk/drum	No	Opt.; 30M bytes	No	No	No
Maximum disk storage	—	—	640M bytes	—	—
WORKSTATIONS					
Maximum number connectable	1	1	4	16	16
Recommended maximum number	1	1	4	16	16
Keyboard style	Type.; num. key.	Type.; num. key.	Type.; num. key.	Type., num. key	Type, num. key.
Workstation printer	1, 1, 2	1, 1, 2	Opt.; (4)	Opt.; 2	Opt.; 2
INPUT/OUTPUT DEVICES					
Serial printer	Std.; 55-150 cps	Std.; 55-150 cps	Std.; 120 cps	Std.; 60 cps	Std.; 120 cps
Line printer	Optional	Optional	Opt.; 600 cps	Opt.; 300-600 lpm	Opt.; 300-600 lpm
Reel-to-reel tape drive	No	No	Opt.; 60,000 cps	Opt.; 300-600 cps	Opt.; 60,000 cps
Cassette/cartridge tape drive	Optional	Optional	No	No	No
CRT	Std.; 1920 char.	Std.; 1920 char.	Std.; 1920 char.	Std.; 1920 char.	Std.; 1920 char.
Other	—	—	Opt.; WP printer	—	—
COMMUNICATIONS					
Maximum no. of lines	3	3	4	16	16
Synchronous	Opt.; 1200/9600 bps	Opt.; 1200/9600 bps	Opt.; to 9600 bps	Opt.; to 9600 bps	Opt.; to 9600 bps
Asynchronous	Std.; 300 bps	Std.; 300 bps	Opt.; to 9600 bps	Opt.; to 9600 bps	Opt.; to 9600 bps
Protocols supported	—	Asyn, bisync	Async, bisync	Async, bisync	Async, bisync
Network architecture supported	—	—	IBM 360/370	IBM 360/370	IBM 360/370
RJE terminals emulated	IBM 2780/3780	IBM 2780/3780	2780/3780	2780/3780	RJE 80 (2780/3780)
IBM 3270 emulation	—	—	—	—	Yes
SOFTWARE SUPPORT					
COBOL	Yes (opt.)	Yes (opt.)	No	No	No
RPG	No	No	No	No	No
FORTRAN	Yes (opt.)	Yes (opt.)	Yes	Yes	Yes
BASIC	Yes	Yes	Yes	Yes	Yes
Assembler	Yes	Yes	Yes	Yes	Yes
Other programming languages	PASCAL	PASCAL	"CREATE" DBMS	"CREATE" DBMS	"CREATE" DBMS
Multiprogramming	No	No	Yes (2 partitions)	Yes	Yes
Max. no. of jobs run concurrently	One program	One program	4	16	16
Language complemented in firmware	No	No	Partially	Partially	Partially
Op. sys. implemented in firmware	Partially	Partially	Partially	Partially	Partially
General accounting packages	Yes	Yes	Yes	Yes	Yes
Industry application areas	Dist., mfg., retail, legal	Dist., mfg., retail	Membership, mfg.	—	—
Data base management system	Yes	Yes	Yes	Yes	Yes
File access methods supported	All types	All types	Rand., seq., ISAM	Rand., seq., index	Rand., seq., index
Software separately priced	No	No	Yes	Yes	Yes
Technical help separately priced	No	No	Yes	Yes	Yes
LEASE/MAINTENANCE OPTIONS					
Lease plans available	1 to 5 years	1 to 5 years	5 yr.	5 yr. lease/purchase	5 yr. lease/purchase
Maintenance plans available	On-site, on-call, factory	On-site	On-site	On-site	On-site
PRICING & AVAILABILITY					
Purchase price of basic system, $	11,500	12,500	24,940	30,940	33,605
Monthly rental of basic system, $	—	No	360	425	462
Monthly maint. price of basic system, $	55	60	240	280	310
Monthly maint. bundled with rental, $	No	No	—	No	No
Purchase price of:					
additional memory module, $	—	300 (8K)	2,200 (32K)	4,000 (64K bytes)	4,000 (64K bytes)
additional workstations, $	6,995	8,995	1,550-1,950	1,950	1,950
additional printer, $	2,100 (150 cps)	3,500 (55 cps)	5,450 (600 cps)	5,450 (600 cps)	5,450 (600 cps)
Discounts available	OEM	OEM	Govt. & mult. unit	Govt.; 10%	Govt.; 10%
Date of first U.S. delivery	October 1976	November 1979	January 1980	1974 (Nova 2/10)	1974 (Nova 2/10)
Number installed to date	400	120	NA	NA	NA
COMMENTS			Membership organizations, associations, mail order companies	Property management, rent and maintenance control, multi-entity financials	CREATE operates in shared-logic mode with business application; word processing with variable text fill-in

Small Business Computer Specifications

MANUFACTURER AND MODEL	Complete Computer Systems #12	Complete Computer Systems #14	Complete Computer Systems #22	Complete Computer Systems #26	Compucorp 600 Series
WORD LENGTH, BITS	16 + 1	16 + 1	16 + 1	16 + 1	8
CPU					
Model	DG Nova 3/12	DG Nova 3/12	DG Nova 3/12	DG Nova 3/12	Zilog Z-80
Add time, microseconds	0.7 (1 word)	0.7 (1 word)	0.7 (1 word)	0.7 (1 word)	2
No. of I/O ports on basic sys. and max.	4; 34	4; 34	10; 34	10; 34	3, 10
INTERNAL STORAGE					
Type	MOS or core	MOS or core	MOS or core	MOS or core	MOS
Capacity of basic system, bytes	64K	64K	96K	128K	64K
Maximum capacity, bytes	256K	256K	256K	256K	128K
Increment size, bytes	32K	32K	32K, 64K	32K, 64K	64K
Cycle/access time, microseconds	0.70/0.35	0.70/0.35	0.7/0.35	0.7/0.35	2
MASS STORAGE					
Floppy disk (diskette) drive	Opt.; 1.2M bytes	Opt.; 1.2M bytes	Opt.; 1.2M bytes	Opt.; 1.2M bytes	Std.; (3) 2.4M bytes
Maximum diskette storage	—	—	—	—	2.4M bytes
Cartridge disk drive	Std.; 10M bytes	Std.; 10M bytes	Std.; 30M bytes	Std.; 40M bytes	Opt.; 10M bytes
Pack disk drive	No	No	No	No	No
Fixed-head disk/drum	No	No	No	No	No
Maximum disk storage	—	—	—	—	40M bytes
WORKSTATIONS					
Maximum number connectable	16	16	16	16	8
Recommended maximum number	16	16	16	16	NA
Keyboard style	Type., num. key.	Type., num. key.	Type., num. key.	Type., num. key.	Type., num. key.
Workstation printer	Opt.; 2	Opt.; 2	Std., 1; opt., 2	Std., 1; opt. 2	Standard
INPUT/OUTPUT DEVICES					
Serial printer	Std.; 180 cps	Std.; 180 cps	Std.; 180 cps	Std.; 60-180 cps	Standard
Line printer	Opt.; 300-600 lpm	Opt.; 300-600 lpm	Opt.; 300 lpm	Opt.; 300 lpm	Optional
Reel-to-reel tape drive	Opt.; 60,000 cps	Opt.; 60,000 cps	Opt.; 60,000 cps	Opt.; 60,000 cps	No
Cassette/cartridge tape drive	No	No	No	No	No
CRT	Std.; 1920 char.	Std.; 1920 char.	Std.; 1920 char.	Std.; 1920 char.	Standard
Other	—	—	Opt.	Opt.	—
COMMUNICATIONS					
Maximum no. of lines	16	16	16	16	2
Synchronous	Opt.; to 9600 bps	Opt.; to 9600 bps	Opt.; to 9600 bps	Opt.; to 9600 bps	Std.; 19,200 bps
Asynchronous	Opt.; to 9600 bps	Opt.; to 9600 bps	Opt.; to 9600 bps	Opt.; to 9600 bps	Std.; 19,200 bps
Protocols supported	Async, bisync	Bisync	Bisync	Bisync	2780/3780
Network architecture supported	IBM 360/370	IBM 360/370	IBM 360/370	IBM 360/370	No
RJE terminals emulated	RJE 80 (2780/3780)	RJE 80 (2780/3780)	RJE 80 (2780/3780)	RJE 80 (2780/3780)	No
IBM 3270 emulation	Yes	Yes	Yes	Yes	No
SOFTWARE SUPPORT					
COBOL	No	No	No	No	No
RPG	No	No	No	No	No
FORTRAN	Yes	Yes	Yes	Yes	Yes
BASIC	Yes	Yes	Yes	Yes	Yes
Assembler	Yes	Yes	Yes	Yes	Yes
Other programming languages	"CREATE" DBMS	"CREATE" DBMS	"CREATE" DBMS	"CREATE" DBMS	No
Multiprogramming	Yes	Yes	Yes, dynamic	Yes, dynamic	Yes
Max. no. of jobs run concurrently	16	16	16	16	3
Language complemented in firmware	Partially	Partially	Partially	Partially	No
Op. sys. implemented in firmware	Partially	Partially	Partially	Partially	No
General accounting packages	Yes	Yes	Yes	Yes	Yes
Industry application areas	—	Various	Various	Various	Fin., ins., WP
Data base management system	Yes	Yes	Yes	Yes	No
File access methods supported	Rand., seq., index	Rand., seq., index	Multi-index, rand.	Multi-index, rand.	Random, seq.
Software separately priced	Yes	Yes	Yes	Yes	Yes
Technical help separately priced	Yes	Yes	Yes	Yes	NA
LEASE/MAINTENANCE OPTIONS					
Lease plans available	5 yr. lease/purchase	5 yr. lease/purchase	5 yr. lease/purchase	5 yr. lease/purchase	NA
Maintenance plans available	On-site	On-site	On-site	On-site	Contact vendor
PRICING & AVAILABILITY					
Purchase price of basic system, $	33,825	45,275	63,605	77,495	8,000 and up
Monthly rental of basic system, $	492	622	874	1,064	Contact vendor
Monthly maint. price of basic system, $	325	375	—	—	Contact vendor
Monthly maint. bundled with rental, $	No	No	—	—	Contact vendor
Purchase price of:					
additional memory module, $	4,000 (64K bytes)	4,000 (64K bytes)	4,000 (64KB)	4,000 (64K)	—
additional workstations, $	1,950	1,950	1,950	1,950	—
additional printer, $	5,450 (600 cps)	5,450 (600 cps)	5,450 (600 cps)	5,450 (600 cps)	Printer dependent
Discounts available	Govt.; 10%	Govt.; 10%	Govt.; 10%	Govt.; 10%	—
Date of first U.S. delivery	1975 (Nova 2/10)	1976	1976	1976	April 1979
Number installed to date	NA	NA	NA	NA	1500
COMMENTS	Inventory control incl. LIFO, FIFO, avg. lot ctrl., serial no. ctrl., bulk qty.	HMO membership control, mail-order prospect control; CREATE report generator	CREATE operates in shared-logic mode with business application, word processing with variable text fill-in and preprinted forms fill-in	Mfg. and construction systems oriented to job costing estimating, projected completion cost, labor, cost ctr. efficiency	

Small Business Computer Specifications

MANUFACTURER AND MODEL	Computer Automation NAKED MINI 4 (NM 4/04)	Computer Automation NAKED MINI 4 (NM 4/10, 4/30, 4/90)	CDA Parts Handler MP/100	CDA Parts Handler MP/200	CDA Parts Handler Nova 4/C
WORD LENGTH, BITS	16	16	16	16	16
CPU					
Model	SCOUT NM 4/04	NM 4/10, 4/30, 4/90	DG MP/100	DG MP/200	DG Nova 4/C
Add time, microseconds	4.2 (16 bits)	1.4 to 3.8 (16 bits)	5	1.6	.8
No. of I/O ports on basic sys. and max.	—	—	5,17	5, 17	5, 17
INTERNAL STORAGE					
Type	MOS	MOS, Core	MOS	MOS	MOS
Capacity of basic system, bytes	32K	32K	64K	64K	64K
Maximum capacity, bytes	128K	128K	64K	64K	64K
Increment size, bytes	16K	16K	64K	64K	64K
Cycle/access time, microseconds	1	.52	960/500 ns.	840/500 ns.	400/200 ns.
MASS STORAGE					
Floppy disk (diskette) drive	2 opt.; 500K bytes	2 opt.; 500K bytes	Std.; 1.26M bytes	Std.; 1.26M bytes	Std.; 1.26M bytes
Maximum diskette storage	4 opt.; 4M bytes	4 opt.; 4M bytes	1.26M bytes	1.26M bytes	1.26M bytes
Cartridge disk drive	—	1 opt.; 10M bytes	No	No	Opt.; 10M bytes
Pack disk drive	—	1 opt.; 80M bytes	No	No	No
Fixed-head disk/drum	—	—	Std.; 12.5M bytes	Std.; 12.5M bytes	Std.; 12.5M bytes
Maximum disk storage	—	1200M bytes	27.5M bytes	27.5M bytes	27.5M bytes
WORKSTATIONS					
Maximum number connectable	16	32	17	17	17
Recommended maximum number	8	16	5	5	9
Keyboard style	Type., num. key.	Type., num. key	Typewriter	Typewriter	Typewriter
Workstation printer	Optional	Optional	Standard	Standard	Standard
INPUT/OUTPUT DEVICES					
Serial printer	Optional (1) 30 cps	Optional (1) 150 cps	Std.; 180 cps	Std.; 180 cps	Std.; 180 cps
Line printer	Optional (1) 180 cps	Optional (1) 600 lpm	No	No	Opt.; 300 lpm
Reel-to-reel tape drive	—	Optional (1) 1.25 ips	No	No	No
Cassette/cartridge tape drive	—	—	No	No	No
CRT	Optional, 1920 char.	Optional, 1920 char.	Std.; 1920 char.	Std.; 1920 char.	Std.; 1920 char.
Other	—	285-cpm card reader	—	—	—
COMMUNICATIONS					
Maximum no. of lines	32	64	17	9	9
Synchronous	Opt.; 19.2-56K bps	Opt.; 19.2-56K bps	Optional	Optional	Optional
Asynchronous	Opt.; 300-19,200 bps	Opt.; 300-19,200 bps	Standard	Standard	Standard
Protocols supported	—	2780/3780, SDLC	2780/3780	2780/3780	2780/3780
Network architecture supported	—	—	2780/3780, HASP	2780/3780, HASP	2780/3780, HASP
RJE terminals emulated	—	IBM 2780 (opt.)	No	No	No
IBM 3270 emulation	—	—	No	No	No
SOFTWARE SUPPORT					
COBOL	Yes	Yes	No	No	No
RPG	No	No	No	No	No
FORTRAN	Yes	Yes	Yes	Yes	Yes
BASIC	No	No	Yes	Yes	Yes
Assembler	Yes	Yes	Yes	Yes	Yes
Other programming languages	—	PASC., BCPL, Coral 66	DG/L, PASCAL	DG/L, PASCAL	DG/L, PASCAL
Multiprogramming	No	No	Yes	Yes	Yes
Max. no. of jobs run concurrently	—	—	9	9	9
Language complemented in firmware	No	No	NA	NA	NA
Op. sys. implemented in firmware	No	No	NA	NA	NA
General accounting packages	No	No	Yes	Yes	Yes
Industry application areas	General (OEM)	Various (OEM)	Auto parts dist.	Auto parts dist.	Auto parts dist.
Data base management system	No	No	No	No	No
File access methods supported	Random, seq.	Random, seq.	Random, ISAM	Random, ISAM	Random, ISAM
Software separately priced	Yes	Yes	—	—	—
Technical help separately priced	—	—	Yes	Yes	Yes
LEASE/MAINTENANCE OPTIONS					
Lease plans available	—	—	5-year	5-year	5-year
Maintenance plans available	—	—	DG National Service	DG National Service	DG National Service
PRICING & AVAILABILITY					
Purchase price of basic system, $	11,500	11,500-26,800	29,945	29,945	35,945
Monthly rental of basic system, $	—	—	—	—	—
Monthly maint. price of basic system, $	—	—	—	—	—
Monthly maint. bundled with rental, $	—	—	—	—	—
Purchase price of:					
additional memory module, $	625	1,050	—	—	—
additional workstations, $	1,920	1,900	2,800	2,800	2,800
additional printer, $	3,500	3,500-16,000	5,000	5,000	5,000
Discounts available	Yes	Yes	—	—	—
Date of first U.S. delivery	1979	1977	April 1979	September 1980	October 1980
Number installed to date	200	5000	40	2	1
COMMENTS	Sold to OEMs and systems houses for resale to end users with value added	Sold to OEMs and systems houses for resale to end user with value added	Includes Winchester disk drive, PARTS HANDLER inventory system, Accounts Receivable, and POS Billing Programs	Includes Winchester disk drive, PARTS HANDLER inventory system, Accounts Receivable, and POS Billing Program	Includes Winchester disk drive, PARTS HANDLER inventory system, Accounts Receivable, and POS Billing Program

Small Business Computer Specifications

MANUFACTURER AND MODEL	CDA Parts Handler Nova 4/X	CDA Parts Handler Eclipse Line S/140-M/600	Computer Designed Systems Adviser I-1432	Computer Designed Systems Adviser I-2880	Computer Designed Systems Adviser IV-3160
WORD LENGTH, BITS	16	16	16	16	16
CPU					
Model	DG Nova 4/X	S/140-M/600	I/64 CDS	I/64 CDS	IVM-640 CDS
Add time, microseconds	.6	.3	25 (5 digits)	25 (5 digits)	10 (5 digits)
No. of I/O ports on basic sys. and max.	5, 33	9, 58	1-4	1-8	1-16
INTERNAL STORAGE					
Type	MOS	MOS	Core, MOS	Core, MOS	Core, MOS
Capacity of basic system, bytes	128K	128K	64K	64K	64K
Maximum capacity, bytes	256K	2M	96K	128K	192K
Increment size, bytes	64K	128K, 256K, 512K	32K	32K	32K
Cycle/access time, microseconds	400/200 ns.	400/200 ns.	0.8/0.4	0.8/0.4	0.6/0.3
MASS STORAGE					
Floppy disk (diskette) drive	Std.; 1.26M bytes	Opt.; 1.26M bytes	No	No	No
Maximum diskette storage	1.26M bytes	1.26M bytes	—	—	—
Cartridge disk drive	Opt.; 10M bytes	Opt.; 10-20M bytes	Std.; 40M bytes	Std.; 80M bytes	Std.; 128M bytes
Pack disk drive	No	Opt.; 50-277M bytes	Opt.; 160M bytes	Opt.; 160M bytes	Opt.; 320M bytes
Fixed-head disk/drum	Std.; 12.5M bytes	Opt.; 1-16M bytes	No	No	No
Maximum disk storage	52.5M bytes	2B bytes	—	—	—
WORKSTATIONS					
Maximum number connectable	32	58	4	8	16
Recommended maximum number	14	18 to 58	4	8	16
Keyboard style	Typewriter	Typewriter	Type.; num. key.	Type.; num. key.	Type.; num. key.
Workstation printer	Standard	Standard	Opt.; 4	Opt.; 8	Opt.; 16
INPUT/OUTPUT DEVICES					
Serial printer	Std.; 180 cps	Std.; 180 cps	Std.; 50 cps	Std.; 200 cps	Std.; 200 cps
Line printer	Opt.; 300 lpm	Opt.; 300-1500 lpm	Opt.; 300 lpm	Opt.; 300 lpm	Opt.; 600 lpm (2)
Reel-to-reel tape drive	Opt.; 800-1600 bpi	Opt.; 800-1600 bpi	Opt.; 50KBS	Opt.; 50KBS	Opt.; 120KBS
Cassette/cartridge tape drive	No	Opt.; 1600 bpi	Opt.; 750 cps/72KBS	Opt.; 750 cps/72KBS	Opt.; 750 cps/72KBS
CRT	Std.; 1920 char.	Std.; 1920 char.	Std.; 1920 char.	Std.; 1920 char.	Std.; 1920 char.
Other	—	—	Yes	Yes	Yes
COMMUNICATIONS					
Maximum no. of lines	33	128	4	8	16
Synchronous	Optional	Optional	Opt.; 9600 bps	Opt.; 9600 bps	Opt.; 9600 bps
Asynchronous	Standard	Standard	Opt.; 9600 bps	Opt.; 9600 bps	Opt.; 9600 bps
Protocols supported	2780/3780	2780/3780	Bisync, async, SDLC	Bisync, async, SDLC	Bisync, async, SDLC
Network architecture supported	2780/3780, HASP	2780/3780, HASP	No	No	SNA/SDLC
RJE terminals emulated	No	Yes	No	No	2780/3780
IBM 3270 emulation	No	Yes	No	No	Yes
SOFTWARE SUPPORT					
COBOL	No	Yes	Yes	Yes	Yes
RPG	No	Yes	Yes	Yes	Yes
FORTRAN	Yes	Yes	No	No	Yes
BASIC	Yes	Yes	Yes	Yes	Yes
Assembler	Yes	Yes	No	No	Yes
Other programming languages	DG/L, PASCAL	DG/L, ALGOL, PAS.	ABOL, PASCAL	ABOL, PASCAL	ABOL, PASCAL
Multiprogramming	Yes, 2 partitions	Yes, up to 58 part.	Yes, 8 partitions	Yes, 16 partitions	Yes, 24 partitions
Max. no. of jobs run concurrently	33	58	Opt.; 8	Opt.; 16	Opt.; 24
Language complemented in firmware	NA	NA	Partially	Partially	Partially
Op. sys. implemented in firmware	NA	NA	Partially	Partially	Partially
General accounting packages	Yes	Yes	Yes	Yes	Yes
Industry application areas	Auto parts dist.	Auto parts dist.	Dist., mfg., med.	Dist., mfg., med.	Dist., mfg., med.
Data base management system	No	Yes	No	No	No
File access methods supported	Random, ISAM	Random, seq., ISAM	Rand., seq., index	Rand., seq., index	Rand., seq., index
Software separately priced	—	—	Yes	Yes	Yes
Technical help separately priced	Yes	Yes	Yes	Yes	Yes
LEASE/MAINTENANCE OPTIONS					
Lease plans available	5-year	5-year	3, 5, 7 yr., third-party	3, 5, 7 yr., third-party	3, 5, 7 yr., third-party
Maintenance plans available	DG National Service	DG National Service	On-call	On-call	On-call
PRICING & AVAILABILITY					
Purchase price of basic system, $	50,245	Contact vendor	20,300	28,900	39,700
Monthly rental of basic system, $	—	—	400	700	950
Monthly maint. price of basic system, $	—	—	185	260	290
Monthly maint. bundled with rental, $	—	—	No	No	No
Purchase price of:					
additional memory module, $	7,500	Contact vendor	Varies	Varies	Varies
additional workstations, $	2,800	2,800	Varies	Varies	Varies
additional printer, $	5,000	5,000	Varies	Varies	Varies
Discounts available	—	—	Quantity (5)	Quantity (5)	Quantity (5)
Date of first U.S. delivery	September 1979	December 1980	1975	1976	1976
Number installed to date	3	1	NA	NA	NA
COMMENTS	Includes Winchester disk drive, PARTS HANDLER inventory system, Accounts Receivable and POS Billing Program	Includes Winchester disk drive, PARTS HANDLER inventory system, Accounts Receivable and POS Billing Program	Single source responsibility for hardware, software, service; field upgradeable	Single source responsibility for hardware, software, service; field upgradeable	Single source responsibility for hardware, software, service; preprocessors available

Small Business Computer Specifications

MANUFACTURER AND MODEL	Computer Designed Systems Adviser IV-4240	Computer Designed Systems Adviser IV-5320	Computer Hardware Inc. 2130	Computer Hardware Inc. 3230	Computer Hardware Inc. 4210
WORD LENGTH, BITS	16	16	16	16	16
CPU					
Model	IVM-642 CDS	IVM-644 CDS	CHI 2130	CHI 3230	CHI 4210
Add time, microseconds	10 (5 digits)	10 (5 digits)	1.6 (1 word)	2.7	4.6
No. of I/O ports on basic sys. and max.	1-24	1-32	21; 128	21	12
INTERNAL STORAGE					
Type	Core, MOS	Core, MOS	MOS	MOS	MOS
Capacity of basic system, bytes	64K	64K	16K	16K	8K
Maximum capacity, bytes	256K	320K	128K/4M	128K	64K
Increment size, bytes	32K	32K	16K	16K	8K
Cycle/access time, microseconds	0.4/0.25	0.35/0.2	0.8/-	1.6/-	1.2/-
MASS STORAGE					
Floppy disk (diskette) drive	No	No	—	No	Std.; 1.0M bytes
Maximum diskette storage	—	—	—	—	—
Cartridge disk drive	Std.; 192M bytes	Std.; 256M bytes	Opt.; 10M bytes	Opt.; 2M bytes	—
Pack disk drive	Opt.; 640M bytes	Opt.; 2400M bytes	Std.; 1600 bytes	Opt.; 80M bytes	—
Fixed-head disk/drum	Optional	Opt.; variable	Opt.; 2M bytes	Opt.; 2M bytes	—
Maximum disk storage	—	—	NA	NA	2,250K bytes
WORKSTATIONS					
Maximum number connectable	24	32	32	32	4
Recommended maximum number	24	32	32	32	1
Keyboard style	Type.; num. key.	Type.; num. key.	Typewriter	Typwriter	Type.; num. key.
Workstation printer	Opt.; 24	Opt.; 32	Optional	Optional	No
INPUT/OUTPUT DEVICES					
Serial printer	Std.; 200 cps	Std.; 200 cps	Opt.; 60 cps	Optional	Opt.; 30, 180 cps
Line printer	Opt.; 600 lpm (2)	Opt.; 600 lpm (4)	Opt.; 600 lpm	Optional	No
Reel-to-reel tape drive	Opt.; 120KBS	Opt.; 120KBS	Opt.; 75 ips	Optional	No
Cassette/cartridge tape drive	Opt.; 72KBS	Opt.; 750 cps/72KBS	No/No	No/No	Standard/No
CRT	Std.; 1920 char.	Std.; 1920 char.	Std.; 24 x 50 char.	Opt.; 24 x 80 char.	Opt.; 24 x 80 char.
Other	Optional	Optional	—	—	—
COMMUNICATIONS					
Maximum no. of lines	24	32	32 async.; 4 sync.	32 async.; 4 sync.	8 async.; 1 sync.
Synchronous	Opt.; 9600 bps	Opt.; 9600 bps	Opt.; to 4800 bps	Opt.; to 4800 bps	Opt.; to 4800 bps
Asynchronous	Opt.; 9600 bps	Opt.; 9600 bps	Opt.; to 9600 bps	Opt.; to 9600 bps	Opt.; to 9600 bps
Protocols supported	Bisync, async, SDLC	Bisync, async, SDLC	Bisync	Bisync	Bisync
Network architecture supported	SNA/SDLC	SNA/SDLC	NA	NA	NA
RJE terminals emulated	2780/3780	2780/3780	2780/3780, 3741	2780/3780	2780/3780
IBM 3270 emulation	Yes	Yes	No	No	No
SOFTWARE SUPPORT					
COBOL	Yes	Yes	Yes	Yes	No
RPG	Yes	Yes	Yes	Yes	No
FORTRAN	Yes	Yes	Yes	Yes	Yes
BASIC	Yes	Yes	Yes	Yes	No
Assembler	Yes	Yes	Yes	Yes	Yes
Other programming languages	ABOL, PASCAL	ABOL, PASCAL	ALGOL, SNOBOL	ALGOL, SNOBOL	—
Multiprogramming	Yes, 32 partitions	Yes, 54 partitions	Yes, 32 partitions	Yes	Yes, 8 partitions
Max. no. of jobs run concurrently	Opt. 48	—	32	32	4
Language complemented in firmware	Partially	Partially	No	No	No
Op. sys. implemented in firmware	Partially	Partially	Partially	Partially	No
General accounting packages	Yes	Yes	Yes	Yes	Yes
Industry application areas	Dist., mfg., med.	Dist., mfg., med.	General accounting	General accounting	General accounting
Data base management system	Yes	Yes	Yes	Yes	No
File access methods supported	Rand., seq., index	Rand., seq., index	Rand., seq., ISAM	Rand., seq., ISAM	Seq., random
Software separately priced	Yes	Yes	Some	Some	Yes
Technical help separately priced	Yes	Yes	Yes	No	No
LEASE/MAINTENANCE OPTIONS					
Lease plans available	3, 5, 7 yr., third-party	3, 5, 7 yr., third-party	2, 3, 5 year	2, 3, 5 year	1, 2, 3, 5 year
Maintenance plans available	On-call	On-site, on-call	On-call	On-call	On-call, factory ret.
PRICING & AVAILABILITY					
Purchase price of basic system, $	48,900	59,900	Consult factory	Consult factory	Consult factory
Monthly rental of basic system, $	1,200	1,500	Consult factory	Consult factory	Consult factory
Monthly maint. price of basic system, $	380	535	Consult factory	Consult factory	Consult factory
Monthly maint. bundled with rental, $	No	No	No	No	No
Purchase price of:					
additional memory module, $	Varies	Varies	1,500 (16K bytes)	1,500 (16K bytes)	960 (8K bytes)
additional workstations, $	Varies	Varies	—	—	—
additional printer, $	Varies	Varies	—	—	—
Discounts available	Quantity (5)	Quantity (5)	Consult factory	Consult factory	Consult factory
Date of first U.S. delivery	1977	1977	1974	1976	1977
Number installed to date	NA	NA	NA	NA	NA
COMMENTS	Single source responsibility for hardware, software, service; preprocessors available	Single source responsible for hardware, software, service; pre-processors avail., field upgradeable	Hardware floating-point available	Hardware floating-point available	

Small Business Computer Specifications

MANUFACTURER AND MODEL	Computer Hardware Inc. 4800	Control Data Cyber 18 Series	Cybertek Information Manager	Data Communications Corp. DCS	Data Communications Corp. DPS
WORD LENGTH, BITS	16	16 + 2	32	16	16
CPU					
Model	TMS 9900	Cyber 18	Perkin-Elmer 7/32	See Comments	See Comments
Add time, microseconds	—	0.95 (1 word)	—	0.80 (1 word)	0.60 (1 word)
No. of I/O ports on basic sys. and max.	2; 4	5; 9	3, 128	4; 24	5; 59
INTERNAL STORAGE					
Type	MOS	MOS	Core	Core	Core
Capacity of basic system, bytes	64K	32K	128K	8K	32K; 64K
Maximum capacity, bytes	256K	512K	1M	32K	256K
Increment size, bytes	16K	32K or 64K	64K	8K	16K
Cycle/access time, microseconds	—	.75/.30	.75	0.80/0.40	0.80/0.40
MASS STORAGE					
Floppy disk (diskette) drive	Standard (2)	Std.; 560K bytes	None	Opt.; 500K bytes	Opt.; 500K bytes
Maximum diskette storage	—	—	None	1.6M bytes	1.6M bytes
Cartridge disk drive	NA	Opt.; 35.2M bytes	Std.; (1) 32M bytes	Std.; 100M bytes	Std.; 10M bytes
Pack disk drive	NA	Opt.; 400M bytes	Opt.; (1) 80M bytes	Opt.; 92M bytes	Opt.; 92M bytes
Fixed-head disk/drum	NA	No	None	Opt.; 2M bytes	Opt.; 2M bytes
Maximum disk storage	NA	—	1.2 billion bytes	—	—
WORKSTATIONS					
Maximum number connectable	4	—	48	64	39
Recommended maximum number	1	—	48	64	39
Keyboard style	Typewriter, numeric	Type.; num. key.	—	All types	All types
Workstation printer	Standard	Optional	—	Optional	Optional
INPUT/OUTPUT DEVICES					
Serial printer	No	Opt.; 180 cps	Standard; 45 cps	Std.; 165 cps	Std.; 165 cps
Line printer	Std.; (1) 84 lpm	Opt.; 300-900 lpm	Opt.; (4) 300-900 lpm	Opt.; 300-1200 lpm	Opt.; 200-1200 lpm
Reel-to-reel tape drive	No	Opt.; 80KBS	Opt. (4) 45-125 ips	Opt.; 60KBS	Opt.; 60KBS
Cassette/cartridge tape drive	Opt.; (2) 10 ips/No	No	—	Opt. cassette	Opt. cassette
CRT	Opt.; (1) 1920 char.	Opt.; 24 x 80 char.	Std. (48) 1920 chars.	Std.; 24 x 80 char.	Std.; 24 x 80 char.
Other	—	Opt.	200-1000 cpm card reader	Opt.	Opt.
COMMUNICATIONS					
Maximum no. of lines	4	—	12	256	256
Synchronous	Opt.; 9600 bps	Opt.; 4800 bps	Opt.; 9600 bps	Opt.; to 9600 bps	Opt.; to 50K bps
Asynchronous	Std.; 2 x 19	Opt.; 9600 bps	Opt.; 9600 bps	Opt.; to 9600 bps	Opt.; to 9600 bps
Protocols supported	Bisync	Bisync	Bisynch/Asynch	ALL	ALL
Network architecture supported	None	—	2260/3270	TNA, SNA	TNA, SNA, X.25
RJE terminals emulated	2780, 3780	See Comments	HASP/RJE	2780/3780	2780/3780
IBM 3270 emulation	No	No	Yes	Yes	Yes
SOFTWARE SUPPORT					
COBOL	Yes	Yes	No	Yes	Yes
RPG	No	Yes	No	Yes	RPG II
FORTRAN	Yes	Yes	Yes	FORTRAN IV, V	FORTRAN IV, V
BASIC	Yes	No	Yes	Yes	Yes
Assembler	Yes	Macro assembler	Yes	Yes	Yes
Other programming languages	NA	None	No	ALGOL	ALGOL
Multiprogramming	Yes	Yes, 16 partitions	Yes (no limit)	Yes	Yes 1F, 1B
Max. no. of jobs run concurrently	4	17	No limit	2	2
Language complemented in firmware	No	No	Yes	No	Fully
Op. sys. implemented in firmware	Partially	No	No	No	No
General accounting packages	No	No	No	Yes	Yes
Industry application areas	Various	—	Insurance	Various	Mortgages
Data base management system	No	No	No	No	INFOS
File access methods supported	Seq., random	Rand., seq., index	Sequential, ISAM	Rand., seq., index	Rand., seq., index
Software separately priced	Some	Yes	Yes	Yes	Yes
Technical help separately priced	Some	Yes	Yes	Yes	Yes
LEASE/MAINTENANCE OPTIONS					
Lease plans available	1, 2, 3, 5 year	5-year	3 yrs./5 yrs.	Purchase only	Purchase only
Maintenance plans available	On-call, factory ret.	On-call	Yes	On-call, on-site	On-call, on-site
PRICING & AVAILABILITY					
Purchase price of basic system, $	8,850	16,700-18,300	57,680	50,000	On request
Monthly rental of basic system, $	3.25/mo. (24 mo.)	565-618	NA	Purchase only	Purchase only
Monthly maint. price of basic system, $	Consult factory	565-618	457	—	—
Monthly maint. bundled with rental, $	No	No	NA	No	No
Purchase price of:					
additional memory module, $	1,500 (32K bytes)	3,000 (32K bytes)	5,900	8,000 (256K bytes)	8,000 (256K bytes)
additional workstations, $	NA	—	3,250	1,190	1,190
additional printer, $	Consult factory	10,300 (300 lpm)	4,590	12,500 (300 lpm)	12,500 (300 lpm)
Discounts available	Consult factory	Quantity	No	Quantity	Quantity
Date of first U.S. delivery	October 1979	May 1976	December 1978	March 1977	September 1976
Number installed to date	—	NA	20	NA	NA
COMMENTS		RJE terminals emulated included the 2780/3780, HASP, and 200UT			CPUs include DG Nova 3/D, DG Eclipse S130/ S230/S330

Small Business Computer Specifications

MANUFACTURER AND MODEL	Data Communications Corp. RTS	Data Communications Corp. TPS	Data General CS/10 MOD. C1	Data General CS/10 MOD. C3	Data General CS/20
WORD LENGTH, BITS	16	16	16	16	16
CPU					
Model	DG MicroNova 3/12	See Comments	DG MicroNova	DG MicroNova	DG MicroNova
Add time, microseconds	0.80 (1 word)	0.80 (1 word)	24	2.4	2.4
No. of I/O ports on basic sys. and max.	4; 24	4; 24	1; 4	1; 4	1; 1
INTERNAL STORAGE					
Type	Core	Core	NMOS	NMOS	NMOS
Capacity of basic system, bytes	8K	96K	64K	128K	64K
Maximum capacity, bytes	32K	256K	64K	128K	64K
Increment size, bytes	8K	32K	—	—	—
Cycle/access time, microseconds	0.80/0.40	0.80/0.40	960 nano.	960 nano.	0.96/2.88
MASS STORAGE					
Floppy disk (diskette) drive	Opt.; 500K bytes	Opt.; 500K bytes	Std.; 1.2M bytes	Std.; 1.2M bytes	Std.; 630K bytes
Maximum diskette storage	1.6M bytes	1.6M bytes	2.4M bytes	2.4M bytes	1.3M bytes
Cartridge disk drive	Std.; 10M bytes	Std.; 10M bytes	No	No	—
Pack disk drive	Opt.; 92M bytes	Opt.; 92M bytes	No	No	—
Fixed-head disk/drum	Opt.; 2M bytes	Opt.; 2M bytes	Std.; 12.5M bytes	Std.; 12.5M bytes	—
Maximum disk storage	—	—	25M bytes	25M bytes	—
WORKSTATIONS					
Maximum number connectable	39	39	4	4	1
Recommended maximum number	39	39	4	4	1
Keyboard style	All types	All types	Type.; num. key.	Type.; num. key.	—
Workstation printer	Optional	Optional	Opt.; 3	Opt.; 3	—
INPUT/OUTPUT DEVICES					
Serial printer	Std.; 165 cps	Std.; 165 cps	Opt.; 60, 180 cps	Opt.; 60, 180 cps	Opt.; 60, 180 cps
Line printer	Opt.; 300-1200 lpm	Opt.; 300-1200 lpm	Opt.; 240, 300 lpm	Opt.; 240, 300 lpm	Opt.; 240, 300 lpm
Reel-to-reel tape drive	Opt.; 60KBS	Opt.; 60KBS	No	No	No
Cassette/cartridge tape drive	Opt. cassette	Opt. cassette	No	No	No
CRT	Std.; 24 x 80 char.	Std.; 24 x 80 char.	Std.; 24 x 80 char.	Std.; 24 x 80 char.	Std.; 24 x 80 char.
Other	Opt.	Opt.	None	None	—
COMMUNICATIONS					
Maximum no. of lines	256	256	1	1	1
Synchronous	Opt.; to 9600 bps	Opt.; to 9600 bps	Opt.; to 9600 bps	Opt.; to 9600 bps	Opt.; to 9600 bps
Asynchronous	Opt.; to 9600 bps	Opt.; to 9600 bps	No	No	No
Protocols supported	ALL	ALL	Bisync	Bisync	Bisync
Network architecture supported	TNA, SNA, X.25	TNA, SNA, X.25	No	No	—
RJE terminals emulated	2780/3780	2780/3780	2780/3780	2780/3780	—
IBM 3270 emulation	Yes	Yes	No	No	No
SOFTWARE SUPPORT					
COBOL	Yes	Yes	Yes	Yes	Yes
RPG	Yes	No	No	No	No
FORTRAN	FORTRAN IV, V	FORTRAN IV, V	No	No	No
BASIC	Yes	Yes	No	No	No
Assembler	Yes	Yes	No	No	No
Other programming languages	ALGOL	ALGOL	No	No	No
Multiprogramming	Yes	No	No	No	No
Max. no. of jobs run concurrently	NA	2	1	1	—
Language complemented in firmware	No	No	No	No	No
Op. sys. implemented in firmware	No	No	No	No	No
General accounting packages	Yes	Yes	No	No	No
Industry application areas	Broadcasting, dist.	Banking, gen. mktg.	Dist., mfg., retail	Dist., mfg., retail	First-time users, ind.
Data base management system	No	No	No	No	No
File access methods supported	Rand., seq., index	Rand., seq., index	Rand., seq., ISAM	Rand., seq., ISAM	Rand., seq., ISAM
Software separately priced	Yes	Yes	No	No	No
Technical help separately priced	Yes	Yes	No	No	No
LEASE/MAINTENANCE OPTIONS					
Lease plans available	Purchase only	Purchase only	No	No	NA
Maintenance plans available	On-call, on-site	On-call, on-site	On-site, on-call	On-site, on-call	On-site, on-call, factory return
PRICING & AVAILABILITY					
Purchase price of basic system, $	25,000	85,000	10,950	24,440	10,945
Monthly rental of basic system, $	Purchase only	Purchase only	NA	NA	—
Monthly maint. price of basic system, $	—	—	NA	NA	—
Monthly maint. bundled with rental, $	No	No	NA	NA	—
Purchase price of:					
additional memory module, $	8,000 (256K bytes)	8,000 (256K bytes)	—	—	—
additional workstations, $	1,190	1,190	2,290	2,290	—
additional printer, $	12,500 (300 lpm)	12,500 (300 lpm)	4,050 (180 cps)	4,050 (180 cps)	—
Discounts available	Quantity	Quantity	Qty., dollar vol.	Qty., dollar vol.	—
Date of first U.S. delivery	March 1977	NA	July 1980	July 1980	NA
Number installed to date	NA	NA	NA	NA	NA
COMMENTS		CPUs include DG Nova 3/D, DG Eclipse S130/ S230/S330	Interactive COBOL, uses Winchester disk drives	Interactive COBOL, uses Winchester disk drives	Interactive COBOL; built-in screen handler

Small Business Computer Specifications

MANUFACTURER AND MODEL	Data General CS/30 MOD. C1	Data General CS/30 MOD. C3	Data General CS/40 MOD. 1	Data General CS/40 MOD. C3	Data General CS/40 MOD. 4
WORD LENGTH, BITS	16	16	16	16	16
CPU					
Model	DG MicroNova	DG MicroNova	DG Nova	DG Nova	DG Nova
Add time, microseconds	2.4	2.4	0.70	0.70	0.70
No. of I/O ports on basic sys. and max.	1; 1	1; 4	1; 1	1; 1	1; 4
INTERNAL STORAGE					
Type	NMOS	NMOS	MOS	MOS	MOS
Capacity of basic system, bytes	64K	64K	64K	64K	64K
Maximum capacity, bytes	64K	112K	64K	64K	64K
Increment size, bytes	—	16K	—	—	—
Cycle/access time, microseconds	960 nano.	960 nano.	0.70	0.70	0.70
MASS STORAGE					
Floppy disk (diskette) drive	Opt.; 315K bytes	Opt.; 315KB	Opt.; 315K bytes	Opt.; 315K bytes	Opt.; 315K bytes
Maximum diskette storage	315K bytes	315K bytes	315K bytes	315K bytes	—
Cartridge disk drive	Std.; 10M bytes	Std.; 10M bytes	Std.; 10M bytes	Std.; 10M bytes	Std.; 50M bytes
Pack disk drive	No	No	No	No	Opt.; 86, 190M bytes
Fixed-head disk/drum	No	No	No	No	No
Maximum disk storage	20M bytes	20M bytes	80M bytes	80M bytes	760M bytes
WORKSTATIONS					
Maximum number connectable	1	4	1	4	4
Recommended maximum number	1	4	1	3	3
Keyboard style	Type.; num. key.	Type.; num. key.	Type.; num. key.	Type.; num. key.	Type.; num. key.
Workstation printer	Opt.; 1	Opt.; 3	Opt.; 1	Opt.; 3	Opt.; 3
INPUT/OUTPUT DEVICES					
Serial printer	Std.; 60, 180 cps	Std.; 60, 180 cps	Std.; 60, 180 cps	Std.; 60, 180 cps	Std.; 180 cps
Line printer	Opt.; 300 lpm	Opt.; 300 lpm	Std.; 300 lpm	Std.; 300 lpm	Std.; 300 lpm
Reel-to-reel tape drive	No	No	Opt.; 60KBS	Opt.; 60KBS	No
Cassette/cartridge tape drive	No	No	No	No	No
CRT	Std.; 24 x 80 char.	Std.; 24 x 80 char.	Std.; 24 x 80 char.	Std.; 24 x 80 char.	Std.; 24 x 80 char.
Other	None	None	None	None	None
COMMUNICATIONS					
Maximum no. of lines	1	1	1	1	1
Synchronous	Opt.; 9600 bps	Opt.; 9600 bps	Opt.; to 9600 bps	Opt.; 9600 bps	Opt.; to 9600 bps
Asynchronous	No	No	No	No	No
Protocols supported	Bisync	Bisync	Bisync	Bisync	Bisync
Network architecture supported	No	No	No	No	No
RJE terminals emulated	2780/3780	2780/3780	2780/3780	2780/3780	2780/3780
IBM 3270 emulation	No	No	No	No	No
SOFTWARE SUPPORT					
COBOL	Yes	Yes	Yes	Yes	Yes
RPG	No	No	No	No	No
FORTRAN	No	No	No	No	No
BASIC	No	No	No	No	No
Assembler	No	No	No	No	No
Other programming languages	No	No	No	No	No
Multiprogramming	No	Yes	No	Yes	Yes
Max. no. of jobs run concurrently	1	4	1	4	4
Language complemented in firmware	No	No	No	No	No
Op. sys. implemented in firmware	No	No	No	No	No
General accounting packages	No	No	No	No	No
Industry application areas	Dist., mfg., retail	Dist., mfg., retail	—	Dist., mfg., retail	Dist., mfg., medical
Data base management system	No	No	No	No	No
File access methods supported	Rand., seq., ISAM	Rand., seq., ISAM	Rand., seq., ISAM	Rand., seq., ISAM	Rand., seq., ISAM
Software separately priced	No	No	No	No	No
Technical help separately priced	No	No	No	No	No
LEASE/MAINTENANCE OPTIONS					
Lease plans available	NA	NA	NA	NA	NA
Maintenance plans available	On-site, on-call, factory return	On-site, on-call, factory	On-site, on-call, factory	On-site, on-call, factory	On-site, on-call, factory
PRICING & AVAILABILITY					
Purchase price of basic system, $	21,840	22,090	32,915	34,105	56,340
Monthly rental of basic system, $	NA	NA	NA	NA	NA
Monthly maint. price of basic system, $	149	168	265	265	385
Monthly maint. bundled with rental, $	No	NA	NA	NA	NA
Purchase price of:					
additional memory module, $	550 (16K bytes)	550 (16K bytes)	3600 (64K bytes)	3,600 (64K bytes)	—
additional workstations, $	2,290	2,290	4,050 (180 cps)	2,290	4,050 (180 bytes)
additional printer, $	4,050 (180 cps)	4,050 (180 cps)	2,290	4,050 (180 cps)	2,290
Discounts available	Qty., dollar vol.	Qty., dollar vol.	Qty., dollar vol.	Qty., dollar vol.	Qty., dollar vol.
Date of first U.S. delivery	September 1979	September 1979	September 1977	September 1977	March 1977
Number installed to date	NA	NA	NA	NA	NA
COMMENTS	Interactive COBOL; built-in screen controller	Interactive COBOL; up to 4 terminals, multi-terminal control	Interactive COBOL; built-in screen handlers	Interactive COBOL; up to 4 terminals multi-terminal control & built-in screen handlers	Interactive COBOL; up to 4 terminals; multi-terminal control & built-in screen handlers

Small Business Computer Specifications

MANUFACTURER AND MODEL	Data General CS/40 MOD. C5	Data General CS/40 MOD. C6	Data General CS/50 MOD. C3	Data General CS/50 MOD. C5	Data General CS/50 MOD. C6
WORD LENGTH, BITS	16	16	16	16	16
CPU					
Model	DG Nova	DG Nova	DG Nova 4	DG Nova 4	DG Nova 4
Add time, microseconds	0.70	0.70	0.70	0.70	0.70;
No. of I/O ports on basic sys. and max.	1; 9	1; 9	1; 3	1; 3	1; 9
INTERNAL STORAGE					
Type	MOS	MOS	MOS	MOS	MOS
Capacity of basic system, bytes	128K	128K	64K	128K	128K
Maximum capacity, bytes	192K	192K	64K	256K	256K
Increment size, bytes	64K	64K	—	128K	128K
Cycle/access time, microseconds	0.70	0.70	700 nano.	700 nano.	700 nano.
MASS STORAGE					
Floppy disk (diskette) drive	Opt.; 315K bytes	Opt.; 315K bytes	Opt.; 315K bytes	Opt.; 315K bytes	Opt.; 315K bytes
Maximum diskette storage	315K bytes	—	315K bytes	315K bytes	315K bytes
Cartridge disk drive	Std.; 10-20M bytes	Std.; 50M bytes	Std.; 20M bytes	Std.; 20M bytes	No
Pack disk drive	No	Opt.; 96, 190M bytes	No	No	Std.; 50M bytes
Fixed-head disk/drum	No	No	No	Opt.; 12.5-25M bytes	No
Maximum disk storage	40M bytes	760M bytes	20M bytes	25M bytes	200M bytes
WORKSTATIONS					
Maximum number connectable	4	9	3	3	9
Recommended maximum number	3	9	3	3	9
Keyboard style	Type.; num. key.	Type.; num. key.	Type.; num. key.	Type.; num. key.	Type.; num. key.
Workstation printer	Opt.; 8	Opt.; 8	Opt.; 3	Opt.; 3	Opt.; 8
INPUT/OUTPUT DEVICES					
Serial printer	Std.; 180 cps	Std.; 180 cps	Std.; 60, 180 cps	Std.; 60, 180 cps	Std.; 60, 180 cps
Line printer	Opt.; 300-600 lpm	Std.; 300 lpm	Std.; 300 lpm	Std.; 300 lpm	Std.; 300 lpm
Reel-to-reel tape drive	Opt.; 60KBS	No	Opt.; to 1600 bpi	Opt.; to 1600 bpi	Opt.; to 1600 bpi
Cassette/cartridge tape drive	No	No	No	No	No
CRT	Std.; 24 x 80 char.	Std.; 24 x 80 char.	Std.; 24 x 80 char.	Std.; 24 x 80 char.	Std.; 24 x 80 char.
Other	None	None	None	None	None
COMMUNICATIONS					
Maximum no. of lines	1	1	1	1	1
Synchronous	Opt.; 9600 bps	Opt.; to 9600 bps	Opt.; 9600 bps	Opt.; 9600 bps	Opt.; 9600 bps
Asynchronous	No	No	No	No	No
Protocols supported	Bisync	Bisync	Bisync	Bisync	Bisync
Network architecture supported	No	No	No	No	No
RJE terminals emulated	2780/3780	2780/3780	2780/3780	2780/3780	2780/3780
IBM 3270 emulation	No	No	No	No	No
SOFTWARE SUPPORT					
COBOL	Yes	Yes	Yes	Yes	Yes
RPG	No	No	No	No	No
FORTRAN	No	No	No	No	No
BASIC	No	No	No	No	No
Assembler	No	No	No	No	No
Other programming languages	No	No	No	No	No
Multiprogramming	Yes	Yes	Yes	Yes	Yes
Max. no. of jobs run concurrently	9	9	3	3	9
Language complemented in firmware	No	No	No	No	No
Op. sys. implemented in firmware	No	No	No	No	No
General accounting packages	No	No	No	No	No
Industry application areas	Dist., mfg., retail	Dist., mfg., medical	Dist., mfg., retail	Dist., mfg., retail	Dist., mfg., retail
Data base management system	No	No	No	No	No
File access methods supported	Rand., seq., ISAM	Rand., seq., ISAM	Rand., seq., ISAM	Rand., seq., ISAM	Rand., seq., ISAM
Software separately priced	No	No	No	No	No
Technical help separately priced	No	No	No	No	No
LEASE/MAINTENANCE OPTIONS					
Lease plans available	NA	NA	NA	NA	NA
Maintenance plans available	On-site, on-call, factory	On-site, on-call, factory	On-site, on-call	On-site, on-call	On-site, on-call
PRICING & AVAILABILITY					
Purchase price of basic system, $	35,090	63,640	27,555	31,755	52,105
Monthly rental of basic system, $	NA	NA	NA	NA	NA
Monthly maint. price of basic system, $	344	465	242	262	407
Monthly maint. bundled with rental, $	NA	NA	NA	NA	NA
Purchase price of:					
additional memory module, $	3,600 (64K bytes)	3,600 (64K bytes)	—	5,250 (128K bytes)	5,250 (128K bytes)
additional workstations, $	2,290	4,050 (180 cps)	2,290	2,290	2,290
additional printer, $	4,050 (180 cps)	2,290	4,050 (180 cps)	4,050 (180 cps)	4,050 (180 cps)
Discounts available	Qty., dollar vol.	Qty., dollar vol.	Qty.; dollar vol.	Qty., dollar vol.	Qty., dollar vol.
Date of first U.S. delivery	September 1977	March 1977	February 1980	February 1980	February 1980
Number installed to date	NA	NA	NA	NA	NA
COMMENTS	Interactive COBOL; up to 9 terminals, multi-terminal control; concurrent operations	Interactive COBOL; up to 9 terminals; multi-terminal control & built-in screen handlers	Interactive COBOL; up to 3 terminals; multi-terminal control & built-in screen handlers	Interactive COBOL; up to 3 terminals; multi-terminal control & built-in screen handlers	Interactive COBOL; up to 9 terminals; multi-terminal control & built-in screen handlers

Small Business Computer Specifications

MANUFACTURER AND MODEL	Data General CS/60 MOD. C3	Data General CS/60 MOD. C5	Data General CS/60 MOD. 6	Data General CS/70 MOD. C5	Data General CS/70 MOD. C6
WORD LENGTH, BITS	16	16	16	16	16
CPU					
Model	DG Eclipse	DG Eclipse	DG Eclipse	DG Eclipse	DG Eclipse
Add time, microseconds	0.60	0.60	0.60	0.60	0.60
No. of I/O ports on basic sys. and max.	1; 9	1; 9	1; 17	1; 9	1; 17
INTERNAL STORAGE					
Type	MOS/ERCC	MOS/ERCC	MOS/ERCC	MOS/ERCC	MOS/ERCC
Capacity of basic system, bytes	64K	128K	128K	128K	512K
Maximum capacity, bytes	64K	256K	512K	256K	512K
Increment size, bytes	—	128K	128K, 256K	128K	—
Cycle/access time, microseconds	0.5-0.7/1.2	0.5-0.7/1.2	0.5-0.7/1.2	400 nano.	400 nano.
MASS STORAGE					
Floppy disk (diskette) drive	Opt.; 315K bytes	Opt.; 315K bytes	Opt.; 315K bytes	Std.; 1.2M bytes	Std.; 1.2M bytes
Maximum diskette storage	315K bytes	315K bytes	315K bytes	1.2M bytes	1.2M bytes
Cartridge disk drive	Std.; 20M bytes	Std.; 20M bytes	Opt.; 10-20M bytes	No	No
Pack disk drive	No	No	Std.; 50M bytes	No	Std.; 380M bytes
Fixed-head disk/drum	No	No	No	Std.; 25M bytes	No
Maximum disk storage	40M bytes	80M bytes	760M bytes	40M bytes	760M bytes
WORKSTATIONS					
Maximum number connectable	4	9	17	9	17
Recommended maximum number	3	9	16	9	17
Keyboard style	Type.; num. key.	Type.; num. key.	Type.; num. key.	Type.; num. key.	Type.; num. key
Workstation printer	Opt.; 3	Opt.; 8	Opt.; 15	Opt.; 8	Opt.; 16
INPUT/OUTPUT DEVICES					
Serial printer	Std.; 180 cps	Std.; 180 cps	Std.; 180 cps	Std.; 180 cps	Std.; 180 cps
Line printer	Std.; 300 lpm	Std.; 300 lpm	Std.; 300 lpm	Std.; 300 lpm	Std.; 300-600 lpm
Reel-to-reel tape drive	Opt.; 60K cps	Opt.; 60K cps	Std.; 60K cps	No	No
Cassette/cartridge tape drive	No	No	No	No	No
CRT	Std.; 24 x 80 char.	Std.; 24 x 80 char.	Std.; 24 x 80 char.	Std.; 24 x 80 char.	Std.; 24 x 80 char.
Other	None	None	None	None	None
COMMUNICATIONS					
Maximum no. of lines	1	1	1	1	1
Synchronous	Opt.; to 9600 bps	Opt.; to 9600 bps	Opt.; to 9600 bps	Opt.; 9600 bps	Opt.; 9600 bps
Asynchronous	No	No	No	No	No
Protocols supported	Bisync	Bisync	Bisync	Bisync	Bisync
Network architecture supported	No	No	No	No	No
RJE terminals emulated	2780/3780	2780/3780	2780/3780	2780/3780	2780/3780
IBM 3270 emulation	No	No	No	No	No
SOFTWARE SUPPORT					
COBOL	Yes	Yes	Yes	Yes	Yes
RPG	No	No	No	No	No
FORTRAN	No	No	No	No	No
BASIC	No	No	No	No	No
Assembler	No	No	No	No	No
Other programming languages	No	No	No	No	No
Multiprogramming	Yes	Yes	Yes	Yes	Yes
Max. no. of jobs run concurrently	4	9	16	9	17
Language complemented in firmware	No	No	No	No	No
Op. sys. implemented in firmware	No	No	No	No	No
General accounting packages	No	No	No	No	No
Industry application areas	Dist., data proc.	Dist., data proc.	Dist., data proc.	Dist., mfg., retail	Dist., mfg., retail
Data base management system	No	No	No	No	No
File access methods supported	Rand., seq., ISAM	Rand., seq., ISAM	Rand., seq., ISAM	Rand., seq., ISAM	Rand., seq., ISAM
Software separately priced	No	No	No	No	No
Technical help separately priced	No	No	No	No	No
LEASE/MAINTENANCE OPTIONS					
Lease plans available	NA	NA	NA	NA	NA
Maintenance plans available	On-site, on-call factory	On-site, on-call, factory	On-site, on-call, factory	On-site, on-call	On-site, on-call
PRICING & AVAILABILITY					
Purchase price of basic system, $	40,890	50,290	70,490	53,050	53,050
Monthly rental of basic system, $	NA	NA	NA	NA	NA
Monthly maint. price of basic system, $	465	365	528	—	—
Monthly maint. bundled with rental, $	NA	NA	NA	NA	NA
Purchase price of:					
additional memory module, $	5,000 (128K bytes)	5,000 (128K bytes)	5,000 (128K bytes)	5,250 (128K bytes)	8,400 (256K bytes)
additional workstations, $	4,050 (180 cps)	12,300 (300 lpm)	12,300 (300 lpm)	2,290	2,290
additional printer, $	2,290	2,290	2,290	12,300 (300 lpm)	12,300 (300 lpm)
Discounts available	Qty., dollar vol.	Qty., dollar vol.	Qty., dollar vol.	Qty., dollar vol.	Qty., dollar vol.
Date of first U.S. delivery	September 1978	September 1978	September 1978	July 1980	July 1980
Number installed to date	NA	NA	NA	NA	NA
COMMENTS	Interactive COBOL; up to 4 terminals; multi-terminal control & built-in screen handlers	Interactive COBOL; up to 9 terminals; multi-terminal control & built-in screen handlers	Interactive COBOL; up to 17 terminals; multi-terminal control & built-in screen handlers	Interactive COBOL; up to 9 terminals; multi-terminal control & built-in screen handlers	Interactive COBOL; up to 9 terminals; multi-terminal control & built-in screen handlers

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MANUFACTURER AND MODEL	Data General Synergist Business Systems M1000 MOD. 10	Data General Synergist Business Systems M1000 MOD. 15	Data General Synergist Business Systems M1000 MOD. 30	Data General Synergist Business Systems M4000 MOD. 30	Data General Synergist Business Systems M4000 MOD. 40
WORD LENGTH, BITS	16	16	16	16	16
CPU					
Model	DG MicroNova	DG MicroNova	DG MicroNova	DG Eclipse	DG Eclipse
Add time, microseconds	2.4	2.4	2.4	0.60	0.60
No. of I/O ports on basic sys. and max.	1; 4	1; 4	1; 4	1; 9	1; 9
INTERNAL STORAGE					
Type	NMOS	NMOS	NMOS	MOS/ERCC	MOS/ERCC
Capacity of basic system, bytes	64K	64K	64K	64K	64K
Maximum capacity, bytes	64K	64K	64K	64K	64K
Increment size, bytes	—	—	—	—	—
Cycle/access time, microseconds	960 nano.	960 nano.	960 nano.	400 nano.	400 ns.
MASS STORAGE					
Floppy disk (diskette) drive	Std.; 1.2M bytes	Std.; 1.2M bytes	Std.; 1.2M bytes	Std.; 1.2M bytes	Std.; 1.2M bytes
Maximum diskette storage	2.4M bytes	2.4M bytes	2.4M bytes	1.2M bytes	1.2M bytes
Cartridge disk drive	No	Opt.; 10M bytes	Opt.; 10M bytes	No	No
Pack disk drive	No	No	No	No	No
Fixed-head disk/drum	No	Opt.; 12.5M bytes	Opt.; 12.5M bytes	No	Opt.; 50-192M bytes
Maximum disk storage	2.4M bytes	52M bytes	52M bytes	1.2M bytes	192M bytes
WORKSTATIONS					
Maximum number connectable	4	4	4	9	9
Recommended maximum number	4	4	4	9	9
Keyboard style	Type.; num. key.	Type.; num. key.	Type.; num. key.	Type.; num. key.	Type.; num. key.
Workstation printer	Opt.; 3	Opt.; 3	Opt.; 3	Opt.; 8	Opt.; 8
INPUT/OUTPUT DEVICES					
Serial printer	Opt.; 60, 180 cps	Opt.; 60, 180 cps	Opt.; 60, 180 cps	Std.; 180 cps	Std.; 180 cps
Line printer	Opt.; 240, 300 lpm	Opt.; 240, 300 lpm	Opt.; 240, 300 lpm	Std.; 300 lpm	Std.; 300 lpm
Reel-to-reel tape drive	No	No	No	No	No
Cassette/cartridge tape drive	No	No	No	No	No
CRT	Std.; 24 x 80 char.	Std.; 24 x 80 char.	Std.; 24 x 80 char.	Std.; 24 x 80 char	Std.; 24 x 80 char.
Other	None	None	None	None	None
COMMUNICATIONS					
Maximum no. of lines	1	1	4	1	1
Synchronous	Opt.; to 9600 bps	Opt.; to 9600 bps	Opt.; to 9600 bps	Opt.; 9600 bps	Opt.; 9600 bps
Asynchronous	No	No	Opt.; to 9600 bps	No	No
Protocols supported	Bisync	Bisync	Bisync, async	Bisync	Bisync
Network architecture supported	No	No	No	No	No
RJE terminals emulated	2780/3780	2780/3780	2780/3780	2780/3780	2780/3780
IBM 3270 emulation	No	No	No	No	No
SOFTWARE SUPPORT					
COBOL	No	No	No	No	No
RPG	No	No	No	No	No
FORTRAN	No	No	No	No	No
BASIC	No	No	No	No	No
Assembler	No	No	No	No	No
Other programming languages	EOS, EIS*	EOS, EIS*	EOS, EIS*	EOS, EIS*	EOS, EIS*
Multiprogramming	No	No	Yes	Yes	Yes
Max. no. of jobs run concurrently	1	1	3	9	9
Language complemented in firmware	No	No	No	No	No
Op. sys. implemented in firmware	No	No	No	No	No
General accounting packages	No	No	No	No	No
Industry application areas	Dist., mfg., retail	Dist., mfg., retail	Dist., mfg., retail	Dist., mfg., retail	Dist., mfg., retail
Data base management system	No	No	No	No	No
File access methods supported	Rand., seq., ISAM	Rand., seq., ISAM	Rand., seq., ISAM	Rand., seq., ISAM	Rand., seq., ISAM
Software separately priced	No	No	No	No	No
Technical help separately priced	No	No	No	No	No
LEASE/MAINTENANCE OPTIONS					
Lease plans available	No	No	No	NA	NA
Maintenance plans available	On-site, on-call	On-site, on-call	On-site, on-call	On-site, on-call	On-site, on-call
PRICING & AVAILABILITY					
Purchase price of basic system, $	Contact vendor	Contact vendor	Contact vendor	Contact vendor	Contact vendor
Monthly rental of basic system, $	NA	NA	NA	NA	NA
Monthly maint. price of basic system, $	NA	NA	NA	—	—
Monthly maint. bundled with rental, $	NA	NA	NA	NA	NA
Purchase price of:					
additional memory module, $	—	—	—	5,250 (128K bytes)	5,250 (128K bytes)
additional workstations, $	2,290	2,290	2,290	2,290	2,290
additional printer, $	4,050 (180 cps)	4,050 (180 cps)	4,050 (180 cps)	12,300 (300 lpm)	12,300 (300 lpm)
Discounts available	Qty., dollar vol.	Qty., dollar vol.	Qty., dollar vol.	Qty., dollar vol.	Qty., dollar vol.
Date of first U.S. delivery	NA	NA	NA	NA	NA
Number installed to date	NA	NA	NA	NA	NA
COMMENTS	*EOS (Extended Operating System), EIS (Executive Inquiry System)	*EOS (Extended Operating System, EIS (Executive Inquiry System)	*EOS (Extended Operating System), EIS (Executive Inquiry System)	*EOS (Extended Operating System), EIS (Executive Inquiry System)	*EOS (Extended Operating System), EIS (Executive Inquiry System)

Small Business Computer Specifications

MANUFACTURER AND MODEL	Data General Synergist Business Systems M4000 MOD. 50	Data General Synergist Business Systems M4000 MOD. 60	Datapoint 1500	Datapoint 1800	Datapoint 3600
WORD LENGTH, BITS	16	16	8-bit byte	8-bit byte	8-bit byte
CPU					
Model	DG Eclipse	DG Eclipse	Datapoint 1500	Datapoint 1800	Datapoint 3800
Add time, microseconds	0.60	0.60	—	3.8	3.8
No. of I/O ports on basic sys. and max.	1; 9	1; 9	2	4	4 maximum
INTERNAL STORAGE					
Type	MOS/ERCC	MOS/ERCC	MOS	MOS	MOS
Capacity of basic system, bytes	128K	128K	32K	64K	60K
Maximum capacity, bytes	256K	256K	64K	128K	120K
Increment size, bytes	128K	128K	32K	64K	60K
Cycle/access time, microseconds	400 nano.	400 nano.	NA	.750/0.2	1.75
MASS STORAGE					
Floppy disk (diskette) drive	Std.; 1.2M bytes	Std.; 1.2M bytes	Std.; 512K-1M bytes	Std.; 2M bytes	No
Maximum diskette storage	1.2M bytes	1.2M bytes	1M byte	4M bytes	No
Cartridge disk drive	No	No	No	No	No
Pack disk drive	No	No	10-40M bytes	10-40M bytes	No
Fixed-head disk/drum	No	Opt.; 50-196M bytes	No	No	No
Maximum disk storage	1.2M bytes	196M bytes	—	—	—
WORKSTATIONS					
Maximum number connectable	9	9	4	9	4
Recommended maximum number	9	9	2	NA	2
Keyboard style	Type.; num. key.	Type.; num. key.	Typewriter	Typewriter	Typewriter
Workstation printer	Opt.; 8	Opt.; 8	Optional	Optional	Optional
INPUT/OUTPUT DEVICES					
Serial printer	Std.; 180 cps	Std.; 180 cps	Opt.; 160 cps	Opt.; 160 cps	No
Line printer	Std.; 300 lpm	Std.; 300 lpm	Optional	Opt.; 300-900 lpm	Opt.; 300-900 lpm
Reel-to-reel tape drive	No	No	No	No	No
Cassette/cartridge tape drive	No	No	No	No	No
CRT	Std.; 24 x 80 char.	Std.; 24 x 80 char.	Std.; 24 x 80 char.	Std.; 24 x 80 char.	Std.; 24 x 80 char.
Other	None	None	—	—	—
COMMUNICATIONS					
Maximum no. of lines	1	1	1	5	4
Synchronous	Opt.; 9600 bps	Opt.; 9600 bps	Opt.; 4800 bps	Std.; 9600 bps	Opt.; to 9600 bps
Asynchronous	No	No	Opt.; 9600 bps	Std.; 9600 bps	Opt.; to 9600 bps
Protocols supported	Bisync	Bisync	Bisync, async, TTY	Bisync, async, TTY	Bisync
Network architecture supported	No	No	—	—	—
RJE terminals emulated	2780/3780	2780/3780	2780/3780	2780/3780, HASP	2780/3780
IBM 3270 emulation	No	No	Yes	Yes	Yes
SOFTWARE SUPPORT					
COBOL	No	No	No	Yes	Yes
RPG	No	No	No	Yes	Yes
FORTRAN	No	No	Yes	No	No
BASIC	No	No	Yes	Yes	Yes
Assembler	No	No	Yes	Yes	Yes
Other programming languages	EOS, EIS*	EOS, EIS*	Databus	Databus, Datashare	Databus
Multiprogramming	Yes	Yes	Yes	Yes	Yes
Max. no. of jobs run concurrently	9	9	2	4	4
Language complemented in firmware	No	No	No	No	No
Op. sys. implemented in firmware	No	No	No	No	No
General accounting packages	No	No	No	No	Yes
Industry application areas	Dist., mfg., retail	Dist., mfg., retail	General purpose	General purpose	General purpose
Data base management system	No	No	No	No	No
File access methods supported	Rand., seq., ISAM	Rand., seq., ISAM	Rand., seq., ISAM	Rand., seq., ISAM	Rand., seq., ISAM
Software separately priced	No	No	No	No	Yes
Technical help separately priced	No	No	No	No	No
LEASE/MAINTENANCE OPTIONS					
Lease plans available	NA	NA	1, 2, 3 yr. lease	1, 2, 3 yr. lease	1, 2, 3 yr. lease
Maintenance plans available	On-site, on-call	On-site, on-call	On-site, on-call	On-site, on-call	On-site, on-call
PRICING & AVAILABILITY					
Purchase price of basic system, $	Contact vendor	Contact vendor	7,075	10,975	Contact vendor
Monthly rental of basic system, $	NA	NA	—	—	—
Monthly maint. price of basic system, $	—	—	67	107	—
Monthly maint. bundled with rental, $	NA	NA	No	No	No
Purchase price of:					
additional memory module, $	5,250 (128K bytes)	5,250 (128K bytes)	675 (32K)	1,500 (64K)	—
additional workstations, $	2,290	2,290	—	—	—
additional printer, $	12,300 (300 lpm)	12,300 (300 lpm)	—	—	—
Discounts available	Qty., dollar vol.	Qty., dollar vol.	OEM	Quantity	OEM
Date of first U.S. delivery	NA	July 1980	NA	1978	1978
Number installed to date	NA	NA	NA	3000	NA
COMMENTS	*EOS (Extended Operating System), EIS (Executive Inquiry System)	*EOS (Extended Operating System), EIS (Executive Inquiry System)	Price includes 32K bytes and 512K-byte dual diskette, 1 CRT, and 1 communications interface	Price includes 64K bytes, 1M-byte dual diskette, 1 CRT, and 1 communications interface	

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MANUFACTURER AND MODEL	Datapoint 6600	Datapoint 8800	Dicom Industries 401	Digi-Log Systems, Inc. System 1000	Digi-Log Systems, Inc. System 2000
WORD LENGTH, BITS	8-bit byte	16	16	8	8
CPU					
Model	Datapoint 6600	Datapoint 8800	DEC LSI-11/23	Zilog Z80A	Dual Zilog Z80A
Add time, microseconds	1.15	NA	1.72 (16-bits)	1.0	1.0
No. of I/O ports on basic sys. and max.	24	8, 24	4, 12	2, 4	2, 3
INTERNAL STORAGE					
Type	MOS	MOS	MOS	MOS	MOS
Capacity of basic system, bytes	120K (user)	256K	96K	32K	66K
Maximum capacity, bytes	120K (user)	1024K	256K	64K	88K
Increment size, bytes	—	128K	32K	16K	16K
Cycle/access time, microseconds	0.6/0.2	NA	.5/.1	—	—
MASS STORAGE					
Floppy disk (diskette) drive	Opt.; 1M byte	—	Optional	2 to 4 diskettes	Std.; 750K bytes
Maximum diskette storage	—	—	—	750K to 1.5M bytes	—
Cartridge disk drive	Opt.; 160M bytes	—	Std.; 6M bytes	—	No
Pack disk drive	Opt.; 200M bytes	Std.; 200M bytes	Opt.; 100M bytes	—	No
Fixed-head disk/drum	No	No	No	—	No
Maximum disk storage	—	1012M bytes	—	—	—
WORKSTATIONS					
Maximum number connectable	24	24	—	—	1
Recommended maximum number	12-14	6-24	—	—	1
Keyboard style	Type.; num. key.	Type., num. key.	Type., num. key.	Typewriter	Typewriter
Workstation printer	Optional	Optional	—	—	Optional
INPUT/OUTPUT DEVICES					
Serial printer	Opt.; 80, 120 cps	Opt.; 80, 120 cps	Std.; 30/80 cps	—	RS-232-C
Line printer	Opt.; 300, 600 lpm	Opt.; 300-600 lpm	Opt.; 240/300 lpm	—	No
Reel-to-reel tape drive	Opt.; to 1600 bpi	Opt.; to 1600 bpi	No	—	No
Cassette/cartridge tape drive	Cast.; opt	Opt.; cartridge	Optional/No	—	No
CRT	Std.; 24 x 80 char.	Std.; 24 x 80 char.	Std.; 24 x 80 char.	Std., 1920 char.	Std.; 1920 char.
Other	—	—	—	—	No
COMMUNICATIONS					
Maximum no. of lines	25	24	8	3	Std.; to 19,200 bps
Synchronous	Opt.; to 9600 bps	Opt.; to 9600 bps	Optional	Opt.; 4800 bps	Std.; to 9600 bps
Asynchronous	Opt.; to 9600 bps	Opt.; to 9600 bps	Standard, 19.2K bps	Std.; 9600 bps	Bisync
Protocols supported	Async, bisync	Async, bisync	2780	TTY	—
Network architecture supported	—	—	—	—	2780/3780
RJE terminals emulated	2780/3780	2780/3780	—	—	Yes
IBM 3270 emulation	Yes	Yes	—	—	Optional
SOFTWARE SUPPORT					
COBOL	Yes	Yes	Yes	No	No
RPG	Yes	No	Yes	No	No
FORTRAN	No	No	Yes	No	Yes
BASIC	Yes	No	Yes	Yes	Standard
Assembler	Yes	No	Yes	No	Optional
Other programming languages	Databus, Datashare	Databus, Datashare	APL	No	None
Multiprogramming	Yes, 2 partitions	Yes	Yes	No	No
Max. no. of jobs run concurrently	24	24	—	—	—
Language complemented in firmware	No	No	No	No	No
Op. sys. implemented in firmware	No	No	—	No	No
General accounting packages	Yes	Yes	Yes	Yes	No
Industry application areas	Gov't., acct'g., banking	General purpose	Business, accounting	Yes	General purpose
Data base management system	No	No	No	—	No
File access methods supported	Rand., seq., ISAM	Rand., seq., ISAM	Sequential, ISAM	—	Rand., seq., ISAM
Software separately priced	Yes	Yes	Yes	Yes	No
Technical help separately priced	No	No	Yes	—	No
LEASE/MAINTENANCE OPTIONS					
Lease plans available	1, 2, 3 yr. lease	1, 2, 3 yr. lease	—	—	Purchase only
Maintenance plans available	On-site, on-call	On-site, on-call	—	Yes	Third party
PRICING & AVAILABILITY					
Purchase price of basic system, $	Contact vendor	42,500	16,500	6,065	8,400
Monthly rental of basic system, $	—	—	Purchase only	—	—
Monthly maint. price of basic system, $	—	—	—	—	75
Monthly maint. bundled with rental, $	No	No	—	—	No
Purchase price of:					
additional memory module, $	—	—	—	—	600 (16K)
additional workstations, $	—	—	—	—	3,900
additional printer, $	—	—	—	—	—
Discounts available	OEM	OEM	—	Contact dealer	Quantity
Date of first U.S. delivery	July 1977	December 1980	March 1981	November 1980	May 1978
Number installed to date	NA	NA	NA	NA	1800
COMMENTS					

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MANUFACTURER AND MODEL	Digital Equipment Corp. Datasystem 150	Digital Equipment Corp. Datasystem 315	Digital Equipment Corp. Datasystem 325	Digital Equipment Corp. Datasystem 335	Digital Equipment Corp. Datasystem 336
WORD LENGTH, BITS	16	16	16	16	16
CPU					
Model	LSI-11	PDP-11/23	DEC PDP-11/03	PDP-11/23	PDP-11/23
Add time, microseconds	NA	NA	NA	NA	NA
No. of I/O ports on basic sys. and max.	2, 2	3, 3	4, 4	8, 8	8, 8
INTERNAL STORAGE					
Type	MOS	MOS	MOS	MOS	MOS
Capacity of basic system, bytes	32K	64K	64K	128K	128K
Maximum capacity, bytes	64K	256K	64K	256K	256K
Increment size, bytes	32K	64K	—	128K	32K
Cycle/access time, microseconds	.57/NA	NA	1.2/0.7	.28/.28	500 ns./NA
MASS STORAGE					
Floppy disk (diskette) drive	Standard	Standard	Std.; 7.2M byte	No	No
Maximum diskette storage	512K bytes	1M bytes	—	—	—
Cartridge disk drive	No	No	Std.; 10.4M bytes	Std.; 10.4M bytes	Std.; 20.8M bytes
Pack disk drive	No	No	No	No	No
Fixed-head disk/drum	No	No	No	No	No
Maximum disk storage	512K bytes	1M bytes	20.8M bytes	20.8M bytes	41.6M bytes
WORKSTATIONS					
Maximum number connectable	1	3	4	8	8
Recommended maximum number	1	1	3	6	6
Keyboard style	Type.; num. key.	Type.; num., key.	Type.; num. key.	Type.; num. key.	Type.; num. key.
Workstation printer	No	No	Optional; 1	No	No
INPUT/OUTPUT DEVICES					
Serial printer	Opt.; 180 cps	Opt.; 180 cps	Opt.; 180 cps	Opt.; 180 cps	Opt.; 180 cps
Line printer	No	No	Opt.; 240, 300 lpm	No	No
Reel-to-reel tape drive	No	No	No	No	No
Cassette/cartridge tape drive	No	No	No	No	No
CRT	Std.; 24 x 80 char.	Std.; 24 x 80 char.	Std.; 24 x 80 char.	Std.; 24 x 80 char.	Std.; 24 x 80 char.
Other	No	No	No	No	No
COMMUNICATIONS					
Maximum no. of lines	1	4	4	4	4
Synchronous	Yes	Yes	Opt.; to 4800 bps	Yes	Yes
Asynchronous	Yes	Yes	No	No	No
Protocols supported	NA	2780/3780	2780/3780	2780/3780	2780/3780
Network architecture supported	NA	NA	DEC	NA	NA
RJE terminals emulated	2780/3780	2780/3780	2780/3780	2780/3780	2780/3780
IBM 3270 emulation	No	No	No	No	No
SOFTWARE SUPPORT					
COBOL	No	No	No	No	No
RPG	No	No	No	No	No
FORTRAN	No	No	No	No	No
BASIC	No	No	No	No	No
Assembler	No	No	No	No	No
Other programming languages	DIBOL-11 (COBOL)	DIBOL-11 (COBOL)	DIBOL-11 (COBOL)	DIBOL-11 (COBOL)	DIBOL-11 (COBOL)
Multiprogramming	Yes	Yes	No	Yes	Yes
Max. no. of jobs run concurrently	3 tasks	3	3	16	16
Language complemented in firmware	No	No	No	No	No
Op. sys. implemented in firmware	No	No	No	No	No
General accounting packages	No	No	No	No	No
Industry application areas	Business acct.	Business acct.	Business acct.	Business accounting	Business acct.
Data base management system	No	No	No	No	No
File access methods supported	Sequential, ISAM	Sequential, ISAM	Seq., ISAM	Sequential, ISAM	Sequential, ISAM
Software separately priced	No	No	No	No	No
Technical help separately priced	Yes	Yes	Yes	Yes	Yes
LEASE/MAINTENANCE OPTIONS					
Lease plans available	NA	Contact vendor	Contact vendor	Contact vendor	Contact vendor
Maintenance plans available	NA	On-site	On-site	On-site	On-site
PRICING & AVAILABILITY					
Purchase price of basic system, $	12,100	15,500	28,400	29,900	33,700
Monthly rental of basic system, $	—	—	Purchase only	Purchase only	Purchase only
Monthly maint. price of basic system, $	62	120	200	212	232
Monthly maint. bundled with rental, $	—	—	NA	—	—
Purchase price of:					
additional memory module, $	700	NA	—	NA	NA
additional workstations, $	No	No	NA	NA	NA
additional printer, $	No	No	4,050 (180 cps)	No	NA
Discounts available	OEM and volume	OEM and volume	OEM and volume	OEM and volume	OEM and volume
Date of first U.S. delivery	March 1979	November 1980	September 1978	First quarter 1980	April 1980
Number installed to date	NA	—	NA	NA	NA
COMMENTS					

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MANUFACTURER AND MODEL	Digital Equipment Corp. Datasystem 356	Digital Equipment Corp. Datasystem 358	Digital Equipment Corp. Datasystem 530	Digital Equipment Corp. Datasystem 540	Digital Equipment Corp. DECstation 78
WORD LENGTH, BITS	16	16	16	16	12
CPU					
Model	PDP-11/34A	PDP-11/34A	PDP-11/34A	PDP-11/44	LSI 8/A
Add time, microseconds	NA	—	NA	NA	—
No. of I/O ports on basic sys. and max.	—	—	—	NA	10/10
INTERNAL STORAGE					
Type	MOS	MOS	MOS	MOS	Core
Capacity of basic system, bytes	128K	128K	128K	256K (8K cache)	16K
Maximum capacity, bytes	256K	256K	256K	1 megabyte	16K
Increment size, bytes	32K	32K	32K	NA	—
Cycle/access time, microseconds	510 ns./NA	0.73/0.7	NA	NA	3.6/
MASS STORAGE					
Floppy disk (diskette) drive	No	Opt.; 512K bytes	Std.; 512K bytes	No	Standard
Maximum diskette storage	—	—	1024K bytes	—	2 million bytes
Cartridge disk drive	Std.; 20.8M bytes	Std.; 112M bytes	Std.; 20.8M bytes	20 megabytes	No
Pack disk drive	No	No	No	Opt.	No
Fixed-head disk/drum	No	No	No	No	No
Maximum disk storage	224M bytes	224M bytes	300M bytes	134 megabytes	2 million bytes
WORKSTATIONS					
Maximum number connectable	12	8	NA	NA	1
Recommended maximum number	8 to 10	8	NA	NA	1
Keyboard style	Type.; num. key.	Type.; num. key.	Type.; num. key.	Type.; num. key.	Type.; num. key.
Workstation printer	Optional; 1	Optional; 1	No	No	—
INPUT/OUTPUT DEVICES					
Serial printer	Opt.; 180 cps	Opt.; 30, 180 cps	Opt.; 180 cps	Opt.; 30, 180 cps	Opt.; 180 cps
Line printer	Opt.; 240-900 lpm	Opt.; 240-900 lpm	Opt.; 240-1200 lpm	Opt.; 240-1200 lpm	No
Reel-to-reel tape drive	Opt.; 10KBS	Opt.; 10KBS	Opt.; 10-72KBS	Opt.; 10-72KBS	No
Cassette/cartridge tape drive	No	No	No	No	No
CRT	Std.; 24 x 80 char.	Std.; 24 x 80 char.	Std.; 24 x 80 char.	Opt.; 24 x 80	Std.; 24 x 80
Other	—	—	NA	NA	NA
COMMUNICATIONS					
Maximum no. of lines	8	8	32 EIA	32 EIA	2
Synchronous	Opt.; to 9600 bps	Opt.; to 9600 bps	Opt.; to 50K bps	Opt.; to 50K bps	No
Asynchronous	No	No	Opt.; to 5600 bps	Opt.; to 9600 bps	Yes
Protocols supported	2780/3780	2780/3780	2780/3271	2780/3271	Async
Network architecture supported	DEC	DEC	DECNET	DECNET	NA
RJE terminals emulated	2780/3780	2780/3780	2780/3780	IBM 2780/3780	2780
IBM 3270 emulation	No	No	Yes	Yes	NA
SOFTWARE SUPPORT					
COBOL	No	No	Yes	Yes	No
RPG	No	No	Yes	Yes	No
FORTRAN	No	No	Yes	Yes	Yes
BASIC	No	No	Yes	Yes	Yes
Assembler	No	No	Yes	Yes	NA
Other programming languages	DIBOL-11 (COBOL)	DIBOL-11 (COBOL)	DIBOL-11 (COBOL)	DIBOL-11 (COBOL)	NA
Multiprogramming	Yes	Yes	Yes	Yes	Yes
Max. no. of jobs run concurrently	16	16	NA	NA	127 tasks
Language complemented in firmware	No	No	No	No	No
Op. sys. implemented in firmware	No	No	No	No	No
General accounting packages	No	No	No	No	No
Industry application areas	Business acct.	Business acct.	Business acct.	Business acct. & data	General business
Data base management system	No	No	No	No	No
File access methods supported	Sequential, ISAM	Seq., index seq.	Random, seq., ISAM	Direct, seq., index seq.	Seq., under seq., rand.
Software separately priced	No	No	No	No	No
Technical help separately priced	Yes	Yes	Yes	Yes	Yes
LEASE/MAINTENANCE OPTIONS					
Lease plans available	Contact vendor	Contact vendor	Contact vendor	NA	NA
Maintenance plans available	On-site	On-site	On-site	NA	NA
PRICING & AVAILABILITY					
Purchase price of basic system, $	40,400	52,400	44,700	56,700	7,995
Monthly rental of basic system, $	—	Purchase only	Purchase only	NA	NA
Monthly maint. price of basic system, $	274	406	287	300	68
Monthly maint. bundled with rental, $	—	NA	NA	NA	NA
Purchase price of:					
additional memory module, $	2,350 (32K)	2,350 (32K)	NA	NA	—
additional workstations, $	NA	NA	NA	NA	—
additional printer, $	7,800 (285 lpm)	7,800 (285 lpm)	NA	NA	3,300
Discounts available	OEM and volume	OEM and volume	OEM and volume	OEM and volume	Yes
Date of first U.S. delivery	1980	September 1978	April 1977	June 1980	September 1978
Number installed to date	NA	NA	NA	NA	20,000+
COMMENTS					

Small Business Computer Specifications

MANUFACTURER AND MODEL	Digital Equipment Corp. DECstation 88	Digital Systems Galaxy/3	Digital Systems Galaxy/5	Dimis, Inc. Total 100 (10)	Dimis, Inc. Total 100 (30)
WORD LENGTH, BITS	12	8 to 20	8 to 20	16	16
CPU					
Model	PDP-8/A	Galaxy/3	Galaxy/5	Modcomp Classic	Modcomp Classic
Add time, microseconds	—	5 (5 digits)	5 (5 digits)	1.0	0.3
No. of I/O ports on basic sys. and max.	10/20	5 to 15	15 to 150	1 to 32	1 to 32
INTERNAL STORAGE					
Type	Core	MOS	MOS	MOS	MOS
Capacity of basic system, bytes	32K	96K	128K	128K	128K
Maximum capacity, bytes	128K	128K	1M byte	128K	512K
Increment size, bytes	—	32K	64K	—	128K
Cycle/access time, microseconds	1.5/	0.75/0.50	0.75/0.50	.6/.6	.25/.25
MASS STORAGE					
Floppy disk (diskette) drive	Standard	No	No	Optional	Optional
Maximum diskette storage	2 million bytes	—	—	—	—
Cartridge disk drive	20.4 million bytes	Std.; 32M byte/drive	Opt.	Optional	Optional
Pack disk drive	No	Opt.; 80M byte	Std.; 80M byte/drive	Std.; 80M bytes/drive	Std.; 200M bytes/dr.
Fixed-head disk/drum	No	No	No	Optional	Optional
Maximum disk storage	20.4 million bytes	160M bytes	1,200M bytes	320M bytes (4 drives)	800M bytes (4 drives)
WORKSTATIONS					
Maximum number connectable	Multiple	15	150	10	28
Recommended maximum number	Multiple	10	60	10	28; 1st 128KB
Keyboard style	Type.; num. key.	Acctg.; num. pad	Acctg., num. pad	Typewriter	Typewriter
Workstation printer	—	Optional	Optional	—	—
INPUT/OUTPUT DEVICES					
Serial printer	Opt.; 180 cps	Optional	Optional	Optional	Optional
Line printer	Opt.; 300 lpm	300, 600, 900 lpm	300, 600, 900 lpm	Std., 300 lpm	Std.; 600 lpm
Reel-to-reel tape drive	No	1600 bpi	1600 bpi	Std., 800 bpi	Std.; 800 bpi, 9 trk
Cassette/cartridge tape drive	No	Opt./No	Opt./No	No	No/No
CRT	Std.; 24 x 80	Std.; 80 x 24 char.	Std.; 80 x 24 char.	Std., 24 x 80 char.	Std.; 24 x 80 char.
Other	NA	—	—	—	—
COMMUNICATIONS					
Maximum no. of lines	4	15	120	32	32
Synchronous	No	Std.; to 9600 bps	Std.; to 9600 bps	Optional	Optional
Asynchronous	Yes	Std.; to 9600 bps	Std.; to 9600 bps	Std., to 9600 bps	Std.; to 9600 bps
Protocols supported	Async	Programmable	Programmable	Programmable	Programmable
Network architecture supported	NA	Gal-Galaxy	Gal-Galaxy	—	—
RJE terminals emulated	2780	None	None	No	No
IBM 3270 emulation	NA	No	No	No	No
SOFTWARE SUPPORT					
COBOL	No	Yes	Yes	No	No
RPG	No	Yes	Yes	No	No
FORTRAN	Yes	No	No	Yes	Yes
BASIC	Yes	Yes	Yes	No	No
Assembler	NA	Yes	Yes	Yes	Yes
Other programming languages	NA	PL/LMP, FMP	PL/G, LMP, FMP	None	None
Multiprogramming	Yes	Yes	Yes	Yes	Yes
Max. no. of jobs run concurrently	127 tasks	6	20	255	255
Language complemented in firmware	No	Partially	Partially	No	No
Op. sys. implemented in firmware	No	Partially	Partially	No	No
General accounting packages	No	Yes	Yes	Yes	Yes
Industry application areas	General Business	Associations	Associations	Distribution	Distribution
Data base management system	No	Yes	Yes	Yes	Yes
File access methods supported	Seq., index seq., rand.	ISAM, random	ISAM, random	Random, seq., ISAM	Seq., rand., ISAM
Software separately priced	No	Yes	Yes	Yes	Yes
Technical help separately priced	Yes	Yes	Yes	Yes	Yes
LEASE/MAINTENANCE OPTIONS					
Lease plans available	NA	3 yr., 5 yr.	3 yr., 5 yr.	NA	NA
Maintenance plans available	NA	On-site contract	On-site contract	NA	NA
PRICING & AVAILABILITY					
Purchase price of basic system, $	11,500	49,500	89,900	110,000	155,000
Monthly rental of basic system, $	NA	On request	On request	1,900	—
Monthly maint. price of basic system, $	129	345	678	750	940
Monthly maint. bundled with rental, $	NA	Yes	Yes	—	—
Purchase price of:					
additional memory module, $	2,400 (16K)	3,400 (32K bytes)	6,200 (64K bytes)	—	10,500 (128KB)
additional workstations, $	1,600 to 3,770	975	975	3,100	3,100*
additional printer, $	3,300 to 11,235	8,900 (300 lpm)	12,995 (600 lpm)	Optional	Optional
Discounts available	Yes	On request	On request	NA	NA
Date of first U.S. delivery	March 1978	February 1980	August 1979	September 1980	June 1974
Number installed to date	20,000+	3	25	3	20*
COMMENTS		Sys. includes CPU, 5 comm. ports, 32 meg. drive, 300 lpm printer	Sys. includes CPU, 15 comm. ports, two 80 meg. drives, one CRT, one 600 lpm printer	Package includes staff and management training and conversion support	3 CRTs std., pkg. includes staff and mgmt. training and conversion support. *Includes compatible Modcomp II

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MANUFACTURER AND MODEL	Dimis, Inc. Total 100 (70)	Display Data Corporation in*sight	Distribution Management Systems BS 11/44	Distribution Management Systems BS 11/70	Distribution Management Systems BS 11/750
WORD LENGTH, BITS	16	8	—	—	—
CPU					
Model	Modcomp Classic	in*sight 1634	DEC PDP-11/44	DEC PDP-11/70	DEC VAX 11/750
Add time, microseconds	0.2	—	—	—	—
No. of I/O ports on basic sys. and max.	1 to 32	8, 32	—	—	—
INTERNAL STORAGE					
Type	MOS	MOS	MOS	MOS	MOS
Capacity of basic system, bytes	512K	64K	256K	512K	2M
Maximum capacity, bytes	4M bytes	128K	1M	4M	2M
Increment size, bytes	512K	64K	128K	128K	—
Cycle/access time, microseconds	.25/.25	—	—	—	—
MASS STORAGE					
Floppy disk (diskette) drive	Optional	No	Optional	Std.; 1M bytes	—
Maximum diskette storage	—	NA	—	—	—
Cartridge disk drive	Optional	Std., 10-40M bytes	Optional	Optional	Optional
Pack disk drive	Std.; 300M bytes/dr.	No	Std.; 134M bytes	Std.; 134M bytes	Std.; 134M bytes
Fixed-head disk/drum	Optional	No	No	Optional	No
Maximum disk storage	1200M bytes (4 drives)	40M bytes	—	—	—
WORKSTATIONS					
Maximum number connectable	28	32	64	64	64
Recommended maximum number	28; 1st 512KB	24	32	40	40
Keyboard style	Typewriter	Type., num. key.	Typewriter	Typewriter	Typewriter
Workstation printer	—	Optional	Standard	Standard	Standard
INPUT/OUTPUT DEVICES					
Serial printer	Optional	Optional	Optional	Optional	Optional
Line printer	Std.; 600 lpm	Opt., 150 to 1100 lpm	Standard	Standard	Standard
Reel-to-reel tape drive	Std.; 800 bpi, 9 trk	No	Standard	Standard	Standard
Cassette/cartridge tape drive	No/No	No	Optional	Optional	Optional
CRT	Std.; 24 x 80 char.	Std., 1920 char.	Std.; VT100	Std.; VT100	Std.; VT100
Other	—	No	No	No	No
COMMUNICATIONS					
Maximum no. of lines	32	32	64	64	64
Synchronous	Optional	No	Standard	Standard	Standard
Asynchronous	Std.; to 9600 bps	Std., to 9600 bps	Standard	Standard	Standard
Protocols supported	Programmable	ANSI std. Asynch.	Various	Various	Various
Network architecture supported	—	None	Yes	Yes	Yes
RJE terminals emulated	No	None	2780/3780	2780/3780	2780/3780
IBM 3270 emulation	No	No	Yes	Yes	Yes
SOFTWARE SUPPORT					
COBOL	No	No	Yes	Yes	Yes
RPG	No	No	No	No	No
FORTRAN	Yes	No	Yes	Yes	Yes
BASIC	No	No	Yes	Yes	Yes
Assembler	Yes	Yes	Yes	Yes	Yes
Other programming languages	None	—	DEAL, ORACLE	DEAL, ORACLE	DEAL, ORACLE
Multiprogramming	Yes	Yes (10 partitions)	Yes	Yes	Yes
Max. no. of jobs run concurrently	255	26	—	—	—
Language complemented in firmware	No	Yes	No	No	No
Op. sys. implemented in firmware	No	Yes	No	No	No
General accounting packages	Yes	Yes	No	No	No
Industry application areas	Distribution	Distribution	Distribution	Distribution	Distribution
Data base management system	Yes	Yes	Yes	Yes	Yes
File access methods supported	Seq., rand., ISAM	Random, seq., ISAM	Random, seq., ISAM	Random, seq., ISAM	Random, seq., ISAM
Software separately priced	Yes	Yes	Yes	Yes	Yes
Technical help separately priced	Yes	Yes	Yes	Yes	Yes
LEASE/MAINTENANCE OPTIONS					
Lease plans available	NA	61 or 85 months	Yes	Yes	Yes
Maintenance plans available	NA	On-site	On-site, on-call, factory, third-party	On-site, on-call, factory, third-party	On-site, on-call, factory, third-party
PRICING & AVAILABILITY					
Purchase price of basic system, $	210,000	29,700	163,000	187,000	230,000
Monthly rental of basic system, $	—	NA	Purchase/lease only	Purchase/lease only	Purchase/lease only
Monthly maint. price of basic system, $	1,270	274	1,340	1,516	1,575
Monthly maint. bundled with rental, $	—	—	—	No	—
Purchase price of:					
additional memory module, $	36,000 (512KB)	5,000 (64K)	11,800 (512K bytes)	21,400 (512K bytes)	—
additional workstations, $	3,100	3,700	2,180	2,180	2,180
additional printer, $	Optional	6,000 (150 lpm)	7,800 (300 lpm)	7,800 (300 lpm)	20,200 (600 lpm)
Discounts available	NA	Quantity	Quantity	Quantity	Quantity
Date of first U.S. delivery	December 1978	1974	December 1980	April 1979	June 1981
Number installed to date	19	1200	NA	8	NA
COMMENTS	3 CRTs and 2 MTUs std., pkg. includes staff and mgmt. training and conversion support				

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MANUFACTURER AND MODEL	Distribution Management Systems BS 11/780	Dynabyte 5200	Dynabyte 5300	Dynabyte 5600	Dynabyte 5700
WORD LENGTH, BITS	—	—	—	—	—
CPU					
Model	DEC VAX 11/780	Zilog Z80A	Zilog Z80A	Zilog Z80A	Zilog Z80A
Add time, microseconds	—	—	—	—	—
No. of I/O ports on basic sys. and max.	—	3,19	3, 19	11, 19	11, 19
INTERNAL STORAGE					
Type	MOS	MOS	MOS	MOS	MOS
Capacity of basic system, bytes	512K	64K	64K	64K	64K
Maximum capacity, bytes	8M	400K	400K	400K	400K
Increment size, bytes	128K	48K or 64K	48K or 64K	48K or 64K	48K or 64K
Cycle/access time, microseconds	—	0.5/0.25	0.5/0.25	0.5/0.25	0.5/0.25
MASS STORAGE					
Floppy disk (diskette) drive	Standard	Std.; (2) 630K bytes	Std.; (2) 2M bytes	Std.; 1M bytes	Std.; 2M bytes
Maximum diskette storage	—	1.2M bytes	2M bytes	1M bytes	2M bytes
Cartridge disk drive	Optional	—	—	—	Opt.; 20M bytes
Pack disk drive	Std.; 134M bytes	—	—	Opt.; 9-45M bytes	Opt.; 9-45M bytes
Fixed-head disk/drum	No	—	—	—	—
Maximum disk storage	—	1.2M bytes	2M bytes	46M bytes	67M bytes
WORKSTATIONS					
Maximum number connectable	64	8	8	8	8
Recommended maximum number	64	6	6	6	6
Keyboard style	Typewriter	Type.; num. key.	Type.; num. key.	Type.; num. key.	Type.; num. key.
Workstation printer	Standard	Optional	Optional	Optional	Optional
INPUT/OUTPUT DEVICES					
Serial printer	Optional	Opt.; 160 cps	Opt.; 160 cps	Opt.; 160 cps	Opt.; 160 cps
Line printer	Standard	Optional	Optional	Optional	Optional
Reel-to-reel tape drive	Standard	No	No	No	No
Cassette/cartridge tape drive	Optional	No	No	No	No
CRT	Std.; VT100	Opt.; 25 x 80 char.	Opt.; 25 x 80 char.	Opt.; 25 x 80 char.	Opt.; 25 x 80 char.
Other	No	—	—	—	—
COMMUNICATIONS					
Maximum no. of lines	64	2	2	2	2
Synchronous	Standard	Optional	Optional	Optional	Optional
Asynchronous	Standard	Std.; to 19,200 bps	Std.; to 19,200 bps	Std.; to 19,200 bps	Std.; to 19,200 bps
Protocols supported	Various	Async, bisync	Async, bisync	Async, bisync	Async, bisync
Network architecture supported	Yes	CPNET	CPNET	CPNET	CPNET
RJE terminals emulated	2780/3780	—	—	—	—
IBM 3270 emulation	Yes	Optional	Optional	Optional	Optional
SOFTWARE SUPPORT					
COBOL	Yes	Yes	Yes	Yes	Yes
RPG	No	No	No	No	No
FORTRAN	Yes	Yes	Yes	Yes	Yes
BASIC	Yes	Yes	Yes	Yes	Yes
Assembler	Yes	Yes	Yes	Yes	Yes
Other programming languages	DEAL, ORACLE	—	—	—	—
Multiprogramming	Yes	Yes, 8 partitions	Yes, 8 partitions	Yes, 8 partitions	Yes, 8 partitions
Max. no. of jobs run concurrently	—	8	8	8	8
Language complemented in firmware	No	No	No	No	No
Op. sys. implemented in firmware	No	No	No	No	No
General accounting packages	No	Yes	Yes	Yes	Yes
Industry application areas	Distribution	—	—	—	—
Data base management system	Yes	Yes	Yes	Yes	Yes
File access methods supported	Random, seq., ISAM	Random, seq., ISAM	Random, seq., ISAM	Random, seq., ISAM	Random, seq., ISAM
Software separately priced	Yes	Yes (applications)	Yes (applications)	Yes (applications)	Yes (applications)
Technical help separately priced	Yes	No	No	No	No
LEASE/MAINTENANCE OPTIONS					
Lease plans available	Yes	NA	NA	NA	NA
Maintenance plans available	On-site, on-call, factory, third-party	Yes	Yes	Yes	Yes
PRICING & AVAILABILITY					
Purchase price of basic system, $	292,000	7,000	8,000	15,000	16,000
Monthly rental of basic system, $	Purchase/lease only	—	—	—	—
Monthly maint. price of basic system, $	2,249	—	—	—	—
Monthly maint. bundled with rental, $	—	—	—	—	—
Purchase price of:					
additional memory module, $	19,800 (1M byte)	800 (64K)	800 (64K)	800 (64K)	800 (64K)
additional workstations, $	2,180	800	800	800	800
additional printer, $	20,200 (600 lpm)	2,000	2,000	2,000	2,000
Discounts available	Quantity	30 & over	30 & over	30 & over	30 & over
Date of first U.S. delivery	January 1981	October 1978	October 1978	July 1980	December 1979
Number installed to date	NA	NA	NA	NA	NA
COMMENTS					

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MANUFACTURER AND MODEL	Dynabyte 5900	EZdata, Inc. SNAP	Four-Phase IV/40	Four-Phase IV/50	Four-Phase IV/60
WORD LENGTH, BITS	—	8	24	24	24
CPU					
Model	Zilog Z80A	Zilog Z80	Four-Phase	Four-Phase	Four-Phase IV/60
Add time, microseconds	—	—	16 (word)	16 (word)	12 (word)
No. of I/O ports on basic sys. and max.	11, 19	—	34	29	40
INTERNAL STORAGE					
Type	MOS	MOS	MOS	MOS	MOS
Capacity of basic system, bytes	64K	64K	24K	24K	240K
Maximum capacity, bytes	400K	—	96K	96K	240K
Increment size, bytes	48K or 64K	—	24K	24K	—
Cycle/access time, microseconds	0.5/0.25	—	2.0	2.0	0.8
MASS STORAGE					
Floppy disk (diskette) drive	Std.; 2M bytes	Std., 2.4M bytes	Opt.; 354K bytes	Std.; 354K bytes	—
Maximum diskette storage	2M bytes	Std., 2.4M bytes	3 units; 22.5MB	4 units; 270MB	3-80M bytes
Cartridge disk drive	Opt.; 32-96M bytes	Optional	Std.; 2.5M bytes	Std.; 2.5M bytes	2.5 to 13M bytes
Pack disk drive	—	—	No	Opt.; 270M bytes	—
Fixed-head disk/drum	—	—	10M bytes	10M bytes	2.5 to 67M bytes
Maximum disk storage	98M bytes	Opt.; 40M bytes	—	—	—
WORKSTATIONS					
Maximum number connectable	8	4 (simultaneous)	16	24	16
Recommended maximum number	6	4 (simultaneous)	Varies	Varies	16
Keyboard style	Type., num. key.	Type., num., func. key.	Type.; num. key.	Type.; num. key.	Multiple std.
Workstation printer	Optional	Optional	—	—	Opt.; 16
INPUT/OUTPUT DEVICES					
Serial printer	Opt.; 160 cps	Std.; 50 cps	Opt.; 55 cps	Opt.; 55 cps	55 cps
Line printer	Optional	Opt.; 400 cps	Opt.; 120-1000 lpm	Opt.; 120-1000 lpm	120-1000 lpm
Reel-to-reel tape drive	No	—	No	No	No
Cassette/cartridge tape drive	No	—	No	No	No
CRT	Opt.; 25 x 80 char.	Std.; 24 x 80 char.	Std.; 24 x 80 char.	Std.; 24 x 80 char.	Std.; 960, 1920 char.
Other	—	—	Opt. card reader	Opt. card reader	Opt. card reader
COMMUNICATIONS					
Maximum no. of lines	2	1 (standard)	2	8	8
Synchronous	Optional	Opt.; to 9600 bps	Std.; to 9600 bps	Std.; to 9600 bps	Std. to 9600 bps
Asynchronous	Std.; to 19,200 bps	Opt.; to 1200 bps	Opt.; to 2400 bps	Opt. to 9600 bps	Opt. to 2400 bps
Protocols supported	Async, bisync	—	Async, bisync	Async, bisync	SDLC, async, bisync
Network architecture supported	CPNET	—	IBM SNA	IBM SNA	SNA
RJE terminals emulated	—	—	2780/3780, HASP	2780/3780, HASP	2780/3780, HASP
IBM 3270 emulation	Optional	—	Yes	Yes	Yes
SOFTWARE SUPPORT					
COBOL	Yes	No	Yes	Yes	Yes
RPG	No	No	Yes	Yes	No
FORTRAN	Yes	Optional	No	No	No
BASIC	Yes	Optional	No	No	No
Assembler	Yes	No	Yes	Yes	Yes
Other programming languages	—	SNAP*	None	None	VISION, DATA IV
Multiprogramming	Yes, 8 partitions	Yes (4 partitions)	No	No	Yes, 5 partitions
Max. no. of jobs run concurrently	8	4	1	1	5
Language complemented in firmware	No	Yes	No	No	No
Op. sys. implemented in firmware	No	Yes	No	No	No
General accounting packages	Yes	Yes	No	No	No
Industry application areas	—	General purpose	Mfg., med., Ins., bank	Mfg., med., Ins., bank	Mfg., Ins., health
Data base management system	Yes	Yes	No	No	No
File access methods supported	Random, seq., ISAM	Yes	Rand., seq., index	Rand., seq., index	Rand., seq., ISAM
Software separately priced	Yes (applications)	—	No	No	No
Technical help separately priced	No	—	—	—	No
LEASE/MAINTENANCE OPTIONS					
Lease plans available	NA	3 and 5 years	1, 2, 3 yrs., 42 mos.	1, 2, 3 yrs., 42 mos.	1, 2, 3 yrs., 42 mos.
Maintenance plans available	Yes	Yes	On-site	On-site	On-site
PRICING & AVAILABILITY					
Purchase price of basic system, $	23,000	15,000	37,440	74,785	64,615
Monthly rental of basic system, $	—	—	619 (42 mo. lease)	1,140 (42 mo. lease)	726 (42/mo. lease)
Monthly maint. price of basic system, $	—	150	Contact vendor	Contact vendor	Contact vendor
Monthly maint. bundled with rental, $	—	525	Yes	Yes	Yes
Purchase price of:					
additional memory module, $	800 (64K)	—	Contact vendor	Contact vendor	Contact vendor
additional workstations, $	800	—	—	—	—
additional printer, $	2,000	—	—	—	—
Discounts available	30 & over	From dealers	Quantity	Quantity	Quantity
Date of first U.S. delivery	December 1979	November 1980	June 1973	Fourth qtr. 1976	May 1979
Number installed to date	NA	3	15,000 (all systems)	15,000 (all systems)	15,000 (all systems)
COMMENTS		*SNAP (Simple & Natural Automatic Programming) allows users to create and modify applications			

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MANUFACTURER AND MODEL	Four-Phase IV/65	Four-Phase IV/70	Four-Phase IV/90	Hewlett-Packard General Sys. Div. 250	Hewlett-Packard Information Sys. Division 300 Model 20
WORD LENGTH, BITS	24	24	24	16	16
CPU					
Model	Four-Phase IV/65	Four-Phase	Four-Phase	HP: BPC	HP300
Add time, microseconds	12 (word)	16 (word)	12 (word)	1,000 (12 digits)	420 (31 digits)
No. of I/O ports on basic sys. and max.	55	78	64	See Comments	1 (8 dev.), 2 (16 dev.)
INTERNAL STORAGE					
Type	MOS	MOS	MOS	MOS	MOS
Capacity of basic system, bytes	288K bytes	24K	96K	128K (sys.); 32K (user)	256K
Maximum capacity, bytes	288K bytes	96K	480K	192K (sys.); 64K (user)	1024K
Increment size, bytes	—	24K	—	32K	128K
Cycle/access time, microseconds	0.8	2.0	0.8	0.833	0.5/0.43
MASS STORAGE					
Floppy disk (diskette) drive	—	Opt.; 354K bytes	Opt.; 354K bytes	Std.; 1.2M bytes	Std.; 1M bytes
Maximum diskette storage	3-80M bytes	4 units; 270MB	4 units; 270M bytes	1 unit; 1.2M bytes	1M bytes
Cartridge disk drive	2.5 to 13M bytes	Std.; 10M bytes	Opt.; (4) 10M bytes	Opt. (2); 40M bytes	Opt.; 20-80M bytes
Pack disk drive	—	Opt.; 270M bytes	Opt.; (3) 270M bytes	—	Std.; 100M bytes
Fixed-head disk/drum	2.5 to 67M bytes	No	Opt.; (2) 20M bytes	Opt.; 12M bytes	No
Maximum disk storage	—	—	780M bytes	53M bytes	480M bytes
WORKSTATIONS					
Maximum number connectable	24	32	32	6	16
Recommended maximum number	24	Varies	32	6	Appl. dependent
Keyboard style	Multiple std.	Type.; num. key.	Multiple std.	Type., num., key.	Type., num., key.
Workstation printer	Opt.; 16	—	Opt.; 32	Opt.; 5	Opt.; 16
INPUT/OUTPUT DEVICES					
Serial printer	55 cps	Opt.; 55 cps	Opt.; 55 cps	Opt.; 2 (180 cps)	Opt., 180 cps
Line printer	120-1000 lpm	Opt.; 120-1000 lpm	Opt.; 120-1000 lpm	Opt.; 2 (180 cps)	Opt.; 400 lpm
Reel-to-reel tape drive	No	Opt.; 12.5-37.5 ips	Opt.; 12.5-37.5 ips	—	No
Cassette/cartridge tape drive	No	No	No	—	No
CRT	Std.; 1920 char.	Std.; 6 x 48 char.	Std.; 960, 1920 char.	Std.; 24 x 80 char.	Std.; 24 x 80 char.
Other	Opt. card reader	Opt. card reader	Opt. card reader	—	Console with horizontal/vertical scrolling
COMMUNICATIONS					
Maximum no. of lines	8	8	8	6	2
Synchronous	Std. to 9600 bps	Std.; to 9600 bps	Std.; to 9600 bps	Opt.; to 19.2K bps	Opt.; to 19.2K bps
Asynchronous	Opt. to 2400 bps	Opt.; to 9600 bps	Opt.; to 9600 bps	Opt.; to 9600 bps	Opt.; to 9600 bps
Protocols supported	SDLC, async, bisync	Async, bisync	Async, bisync	Bisync	Bisync
Network architecture supported	SNA	IBM SNA	IBM SNA	—	No
RJE terminals emulated	2780/3780, HASP	2780/3780, HASP	2780/3780, HASP	2780/3780	2780/3780
IBM 3270 emulation	Yes	Yes	Yes	No	No
SOFTWARE SUPPORT					
COBOL	Yes	Yes	Yes	No	No
RPG	No	Yes	Yes	No	Yes
FORTRAN	No	No	No	No	Yes
BASIC	No	No	No	Yes	Yes
Assembler	Yes	Yes	Yes	No	No
Other programming languages	VISION, DATA IV	None	None	—	SL/300
Multiprogramming	Yes, 5 partitions	No	Yes; 5 partitions	Yes	Yes
Max. no. of jobs run concurrently	5	1	5	6	No fundamental limit
Language complemented in firmware	No	No	No	See Comments	Partially
Op. sys. implemented in firmware	No	No	No	See Comments	Partially
General accounting packages	No	No	No	Yes	No
Industry application areas	Mfg., Ins., health	Mfg., med., Ins., bank	Mfg., med., Ins., bank	Manuf., gen. acct.	Office automation
Data base management system	No	No	No	Yes.	Yes
File access methods supported	Rand., seq., ISAM	Rand., seq., index	Rand., seq., index	Dir., chain, cal. seq.	7 methods
Software separately priced	No	No	No	Yes (application only)	Yes
Technical help separately priced	No	—	—	Yes	Yes
LEASE/MAINTENANCE OPTIONS					
Lease plans available	1, 2, 3 yrs., 42 mos.	With rental	1, 3 yr.; 42 months	1 to 5 years	1 to 5 years
Maintenance plans available	On-site	On-call	On-call	On-site, on-call	On-site, on-call
PRICING & AVAILABILITY					
Purchase price of basic system, $	79,915	62,050	51,200	17,000	50,000
Monthly rental of basic system, $	908 (42/mo. lease)	1,344 (42 mo. lease)	931 (42 mo. lease)	—	—
Monthly maint. price of basic system, $	Contact vendor	Contact vendor	Contact vendor	122	261-329
Monthly maint. bundled with rental, $	Yes	Yes	Yes	—	No
Purchase price of:					
additional memory module, $	Contact vendor	Contact vendor	Contact vendor	2,500 (128K)	2,500 (128K)
additional workstations, $	—	—	—	4,250	1,450+
additional printer, $	—	—	—	3,650 (180 cps)	3,450 (180 cps)
Discounts available	Quantity	Quantity	Quantity	OEM and volume	OEM and volume
Date of first U.S. delivery	May 1979	February 1971	June 1977	September 1978	June 1980
Number installed to date	15,000 (all systems)	15,000 (all systems)	15,000 (all systems)	—	NA
COMMENTS				IEEE 488 BUS channels standard; Async RS-232-C channels optional; Operating Software is resident in RAM	Code & data segmentation; IMAGE data base management; extensive RPG II conversion aids; fully integrated package

Small Business Computer Specifications

MANUFACTURER AND MODEL	Hewlett-Packard HP 3000 Series III	Hewlett-Packard HP 3000 Series 30	Hewlett-Packard HP 3000 Series 33	Hewlett-Packard HP 3000 Series 44	Honeywell Level 6 Model 23
WORD LENGTH, BITS	16	16	16	16	16
CPU					
Model	HP 3000 Series III	HP 3000 Series 30	HP 3000 Series 33	HP 3000 Series 44	Honeywell CPS 93XX
Add time, microseconds	—	—	—	—	3.5 (16 bits)
No. of I/O ports on basic sys. and max.	13; 33	10; 10	10; 17	—	5; 9
INTERNAL STORAGE					
Type	MOS	MOS	MOS	—	MOS
Capacity of basic system, bytes	256K	256K	256K	1M	32K
Maximum capacity, bytes	2048K	1024K	1024K	4M	128K
Increment size, bytes	256K	256K	256K	512K	32K
Cycle/access time, microseconds	.7	.86	.86	.8	—
MASS STORAGE					
Floppy disk (diskette) drive	No	Std.; 1.18M bytes	Std.; 1.18M bytes	Opt.; 1.2M bytes	4 x 256/512K bytes
Maximum diskette storage	None	1.18M bytes	1.18M bytes	1.2M bytes	2M bytes
Cartridge disk drive	No	Std.; 8 x 20M bytes	Std.; 8 x 20M bytes	—	4 x 26/80M bytes
Pack disk drive	Std.; 50M bytes	Opt.; 50-120M bytes	Opt.; 50-120M bytes	—	No
Fixed-head disk/drum	No	No	No	50M bytes	No
Maximum disk storage	960M bytes	—	—	1.92 gigabytes	—
WORKSTATIONS					
Maximum number connectable	64	32	32	96	16
Recommended maximum number	64	32	32	—	Varies
Keyboard style	All types	All types	All types	All types	Type.; num. key.
Workstation printer	Opt.; 1 per term.	Opt.; 1 per term.	Opt.; 1 per term.	—	Opt.; up to 16
INPUT/OUTPUT DEVICES					
Serial printer	Opt.; 180 cps	Opt.; 180 cps	Opt.; 180 cps	Optional	Opt.; 30-160 cps
Line printer	Opt.; 400-1000 lpm	Opt.; 400 lpm	Opt.; 400 lpm	Optional (4)	Opt.; 240-900 lpm
Reel-to-reel tape drive	Opt.; KBS	Opt.; 75KBS	Opt.; 75KBS	Std.; 1600 bpi	No
Cassette/cartridge tape drive	Opt.; cassette only	Opt.; cassette only	Opt.; cassette only	—	No
CRT	Std.; 1920 char.	Std.; 1920 char.	Std.; 1920 char.	Std.	Opt.; 960, 1920, 2000
Other	—	—	—	HP 2680 laser prntr.	No
COMMUNICATIONS					
Maximum no. of lines	9	2	7	7	—
Synchronous	Opt.; 56KBS-2.5KBS	Opt.; 56KBS	Opt.; 56KBS	Std.; 9600 bps	Opt.; 50-9600 bps
Asynchronous	Std.; 2400 bps	Std.; 9600 bps	Std.; 9600 bps	—	Opt.; 50-9600 bps
Protocols supported	Bisync	Bisync	Bisync	Bisync	Async, bisync
Network architecture supported	HP-DSN	HP-DSN	HP-DSN	HP-DSN	—
RJE terminals emulated	2780/3780, HASP 2	2780/3780	2780/3780	2780/3780, HASP	HASP, 2780/3780
IBM 3270 emulation	No	No	No	Yes	Yes
SOFTWARE SUPPORT					
COBOL	Yes	Yes	Yes	Yes	Yes
RPG	Yes	Yes	Yes	Yes	Yes
FORTRAN	Yes	Yes	Yes	Yes	Yes
BASIC	Yes	Yes	Yes	Yes	No
Assembler	No	No	No	No	Yes
Other programming languages	SPL, APL	SPL	SPL	SPL	Macro preprocessor
Multiprogramming	Yes, virtual	Yes, virtual	Yes, virtual	Yes, virtual	Yes; no limit
Max. no. of jobs run concurrently	No limit	No limit	No limit	No limit	No fixed limit
Language complemented in firmware	Partially	Partially	Partially	Partially	No
Op. sys. implemented in firmware	Partially	Partially	Partially	Partially	No
General accounting packages	No	No	No	No	No
Industry application areas	Manufacturing	Manufacturing	Manufacturing	Manufacturing	Mfg., various others
Data base management system	Yes	Yes	Yes	Yes	Yes
File access methods supported	Seq., random, ISAM	Seq., random, ISAM	Seq., random, ISAM	Random, seq., ISAM	Rand., seq., index
Software separately priced	Some	Some	Some	Some	Yes
Technical help separately priced	Yes	Yes	Yes	Yes	Yes
LEASE/MAINTENANCE OPTIONS					
Lease plans available	Yes, many plans	Yes, many plans	Yes, many plans	Yes, many plans	Purchase only
Maintenance plans available	On-site, on-call	On-site, on-call	On-site, on-call	On-site, on-call	On-site, on-call, factory ret., third party
PRICING & AVAILABILITY					
Purchase price of basic system, $	105,000	49,750	58,500	109,445	4,800
Monthly rental of basic system, $	None	None	None	—	—
Monthly maint. price of basic system, $	534	360	395	—	52
Monthly maint. bundled with rental, $	—	—	—	—	—
Purchase price of:					
additional memory module, $	3,750 (256K bytes)	5,000 (256K bytes)	5,000 (256K bytes)	—	2,525 (64K bytes)
additional workstations, $	1,500	1,500	1,500	—	1,980 (1920 char.)
additional printer, $	10,550 (400 lpm)	3,640 (180 cps)	3,640 (180 cps)	—	3,200 (160 cps)
Discounts available	Quantity, OEM	Quantity, OEM	Quantity, OEM	—	Qty., vol., educ.
Date of first U.S. delivery	June 1978	October 1979	October 1978	First qtr. 1981	1978
Number installed to date	5000 (all models)	5,000 (all models)	5,000 (all models)	5,000 (all models)	NA
COMMENTS					

Small Business Computer Specifications

MANUFACTURER AND MODEL	Honeywell Level 6 Model 33	Honeywell Level 6 Model 43	Honeywell Level 6 Model 47	Honeywell Level 6 Model 53	Honeywell Level 6 Model 57
WORD LENGTH, BITS	16	16	16	16	16
CPU					
Model	Honeywell CPS 946X	Honeywell CPS 955X	Honeywell CPS 955X	Honeywell CPS 955X	Honeywell CPS 9572
Add time, microseconds	1.9 (16 bits)	1.0 (16 bits)	0.7 (16 bits)	0.7 (16 bits)	0.7 (16 bits)
No. of I/O ports on basic sys. and max.	160 maximum	160 maximum	160 maximum	160 maximum	160 maximum
INTERNAL STORAGE					
Type	NMOS	NMOS	NMOS, core	NMOS, core	MOS
Capacity of basic system, bytes	32K	32K	32K	32K	32K
Maximum capacity, bytes	128K	2048K	2048K	2048K	2048K
Increment size, bytes	16K, 64K	16, 64K	16K, 64K	16K, 64K	16K, 64K
Cycle/access time, microseconds	0.65, 0.55/0.44, 0.29	0.65, 0.55/0.44, 0.29	0.65, 0.55/0.44, 0.29	0.65, 0.55/0.44, 0.29	0.65, 0.55/0.44, 0.29
MASS STORAGE					
Floppy disk (diskette) drive	Opt.; 4 x 256/512K	Opt.; 4 x 256/512K	Opt.; 4 x 256/512K	Opt.; 4 x 256/512K	4 x 256/512K bytes
Maximum diskette storage	2M bytes	2M bytes	2M bytes	2M bytes	2M bytes
Cartridge disk drive	Opt.; 8 x 10/26/80M	Opt.; 8 x 10/26/80M	Opt.; 8 x 10/26/80M	Opt.; 8 x 10/26/80M	8 x 10/26/80M bytes
Pack disk drive	Opt.; 8 x 67/256M	Opt.; 8 x 67/256M	Opt.; 8 x 67/256M	Opt.; 8 x 67/256M	8 x 67/256K bytes
Fixed-head disk/drum	No	No	No	No	No
Maximum disk storage	—	—	—	—	—
WORKSTATIONS					
Maximum number connectable	160	160	152	152	144
Recommended maximum number	Varies	Varies	Varies	Varies	Varies
Keyboard style	Type.; num. key.	Type.; num. key.	Type.; num. key.	Type.; num. key.	Type.; num. key
Workstation printer	Opt.; up to 160	Opt.; up to 160	Opt.; up to 152	Opt.; up to 152	Opt.; up to 144
INPUT/OUTPUT DEVICES					
Serial printer	Opt.; 30-160 cps	Opt.; 30-160 cps	Opt.; 30-160 cps	Opt.; 30-160 cps	Opt.; 30-160 cps
Line printer	Opt.; 240-900 lpm	Opt.; 240-900 lpm	Opt.; 240-900 lpm	Opt.; 240-900 lpm	Opt.; 240-900 lpm
Reel-to-reel tape drive	Opt.; 36-120KBS	Opt.; 36-120KBS	Opt.; 36-120KBS	Opt.; 36-120KBS	Opt.; 36-120KBS
Cassette/cartridge tape drive	No	No	No	No	No
CRT	Opt.; 960, 1920, 2000	Opt.; 960, 1920, 2000	Opt.; 960, 1920, 2000	Opt.; 960, 1920, 2000	Opt.; 960, 1920, 2000
Other	Opt.	Opt.	Opt.	Opt.	Opt.
COMMUNICATIONS					
Maximum no. of lines	160	160	160	160	160
Synchronous	Opt.; 50-72000 bps	Opt.; 50-7200 bps	Opt.; 50-7200 bps	Opt.; 50-72000 bps	Opt.; 50-72000 bps
Asynchronous	Opt.; 50-19200 bps	Opt.; 50-19200 bps	Opt.; 50-19200 bps	Opt.; 50-19200 bps	Opt.; 50-19200 bps
Protocols supported	Async, bisync, HDLC	Async, bisync, HDLC	Async, bisync, HDLC	Async, bisync, HDLC	Async, bisync, HDLC
Network architecture supported	—	—	—	—	—
RJE terminals emulated	HASP, 2780/3780	HASP, 2780/3780	HASP, 2780/3780	HASP, 2780/3780	HASP, 2780/3780
IBM 3270 emulation	—	—	—	—	Yes
SOFTWARE SUPPORT					
COBOL	Yes	Yes	Yes	Yes	Yes
RPG	Yes	Yes	Yes	Yes	Yes
FORTRAN	Yes	Yes	Yes	Yes	Yes
BASIC	No	No	No	No	No
Assembler	Macro assembler	Yes	Yes	Yes	Yes
Other programming languages	None	Macro preprocessor	Macro preprocessor	Macro preprocessor	Macro preprocessor
Multiprogramming	Yes	Yes	Yes	Yes	Yes; no limit
Max. no. of jobs run concurrently	No fixed limit	No fixed limit	No fixed limit	No fixed limit	No fixed limit
Language complemented in firmware	No	No	No	No	No
Op. sys. implemented in firmware	No	No	No	No	No
General accounting packages	No	No	No	No	No
Industry application areas	Mfg., etc.	Mfg., etc.	Mfg., etc.	Mfg., etc.	Mfg., etc.
Data base management system	Yes	Yes	Yes	Yes	Yes
File access methods supported	Rand., seq., index	Rand., seq., index	Rand., seq., index	Rand., seq., index	Rand., seq., index
Software separately priced	Yes	Yes	Yes	Yes	Yes
Technical help separately priced	Yes	Yes	Yes	Yes	Yes
LEASE/MAINTENANCE OPTIONS					
Lease plans available	Purchase only	Purchase only	Purchase only	Purchase only	Purchase only
Maintenance plans available	On-site, on-call, factory ret., third party	On-site, on-call, factory ret., third party	On-site, on-call, factory ret., third party	On-site, on-call, factory ret., third party	On-site, on-call, factory ret., third party
PRICING & AVAILABILITY					
Purchase price of basic system, $	7,275	10,325	22,275	22,175	46,975
Monthly rental of basic system, $	—	—	—	—	—
Monthly maint. price of basic system, $	77	114	227	174	334
Monthly maint. bundled with rental, $	NA	NA	NA	NA	NA
Purchase price of:					
additional memory module, $	875 (16K bytes)	2,240 (64K bytes)	2,250 (64K bytes)	2,250 (64K bytes)	875 (16K bytes)
additional workstations, $	1,980 (1920 char.)	1,980 (1920 char.)	1,980 (1920 char.)	1,980 (1920 char.)	1,980 (1920 char.)
additional printer, $	3,200 (160 cps)	3,200 (160 cps)	3,200 (160 cps)	3,200 (160 cps)	23,000 (900 lpm)
Discounts available	Qty., vol., educ.	Qty., vol., educ.	Qty., vol., educ.	Qty., vol., educ.	Qty., vol., educ.
Date of first U.S. delivery	1976	1977	1978	1978	1978
Number installed to date	NA	NA	NA	NA	NA
COMMENTS	Field upgradable to all higher models; replaces models 34 and 36	Field upgradable to all higher models	Field upgradable to model 57; includes high speed commercial instructions	Field upgradable to model 57; includes 8K bytes high-speed cache memory	Includes 8K-byte high-speed cache memory and high-speed commercial instructions

Small Business Computer Specifications

MANUFACTURER AND MODEL	Honeywell Series 60 Level 62	IBM Series/1 4952	IBM Series/1 4953	IBM Series/1 4955	IBM System/3
WORD LENGTH, BITS	8-bit byte/16-bit word	8-bit byte/16-bit word	8-bit byte/16-bit word	8-bit byte/16-bit word	8-bit byte
CPU					
Model	Honeywell CPS 2004	IBM Model 4952	IBM Model 4953	IBM Model 4955	IBM System/3
Add time, microseconds	—	NA	NA	NA	24 (5 digits)
No. of I/O ports on basic sys. and max.	6 std.; 3 opt.	5; 14	4; 13	3; 10	—
INTERNAL STORAGE					
Type	MOS	MOS	MOS	MOS	Core, MOS
Capacity of basic system, bytes	96K	32K	16K	16K	Varies
Maximum capacity, bytes	992K	128K	32K	64K	512K
Increment size, bytes	32K or 128K	32K	16K, 32K	16K, 32K	4, 8, 16, 32K
Cycle/access time, microseconds	1.0/0.5	—	—	—	1.52
MASS STORAGE					
Floppy disk (diskette) drive	Std.; 256K bytes	Opt.; to 27.8M bytes	Opt.; to 27.8M bytes	Opt.; to 27.8M bytes	Opt.; via 3741
Maximum diskette storage	512K bytes	27.8M bytes	27.8M bytes	27.8M bytes	—
Cartridge disk drive	No	See Comments	See Comments	See Comments	Opt.; 9.9M bytes
Pack disk drive	2 to 6 drives	No	No	No	Opt.; 506M bytes
Fixed-head disk/drum	No	Opt.; to 128K bytes	Opt.; to 128K bytes	Opt.; to 128K bytes	No
Maximum disk storage	1,800M bytes	—	—	—	—
WORKSTATIONS					
Maximum number connectable	744	6 (can vary)	2 (can vary)	12 (can vary)	Variable
Recommended maximum number	100	6	2	12	—
Keyboard style	Typewriter; num. key.	Type.; num. key.	Type.; num. key.	Type.; num. key.	Type.; num. key.
Workstation printer	Optional	No	No	No	—
INPUT/OUTPUT DEVICES					
Serial printer	Std.; 30 cps console	Opt.; 120 cps	Opt.; 120 cps	Opt.; 120 cps	Opt.; 85 cps
Line printer	Opt.; 100-1600 lpm	Opt.; 80-414 lpm	Opt.; 80-414 lpm	Opt.; 80-414 lpm	Opt.; 100-1100 lpm
Reel-to-reel tape drive	Opt.; 10.4-60KBS	Opt.; to 120,000 bps	Opt.; to 12,000 bps	Opt.; to 12,000 bps	Opt.; 20-80KBS
Cassette/cartridge tape drive	Cas.; opt., 700 cps	No	No	No	No
CRT	Opt.; 24 x 80 char.	Opt.; 24 x 80 char.	Opt.; 24 x 80 char.	Opt.; 24 x 80 char.	Opt.; 12/24 x 80 char.
Other	Opt.	No	No	No	Opt.
COMMUNICATIONS					
Maximum no. of lines	25	8	8	8	8
Synchronous	Opt.; 19,200 bps	Opt.; to 56,000 bps	Opt.; to 56,000 bps	Opt.; to 56,000 bps	Opt.; 50K bps
Asynchronous	Opt.; 9600 bps	Opt.; to 9600 bps	Opt.; to 9600 bps	Opt.; to 9600 bps	No
Protocols supported	Bisync	Bisync	Bisync	Bisync	SDLC
Network architecture supported	TTY, ISO, BSC, VIP	System/370	System/370	System/370	—
RJE terminals emulated	360/370, 2780	IBM 3780, HASP	IBM 3780, HASP	IBM 3780, HASP	System/370
IBM 3270 emulation	Yes	Yes	Yes	Yes	Yes
SOFTWARE SUPPORT					
COBOL	Yes	Yes	Yes	Yes	Yes
RPG	Yes	No	No	No	RPG II
FORTRAN	Yes	Fortran IV	Fortran IV	Fortran IV	Yes
BASIC	No	No	No	No	Yes
Assembler	No	Macro assembler	Macro assembler	Macro assembler	No
Other programming languages	None	PL/1	PL/1	PL/1	None
Multiprogramming	Yes	Yes	Yes	Yes	Yes; 3 partitions
Max. no. of jobs run concurrently	15	6	2	12	—
Language complemented in firmware	No	No	No	No	No
Op. sys. implemented in firmware	No	No	No	No	No
General accounting packages	Yes	Yes	Yes	Yes	Yes
Industry application areas	Dist., mfg.	General purpose	General purpose	General Purpose	Dist., med., mfg., ed.
Data base management system	Yes	No	No	No	No
File access methods supported	Seq., index, relative	Index	Index	Index	Rand., seq., index
Software separately priced	Yes	Yes	Yes	Yes	Yes
Technical help separately priced	Yes	Yes	Yes	Yes	Yes
LEASE/MAINTENANCE OPTIONS					
Lease plans available	1-, 5-, 6-year	Purchase only	Purchase only	Purchase only	Contact vendor
Maintenance plans available	On-site, on-call, third party, factory ret.	On-site contract	On-site contract	On-site contract	On-call
PRICING & AVAILABILITY					
Purchase price of basic system, $	33,192	4,600 (CPU only)	4,360 (CPU only)	6,165 (CPU only)	20,190
Monthly rental of basic system, $	799 (1-yr. lease)	Purchase only	Purchase only	Purchase only	816 (1-yr. lease)
Monthly maint. price of basic system, $	160 (processor)	23	76	73	130
Monthly maint. bundled with rental, $	Yes	—	—	—	Yes
Purchase price of:					
additional memory module, $	2,750 (128K)	450 (32K bytes)	1,170 (16K bytes)	1,580 (16K bytes)	—
additional workstations, $	—	1,320	1,395	1,735	4,525
additional printer, $	13,645 (450 lpm)	8,625 (80 lpm)	12,425 (235 lpm)	12,425 (235 lpm)	4,115 (86 cps)
Discounts available	Quantity	Contact vendor	Contact vendor	Contact vendor	Contact vendor
Date of first U.S. delivery	January 1979	February 1979	November 1976	November 1976	December 1970
Number installed to date	Over 1,000	NA	NA	NA	Over 54,000
COMMENTS	Performance increase packages of 33, 78 or 90 percent opt.	Up to 256M bytes non-removable disk available	Up to 256M bytes non-removable disk available	Up to 256M bytes non-removable disk available	Six different models currently in line

Small Business Computer Specifications

MANUFACTURER AND MODEL	IBM System/32	IBM System/34	IBM System/38	IBM 5100 Portable Computer	IBM 5110 Computing System
WORD LENGTH, BITS	8-bit byte	8-bit byte	8-bit byte	8-bit byte	8-bit byte
CPU					
Model	IBM System 32	IBM System/34	IBM Model 300/500	IBM 5110	IBM 5110
Add time, microseconds	150 (5 digits)	68.5 (5 digits)	—	1000 (approx.)	NA
No of I/O ports on basic sys. and max.	—	—	8	2; variable	2; variable
INTERNAL STORAGE					
Type	MOS	MOS	MOS	MOS	MOS
Capacity of basic system, bytes	16K	32K	512K	16K	16K
Maximum capacity, bytes	32K	128K	1536K	64K	64K
Increment size, bytes	8K	16K, 32K	No additions	16K	16K
Cycle/access time, microseconds	0.6/0.25	0.6	1.1, 0.6	0.53/0.33	0.53/0.33
MASS STORAGE					
Floppy disk (diskette) drive	Std.; 303K bytes	Std.; 1.2M bytes	Std.; 240.5K bytes	No	Std.; 4.8M bytes
Maximum diskette storage	—	1.2M bytes	24M bytes	NA	4.8M bytes
Cartridge disk drive	See Comments	Std.; 8.6M bytes	No	No	No
Pack disk drive	No	No	No	No	No
Fixed-head disk/drum	No	No	Std.; 129M bytes	No	No
Maximum disk storage	13.75M bytes	128M bytes	387M bytes	NA	—
WORKSTATIONS					
Maximum number connectable	—	16 local; 64 remote	40	1	Contact vendor
Recommended maximum number	—	16	—	1	—
Keyboard style	—	Type.; num. key.	Type.; num. key	Type.; num. key	Type.; num. key
Workstation printer	Optional	Optional	Std.; 2	No	No
INPUT/OUTPUT DEVICES					
Serial printer	Opt.; 40, 80 cps	Opt.; 40, 80, 120 cps	Opt.; 40 to 120 cps	Opt.; 80 cps	Opt.; 80/120 cps
Line printer	Std.; 50-155 lpm	Opt.; 160, 300 lpm	Std.; 300 or 600 lpm	No	No
Reel-to-reel tape drive	No	No	Opt.; 12.5-50 ips	No	No
Cassette/cartridge tape drive	No	No	No	Cart.; 2850 cps	Cart.; 2850 cps
CRT	Std.; 6 x 40 char	Opt.; 960-1920 char.	Std.; 24 x 80 char. (6)	Std.; 16 x 64 char.	Std.; 16 x 64 char.
Other	Opt.	Opt.	Opt.	Opt.	Opt.
COMMUNICATIONS					
Maximum no. of lines	1	16	4	1	1
Synchronous	Opt.; to 7200 bps	Opt.; to 9600 bps	Opt.; to 9600 bps	No	Opt.; to 9600 bps
Asynchronous	No	No	Opt.; to 1200 bps	Opt.; to 300 bps	Opt.; to 300 bps
Protocols supported	SDLC, Bisync	SDLC, Bisync	Bisync	Bisync	Bisync
Network architecture supported	System/3, /7, /360	—	Most IBM systems	System/370	System/370
RJE terminals emulated	System/370	—	—	—	—
IBM 3270 emulation	No	Yes	—	No	No
SOFTWARE SUPPORT					
COBOL	No	Yes	No	No	No
RPG	RPG II	RPG II	Yes, RPG II	No	No
FORTRAN	No	Yes	No	No	No
BASIC	No	No	No	Yes	Yes
Assembler	Macro assembler	Yes	No	No	NO
Other programming languages	None	None	None	APL	APL
Multiprogramming	No	Yes; 8 partitions	No	No	No
Max. no. of jobs run concurrently	—	—	—	1	—
Language complemented in firmware	No	Partially	—	Fully	Fully
Op. sys. implemented in firmware	Partially	Partially	—	Fully	Fully
General accounting packages	Yes	Yes	Yes	No	Yes
Industry application areas	Dist., med., mfg.	Mfg., med., dist.	General acct.	Finan. ana., stat.	Finan. ana., stat.
Data base management system	No	No	Yes	No	No
File access methods supported	Rand., seq., index	Rand., seq., index	—	Sequential	Sequential
Software separately priced	Yes	Yes	Yes	Some	Some
Technical help separately priced	Yes	Yes	Yes	Yes	Yes
LEASE/MAINTENANCE OPTIONS					
Lease plans available	2-yr. base/1 yr. ext.	Contact vendor	Purchase/rent only	3-month contract	3-month contract
Maintenance plans available	Contact vendor	On-site, on-call	Contact vendor	Contact vendor	Contact vendor
PRICING & AVAILABILITY					
Purchase price of basic system, $	26,870	34,700	121,480	6,285	8,475
Monthly rental of basic system, $	1,047	1,062	3,352	1,350 (3-mo. lease)	1,275 (3-mo. lease)
Monthly maint. price of basic system, $	185	240 (approx.)	—	63.50	45
Monthly maint. bundled with rental, $	Yes	Yes	Yes	Yes	Yes
Purchase price of:					
additional memory module, $	878 (8K bytes)	1,175 (16K bytes)	NA	1,175 (16K bytes)	1,175 (16K)
additional workstations, $	1,000	3,040	2,850	—	Contact vendor
additional printer, $	29,000 (77/92 cps)	12,800 (160 lpm)	14,000 (650 lpm)	3,675 (80 cps)	3,200 (80 cps)
Discounts available	Contact vendor	Education (10%)	Contact vendor	Education (10%)	Education (10%)
Date of first U.S. delivery	February 1975	January 1978	August 1979	September 1975	February 1978
Number installed to date	NA	NA	NA	NA	NA
COMMENTS	System also includes 3.2M-13.75M bytes of nonremovable disk storage		There are 48 packaged models of the System/38	Portable computer weighing 50 lbs.; RS-232-C interface available for non-IBM peripherals	Enhanced version of IBM 5100 with 2 to 3 times the internal computing power plus diskette I/O; 5110 with both diskette and tape costs $14,475

Small Business Computer Specifications

MANUFACTURER AND MODEL	IBM 5120 Computing System	IBM 5280 Distributed Data System	IBM 8100 Information System	Industrial Micro Systems Series 5000	Industrial Micro Systems Series 8000
WORD LENGTH, BITS	8-bit byte	8-bit byte	8-bit byte, 32-bit word	8-bit byte	8-bit byte
CPU					
Model	IBM 5120	IBM 5285, 5286, 5288	IBM 8130/8140	Zilog Z80A	Zilog Z80A
Add time, microseconds	NA	NA	—	1.0	1.0
No. of I/O ports on basic sys. and max.	2, variable	1; 1	1; 19	5, 16	5, 16
INTERNAL STORAGE					
Type	MOSFET	MOS	MOSFET	MOS	MOS
Capacity of basic system, bytes	16K	32K	256K	64K	64K
Maximum capacity, bytes	64K	160K	512K	512K	512K
Increment size, bytes	16K	32K	128K, 256K	—	—
Cycle/access time, microseconds	0.53/0.33	NA	1.5, 0.8	—	—
MASS STORAGE					
Floppy disk (diskette) drive	Std.; 2.4M bytes	Std.; 12M bytes	Std.; 29M bytes	Standard	Standard
Maximum diskette storage	4.8M bytes	9.6M bytes	962M bytes	960K bytes	3M bytes
Cartridge disk drive	No	NA	No	Optional	Optional
Pack disk drive	No	NA	No	—	—
Fixed-head disk/drum	No	NA	No	—	—
Maximum disk storage	—	NA	320M bytes	96M bytes	96M bytes
WORKSTATIONS					
Maximum number connectable	Contact vendor	4	24	8	8
Recommended maximum number	—	4	24	2 to 4	2 to 4
Keyboard style	Type., num. key.	Type.; num. key.	Type.; num. key.	—	—
Workstation printer	—	Opt; up to 5	Optional	—	—
INPUT/OUTPUT DEVICES					
Serial printer	Opt.; 80-120 cps	Opt.; 40 to 120 cps	Opt; 40 to 120 cps	—	—
Line printer	No	Opt.; 195 to 560 lpm	Opt; 120 to 400 lpm	—	—
Reel-to-reel tape drive	No	No	Opt.; 160KBS	—	—
Cassette/cartridge tape drive	No	No	No	—	—
CRT	Std.; 1024 char.	Std.; 6 x 80 char.	Opt.; 240 to 2560	—	—
Other	Any w/RS-232-C int.	Opt.; 24 x 80 char.	Opt.	Parallel printer	Parallel printer
COMMUNICATIONS					
Maximum no. of lines	1	1	24	16	16
Synchronous	Opt.; to 4800 bps	Opt.; to 4800 bps	Std.; 600 to 9600 bps	—	—
Asynchronous	Opt.; to 300 bps	No	No	Std.; 9600-19.2K bps	Std.; 9600-19.2K bps
Protocols supported	2770, 3741	SDLC, Bisync	Bisync	Async	Async
Network architecture supported	Most IBM systems	System/370	SNA	—	—
RJE terminals emulated	2770, 3741	Yes	Most IBM systems	—	—
IBM 3270 emulation	No	No	Yes	No	No
SOFTWARE SUPPORT					
COBOL	No	Yes	Yes	Yes	Yes
RPG	No	Yes	No	No	No
FORTRAN	No	No	Yes	Yes	Yes
BASIC	Yes	No	No	Yes	Yes
Assembler	No	Yes	Yes	Yes	Yes
Other programming languages	APL	No	No	—	—
Multiprogramming	No	Yes	—	Yes	Yes
Max. no. of jobs run concurrently	—	8	31	8	8
Language complemented in firmware	Fully	No	No	No	No
Op. sys. implemented in firmware	Fully	No	No	No	No
General accounting packages	Yes	No	No	Yes (from dealers)	Yes (from dealers)
Industry application areas	General purpose	Dist., retail	Comm.	—	—
Data base management system	No	No	Yes (DTMS)	Yes (from dealers)	Yes (from dealers)
File access methods supported	Sequential	Sequential	—	Random, seq., ISAM	Random, seq., ISAM
Software separately priced	Some	Yes	Yes	Yes	Yes
Technical help separately priced	Yes	Yes	Yes	—	—
LEASE/MAINTENANCE OPTIONS					
Lease plans available	3-month contract	24-month contract	2 years	—	—
Maintenance plans available	Contact vendor	Contact vendor	On-call	—	—
PRICING & AVAILABILITY					
Purchase price of basic system, $	9,990 (16K)	5,280 (32K)	91,815 (348K)	3,000 to 12,000	3,000 to 12,000
Monthly rental of basic system, $	2,365 (3-mo. lease)	183 (3-months)	2,981	—	—
Monthly maint. price of basic system, $	85	42	—	—	—
Monthly maint. bundled with rental, $	Yes	Yes	Yes	—	—
Purchase price of:					
additional memory module, $	3,445 (1.2M)	600 (32K)	2,250 (128K)	—	—
additional workstations, $	Contact vendor	2,035	2,835	—	—
additional printer, $	2,655 (80 cps)	5,800 (80 cps)	13,250 (400-500 lpm)	—	—
Discounts available	Educational (10%)	Education (10%)	Contact vendor	Dealer, OEM	Dealer, OEM
Date of first U.S. delivery	February 1980	June 1980	August 1979	May 1979	May 1979
Number installed to date	NA	NA	NA	3000	5000
COMMENTS	Enhanced version of the 5110				

Small Business Computer Specifications

MANUFACTURER AND MODEL	Infotecs, Inc. Control Center II	Infotecs, Inc. IMP	Logical Machine Corp. ADAM	Logical Machine Corp. DAVID	Logical Machine Corp. GOLIATH
WORD LENGTH, BITS	12	12	16	16	16
CPU					
Model	—	IMP-1	BIT-SLICE	Intel 8086	Intel 8086
Add time, microseconds	31	39 (7 digits)	—	NA	NA
No. of I/O ports on basic sys. and max.	4, 64	4; 5	5	2	20
INTERNAL STORAGE					
Type	MOS	MOS	MOS	MOS	MOS
Capacity of basic system, bytes	64K	32K	32K	64K	64K
Maximum capacity, bytes	1024K	32K	64K	64K	256K
Increment size, bytes	32K	—	32K	—	64K
Cycle/access time, microseconds	.5/.2	0.5/0.2	0.17/0.50	—	—
MASS STORAGE					
Floppy disk (diskette) drive	Opt.; 1.9-15.2M bytes	Std.; 3.8M bytes	Opt.; 250K bytes	Std.; 1.25M bytes	—
Maximum diskette storage	—	—	—	2.5M bytes	—
Cartridge disk drive	Opt.; 34-808M bytes	No	Std.; 10.6M bytes	—	Std.; 10M bytes
Pack disk drive	—	No	—	—	Std.; 10M bytes
Fixed-head disk/drum	—	No	—	—	—
Maximum disk storage	—	—	10.6M bytes	—	65M bytes
WORKSTATIONS					
Maximum number connectable	16	—	—	—	20
Recommended maximum number	16	—	—	—	20
Keyboard style	Type., num. key.	Type.; num. key.	Type.; 10-dig. num.	Type.; 10-dig. num.	Type.; 10-dig. num.
Workstation printer	Optional	—	—	—	—
INPUT/OUTPUT DEVICES					
Serial printer	Opt.; 55-340 cps	Std.; 200 cps	Std.; 165 cps	Std.; 110 cps	NA
Line printer	Opt.; 300-600 lpm	No	Opt.; 200 lpm	—	NA
Reel-to-reel tape drive	—	No	—	—	—
Cassette/cartridge tape drive	—	No	—	—	—
CRT	Std.; 24 x 80 char.	Std.; 24 x 28 char.	Std.; 24 x 80 char.	Std.; 24 x 80 char.	Std.; 24 x 80 char.
Other	Any w/RS-232-C int.	No	—	—	—
COMMUNICATIONS					
Maximum no. of lines	16	1	—	1	20
Synchronous	Std.; 300-19,200 bps	No	—	Standard	Standard
Asynchronous	Std.; 300-19,200 bps	Opt.; to 2400 bps	—	Standard	Standard
Protocols supported	—	None	NA	—	—
Network architecture supported	—	—	—	—	Yes
RJE terminals emulated	—	—	—	—	—
IBM 3270 emulation	—	—	—	—	—
SOFTWARE SUPPORT					
COBOL	No	No	—	—	—
RPG	No	No	—	—	—
FORTRAN	No	No	—	—	—
BASIC	No	No	—	—	—
Assembler	Yes	No	—	—	—
Other programming languages	HIBOL	HIBOL	Natural English	Natural English	Natural English
Multiprogramming	Yes, 16 partitions	No	—	—	—
Max. no. of jobs run concurrently	16	—	—	—	—
Language complemented in firmware	Yes	No	Partially	Yes	Yes
Op. sys. implemented in firmware	Some	No	NA	—	—
General accounting packages	Yes	Yes	Yes	Yes	Yes
Industry application areas	Acctg.; insurance	Accounting	All	All	All
Data base management system	Yes	No	—	—	—
File access methods supported	Random, seq., ISAM	Rand., seq., index	NA	—	—
Software separately priced	Yes	Yes	—	No	No
Technical help separately priced	Yes	Yes	Yes	Yes	Yes
LEASE/MAINTENANCE OPTIONS					
Lease plans available	Contact vendor	Contact vendor	Contact dealer	Contact dealer	Contact vendor
Maintenance plans available	—	—	Yes	Yes	Yes
PRICING & AVAILABILITY					
Purchase price of basic system, $	6,995	7,995	25,000	8,500	33,325
Monthly rental of basic system, $	Contact vendor	Contact vendor	625 (lease)	213	833
Monthly maint. price of basic system, $	—	—	—	—	—
Monthly maint. bundled with rental, $	—	—	—	—	—
Purchase price of:					
additional memory module, $	—	—	—	—	3,117
additional workstations, $	—	—	—	—	—
additional printer, $	—	—	—	—	—
Discounts available	—	—	—	Dealer	Dealer
Date of first U.S. delivery	April 1980	September 1977	April 1975	December 1980	November 1980
Number installed to date	Over 300	Over 600	NA	NA	NA
COMMENTS	Programs compatible with DEC PDP-8; complete systems and software sold & serviced nationwide by Infotecs' dealers	Programs compatible with DEC PDP/8: complete systems, and software are sold and serviced by Infotecs' dealers	Unique natural language programming; no compiler or assemblers		

Small Business Computer Specifications

MANUFACTURER AND MODEL	Logical Machine Corp. TINA	MCM Computers Ltd. POWER	Mercator Business Systems System 3000	Mercator Business Systems System 4000	Mylee Digital Sciences System 3000
WORD LENGTH, BITS	16	8	16	16	16
CPU					
Model	LOMAC-prop.	MCM AMD 2901	Intel 8088	Intel 8086	Mylee System 3000
Add time, microseconds	NA	—	—	—	125 (5 digits)
No. of I/O ports on basic sys. and max.	7	2, 4	1,4	1, 8	11; 19
INTERNAL STORAGE					
Type	MOS	Core	MOS	MOS	MOS
Capacity of basic system, bytes	48K	64K	64K	128K	88K
Maximum capacity, bytes	48K	64K	256K	1M	286K
Increment size, bytes	NA	—	64K	128K	96K
Cycle/access time, microseconds	0.17/0.50	—	200 ns.	200 ns.	0.8/0.4
MASS STORAGE					
Floppy disk (diskette) drive	Std.; 5M bytes	Opt.; up to 4M bytes	No	No	Optional
Maximum diskette storage	—	—	—	—	4 drives; 64M bytes
Cartridge disk drive	No	Opt.; up to 3M bytes	—	—	Std.; 16M bytes
Pack disk drive	No	—	Std. 10MB (20MB)	Std.; 10MB (20MB)	No
Fixed-head disk/drum	No	—	—	—	No
Maximum disk storage	—	30M bytes	240M bytes	240M bytes	64M bytes
WORKSTATIONS					
Maximum number connectable	—	8	4	8	16
Recommended maximum number	—	8	4	8	16
Keyboard style	Type.; num. key.	Type.; num. key.	Typewriter	Typewriter	Type.; num. key.
Workstation printer	—	—	Optional	Optional	1 std.; 7 opt.
INPUT/OUTPUT DEVICES					
Serial printer	Std.; 110 cps	Opt.; (45-180 cps)	Std.; 160 cps	Std.; 160 cps	Std.; 165 cpm
Line printer	No	Opt.; (300 lpm)	Opt.; 300 lpm	Opt.; 300 lpm	Opt.; 300 lpm
Reel-to-reel tape drive	No	—	Optional	Optional	No
Cassette/cartridge tape drive	No	—	Standard	Standard	No
CRT	Std.; 24 x 80 char.	Std.; 1920 char.	Std.; 1920 char.	Std.; 1920 char.	Std.; 332-1920 char.
Other	—	—	—	—	No
COMMUNICATIONS					
Maximum no. of lines	1	2	4	8	16
Synchronous	No	Opt.; to 19.2K bps	Optional	Optional	Opt.; to 9600 bps
Asynchronous	No	Std.; to 300 bps	Optional	Optional	Opt.; to 1200 bps
Protocols supported	None	2780	Bisync	Bisync	Bisync
Network architecture supported	—	—	—	—	—
RJE terminals emulated	—	—	2780/3780 SDLC	2780/3780	IBM 2780/3780
IBM 3270 emulation	—	—	Optional	Optional	No
SOFTWARE SUPPORT					
COBOL	No	No	Yes	Yes	No
RPG	No	No	No	No	No
FORTRAN	No	No	Yes	Yes	No
BASIC	No	No	Yes	Yes	No
Assembler	No	Yes	Yes	Yes	No
Other programming languages	Natural English	APL	PASCAL	PASCAL	ACE
Multiprogramming	No	No	Yes (4 partitions)	Yes (8 partitions)	Yes; 12 partitions
Max. no. of jobs run concurrently	—	8	—	—	24
Language complemented in firmware	Partially	Yes	No	No	Partially
Op. sys. implemented in firmware	NA	Yes	No	No	Partially
General accounting packages	Yes	Yes	Yes	Yes	Yes
Industry application areas	All	Travel, corporate	Distribution	Distribution	Distribution
Data base management system	No	Yes	Yes	Yes	Yes
File access methods supported	NA	—	Random., seq., ISAM	Random, seq., ISAM	Index sequential
Software separately priced	No	Yes	No	No	Some
Technical help separately priced	Yes	—	No	No	No
LEASE/MAINTENANCE OPTIONS					
Lease plans available	Contact vendor	No	3 to 5 years	3 to 5	Third-party
Maintenance plans available	—	1 year	National maintenance program	National maintenance program	On-call
PRICING & AVAILABILITY					
Purchase price of basic system, $	14,995	20,000	19,000	30,200	29,995
Monthly rental of basic system, $	350 (lease)	—	—	—	Purchase only
Monthly maint. price of basic system, $	—	—	—	—	9%
Monthly maint. bundled with rental, $	—	—	—	—	No
Purchase price of:					
additional memory module, $	—	—	—	—	3,000 (96K bytes)
additional workstations, $	—	—	1,900	1,900	2,950
additional printer, $	—	—	—	—	Various models
Discounts available	—	OEM	Consult factory	Consult factory	—
Date of first U.S. delivery	September 1978	1975	April 1981	1980	May 1976
Number installed to date	NA	700	NA	NA	175
COMMENTS	Unique natural language programming; no compilers or assemblers				Total turnkey system from design to installation

Small Business Computer Specifications

MANUFACTURER AND MODEL	NCR Century 50 and 50 Mod 1	NCR Century 75	NCR Century 100	NCR Century 101	NCR Century 151
WORD LENGTH, BITS	8	8	8	8	8
CPU					
Model	NCR 615-910	NCR 615-950	NCR 615-910	NCR 615-952	NCR 615-955
Add time, microseconds	59 (5 digits)	28.8 (5 digits)	50 (5 digits)	25.2 (5 digits)	15.8 (5 digits)
No. of I/O ports on basic sys. and max.	6; 7	2; 2	6; 7	5; 32	5; 32
INTERNAL STORAGE					
Type	Thin film	Core	Thin film	Core	MOS
Capacity of basic system, bytes	16K	16K	16K	16K	32K
Maximum capacity, bytes	32K	64K	32K	128K	131K
Increment size, bytes	16K	8K, 16K	16K	8K, 16K, 32K	16K, 32K
Cycle/access time, microseconds	0.800/—	1.2/0.600	0.800/—	1.2/0.600	0.75/—
MASS STORAGE					
Floppy disk (diskette) drive	No	No	No	No	No
Maximum diskette storage	—	—	—	—	—
Cartridge disk drive	No	No	No	Std.; 19.6M bytes	Std.; 19.6M bytes
Pack disk drive	Std.; 16M bytes	Std.; 9.98M bytes	Std.; 16M bytes	Opt.; 380M bytes	Opt.; 380M bytes
Fixed-head disk/drum	No	No	No	No	No
Maximum disk storage	—	—	—	—	—
WORKSTATIONS					
Maximum number connectable	—	—	—	—	—
Recommended maximum number	—	—	—	—	—
Keyboard style	—	Type.; num. key.	Type.; num. key	Type.; num. key.	Type.; num. key.
Workstation printer	—	—	—	—	—
INPUT/OUTPUT DEVICES					
Serial printer	Opt.; 6 cps	No	Opt.; 6 cps	Opt.; 6 cps	Std.; 6 cps
Line printer	Std.; 125-900 lpm	Std.; 200-450 lpm	Std.; 450-1500 lpm	Std.; 300-3500 lpm	Opt.; 300-3500 lpm
Reel-to-reel tape drive	Opt.; 10-80KBS	No	Opt.; 10-40KBS	Opt.; 40-320KBS	Opt.; 40-320KBS
Cassette/cartridge tape drive	Opt.; 750 cps/No	Opt.; 750 cps/No	Opt.; 750 cps/No	Opt.; 750 cps/No	Opt.; 750 cps/No
CRT	Opt.; 24 x 80 char.	Opt.; 24 x 80 char.	Opt.; 24 x 80 char.	Opt.; 24 x 80 char.	Opt.; 24 x 80 char.
Other	—	—	—	—	—
COMMUNICATIONS					
Maximum no. of lines	16	10	16	255	255
Synchronous	Opt.; to 9600 bps	Opt.; to 4800 bps	Opt.; to 9600 bps	Opt.; to 9600 bps	Opt.; to 9600 bps
Asynchronous	Opt.; to 9600 bps	Opt.; to 9600 bps	Opt.; to 9600 bps	Opt.; to 9600 bps	Opt.; to 9600 bps
Protocols supported	Bisync	Bisync	Bisync	Bisync	Bisync
Network architecture supported	—	—	—	—	—
RJE terminals emulated	—	—	—	—	—
IBM 3270 emulation	—	—	—	—	—
SOFTWARE SUPPORT					
COBOL	Yes	Yes	Yes	Yes	Yes
RPG	RPG II	Yes	RPG II	RPG II	RPG II
FORTRAN	No	Yes	No	FORTRAN IV	FORTRAN IV
BASIC	Yes	Yes	Yes	Yes	Yes
Assembler	No	Yes	No	Yes	Yes
Other programming languages	NEAT/3	NEAT/3	NEAT/3	NEAT/3	NEAT/3
Multiprogramming	No	No	No	Yes; 9 partitions	Yes; 9 partitions
Max. no. of jobs run concurrently	—	—	—	—	—
Language complemented in firmware	No	No	No	No	No
Op. sys. implemented in firmware	No	No	No	No	No
General accounting packages	Yes	Yes	Yes	Yes	Yes
Industry application areas	Business	All bus. applic.	All bus. applic.	All bus. applic.	All bus. applic.
Data base management system	No	Yes	No	TOTAL	TOTAL
File access methods supported	Rand., seq., index seq	Rand., seq., ISAM	Rand., seq., ISAM	Rand., seq., ISAM	Rand., seq., ISAM
Software separately priced	Yes	Yes	Yes	Yes	Yes
Technical help separately priced	Yes	Some	Yes	Yes	Yes
LEASE/MAINTENANCE OPTIONS					
Lease plans available	—	—	—	—	—
Maintenance plans available	—	—	—	—	—
PRICING & AVAILABILITY					
Purchase price of basic system, $	32,000	56,850	40,000	69,520	120,325
Monthly rental of basic system, $	1,075	1,650	1,600	2,005	2,975
Monthly maint. price of basic system, $	—	—	—	—	—
Monthly maint. bundled with rental, $	—	—	—	—	—
Purchase price of:					
additional memory module, $	—	—	—	—	—
additional workstations, $	—	—	—	—	—
additional printer, $	—	—	—	—	—
Discounts available	—	—	—	—	—
Date of first U.S. delivery	December 1970	May 1976	March 1963	August 1972	February 1975
Number installed to date	NA	NA	NA	Over 1,200	NA
COMMENTS	Century 50 and 50 Mod 1 are no longer manuf.		Century 100 is no longer manufactured		

Small Business Computer Specifications

MANUFACTURER AND MODEL	NCR 499	NCR 7510	NCR 7520	NCR 7520 SBS	NCR 7530
WORD LENGTH, BITS	16	8	8	8	8
CPU					
Model	NCR 605	Intel 8080	Intel 8080	Intel 8080	Intel 8080
Add time, microseconds	1700 (5 digits)	—	—	—	—
No. of I/O ports on basic sys. and max.	4; 15	2,4	2, 4	2, 4	2, 6
INTERNAL STORAGE					
Type	Core	MOS	MOS	MOS	MOS
Capacity of basic system, bytes	12K	48K	48K	48K	48K
Maximum capacity, bytes	32K	48K	48K	48K	48K
Increment size, bytes	2K, 4K	NA	NA	NA	NA
Cycle/access time, microseconds	1.2/0.650	—	—	—	—
MASS STORAGE					
Floppy disk (diskette) drive	No	NA	Std.; 250K bytes	Std.; 500K bytes	Std.; 250K bytes
Maximum diskette storage	—	NA	500K bytes (2 drives)	500K bytes (2 drives)	500K bytes (2 drives)
Cartridge disk drive	Opt.; 9.8M bytes	NA	NA	NA	NA
Pack disk drive	No	NA	NA	NA	NA
Fixed-head disk/drum	No	NA	NA	NA	NA
Maximum disk storage	—	NA	NA	NA	NA
WORKSTATIONS					
Maximum number connectable	—	1	1	1	1
Recommended maximum number	—	1	1	1	1
Keyboard style	Type.; num. key.	Keypunch, type.	Keypunch, type.	Typewriter	Keypunch, type.
Workstation printer	—	NA	NA	NA	NA
INPUT/OUTPUT DEVICES					
Serial printer	Std.; 75 to 130 cps	Opt. (1), 50-125 lpm	Opt. (1), 50-125 lpm	Std.; 50-125 lpm	Opt. (1) 50-125 lpm
Line printer	Opt.; 55-300 lpm	NA	NA	NA	NA
Reel-to-reel tape drive	No	NA	Opt.; 12.5 ips	Opt.; 12.5 ips	Opt.; 12.5 ips
Cassette/cartridge tape drive	Std.; 750 cps/No	Std.; 15.0 ips/No	NA	NA	Std.; 15.0 ips/No
CRT	Std.; 24 x 80 char.	Std.; 512-char.*	Std.; 512 char.*	Std.; 2000 char.	Std.; 512 char.*
Other	—	NA	NA	NA	NA
COMMUNICATIONS					
Maximum no. of lines	2	1	1	1	1
Synchronous	Opt.; to 9600 bps	Optional	Optional	Optional	Opt. (ACH opt.)
Asynchronous	Opt.; to 1800 bps	NA	NA	NA	NA
Protocols supported	Bisync	2780/3780	2780/3780	2780/3780	2780/3780
Network architecture supported	—	NA	NA	NA	NA
RJE terminals emulated	—	2780/3780	2780/3780	2780/3780	2780/3780
IBM 3270 emulation	—	NA	NA	NA	NA
SOFTWARE SUPPORT					
COBOL	No	—	—	—	—
RPG	No	—	—	—	—
FORTRAN	No	—	—	—	—
BASIC	No	Yes	Yes	Yes	Yes
Assembler	No	—	—	—	—
Other programming languages	NEAT/AM	—	—	—	—
Multiprogramming	No	—	—	—	—
Max. no. of jobs run concurrently	—	—	—	—	—
Language complemented in firmware	No	Yes	Yes	Yes	Yes
Op. sys. implemented in firmware	No	Yes	Yes	Yes	Yes
General accounting packages	Yes	—	Yes	Yes	Yes
Industry application areas	All business acctg.	NA	—	—	—
Data base management system	No	—	—	—	—
File access methods supported	Random, sequential	Serial	Seq., random	Seq., random	Seq., random
Software separately priced	Yes	Yes	Yes	Yes	Yes
Technical help separately priced	Yes	Yes	Yes	Yes	Yes
LEASE/MAINTENANCE OPTIONS					
Lease plans available	—	1, 3 or 5 years	1, 3 or 5 years	1, 3 or 5 years	1, 3 or 5 years
Maintenance plans available	—	On-site contract	On-site contract	On-site contract	On-site contract
PRICING & AVAILABILITY					
Purchase price of basic system, $	17,900	5,575	6,450	9,195	8,440
Monthly rental of basic system, $	Purchase only	NA	NA	NA	NA
Monthly maint. price of basic system, $	—	48.50	60	125	76
Monthly maint. bundled with rental, $	—	181 (5-yr.)	223 (5 yr.)	454 (5 yr.)	296 (5 yr.)
Purchase price of:					
additional memory module, $	—	—	—	—	—
additional workstations, $	—	—	—	—	—
additional printer, $	—	4,995	4,995	—	4,995
Discounts available	—	Yes	Yes	—	Yes
Date of first U.S. delivery	February 1976	June 1978	July 1979	July 1979	October 1978
Number installed to date	NA	500	150	50	75
COMMENTS		*Optional CRT contains 2000 characters	*Optional CRT contains 2000 characters		*Optional CRT contains 2000 characters

Small Business Computer Specifications

MANUFACTURER AND MODEL	NCR 8130	NCR 8140	NCR 8150	NCR 8230	NCR 8250
WORD LENGTH, BITS	16	8	16	16	16
CPU					
Model	NCR 3275	NCR 3274	NCR 3275	NCR 6080	NCR 6080
Add time, microseconds	2.0 (5 digits)	1.25 (5 digits)	2.0 (5 digits)	2.4 (8 digits)	2.4 (8 digits)
No. of I/O ports on basic sys. and max.	32	5, 17	32	8	8
INTERNAL STORAGE					
Type	MOS	MOS	MOS	MOS	MOS
Capacity of basic system, bytes	48K	48K	48K	64K	48K
Maximum capacity, bytes	64K	128K	256K	96K	128K
Increment size, bytes	16K	16K	16K, 32K	16K	16K
Cycle/access time, microseconds	0.600/0.620	0.45/0.27	0.800/0.620	0.8/NA	0.8/NA
MASS STORAGE					
Floppy disk (diskette) drive	Std.; 500K bytes	Std. (2) 1M bytes	—	Opt.; 250K bytes	Opt. 250K bytes
Maximum diskette storage	4M bytes	Opt. (4) 4M bytes	—	1M bytes	1M byte
Cartridge disk drive	No	No	No	Std.; 1-4M bytes	Std.; 1-8M bytes
Pack disk drive	No	No	10M bytes	No	No
Fixed-head disk/drum	No	No	No	No	No
Maximum disk storage	—	—	40M bytes	—	—
WORKSTATIONS					
Maximum number connectable	—	1	4	—	—
Recommended maximum number	—	1	4	—	—
Keyboard style	—	Typewriter	Typewriter	—	—
Workstation printer	—	No	No	—	—
INPUT/OUTPUT DEVICES					
Serial printer	Std.; 130 cps	Std.; 154 cps	Std.; 130 cps	Opt.; 50 lpm	Opt.; 50 lpm
Line printer	Opt.; 200 lpm	Opt.; 200 lpm	Opt.; 200 lpm	Opt.; 125-600 lpm	Opt.; 125-600 lpm
Reel-to-reel tape drive	No	No	No	Opt.; 10/20KBS	Opt.; 10/20KBS
Cassette/cartridge tape drive	Opt.; 750 cps/No	Opt. (2) 1500 cps	Cart.; 600 cps	Std.; 750 cps/No	Std.; 750 cps/No
CRT	Std.; 16 x 32 char.	Std. (1) 1920 char.	Std.; 16 x 32 char.	Std.; 24 x 80 char.	Std.; 24 x 80 char.
Other	—	—	—	Opt. card reader	Opt. card reader
COMMUNICATIONS					
Maximum no. of lines	1	1	1	5	24
Synchronous	Opt.; to 9600 bps	Opt.; to 9600 bps	Opt.; to 9600 bps	Opt.; to 9600 bps	Opt.; to 9600 bps
Asynchronous	NA	No	Std.; 2400 bps	Std.; 2400 bps	Std.; 2400 bps
Protocols supported	Bisync	2780/3780	Bisync, NCR/DLC	Bisync, async	Bisync, async
Network architecture supported	—	—	—	—	—
RJE terminals emulated	2780/3780	2780/3780	2780/3780	—	—
IBM 3270 emulation	—	No	—	—	—
SOFTWARE SUPPORT					
COBOL	Yes	Yes	Yes	Yes	Yes
RPG	No	No	No	No	No
FORTRAN	No	No	No	No	No
BASIC	Yes	Yes	No	No	No
Assembler	No	Yes	Yes	Yes	Yes
Other programming languages	No	No	No	No	No
Multiprogramming	No	No	Yes	Yes	Yes
Max. no. of jobs run concurrently	—	—	5	—	—
Language complemented in firmware	No	No	No	No	No
Op. sys. implemented in firmware	No	No	No	No	No
General accounting packages	Yes	Yes	Yes	Yes	Yes
Industry application areas	Whsl. dist., med., ed.	Whsl., dist.	Whsl. dist., med.	Whsl. dist., med.	Whsl. dist., med.
Data base management system	No	No	No	No	No
File access methods supported	Seq., ISAM	Seq., ISAM, relative	Seq., ISAM	Seq., ISAM	Seq., ISAM
Software separately priced	Yes	Yes	Yes	Yes	Yes
Technical help separately priced	Yes	Yes	Yes	Yes	Yes
LEASE/MAINTENANCE OPTIONS					
Lease plans available	—	1 or 3 years	—	—	—
Maintenance plans available	—	On-site contract	—	—	—
PRICING & AVAILABILITY					
Purchase price of basic system, $	10,700	14,625	18,300	32,420	34,420
Monthly rental of basic system, $	—	—	—	859	889
Monthly maint. price of basic system, $	136	114	192	163	163
Monthly maint. bundled with rental, $	527	751	800	—	—
Purchase price of:					
additional memory module, $	600	600 (16K),	600	1,000 (16K bytes)	1,000 (16K bytes)
additional workstations, $	—	—	2,190	—	—
additional printer, $	4,995	—	4,995	—	—
Discounts available	—	Volume discounts, contact local office	—	—	—
Date of first U.S. delivery	March 1978	July 1980	March 1978	August 1977	March 1977
Number installed to date	Over 300	60	Over 800	NA	NA
COMMENTS	Optional CRT configuration contains 24 x 80 characters	Memory increment of 64K is available for $1,300	Optional 1500 cps cassette; optional CRT configuration contains 24 x 80 characters		

Small Business Computer Specifications

MANUFACTURER AND MODEL	New England Digital ABLE/40, /60	Nixdorf 8870/1	Nixdorf 8870/3	Northern Telecom Systems Corp. 405	Northern Telecom Systems Corp. 410
WORD LENGTH, BITS	16	16	16	8	8
CPU					
Model	NED Model B	Nixdorf	Nixdorf	NTSC-405	NTSC-410
Add time, microseconds	0.25 (16 bits)	1.3	.7	5.5	5.5
No. of I/O ports on basic sys. and max.	NA	—	—	8	10
INTERNAL STORAGE					
Type	MOS	MOS	MOS	MOS	MOS
Capacity of basic system, bytes	32K	96K	128K	48K	40K
Maximum capacity, bytes	120K	256K	512K	64K	64K
Increment size, bytes	16K	32K	32K	16K	8K
Cycle/access time, microseconds	450/450	.7	.4	0.25/0.25	0.50/0.25
MASS STORAGE					
Floppy disk (diskette) drive	Standard (2)	No	No	Std.; 5M bytes	Optional
Maximum diskette storage	See Comments	NA	NA	4 drives; 1M byte	256K bytes
Cartridge disk drive	—	Std.; 10-40M bytes	Std.; 36-52M bytes	No	No
Pack disk drive	—	Opt.; 26-66M bytes	Opt.; 26-264M bytes	No	No
Fixed-head disk/drum	Opt.; 20M bytes	No	No	No	Std.; to 5M bytes
Maximum disk storage	40M bytes	—	—	—	5M bytes
WORKSTATIONS					
Maximum number connectable	1	16	32	2	1
Recommended maximum number	1	Appl. dependent	Appl. dependent	2	1
Keyboard style	Type.; num. key.	Type.; num. key.	Type., num. key.	Type.; num. key.	Type.; num. key.
Workstation printer	Optional (1)	Optional	Optional	No	No
INPUT/OUTPUT DEVICES					
Serial printer	Opt.; 30-180 cps	Std.; 100 cps	Std.; 100 cps	Opt.; to 180 cps	Std.; to 180 cps
Line printer	Opt.; 300 lpm	Std.; 300 lpm	Std.; 300 lpm	Opt.; 300 or 600 lpm	Opt.; 300 lpm
Reel-to-reel tape drive	No	Opt.; 800-1600 bpi	Opt.; 800-1600 bpi	Opt.; 10,000 cps	Opt.; 10,000 cps
Cassette/cartridge tape drive	No	No	No	No	Std.; 1,000 cps
CRT	Std.; 1920 char.	Std.; 25 x 80 char.	Std.; 25 x 80 char.	Std.; 24 x 80 char.	Std.; 576 char.
Other	—	Hardcopy term., color plotter	Hardcopy term., color plotter	—	—
COMMUNICATIONS					
Maximum no. of lines	1	16	32	2	2
Synchronous	Opt.; to 9600 bps	Opt.; to 9600 bps	Opt.; to 9600 bps	Opt.; to 9600 bps	Std.; to 9600 bps
Asynchronous	Std.; to 9600 bps	—	—	Opt.; to 1200 bps	Opt.; to 1200 bps
Protocols supported	Async, bisync	Bisync, async	Bisync, async	Async, bisync, SDLC	Async, bisync, SDLC
Network architecture supported	NA	—	—	IBM SNA	—
RJE terminals emulated	2780	—	—	3774, 3780	UT200, TC 3800
IBM 3270 emulation	No	—	—	No	No
SOFTWARE SUPPORT					
COBOL	No	No	No	Yes	Yes
RPG	No	No	No	No	No
FORTRAN	No	No	No	No	No
BASIC	No	Yes	Yes	Yes	No
Assembler	No	No	No	No	No
Other programming languages	XPL	COMET Application	COMET Application	TAL-2000	TAL-2
Multiprogramming	No	Yes	Yes	Yes; 3 partitions	Yes; 2 partitions
Max. no. of jobs run concurrently	NA	—	—	3	2
Language complemented in firmware	No	No	No	No	No
Op. sys. implemented in firmware	No	No	No	No	No
General accounting packages	No	Yes	Yes	Yes	No
Industry application areas	Process control	Dist., med., gov't.	Dist., med., gov't.	Industrial	Industrial, various
Data base management system	No	No	No	No	No
File access methods supported	Direct, seq.	Random, seq., ISAM	Random, seq., ISAM	Seq., indexed relative	Seq., indexed relative
Software separately priced	No	Yes	Yes	Yes; applications only	Yes; applications only
Technical help separately priced	No	Yes	Yes	No	No
LEASE/MAINTENANCE OPTIONS					
Lease plans available	Contact vendor	60-month	60-month	1, 3, 4 yrs.	1, 3, 4 yrs.
Maintenance plans available	NA	Contact Nixdorf	Contact Nixdorf	On-call	On-call
PRICING & AVAILABILITY					
Purchase price of basic system, $	7,950	30,750	46,200	6,150	23,960
Monthly rental of basic system, $	NA	753	1,132	234	546
Monthly maint. price of basic system, $	NA	313	364	64	144
Monthly maint. bundled with rental, $	NA	—	—	No	No
Purchase price of:					
additional memory module, $	1,250 (16K)	2,500	2,500	NA	NA
additional workstations, $	NA	2,950	2,950	NA	NA
additional printer, $	NA	4,950	4,950	NA	NA
Discounts available	Yes	—	—	Quantity	Quantity
Date of first U.S. delivery	September 1977	1975	1981	August 1978	May 1976
Number installed to date	NA	NA	NA	NA	NA
COMMENTS	Maximum diskette storage for ABLE/40 is 179K bytes, while the ABLE/60 provides 630K bytes of diskette storage			For entry level and small DDP; word processing available	Designed for transaction proc. in distributed or standalone environments; industry application software packages are available through distributors

Small Business Computer Specifications

MANUFACTURER AND MODEL	Northern Telecom Systems Corp. 435	Northern Telecom Systems Corp. 440	Northern Telecom Systems Corp. 445	Olivetti BCS 2025	Olivetti BCS 2030 FDU
WORD LENGTH, BITS	8	8	8	8	8-bit byte
CPU					
Model	NTSC-435	NTSC-440	NTSC-445	Intel 8080	Intel 8080
Add time, microseconds	5.5	5.5	5.5	6	6
No. of I/O ports on basic sys. and max.	28	17	28	4, 4	4; 4
INTERNAL STORAGE					
Type	MOS	MOS	MOS	MOS	MOS
Capacity of basic system, bytes	64K	24K	64K	64K	36K
Maximum capacity, bytes	128K	64K	256K	64K	64K
Increment size, bytes	32K	8K	32K	—	4K
Cycle/access time, microseconds	0.25/0.25	0.50/0.25	0.25/0.25	1/2.3	1/2.3
MASS STORAGE					
Floppy disk (diskette) drive	Opt.; 256K bytes	Optional	Opt.; 256K bytes	Std.; 2M bytes	Standard
Maximum diskette storage	2 drives; .5M bytes	256K bytes	2 drives; .5M bytes	4M bytes	—
Cartridge disk drive	No	No	No	No	No
Pack disk drive	No	No	Opt.; 4-74.5M bytes	No	No
Fixed-head disk/drum	No	Std.; to 20M bytes	Opt.; 5, 10, 20MB	No	No
Maximum disk storage	10M bytes	20M bytes	308M bytes	—	—
WORKSTATIONS					
Maximum number connectable	2	8	8	1	1
Recommended maximum number	2	4	8	1	1
Keyboard style	Type.; num. key.	Type.; num. key.	Type.; num. key.	Typewriter	Typewriter
Workstation printer	No	No	No	Standard	Standard
INPUT/OUTPUT DEVICES					
Serial printer	Opt.; to 180 cps	Opt.; to 180 cps	Opt.; to 180 cps	Std.; 60 cps	Std.; 100 cps
Line printer	Opt.; 300 lpm	Opt.; to 300 lpm	Opt.; 300-600 lpm	Opt.; 200 cps	Opt.; 200 cps
Reel-to-reel tape drive	Opt.; to 10,000 cps	Opt.; 10,000 cps	Opt.; 10,000 cps	No	No
Cassette/cartridge tape drive	Opt.; 1,000 cps	Std.; 1,000 cps	Opt.; 1,000 cps	Opt.; 1000 cps/No	Opt. cast.; 1000 cps
CRT	Std. cart., 5.76MB	Std.; 576 char.	Std.; 24 x 80 char.	Std.; 24 x 80 char.	Standard
Other	—	Opt.	Opt.; cart. tape drive (57.6MB)	No	No
COMMUNICATIONS					
Maximum no. of lines	3	2	3	1	1
Synchronous	Opt.; to 9600 bps	Opt.; to 9600 bps	Opt.; to 9600 bps	Standard	Standard
Asynchronous	Opt.; to 1200 bps	Opt.; to 1200 bps	Opt.; to 1200 bps	No	No
Protocols supported	Async, bisync, SDLC	Async, bisync, SDLC	Async, bisync, SDLC	Bisync	Bisync
Network architecture supported	IBM SNA, OMNILINK	—	IBM SNA, OMNILINK	None	None
RJE terminals emulated	UT200, TC 3500	UT200, TC 3800	UT200, TC 3500	2780	IBM 2780
IBM 3270 emulation	Yes	No	Yes	No	No
SOFTWARE SUPPORT					
COBOL	Yes	Yes	Yes	No	No
RPG	No	No	No	No	No
FORTRAN	No	No	No	No	No
BASIC	No	No	No	Yes	Yes
Assembler	No	No	No	No	—
Other programming languages	TAL-2000	TAL-2	TAL-2000	No	No
Multiprogramming	Yes, 4 partitions	Yes; 9 partitions	Yes; 16 partitions	No	No
Max. no. of jobs run concurrently	4	9	16	1	1
Language complemented in firmware	No	No	No	Fully	Fully
Op. sys. implemented in firmware	No	No	No	Partially	Partially
General accounting packages	No	No	No	Yes	Yes
Industry application areas	Various	Industrial, various	Various	Whsle., dist., bus.	Whsl., dist., bus.
Data base management system	No	No	No	No	No
File access methods supported	Seq., indexed, relative	Seq., indexed, relative	Seq., indexed, relative	Rand., seq., ISAM	Rand., seq., index
Software separately priced	Yes; applications only	Yes; applications only	Yes; applications only	Yes	Yes
Technical help separately priced	No	No	No	Yes	Yes
LEASE/MAINTENANCE OPTIONS					
Lease plans available	1, 3, 4 yrs.	1, 3, 4 yrs.	1, 3, 4 yrs.	Up to 5 yrs.	Up to 5 years
Maintenance plans available	On-call	On-call	On-call	Contact vendor	Contact vendor
PRICING & AVAILABILITY					
Purchase price of basic system, $	19,300	21,240	20,680	12,950	13,350
Monthly rental of basic system, $	508	528	517	Leases available	Leases available
Monthly maint. price of basic system, $	241	135	200	Contact vendor	Contact vendor
Monthly maint. bundled with rental, $	No	No	No	Contact vendor	Contact vendor
Purchase price of:					
additional memory module, $	NA	NA	NA	—	650 (4K bytes)
additional workstations, $	NA	NA	NA	—	—
additional printer, $	NA	NA	NA	Contact vendor	Contact vendor
Discounts available	Quantity	Quantity	Quantity	—	—
Date of first U.S. delivery	May 1980	May 1976	May 1978	December 1980	January 1979
Number installed to date	NA	NA	NA	NA	NA
COMMENTS		Designed for transaction processing in distributed or stand-alone environments; industry application software packages are avail. through distributors	Six remote workstations on-line concurrently; unlimited in time-sharing; word processing is available		

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MANUFACTURER AND MODEL	Olivetti BCS 2030 FV	Olivetti BCS 2030 MDU	Point 4 Data Corp. Mark 3	Point 4 Data Corp. Mark 4	Point 4 Data Corp. Mark 5 (4/3, 4/4)
WORD LENGTH, BITS	8	8-bit byte	16	16	16
CPU					
Model	Intel 8080	Intel 8080	—	—	—
Add time, microseconds	6	6	.5 (16 bits)	.5 (16 bits)	.4 (16 bits)
No. of I/O ports on basic sys. and max.	4, 4	4; 4	4	8	0, 128
INTERNAL STORAGE					
Type	MOS	MOS	MOS	MOS	MOS
Capacity of basic system, bytes	64K	4K	64K	128K	64K, 128K
Maximum capacity, bytes	64K	16K	64K	128K	64K, 128K
Increment size, bytes	—	4K	—	—	—
Cycle/access time, microseconds	1/2.3	1/2.3	.5	.5	.4
MASS STORAGE					
Floppy disk (diskette) drive	Std.; 2M bytes	Std.; 8K bytes	No	No	See Comments*
Maximum diskette storage	4M bytes	—	No	No	—
Cartridge disk drive	Opt.; 20M bytes	No	Opt.; (2) any CMD	Opt.; (2) any CMD	—
Pack disk drive	No	No	Opt.; (2) any SMD	Opt.; (2) any SMD	—
Fixed-head disk/drum	No	No	No	No	—
Maximum disk storage	20M bytes	—	Dependent on drive	Dependent on drive	1200M bytes
WORKSTATIONS					
Maximum number connectable	1	1	4	8	128
Recommended maximum number	1	1	4	8	8, 16
Keyboard style	Typewriter	Typewriter	Type.; num. key.	Type.; num. key.	Type.; num. key.
Workstation printer	Standard	Standard	—	—	—
INPUT/OUTPUT DEVICES					
Serial printer	Std.; 100 cps	Std.; 100 cps	Any w/RS-232 int.	Any w/RS-232 int.	See Comments*
Line printer	Opt.; 200 cps	Opt.; 200 cps	Any w/RS-232 int.	Any w/RS-232 int.	—
Reel-to-reel tape drive	No	No	No	No	—
Cassette/cartridge tape drive	Opt. cast.; 1000 cps	Opt. cast.; 1000 cps	Opt.; cast., 9600 bps	Opt.; cast., 9600 bps	Opt.; cast., 9600 bps
CRT	Std.; 24 x 80 char.	Standard	See Comments*	See Comments*	See Comments*
Other	No	Mag. card	—	—	—
COMMUNICATIONS					
Maximum no. of lines	1	1	4	8	128
Synchronous	Standard	Standard	—	Std.; 75-9600 bps	—
Asynchronous	No	No	Opt.; 110-9600 bps	Opt.; 110-9600 bps	Opt.; 110-19,200 bps
Protocols supported	Bisync	Bisync	—	Bisync	—
Network architecture supported	None	None	—	—	—
RJE terminals emulated	2780	IBM 2780	—	—	—
IBM 3270 emulation	No	No	—	—	—
SOFTWARE SUPPORT					
COBOL	No	No	No	No	No
RPG	No	No	No	No	No
FORTRAN	No	No	No	No	No
BASIC	Yes	Yes	Yes	Yes	Yes
Assembler	—	Yes	Yes	Yes	Yes
Other programming languages	No	No	—	PASCAL	—
Multiprogramming	No	No	Yes	Yes	Yes
Max. no. of jobs run concurrently	1	1	4	8	Unlimited
Language complemented in firmware	Fully	Fully	No	Yes	No
Op. sys. implemented in firmware	Partially	Fully	No	No	No
General accounting packages	Yes	Yes	Yes	Yes	Yes
Industry application areas	Whsl., dist., bus.	Business	Const., WP	Const., WP	Const., WP
Data base management system	No	No	Yes	Yes	Yes
File access methods supported	Random, seq., ISAM	Rand., seq.	Rand., ISAM, seq.	Rand., ISAM, seq.	Rand., ISAM, seq.
Software separately priced	Yes	Yes	Yes	Yes	Yes
Technical help separately priced	Yes	Yes	Yes	Yes	Yes
LEASE/MAINTENANCE OPTIONS					
Lease plans available	Up to 5 years	Up to 5 years	No	No	No
Maintenance plans available	Contact vendor	Contact vendor	Third-party	Third-party	Third-party
PRICING & AVAILABILITY					
Purchase price of basic system, $	14,950	9,950	NA	NA	6,090, 8,030
Monthly rental of basic system, $	Leases available	Leases available	—	—	—
Monthly maint. price of basic system, $	Contact vendor	Contact vendor	—	—	—
Monthly maint. bundled with rental, $	Contact vendor	Contact vendor	—	—	—
Purchase price of:					
additional memory module, $	—	650 (4K bytes)	—	—	—
additional workstations, $	—	—	—	—	—
additional printer, $	Contact vendor	Contact vendor	—	—	—
Discounts available	—	—	Blanket, Staircase	Blanket, Staircase	Blanket, Staircase
Date of first U.S. delivery	December 1980	January 1979	April 1981	July 1981	March 1980
Number installed to date	NA	NA	NA	NA	500, 1000
COMMENTS			*Point 4 has device handlers to support many peripherals not supplied by Point 4; processors include virtual front panels, self-test diagnostics, chassis, power supply	*Point 4 has device handlers to support many peripherals not supplied by Point 4; processors include virtual front panels, self-test diagnostics, chassis, power supply	*Point 4 has device handlers to support many peripherals not supplied by Point 4, processors include virtual front panels, self-test diagnostics, chassis, power supply

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MANUFACTURER AND MODEL	Point 4 Data Corp. Mark 8	PolyMorphic Systems 8810	PolyMorphic Systems 8813	Prime 450	Prime 550
WORD LENGTH, BITS	16	8	8	16; 32	16; 32
CPU					
Model	—	Intel, NEC; 8080A	Intel, NEC; 8080A	Prime 450	Prime 550
Add time, microseconds	.4 (16 bits)	2, 12	2, 12	1.1	61
No. of I/O ports on basic sys. and max.	0, 128	12, 256	12, 256	64	64
INTERNAL STORAGE					
Type	MOS	MOS	MOS	MOS	MOS
Capacity of basic system, bytes	128K	32K	32K	256K	512K
Maximum capacity, bytes	128K	56K	104K	1024K	2048K
Increment size, bytes	—	8K, 16K, 48K	8K, 16K, 48K	256K, 512K	256K, 512K, 1M
Cycle/access time, microseconds	.4	—	—	.750	750
MASS STORAGE					
Floppy disk (diskette) drive	See Comments*	390K bytes	390K bytes	Optional	Opt.; 2M bytes
Maximum diskette storage	—	5.36M bytes	6.08M bytes	2M bytes	2.4M bytes
Cartridge disk drive	—	None	None	Std.; 32-768MB	Opt.; to 768M bytes
Pack disk drive	—	—	—	Opt.; to 2400MB	Opt.; to 2400M bytes
Fixed-head disk/drum	—	Opt.; 35M bytes	Opt.; 35M bytes	Opt.; to 1M byte	Opt.; to 2M bytes
Maximum disk storage	1200M bytes	35M bytes	35M bytes	—	—
WORKSTATIONS					
Maximum number connectable	128	1	2	32	63
Recommended maximum number	32	1	2	32	63
Keyboard style	Type.; num. key.	Type.; num. key.	Type.; num. key.	Typewriter	Typewriter
Workstation printer	—	Optional	Optional	Optional	Optional
INPUT/OUTPUT DEVICES					
Serial printer	See Comments*	Opt.; 110-9600 bps	Opt.; 110-9600 bps	Opt.; 300 lpm	Opt.; 300 lpm
Line printer	—	NA	NA	Opt.; 1000 lpm	Opt.; 1000 lpm
Reel-to-reel tape drive	—	NA	NA	Opt.; 800, 1600 bpi	Opt.; 800, 1600 bpi
Cassette/cartridge tape drive	Opt.; cast., 9600 bps	Opt./NA	Opt./NA	No	No
CRT	See Comments*	Std.; 64 x 16 char.	Std.; 64 x 16 char.	Opt.; 24 x 80 char.	Opt.; 24 x 80 char.
Other	—	—	—	Opt.	Opt.
COMMUNICATIONS					
Maximum no. of lines	128	1	1	32	63
Synchronous	—	Standard	Standard	Std.; 56KBS	Std.; 56KBS
Asynchronous	Opt.; 110-19,200 bps	Standard	Standard	Std.; 9600 bps	Std.; 9600 bps
Protocols supported	—	—	—	Bisync	Async, bisync
Network architecture supported	—	POLYNET	POLYNET	PRIMENET, X.25	PRIMENET, X.25
RJE terminals emulated	—	No	No	HASP, 2780/3780	HASP, 2780/3780
IBM 3270 emulation	—	No	No	Yes	Yes
SOFTWARE SUPPORT					
COBOL	No	No	No	Yes	Yes
RPG	No	No	No	Yes	Yes
FORTRAN	No	Yes	Yes	Yes	Yes
BASIC	Yes	Yes	Yes	Yes	Yes
Assembler	Yes	Yes	Yes	Yes	Yes
Other programming languages	PASCAL	PASCAL	PASCAL	PL/1, FORMS, MIDAS	PL/1, FORMS, MIDAS
Multiprogramming	Yes	No	No	Yes, 31 partitions	Yes; 63 partitions
Max. no. of jobs run concurrently	Unlimited	1	2	32	63
Language complemented in firmware	Yes	Partially	Partially	Partially	Partially
Op. sys. implemented in firmware	No	Partially	Partially	Partially	Partially
General accounting packages	Yes	Yes	Yes	No	No
Industry application areas	Const., WP	All	All	Graph., stats.	Graph., stats.
Data base management system	Yes	No	No	Yes	Yes
File access methods supported	Rand., ISAM, seq.	Sequential	Sequential	Rand., seq., index	Rand., seq., index
Software separately priced	Yes	Some	Some	Yes	Yes
Technical help separately priced	Yes	Yes	Yes	Yes	Yes
LEASE/MAINTENANCE OPTIONS					
Lease plans available	No	No	No	5-year	5-year
Maintenance plans available	Third-party	Factory ret., third party	Factory ret., third party	On-site, on-call	On-site, on-call
PRICING & AVAILABILITY					
Purchase price of basic system, $	9,800	6750 (approx.)	6,750 (approx.)	73,000 (450 HMB)	80,000 (550 HMB)
Monthly rental of basic system, $	—	No	No	—	—
Monthly maint. price of basic system, $	—	—	—	500	578
Monthly maint. bundled with rental, $	—	No	No	Yes (lease)	Yes (lease)
Purchase price of:					
additional memory module, $	—	—	—	—	40,000 (1M byte)
additional workstations, $	—	—	—	—	—
additional printer, $	—	—	—	28,000 (1000 lpm)	28,000 (1000 lpm)
Discounts available	Blanket, Staircase	Quantity	Quantity	Volume	Volume
Date of first U.S. delivery	January 1981	1977	1977	First qtr. 1979	First qtr. 1979
Number installed to date	NA	1500	1500	77	201
COMMENTS	*Point 4 has device handlers to support many peripherals not supplied by Point 4, processors include virtual front panels, self-test diagnostics, chassis, power supply				

Small Business Computer Specifications

MANUFACTURER AND MODEL	Prime 650	Prime 750	Qantel Series 100	Qantel Series 200	Qantel Series 300
WORD LENGTH, BITS	16; 32	16; 32	8	8	8
CPU					
Model	Prime 650	Prime 750	Qantel micro CPU	Qantel micro CPU	Qantel micro CPU
Add time, microseconds	1.1	.5	—	—	—
No. of I/O ports on basic sys. and max.	64	64	5; 5	11; 11	15; 15
INTERNAL STORAGE					
Type	MOS	MOS	MOS	MOS	MOS
Capacity of basic system, bytes	512K	512K	48K	64K	128K
Maximum capacity, bytes	4096K	8192K	64K	256K	1,024K
Increment size, bytes	256K, 512K, 1M	512K, 1M	16K	32K	32K
Cycle/access time, microseconds	.750	.750	0.8	0.95	0.95
MASS STORAGE					
Floppy disk (diskette) drive	Opt.; 2M bytes	Opt.; 2M bytes	1.3M bytes	No	No
Maximum diskette storage	2.4M bytes	2.4M bytes	2.6M bytes	No	No
Cartridge disk drive	Opt.; to 768M bytes	Opt.; to 768M bytes	—	Opt.; 12M bytes	Opt.; 12M bytes
Pack disk drive	Opt.; to 2400M bytes	Opt.; to 2400M bytes	—	Opt.; 20-200M bytes	Opt.; 20-200M bytes
Fixed-head disk/drum	Opt.; to 2M bytes	Opt.; to 2M bytes	—	—	—
Maximum disk storage	—	—	—	1600M bytes	1600M bytes
WORKSTATIONS					
Maximum number connectable	63	63	2	32	64
Recommended maximum number	63	63	2	32	64
Keyboard style	Typewriter	Typewriter	Type.; num. key.	Type.; num. key.	Type.; num. key.
Workstation printer	Optional	Optional	Optional	Standard	Standard
INPUT/OUTPUT DEVICES					
Serial printer	Opt.; 300 lpm	Opt.; 300 lpm	Opt.; 75 to 150 cps	Std.; 150 cps	Opt.; 75 to 150 cps
Line printer	Opt.; 1000 lpm	Opt.; 1000 lpm	Opt.; 240 to 600 lpm	Opt.; 240 to 600 lpm	Std.; 300 lpm
Reel-to-reel tape drive	Opt.; 800, 1600 bpi	Opt.; 800, 1600 bpi	No	Opt.; 800-1600 bpi	Opt.; 800-1600 bpi
Cassette/cartridge tape drive	No	No	No	No	No
CRT	Opt.; 24 x 80 char.	Opt.; 24 x 80 char.	Std.; 1728 char.	Std.; 1728 char.	Std.; 1728 char.
Other	Opt.	Opt.	No	No	No
COMMUNICATIONS					
Maximum no. of lines	63	63	2	2	2
Synchronous	Std.; 56KBS	Std.; 56KBS	Opt.; to 9600 bps	Opt.; to 9600 bps	Opt.; to 9600 bps
Asynchronous	Std.; 9600 bps	Std.; 9600 bps	Opt.; to 4800 bps	Opt.; to 4800 bps	Opt.; to 4800 bps
Protocols supported	Async, bisync	Async, bisync	Async, bisync	Async, bisync	Async, bisync
Network architecture supported	PRIMENET, X.25	PRIMENET, X.25	—	—	—
RJE terminals emulated	HASP, 2780/3780	HASP, 2780/3780	2780/3780	2780/3780	2780/3780
IBM 3270 emulation	Yes	Yes	Yes	Yes	Yes
SOFTWARE SUPPORT					
COBOL	Yes	Yes	No	No	No
RPG	Yes	Yes	Yes	Yes	Yes
FORTRAN	Yes	Yes	No	No	No
BASIC	Yes	Yes	QICBASIC	QICBASIC	QICBASIC
Assembler	Yes	Yes	REAL	REAL	REAL
Other programming languages	PL/1, FORMS, MID.	PL/1, FORMS, MID.	None	None	None
Multiprogramming	Yes; 63 partitions	Yes; 63 partitions	Yes	Yes	Yes
Max. no. of jobs run concurrently	63	63	2	32	32
Language complemented in firmware	Partially	Partially	Partially	Partially	Partially
Op. sys. implemented in firmware	Partially	Partially	Partially	Partially	Partially
General accounting packages	No	No	Yes	Yes	Yes
Industry application areas	Graph., stats.	Graph., stats.	Dist., CPA	Dist., CPA	Dist., CPA
Data base management system	Yes	Yes	Yes	Yes	Yes
File access methods supported	Rand., seq., index	Rand., seq., index	Random, seq.	Random, seq.	Random, seq.
Software separately priced	Yes	Yes	Some	Some	Some
Technical help separately priced	Yes	Yes	Yes	Yes	Yes
LEASE/MAINTENANCE OPTIONS					
Lease plans available	5-year	5-year	Yes	Yes	Yes
Maintenance plans available	On-site, on-call	On-site, on-call	Yes	Yes	Yes
PRICING & AVAILABILITY					
Purchase price of basic system, $	105,000 (650 HMB)	149,000 (750-1MB)	11,950	29,950	49,950
Monthly rental of basic system, $	—	—	380	975	1,528
Monthly maint. price of basic system, $	685	785	105	286	379
Monthly maint. bundled with rental, $	Yes (lease)	Yes (lease)	Yes	Yes	Yes
Purchase price of:					
additional memory module, $	40,000 (1M byte)	40,000 (1M byte)	—	2,950 (32K)	2,950 (32K)
additional workstations, $	—	—	3,450	3,450	3,450
additional printer, $	28,000 (1000 lpm)	28,000 (1000 lpm)	2,950 (150 cps)	15,500 (300 lpm)	22,500 (600 lpm)
Discounts available	Volume	Volume	—	—	—
Date of first U.S. delivery	First qtr. 1979	Third qtr. 1979	May 1980	May 1980	May 1980
Number installed to date	11	55	NA	NA	NA
COMMENTS					

Small Business Computer Specifications

MANUFACTURER AND MODEL	Qantel 210	Qantel 950	Qantel 960	Qantel 965	Qantel 970
WORD LENGTH, BITS	8	8	8	8	8
CPU					
Model	Qantel micro CPU	Qantel 900/950	Qantel 960	Qantel 970	Qantel 970
Add time, microseconds	—	—	—	—	—
No. of I/O ports on basic sys. and max.	6	6	6	6	6
INTERNAL STORAGE					
Type	MOS	MOS	MOS	MOS	MOS
Capacity of basic system, bytes	48K	16K	16K	64K	64K
Maximum capacity, bytes	64K	64K	64K	256K	256K
Increment size, bytes	16K	32K	8K, 16K	32K	32K
Cycle/access time, microseconds	1.5/1.5	1.5	—	—	—
MASS STORAGE					
Floppy disk (diskette) drive	Standard	Optional	Optional	Optional	Optional
Maximum diskette storage	5.2M bytes	2.6M bytes	2.6M bytes	2.6M bytes	2.6M bytes
Cartridge disk drive	No	Std.; 6-36M bytes	Std.; 6M-12M bytes	Optional	Std.; 12M bytes
Pack disk drive	No	No	No	No	No
Fixed-head disk/drum	No	No	No	Std.; 24M bytes	No
Maximum disk storage	NA	36M bytes	300M bytes	92M bytes	300M bytes
WORKSTATIONS					
Maximum number connectable	1	16	16	16	32
Recommended maximum number	1	—	16	—	—
Keyboard style	Type.; num. key.	Type., num. key.	Type.; num. key.	Type.; num. key.	Type.; num. key.
Workstation printer	Optional	Standard	Standard	Standard	Standard
INPUT/OUTPUT DEVICES					
Serial printer	Opt.; 45-120 cps	Opt.; 120 cps	Std.; 55 cps	Std.; 120 cps	Opt.; 55-120 cps
Line printer	Opt.; 300 lpm	Opt.; 300-600 lpm	Opt.; 50-600 lpm	Optional	Std.; 50-100 lpm
Reel-to-reel tape drive	No	Opt.; 36-72KBS	Opt.; 36-72KBS	Std.; 1600 bpi	Opt.; 36-72KBS
Cassette/cartridge tape drive	No	No	No	No	—
CRT	Std.; 1728 char.	Std.; 27 x 64 char.	Std.; 1728 char.	Std.; 1728 char.	Std.; 1728 char.
Other	No	Opt. card reader	Opt. card reader	Opt. card reader	Opt.; card reader
COMMUNICATIONS					
Maximum no. of lines	1	1	1	1	1
Synchronous	Opt.; to 50K bps	Opt.; to 50K bps	Opt.; to 50KBS	Opt.; to 50KBS	Opt.; to 50KBS
Asynchronous	Opt.; to 38,400 bps	Opt.; to 38,400 bps	Opt.; to 38,400 bps	Opt.; to 38,400 bps	Opt.; to 38,400 bps
Protocols supported	Bisync	Async, bisync	Async, bisync	Async, bisync	Async, bisync
Network architecture supported	—	—	—	—	—
RJE terminals emulated	—	—	—	—	—
IBM 3270 emulation	—	—	—	—	—
SOFTWARE SUPPORT					
COBOL	No	No	No	No	No
RPG	No	No	No	No	No
FORTRAN	No	No	No	No	No
BASIC	QICBASIC	QICBASIC	QICBASIC	QICBASIC	QICBASIC
Assembler	Yes	Yes	No	No	No
Other programming languages	No	No	None	None	None
Multiprogramming	Yes; 5 partitions	Yes	Yes	Yes	Yes
Max. no. of jobs run concurrently	2	4	4	4	8
Language complemented in firmware	Partially	Partially	Partially	Partially	Partially
Op. sys. implemented in firmware	Partially	Partially	Partially	Partially	Partially
General accounting packages	Yes	Yes	Yes	Yes	Yes
Industry application areas	Whsl., med., CPA	Whsl., med., CPA	Whsl., dist., CPA	Whsl., dist., CPA	Whsl., dist., CPA
Data base management system	No	No	Yes	Yes	Yes
File access methods supported	Rand., seq., index	Rand., seq., index	Random	Random	Random
Software separately priced	Some	Some	Some	Some	Some
Technical help separately priced	Yes	Yes	Yes	Yes	Yes
LEASE/MAINTENANCE OPTIONS					
Lease plans available	—	—	—	—	—
Maintenance plans available	—	—	—	—	—
PRICING & AVAILABILITY					
Purchase price of basic system, $	11,950	27,900 (Model 950)	29,990	39,500	35,900
Monthly rental of basic system, $	275 (1-mo. lease)	642 (1-mo. lease)	688 (1-mo. lease)	—	826 (1-mo. lease)
Monthly maint. price of basic system, $	90	245	275	330	325
Monthly maint. bundled with rental, $	—	—	—	—	—
Purchase price of:					
additional memory module, $	1,450 (16K bytes)	1,450 (8K bytes)	2,450 (16K bytes)	2,450 (16K bytes)	2,950 (32K bytes)
additional workstations, $	—	3,450	3,450	3,450	3,450
additional printer, $	6,450 (55 cps)	7,450 (55 cps)	7,450 (55 cps)	7,450 (55 cps)	7,450 (55 cps)
Discounts available	—	—	—	—	—
Date of first U.S. delivery	December 1977	First qtr. 1975	NA	NA	NA
Number installed to date	NA	NA	NA	NA	NA
COMMENTS		Program and report generating packages			

Small Business Computer Specifications

MANUFACTURER AND MODEL	Qantel 975	Qantel 1400	Qantel 1400-2	Qantel 1450	Qantel 1450-2
WORD LENGTH, BITS	8	8	8	8	8
CPU					
Model	Qantel 970	Qantel 1400	Qantel 1400-2	Qantel 1450	Qantel 1450-2
Add time, microseconds	—	—	—	—	—
No. of I/O ports on basic sys. and max.	6	12	12	12	12
INTERNAL STORAGE					
Type	MOS	MOS	MOS	MOS	MOS
Capacity of basic system, bytes	64K	40K	48K	64K	64K
Maximum capacity, bytes	256K	128K	128K	1024K	1024K
Increment size, bytes	16K, 32K	8K, 16K	8K	32K	32K
Cycle/access time, microseconds	—	1.1	1.1	—	—
MASS STORAGE					
Floppy disk (diskette) drive	Optional	Optional	Optional	Optional	Optional
Maximum diskette storage	2.6M bytes	2.6M bytes	2.6M bytes	2.6M bytes	2.6M bytes
Cartridge disk drive	Optional	Std.; 12-48M bytes	Std.; 12-48M bytes	Std.; 12M bytes	Std.; 25M bytes
Pack disk drive	No	Std.; 25-600M bytes	Std.; 25-600M bytes	No	No
Fixed-head disk/drum	Std.; 25M bytes	No	No	No	No
Maximum disk storage	300M bytes	648M bytes	648M bytes	300M bytes	300M bytes
WORKSTATIONS					
Maximum number connectable	32	64	64	64	64
Recommended maximum number	—	—	—	—	—
Keyboard style	Type.; num. key.	Type.; num. key.	Type.; num. key.	Type.; num. key.	Type.; num. key.
Workstation printer	Standard	Standard	Standard	Standard	Standard
INPUT/OUTPUT DEVICES					
Serial printer	Std.; 50-100 lpm	Opt.; 120 cps	Opt.; 120 cps	Opt.; 55 cps	Opt.; 55 cps
Line printer	Optional	Opt.; 300-600 lpm	Opt.; 300-600 cps	Std.; 300 lpm	Std.; 300 lpm
Reel-to-reel tape drive	Std.; 1600 bpi	Opt.; 36-72KBS	Opt.; 36-72KBS	Opt.; 36-72KBS	Opt.; 36-72KBS
Cassette/cartridge tape drive	No	No	No	—	—
CRT	Std.; 1728 char.	Std.; 27 x 64 char.	Std.; 24 x 64 char.	Std.; 1728 char.	Std.; (2) 1728 char.
Other	Opt.; card reader	Opt. card reader	Opt. card reader	Opt.; card reader	Opt.; card reader
COMMUNICATIONS					
Maximum no. of lines	1	4	4	4	4
Synchronous	Opt.; to 50KBS	Opt.; to 50K bps	Opt.; to 50K bps	Opt.; to 50KBS	Opt.; to 50KBS
Asynchronous	Opt.; to 38,400 bps	Opt.; to 38,400 bps	Opt.; to 38,400 bps	Opt.; to 38,400 bps	Opt.; to 38,400 bps
Protocols supported	Async, bisync	Bisync	Bisync	Bisync	Bisync
Network architecture supported	—	—	—	—	—
RJE terminals emulated	—	—	—	—	—
IBM 3270 emulation	—	—	—	—	—
SOFTWARE SUPPORT					
COBOL	No	No	No	No	No
RPG	No	No	No	No	No
FORTRAN	No	No	No	No	No
BASIC	QICBASIC	QICBASIC	QICBASIC	QICBASIC	QICBASIC
Assembler	No	Yes	Yes	No	No
Other programming languages	None	No	No	None	None
Multiprogramming	Yes	Yes; 30 partitions	Yes; 30 partitions	Yes	Yes
Max. no. of jobs run concurrently	8	16	16	20	20
Language complemented in firmware	Partially	Partially	Partially	Partially	Partially
Op. sys. implemented in firmware	Partially	Partially	Partially	Partially	Partially
General accounting packages	Yes	Yes	Yes	Yes	Yes
Industry application areas	Whsl., dist., CPA	Whsl., med., CPA	Whsl., med., CPA	Whsl., dist., CPA	Whsl., dist., CPA
Data base management system	Yes	No	No	Yes	Yes
File access methods supported	Random	Rand., seq., index	Rand., seq., index	Random	Random
Software separately priced	Some	Some	Some	Some	Some
Technical help separately priced	Yes	Yes	Yes	Yes	Yes
LEASE/MAINTENANCE OPTIONS					
Lease plans available	—	—	—	—	—
Maintenance plans available	—	—	—	—	—
PRICING & AVAILABILITY					
Purchase price of basic system, $	59,000	43,900	64,900	44,900	69,900
Monthly rental of basic system, $	1,378 (1-mo. lease)	1,010 (1-mo. lease)	1,493 (1-mo. lease)	1,033 (1-mo. lease)	1,608 (1-mo. lease)
Monthly maint. price of basic system, $	482	335	485	335	485
Monthly maint. bundled with rental, $	—	—	—	—	—
Purchase price of:					
additional memory module, $	2,950 (32K bytes)	1,450 (8K bytes)	1,450 (8K bytes)	2,950 (32K bytes)	2,950 (32K bytes)
additional workstations, $	3,450	—	—	3,450	3,450
additional printer, $	7,450 (55 cps)	7,950 (55 cps)	7,950 (55 cps)	7,450 (55 cps)	7,450 (55 cps)
Discounts available	—	—	—	—	—
Date of first U.S. delivery	NA	Second qtr. 1977	Second qtr. 1977	NA	NA
Number installed to date	NA	NA	NA	NA	NA
COMMENTS		Program and report generating packages	Program and report generating packages		

Small Business Computer Specifications

MANUFACTURER AND MODEL	Quodata Q 620	Quodata Q 850	Quodata Q 970	Rexon RX-20	Rexon RX-30
WORD LENGTH, BITS	16	16	16 or 32	16	16
CPU					
Model	DEC PDP 11/23	DEC PDP 11/44	DEC PDP 11/70	Intel 8086	Intel 8086
Add time, microseconds	3.0	2.16	Variable	1.2 (5 digits)	1.2 (5 digits)
No. of I/O ports on basic sys. and max.	4, 6	—	—	6, 12	6; 12
INTERNAL STORAGE					
Type	MOS	MOS	Core	MOS	MOS
Capacity of basic system, bytes	192K	256K	512K	64K	64K
Maximum capacity, bytes	256K	256K	2M	64K	128K
Increment size, bytes	32K	—	64K	—	64K
Cycle/access time, microseconds	0.9/0.45	0.3	Variable	0.6/0.25	0.6/0.25
MASS STORAGE					
Floppy disk (diskette) drive	Optional	Optional	Optional	No	No
Maximum diskette storage	2M bytes	2M bytes	2M bytes	—	—
Cartridge disk drive	Standard	Optional	Optional	Std. (1) 10M bytes	Std.; (1), 20M bytes
Pack disk drive	Optional	Std.; 56M bytes (2)	Std.; 67M bytes	No	No
Fixed-head disk/drum	Optional	Optional	Optional	No	No
Maximum disk storage	—	—	—	20M bytes	40M bytes
WORKSTATIONS					
Maximum number connectable	16	64	128	4	8
Recommended maximum number	6-8	32	50	4	8
Keyboard style	Variable	Variable	Variable	Type.; num. key.	Type.; num. key.
Workstation printer	Opt.; 8 max.	Opt.; 8 max.	Opt.; 8 max.	Opt.; 4	Opt.; 8
INPUT/OUTPUT DEVICES					
Serial printer	Optional	Opt.; 180 cps	Opt.; 180 cpm	Opt.; (2) 150 cps	Opt.; (4), 150 cps
Line printer	Optional	Opt.; 100-900 lpm	Opt.; 300-900 lpm	Opt.; (2) 300 lpm	Opt.; (4), 300 lpm
Reel-to-reel tape drive	Optional	Optional	Standard	No	No
Cassette/cartridge tape drive	Optional	No	No	No	No
CRT	Opt.; 24 x 80 char.	Opt.; 1920 char.	Opt.; 1920 char.	Std.; 1920 char.	Std.; 1920 char.
Other	—	—	—	No	No
COMMUNICATIONS					
Maximum no. of lines	32	63	63	4	8
Synchronous	Optional	Optional	Optional	No	No
Asynchronous	Standard	Std.; to 9600 bps	Std.; to 9600 bps	Std.; 100-9600 bps	Std.; 110-9600 bps
Protocols supported	Bisync, SDLC	Bisync, SDLC	Bisync, SDLC	None	None
Network architecture supported	DECnet	DECnet	DECnet	No	No
RJE terminals emulated	3780, HASP	3780, HASP	3780, HASP	No	No
IBM 3270 emulation	Yes	Yes	Yes	No	No
SOFTWARE SUPPORT					
COBOL	Yes	Yes	Yes	No	No
RPG	Yes	Yes	Yes	No	No
FORTRAN	Yes	Yes	Yes	No	No
BASIC	Yes	Yes	Yes	Business BASIC	Business BASIC
Assembler	Yes	Yes	Yes	No	No
Other programming languages	FOCAL	APL, PASCAL, DIB	APL, PASCAL, DIB	None	None
Multiprogramming	Yes	Yes, 63 partitions	Yes, 63 partitions	Yes; 5 partitions	Yes; 9 partitions
Max. no. of jobs run concurrently	—	—	—	5	9
Language complemented in firmware	No	No	No	No	No
Op. sys. implemented in firmware	No	No	No	Partially	Partially
General accounting packages	Yes	Yes	Yes	Yes	Yes
Industry application areas	Educ., non-profit	Educ., non-profit	Educ., non-profit	Mfg., dist., health	Mfg., dist., health
Data base management system	Yes	Yes	Yes	Yes	Yes
File access methods supported	Rand., seq., ISAM	Rand., seq., ISAM	Random, seq., ISAM	Seq., rand., indexed	Seq., rand., indexed
Software separately priced	Yes	Yes	Yes	Yes (applications)	Yes (applications)
Technical help separately priced	Yes	Yes	Yes	Yes	Yes
LEASE/MAINTENANCE OPTIONS					
Lease plans available	Contact vendor	Contact vendor	Contact vendor	Third-party	Third-party
Maintenance plans available	—	—	—	Contract or on-call	Contract or on-call
PRICING & AVAILABILITY					
Purchase price of basic system, $	36,000	88,000	141,000	19,900	29,300
Monthly rental of basic system, $	—	—	—	Third-party	Third-party
Monthly maint. price of basic system, $	—	—	—	141	162
Monthly maint. bundled with rental, $	—	—	—	No	No
Purchase price of:					
additional memory module, $	—	—	—	NA	4,500 (64K)
additional workstations, $	—	—	—	—	2,000
additional printer, $	—	—	—	3,000 (150 lpm)*	3,000 (150 lm)*
Discounts available	—	—	—	No	No
Date of first U.S. delivery	1979	1973	1975	May 1980	July 1979
Number installed to date	25	Over 50	Over 50	NA	NA
COMMENTS	Word processing and data management available as options	See Q 970	Data management and word processing specifically designed for educational institutions, government entities, and non-profit organizations	Application software by indep. software house and Rexon dealers; *$7,200 (300 lpm)	Application software by indep. software house and Rexon dealers; *$7,200 (300 lpm)

Small Business Computer Specifications

MANUFACTURER AND MODEL	Scientific Data Systems 420	Sentinel Model 30	Sentinel Model 40	Sentinel Model 50	Sentinel Model 80
WORD LENGTH, BITS	8	16	16	16	16
CPU					
Model	Rockwell 6502	Intel 8086	Intel 8086	Intel 8086	Intel 8086
Add time, microseconds	1.0 (8 bits)	—	—	—	—
No. of I/O ports on basic sys. and max.	2.4	1, 17	1, 17	1, 17	1, 17
INTERNAL STORAGE					
Type	MOS	MOS	MOS	MOS	MOS
Capacity of basic system, bytes	32K	96K	128K	128K	128K
Maximum capacity, bytes	64K	1M	1M	1M	1M
Increment size, bytes	32K	32K or 64K	32K or 64K	32K or 64K	32K or 64K
Cycle/access time, microseconds	0.5/0.25	—	—	—	—
MASS STORAGE					
Floppy disk (diskette) drive	Std.; 1.25M bytes	Std.; 800K bytes	Std.; 800K bytes	Std.; 800K bytes	Std.; 800K bytes
Maximum diskette storage	Opt.; 2.5M bytes	Opt.; 1.6M bytes	Opt.; 1.6M bytes	Opt.; 1.6M bytes	Opt.; 1.6M bytes
Cartridge disk drive	No	—	—	—	—
Pack disk drive	No	—	—	—	Std.; 80M bytes
Fixed-head disk/drum	Opt.; 31M bytes	Std.; 14.5M bytes	Std.; 29M bytes	Std.; 29M bytes	—
Maximum disk storage	64.5M bytes	1.26B bytes	1.26B bytes	1.26B bytes	1.26B bytes
WORKSTATIONS					
Maximum number connectable	250	17	17	17	17
Recommended maximum number	1-250	—	—	—	—
Keyboard style	Typewriter	Type.; num. key.	Type.; num. key.	Type.; num. key.	Type.; num. key.
Workstation printer	Optional	Standard	Standard	Standard	Standard
INPUT/OUTPUT DEVICES					
Serial printer	Optional	Std.; 150 cps	Std.; 150 cps	Std.; 150 cps	Std.; 150 cps
Line printer	Opt.; 300 lpm	Opt.; 300-600 lpm	Opt.; 300-600 lpm	Opt.; 300-600 lpm	Opt.; 300-600 lpm
Reel-to-reel tape drive	No	Opt.; 800-1600 bpi	Opt.; 800-1600 bpi	Opt.; 800-1600 bpi	Opt.; 800-1600 bpi
Cassette/cartridge tape drive	No	Optional	Optional	Optional	Optional
CRT	Std.; 25 x 80 char.	Std.; 1920 char.	Std.; 1920 char. (2)	Std.; 1920 char. (4)	Std.; 1920 char. (2)
Other	—	—	—	—	—
COMMUNICATIONS					
Maximum no. of lines	2	—	—	—	—
Synchronous	Opt.; to 1M bps	Opt.; 9600 bps	Opt.; 9600 bps	Opt.; 9600 bps	Opt.; 9600 bps
Asynchronous	Std.; to 19,200 bps	Std.; 9600 bps	—	—	—
Protocols supported	SDLC	—	—	—	—
Network architecture supported	Ethernetwork	—	—	—	—
RJE terminals emulated	HASP	2780/3780	2780/3780	2780/3780	2780/3780
IBM 3270 emulation	—	—	—	—	—
SOFTWARE SUPPORT					
COBOL	No	No	No	No	No
RPG	No	No	No	No	No
FORTRAN	No	No	No	No	No
BASIC	Yes	Yes	Yes	Yes	Yes
Assembler	Yes	No	No	No	No
Other programming languages	—	Data Base (DBL)	Data Base (DBL)	Data Base (DBL)	Data Base (DBL)
Multiprogramming	No	Yes	Yes	—	—
Max. no. of jobs run concurrently	1 per unit	Unlimited	Unlimited	—	—
Language complemented in firmware	No	No	No	—	—
Op. sys. implemented in firmware	Partially	No	No	—	—
General accounting packages	Yes	Yes	Yes	Yes	Yes
Industry application areas	—	—	—	—	—
Data base management system	Yes	Yes	Yes	Yes	Yes
File access methods supported	Rand., seq., ISAM	—	—	—	—
Software separately priced	Yes (applications)	Yes	Yes	Yes	Yes
Technical help separately priced	No	No	No	No	No
LEASE/MAINTENANCE OPTIONS					
Lease plans available	Third-party	—	—	—	—
Maintenance plans available	On-site, on-call	Yes	—	—	—
PRICING & AVAILABILITY					
Purchase price of basic system, $	Contact vendor	25,300	34,600	43,500	48,500
Monthly rental of basic system, $	Contact vendor	—	—	—	—
Monthly maint. price of basic system, $	Contact vendor	—	—	—	—
Monthly maint. bundled with rental, $	Contact vendor	—	—	—	—
Purchase price of:					
additional memory module, $	1,000	2,500 (32K)	2,500 (32K)	2,500 (32K)	2,500 (32K)
additional workstations, $	—	2,500 (CRT)	2,500 (CRT)	2,500 (CRT)	2,500 (CRT)
additional printer, $	Contact vendor	3,900 (150 cps)	3,900 (150 cps)	3,900 (150 cps)	3,900 (150 cps)
Discounts available	OEM, distributor	To distributors	To distributors	To distributors	To distributors
Date of first U.S. delivery	December 1978	NA	NA	NA	NA
Number installed to date	200	NA	NA	NA	NA
COMMENTS	Network will support up to 250 stations, (up to 1KM) sharing data	$4,100 for 64K memory increment	See Model 30 Comments	See Model 30 Comments	See Model 30 Comments

Small Business Computer Specifications

MANUFACTURER AND MODEL	Sperry Univac BC/7-600	Sperry Univac BC/7-700	Sperry Univac BC/7-800	Sperry Univac BC/7-900	STC Systems Inc. System 4000
WORD LENGTH, BITS	8	8	8	8	16
CPU					
Model	Univac T3038	Univac T3038	Univac T3038	Univac T3038	DG Nova 4
Add time, microseconds	106 (5 digits)	106 (5 digits)	106 (5 digits)	65 (5 digits)	0.7
No. of I/O ports on basic sys. and max.	3; 12	3; 12	3; 12	3; 14	8, 32
INTERNAL STORAGE					
Type	MOS	MOS	MOSFET	MOSFET	MOS
Capacity of basic system, bytes	48K	48K	128K	256K	64K
Maximum capacity, bytes	64K	64K	128K	256K	64K
Increment size, bytes	16K	16K	16K	—	16K
Cycle/access time, microseconds	1.0/0.5	1.0/0.5	1.0/0.5	1.0/0.5	0.7/0.35
MASS STORAGE					
Floppy disk (diskette) drive	Standard	Optional	Optional	Optional	NA
Maximum diskette storage	6M bytes	4M bytes	4M bytes	4M bytes	—
Cartridge disk drive	No	Opt.; 40M bytes	Opt.; 40M bytes	Opt.; 40M bytes	Std.; 12M-48M bytes
Pack disk drive	No	No	No	No	Opt.; 32M-320M bytes
Fixed-head disk/drum	No	No	No	Opt.; 100M bytes	NA
Maximum disk storage	—	40M bytes	40M bytes	140M bytes	320M bytes (4 drives)
WORKSTATIONS					
Maximum number connectable	4	4	6	8	3
Recommended maximum number	2	4	6	8	3
Keyboard style	Type.; num. key.	Type.; num. key.	Type.; num. key.	Type.; num. key.	Type.; num. key.
Workstation printer	—	—	Opt.; 6 max.	Opt.; 8 max.	Optional slave prntr.
INPUT/OUTPUT DEVICES					
Serial printer	Std.; 200 cps	Std.; 200 cps	Std.; 200 cps	Std.; 200 cps	Std.; 165 cps
Line printer	Opt.; 180 lpm	Opt.; 180-640 lpm	Opt.; 180-640 lpm	Opt.; 180-640 lpm	Opt.; 300-900 lpm
Reel-to-reel tape drive	No	Opt.; 20, 40KBS	Opt.; 20, 40KBS	Opt.; 20, 40 KBS	Opt.; 800-1600 bpi
Cassette/cartridge tape drive	No/No	No/No	No/No	No/No	NA
CRT	Std.; 1920 char.	Std.; 1920 char.	Std.; 1920 char.	Std.; 1920 char.	Std.; 1920 char.
Other	Punched card read.	Punched card read.	Punched card read.	—	—
COMMUNICATIONS					
Maximum no. of lines	2	2	2	2	Unlimited
Synchronous	Std.; to 9600 bps	Std.; to 9600 bps	Std.; to 9600 bps	Std.; to 9600 bps	Opt.; to 9600 bps
Asynchronous	Opt.; 110-9600 bps	Opt.; 110-9600 bps	Opt.; 110-9600 bps	Opt.; to 9600 bps	Opt.; to 1200 bps
Protocols supported	Bisync, sync	Bisync, sync	Bisync, sync	Bisync, sync	Bisync
Network architecture supported	—	—	—	—	—
RJE terminals emulated	See Comments	See Comments	See Comments	See Comments	2780/3780
IBM 3270 emulation	Yes	Yes	Yes	Yes	Yes
SOFTWARE SUPPORT					
COBOL	No	No	No	No	No
RPG	Yes	Yes	Yes	Yes	Yes
FORTRAN	No	No	No	No	No
BASIC	No	No	No	No	Yes
Assembler	No	No	No	No	Yes
Other programming languages	ESCORT	ESCORT	ESCORT	ESCORT	ENGLISH 210
Multiprogramming	Yes; 2 partitions	Yes; 2 partitions	Yes; 2 partitions	Yes; 4 partitions	Yes; 8 partitions
Max. no. of jobs run concurrently	2	4	4	5	Varies
Language complemented in firmware	Partially	Partially	Partially	Partially	No
Op. sys. implemented in firmware	No	No	No	No	No
General accounting packages	Yes	Yes	Yes	Yes	Yes
Industry application areas	Dist., manufacturing	Dist., manufacturing	Dist., manufacturing	Dist., manufacturing	Dist., publ., appar.
Data base management system	No	No	No	No	Yes
File access methods supported	Rand., seq., ISAM	Rand., seq., ISAM	Rand., seq., ISAM	Rand., seq., ISAM	Seq., random, ISAM
Software separately priced	Partly	Partly	Partly	Partly	No
Technical help separately priced	Partly	Partly	Partly	Partly	No
LEASE/MAINTENANCE OPTIONS					
Lease plans available	1 or 5 yrs.	1 or 5 yrs.	1 or 5 yrs.	1 or 5 yrs.	Contact vendor
Maintenance plans available	Various	Various	Various	Various	On-call, third party
PRICING & AVAILABILITY					
Purchase price of basic system, $	17,162	21,800	34,900	40,900	34,900
Monthly rental of basic system, $	489	678	1,077	1,290	—
Monthly maint. price of basic system, $	169	161	252	287	345
Monthly maint. bundled with rental, $	No	No	No	No	—
Purchase price of:					
additional memory module, $	900 (16K)	900 (16K)	900 (16K)	900 (16K)	3,500 (32K)
additional workstations, $	3,225	3,225	3,225	3,225	2,600
additional printer, $	5,238 (200 cps)	5,238 (200 cps)	5,238 (200 cps)	5,238 (200 cps)	7,600 (300 lpm)
Discounts available	—	—	—	—	NA
Date of first U.S. delivery	July 1978	March 1977	July 1978	June 1980	1973
Number installed to date	200	1000	650	50	125
COMMENTS	Supports up to 4 workstations; entirely diskette based; emulates the following RJE terminals: 2780/3780, HASP, 1004, 9300 NTR, DCT 1000/2000	Supports up to 4 workstations; disk-based; magnetic tape and diskettes for I/O; see BC/7-600 Comments for RJE emulation	Supports up to 6 workstations; two applic. programs and print spooling can be run concurrently; see BC/7-600 Comments for RJE emulation	Supports up to 8 workstations, 4 application programs, and print spooling can be run concurrently; see BC/7-600 Comments for RJE emulation	System price includes all hardware, software, installation, training, and maintenance (1 year on software, 90 days on hardware)

Small Business Computer Specifications

MANUFACTURER AND MODEL	STC Systems Inc. System 5000	Stratmar Business Solutions STRAT TEXT	Stratmar Business Solutions SUPERVISOR II	Systel Computers, Inc. REPORT/80	TECHNICO SS16
WORD LENGTH, BITS	16	16	16	8	16
CPU					
Model	DG Nova 4	DG Nova 4	DG Nova 4	Zilog Z-80	9900
Add time, microseconds	0.7	—	—	—	4.2
No. of I/O ports on basic sys. and max.	8; 32	—	—	2; 4	2
INTERNAL STORAGE					
Type	MOS	MOS	MOS	Dynamic RAM	MOS
Capacity of basic system, bytes	64K	64K	64K	64K	96K
Maximum capacity, bytes	512K	256K	256K	64K	96K
Increment size, bytes	16K	32K	32K	64K	8K to 32K
Cycle/access time, microseconds	0.7/0.35	.40	.40	200	.2
MASS STORAGE					
Floppy disk (diskette) drive	NA	Std.; 1.25M bytes	Std.; 1.25M bytes	Std.; (2) 700K bytes	Std.; (2) 1M bytes
Maximum diskette storage	—	—	—	1.2M bytes	Opt.; (4) 2M bytes
Cartridge disk drive	Opt.; 32M-64M bytes	Opt.; 20M bytes	Opt.; 20M bytes	—	—
Pack disk drive	Std.; 80M-320M bytes	Opt.; 190M bytes	Opt.; 190M bytes	—	—
Fixed-head disk/drum	NA	Std.; 12.5M bytes	Std.; 12.5M bytes	—	—
Maximum disk storage	320M bytes (4 drives)	1520M bytes	1520M bytes	1.2M bytes	1M bytes
WORKSTATIONS					
Maximum number connectable	40	16	16	1	2
Recommended maximum number	40	10	10	1	2
Keyboard style	Type.; num. key.	Type.; num. key.	Type.; num. key.	Typewriter	Type.; num. key.
Workstation printer	Optional slave prntr.	Optional	Optional	Standard	Optional
INPUT/OUTPUT DEVICES					
Serial printer	Std.; 165 cps	Std.; 180 cps	Std.; 180 cps	Optional	Std.; 80 cps
Line printer	Opt.; 300-900 lpm	Optional	Optional	Std.; 150 cps	—
Reel-to-reel tape drive	Opt.; 800-1600 bpi	Optional	Optional	—	No
Cassette/cartridge tape drive	NA	No	No	—	No
CRT	Std.; 1920 char.	Std.; 1920 char.	Std.; 1920 char.	Std.; 1920 char.	Std.; 1920 char.
Other	—	No	No	—	—
COMMUNICATIONS					
Maximum no. of lines	Unlimited	16	16	1	1
Synchronous	Opt.; to 9600 bps	Optional	Optional	Optional	Std.; 4800 bps
Asynchronous	Opt.; to 1200 bps	Standard	Standard	Std.; to 19,200 bps	Std.; 4800 bps
Protocols supported	Bisync	Async, bisync	Async, bisync	2780/3780	—
Network architecture supported	—	X.25	X.25	—	—
RJE terminals emulated	2780/3780	2780/3780	2780/3780	—	—
IBM 3270 emulation	Yes	No	No	—	—
SOFTWARE SUPPORT					
COBOL	No	Yes	Yes	Yes	No
RPG	Yes	No	No	No	No
FORTRAN	No	Yes	Yes	Yes	Yes
BASIC	Yes	Yes	Yes	Yes	Yes
Assembler	Yes	Yes	Yes	Yes	Yes
Other programming languages	ENGLISH 210	No	No	—	PASCAL
Multiprogramming	Yes; 50 partitions	Yes; 2 partitions	Yes, 2 partitions	—	—
Max. no. of jobs run concurrently	Varies	16	16	—	—
Language complemented in firmware	No	No	No	No	Optional
Op. sys. implemented in firmware	No	No	No	Yes	Yes
General accounting packages	Yes	Yes	Yes	Yes	Yes
Industry application areas	Dist., publ., appar.	Word processing	Dist., mfg.	Small business	Education
Data base management system	Yes	No	No	Yes	Yes
File access methods supported	Rand., seq., ISAM	Rand., seq., ISAM	Rand., seq., ISAM	—	ISAM, DBMS, QUERY
Software separately priced	No	Yes	Yes	Yes	Yes
Technical help separately priced	No	Yes	Yes	No	Yes
LEASE/MAINTENANCE OPTIONS					
Lease plans available	Contact vendor	3, 5 or 6 years	3, 5 or 6 years	NA	3 to 7 years
Maintenance plans available	On-call, third party	See Comments	See Comments	Distributor or third-party	Depot & field
PRICING & AVAILABILITY					
Purchase price of basic system, $	51,000	22,375	28,375	8,950	8,999
Monthly rental of basic system, $	—	498	630	—	Optional
Monthly maint. price of basic system, $	435	198	198	100	1 percent
Monthly maint. bundled with rental, $	—	696	828	—	—
Purchase price of:					
additional memory module, $	3,500 (32K)	2,310 (32K)	2,310 (32K)	NA	—
additional workstations, $	2,600	1,750	1,750	NA	—
additional printer, $	7,600 (300 lpm)	4,550	4,550	—	—
Discounts available	NA	Quantity	Quantity	Distributor and dealer	OEM, 150, distrib.
Date of first U.S. delivery	1974	June 1980	January 1980	January 1981	January 1976
Number installed to date	125	1	2	NA	2000
COMMENTS	System price includes all hardware, software, installation, training, and maintenance (1 year on software, 90 days on hardware)	Software maint. provided by Stratmar; hardware maint. provided by Data General	Software maint. provided by Stratmar; hardware maint. provided by Data General		

Small Business Computer Specifications

MANUFACTURER AND MODEL	TECHNICO T.I. 32-8H	TECHNICO T.I. 32-14H	Texas Instruments DS990 Series Model 1	Texas Instruments DS990 Series Model 2	Texas Instruments DS990 Series Model 4
WORD LENGTH, BITS	16 (dual) See Comments	16 (dual) See Comments	16 + parity	16	16
CPU					
Model	9900	9900	TI TMS-9900	TI 990/5	TI 990/10
Add time, microseconds	4.2	4.2	4.67 (2-16 bit)	5.5 (16 bits)	3.6
No. of I/O ports on basic sys. and max.	6,18	6,18	2; 2	3; 256	12; 180
INTERNAL STORAGE					
Type	MOS	MOS	MOS, RAM	RAM	MOS
Capacity of basic system, bytes	192K (user)	192K (user)	64K	64K	128K
Maximum capacity, bytes	256K	256K	64K	64K	2048K
Increment size, bytes	2K to 32K	2K to 32K	—	—	64K
Cycle/access time, microseconds	.2	.2	0.667/0.667	NA/0.5	740
MASS STORAGE					
Floppy disk (diskette) drive	Opt.; (2) 1M bytes	Opt.; (2) 1M bytes	Std.; 1.15M bytes	Std.; (2) 2.3M bytes	Opt.; 1M bytes
Maximum diskette storage	Opt.; (4) 2M bytes	Opt.; (4) 2M bytes	4.6M bytes	4.6M bytes	Opt. (4) 4M bytes
Cartridge disk drive	—	—	No	Opt.; 2-20M bytes	Std.; 10M bytes
Pack disk drive	—	—	No	Opt.; 2-400M bytes	Opt. (1) 50M bytes
Fixed-head disk/drum	Std.; (1) 10M bytes	Std.; (1) 29M bytes	No	No	No
Maximum disk storage	Opt.; (4) 40M bytes	Opt.; (4) 116M bytes	—	—	Opt.; (dual) 200MB
WORKSTATIONS					
Maximum number connectable	18	18	1	2	39
Recommended maximum number	6 to 8	6 to 8	1	2	8
Keyboard style	Type.; num. key.	Type.; num. key.	Type.; num. key.	Typewriter	Type.; num. key.
Workstation printer	Optional	Optional	Optional	Optional	Optional
INPUT/OUTPUT DEVICES					
Serial printer	Opt.; 80-180 cps	Opt.; 80-180 cps	—	Opt.; 150 cps	Opt.; 150 cps
Line printer	Optional	Optional	—	Opt.; 300, 600 lpm	Opt.; 300, 600 lpm
Reel-to-reel tape drive	No	No	No	Opt.; 4 drives	Opt.; 37.5 ips
Cassette/cartridge tape drive	Opt.; (4) 40M bytes	Opt.; (4) 40M bytes	No	No	No
CRT	Std.; 1920 char.	Std.; 1920 char.	Std.; 24 x 80 char.	Std.; 1920 char.	Std.; 1920 char.
Other	See Comments*	See Comments*	Optional	Opt. card reader	Opt. card reader
COMMUNICATIONS					
Maximum no. of lines	18	18	2	Std.; 3/Opt.; 16+	Varies
Synchronous	Opt.; to 19,200 bps	Opt.; to 19,200 bps	Opt.; to 4800 bps	Std.; 9600 bps	Opt.; 75 to 9600 bps
Asynchronous	Opt.; to 19,200 bps	Opt.; to 19,200 bps	Opt.; to 9600 bps	Std.; 9600 bps	Opt.; 75 to 9600 bps
Protocols supported	Opt.; 2780/3780	Opt.; 2780/3780	Bisync	Bisync	Bisync
Network architecture supported	Optional	Optional	—	No	—
RJE terminals emulated	Optional	Optional	2780/3780	IBM 2780/3780	2780/3780
IBM 3270 emulation	Optional	Optional	No	No	3270 IDC
SOFTWARE SUPPORT					
COBOL	Optional	Optional	Yes (Run-Time)	Yes (Run-Time)	Yes
RPG	Optional	Optional	No	No	Yes
FORTRAN	Yes	Yes	Yes	Yes	Yes
BASIC	Yes	Yes	Yes	Yes	Yes
Assembler	Yes	Yes	Yes	Yes	Yes and macro
Other programming languages	PASCAL	PASCAL	PASCAL, Run-Time,	PASCAL Run-Time	PASCAL, TIFORM
Multiprogramming	Yes, 18 partitions	Yes, 18 partitions	Yes; 1-4 partitions	No	Yes, variable
Max. no. of jobs run concurrently	6	6	6	Varies	Varies
Language complemented in firmware	Optional	Optional	No	No	No
Op. sys. implemented in firmware	Yes	Yes	No	No	No
General accounting packages	Yes	Yes	Thru TPP's	No	No
Industry application areas	Gas stations	Contractors	Thru TPP's	NA	No
Data base management system	Yes	Yes	No	No	Yes, DBMS 990
File access methods supported	ISAM, DBMS, QUERY	ISAM, DBMS, QUERY	Rand., seq., keyed	Rand., seq., index	Seq., multi-keyed
Software separately priced	Yes	Yes	Yes (except TX5-0S)	Yes	Yes
Technical help separately priced	Yes	Yes	No	Yes	Yes
LEASE/MAINTENANCE OPTIONS					
Lease plans available	3 to 7 years	3 to 7 years	90 days; 1 3, 5 yrs.	1, 3, 5 years	90 days; 1 to 5 yrs.
Maintenance plans available	Depot & field	Depot & field	On-call, third party	On-call, third party	Contract, on-call
PRICING & AVAILABILITY					
Purchase price of basic system, $	16,999	19,999	9,450	12,995	26,500 (H/W only)
Monthly rental of basic system, $	Optional	Optional	370 (3 yr. lease)	474 (5 yr. lease)	NA
Monthly maint. price of basic system, $	1 percent	1 percent	100	143	285
Monthly maint. bundled with rental, $	—	—	Lease only	Lease only	—
Purchase price of:					
additional memory module, $	1,000 (32K)	1,000 (32K)	NA	NA	2,000 (64K)
additional workstations, $	1,300	1,300	—	—	1,975 (W/O control.)
additional printer, $	2,300	2,300	1,100 (30 cps)	2,430 (150 cps)	2,705 (150 cps)
Discounts available	OEM, 150, distrib.	OEM 150, distrib.	Contact vendor	Contact vendor	Quantity
Date of first U.S. delivery	September 1980	December 1980	April 1979	June 1979	NA
Number installed to date	30	10	—	NA	NA
COMMENTS	Multiprocessor design uses two 16-bit microprocessors; *CRT models (IBM, DEC, ADM3A, Beehive, Datamedia) may be intermixed within the same system	Multiprocessor design uses two 16-bit microprocessors; *CRT models (IBM, DEC, ADM3A, Beehive, Datamedia) may be intermixed within the same system			

Small Business Computer Specifications

MANUFACTURER AND MODEL	Texas Instrument DS990 Series Model 6	Texas Instrument DS990 Series Model 8	Texas Instrument DS990 Series Model 20	Texas Instrument DS990 Series Model 30	Wang VS Systems
WORD LENGTH, BITS	16	16	16	16	32
CPU					
Model	TI 990/10	TI 990/10	TI 990/12	TI 990/12	Wang 2200VS
Add time, microseconds	3.6	3.6	.552 to 4.16	.552 to 4.16	NA
No. of I/O ports on basic sys. and max.	16; 180	12; 180	20; 188	20; 188	8; 16
INTERNAL STORAGE					
Type	MOS	MOS	MOS	MOS	MOS
Capacity of basic system, bytes	128K	128K	256K	256K	128K
Maximum capacity, bytes	2048K	2048K	2048K	2048K	512K
Increment size, bytes	64K	64K	64K	64K	64K
Cycle/access time, microseconds	.740	.740	.74 main/.35 cache	.74 main/.35 cache	0.66
MASS STORAGE					
Floppy disk (diskette) drive	Opt.; 256K bytes	Opt.; 1M bytes	Opt.; 1M bytes	Opt.; 1M bytes	Std.; 318K bytes
Maximum diskette storage	7024K bytes	Opt. (4) 4M bytes	4M bytes	4M bytes	—
Cartridge disk drive	Opt.; (2) 10M bytes	Opt.; 20M bytes	Opt.; 10M bytes	Opt.; 10M bytes	Yes; 45M bytes
Pack disk drive	Opt.; (2) 25M bytes	Std. (dual) 50MB	Dual 50M bytes	Std.; 200M bytes	Yes; 72M bytes
Fixed-head disk/drum	No	NA	NA	NA	No
Maximum disk storage	25M bytes	Opt. (dual) 200MB	—	—	800M bytes
WORKSTATIONS					
Maximum number connectable	39	39	39	39	32
Recommended maximum number	16	16	24	24	—
Keyboard style	Type.; num. key.	Type.; num. key.	Type.; num. key.	Type.; num. key.	Type.; num. key.
Workstation printer	Optional	Optional	Optional	Optional	Optional
INPUT/OUTPUT DEVICES					
Serial printer	Opt.; 150 cps	Opt.; 150 cps	Opt.; 150 cps	Opt.; 150 cps	Std.; 120 cps
Line printer	Opt.; 300, 600 lpm	Opt.; 300, 600 lpm	Opt.; 300, 600 lpm	Opt.; 300, 600 lpm	Opt.; to 600 lpm
Reel-to-reel tape drive	Opt.; 800, 1600 bpi	Opt.; 37.5 ips	Opt.; 800-1600 bpi	Std.; 1600 bpi	Opt.; 120KBS
Cassette/cartridge tape drive	No	No	No	No	No
CRT	Std.; 1920 char.	Std.; 1920 char.	Std.; (2) 1920 char.	Std.; (2) 1920 char.	Std.; 24 x 80 char.
Other	Opt. card reader	Opt. card reader	—	—	—
COMMUNICATIONS					
Maximum no. of lines	Varies	Varies	Varies	Varies	3
Synchronous	Opt.; 75 to 9600 bps	Opt.; 75 to 9600 bps	Opt.; 75 to 9600 bps	Opt.; 75 to 9600 bps	Opt.; to 9600 bps
Asynchronous	Opt.; 75 to 9600 bps	Opt.; 75 to 9600 bps	Opt.; 75 to 9600 bps	Opt.; 75 to 9600 bps	No
Protocols supported	Bisync	Async, bisync	Async, bisync	Async, bisync	—
Network architecture supported	—	NA	NA	NA	—
RJE terminals emulated	2780/3780	2780/3780	2780/3780	2780/3780	—
IBM 3270 emulation	3270 IDC	Yes	Yes	Yes	—
SOFTWARE SUPPORT					
COBOL	Yes	Yes	Yes	Yes	Yes
RPG	Yes	Yes	Yes	Yes	Yes
FORTRAN	Yes	Yes	Yes	Yes	No
BASIC	Yes	Yes	Yes	Yes	Yes
Assembler	Yes and macro	Yes and macro	Yes and macro	Yes and macro	Yes
Other programming languages	PASCAL, TIFORM,	PASCAL, TIFORM	PASCAL, TIFORM	PASCAL, TIFORM	Procedure
Multiprogramming	Yes, variable	Yes, variable	Yes, variable	Yes, variable	Yes; 11 users
Max. no. of jobs run concurrently	Varies	Variable	Variable	Variable	—
Language complemented in firmware	No	No	No	No	Partially
Op. sys. implemented in firmware	No	No	No	No	Partially
General accounting packages	No	No	No	No	Yes
Industry application areas	No	No	No	No	No
Data base management system	Yes, DBMS 990	Yes, DBMS 990	Yes, DBMS 990	Yes, DBMS 990	No
File access methods supported	Seq., multi-key	Seq., multi-key index	Seq., multi-key index	Seq., multi-key index	Virtual index, rand.
Software separately priced	Yes	Yes	Yes	Yes	Yes
Technical help separately priced	Yes	Yes	Yes	Yes	No
LEASE/MAINTENANCE OPTIONS					
Lease plans available	90 days; 1, 3, 5 yrs.	90 days; 1 to 5 years	1, 3, 5 year	1, 3, 5 year	2, 3, 5-year
Maintenance plans available	On-call, third party	Contract, on-call	On-call, factory return	On-call, factory return	Contract
PRICING & AVAILABILITY					
Purchase price of basic system, $	44,250 (H/W only)	52,750 (H/W only)	75,750 (H/W only)	86,000 (H/W only)	22,000
Monthly rental of basic system, $	1,684 (3 yr. lease)	NA	2,749 (3 yr. lease)	3,098 (3 yr. lease)	—
Monthly maint. price of basic system, $	333	500	625	645	235
Monthly maint. bundled with rental, $	Yes	—	Lease only	Lease only	—
Purchase price of:					
additional memory module, $	3,250 (128K)	2,000 (64K)	3,500 (128K)	3,500 (128K)	5,000 (64K bytes)
additional workstations, $	2,150 (w/dual control	1,975 (w/o control)	1,975	1,975	2,800
additional printer, $	2,745 (150 cps)	2,705 (150 cps)	2,705 (150 cps)	2,705 (150 cps)	3,200 (120 cps)
Discounts available	Quantity	Quantity	Quantity	Quantity	—
Date of first U.S. delivery	NA	NA	NA	NA	December 1977
Number installed to date	NA	NA	NA	NA	NA
COMMENTS			Additional workstation includes dual controller	Additional workstation includes dual controller	

Small Business Computer Specifications

MANUFACTURER AND MODEL	Wang VS-100	Wang 2200 LVP	Wang 2200 MVP	Wang 2200 SVP
WORD LENGTH, BITS	32	—	8-bit byte	—
CPU				
Model	Wang 2200VS-E	Wang 2200 LVP	Wang 2200 MVP	Wang 2200 SVP
Add time, microseconds	NA	—	130 (13 digits)	—
No. of I/O ports on basic sys. and max.	8; 32	3, 7	9	NA
INTERNAL STORAGE				
Type	MOS	MOS/RAM	MOS	MOS/RAM
Capacity of basic system, bytes	256K	32K	16K	32K
Maximum capacity, bytes	512K	128K	64K	64K
Increment size, bytes	64K	32K	16K, 32K	32K
Cycle/access time, microseconds	0.66	0.60	0.6	0.60
MASS STORAGE				
Floppy disk (diskette) drive	Std.; 318K bytes	Std. & opt.; 1M bytes each	Opt.; 786K bytes	Std. & opt.; 1M bytes each
Maximum diskette storage	—	2M bytes	—	2M bytes
Cartridge disk drive	Yes; 45M bytes	Opt.; 8M bytes	Opt.; 20M bytes	Opt.; 4M bytes
Pack disk drive	Yes; 72M bytes	—	No	—
Fixed-head disk/drum	No	—	No	—
Maximum disk storage	800M bytes	160M bytes	—	5M bytes
WORKSTATIONS				
Maximum number connectable	32	4	8	1
Recommended maximum number	—	4	8	1
Keyboard style	Type.; num. key.	—	Type.; num. key.	—
Workstation printer	Optional	Yes	—	Yes
INPUT/OUTPUT DEVICES				
Serial printer	Opt.; 120 cps	No	Opt.; 200 cps	No
Line printer	—	Opt.; 200-600 cps	Opt.; to 600 lpm	Opt.; 200-600 cps
Reel-to-reel tape drive	Opt.; 120KBS	Opt.; 1600 bpi	Opt.; 120KBS	—
Cassette/cartridge tape drive	No	—	No	—
CRT	Std.; 24 x 80 char.	Opt.; 1920 char.	Opt.; 24 x 80 char.	Opt.; 1920 char.
Other	—	—	Opt. paper tape	—
COMMUNICATIONS				
Maximum no. of lines	3	2 to 5	5	1
Synchronous	Opt.; to 9600 bps	Opt.; 300-9600 bps	Opt.; to 4800 bps	Opt.; 300-9600 bps
Asynchronous	No	Opt.; 300-9600 bps	Opt.; to 9600 bps	Opt.; 300-9600 bps
Protocols supported	—	2780/3780/3271	Async, bisync	2780/3780/3275
Network architecture supported	—	—	—	—
RJE terminals emulated	—	2780/3780	—	2780/3780
IBM 3270 emulation	—	Yes	—	Yes
SOFTWARE SUPPORT				
COBOL	Yes	No	No	No
RPG	Yes	No	No	No
FORTRAN	No	No	No	No
BASIC	Yes	Yes	Yes	Yes
Assembler	Yes	No	No	No
Other programming languages	Procedure	No	None	No
Multiprogramming	Yes; 32 users	Yes, 16 partitions	Yes; 16 partitions	No
Max. no. of jobs run concurrently	—	16	16	1
Language complemented in firmware	Partially	No	Fully	No
Op. sys. implemented in firmware	Partially	No	Partially	No
General accounting packages	Yes	Yes	Yes	Yes
Industry application areas	No	Yes	Mfg., dist., insur.	Yes
Data base management system	No	—	No	—
File access methods supported	Virtual index, rand.	KFAM/HIKAM	Rand., seq., index	RFAM/HIKAM
Software separately priced	—	—	Yes	—
Technical help separately priced	—	No	No	No
LEASE/MAINTENANCE OPTIONS				
Lease plans available	2, 3, 5-year	1 year	2, 3, 5-year	1 year
Maintenance plans available	Contract	Yes	Contract	Yes
PRICING & AVAILABILITY				
Purchase price of basic system, $	22,000	8,000	9,000	6,000
Monthly rental of basic system, $	—	—	—	—
Monthly maint. price of basic system, $	235	80	55	68
Monthly maint. bundled with rental, $	—	—	Yes	—
Purchase price of:				
additional memory module, $	5,000 (64K bytes)	3,000 (32K)	4,000 (32K bytes)	3,000 (32K)
additional workstations, $	2,800	2,700	2,600	2,700
additional printer, $	3,200 (120 cps)	Varies	5,000 (200 cps)	Varies
Discounts available	—	—	—	—
Date of first U.S. delivery	December 1977	—	January 1978	—
Number installed to date	NA	—	NA	—
COMMENTS				

Small Business Computer Specifications

MANUFACTURER AND MODEL	Wang 2200VP	Xerox Diablo 3000	Xerox Diablo 3200	Xerox 510
WORD LENGTH, BITS	8-bit byte	8 + parity	8 + parity	8 + parity
CPU				
Model	Wang 2200VP	Diablo 3000	Diablo 3200	510
Add time, microseconds	130 (13 digits)	16.7/6 digits	23.9/6 digits	16.7 (6 digits)
No. of I/O ports on basic sys. and max.	9	—	—	—
INTERNAL STORAGE				
Type	MOS	MOS	MOS	MOS
Capacity of basic system, bytes	16K	32K	24K	32K
Maximum capacity, bytes	64K	64K	64K	64K
Increment size, bytes	16K	16K	8K or 16K	16K
Cycle/access time, microseconds	0.6	.410/.250	0.488/0.300	.410/.250
MASS STORAGE				
Floppy disk (diskette) drive	Opt.; 786K bytes	Std.; 2.5M bytes	Std.; 5M bytes	Std.; 1.25M bytes
Maximum diskette storage	—	5M bytes	20M bytes	2.5M bytes
Cartridge disk drive	Opt.; 20M bytes	No	Opt.; 20M bytes	No
Pack disk drive	No	No	No	No
Fixed-head disk/drum	No	No	No	No
Maximum disk storage	—	—	20M bytes	—
WORKSTATIONS				
Maximum number connectable	4	1	9	4
Recommended maximum number	4	1	4-9 (job depend.)	4
Keyboard style	Type.; num. key.	Type.; num. key.	Type.; num. key.	Type.; num. key.
Workstation printer	—	1 Standard	Opt.; 8 max.	1 standard
INPUT/OUTPUT DEVICES				
Serial printer	Opt.; 200 cps	Std.; 40, 45 cps	Std.; 40, 45, 200 cps	Std.; 35-200 cps
Line printer	Opt.; to 600 lpm	No; or 200 cps	No	No
Reel-to-reel tape drive	Opt.; 120KBS	No	No	No
Cassette/cartridge tape drive	No	No/No	No/No	No/No
CRT	Opt.; 24 x 80 char.	Std.; 1920, 24 x 80	Std.; 1920, 24 x 80	Std.; 1920 char.
Other	Opt. paper tape	—	—	—
COMMUNICATIONS				
Maximum no. of lines	5	No	9	1
Synchronous	Opt.; to 4800 bps	No	Opt.; to 9600 bps	Opt.; to 9600 bps
Asynchronous	Opt.	No	Opt.; to 9600 bps	Opt.; to 9600 bps
Protocols supported	Async, bisync	No	Bisync	Bisync, 2780/3780
Network architecture supported	—	No	No	No
RJE terminals emulated	—	No	IBM 2780	2780/3780
IBM 3270 emulation	—	No	No	No
SOFTWARE SUPPORT				
COBOL	No	No	No	No
RPG	No	No	No	No
FORTRAN	No	No	No	No
BASIC	Yes	No	No	Yes
Assembler	No	Yes	Yes	Yes
Other programming languages	None	DACL*	DACL*	DACL*, ABL
Multiprogramming	No	Yes; 8	Yes; 16 partitions	No
Max. no. of jobs run concurrently	4	8 (7 background)	16 (7 background)	NA
Language complemented in firmware	Fully	No	No	No
Op. sys. implemented in firmware	Partially	No	No	No
General accounting packages	Yes	Yes	Yes	Yes
Industry application areas	Mfg., dist., insur.	Dist., mfg., acctg.,	Dist., mfg., acctg.	Acctg., mfg.
Data base management system	Yes	No	No	No
File access methods supported	Rand., seq., index	Seq., rand., seq. index	Seq., rand., seq. index	Random, seq., ISAM
Software separately priced	Yes	Yes (application soft.)	Yes (application soft.)	Yes
Technical help separately priced	No	Yes	Yes	Yes
LEASE/MAINTENANCE OPTIONS				
Lease plans available	2, 3, 5-year	Various	Various	Various
Maintenance plans available	Contract	On-call	On-call	On-call
PRICING & AVAILABILITY				
Purchase price of basic system, $	8,000	15,950	18,950	See Comments
Monthly rental of basic system, $	—	Various	Various	See Comments
Monthly maint. price of basic system, $	45	Various	Various	NA
Monthly maint. bundled with rental, $	Yes	No	No	NA
Purchase price of:				
additional memory module, $	2,500 (16K bytes)	—	—	See Comments
additional workstations, $	2,600	Various	Various	See Comments
additional printer, $	14,000 (400 lpm)	—	—	See Comments
Discounts available	—	—	—	Yes
Date of first U.S. delivery	November 1978	October 1979	December 1976	April 1980
Number installed to date	NA	NA	NA	NA
COMMENTS		*DACL compiler language is a high-level, Eng.-like language source statement compiler	*DACL compiler language is a high-level, Eng.-like language source statement compiler	*DACL compiler language is a high-level Eng.-like language source statement compiler; prices are set by retail outlet; autofile access program provided