**Fortune Systems Corp Fortune 32:16**

**PS-10, PS-20, XP-20 & XP-30**

### Profile

**Operating System**
- FOR:PRO single-/multiuser multitasking operating system based on Bell Lab's Version 7 and System III UNIX, and includes features from Berkeley 4.1 BDS.

**Data Management**
- Operating system provides standard data management facilities; Science Management Corporation's IDOL relational database management system.

**Communications/Networks**
- General asynchronous communications; batch bisequential emulation for IBM 370, 3741, 2770, and 2968; interactive bisequential emulation for 3274.

**Languages**
- CBASIC 16, ANSI-74 Level 2 COBOL, FORTRAN-77, Pascal, SMC BASIC, and "C."

**Models**
- PS-10, PS-20, XT-20, and XP-30.

**CPU**
- Motorola 68000 operating at 5.5-MHz cycle time.

**Memory**
- All models can be expanded to 1M bytes of memory.

**Chassis Slots**
- All models have 5 memory slots, one of which is used for error checking and correction; the PS models have 3 I/O expansion slots, while the XP models have 5; however, the PS models can be upgraded to XP systems.

**Ports**
- Standard asynchronous port; optional 2- or 4-port asynchronous controller and an optional 2- or 4-port intelligent communications controller.

### PURCHASE PRICE RANGE

<table>
<thead>
<tr>
<th>Package Description</th>
<th>Price Range</th>
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</thead>
<tbody>
<tr>
<td>Systems software</td>
<td>$995 to $4,375</td>
</tr>
<tr>
<td>packaged system/cpu complex</td>
<td>$7,995 to $14,995</td>
</tr>
<tr>
<td>memory</td>
<td>to $1,495</td>
</tr>
<tr>
<td>disk &amp; tape</td>
<td>to $10,740</td>
</tr>
<tr>
<td>terminals, printers &amp; other peripherals</td>
<td>to $6,554</td>
</tr>
<tr>
<td></td>
<td>$12K $24K $36K $48K $60K</td>
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</tbody>
</table>

### Mass Storage
- All models could be expanded to include 120M bytes of hard disk storage and tape cartridge.

### Terminals/Workstations
- Practical limit of approximately 12 on all models.

### Printers
- NEC letter-quality printers at speeds up to 55 cps; IDS Prism dot-matrix printers with speeds up to 150 cps.

### First Delivery
- Second quarter of 1982.

### Systems Delivered
- Information not available.

### Comparable Systems
- Any microprocessor built around Motorola 68000 chip having prices between $5,000 and $15,000.

### Vendor
- Fortune Systems Corporation; 101 Twin Dolphin Parkway, Redwood City, CA 94065 • 415-595-8444.

### Canada
- Distributed in large cities throughout Canada • Call 415-592-5140 for local Canadian distributor.

### Distribution
- Through manufacture's direct sales force, OEMs, and ComputerLand stores.

### ANALYSIS

Fortune Systems Corporation has designed the Fortune 32:16 for the small- to medium-size business market. The system is built around a Motorola 68000 microprocessor and uses an enhanced proprietary version of the UNIX operating system, which uses a menu-driven shell that makes UNIX transparent to the user. The native speed of the Motorola 68000 is 8 MHz, but the Fortune 32:16 series...
Fortune Systems Corp Fortune 32:16
PS-10, PS-20, XP-20 & XP-30

operates at 5.5 MHz, giving it more power than 8-bit micros, but not as much power as those systems operating at speeds closer to the maximum. The Fortune 32:16 is available in both single-user and multiuser versions. When the series was first announced, a single-user floppy-based version was supposed to be available for under $5,000. That model has been dropped however. The latest models announced are broken into two models, the PS (Professional Series) and the XT (Expanded Series). The PS-10 and PS-20 models are single-user versions with 10M and 20M bytes of disk storage, respectively. Each includes 256K bytes of memory. The XP-20 and XP-30 are multiuser versions with 20M and 30M bytes of disk storage. Each of these models includes 512K bytes of memory.

The initial marketing strategy for the Fortune Systems was to use retail stores to distribute the Fortune 32:16. But the Fortune 32:16 is somewhat more sophisticated than other micros on the market. This fact coupled with obstacles common to many start-up microcomputer companies, such as delayed product shipments and a lag in setting up support functions, caused retailers without technical expertise not to push the sales of the 32:16. But with the recent ouster of Gary B. Friedman, founder and chairman of Fortune, the company has turned its attention toward those dealers with a system house orientation and toward retailers with either a business-solution focus, an outside sales force, or both. This is probably more in line with the niche in the market Fortune was looking for. After the initial start-up problems, Fortune has put together a good support staff, which has fixed most of the software problems that were in the initial releases. Hopefully, Fortune hasn't waited too long to do this.

Strengths

The most obvious attribute of the Fortune 32:16 is the multiuser capability. This multiuser capability in a desktop microprocessor gives the 32:16 a leg up on most of the competition by providing almost minicomputer capabilities in a desktop.

The FOR:PRO (UNIX-based operating system) is quite a nice operating system especially for those users doing their own development. Fortune has also added their own menu-driven shell to the operating system helping to make the UNIX base a little easier to work with. Also included with the UNIX base are over 300 utilities for data management, text editing, and development tools.

The maximum memory of 1M bytes, as well as the 80M bytes of disk storage on the 32:16, allows for a lot of growth for most users.

Limitations

Although the Fortune 32:16 is available as a single-user system, it appears that one of the major attributes is its multiuser capability. In addition, the operating system (UNIX-based FOR:PRO) is much more sophisticated than those used on single-user systems. This all leads to a problem in the initial marketing strategy of Fortune, in which they sell their product through retail outlet stores. In many cases, retail dealers do not have the time nor the support staff to understand the system, and thus unknowledgeable first-time users might have a difficult time with the operation of the system. In September of 1983 Fortune made strides to correct this problem by shifting its distribution to more sophisticated dealers including value-added firms.

Another problem affecting the 32:16 is the delay in delivery of the announced software products. Many of the packages were months late. This in itself might not be a major stumbling block, but some of the newer releases were supposed to increase response time when multusers were utilizing the system.

Documentation, especially in the area of the operating system, was initially not very good but has since been enhanced.

SOFTWARE

Terms & Support

Terms • FOR:PRO operating system bundled with system price • optional software products are available on a one-time fee basis. Support • corrective updates and enhancements from the manufacturer • support through distributors and dealers.

Software Overview

All Fortune Systems have bundled into the standard system price Fortune's FOR:PRO operating system. FOR:PRO is a Fortune-enhanced version of Bell Lab's UNIX operating system.

Various languages and programming software are available for program/system development including: Digital Research's C, UNIX Berkeley-based versions of FORTRAN-77 and Pascal; COBOL and "C".

Standard data management facilities are handled through the operating system, with Science Management Corporation's IDOL providing a relational database management system. Fortune:Word and Fortune:Word Plus provide word processing facilities, and Multiplan supports the electronic spreadsheet applications.

Fortune's ITE (Interactive Terminal Emulator) and FTF (Fortune To Fortune) packages handle asynchronous communications with standard ASCII terminals and networking with other Fortune or UNIX-based systems, respectively. In addition, batch asynchronous emulation is available for IBM 2770, 2780, 2968, 3741, and 3780 terminals.

A 7-package Business Accounting System is available as a total system or on an individual basis providing facilities for all standard accounting functions.

Operating Systems

FOR:PRO • single-/multiuser, multitasking operating system • based on the University of California at Berkeley's version of Bell Laboratories' UNIX operating system • Fortune has modified and enhanced UNIX in the areas of ease of use, flexible or hard disk support, automatic configuration, performance improvements, additional utilities, and a global menu interface • supports up to 1M bytes of memory; supports programs written in BASIC, FORTRAN-77, Pascal, and "C"; includes some 300 utilities for file management, text editing, and development tools • one of the major enhancements that was added is a shell program that presents users with a friendly, mistake-proof master menu containing 36 selections, arranged in 6 logical areas: business applications, professional tools, electronic office tools, communications, training/education, and system tools • included in basic system price.

Data Management

IDOL (Interactive Definition-Oriented Language) • a menu-driven, information management tool that uses a dictionary approach to data definition • data elements are defined by name.
along with specific attributes without concern for how the data elements are to be stored; when record formats are defined, IDOL maintains a cross-reference of where each data element is used; users can then maintain data, and define online inquiries and reports without writing application programs: 

□ Communications/Networks

The Fortune 32:16 supports asynchronous communications in interactive or batch mode, as well as in a networking environment using full-duplex asynchronous lines. Bisyronchronous communication is also supported by emulation of IBM 2770/3770, 3741, 2968, and 2770 terminals with the ability to transmit data, using an RS-232C interface at speeds up to 19.2K bps. Also, IBM 327X bisynchronous and SDLC communications, as well as multiuser passthrough using COBOL, are also supported. The Fortune 32:16 can utilize the Xerox/DEC/Intel baseband networking standard.

1000188-01 ITE (Interactive Terminal Emulator) • asynchronous interactive terminal emulator • allows a user to interact with another system emulating a Model 33 TTY or standard ASCII terminal • supports interactive and batch modes: 

1000188-01 FT (Fortune To Fortune) • asynchronous Fortune To Fortune communications • supports operations of Fortune and other UNIX-based operating systems; uses full-duplex asynchronous lines; provides CRC block validation • supports execution of applications on other UNIX-based systems:

1000188-01 Batch Bisynchronous Emulation • supports emulation of IBM 2770, 2780, 2968, 3741, and 3780 terminals uses RS-232C interface at speeds up to 19.2K bps.

1001048-01 Interactive Bisynchronous Emulation • supports emulation of IBM 3274, 3275, and 3276 terminals: 

□ Program Development/Languages

CBASIC 18 • a modified and enhanced version of Digital Research's CBASIC • includes features for automatic record locking that provides error-free utilization of data files in a multiuser environment; full implementation of the IEEE floating-point standard; and the ability to use "C" language subroutines from within CBASIC programs:

FORTRAN-77 • based on FORTRAN developed by UC Berkeley • provides 3 major language tools: RATFOR, STRUCT, and EFL, which greatly increase programmer productivity by translating and structuring FORTRAN source code and by providing additional programming aids; combines global and peephole optimization to produce efficient runtime code:

Pascal • based on Pascal compiler developed by UC Berkeley • conforms both to standard Pascal and to the full ISO Level I Pascal:

COBOL • ANSI-74 Level 2 implementation with various enhancements including an input screen generator and a 327X-type passthrough feature • compiler and runtime system:

□ Application Packages

FortuneWord • word processing package • provides functions for text editing, document management, printing, and limited calculations: 

FortuneWord Plus • provides all functions and features of FortuneWord as well as additional features such as multiple print queues; artwork space reservation; chained and nested printing; overflow pages; automatic table of contents generation; and various additional text editing commands:

Multiplan • electronic spreadsheet, multipurpose financial modeling and forecasting tool • supports a spreadsheet 63 columns wide, 255 rows deep, and several pages thick; cells can be 3 to 32 characters wide and their contents can be centered or aligned left, right, or by fixed decimal point; columns widths can be altered for single columns, a range of columns, or all columns in the document; supports displaying up to 8 windows simultaneously allowing the user to enter information and data in one area and view the effect it has on areas which would otherwise be off the screen; supports "what if" modeling; provides multiple-sheet editing feature which allows for the merging of selected data in the system with new documents being created; provides an ascending/descending sort; and includes a HELP facility developed by Microsoft Corporation:

Fortune Business Accounting System • integrated accounting packages that can be purchased as a complete system or on an individual standalone basis: 

Accounts Receivable • automates receivable process from confirming customer orders and checking customer credit to producing invoices and controlling inventory in multiple warehouse locations; functions include: matches all orders to available inventory and prepares detailed order acknowledgements; credit limit checking; supports online inquiry; multiple pricing methods including % discount, accounts payable, general ledger, purchase orders, payroll, and fixed assets. The description for each module follows.

Order Processing & Inventory Control • automates the entire order process from confirming customer orders and checking customer credit to producing invoices and controlling inventory in multiple warehouse locations; functions include: matches all orders to available inventory and prepares detailed order acknowledgements; credit limit checking; supports online inquiry; multiple pricing methods including % discount, accounts payable, general ledger, purchase orders, payroll, and fixed assets. The description for each module follows.

S=L=3

LCNS: one-time license fee. Prices effective as of October 1983.
individual reports for each company or profit center and an overall company summary:

Accounts Payable • automates entire vendor payment process by providing a flexible payment selection process • features include: providing payment options for all outstanding invoices or can be selected by specific due date or discount eligibility date; automatically prints payment checks, indicating the exact invoices paid and discounts taken; supports online inquiry; automatically tracks all issued checks, reconciles them against bank statements and provides Outstanding Checks and Cancelled Check Summaries; combines payments in daily or monthly check register with summaries by check number; by date; provides Open Payables Report, Payables Aging Report, and Cash Requirements Report; supports multiple locations; and provides detailed individual reports by company with an overall company summary:

General Ledger • automates entire bookkeeping process from posting of individual financial transactions to producing up-to-the-minute balance sheets and income statements • features include: handles budget information for up to 12 individual accounting periods; automatically provides comparisons such as allocated versus actual expenses incurred, and actual income versus forecasts; provides a trial balance with completely printed audit trails; calculates and compiles profit and loss statements from posting data providing information on month-to-date, year-to-date, actual versus budget comparisons, and monthly, quarterly, or previous year's comparisons; provides company analysis including such things as Ratio of Current Assets to Current Liabilities, Acid Test Ratio, Equity Ratio, Current Asset to Fixed Asset Ratio, Debt to Equity Ratio, and Inventory Turnover; and provides individual journals, statements, and reports for each entity with automatic combination into an overall company summary:

Purchase Orders • automates the entire purchase order process from initial order to receipt of merchandise in multiple warehouse locations • features include: generates detailed printed purchase orders and tracks and reports on status of each order at any given time; automatically issues stock receipt and confirmation reports; supports online inquiry; automatically updates inventory on entry of shipping receipts; Unit of Measure Conversion feature which automatically converts the way merchandise has been brought into the way it will be sold; supports LIFO/FIFO, Market Value, or Average Cost inventory valuations; purchase order reports provided include: Open Purchase Order Report, Purchase Order Status Report, Purchase Order Quantity Reports, Merchandise Receipt Confirmation, Journals, and Purchase Order Register; supports multiple locations with detailed individual reports for each company or profit center and an overall company summary:

Payroll • automates entire payroll process from generating and updating employee records to calculating earnings and deductions, and printing employee checks • features include: handles budget information for up to 12 payroll periods; supports 10 different standard voluntary deductions plus 5 miscellaneous deductions; reports provided are: Labor Distribution Report which automatically distributes payroll expenses to different departments or profit centers; Workers Compensation, Income Tax Tables, Nonemployment Insurance, Employee Listings, Form 941-A and Form W-2; supports multiple locations and provides detailed individual reports for each company or profit center as well as overall company summary:

Fixed Assets • automates the task of fixed asset accounting • features include support for 5 depreciation methods; the ability to transfer assets between profit centers within a company or between companies; online inquiry; maintenance information on asset depreciation • reports can list assets by type and number; by depreciation method used, or by asset value; supports multiple locations and provides detailed individual reports for each company or profit center as well as overall company summary:

HARDWARE

Terms, Support & Documentation

Terms • available on a purchase-only basis from manufacturer • also available through OEMs and Computerland stores.

Support • mail/carry-in corrective maintenance provided at no additional charge during initial 90-day warranty period • national service is available from Bunker-Ramo Customer Service throughout the U.S. in selected major metropolitan areas.

Documentation • online manuals and HELP menu; hard-copy manuals produced inhouse for Fortune Operating System.

Physical Specifications (H x W x D; Weight)

CPU • 5.8 x 22.3 x 13.9 inches; 30 pounds.

Monitor • 12.9 x 12.3 x 13.7 inches; 12 pounds.

Keyboard • 2.2 x 23.3 x 6.3 inches; 6 pounds.

Systems Overview & Configurability

The Fortune 32:16 series is built around a Motorola 68000 microprocessor operating at 5.5-MHz clock rate. The product is broken into the PS (Professional System) PS-10 and PS-20 and the XT (Expanded Performance) XT-20 and XP-30. One of the design features is the ability to expand the smallest packaged system into the largest possible system by simply adding parts. The difference in all the models is the amount of memory provided by the system, as well as the disk storage included.

The entry-level PS-10 and PS-20 systems are both packaged with 512K bytes of memory, a 5.25-inch 800K-byte floppy disk drive, 12-inch monochrome display with detachable keyboard, 3 input/output expansion slots, and a single RS-232 serial port expandable to 5. Hard disk storage provided on the PS-10 is 10M bytes, while the PS-20 provides 20M bytes. The PS models will support up to 5 users by attachment of 2- and 4-port serial asynchronous controllers and CRT's. Upgrade kits are also available which will expand the PS models to XP models.

The larger XP-20 and XP-30 systems are both packaged with 512K bytes of memory expandable to 1M bytes, a 5.25-inch 800K-byte floppy disk drive, 12-inch monochrome display with detachable keyboard, 5 input/output expansion slots, and a single RS-232 serial port expandable to 12. Hard disk storage provided on the XP-20 is 20M bytes, while the XP-30 provides 30M bytes. The XP models will support up to 12 users by attachment of multiple 4-port serial asynchronous controllers and CRT's. Maximum hard disk storage is 120M bytes using 4 50M-byte hard disks.

All 32:16 models will support attachment of a serial printer and a 20M-byte 0.25-inch streamer tape cartridge.

Maximum configurability is stated below; minimum configurations are discussed under Packaged Systems. Since PS Series models can be upgraded to XP Series, we will list the XP maximums.

XP Series System Maximums • 1M bytes of memory, practical limit of 12 terminals, 120M bytes of hard disk storage, and 2 printers.

Packaged Systems

PS-10 • MC 68000 microprocessor with 512K bytes of memory, 16K bytes of ROM, memory management unit, 3 I/O expansion slots, an RS-232 port, a 5.25-inch 800K-byte diskette with controller, a 5.25-inch 10M-byte Winchester hard disk with controller, CRT, and single-user FORTRAN operating system: $7,995

PS-20 • same as PS-10 except includes a 5.25-inch 20M-byte Winchester hard disk: $9,995

PRCH: purchase price. NA: not available. Prices effective as of October 1983.
XP-20 • MC 68000 microprocessor with 512K bytes of memory, 16K bytes of ROM, memory management unit, 2 memory expansion slots, 5 I/O expansion slots, an RS-232 port, a 5.25-inch 800K-byte diskette drive with controller, a 5.25-inch 20M-byte Winchester hard disk with controller, and multiser FOR:PRO operating system:

XP-30 • same as XP-20 except includes a 5.25-inch 30M-byte Winchester hard disk:

1001971-01 PS Second User Kit • 2 Port Comm A Board, FIS 1000 Work Station, and multiser FOR:PRO:

1001970-01 PS to XP-20 Upgrade Kit • 2 additional memory and I/O controller slots, 20M-byte Winchester disk, and multiser FOR:PRO:

1001970-02 PS to XP-30 Upgrade Kit • 2 additional memory and I/O controller slots, 30M-byte Winchester disk, and multiser FOR:PRO:

CPU

Motorola 68000 Processor • 16-bit internal (ALU) architecture, 16-bit data bus interface with 24-bit addressing to 16M bytes; CPU has eight 32-bit data registers and eight 32-bit address registers; two 32-bit stack pointers, a 16-bit status register and a 23-bit program counter • powerful 56 mnemonic instruction set includes 16- and 32-bit data manipulation, signed and unsigned multiply and divide, live basic addressing modes with pre- and post-incrementing, offsetting and indexing, seven levels of priority interrupt with 256 possible interrupt vectors, a trace mode, and sophisticated trap operations for debugging; Motorola "HMOS" technology large-computer geometric architecture.

Memory

The Fortune 32:16 series provides 5 memory slots which include one for an error checking and correction board, and 4 for either 128K-byte or 256K-byte memory boards.

1000034-01 • 128K-byte memory board with parity • requires expansion slot:

1000031-01 • 256K-byte memory board with parity • requires expansion slot:

I/O & Communications

There are 3 types of RS-232C serial communications available for attachment of various types of peripheral equipment. Available are a standard single asynchronous port, an optional 2- or 4-port asynchronous controller, and an optional 2- or 4-port intelligent communications controller. The intelligent communications controller includes its own Zilog Z80B microprocessor, buffer memory, and interprocessor communications port. In addition, an optional 1- or 2-port parallel I/O controller is available, that can function as an industry-standard (Centronics) printer interface or as an IEEE-488 General-Purpose Interface Bus. An Ethernet controller is also available supporting Ethernet local networking system.

Mass Storage

The processor cabinet on the Fortune 32:16 can accommodate 2 mass storage devices (5.25-inch diskette or hard disk). A Disk Expansion cabinet is available to house additional hard or diskette drives. A hard disk controller which supports up to 4 hard disks is required and is included in the price of the hard disk systems.

Diskette Storage

1000058-01 • 800K-byte (formatted) diskette drive • 5.25-inch, double-sided, double-density, 96-track-per-inch diskettes • 250-millisecond average access time:

Hard Disk Storage

1001030-01 • 5M-byte (formatted) hard disk with controller • 75-millisecond average access time:

1000081-01 • 5M-byte (formatted) hard disk:

1001030-02 • 10M-byte (formatted) hard disk with controller • 75-millisecond average access time:

1000081-02 • 10M-byte (formatted) hard disk:

1001030-03 • 20M-byte (formatted) hard disk with controller • 75-millisecond average access time:

1000081-03 • 20M-byte (formatted) hard disk:

1001032-01 Disk Expansion Cabinet • provides storage for 1 or 2 5.25-inch diskettes or hard disks • includes power supply:

Tape

1000695-01 Tape Cartridge Expansion Cabinet • includes 20M-byte, 0.25-inch streamer tape cartridge, integral controller, a parallel I/O controller, cables, and power supply:

Terminals/Workstations

1000091-01 FIS 1000 Intelligent Workstation • 12-inch, monochrome display and keyboard; 2000-character display (25 lines x 80 characters); vertical tilt from +15 degrees to -5 degrees, horizontal swivel 90 degrees; 256 upper- and lowercase characters standard; international character sets optional • 99-key, low-profile, detachable keyboard; sculptured standard typewriter keyboard layout; 15-key numeric pad; 9-key cursor control pad; 16 programmable function keys; full set of system-level function keys, including HELP, CANCEL, and DELETE:

Printer/Graphic

1000440-05 NEC 3500R Letter-Quality Printer • bidirectional 35-cps thimble printer • includes 10-foot cable:

1001035-01 • bidirectional tractor:

1001036-01 • cut-sheet guide:

1001037-01 • cut-sheet feeder:

1000440-08 NEC 7710R Letter-Quality Printer • bidirectional 55-cps thimble printer • includes 10-foot cable:

1001043-01 • bidirectional tractor:

1001044-01 • cut-sheet feeder:

1000440-04 IDS Prism 80 • 150-cps dot-matrix printer • includes 10-foot cable:

1000697-04 • auto-sheet feeder:

1000697-07 • auto-sheet feeder:
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1000440-02 IDS Prism 132 • 150-cps dot-matrix printer • includes 10-foot cable:

1,639

1000697-05 • auto-sheet feeder:

149

• END