HP 3000 Computer Systems

HEWLETT **hp** PACKARD

A family of compatible business systems for distributed data processing

Price/configuration guide

HP 3000 Series 30

HP 3000 Series 33

HP 3000 Series III

HP 3000 Computer Systems Price/Configuration Guide

HEWLETT **hp** *PACKARD*

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HP 3000
PRODUCT FAMILY

HARDWARE COMPARISONS
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The HP 3000 family of computers, comprised of Series 30, Series 33 and Series III systems, offers you a broad range of capabilities and performance. The expandable hardware configurations and upward software compatibility of all the models allow you to choose the system that best fits your current needs, while protecting your investment for the future. A full range of peripherals, programming languages, data base management packages, and hardware/software products for data communications exist for additional system enhancement. To simplify a comparison of the various systems, the comparison chart on the next page outlines the features of each.

HP 3000 Series 30
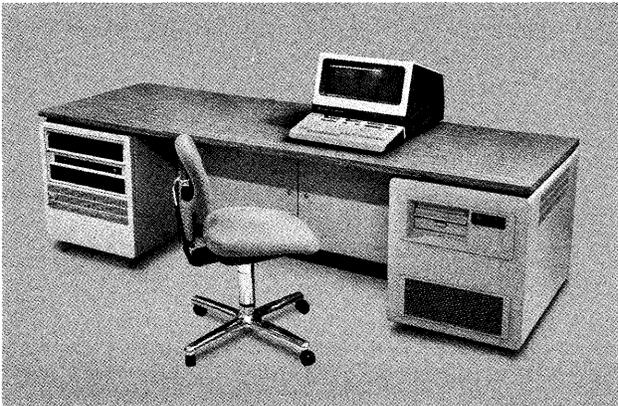
HP 3000 Series 33
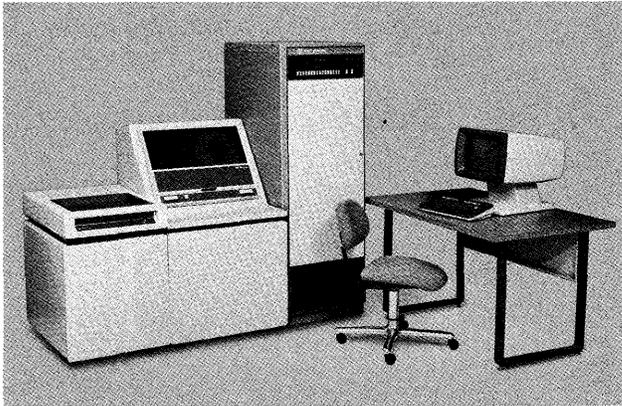
HP 3000 Series III

SERIES 30—SERIES 33—SERIES III
HARDWARE COMPARISON

FEATURES	SERIES 30*	SERIES 33	SERIES III
Central Processing Unit	214 firmware instructions	214 firmware instructions	209 firmware instructions
Fault Control Semiconductor Memory	256 Kb standard (1024 Kb maximum)	256 Kb standard (1024 Kb maximum)	256 Kb standard (2048 Kb maximum)
I/O Channel for Discs	1 Mb general I/O channel Up to 8 7906/7920/7925 disc drives	1 Mb general I/O channel Up to 8 7906/7920/7925 disc drives	2.8 Mb selector channel Up to 8 7920/7925 disc drives
Asynchronous Point-to-Point Terminal Ports	4 terminal ports standard (32 maximum) Modem control standard (103/212/202S)	8 terminal ports standard (32 maximum) Modem control standard (103/212/202S)	16 terminal ports standard (64 maximum) Modem control (103/212 standard; 202S optional)
Multipoint Terminal Ports	Not available	Not available	Up to 7 optional
Magnetic Tape	Up to 4 drives (1600 bpi)	Up to 4 drives (1600 bpi)	Up to 8 drives (800 or 1600 bpi)
Flexible Disc	1.2 Mb standard with system	1.2 Mb standard with system	Not available
Line Printers	Up to 2 line printers	Up to 2 line printers	Up to 4 line printers
I/O Slots	8 standard (8 maximum) Available for additional ADCCs (terminals), GICs, (mag tape) or INPs (distributed communications boards)	6 standard (13 maximum) Available for additional ADCCs (terminals), GICs, (mag tape) or INPs (distributed communications boards)	9 standard (29 maximum) Available for additional ATCs (terminals), printers card reader, card reader/ punch, paper tape reader, paper tape punch, magnetic tape or distributed communications boards

*Note: Maximum configuration involves trade-offs between magnetic tape drives, Intelligent Network Processors and terminal ports.

PRODUCT SUPPORT MATRIX FOR
HP 3000 SYSTEMS

Products supported on the Series 30, Series 33 and
Series III are shown in the chart. The support of hardware
and software products is subject to change, however,
with new releases of the MPE operating system.

MODEL NO.	DESCRIPTION	SERIES 30	SERIES 33	SERIES III

SOFTWARE SUBSYSTEMS

MODEL NO.	DESCRIPTION	SERIES 30	SERIES 33	SERIES III
32213C	COBOL/3000 Compiler	X	X	X
32104A	RPG/3000 Compiler	X	X	X
32102B	FORTRAN/3000 Compiler	X	X	X
32111A	BASIC/3000 Interpreter & Compiler	X	X	X
32105A	APL\3000 Language Subsystem	·		X
32100A	SPL/3000 Compiler	X	X	X
32205B	Scientific Library	X	X	X
32190A	DS/3000 Distributed Systems Software	X	X	X
30130E	RJE/3000 (2780/3780 Emulation)	X	X	X
32192A	MRJE/3000 Multileaving Remote Job Entry			X
32193A	MTS/3000 Multipoint Terminal Software			X
32380A	EDC/3000 Engineering Data Control	X	X	X
32384A	IOS/3000 Inventory and Order Status	X	X	X
32388A	MRP/3000 Material Requirements Planning	X	X	X
32392A	SPC/3000 Standard Product Costing	X	X	X
32900A	SIS/3000 Student Information System			X
32902A	CIS/3000 College Information System			X

PERIPHERALS

MODEL NO.	DESCRIPTION	SERIES 30	SERIES 33	SERIES III
7906M,S	20 Megabyte Cartridge Disc Drive	X	X	
7920M,S	50 Megabyte Disc Drive	X	X	X
7925M,S	120 Megabyte Disc Drive	X	X	X
2621X	Interactive Display Terminal	X	X	X
2640X	Interactive Display Terminal	X	X	X
2641A	APL Display Station			X
2645X	Interactive Display Station	X	X	X
2647A	Intelligent Graphics Terminal	X	X	X
2648A	Graphics Terminal	X	X	X
2635A	Printing Terminal	X	X	X
2631A	Dot Matrix Character Printer	X	X	
3075A	Desk Top Data Capture Terminal	X	X	X
3076A	Wall Mounted Data Capture Terminal	X	X	X
3077A	Time Reporting Terminal	X	X	X
7970B	800 bpi Digital Magnetic Tape Drive			X
7970E	1600 bpi Digital Magnetic Tape Drive	X	X	X
2613A	300 lpm Drum Line Printer			X
2608A	400 lpm Dot Matrix Line Printer	X	X	X
2617A	600 lpm Drum Line Printer			X
2619A	1000 lpm Chain Line Printer			X
30106A	Card Reader Subsystem			X
30119A	Card Reader Punch Subsystem			X
30105A	Paper Tape Punch Subsystem			X
30104A	Paper Tape Reader Subsystem			X
30126A	CalComp Plotter Interface Subsystem			X
7260A	Optical Mark Reader	X	X	X

*Support for foreign device users —There may be occasions when it is desired to interface a non-Hewlett-Packard product to an HP 3000. Support for
the foreign device and system modifications required to drive it are the responsibility of the customer. If the HP 3000 exhibits problems resulting from
the foreign device, the system must be reconfigured to its original Hewlett-Packard configuration and with the current supported version of the operating
system before service can be rendered under the Customer Maintenance Agreement. Hewlett-Packard will not warrant compatibility of operating systems,
user subsystems, or modifications to Hewlett-Packard hardware necessitated by design updates with any non-Hewlett-Packard product to an HP 3000.*

HP 3000
SERIES 30 AND
SERIES 33

HP 3000 SERIES 30 AND SERIES 33 CONFIGURATION OVERVIEW

To aid in configuring an HP 3000 Series 30 or Series 33 system, diagrams are included below. By following the steps indicated, it is simple to plan a new system or add to an existing one.

Selection Options

When choosing options denoted by circles, be certain to write the number of the interface slot which the option will occupy in the open circle beside the selected option, then cross out the numbered circle connected to the Inter-Module Bus (IMB) to show that interface slot is no longer available. For example,
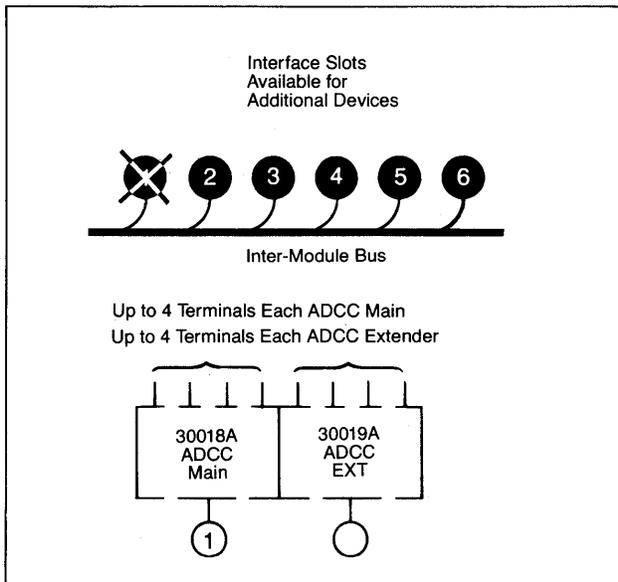
Interface Slots
Available for
Additional Devices

Inter-Module Bus

Up to 4 Terminals Each ADCC Main
Up to 4 Terminals Each ADCC Extender

30018A
ADCC
Main

30019A
ADCC
EXT

As a result, the options that have been chosen and the interface slots they occupy will be evident at a glance. DO NOT EXCEED THE TOTAL NUMBER OF AVAILABLE INTERFACE SLOTS ON THE INTER-MODULE BUS.

Devices identified with triangles or squares will function only in the positions designated by matching geometric shapes.

Equipment supplied with the System Processor Unit.
Products in darkened boxes.

30078A   128 kb
30078A   128 kb

Memory Controller

Inter-Module Bus
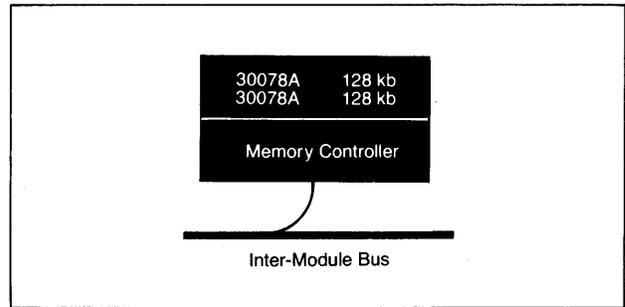
Equipment required, though ordered separately from System Processor Unit. Products in heavily outlined boxes.

2649E
System/Maintenance
Console

30018A
ADCC
Main
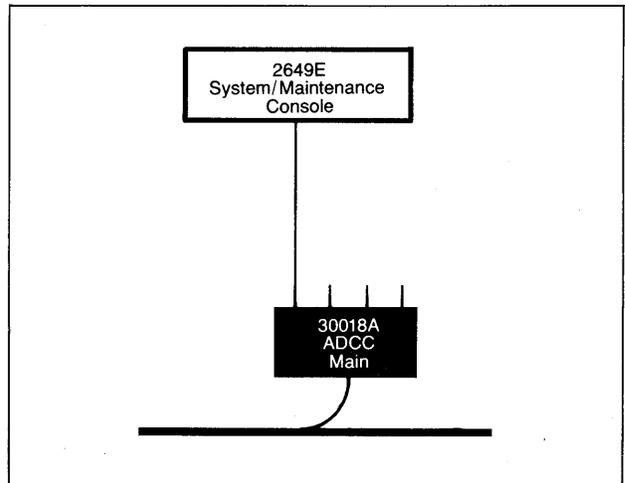
Optional equipment. Products in white boxes outlined by dashed lines.

Intelligent
Network Processor
(30020A)

7th Intelligent
Network Processor
(30020A)
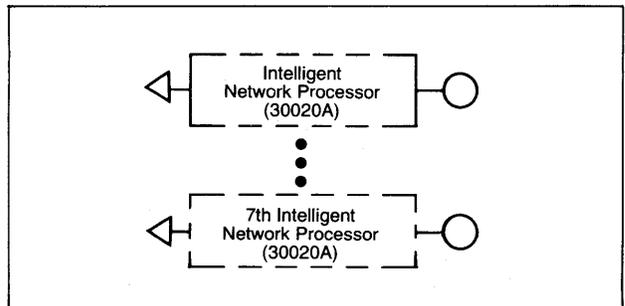
Connecting Additional Devices. Spare interface slots (numbered "circles") connected to the IMB are available for additional devices and can be interfaced to either Asynchronous Data Communication Controllers (ADCCs), General I/O Channels (GICs) or Intelligent Network Processors (INPs).

Connecting Additional Terminals. For the Series 30 one Asynchronous Data Communications Controller is supplied with the System Processor Unit (ADCC Main). This permits the connection of the system/maintenance console and up to three terminals.* The system/maintenance console is required and is ordered separately from the System Processor Unit. Additional terminal capacity may be added in groups of four to allow interfacing up to 32 terminals including the system/maintenance console. ADCC Extenders also provide additional terminal capacity.

One ADCC Extender is standard equipment on the Series 33. Always add an ADCC Extender to an existing ADCC Main before adding another ADCC Main. Option 030 for the ADCCs specifies a Series 30 ADCC cable.

Disc Drives. One system disc is required and is ordered separately from the System Processor Unit. 20 Mb, 50 Mb, or 120 Mb master disc drives (including controller) are available. The controller can handle a total of eight drives, hence 960 Mb maximum capacity for the system. For the Series 30 the system disc can be located 2 meters from the system; a 2 meter cable is provided with the system disc. For the Series 33 the system disc can be located 6 meters from the system.

Magnetic Tape Units. One Master 1600 bpi magnetic tape master drive with built-in controller is available and must be attached to a dedicated general I/O channel (GIC). Up to three additional slave magnetic tape drives may be attached to the master. All magnetic tape drives are enclosed in separate low-boy cabinets with sloping front access to the drives. The magnetic tape master drive controller can be located 6 meters from the system. Order option 030 to the GIC for a Series 30 cable. A 6 meter cable is provided.

Line Printers. A line printer with built-in controller can be attached to the general I/O channel supplied with the system processor unit. A maximum of two line printers, each with its own built-in controller, may be added to the system. Each printer comes with a 2 meter cable. One 2 meter extension cable may be added.

*For the Series 33 two Asynchronous Data Communications Controllers are supplied with the system processor unit. This permits the connection of the system/maintenance console and up to seven terminals.

Data Communications. For a Series 30 up to two Intelligent Network Processor (INP) boards may be configured. For a Series 33 up to seven INP boards are configurable, 3 in the first card cage and 4 in the second. To configure the first INP in the second card cage of a Series 33, order 30020A-001 extender cable. Each INP board requires one I/O slot and a connection to a GIC.

Additional Memory. 256 Kb of fault control memory is supplied with the System Processor Unit. System memory sizes of 512 Kb, 768 Kb, and 1024 Kb are also available. Up to 1024 Kb, order the proper number of 128 Kb memory array boards to constitute the desired size system.

Series 30 I/O Expansion. The system processor unit contains 8 I/O slots. No additional slots are available.

Series 33 I/O Expansion. To obtain seven additional I/O slots (beyond the six in the system processor unit) order an I/O expansion kit (30416A).

Environmental Specifications

The following specifications apply to any HP 3000 Series 30 and Series 33 configured with any combination of the peripherals supported. It is not necessary to consider each device separately.

Temperature (operating): 50°-95°F (10°-35°C)

Recommended temperature range for most reliable operation: 68°-86°F (20°-30°C)

Relative Humidity: 30-80% non-condensing. 40%-60% optimal. Maximum wet bulb temperature, 78°F (25°C)

Line Voltage: Series 33: 200/210/220/230/240 VAC +4%, −10% single phase. Series 30: 100 or 120 (220 or 240) VAC +4%, −10% 60 Hz (50 Hz) single phase.

Line Frequency: 50 or 60 Hz ± 0.5 Hz

Maximum Rate of Temperature Change: 18°F/Hr (10°C/Hr)

HP 3000 SERIES 30
SYSTEM PROCESSOR UNIT

Hardware Supplied

- Central Processing Unit
- 214 firmware instructions
- System Clock
- 4 asynchronous terminal ports via one Asynchronous Data Communications Controller (ADCC)
- Modem support (for type 103/212/202S)
- General I/O Channel for discs, line printers, flexible disc and Intelligent Network Processors (INPs)
- 256Kb fault control memory with memory controller
- System cabinet, one card cage and power supplies
- 1.2 Mb flexible disc (double sided) with controller
- 8 spare I/O slots and space for 1024Kb memory
- Room for 31 terminals plus system/maintenance console

Required Hardware Ordered Separately

- System/maintenance console ·
- System disc with controller (20 Mb, 50 Mb or 120 Mb)

Software Supplied

Standard on each HP 3000 system is the Fundamental Operating Software which includes:

- Multiprogramming Executive III (MPE III) Operating system
- Text editor (EDIT/3000)
- File copying utility (FCOPY/3000)
- Sort and merge package (SORT-MERGE/3000)
- Data base management system (IMAGE/3000)
- Data base inquiry language (QUERY/3000)
- Keyed Sequential Access Method Software (KSAM/3000)
- Forms management software (HP VIEW/3000)
- Facility to execute compiled programs without the source language compiler on the system (except for programs written in APL\3000).

HP 3000 Series 30 Minimum Configuration

1.2 Mb Flexible Disc

System Processor Unit

Terminal ports and I/O cables accessible at rear of System Processor Unit

20 Mb Cartridge Disc

100 or 120 VAC 60 Hz single phase power (200 or 240 VAC 50 Hz)

System/Maintenance Console
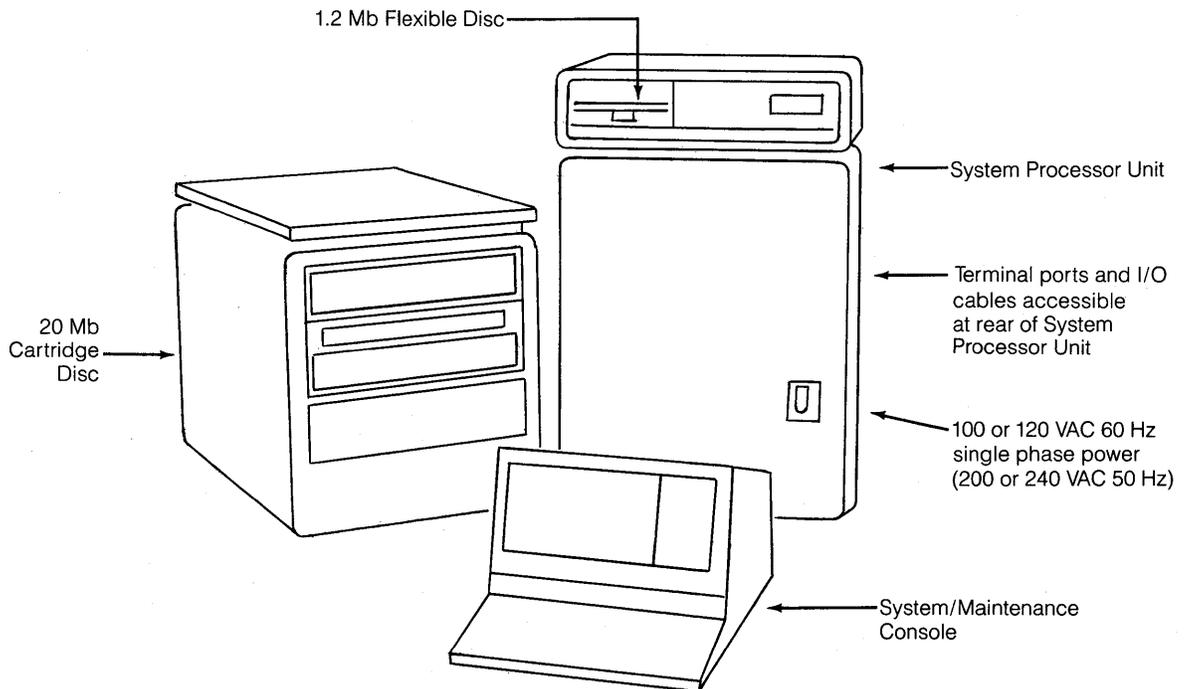
Note: Power outlets for disc and terminal not provided in System Processor Unit. Under certain power line conditions at the system site, an isolation transformer or other line conditioning equipment may be required. Refer to Site Preparation section of this guide.

Maximum Configuration Diagram For Series 30 (Models 32430B, 32431B)

SOFTWARE			
✓ Fundamental Operating Software		32104A	RPG/3000
32111A	BASIC/3000	32205B	Scientific Library
32213C	COBOL/3000	32392A	SPC/3000
32190A	DS/3000	32100A	SPL/3000
32380A	EDC/3000		
32102B	FORTRAN/3000		
32384A	IOS/3000		
32388A	MRP/3000		
30130E	RJE/3000		

Memory Sizes Supported

1024 kb	30078A	128 kb
	30078A	128 kb
768 kb	30078A	128 kb
	30078A	128 kb
512 kb	30078A	128 kb
	30078A	128 kb
256 kb	30078A	128 kb
	30078A	128 kb

Memory Controller

7906S/7920S/7925S
2nd through
8th Disc

Note: Maximum of 8
7906/7920/7925 drives
per system

2649E
System/Maintenance
Console

Supports
103/212/202S Modems

Line Printers

1.2 Mb Flexible Disc and Controller

Up to 3 Terminals

Available Interface Slots

7906M/7920M/7925M
System Disc Master
with Option 102

30079A
General I/O
Channel

INPs

30018A
ADCC
Main

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

CPU

Inter-Module Bus

Up to 4 Terminals Each ADCC Main (Asynchronous Data Communications Controller) Up to 4 Terminals Each ADCC Extender

30091A-030
ADCC
EXT

30018A-030
ADCC
Main

30019A-030
ADCC
EXT

30018A-030
ADCC
Main

30019A-030
ADCC
EXT

30018A-030
ADCC
Main

30019A-030
ADCC
EXT

Note: Maximum of 31 terminals per system plus console. ADCCs connect to interface slots. To expand terminal capacity, add ADCCs singly or in pairs. Always add one ADCC extender to an ADCC main before adding another ADCC main. ADCC main supports 103, 212, and 202S modems in the U.S. Addition of ADCC extender adds support for Data Rate Select (CCITT 117 required for European half-duplex modems) to all eight ADCC ports.

■ Supplied

☐ Required. Must be ordered separately

⌐ ⌐ Optional

Line Printer and Integrated Controller

Note: Maximum of 2 line printers per system. (Models 2608A-333 or 2631A-333) Line printers attach to General I/O Channel supplied

Line Printer and Integrated Controller

Intelligent Network Processor (30020A)

Note 1: INP cards require attachment to an I/O slot and to the General I/O channel supplied

Intelligent Network Processor (30020A)

Note 2: Maximum 2 Intelligent Network Processors.

Configuration Table Examples

I/O slots used for				
Terminals	7	6	5	6
Magnetic Tape Drives	1	1	1	0
INP(s)	0	1	2	2
Number of Physical Devices				
Terminals	32 terminals	28 terminals	24 terminals	28 terminals
Magnetic Tape Drives	4 magnetic tape drives	4 magnetic tape drives	4 magnetic tape drives	
INP(s)		1 INP	2 INPs	2 INPs

30079A-030
General I/O
Channel

7970E-426
1600 bpi Magnetic Tape
1st Drive and
Integrated Controller

7970E-421
2nd Tape
Drive

7970E-421
3rd Tape
Drive

7970E-421
4th Tape
Drive

Note: Maximum of 4 tape drives per system. Magnetic tape drive controller attaches to a dedicated general I/O channel.

GIC attaches to Interface Slot
Maximum of 2 GIC's per system.

SERIES 30 ORDERING GUIDE

To order an HP 3000 Series 30 computer system, follow the steps below:

A. Order one HP 3000 Series 30 System Processor Unit (60 Hz)

32430B   HP 3000 Series 30 System Processor Unit

Order any appropriate options

32430B-201 Add console table

B. Order one system disc

7906M   Master 20 Mb cartridge disc drive
7906M-102 Specifies HP-IB interface and 2M (6.56 ft) cable

OR

7920M   Master 50 Mb disc drive
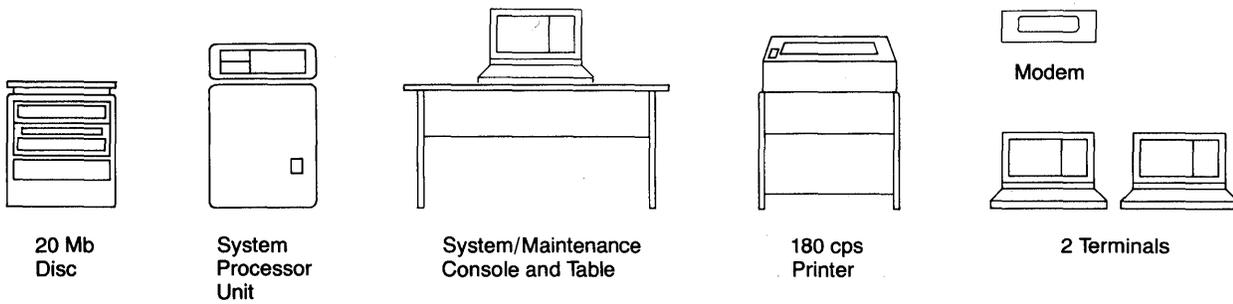7920M-102 Specifies HP-IB interface and 2M (6.56 ft) cable

OR

7925M   Master 120 Mb disc drive
7925M-102 Specifies HP-IB interface and 2M (6.56 ft) cable

C. Order one system/maintenance console

2649E   System/maintenance console (cables included)

SERIES 30 ORDERING EXAMPLE

| 20 Mb Disc | System Processor Unit | System/Maintenance Console and Table | 180 cps Printer | Modem 2 Terminals |

PRODUCT/ NUMBER	QTY.	PRODUCT	EXTENDED PRICE†	MONTHLY MAINT. CHARGE†
Processor 32430B 32430B-201	1 1	HP 3000 Series 30 System Processor Unit (60 Hz) System Table	$28,525 425	$226 0
System Console 2649E	1	System/maintenance console and cables	6,350	34
System Disc 7906M 7906M-102	1 1	Master 20 Mb disc drive HP-IB interface and 2M cable	14,000 875	82 5
Line Printer 2631A 2631A-333 26098A 26098A-002	1 1 1 1	180 cps dot matrix printer HP-IB interface and 2M cable Pedestal stand Paper catcher	3,350 290 275 50	31 0 0 0
Line Printer Extension Cable 31389B	1	HP-IB 2M cable	65	0
Terminals/Cables 2645A 13232Y	2 2	Display station EMP protect cable for 2645A	7,000 100	40 0
Data Comm* 30020A 30221A	1 1	Intelligent Network Processor Synchronous Modem Cable	4,500 250	34 0
Modem 37210T 37210T-003	1 1	4800 bps modem Auto answer U.S.A.	4,350 270	32 1
		TOTALS	**$70,675**	**$485**

*A data communications software product should be ordered separately.

†Domestic U.S.A. prices only, and subject to change without notice. For a firm quotation, contact your Hewlett Packard Sales Representative.

HP 3000 SERIES 33
SYSTEM PROCESSOR UNIT

Hardware Supplied

- Central processing unit (CPU)
- 214 firmware instructions
- System clock
- 8 asynchronous terminal ports via two Asynchronous Data Communications Controllers (ADCCs)
- Modem support (for type 103/212/202S)
- General I/O Channel for discs
- General I/O Channel for line printers, flexible disc and Intelligent Network Processors (INPs)
- 256Kb fault control memory with memory controller
- System desk mainframe, one card cage, and power supplies
- 1.2 Mb flexible disc (double-sided) with controller
- 6 spare I/O slots and space for 1024Kb memory
- Space for 31 terminals plus system/maintenance console
- Built-in isolation transformer

### Required Hardware Ordered Separately

- System/maintenance console
- System disc with controller (20 Mb, 50 Mb or 120 Mb)

Software Supplied

Standard on each HP 3000 system is the Fundamental Operating Software which includes:

- Multiprogramming Executive III (MPE III) Operating system
- Text editor (EDIT/3000)
- File copying utility (FCOPY/3000)
- Sort and merge package (SORT-MERGE/3000)
- Data base management system (IMAGE/3000)
- Data base inquiry language (QUERY/3000)
- Keyed Sequential Access Method Software (KSAM/3000)
- Forms management software (HP VIEW/3000)
- Facility to execute compiled programs without the source language compiler on the system (except for programs written in APL\3000)

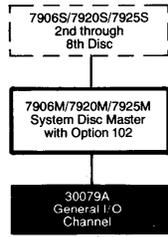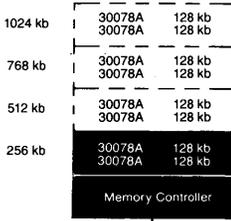## HP 3000 Series 33 Minimum Configuration
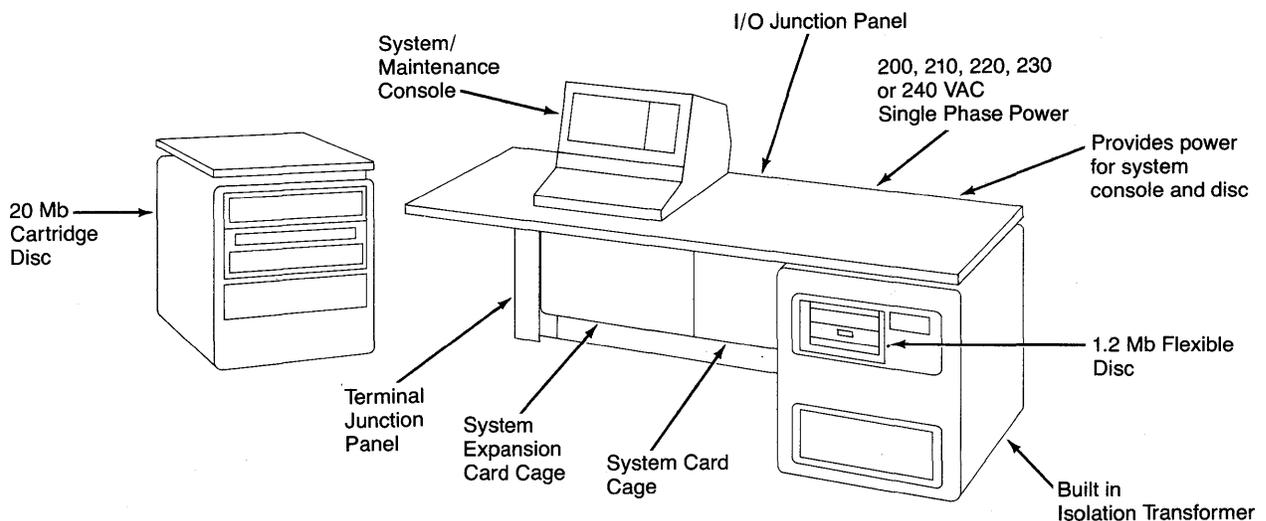
Note: Under certain power line conditions at the system site, an isolation transformer or other line conditioning equipment may be required for add-on disc and magnetic tape drives.

Maximum Configuration Diagram For Series 33 (Models 32412B, 32413B)

SOFTWARE

✓	Fundamental Operating Software	32104A	RPG/3000
	32111A BASIC/3000	32205B	Scientific Library
	32213C COBOL/3000	32392A	SPC/3000
	32190A DS/3000	32100A	SPL/3000
	32380A EDC/3000		
	32102B FORTRAN/3000		
	32384A IOS/3000		
	32388A MRP/3000		
	30130E RJE/3000		

Memory Sizes Supported

1024 kb	30078A 30078A	128 kb 128 kb
768 kb	30078A 30078A	128 kb 128 kb
512 kb	30078A 30078A	128 kb 128 kb
256 kb	30078A 30078A	128 kb 128 kb

Memory Controller

7906S/7920S/7925S 2nd through 8th Disc

Note: Maximum of 8 7906/7920/7925 drives per system

7906M/7920M/7925M System Disc Master with Option 102

2649E System/Maintenance Console

Line Printers

1.2 Mb Flexible Disc and Controller

Supports 103/212/202S Modems

Up to 3 Terminals   Up to 4 Terminals

30079A General I/O Channel   INPs

30079A General I/O Channel   INPs

30018A ADCC Main   30019A ADCC EXT

CPU

Inter-Module Bus

Available Interface Slots ① ② ③ ④ ⑤ ⑥

Optional Interface Slots ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬
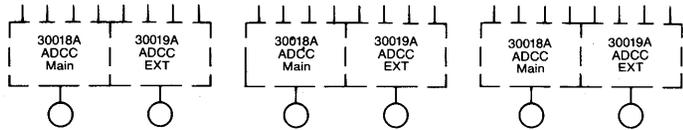
I/O expansion beyond six slots requires use of second card cage. Order 30416A Expansion Kit.

Up to 4 Terminals Each ADCC Main (Asynchronous Data Communications Controller) Up to 4 Terminals Each ADCC Extender

30018A ADCC Main   30019A ADCC EXT

30018A ADCC Main   30019A ADCC EXT

30018A ADCC Main   30019A ADCC EXT

Note: Maximum of 31 terminals plus console. ADCCs connect to interface slots. To expand terminal capacity, add ADCC's singly or in pairs. Always add one ADCC extender to an ADCC main before adding another ADCC main. ADCC main supports 103, 212, and 202S modems in the U.S. Addition of ADCC extender adds support for Data Rate Select (CCITT 12—required for European half-duplex modems) to all eight ADCC ports.

■ Supplied

□ Required. Must be ordered separately

⌐ ⌐ Optional

Line Printer and Integrated Controller

Line Printer and Integrated Controller
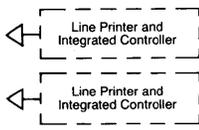
Note: Maximum of 2 line printers per system (Models 2608-A333 or 2631A-333) Line printers attach to General I/O Channel with 7902 flexible disc.

Intelligent Network Processor (30020A)

⋮

7th Intelligent Network Processor (30020A)
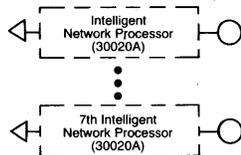
Note 1: Maximum of 7 Intelligent Network Processors per system.

Note 2: Up to 3 INP's may be configured into the first card cage. To configure the first INP in the second card cage, order 30020A-001 for extender cable.

Note 3: INP's 1 through 5 should be configured on the GIC with the flexible disc. INP's 6 and 7 are to be configured on the GIC with high speed discs.
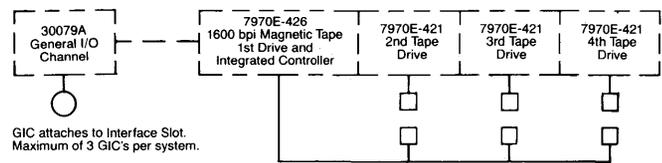
Configuration Table Example

I/O slots used for	In One Card Cage			In Two Card Cages
Terminals	6	5	3	6
Magnetic Tape Drives	0	1	0	0
INP(s)	0	0	3	7
Number of Physical Devices				
Terminals	32 terminals	28 terminals	20 terminals	32 terminals
Magnetic Tape Drives		4 magnetic tape drives		
INP(s)			3 INPs	7 INPs

30079A General I/O Channel

7970E-426 1600 bpi Magnetic Tape 1st Drive and Integrated Controller

7970E-421 2nd Tape Drive

7970E-421 3rd Tape Drive

7970E-421 4th Tape Drive

Note: Maximum of 4 tape drives per system. Magnetic tape drive controller attaches to a dedicated general I/O channel.

GIC attaches to Interface Slot. Maximum of 3 GIC's per system.

To order an HP 3000 Series 33 computer system, follow the steps below:

A. Order one HP 3000 Series 33 System Processor Unit (60 Hz)

32412B	HP 3000 Series 33 System Processor Unit

B. Order one system disc

7906M	Master 20 Mb cartridge disc drive
7906M-102	Specifies HP-IB interface and 2M (6.56 ft) cable

OR

7920M	Master 50 Mb disc drive
7920M-102	Specifies HP-IB interface and 2M (6.56 ft) cable

OR

7925M	Master 120 Mb disc drive
7925M-102	Specifies HP-IB interface and 2M (6.56 ft) cable

C. Order one system/maintenance console

2649E	System/maintenance console (cables included)

SERIES 33 ORDERING EXAMPLE

120 Mb Disc	System Processor Unit and System/Maintenance Console	1600 bpi Magnetic Tape	400 lpm Printer	5 Terminals	1 Modem
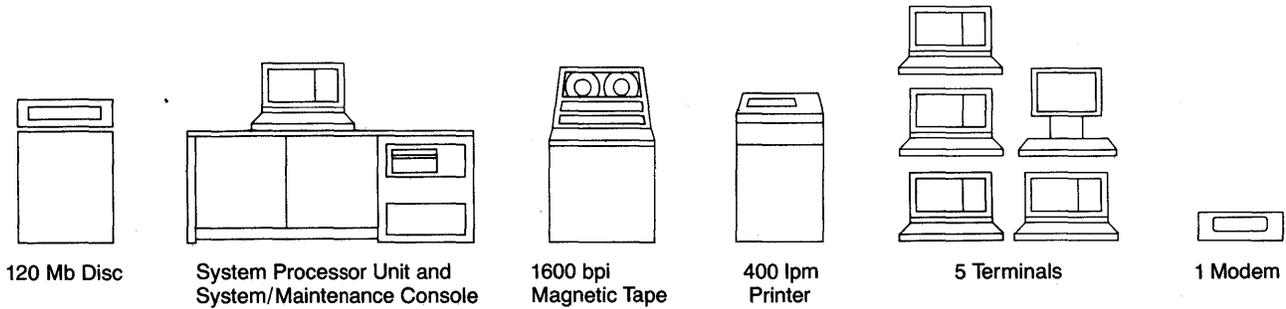
PRODUCT NUMBER	QTY.	PRODUCT	EXTENDED PRICE†	MONTHLY MAINT. CHARGE†
Processor 32412B	1	HP 3000 Series 33 System Processor Unit (60 Hz)	37,275	261
System Console 2649E	1	System/maintenance console and cables	6,350	34
System Disc 7925M 7925M-102	1 1	Master 120 Mb disc drive HP-IB interface and 2M cable	21,000 875	89 5
Add-On Memory 30078A	2	128Kb memory array	5,000	30
Magnetic Tape 7970E 7970E-426 30079A	1 1 1	1600 bpi, 45 ips magnetic tape Specify first (master) drive General I/O Channel	8,885 3,115 1,800	70 23 10
Line Printer 2608A 2608A-110 2608A-333	1 1 1	400 lpm dot matrix printer (Usage: 131-360 print hours) Add sound cover HP-IB interface and 2M (6.56 ft) cable	9,900 150 565	125 0 0
Extension Cable 31389B	1	HP-IB 2M (6.56 ft) cable	65	0
Terminals/Cables 2645A 2648A 13232Y 2621P 13222Y	3 1 4 1 1	Display station Graphics terminal EMP protect cable for 2645A Interactive terminal with printer EMP protect cable for 2621P	10,500 5,500 200 2,550 50	60 22 0 25 0
Data Comm* 30020A 30221A	1 1	Intelligent Network Processor Synchronous Modem Cable	4,500 250	34 0
Modem 37210T 37210T-003	1 1	4800 bps modem Auto answer U.S.A.	4,350 270	32 1
		TOTALS	$123,150	$821

*A data communications software product should be ordered separately.

†Domestic U.S.A. prices only, and subject to change without notice. For a firm quotation, contact your Hewlett-Packard Sales Representative.

HP 3000 SERIES 30 AND SERIES 33
SYSTEM PRICING GUIDE

PRODUCT NUMBER	OPT.	DESCRIPTION	PRICE†	MONTHLY MAINT. CHARGE†

Series 30 System Processor Unit

PRODUCT NUMBER	OPT.	DESCRIPTION	PRICE†	MONTHLY MAINT. CHARGE†
32430B (U.S.A. version)		**HP 3000 Series 30 System Processor Unit:** 100 or 120V, 60 Hz, single phase; 256Kb fault control memory; 1.2 Mb flexible disc; 4 port Asynchronous Data Communications Controller with type 103, 212, 202S modem support; 1 General I/O Channel; remote diagnostic capability; system cabinet. Fundamental Operating Software (MPE III operating system, EDIT/3000, FCOPY/3000, SORT-MERGE/3000, IMAGE/3000, QUERY/3000, HP VIEW/3000, KSAM/3000, and facility to execute compiled programs without the source language compiler on the system (except for programs written in APL\3000)). Complete user manual set. A SYSTEM DISC (7906M, 7920M, 7925M) WITH OPTION 102 FOR SERIES 30 INTERFACE AND CABLE IS REQUIRED AND MUST BE ORDERED SEPARATELY. A 2649E SYSTEM/MAINTENANCE CONSOLE IS REQUIRED AND MUST BE ORDERED SEPARATELY.	$28,525	$226
	201	Add console table	425	0
32431B (International version)		**HP 3000 Series 30 System Processor Unit:** 220 or 240V, 50 Hz, single phase; 256Kb fault control memory; 1.2 Mb flexible disc; 4 port Asynchronous Data Communications Controller with type 103, 212, 202S modem support; 1 General I/O Channel; remote diagnostic capability; system cabinet. Fundamental Operating Software (MPE III operating system, EDIT/3000, FCOPY/3000, SORT-MERGE/3000, IMAGE/3000, QUERY/3000, HP VIEW/3000, KSAM/3000, and facility to execute compiled programs without the source language compiler on the system (except for programs written in APL\3000)). Complete user manual set. A SYSTEM DISC (7906M, 7920M, 7925M) WITH OPTION 102 FOR SERIES 30 INTERFACE AND CABLE IS REQUIRED AND MUST BE ORDERED SEPARATELY. A 2649E SYSTEM/ MAINTENANCE CONSOLE IS REQUIRED AND MUST BE ORDERED SEPARATELY. ORDER OPTION 015 FOR EACH PERIPHERAL FOR 230V, 50 HZ, SINGLE PHASE OPERATION.	28,525	226
	201	Add console table	425	0

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PRODUCT NUMBER	OPT.	DESCRIPTION	PRICE†	MONTHLY MAINT. CHARGE†
32412B (U.S.A. version)		**HP 3000 Series 33 System Processor Unit:** 200-240V, 60 Hz, single phase; 256Kb fault control memory; 1.2 Mb flexible disc; 8 ports via two Asynchronous Data Communications Controllers with type 103, 212, 202S modem support; 2 General I/O Channels; remote diagnostic capability; system desk mainframe; isolation transformer included in desk mainframe. Fundamental Operating Software (MPE III operating system, EDIT/3000, FCOPY/3000, SORT-MERGE/3000, IMAGE/3000, QUERY/3000, HP VIEW/3000, KSAM/3000, and facility to execute compiled programs without the source language compiler on the system (except for programs written in APL\3000)). Complete user manual set. A SYSTEM DISC (7906M, 7920M, 7925M) WITH OPTION 102 FOR SERIES 33 INTERFACE AND CABLE IS REQUIRED AND MUST BE ORDERED SEPARATELY. A 2649E SYSTEM/MAINTENANCE CONSOLE IS REQUIRED AND MUST BE ORDERED SEPARATELY.	$37,275	$261
32413B (International version)		**HP 3000 Series 33 System Processor Unit:** 200-240V, 50 Hz, single phase; 256Kb fault control memory; 1.2 Mb flexible disc; 8 ports via two Asynchronous Data Communications Controllers with type 103, 212, 202S modem support; 2 General I/O Channels; remote diagnostic capability; system desk mainframe; isolation transformer included in desk mainframe. Fundamental Operating Software (MPE III operating system, EDIT/3000, FCOPY/3000, SORT-MERGE/3000, IMAGE/3000, QUERY/3000, HP VIEW/3000, KSAM/3000, and facility to execute compiled programs without the source language compiler on the system (except for programs written in APL\3000)). Complete user manual set. A SYSTEM DISC (7906M, 7920M, 7925M) WITH OPTION 102 FOR SERIES 33 INTERFACE AND CABLE IS REQUIRED AND MUST BE ORDERED SEPARATELY. A 2649E SYSTEM/ MAINTENANCE CONSOLE IS REQUIRED AND MUST BE ORDERED SEPARATELY. ORDER OPTION 015 FOR EACH PERIPHERAL FOR 230V, 50 HZ, SINGLE PHASE OPERATION.	37,275	261

Series 33 System Processor Unit

†Domestic U.S.A. prices only, and subject to change without notice. For a firm quotation, contact your Hewlett-Packard Sales Representative.

PRODUCT NUMBER	OPT.	DESCRIPTION	PRICE†	MONTHLY MAINT. CHARGE†

Memory and I/O Expansion

PRODUCT NUMBER	OPT.	DESCRIPTION	PRICE†	MONTHLY MAINT. CHARGE†
30078A		**128 Kb Fault Control 16K RAM Semiconductor Memory Array.** Order 128Kb arrays so that resulting system is 512 Kb, 768 Kb, or 1024 Kb; thus, 30078A boards must be ordered in pairs.	$ 2,500	$ 15
30018A		**Asynchronous Data Communications Controller (ADCC)**—Main (4 terminal ports). Includes 103,212, and 202 (US only) type modem support and 9600 baud communications. Includes one board and HP-IB cable for Series 33. When ordering Series 30 must order option 030.	1,600	7
	030	Replace Series 33 cable with Series 30 cable.	0	0
30019A		**Asynchronous Data Communications Controller (ADCC)**—Extender (4 terminal ports). Includes European 202S type modem support for ADCC-M and ADCC-E and 9600 baud communications. Order ADCC Extender after an ADCC Main. Includes one board and HP-IB cable for Series 33. When ordering Series 30 must order option 030.	1,600	7
	030	Replace Series 33 cable with Series 30 cable.	0	0
30079A		**General I/O Channel (GIC).** Order with the master magnetic tape drive to support magnetic tape drives on system. Includes one board and HP-IB cable for Series 33. When ordering for Series 30 must order option 030.	1,800	10
	030	Replace Series 33 cable with Series 30 cable.		
30416A		**HP 3000 Series 33 Expansion Kit.** Includes second card cage, cooling unit, and power supply. Provides 7 additional I/O slots.	7,500	20

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PRODUCT NUMBER	OPT.	DESCRIPTION	PRICE†	MONTHLY MAINT. CHARGE†
7906M		**Master 20 Mb Cartridge Disc.** Includes drive, cartridge, controller and low profile cabinet.	$14,000	$ 82
	015	Specifies 230V/50 Hz single phase operation. Specify destination country for correct power cord.	0	0
	102	Specifies HP-IB interface and 2M (6.56 ft) cable	875	5
7920M		**Master 50 Mb Disc.** Includes drive, pack, controller and low profile cabinet.	17,000	81
	015	Specifies 230V/50 Hz single phase operation. Specify destination country for correct power cord.	0	0
	102	Specifies HP-IB interface and 2M (6.56 ft) cable	875	5
7925M		**Master 120 Mb Disc.** Includes drive, pack, controller and low profile cabinet.	21,000	89
	015	Specifies 230V/50 Hz single phase operation. Specify destination country for correct power cord.	0	0
	102	Specifies HP-IB interface and 2M (6.56 ft) cable	875	5
7906S		**Add-on 20 Mb Disc Drive.** For use as second through eighth add-on drive. Includes 12940A cartridge, low-profile cabinet, and cables [2.44M (8 ft) multi-unit and 15.24M (50 ft) data cables].	10,000	55
	015	230V/50 Hz single phase operation. Specify destination country for correct power cord.	0	0
7920S		**Add-on 50 Mb Disc Drive.** For use as second through eighth add-on drive. Includes 7920, 13394A disc pack, cabinet, and cables [2.44 M (8 ft) multi-unit and 15.24M (50 ft) data cables].	13,000	54
	015	230V/50 Hz single phase operation. Specify destination country for correct power cord.	0	0
7925S		**Add-on 120 Mb Disc Drive.** For use as second through eighth add-on drive. Includes 7925, 13356A disc pack, cabinet and cables [2.44M (8 ft) multi-unit and 15.24M (50 ft) data cables].	17,000	62
	015	230V/50 Hz single phase operation. Specify destination country for correct power cord.	0	0
12940A		7906 Disc Cartridge	180	0
13394A		7920 Disc Pack	600	0
13356A		7925 Disc Pack	850	0

Disc Drives

†Domestic U.S.A. prices only, and subject to change without notice. For a firm quotation, contact your Hewlett-Packard Sales Representative.

PRODUCT NUMBER	OPT.	DESCRIPTION	PRICE†	MONTHLY MAINT. CHARGE†

Magnetic Tape Drives

PRODUCT NUMBER	OPT.	DESCRIPTION	PRICE†	MONTHLY MAINT. CHARGE†
7970E		**1600 bpi, 45 ips Magnetic Tape Drive.** Must order option 426 for master or 421 for slave drive. 9 track phase encoded, 115V/230V switch; 50/60 Hz. Power Cord supplied.	$ 8,885	70
	426	Specifies HP-IB Master drive. Includes lo-boy cabinet and HP-IB integrated controller. 6M (19.69 ft) data cable is included. A separate GIC is required and must be ordered separately (30079A for Series 33; 30079A-030 for Series 30)	3,115	23
	421	Specifies HP-IB Slave drive. Includes lo-boy cabinet and multi-unit cable: Cable length 6.10M (20 ft).	−105	−3

Line Printers

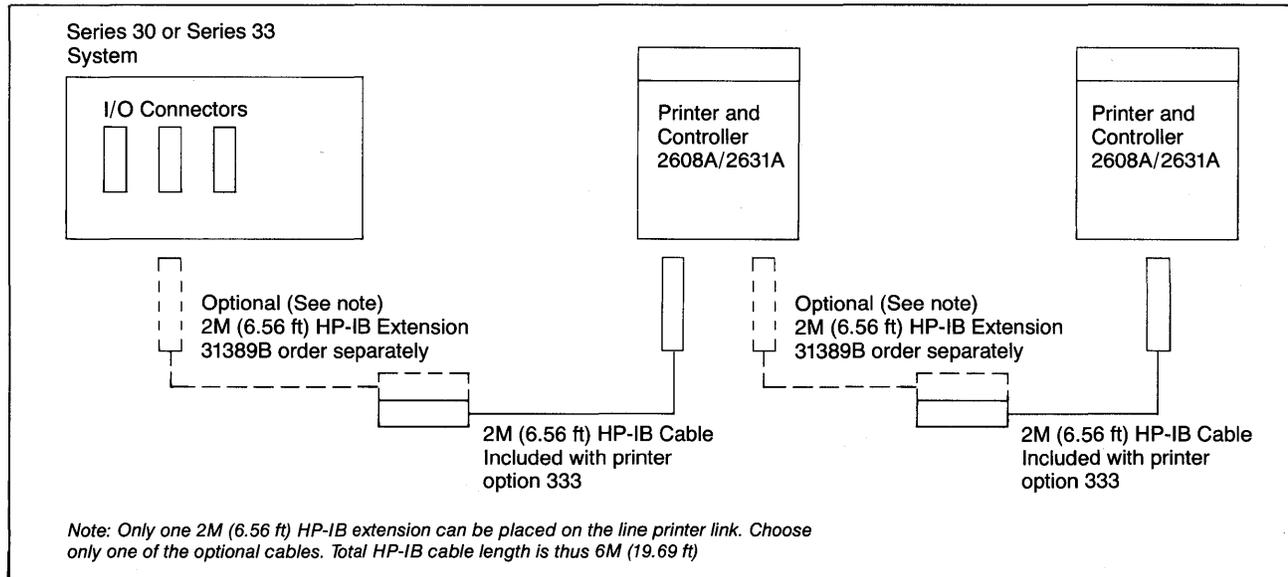| PRODUCT NUMBER	OPT.	DESCRIPTION	PRICE†	MONTHLY MAINT. CHARGE†
2631A		**180 cps Dot Matrix Printer.** Must order option 333. Pedestal stand not included.	$ 3,350	$ 31
	015	Specifies 230V, 50 Hz single phase operation	0	0
	333	Series 30 or Series 33 option with HP-IB interface and 2 Meter cable	290	0
		Note: Print head is included in Monthly Maintenance Charge		
		Additional Products		
26090A		Sound abatement cover for 2631A	100	0
26098A		Pedestal Stand for 2631A	275	0
	001	Add casters	15	0
	002	Add paper catcher	50	0
2608A		**400 lpm Dot Matrix Printer.** Must order option 333. 128 character USASCII set. Includes enclosed stand with caster, paper basket. Monthly maintenance charge allows three levels of monthly usage. Level 1: 1-69 print hours Level 2: 70-130 print hours Level 3: 131-360 print hours	9,900	 62 71 125
	001	Language option. Adds Arabic, Cyrillic, Katakana, and draw.	150	0
	002	Substitution option. Adds APL, French, German, Swedish/Finnish, Norwegian/Danish, Spanish, British	150	0
	015	Specifies 230V, 50 Hz single phase operation	0	0
	110	Add sound cover	150	0
	333	Adds HP 3000 Series 30 or Series 33 HP-IB interface, 2M (6.56 ft) cable, and documentation	565	0

†*Domestic U.S.A. prices only, and subject to change without notice. For a firm quotation, contact your Hewlett-Packard Sales Representative.*

PRODUCT NUMBER	OPT.	DESCRIPTION	PRICE†	MONTHLY MAINT. CHARGE†

HP-IB Cables

PRODUCT NUMBER	OPT.	DESCRIPTION	PRICE†	MONTHLY MAINT. CHARGE†
31389B		HP-IB Cable. 2M (6.56 ft)	$ 65	$ 0

Series 30 or Series 33 Peripheral Cables (Printers)

Series 30 or Series 33 System

I/O Connectors

Printer and Controller 2608A/2631A

Printer and Controller 2608A/2631A

Optional (See note)
2M (6.56 ft) HP-IB Extension
31389B order separately

Optional (See note)
2M (6.56 ft) HP-IB Extension
31389B order separately

2M (6.56 ft) HP-IB Cable
Included with printer
option 333

2M (6.56 ft) HP-IB Cable
Included with printer
option 333

Note: Only one 2M (6.56 ft) HP-IB extension can be placed on the line printer link. Choose only one of the optional cables. Total HP-IB cable length is thus 6M (19.69 ft)

HP 3000
SERIES III

SYSTEM PROCESSOR UNIT
CONFIGURATION OVERVIEW
MAXIMUM CONFIGURATION
ORDERING GUIDE
ORDERING EXAMPLE
PRICING GUIDE

HP 3000 SERIES III
SYSTEM PROCESSOR UNIT

Hardware Supplied

- Central processing unit (CPU)
- 209 firmware instructions
- System clock
- 16-port Asynchronous Terminal Controller
- Modem support (for type 103 or 212)
- 16-Channel System I/O Multiplexer
- Table for system console
- High-speed selector channel
- Magnetic tape controller
- Built-in isolation transformer
- 256 Kb fault control memory
- 9 spare I/O slots and space for 2048 Kb memory
- One bay, card cages, and power supplies
- Room for 48 terminals including system console

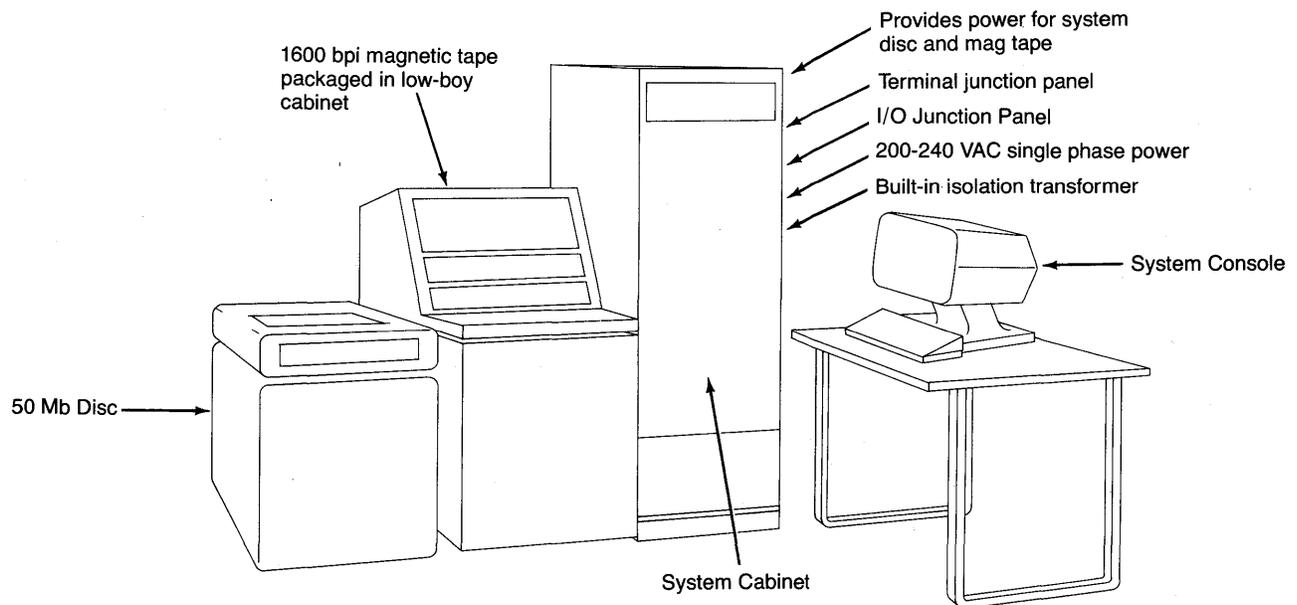### Required Hardware Ordered Separately

- System console
- System disc with controller (50 Mb or 120 Mb)
- Magnetic tape drive (800 bpi or 1600 bpi)

Software Supplied

Standard on each HP 3000 system is the Fundamental Operating Software which includes:

- Multiprogramming Executive III (MPE III) Operating system
- Text editor (EDIT/3000)
- File copying utility (FCOPY/3000)
- Sort and merge package (SORT-MERGE/3000)
- Data base management system (IMAGE/3000)
- Data base inquiry language (QUERY/3000)
- Keyed Sequential Access Method Software (KSAM/300)
- Forms management software (HP VIEW/3000)
- Facility to execute compiled programs without the source language compiler on the system (except for programs written in APL\3000).

HP 3000 Series III Minimum Configuration

1600 bpi magnetic tape packaged in low-boy cabinet

Provides power for system disc and mag tape

Terminal junction panel

I/O Junction Panel

200-240 VAC single phase power

Built-in isolation transformer

System Console

50 Mb Disc

System Cabinet

Note: Under certain power line conditions at the system site, an isolation transformer or other line conditioning equipment may be required for add-on disc and magnetic tape drives.

HP 3000 SERIES III
CONFIGURATION OVERVIEW

To aid in configuring an HP 3000 Series III system, a diagram is included on the following page. In this diagram, equipment originally supplied with a standard model is shown in darkened boxes, while optional equipment is in white. By following the steps indicated, it is simple to plan a new system or add to an existing one.

Selecting Options

When choosing options denoted by "circles," be certain to write the number of the interface slot which the option will occupy in the open circle beside the selected option; then, cross out the numbered circle connected to the IOP Bus to show that the interface slot is no longer available. For example:
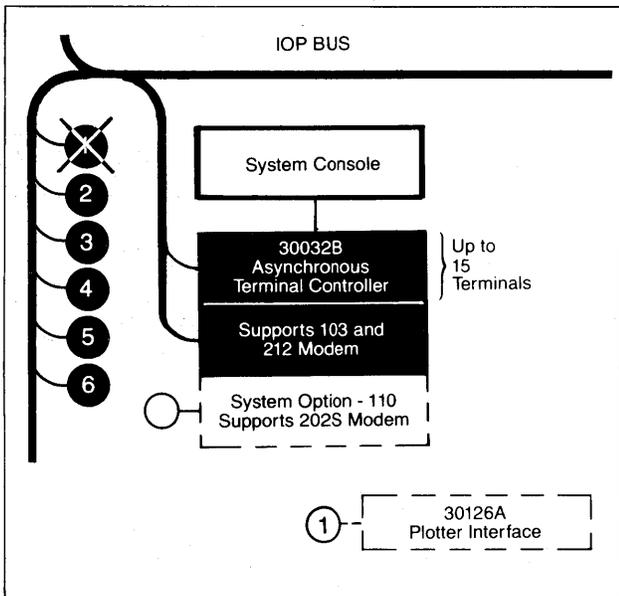
As a result, the options that have been chosen and the interface slots they occupy will be evident at a glance. DO NOT EXCEED THE TOTAL NUMBER OF AVAILABLE INTERFACE SLOTS ON THE IOP BUS.

Devices identified with triangles or squares will function only in the positions designated by matching geometric shapes.

Equipment Supplied with System Processor Unit. Products in darkened boxes.
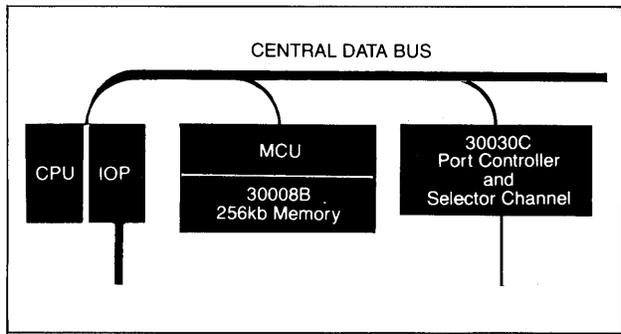
Required Equipment, Though Ordered Separately from System Processor Unit. Products in heavily outlined boxes.
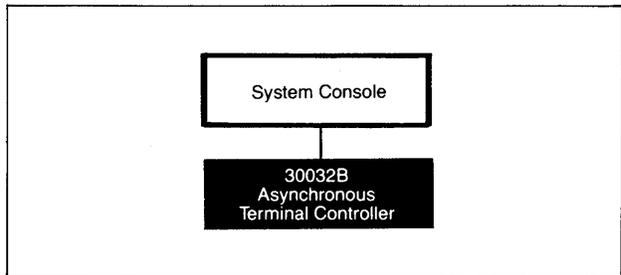
Optional Equipment. Products in white outlined by dashed lines.

Interfacing Optional Equipment Through Interface Slots.
Spare interface slots (numbered "circles" connected to the
IOP Bus) are available for additional products, and can
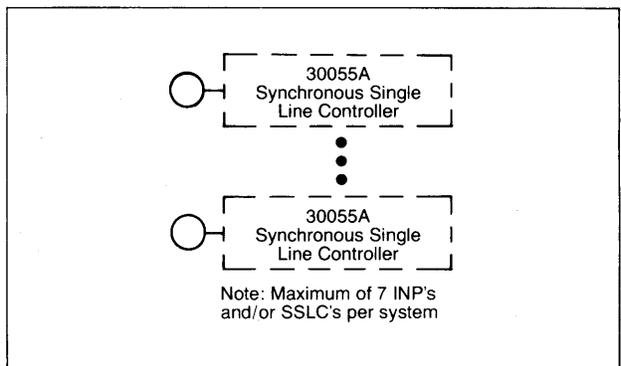be occupied by optional equipment identified with an
attached "circle."

Connecting Additional Terminals. One Asynchronous Ter-
minal Controller (ATC) is supplied. It permits the connec-
tion of up to 16 terminals, including the system console.
Additional ATCs can be added, each interfacing up to 16
terminals. Up to 48 terminals can be interfaced in the
System Processor Unit bay. The addition of an extension
bay allows the addition of an extension bay allows the
interfacing of the final 16 terminal ports.

Disc Drive. One 50 Mb or 120 Mb disc subsystem with
controller is required, connected directly to the Central
Data Bus through a disc interface to the selector channel.
The controller and Series III system can handle a total of
8 drives, 960 Mb maximum capacity.

Magnetic Tape Units. One 1600 bpi or 800 bpi magnetic
tape drive in low-boy cabinet is required and is connected
through a controller to the system. The supplied controller
can also handle up to three extra drives of mixed den-
sities (up to a total of four).

Additionally, a second controller may be ordered which
can support up to four additional drives (5th through 8th
on system) of mixed densities. Each additional tape
drive ordered will be supplied in a free-standing low-boy
cabinet. See the 7970 data sheet for further configura-
tion details on extra drives.

Line Printers. A maximum of four line printers may be
connected to any HP 3000 Series III, each with its own
30209A controller.

Memory Expansion. The 30418A memory expansion up-
grade permits increasing memory capacity of HP 3000
Series III systems from 1024 Kb to a maximum of 2048 Kb.
The kit includes two 256 Kb memory boards with built-in
fault control, memory controller, cables, and mounting
hardware. Further expansion to the full 2048 Kb is accom-
plished by adding two more optional 30008B memory
array boards.

Environmental Specifications

The following specifications apply to any HP 3000 config-
ured with any combination of the peripheral devices listed.
It is not necessary to consider each device separately.

Temperature (operating): 50°–95°F (10°–35°C).
Recommended temperature range for most reliable
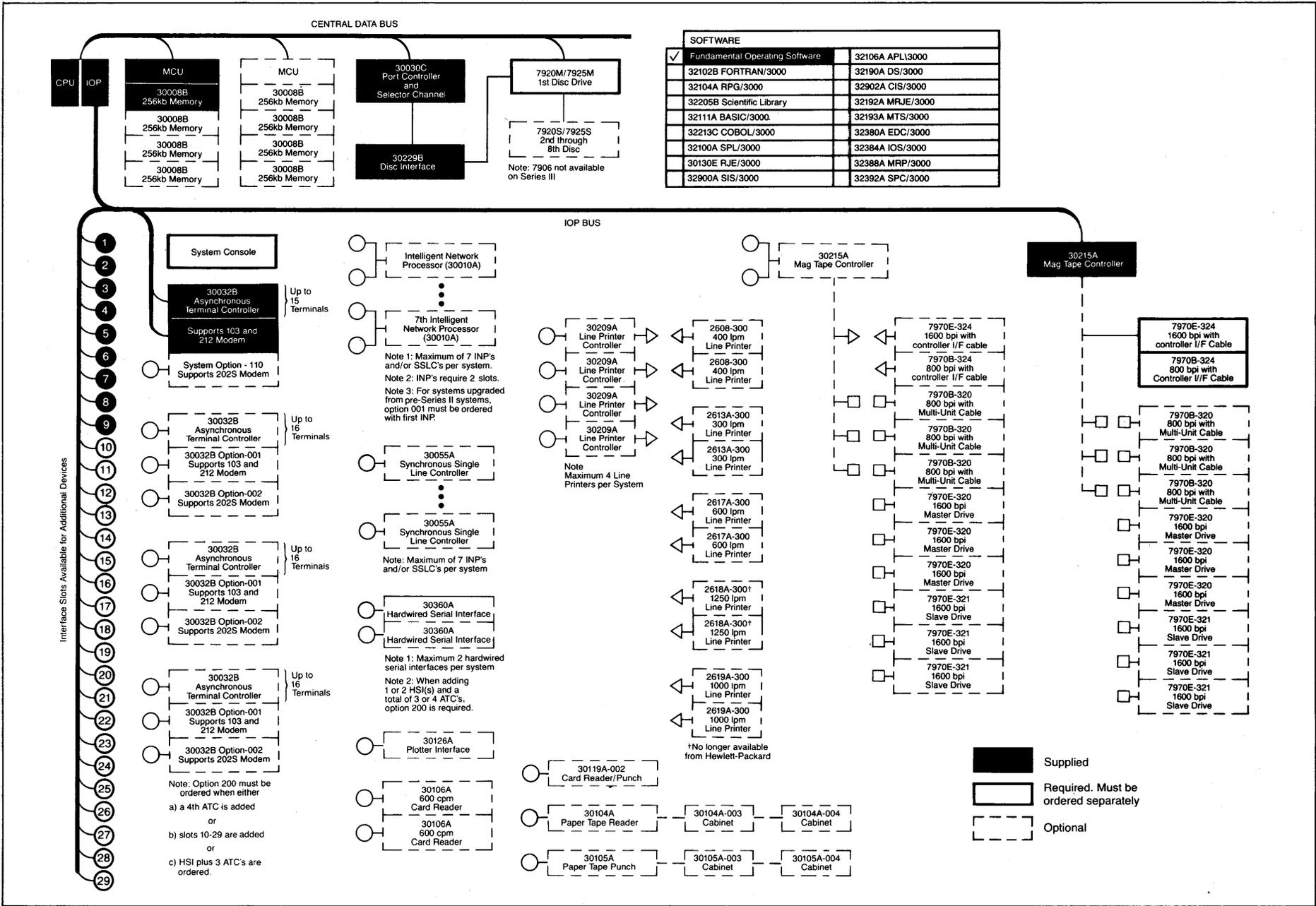operation: 68°–86°F (20°–30°C)

Relative humidity: 40–80% non-condensing, 60% optimal.
Maximum wet bulb temperature 78°F (26°C).

Line voltage: 200/210/220/230/240 VAC +4%, −10%
single phase.

Line frequency: 50 or 60 Hz, ±0.5 Hz.

Maximum rate of temperature change: 18°F/Hr. (10°C/Hr.)

Maximum Configuration Diagram For Series III (Model 32435B)

CENTRAL DATA BUS

	CPU	IOP

MCU		MCU
30008B 256kb Memory		30008B 256kb Memory
30008B 256kb Memory		30008B 256kb Memory
30008B 256kb Memory		30008B 256kb Memory
30008B 256kb Memory		30008B 256kb Memory

30030C Port Controller and Selector Channel

30229B Disc Interface

7920M/7925M 1st Disc Drive

7920S/7925S 2nd through 8th Disc

Note: 7906 not available on Series III

SOFTWARE	
✓ Fundamental Operating Software	32106A APL\3000
32102B FORTRAN/3000	32190A DS/3000
32104A RPG/3000	32902A CIS/3000
32205B Scientific Library	32192A MRJE/3000
32111A BASIC/3000	32193A MTS/3000
32213C COBOL/3000	32380A EDC/3000
32100A SPL/3000	32384A IOS/3000
30130E RJE/3000	32388A MRP/3000
32900A SIS/3000	32392A SPC/3000

IOP BUS

Interface Slots Available for Additional Devices

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29

System Console

30032B Asynchronous Terminal Controller

Supports 103 and 212 Modem

Up to 15 Terminals

System Option - 110 Supports 202S Modem

30032B Asynchronous Terminal Controller

Up to 16 Terminals

30032B Option-001 Supports 103 and 212 Modem

30032B Option-002 Supports 202S Modem

30032B Asynchronous Terminal Controller

Up to 16 Terminals

30032B Option-001 Supports 103 and 212 Modem

30032B Option-002 Supports 202S Modem

30032B Asynchronous Terminal Controller

Up to 16 Terminals

30032B Option-001 Supports 103 and 212 Modem

30032B Option-002 Supports 202S Modem

Note: Option 200 must be ordered when either

a) a 4th ATC is added

or

b) slots 10-29 are added

or

c) HSI plus 3 ATC's are ordered.

Intelligent Network Processor (30010A)

7th Intelligent Network Processor (30010A)

Note 1: Maximum of 7 INP's and/or SSLC's per system.

Note 2: INP's require 2 slots.

Note 3: For systems upgraded from pre-Series II systems, option 001 must be ordered with first INP.

30055A Synchronous Single Line Controller

30055A Synchronous Single Line Controller

Note: Maximum of 7 INP's and/or SSLC's per system

30360A Hardwired Serial Interface

30360A Hardwired Serial Interface

Note 1: Maximum 2 hardwired serial interfaces per system

Note 2: When adding 1 or 2 HSI(s) and a total of 3 or 4 ATC's, option 200 is required.

30126A Plotter Interface

30106A 600 cpm Card Reader

30106A 600 cpm Card Reader

30209A Line Printer Controller

30209A Line Printer Controller

30209A Line Printer Controller

30209A Line Printer Controller

Note Maximum 4 Line Printers per System

2608-300 400 lpm Line Printer

2608-300 400 lpm Line Printer

2613A-300 300 lpm Line Printer

2613A-300 300 lpm Line Printer

2617A-300 600 lpm Line Printer

2617A-300 600 lpm Line Printer

2618A-300† 1250 lpm Line Printer

2618A-300† 1250 lpm Line Printer

2619A-300 1000 lpm Line Printer

2619A-300 1000 lpm Line Printer

†No longer available from Hewlett-Packard

30119A-002 Card Reader/Punch

30104A Paper Tape Reader

30104A-003 Cabinet

30104A-004 Cabinet

30105A Paper Tape Punch

30105A-003 Cabinet

30105A-004 Cabinet

30215A Mag Tape Controller

30215A Mag Tape Controller

7970E-324 1600 bpi with controller I/F cable

7970B-324 800 bpi with controller I/F cable

7970B-320 800 bpi with Multi-Unit Cable

7970B-320 800 bpi with Multi-Unit Cable

7970B-320 800 bpi with Multi-Unit Cable

7970E-320 1600 bpi Master Drive

7970E-320 1600 bpi Master Drive

7970E-320 1600 bpi Master Drive

7970E-321 1600 bpi Slave Drive

7970E-321 1600 bpi Slave Drive

7970E-321 1600 bpi Slave Drive

7970E-324 1600 bpi with controller I/F Cable

7970B-324 800 bpi with Controller I/F Cable

7970B-320 800 bpi with Multi-Unit Cable

7970B-320 800 bpi with Multi-Unit Cable

7970B-320 800 bpi with Multi-Unit Cable

7970B-320 800 bpi with Multi-Unit Cable

7970E-320 1600 bpi Master Drive

7970E-320 1600 bpi Master Drive

7970E-320 1600 bpi Master Drive

7970E-321 1600 bpi Slave Drive

7970E-321 1600 bpi Slave Drive

7970E-321 1600 bpi Slave Drive

7970E-321 1600 bpi Slave Drive

■ Supplied

☐ Required. Must be ordered separately

⌐ ⌐ Optional

SERIES III ORDERING GUIDE

To order an HP 3000 Series III computer system,
follow the steps below:

A. Order one HP 3000 Series III System Processor Unit

32435B	HP 3000 Series III System Processor Unit

Order any appropriate options:

32435B-008	Software on 800 bpi NRZI magnetic tape
32435B-015	230V, 50 Hz single-phase operation
32435B-110	Adds 202S type modem control to ATC
32435B-200	Additional I/O capacity
32435B-505	Expands memory to 512Kb
32435B-506	Expands memory to 768Kb
32435B-507	Expands memory to 1024Kb
32435B-509	Expands memory to 1536Kb
32435B-511	Expands memory to 2048Kb

B. Order one system disc

7920M	OR	7925M

C. Order one master magnetic tape drive:

7970E 7970E-324 (1600 bpi)	OR	7970B 7970B-324 (800 bpi)

D. Order one system console with appropriate cable:

Console (order one)

2640B	Interactive terminal
2641A	APL display station
2645A	Display station
2647A	Intelligent graphics terminal
2648A	Graphics terminal

OR

2621A	Interactive terminal
2621P	Interactive terminal with printer

OR

2635A	Printing terminal

Cable (order one)

PLUS

13232A	Terminal cable
13232Y	EMP protect cable

PLUS

13222N	US Hardwired/modem Cable
13222Y	EMP Protect Cable

PLUS (cable included)

SERIES III ORDERING EXAMPLE

120 Mb Disc | 120 Mb Disc | 1600 bpi Magnetic Tape | System Processor Unit | Series III Console and Table | 1000 lpm Printer | 9 Terminals | 1 Modem

PRODUCT NUMBER	QTY.	PRODUCT	EXTENDED PRICE†	MONTHLY MAINT. CHARGE†
Processor				
32435B	1	HP 3000 Series III System Processor Unit	$ 75,875	$ 445
32435B-507	1	Expands memory to 1024 Kb	11,250	114
System Console				
2621P	1	Interactive terminal with printer	2,550	25
13222Y	1	EMP protect cable for 2621P	50	0
Magnetic Tape				
7970E	1	1600 bpi, 45 ips magnetic tape	8,885	70
7970E-324	1	Specify first master drive	1,740	2
System Disc				
7925M	1	Master 120 Mb disc drive	21,000	89
Add on Disc				
7925S	1	Add-on 120 Mb disc drive	17,000	62
Line Printer				
2619A	1	1000 lpm chain line printer	21,000	
		(Usage: 67-99 print hours per month)		259
2619A-300		Adds HP 3000 interface cable, installation	650	0
30209A	1	Line printer controller	1,275	7
Terminals/Cables				
2645A	6	Display station	21,000	120
2647A	1	Intelligent graphics terminal	8,300	50
13232Y	7	EMP protect cables for 2645A, 2647A	350	0
2621A	2	Interactive terminal	2,900	30
13222Y	2	EMP protect cables for 2621A	100	0
Data Comm.*				
30010A	1	Intelligent Network Processor	4,500	34
30222A	1	Synchronous Modem Cable	250	0
30055A	1	Synchronous Single Line Controller	2,000	18
Modem				
37210T	1	4800 bps modem	4,350	33
37210T-003	1	Auto answer U.S.A.	510	4
37220T	1	9600 bps modem	6,150	31
		TOTALS	**$211,685**	**$1,393**

*Data communications software products should be ordered separately.

†Domestic U.S.A. prices only, and subject to change without notice. For a firm quotation, contact your Hewlett-Packard Sales Representative.

SERIES III SYSTEM PRICING GUIDE

PRODUCT NUMBER	OPT.	DESCRIPTION	PRICE†	MONTHLY MAINT. CHARGE†

Series III System Processor Unit

PRODUCT NUMBER	OPT.	DESCRIPTION	PRICE†	MONTHLY MAINT. CHARGE†
32435B		**HP 3000 Series III System Processor Unit:** 200-240V, 60 Hz, single phase; 256 Kb fault control memory; 16 port Asynchronous Terminal Controller with type 103 and 212 modem support; capacity for 48 asynchronous terminal ports; 30215A magnetic tape controller included in system cabinet; 1 system cabinet and console table; isolation transformer included in system cabinet. Fundamental Operating Software (MPE III operating system, EDIT/3000, FCOPY/3000, SORT-MERGE/3000, IMAGE/3000, QUERY/3000, HP VIEW/3000, KSAM/3000, and facility to execute compiled programs without the source language compiler on the system (except for programs written in APL\3000)). Complete user manual set. Software distributed on 1600 bpi magnetic tape. A 7970E OR 7970B SYSTEM MAGNETIC TAPE DRIVE IS REQUIRED AND MUST BE ORDERED SEPARATELY; SPECIFY OPTION 324 FOR THE FIRST MAGNETIC TAPE DRIVE. A SYSTEM DISC (7920M, 7925M) IS REQUIRED AND MUST BE ORDERED SEPARATELY. A SYSTEM CONSOLE (262X, 263X, 264X TERMINAL) AND APPROPRIATE TERMINAL CABLE IS REQUIRED AND MUST BE ORDERED SEPARATELY. ORDER OPTION 015 FOR THE SYSTEM AND EACH PERIPHERAL FOR 230V, 50 HZ SINGLE PHASE OPERATION.	$75,875	$445
	008	Supply software on 800 bpi NRZI magnetic tape	0	0
	015	230V, 50 Hz single-phase operation.	0	0
	110	Adds 202S type modem control to Asynchronous Terminal Controller	+1,240	+6
	200	Additional I/O cabinet. Adds 20 I/O slots and capacity for an additional 16 asynchronous terminal ports (total 64)	+8,000	+25
	505	Expands memory to 512 Kb	+3,750	+38
	506	Expands memory to 768 Kb	+7,500	+76
	507	Expands memory to 1024 Kb	+11,250	+114
	509	Expands memory to 1536 Kb	+20,250	+208
	511	Expands memory to 2048 Kb	+27,750	+284

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PRODUCT NUMBER	OPT.	DESCRIPTION	PRICE†	MONTHLY MAINT. CHARGE†

HP 3000 Series III I/O Expansion Products

PRODUCT NUMBER	OPT.	DESCRIPTION	PRICE†	MONTHLY MAINT. CHARGE†
30032B		**Asynchronous Terminal Controller.** For point-to-point terminals.	$ 3,000	$ 15
	001	For type 103 and 212 modems.	+1,240	+6
	002	Adds 202S type modem support.	+2,480	+12
30235A		**I/O Expansion Kit for HP 3000 Series III.** Adds 1 cabinet with 20 I/O slots and capacity for an additional 16 asynchronous terminal ports.	8,000	25

Field-Installed HP 3000 Series III Memory Expansion

PRODUCT NUMBER	OPT.	DESCRIPTION	PRICE†	MONTHLY MAINT. CHARGE†
30418A		**1536 Kb Memory Expansion Kit.** For all HP 3000 Series III's. Expands system memory from 1024 Kb to 1536 Kb. See notes below for prerequisites. To expand to the full 2048 Kb also order two 30008B 256 Kb memory array boards.	$ 9,000	$ 94
	001	Adds one 30311A power supply. Required for all model 32421A Series III's. Also required for any Series III upgraded from a Series II which had only one 30311A power supply. *Prerequisites: You must have a Series III with 1024Kb of memory purchased as either a system option or as an upgrade with a 30417A Series II upgrade kit. If your HP 3000 Series III was upgraded from an HP 3000 Series II Model 5 or 7 and you wish to expand to 15365Kb or memory or greater, you must order a 30408A-002 I/O expansion kit as a prerequisite to ordering the 30418A Series III memory expansion kit.*	+2,500	+29
30008B		**256 Kb Memory Array.** Note: Only 256 Kb, 512 Kb, 768 Kb, 1024 Kb, 1536 Kb, and 2048 Kb memory sizes are supported. When ordering additional memory (30008B) make sure that the total system memory is equal to one of the supported sizes.	3,750	38

Disc Drives

PRODUCT NUMBER	OPT.	DESCRIPTION	PRICE†	MONTHLY MAINT. CHARGE†
7020M		**Master 50 Mb Disc.** Includes 7920 drive in cabinet, 13394A pack and controller*.	$17,000	$ 81
	015	230V, 50 Hz, single phase operation. Specify destination country for correct power cord.	0	0
7925M		**Master 120 Mb Disc.** Includes 7925 drive in cabinet, 13356A pack and controller*.	21,000	89
	015	230V, 50 Hz, single phase operation. Specify destination country for correct power cord.	0	0
7920S		**Add-on 50 Mb Disc Drive.** Includes 7920 drive in cabinet, 13394A pack, and cables. [2.44M (8 ft) multi-unit and 15.24M (50 ft) data cables].	13,000	54
	015	230V, 50 Hz, single phase operation. Specify destination country for correct power cord.	0	0

*5.49M (18 ft.) disc master interface cable included with System Processor Unit.

†Domestic U.S. prices only, and subject to change without notice. For a firm quotation, contact your Hewlett-Packard Sales Representative.

PRODUCT NUMBER	OPT.	DESCRIPTION	PRICE†	MONTHLY MAINT. CHARGE†

Disc Drives (cont'd)

PRODUCT NUMBER	OPT.	DESCRIPTION	PRICE†	MONTHLY MAINT. CHARGE†
7925S		**Add-on 120 Mb Disc Drive.** Includes 7925 drive in cabinet, 13356A pack, and cables [2.44M (8 ft) multi-unit and 15.24M (50 ft) data cables].	$17,000	$ 62
	015	230V, 50 Hz, single phase operation. Specify destination country for correct power cord.	0	0
	250	Field installed 30229A Controller upgrade for 7925 disc support. Required for all 30229A Controllers shipped prior to June 1978 (approximate). Upgrades device controller board from 13037-60002 to 13037-60028 and the error correction board from 13037-60004 to 13037-60024.	+500	0
13394A		**7920 Disc Pack**	600	0
13356A		**7925 Disc Pack**	850	0

Magnetic Tape Drives and Controllers

PRODUCT NUMBER	OPT.	DESCRIPTION	PRICE†	MONTHLY MAINT. CHARGE†
30215A		**Mag Tape Controller.** Required for 5th through 8th 7970B or 7970E mag tapes with 300 level options to an HP 3000 Series III. Note that the standard 32435B Series III system includes a mag tape controller for the first four mag tape drives.	$ 2,700	$ 15
7970B		**800 bpi 45 ips Mag Tape.** Must order option 320 or 324 to interface drive to an HP 3000 Series III. 50/60 Hz, 115/230V switch.	6,870	64
	320	Specify this option for add-on drives (2nd, 3rd, and 4th drive) on 30215A controller. Includes HP 3000 low-boy cabinet and 6.10M (20 ft) multi-unit cable.	+1,830	+2
	324	Specify this option for first drive on a 30215A mag tape controller. Includes HP 3000 low-boy cabinet and HP 3000 interface cable.	+1,830	+2
7970E		**1600 bpi, 45 ips Mag Tape.** Must order option 320, 321, or 324 to interface drive to an HP 3000 Series III. 50/60 Hz, 115/230V switch.	8,885	70
	320	Specify this option for 2nd, 3rd, and 4th master drive on 30215A controller. Includes HP 3000 low-boy cabinet and multi-unit cable.	+1,740	+2
	321	Specify this option for 2nd, 3rd, and 4th slave drive on 30215A controller. Includes HP 3000 low-boy cabinet and slave multi-unit cable. Must be used with a master unit.	−105	+2
	324	Specify this option for first drive on a 30215A controller. Includes HP 3000 low-boy cabinet and HP 3000 interface cable.	+1,740	+2
		Notes: *One drive on a magnetic tape controller must be a master.* *Master/slave electronic relationship: Two masters on the same controller offer greater redundancy than a master and a slave. With the master/slave relationship, the slave shares the master's electronics; the slave will not function if the master is not operative. With a master/master relationship, if the first master is not operative it does not affect the second master's performance.* *For add-on tape drive to Series I, Series II, and Series III model 32421A systems, consult the HP 3000 Upgrade Products Price/Configuration Guide for these products.*		

†*Domestic U.S.A. prices only, and subject to change without notice. For a firm quotation, contact your Hewlett-Packard Sales Representative.*

PRODUCT NUMBER	OPT.	DESCRIPTION	PRICE†	MONTHLY MAINT. CHARGE†
		Line Printers and Controllers		
30209A		**Line Printer Controller.** Interfaces one 2608A, 2613A, 2617A, or 2619A printer with option 300 to an HP 3000 Series III.	$ 1,275	$ 7
2608A		**400 lpm Dot Matrix Line Printer.** Must order option 300. 128 character USASCII set. Includes enclosed stand with casters, paper basket. Monthly maintenance charge allows three levels of monthly usage.	9,900	
		Level 1: 1-69 print hours per month		62
		Level 2: 70-130 print hours per month		71
		Level 3: 131-360 print hours per month		125
	001	Language option. Adds Arabic, Cyrillic, Katakana, and draw.	+150	0
	002	Substitution option. Adds APL, French, German, Swedish/Finnish, Norwegian/Danish, Spanish, British.	+150	0
	015	230V, 50 Hz	0	0
	110	Sound cover	+150	0
	300	Adds HP 3000 Series II and III interface cable and documentation,	+650	0
2613A		**300 lpm Line Printer.** With 136 columns, 64 characters; 115V, 60 Hz	11,600	133
	001	96 character set; 240 lpm	+1,675	0
	002	64-character set with OCR-B font. Slug character replaces backslash	0	0
	003	96 character set with OCR-B font as above	+1,675	0
	015	230V, 50 Hz, single-phase operation	0	0
	300	Add HP 3000 interface cable, documentation, and installation	+650	0
2617A		**600 lpm Line Printer.** With 136 columns, 64 characters, 115V, 60 Hz	15,700	147
	001	96 character; 436 lpm	+1,675	0
	002	64 character set with OCR-B font. Slug character replaces backslash	0	0
	003	96 character set with OCR-B font.	+1,675	0
	015	230V, 50 Hz, single-phase operation	0	0
	300	Adds HP 3000 interface cable, documentation, and installation	+650	0

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PRODUCT NUMBER	OPT.	DESCRIPTION	PRICE†	MONTHLY MAINT. CHARGE†
2619A		**1000 lpm Chain Technology Line Printer.** With 132 columns, 64 characters; 115V, 60 Hz. Monthly maintenance charge allows three levels of average monthly usage.	$21,000	
		Level 1: 1-66 print hours per month		$175
		Level 2: 67-99 print hours per month		259
		Level 3: 100-132 print hours per month		363
	001	96 character set; 750 lpm	+1,200	0
	002	64 character set with OCR-B font. Slug character replaces backslash	+600	0
	003	96 character set with OCR-B font as above	+1,800	0
	015	230V, 50 Hz, single-phase operation	0	0
	016	100V, 50 Hz, single-phase operation	0	0
	300	Adds HP 3000 interface cable, documentation, and installation	+650	0

Line Printers and Controllers (cont'd)

†Domestic U.S.A. prices only, and subject to change without notice. For a firm quotation, contact your Hewlett-Packard Sales Representative.

PRODUCT NUMBER	OPT.	DESCRIPTION	PRICE†	MONTHLY MAINT. CHARGE†
30106A		**80-Column Card Reader and Controller.** 600 cpm; 115V, 60 Hz. Includes card reader, controller/interface, device diagnostic software, and card reader manual No. 30106-90001.	$ 7,700	$ 70
	015	230V, 50 Hz single-phase operation.	0	0
30119A		**80-Column Card Reader/Punch and Controller.** Reads 176-200 cpm, punches 45-75 cpm; 115V, 60 Hz. Includes card reader/punch, universal interface package consisting of interface card and cable, device diagnostic software. Must order option 002	17,500	137
	002	Add keyboard for off-line use.	+2,000	0
	015	230V, 50 Hz single-phase operation.	0	0
30104A		**Paper Tape Reader and Controller.** Reads 500 cps at 60 Hz, 420 cps at 50 Hz. Includes tape reader, rack mounting kit, controller/interface, device diagnostic software, and manual (30104-90001). Option 003 or 004 must be ordered with Series III Model 32435B. For other HP 3000 systems refer to note below.	3,585	26
	003	Add low-profile cabinet. 115V, 60 Hz	+2,000	0
	004	Add low-profile cabinet. 230V, 50 Hz. Requires option 015.	+2,000	0
	015	230V, 50 Hz operation.	0	0
		Operating Accessory Available:		
		12575C Paper Tape Winder, 115V, 60 Hz/battery. Includes rechargeable battery.	150	0
30105A		**Paper Tape Punch and Controller.** Punches 75 cps. Includes tape punch, controller/interface, device diagnostic software, and manual (30105-90001). 50/60 Hz switch-selectable. Option 003 or 004 must be ordered with Series III Model 32435A. For other HP 3000 systems refer to note below.	5,000	54
	003	Add low-profile cabinet. 115V, 60 Hz.	+2,000	0
	004	Add low-profile cabinet. 230V, 50 Hz.	+2,000	0
		Note: *The paper tape reader and paper tape punch subsystems together require 17 vertical inches of cabinet space. One subsystem or both may be installed below the magnetic tape drive on a three-bay system, if no other equipment occupies that space. Option 003 or 004 must be ordered to provide a cabinet for one or both subsystems if this space is not available.*		
30126A		**CalComp 565 Series Plotter Interface**	1,350	14
	001	CalComp 702 series plotter interface	0	0

Card I/O, Paper Tape I/O and Plotter Interface

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HP 3000
TERMINAL
COMMUNICATIONS
PRODUCTS

TERMINAL COMMUNICATIONS SUPPORT MATRIX
TERMINALS AND MODEMS PRICING GUIDE
CONFIGURATION DIAGRAMS
MTS ORDERING EXAMPLE

TERMINAL COMMUNICATIONS SUPPORT MATRIX

CAPABILITY	HOST SYSTEM(S)	SOFTWARE	REQUIRED HARDWARE	SUPPORTED TERMINALS
Point-to-Point Configurations	Series 30	Supplied Standard	ADCC: one standard with System Processor Unit	264X, 2621X, 2635A, 307X
	Series 33	Supplied Standard	ADCC: two standard with System Processor Unit	264X, 2621X, 2635A, 307X
	Series III	Supplied Standard	ATC: one standard with System Processor Unit	264X, 2621X, 2635A, 307X
Multipoint Configurations				
Hardwired Data Link (Asynchronous)	Series III	MTS/3000 (32193A)	Synchronous Single Line Controller (SSLC) (30055A) Data Link Adapter(s) (3074A) for 307X terminals	264X terminals (excluding 2640 A/B, 2644A) with asynchronous multipoint communications interface (option 033) 307X terminals
Hardwired Daisy Chain Link (Asynchronous)	Series III	MTS/3000 (32193A)	SSLC (30055A)	264X terminals (excluding 2640 A/B, 2644A) with asynchronous multipoint communications interface (option 033) 307X terminals
Hardwired Daisy Chain Link (Synchronous)	Series III	MTS/3000 (32193A)	SSLC (30055A)	264X terminals (excluding 2640 A/B, 2644A) with synchronous multipoint communications interface (option 034)
Remote Daisy Chain Link (Synchronous)	Series III	MTS/3000 (32193A)	SSLC (30055A)	264X terminals (excluding 2640 A/B, 2644A) with synchronous multipoint communications interface (option 034)

PRODUCT NUMBER	OPT.	DESCRIPTION	PRICE†	MONTHLY MAINT. CHARGE†
		For option availability, see option summary chart, Order cables separately.		
2621A		Interactive Terminal. 115V, 60 Hz	$ 1,450	$ 15
	013	240V, 50 Hz operation	0	0
	014	100V, 60 Hz operation	0	0
	015	220V, 50 Hz operation	0	0
	016	100V, 50 Hz operation	0	0
2621P		Interactive Terminal with Printer. 115V, 60 Hz	2,550	25
	015	230V, 50 Hz operation	0	0
	016	115V, 50 Hz operation	0	0
2640B		Display Terminal	2,600	18
	015	230V, 50 Hz operation	0	0
	016	115V, 50 Hz operation	0	0
2645A		Display Station	3,500	20
2641A		APL Display Station (Note: APL\3000 is supported only by HP 3000 Series III systems)	4,100	20
2647A		Intelligent Graphics Terminal	8,300	50
2648A		Graphics Terminal	5,500	22
2649E		System/maintenance console for Series 30 or Series 33. Cables included.	6,350	34
	015	230V, 50 Hz operation	0	0

Interactive Display Terminals

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PRODUCT NUMBER	OPT.	DESCRIPTION	PRICE†	MONTHLY MAINT. CHARGE†
		The following options apply to 2645A, 2641A, 2647A, and 2648A except as noted.		
	001	128 character set adds lower case and displayable control codes. For 2641A only.	+100	0
	007	Integrated dual cartridge tapes (standard on 2647A)	+1,600	+6
	013	5 mini-cartridges	+90	0
	015	230V, 50 Hz	0	0
	016	115V, 50 Hz	0	0
	030	Delete standard asynchronous communications interface for multipoint applications. Order 13260 product to support multi-point communications (use options 033 and 034 if monitor mode is needed).	−160	0
	031	Delete standard asynchronous communications interface to free one option slot (for 2647 only)	−75	0
	033	Deletes standard communications interface and provides asynchronous multipoint communications capability (includes monitor mode)	+250	0
	034	Deletes standard communications interface and provides synchronous multipoint communications capability (includes monitor mode)	+275	0
		Terminal Expansion for 264X Display Terminals		
13234A		**Terminal 4K Memory Module**	300	0
13231A		**Display Enhancements**—blinking, half bright, underline, and 64 character line drawing	250	0
	201	Add Math Symbols Alternate Character Set	+100	0
	203	Add Large Character Alternate Character Set	+150	0
13240A		**Option Slot Extender.** Add 5 slots for 2640 Terminals only	150	0
		Note: See Terminal Option Summary Chart for complete details.		

Interactive Display Terminals (cont'd)

†Domestic U.S.A. prices only, and subject to change without notice. For a firm quotation, contact your Hewlett-Packard Sales Representative.

PRODUCT NUMBER	OPT.	DESCRIPTION	PRICE†	MONTHLY MAINT. CHARGE†

Terminal Cables (2620 Series)

PRODUCT NUMBER	OPT.	DESCRIPTION	PRICE†	MONTHLY MAINT. CHARGE†
13222M		**European Modem Cable.** Male, 5M (16.4 ft). For European modem application.	$ 75	$ 0
13222N		**U.S. Hardwired/Modem Cable.** Male, 5M (16.4 ft). For U.S. hardwired/modem applications.	75	0
13222Y		**EMP Protect Cable.** Male 5M (16.4 ft). For hardwired applications only. Lightning protection for terminal, three wires (send, receive common) connected.	50	0

Terminal Cables (2640 Series)

PRODUCT NUMBER	OPT.	DESCRIPTION	PRICE†	MONTHLY MAINT. CHARGE†
30062B		**Data Set Cable.** Connects HP 3000 Asynchronous RS-232C port to a Bell 103 or 202S type modem 7.62M (25 ft) long with male-to-male RS-232C connectors.	$ 65	0
	001	Replace 7.62M (25 ft) cable with 15.24M (50 ft) cable	+30	0
30062C		**Hardwire or Modem Extender Cable.** 7.62 (25 ft) long with male-to-female RS 232C connectors. All 25 pins connected end to end.	105	0
	001	Replaces 7.62M (25 ft) cable with 15.24M (50 ft) cable	+40	0
	002	Replaces 7.62M (25 ft) cable with 30.48M (100 ft) cable	+95	0
30062D		**Hardwire Extender Cable.** Hardwired applications only; 7.62M (25 ft) long with male-to-female RS-232C connectors; three wires (send, receive, common) connected.	65	0
13232A		**Terminal Cable.** (Name on hood: 103/202 modem cable); connects 2640 series terminals to 103 or 202 type modem or to HP 3000 System; 4.57M (15 ft) long with male-to-PC edge connector connectors. Shielded.	50	0
13232M		**European Modem Cable.** For connection of 2640 series terminals to European modems; 4.57M (15 ft) long with male-to-PC edge connector connectors.	75	0
13232Y		**EMP Protect Cable.** Male-to-PC edge connector. 4.57M (15 ft). For hardwired applications only. Lightning protection for terminal; three wires (send, receive, common) connected.	50	0

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INTERACTIVE DISPLAY TERMINAL OPTION SUMMARY CHART

	2640B*	2641A†	2645A*	2647A	2648A	2621 A/P
Maximum Baud Rate (see Note 1)	2400	9600	9600	9600	9600	9600
Memory	5-8 Kb	4-12 Kb	4-12 Kb	9 Kb max.	8-12 Kb	48 lines
Block or character mode (see Note 2)	STD	STD	STD	STD	STD	Char mode only
Inverse Video	STD	STD	STD	STD	STD	N/A
Underline, Half-bright, blinking (Available by ordering 13231A)	AVAIL	STD	AVAIL	AVAIL	AVAIL	Underline only STD
User-definable Soft Keys	N/A	8 STD	8 STD	8 STD	9 STD	N/A
Option slots supplied	1	5	7	1	4	none
Character set supplied (see Note 4)	128 Roman	64 Roman + 128 APL	128 Roman	128 Roman	128 Roman	128 Roman
Other (see Note 3)				Graphics & Intelligence	Graphics Features	120 cps thermal printer on 2621P
Lower case/displayable control codes (see Note 4)	STD	128 Roman	STD	STD	STD	STD
Integrated dual cartridge tapes	N/A	OPT	OPT	STD	OPT	N/A
5 mini-cartridges	N/A	OPT	OPT	OPT	OPT	N/A
230V, 50 Hz operation	OPT	OPT	OPT	OPT	OPT	(See Note 5)
115V, 50 Hz operation	OPT	OPT	OPT	OPT	OPT	OPT
Multipoint Interface	N/A	AVAIL	AVAIL	AVAIL	AVAIL	N/A
Add math symbols alternate character set	AVAIL	OPT	AVAIL	AVAIL	AVAIL	N/A
Add large character alternate character set (Alternate character sets available by ordering 13231A)	AVAIL	OPT	AVAIL	AVAIL	AVAIL	N/A

KEY:
STD—Standard with terminal, OPT—Option ordered with terminal, AVAIL—Order separate product, N/A—Not Available.

†APL\3000 is available only on the HP 3000 Series III. The 2641A is supported on the HP 3000 as a 2645A when used without APL\3000.

*Character sets for languages other than English are available on other models of these terminals. See your Hewlett-Packard Sales Representative for details.

NOTES:

1. The maximum point-to-point data rate is 2400 baud for 264X and 262X series terminals on HP 3000 Series III systems. HP 2645 series terminals equipped with Multidrop hardware connected to the Synchronous Single Line Controller (SSLC) on HP 3000 Series III systems can operate at 9600 baud.

   The maximum data rate is 2400 baud for 2640 terminals and 9600 baud for 2645, 2647, 2648, and 2621 A/P terminals on HP 3000 Series 30 and Series 33 systems.

2. Terminals on the HP 3000 normally operate in character mode, except when accessed via MFG/3000. HP VIEW/3000, or MTS/3000 where block mode is employed. Terminals without block mode cannot run MFG/3000, HP VIEW/3000, or MTS/3000.

3. The 2647A and 2648A are supported on the HP 3000 as a 2645A. Development of software to make full use of graphics features and intelligent terminal capabilities on the HP 3000 is the responsibility of the user.

4. Non-standard characters in the International character sets and the display enhancement control characters must be handled by user application programs.

5. Voltages available at 50 Hz are:

   2621A 220/240V

   2621P 230V

PRODUCT NUMBER	OPT.	DESCRIPTION	PRICE†	MONTHLY MAINT. CHARGE†

Printing Terminal

PRODUCT NUMBER	OPT.	DESCRIPTION	PRICE†	MONTHLY MAINT. CHARGE†
2635A		Printing Terminal. 180 characters per second. Automatic bidirectional printing, underline and display function modes. 8 channel fixed VFU (non-programmable). EIA RS232C interface without modem control. (For use with 103-type modems or some hardwired applications.) 115 volts. 60 Hz. Includes terminal and 3.81M (12.5 ft) male to male cable. Supported in point-to-point or multipoint configurations.	$ 3,650	$ 31
	015	230V, 50 Hz	0	0
	715	Add service documentation	+15	0
		Additional Products:		
26090A		Sound abatement cover for 2635A	100	0
26097A		Stand for 2635A	275	0
	001	Add Casters	+15	0
	002	Add paper catcher	+50	0

Factory Data Collection Terminals

PRODUCT NUMBER	OPT.	DESCRIPTION	PRICE†	MONTHLY MAINT. CHARGE†
		Order cables separately		
3074A		Data Link Adapter. Required to convert RS-232 interface to data link interface. Can also be used to connect daisy chain terminals to data link.	$ 400	$ 2*
3075A		Desk top Data Capture Terminal. See description and options below.	2,090	10*
3076A		Wall Mounted Data Capture Terminal. See description and options below. Also includes cradle. Built-in relay.	2,475	10*
		The following description and options apply to 3075A and 3076A. 15 position numeric display, protected display field, 17 user-defined prompting lights and 10 special function keys. A maximum of two options per terminal from options 007, 008, 009 may be ordered. Supported in point-to-point or asynchronous multipoint configurations.		
	004	Alphanumeric keyboard includes all keys on standard numeric keyboard, plus 26 alpha keys and one shift key. Alpha keys can be used as special function keys with the use of the shift key.	+110	+5*
	005	Alphanumeric display provides 24 position display with 64 upper case ASCII characters.	+490	+5*
	007	Multifunction reader. Reads punched plastic badges (industry type III), 80 column punched cards and optical mark forms.	+715	+5*
	008	Type V badge reader. Reads non-embossed punched plastic badges with or without clip.	+360	+5*
	009	Alphanumeric printer. 40 line per minute thermal printing on 4.7 cm (2.25 in) wide paper roll.	+440	+5*

*All terminals are returned to a Hewlett-Packard designated repair office for bench repair.
†Domestic U.S.A. prices only, and subject to change without notice. For a firm quotation, contact your Hewlett-Packard Sales Representative.

(continued)

PRODUCT NUMBER	OPT.	DESCRIPTION	PRICE†	MONTHLY MAINT. CHARGE†

Factory Data Collection Terminals (cont'd)

PRODUCT NUMBER	OPT.	DESCRIPTION	PRICE†	MONTHLY MAINT. CHARGE†
3077A		**Time Reporting Terminal.** Large time display and Type V badge reader are standard. Wall mounted unit with built in relay to control external devices. Supported in point-to-point or asynchronous multipoint configurations.	$ 2,530	$ 10*
	001	Multifunction Reader replaces Type V badge reader. Reads punched plastic badges (industry type III), 80 column punched cards and optical mark forms.	+350	+5*
	005	Alphanumeric Display provides 24 position display with 64 upper case ASCII characters.	+605	+5*
7260A		**Optical Mark Reader.** Buffered serial output data; switchable baud rate; RS-232C compatible; up to 300 cards per minute. Includes reader, operating manual, card weight, dust cover, 2.29M (7.5 ft) interface and power cables. 115V, 60 Hz operation. Use of the 7260A on HP 3000 systems is in conjunction with an HP supported terminal.	5,505	45.00
	002	Select Hopper. Separate Hopper for storing cards selected under computer control.	+230	0.00
	003	Encoder. Allows reading of Standard 80 and 40 column punched cards and 40 column marked cards without clock marks. Rear panel switch allows selection of reading cards with or without clock marks. Note: 7260A can be used to input punched cards to the HP 3000 only on a light duty basis. It is not a general purpose punched card reader.	+230	0.00
	004	Bell. Audible event indicator activated under computer control	+60	0.00
	005	200/240V AC power operation	0	0.00
	006	50 Hz operation	0	0.00
	007	Wider input hopper for turn-around document.	+52	0.00
	300	Adds operating documentation for HP 3000.	+10	0.00

*All terminals are returned to a Hewlett-Packard designated repair office for bench repair.
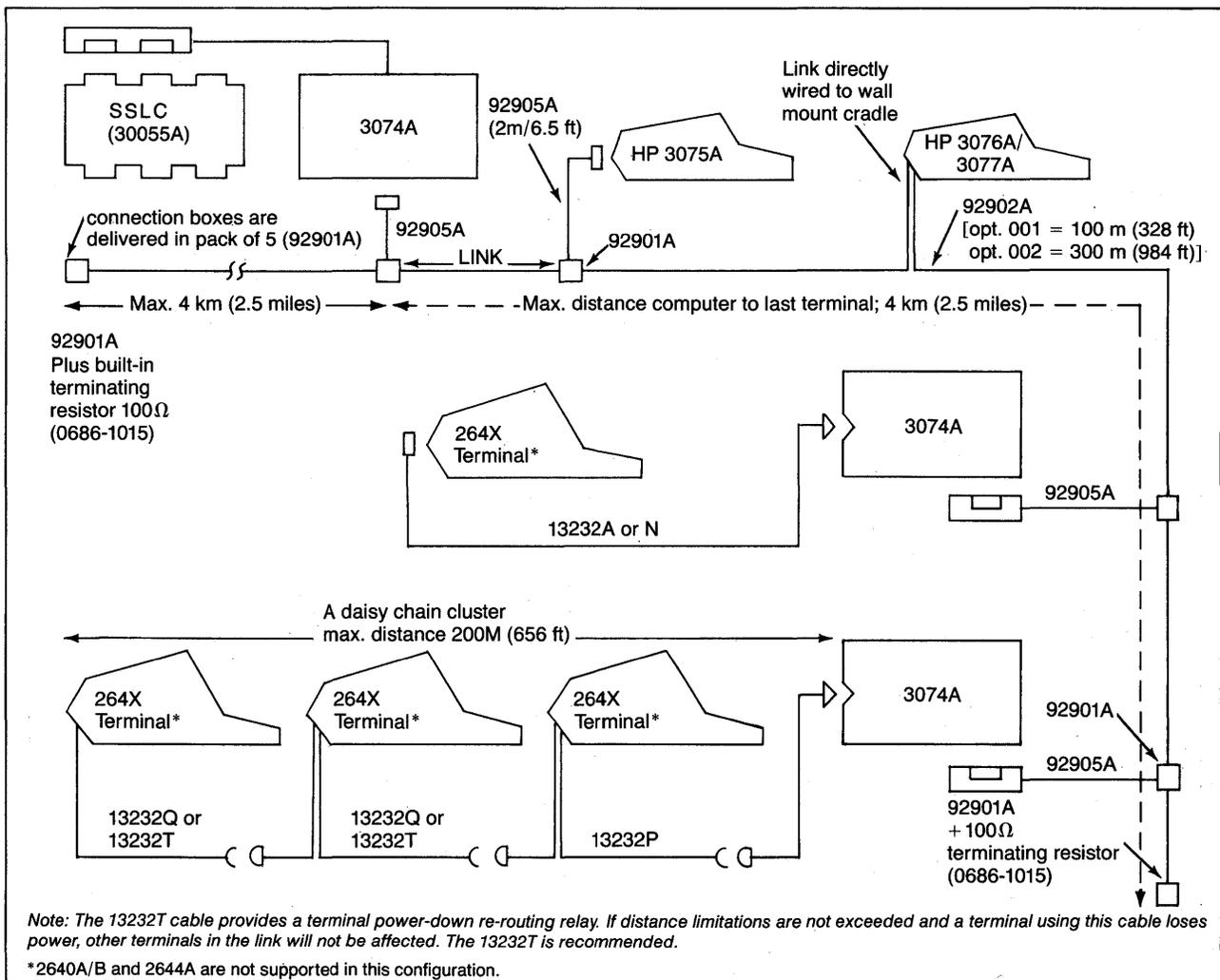
†Domestic U.S.A. prices only, and subject to change without notice. For a firm quotation, contact your Hewlett-Packard Sales Representative.
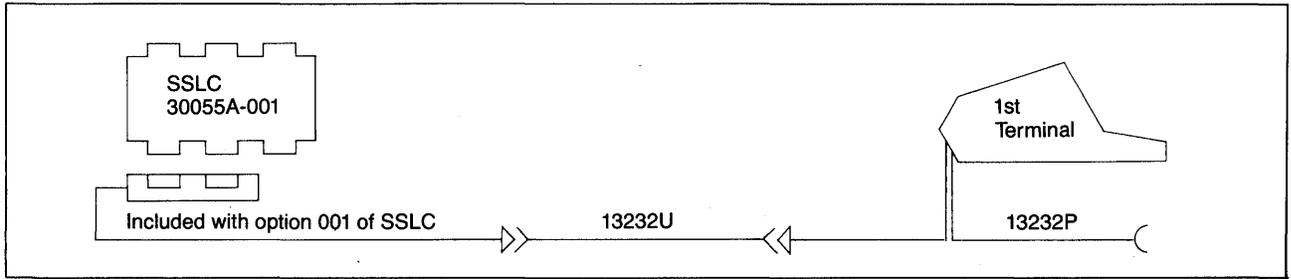
PRODUCT NUMBER	OPT.	DESCRIPTION	PRICE†	MONTHLY MAINT. CHARGE†
		System Software and Hardware Interface		
32193A		**MTS/3000 Software**	please see software ordering section	
30055A		**Synchronous Single Line Controller (SSLC).** Includes Synchronous Cable. Length 7.62M (25 ft)	$2,000	0
	001	Replaces standard synchronous cable with asynchronous cable for hardwired asynchronous operation. Length 7.62M (25 ft).	0	0
30037A		**Asynchronous Repeater (AR).** Extends RS232-C interface link to 2000 ft. Converts RS232-C communication signal levels to be compatible with the HP family of terminals which operate in asynchronous multipoint communication mode (e.g., 2641A, 2645A, 2647A, 2648A). By using an AR, the first asynchronous multipoint terminal can be located up to 609.76M (2000 ft) from the computer. Includes adapter cable.	900	5
	015	230V operation	0	0
		Terminal Multipoint Interfaces for 2641A, 2645X, 2647A and 2648A Terminals		
13260C		**Asynchronous Multipoint Communications Interface.** For daisy chained line sharing. Not for 2640A/B or 2644A or 2621A/P terminals. Option 030 must be ordered with each terminal to delete the standard asynchronous interface.	435	0
	001	Add monitor mode capability. Allows any terminal in a drop to monitor all data transmitted to and from all terminals beyond it in the drop.	+50	0
13260D		**Synchronous Multipoint Communications Interface.** For daisy chained line sharing. Not for 2640A/B or 2644A or 2621A/P terminals. Option 030 must be ordered with each terminal to delete the standard asynchronous interface.	450	0
	001	Add monitor mode capability. Allows any terminal in a drop to monitor all data transmitted to and from all terminals beyond it in the drop.	+50	0
		Cables—See diagrams, following pages		

Multipoint Terminal Communications Products

(continued)

†Domestic U.S.A. prices only, and subject to change without notice. For a firm quotation, contact your Hewlett-Packard Sales Representative.

PRODUCT NUMBER	OPT.	DESCRIPTION	PRICE†	MONTHLY MAINT. CHARGE†

Multipoint Terminal Communications Products (cont'd)

PRODUCT NUMBER	OPT.	DESCRIPTION	PRICE†	MONTHLY MAINT. CHARGE†
92901A		Data Link Connector. For use with hardwired data link configurations. 5 data link connector boxes per set.	30 (1-3 sets) 27 (4 or more sets)	
92902A		Shielded twisted pair cable. Must order option 001 or 002	0	0
	001	100M (328.08 ft)	165	0
	002	300M (984.25 ft)	490	0
92905A		Device to Data Link Cable. To connect 3074A Data Link Adapters in a hardwired data link configuration. 2M/6.56 ft)	90	0
13232P		Modem Multipoint Cable. Each leg 4.57M (15 ft)	115	0
13232Q		Multipoint Cable. Each leg 4.57M (15 ft)	90	0
13232R		Multipoint Extension Cable	75	0
13232T		Power Protect Multipoint Cable. Each leg 4.57M (15 ft)	185	0
13232U		Modem Bypass Cable. 1.52M (5 ft)	50	0

Modems

PRODUCT NUMBER	OPT.	DESCRIPTION	PRICE†	MONTHLY MAINT. CHARGE†
37210T	*	4800 BPS Modem. Automatically equalized 4800 bits/sec synchronous modem. Will operate over leased or dial-up circuits, and can operate in point-to-point or multi-drop configurations. Compatible with CCITT recommendation V.27 bis.	$ 4,350	$ 33
	003	Auto Answer USA. For US dial-up applications. Is certified by the FCC and does not require an external Data Access Arrangement	270	1
	005	Remote Command. Remote modems can be tested and controlled from a central site modem. Recommended for multi-drop applications to simplify network testing. Can only be used on four wire circuits.	510	4
37220T	*	9600 BPS Modem. Automatically equalized 9600 bits/sec synchronous modem. Operates on four wire point-to-point leased telephone circuits. Requires D1 conditioned line.	6,150	37

*Note: Available only in the USA.
†Domestic U.S.A. prices only, and subject to change without notice. For a firm quotation, contact your Hewlett-Packard Sales Representative.

Point-To-Point Cable Configurations

CABLES AND MODEMS

TERMINALS

Hardwired — 30062D (Optional)

Remote — 30062C (Optional) — 30062B — Modem —//— Modem — 30062C (Optional)

Required. Order Separately

Key:
  Male DTE Connector
  Female DTE Connector
  PC Edge Connector

Included with Printing Terminal — 2635A

Cables Not included with Display Terminal. Order Separately.
13232A/M
13232Y *

264X CRT

307X

Cables Not included with Display Terminal. Order Separately.
13222N/M
13222Y *

262X CRT

*13232Y or 13222Y cables can be ordered to provide lightning protection for terminals in hardwired applications. Do not specify these cables for modems.

MTS/3000 Hardwired Data Link (Asynchronous Cable Configurations)

SSLC (30055A)

3074A

92905A (2m/6.5 ft)

HP 3075A

Link directly wired to wall mount cradle

HP 3076A/ 3077A

connection boxes are delivered in pack of 5 (92901A)

92905A

LINK

92901A

92902A [opt. 001 = 100 m (328 ft) opt. 002 = 300 m (984 ft)]

◄— Max. 4 km (2.5 miles) —► ◄— — — —Max. distance computer to last terminal; 4 km (2.5 miles)— — —

92901A Plus built-in terminating resistor 100Ω (0686-1015)

264X Terminal*

3074A

92905A

13232A or N

A daisy chain cluster max. distance 200M (656 ft)

264X Terminal*

264X Terminal*

264X Terminal*

3074A

92901A

92905A

13232Q or 13232T

13232Q or 13232T

13232P

92901A +100Ω terminating resistor (0686-1015)

Note: The 13232T cable provides a terminal power-down re-routing relay. If distance limitations are not exceeded and a terminal using this cable loses power, other terminals in the link will not be affected. The 13232T is recommended.

*2640A/B and 2644A are not supported in this configuration.

MTS/3000 Hardwired Daisy Chain Link (Asynchronous Cable Configurations.)

1st Terminal Within 13.72M (45 ft) of CPU

SSLC 30055A-001		1st Terminal
Included with option 001 of SSLC	13232U	13232P

1st Terminal up to 609.76M (2000 ft) from CPU

SSLC 30055A-001	Asynchronous Repeater 30037A (AR)	1st Terminal	2nd thru Nth Terminal
Included with option 001 of SSLC	13232R	13232Q 13232R	13232Q or 13232T
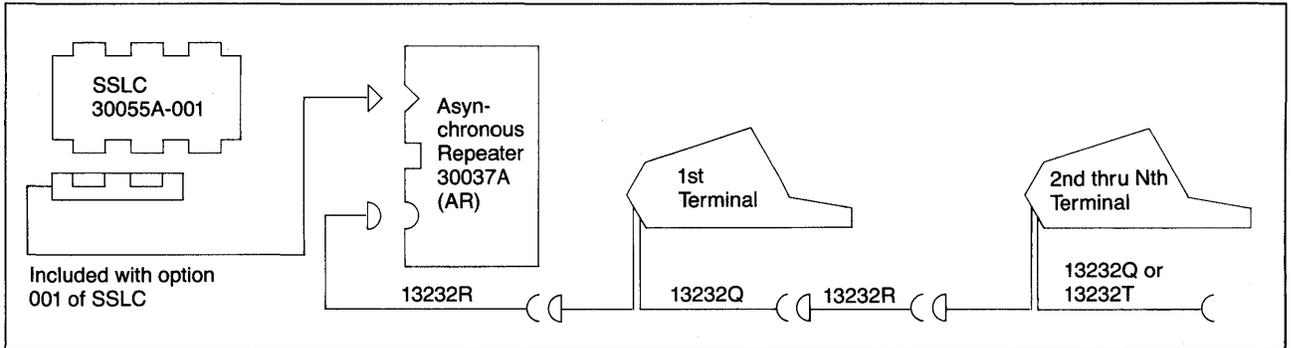
Two Groups of Terminals
1st Group up to 609.76M (2000 ft) from CPU
2nd Group up to 1219.51M (4000 ft) from CPU

SSLC 30055A-001

Included with option 001 of SSLC

13232R

Asynchronous Repeater 30037A (AR)

1st Terminal

2nd thru Nth Terminal

13232P

13232Q or 13232T

Included with AR

13232R

Asynchronous Repeater 30037A (AR)

1st Terminal

2nd thru Nth Terminal

13232P

13232Q or 13232T

Included with AR

Asynchronous Repeater 30037A (AR)

Note 1: All cables must be ordered separately unless otherwise specified.

Note 2: Multi-point terminals can be either data capture or interactive display terminals for Daisy Chain Link.

Note 3: The 13232T cable is recommended but is not required for the last terminal.

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MTS/3000 Hardwired Daisy Chain Link (Synchronous Cable Configuration)

MTS/3000 Modem Daisy Chain Link (Synchronous Cable Configuration)
Single Remote Drop

Multiple Remote Drops

Symbol Key

Symbol	Type
Male DTE	→→
Female DTE	—<
Male M/P	—)
Female M/P	—(
Male A/R Connector	—□
Female A/R Connector	—□

Note 1: *Extension cables may be used between synchronous terminals. The allowable length is a function of line speed. Refer to the MTS/3000 site preparation manual (32193-90001).*

Note 2: *The 13232T cable provides a terminal power-down re-routing relay. If distance limitations are not exceeded and a terminal using this cable loses power, other terminals in the chain will not be affected. The 13232T is recommended but is not required for the last terminal.*

Note 3: *13232R cable may be replaced by a customer; fabricated equivalent up to 610 meters (2000 Ft).*

Note: All cables must be ordered separately unless otherwise specified.

MTS/3000 ORDERING EXAMPLE

Configuration required: "Multiple Remote Drops" with two modem drops operating at 4800 bps. At drop 1 there are three 2645A's and at drop 2 there are two 2645A's.

PART NUMBER	QTY.	DESCRIPTION	EXTENDED PRICE†	MONTHLY MAINT. CHARGE†
30055A	1	Synchronous Single Line Controller	$ 2,000	$ 18
32193A*	1	MTS/3000	1,500	*
37210T	3	4800 bps Modem	13,050	99
2645A	5	Display station terminal	17,500	100
2645A-034	5	Synchronous Multipoint Communications Interface	1,375	0
13232P	2	Modem multipoint cable	230	0
13232Q	2	Multipoint Cable	180	0
13232T	1	Power Protect Multipoint Cable	75	0

Note: It is the customer's responsiblity to provide an appropriate leased telephone line.

*Please refer to software support ordering details.

†Domestic U.S.A. prices only, and subject to change without notice. For a firm quotation, contact your Hewlett-Packard Sales Representative.

HP 3000
SYSTEMS
COMMUNICATIONS
PRODUCTS

SYSTEMS COMMUNICATIONS SUPPORT MATRIX
DISTRIBUTED SYSTEMS DIAGRAMS
PRICING GUIDE

SYSTEMS COMMUNICATIONS SUPPORT MATRIX

CAPABILITY	HOST SYSTEM(S)	SOFT-WARE	REQUIRED HARDWARE	HARDWARE INTERFACE CABLE(S)	MAXIMUM DATA RATE
Hewlett Packard— Hewlett Packard					
Distributed Systems (Remote)	Series 30 or 33 to Series 30 or 33	DS/3000 (32190A)	INP (30020A) for each system Modem for each system	30221A for each 30020A Modem cables	56,000 bps
	Series 30 or 33 to Series III	DS/3000 (32190A)	INP (30020A) for Series 30 or 33 INP (30010A) for Series III Modem for each system	30221A for 30020A 30222A for 30010A Modem cables	56,000 bps
			OR		
			INP (30020A) for Series 30 or 33 SSLC (30055A) for Series III Modem for each system	30221A for 30020A Synchronous cable included Modem cables	9,600 bps
	Series III to Series III	DS/3000 (32190A)	INP (30010A) for each system Modem for each system	30222A for each 30010A Modem cables	56,000 bps
			OR		
			SSLC (30055A) for each system Modem for each system	Synchronous cable included Modem cables	9,600 bps
			OR		
			INP (30010A) SSLC (30055A) Modem for each system	30222A for 30010A Synchronous cable included Modem cables	9,600 bps
Distributed Systems (Hardwired)	Series 30 or 33 to Series 30 or 33	DS/3000 (32190A)	INP (30020A) for each system	30224B for each INP 30224L for direct connection of INPs	56,000 bps
	Series 30 or 33 to Series III	DS/3000 (32190A)	INP (30020A) for Series 30 or 33 INP (30010A) for Series III	30224B for 30020A 30224A for 30010A 30224L for direct connection of INPs	56,000 bps
			OR		
			INP (30020A) for Series 30 or 33 SSLC (30055A) for Series III	30225B for 30020A Synchronous cable included	9,600 bps
	Series III to Series III	DS/3000 (32190A)	INP (30010A) for each system	30224A for each system 30224L for direct connection of INPs	56,000 bps
			OR		
			INP (30010A) SSLC (30055A)	30225A for Series III Synchronous cable included	9,600 bps
			OR		
			HSI (30360A) for each system	30220A for each link	2,500,000*

*Note: For HSI links, values are the nominal transfer rate. Actual throughput depends upon the application.

SYSTEMS COMMUNICATIONS SUPPORT MATRIX (cont'd)

CAPABILITY	HOST SYSTEM(S)	SOFT-WARE	REQUIRED HARDWARE	HARDWARE INTERFACE CABLE(S)	MAXIMUM DATA RATE
Hewlett Packard—IBM					
Multileaving Remote Job Entry	Series III	MRJE/3000 (32192A)	SSLC (30055A) Modem	Synchronous cable included Modem cables	9,600 bps
Remote Job Entry	Series 30 and Series 33	RJE/3000 (30130E)	INP (30020A) Modem	30221A Modem cables	56,000 bps
	Series III	RJE/3000 (30130E)	INP (30010A) Modem	30222A Modem cables	56,000 bps
			OR		
			SSLC (30055A) Modem	Synchronous cable included Modem cables	9,600 bps

INP Modem Connection

Intelligent Network Processor

30221A for Series 30 or 33
30221D for Series 30 or 33
30222A for Series III
30222D for Series III
(order cables separately)

Modem ...to HP or IBM installation
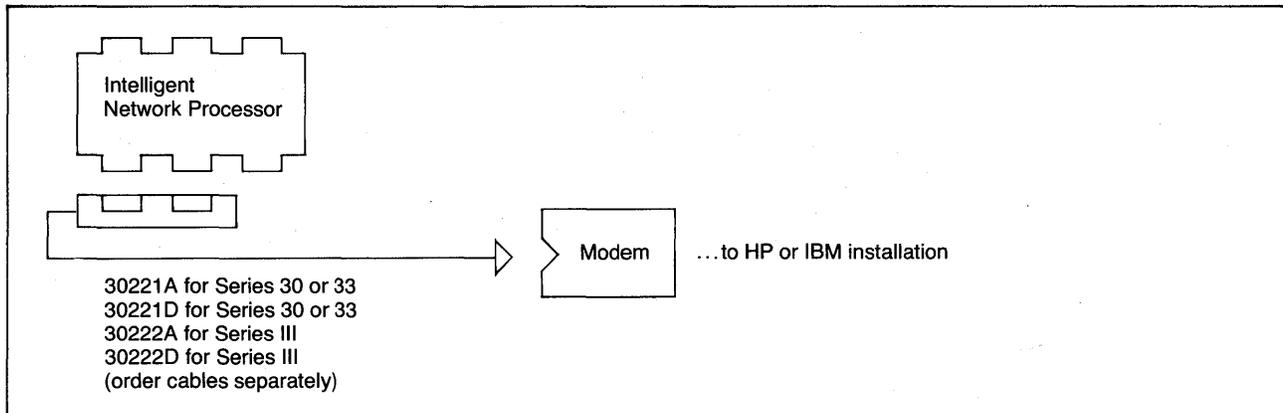
SSLC Modem Connection (Available only on Series III)

Synchronous Single Line Controller (30055A)

Cable included

Modem ...to HP or IBM installation
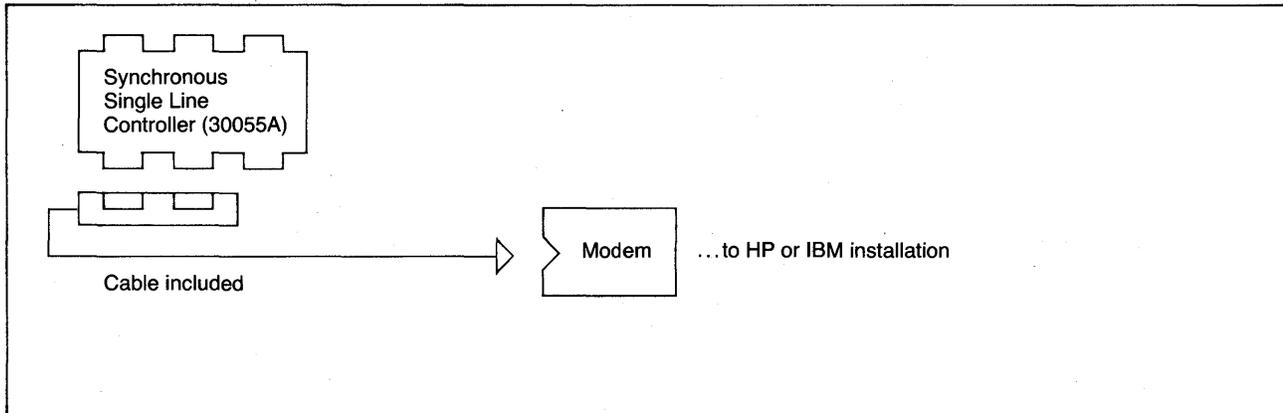
DS/3000 INP-INP Direct Connection

Intelligent Network
Processor
(30020A or 30010A)

Intelligent Network
Processor
(30020A or 30010A)

30224B for Series 30 or 33
30224A for Series III

30224L
(order separately and
select option for
appropriate length)

30224B for Series 30 or 33
30224A for Series III
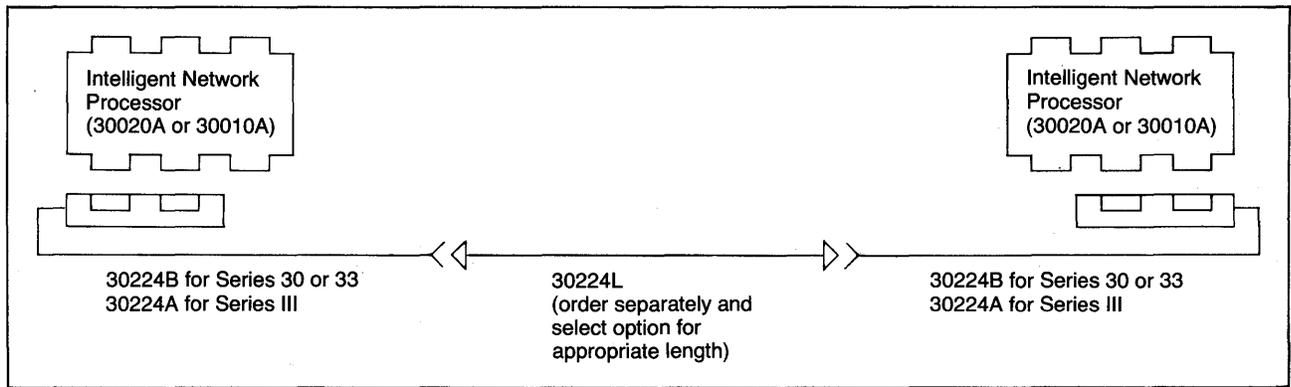
DS/3000 INP-SSLC Direct Connection

Intelligent
Network Processor
(30020A or 30010A)

Synchronous
Single Line
Controller (30055A)

30225B for Series 30 or 33
30225A for Series III
(order cables separately)

cable included
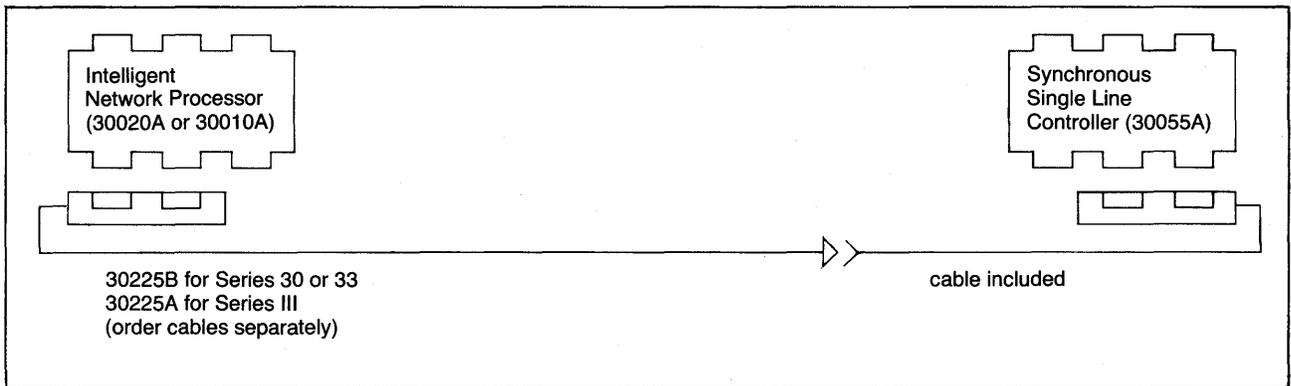
DS/3000 HSI-HSI Hardwired Connection (Available only on Series III)

HSI
30360A

HSI
30360A

30220A Coaxial Cable (Order Separately)

Up to 4 links to other HSI cards are possible on a single HSI. However, DS/3000 can be active over only one link at a time.

63
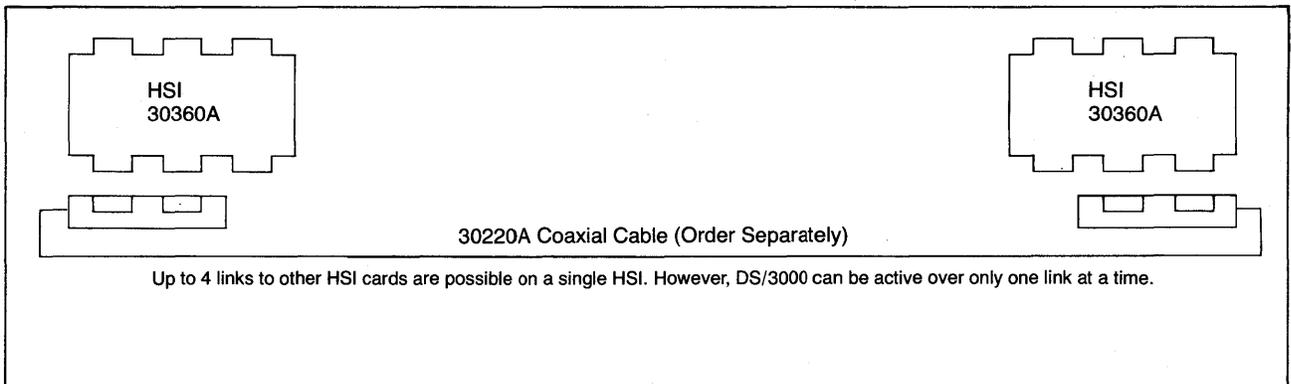
SYSTEMS COMMUNICATIONS PRICING GUIDE

PRODUCT NUMBER	OPT	DESCRIPTION	PRICE†	MONTHLY MAINT. CHARGE†
		Hardware Interfaces		
30010A		**Intelligent Network Processor (INP).** For use on Series III systems. Provides serial interface for modem or hardwired links. Offloads data communication protocol handling from CPU. For those systems which have upgraded from a pre-Series II system, option 001 is required with the first INP. Requires a modem or hardwired interface cable.	$4,500	$34
	001	Provides new I/O card cage backplane for systems that were upgraded from pre-Series II systems.	+375	0
30020A		**Intelligent Network Processor (INP).** For use on Series 30 or Series 33 systems. Provides serial interface for modem or hardwired links. Offloads data communication protocol handling from CPU. Includes internal HP-IB cable. When ordering first INP for second card cage of Series 33, option 001 is required. Requires a modem or hardwired interface cable.	4,500	34
	001	Specifies HP-IB internal cable to extend to second card cage of Series 33.	0	0
30055A		**Synchronous Single Line Controller.** For modem links. Cable to modem included. Length 7.62M (25 ft).	2,000	18
	001	Replaces modem cable with cable to run MTS/3000 in hardwired asynchronous mode. Length 7.62M (25 ft).	0	0
30360A		**Hardwired Serial Interface.** For coaxial links. A 30220A cable is required for each pair of hardwired serial interfaces.	2,300	20

Hardware Interfaces

INP Cables

PRODUCT NUMBER	OPT	DESCRIPTION	PRICE†	MONTHLY MAINT. CHARGE†
30221A		**Synchronous Modem Cable (RS-232-C).** For use with a modem operating up to 19.2 Kbs on a Series 30 or a Series 33 INP modem link. Length 10M (32.91 ft).	$ 250	0
30221D		**High Speed Synchronous Modem Cable (V.35).** For use with a modem operating above 19.2 Kbs on a Series 30 or Series 33 INP modem link. Length 10M (32.81 ft)	250	0
30222A		**Synchronous Modem Cable (RS-232-C).** For use with a modem operating up to 19.2 Kbs on a Series III INP modem link. Length 10M (32.81 ft).	250	0
30222D		**High Speed Synchronous Modem Cable (V.35).** For use with a modem operating above 19.2 Kbs on a Series III INP modem link. Length 10M (32.81 ft).	250	0
30224A		**INP-to-INP Direct-Connect Cable.** Required to interface 30224L External Interconnect Cable to Series III systems.	250	0
30224B		**INP-to-INP Direct-Connect Cable.** Required to interface 30224L External Interconnect Cable to Series 30 or Series 33 systems.	250	0

†Domestic U.S.A. prices only, and subject to change without notice. For a firm quotation, contact your Hewlett-Packard Sales Representative

PRODUCT NUMBER	OPT	DESCRIPTION	PRICE†	MONTHLY MAINT. CHARGE†

INP Cables (cont'd)

PRODUCT NUMBER	OPT	DESCRIPTION	PRICE†	MONTHLY MAINT. CHARGE†
30224L		**External Interconnect Cable.** Required to hardwire interconnect HP 3000 systems using INPs. A 30224A and/or a 30224B must be used to interconnect each end of the 30224L on an HP 3000 system. Length 10M (32.81 ft).	$ 150	$ 0
	001	25M (82.02 ft).	+50	0
	002	50M (164.04 ft)	+120	0
	003	100M (328.08 ft)	+250	0
	004	250M (820.21 ft)	+675	0
	005	500M (1,640.42 ft)	+1,350	0
	006	1,000M (3,280.84 ft)	+2,750	0
30225A		**INP-to-SSLC Direct-Connect Cable.** For use with Series III INP. Length 15M (49.21 ft).	250	0
30225B		**INP-to-SSLC Direct-Connect Cable.** For use with Series 30 or Series 33 INP. Length 15M (49.21 ft)	250	0

HSI Cables

PRODUCT NUMBER	OPT	DESCRIPTION	PRICE†	MONTHLY MAINT. CHARGE†
30220A		**Coaxial Cable.** For hardwired serial interface. Length 7.62M (25 ft)	$ 175	$ 0
	001	30.48M (100 ft)	+100	0
	002	76.20M (250 ft)	+225	0
	003	152.40M (500 ft)	+430	0
	004	304.80M (1,000 ft)	+825	0
	005	609.60M (2,000 ft)	+1,600	0

†Domestic U.S.A. prices only, and subject to change without notice. For a firm quotation, contact your Hewlett-Packard Sales Representative.

HP 3000 SYSTEMS AND PERIPHERALS SITE PREPARATION DATA

SYSTEMS SITE PREPARATION DATA

Site Preparation Data for Series 30

	HP 7906M 20 Mb DISC DRIVE (Must be ordered separately)		SYSTEM CABINET		HP 2649E SYSTEM/MAINTENANCE CONSOLE (Must be ordered separately)	
	USA (60 Hz)	NON-USA (50 Hz)	USA (60 Hz)	NON-USA (50 Hz)	USA (60 Hz)	NON-USA (50 Hz)
VOLTAGE (single phase)	120	230	100 or 120	220/240	115	230
CURRENT (Note 3)	7.1A	4.3A	5.0A	2.6A	2.2A	1.1A
HEAT OUTPUT (per hour)	2450 btu	686 kcal	1640 btu	459 kcal	560 btu	140 kcal
WEIGHT	270 lb	122 kg	250 lb	114 kg	50 lb	23 kg
SIGNAL CABLE LENGTH	Note 1	Note 1	—	—	Note 2	Note 2

Note 1: Up to seven slave disc drives may be daisy chained from a controller within the master drive. The cable length from system to master drive is 6M (19.69 ft). The cable length between drives is 2.44M (8 ft.). In addition, each slave drive has a cable back to the controller. The length of this cable for each drive is 15.24M (50 ft.). The maximum cumulative length of daisy-chained cable is 22.56M (74 ft.).

Note 2: The system/maintenance console is cabled to remain adjacent to the System Processor Unit, approximately 2M (6.56 ft.).

Note 3: The HP 3000 Series 30 computer system has been designed to operate reliably over a broad range of power conditions with most commercially available power sources, when installed according to Hewlett-Packard guidelines for site preparation (refer to Site Preparation Planning Guide 30080-60050).

The HP Customer Engineer may assist in determining the need for line conditioning in addition to these guidelines by monitoring the AC power line as part of the standard site preparation for a Series 30 system. If the specifications are not met, additional line conditioning equipment will be required for reliable system operation. Since power conditions may vary over time, line conditioning equipment may be required after system installation at HP's option to provide continued reliable operation.

Site Preparation Data for Series 33

	HP 7906M 20 Mb DISC DRIVE (Must be ordered separately)		SYSTEM CABINET		HP 2649E SYSTEM/MAINTENANCE CONSOLE (Must be ordered separately)	
	USA (60 Hz)	NON-USA (50 Hz)	USA (60 Hz)	NON-USA (50 Hz)	USA (60 Hz)	NON-USA (50 Hz)
VOLTAGE (single phase)	120	230	200-240	200-240	115	230
CURRENT	7.1A*	4.3A*	24.0A*	24.0A*	2.2A*	1.1A*
HEAT OUTPUT (per hour)	2450 btu	686 kcal	5300 btu	1335 kcal	560 btu	140 kcal
WEIGHT	270 lb	122 kg	710 lb	322 kg	50 lb	23 kg
SIGNAL CABLE LENGTH	Note 1	Note 1	—	—	Note 2	Note 2

Note 1: Up to seven slave disc drives may be daisy chained from a controller within the master drive. The cable length from system to master drive is 6M (19.69 ft). The cable length between drives is 2.44M (8 ft). In addition, each slave drive has a cable back to the controller. The length of this cable for each drive is 15.24M (50 ft). The maximum cumulative length of daisy-chained cable is 22.56M (74 ft).

Note 2: The system/maintenance console is cabled to remain on the system table.

*System cabinet alone draws up to 10 amps; remaining 14 amps are available for up to four peripherals through an outlet in the rear of the cabinet.

SYSTEM SITE PREPARATION DATA (CONT'D)

Site Preparation for Series III

	HP 7920M 50 Mb DISC DRIVE (Must be ordered separately)		SYSTEM BAY		HP 2621A CRT CONSOLE (Must be ordered separately)		7970E 1600 bpi Mag Tape (Must be ordered separately	
	USA (60 Hz)	NON-USA (50 Hz)	USA (60 Hz)	NON-USA (50 Hz)	USA (60 Hz)	NON-USA (50 Hz)	USA (60 Hz)	NON-USA (50 Hz)
VOLTAGE (single phase)	120	230	200-240	200-240	110-120	230V	120	220
CURRENT	6.7A*	4.4A*	24A*	24A*	0.5	0.25A	3.3A*	1.7A*
HEAT OUTPUT (per hour)	2350 btu	730 kcal	12,000 btu	3024 kcal	137 btu	35 kcal	614 btu	150 kcal
WEIGHT	300 lb	136 kg	490 lb	223 kg	130.5 lb	16.1 kg	290 lb	129 kg
SIGNAL CABLE LENGTH	18 ft**	5.49M**	—	—	25 ft	7.6M	20 ft	6M

Site Preparation Data for Series III with Option 200 (I/O Expansion to Second Bay)

	HP 7920M 50 Mb DISC DRIVE (Must be ordered separately)		SYSTEM BAYS		HP 2621A CRT CONSOLE (Must be ordered separately)		7970E 1600 bpi Mag Tape (Must be ordered separately)	
	USA (60 Hz)	NON-USA (50 Hz)	USA (60 Hz)	NON-USA (50 Hz)	USA (60 Hz)	NON-USA (50 Hz)	USA (60 Hz)	NON-USA (50 Hz)
VOLTAGE	120	230	200-240	200-240	115	230V	120	220
CURRENT	6.7A*	4.4A*	24A*	24A*	0.5	0.25A	3.3A*	1.7A*
HEAT OUTPUT (per hour)	2350 btu	730 kcal	12,000 btu	3024 kcal	137 btu	35 kcal	614 btu	150 kcal
WEIGHT	300 lb	136 kg	690 lb	313 kg	130.5 lb	16.1 kg	290 lb	129 kg
SIGNAL CABLE LENGTH	18 ft**	5.49M**	—	—	25 ft	7.6M	20 ft	6M

*System cabinet alone draws up to 10 amps; 14 amps are available for the system disc and tape through an outlet at the rear of the cabinet. 7920M and 7970E as shown draw 10.0 amps from system bay.

**Up to seven slave disc drives may be daisy-chained to a master drive. The cable length between disc drives is 2.44M (8 ft). In addition, each drive also has a cable back to the controller in the master drive. The length of this cable for each drive is 15.24M (50 ft). The maximum cumulative length of daisy-chained cable is 22.56M (74 ft). Longer cables may be special ordered, but this is not advised.

PERIPHERALS SITE PREPARATION DATA

Electrical Power

These peripherals for the HP 3000 operate on 115 volt, 60 Hz, single phase (U.S.A.) or optionally on 230 volt, 50 Hz, single phase (International).

Installation

Installation is provided by a factory-authorized Customer Engineer and is included in the list price of all peripherals.

PERIPHERALS SUMMARY DATA						U.S.A.	
DESCRIPTION			STEADY STATE CURRENT	HEAT OUTPUT PER HOUR	WEIGHT (NET)	SERIES 30 AND SERIES 33 CABLE LENGTHS	SERIES III CABLE LENGTHS
Disc Drives	7906S	20 Mb Drive (Series 30 and Series 33)	5.1A†	1600 btu	270 lb	Note 1	
	7920S	50 Mb Drive	4.7A†	1500 btu	315 lb	Note 1	Note 1
	7925S	120 Mb Drive	3.7A†	1150 btu	320 lb	Note 1	Note 1
		Controller in master drive	2.0A	850 btu		Note 5	
Magnetic Tape Drives	7970B	800 BPI Drive (Series III)	2.5A	375 btu	425 lb	Note 4	Note 4
	7970E	1600 BPI Drive	3.3A	614 btu	425 lb	Notes 3,4	Note 4
Line Printers	2608A	400 LPM	7.0A	2600 btu	215 lb	Note 2	50 ft.
	2613A	300 LPM	7.8A	3070 btu	340 lb		50 ft.
	2617A	600 LPM } (Series III)	13A*	5120 btu	390 lb		50 ft.
	2619A	1000 LPM	12.5A*	6500 btu	570 lb		50 ft.
	2631A	180 CPS (Series 30 and Series 33)	2.5A	410 btu	51 lb	Note 2	
Display Terminals	2640X	All Models	1.1A	300 btu	44 lb	15 ft.	15 ft.
	2641A	APL Station	1.2A	325 btu	44 lb		15 ft.
	2645X	All Models	1.4A	350 btu	50 lb	15 ft.	15 ft.
	2647A	Intelligent Graphics	2.2A	560 btu	50 lb	15 ft.	15 ft.
	2648A	Graphics Terminal	1.8A	460 btu	50 lb	15 ft.	15 ft.
	2621A	Interactive Terminal	0.5A	137 btu	35.5 lb	16 ft.	16 ft.
	2621P	Printing Terminal	1.2A	340 btu	37.5 lb	16 ft.	16 ft.
Printing Terminal	2635A	180 CPS	2.5A	580 btu	56 lb	12.5 ft.	12.5 ft.
Other	30104A	Paper Tape Reader	2.5A	683 btu	42 lb		25 ft.
	30105A	Paper Tape Punch	2A	683 btu	35 lb		25 ft.
	30106A	Card Reader } (Series III)	4.0A	1230 btu	75 lb		25 ft.
	30119A	Card Reader/Punch	5.3A	1450 btu	260 lb		50 ft.
	7260A	Optical Mark Reader	1.5A	460 btu	541 lb	7.5 ft.	7.5 ft.

*20A recommended breaker current   †Operation on 120 volt, 60 Hz, single phase recommended

Notes:
1. The maximum cumulative length of daisy-chained cable is 22.56M (74 ft).
2. Refer to Series 30 and Series 33 cabling diagram for printers.
3. The maximum length of HP-IB cable is 6M (19.69 ft) for the master drive.
4. Multi-unit cables 6M (19.69 ft).
5. The maximum length of HP-IB cable is 6M (19.69 ft) for the master drive on Series 33 and 2M (6.56 ft) for the master drive on Series 30.

HP 3000
SOFTWARE,
MANUALS AND
TRAINING

HP 3000 SOFTWARE PRODUCTS
HP 3000 SOFTWARE SUPPORT
HP 3000 MANUALS AND DOCUMENTATION SERVICES
HP 3000 SOFTWARE ORDERING EXAMPLES
TRAINING AND CONSULTING

HP 3000
SOFTWARE PRODUCTS

Fundamental Operating Software

Standard on each HP 3000 system is the Fundamental Operating Software which includes:

- Multiprogramming Executive III (MPE III) Operating system
- Text editor (EDIT/3000)
- File copying utility (FCOPY/3000)
- Sort and merge package (SORT-MERGE/3000)
- Data base management system (IMAGE/3000)
- Data base inquiry language (QUERY/3000)
- Keyed Sequential Access Method Software (KSAM/3000)
- Forms management software (HP VIEW/3000)
- Facility to execute compiled programs without the source language compiler on the system (except for programs written in APL\3000).

Additional HP 3000 Software Products

Software subsystems not included with the system are available as add-on products.

Software products are denoted by a five-digit product number followed by an alphabetic character. This alphabetical suffix indicates the version level of the product. Support services related to the product are ordered separately and are specified by the same five-digit number and a different suffix.

Purchase of a software product entitles a customer to use that product on one HP 3000 computer system with no time limit. The standard software product is ordered with suffixes A through E. A customer who has purchased the software for one system may buy the right to copy that software at a reduced fee. This right to copy entitles a customer to make one copy of an additional HP software product for distribution and use on one additional HP 3000 system with no time limit. This method of purchasing software is indicated by the suffix R.

Standard Software Product (ordered as xxxxxA through xxxxxE)

This product must be ordered for the first use of a software product that is purchased for an HP 3000 system. Purchase of the software product includes:

- one copy of the product's software installed on one HP 3000 system
- the right to use the software on one HP 3000 system with no time limit
- one copy of the product's firmware, if appropriate
- one copy of the associated product manual(s)

Right to Copy the Standard Software Product (ordered as xxxxxR)

The right to copy the standard software product is available to provide software at a reduced fee for additional HP 3000 systems. Purchase of the Right to Copy includes:

- the right to make one copy of a previously or concurrently purchased standard software product
- the right to distribute to and use the copy of the software product on one additional HP 3000 system with no time limit
- one copy of the product's firmware, if appropriate
- one copy of the associated product manual(s)

Order one Right-to-Copy product for each copy desired. Installation of Right-to-Copy products may be purchased on a time and materials basis.

The following tables list the software products available, and the product numbers for both purchasing methods. Detailed descriptions of each product can be found in the HP 3000 General Information Manual (30000-90008).

Languages

The HP 3000 offers several high-level languages which let you select the language best suited to the task. Applications written in different languages can be run simultaneously. Data files, subprograms, and peripheral devices can be used in common by programs in any language without program changes.

PRODUCT NUMBER	DESCRIPTION	STANDARD PRODUCT PRICE†	RIGHT TO COPY PRICE†
32213C	**COBOL/3000 Compiler.** Conforms to 1968 American National Standards Institute specifications. Includes: COBOL/3000 Reference Manual (32213-90001) Using COBOL (32213-90003)	$1,500	
32213R	"Right to Copy" 32213C product		$ 600
32104A	**RPG/3000 Compiler.** Includes: RPG/3000 Reference Manual (32104-90001) RPG Listing Analyzer (32104-90003)	1,500	
32104R	"Right to Copy" 32104A product		600
32102B	**FORTRAN/3000 Compiler.** Includes: FORTRAN/3000 Reference Manual (30000-90040) FORTRAN/3000 Pocket Guide (32102-90002)	1,500	
32102R	"Right to Copy" 32102B product		600
32111A	**BASIC/3000 Interpreter and Compiler.** Includes: BASIC for Beginners (03000-90025) BASIC/3000 Pocket Guide (03000-90050) BASIC/Interpreter Manual (30100-90026) BASIC Compiler Reference Manual (32103-90001)	1,500	
32111R	"Right to Copy" 32111A product		600
32105A	**APL\3000 Language Subsystem.** Includes: APL Reference Manual (32105-90002) APL Pocket Guide (32105-90003) APL firmware	5,000	
32105R	"Right to Copy" 32105A product		2,000
32100A	**SPL/3000 Compiler.** Includes: SPL Pocket Guide (32100-90001) SPL/3000 Reference Manual (30000-90024) SPL Textbook (30000-90025)	2,000	
32100R	"Right to Copy" 32100A product		800

†Domestic U.S.A. prices only, and subject to change without notice. For a firm quotation, contact your Hewlett-Packard Sales Representative.

Data Communications

The HP 3000 employs a network architecture called Hewlett-Packard Distributed Systems Network (HP-DSN), which allows diverse computer systems to be linked into information processing network. Through the HP-DSN communications product family, data processing can be distributed among functionally or geographically dispersed computers and terminals.

PRODUCT NUMBER	DESCRIPTION	STANDARD PRODUCT PRICE†	RIGHT TO COPY PRICE†
32190A	**DS/3000 Distributed Systems Software.** Provides remote access, interactive processing, and resource sharing among HP 3000 computers and other Hewlett-Packard computer systems. Includes: DS/3000 Reference Manual (32190-90001) DS/3000 to DS/1000 Reference Manual (32190-90005)	$3,000	
32190R	"Right to Copy" 32190A product		$1,200
30130E	**RJE/3000 Remote Job Entry.** Provides IBM 2780/3780 emulation. Includes: 2780/3780 Emulator Reference Manual (30000-90047)	750	
30130R	"Right to Copy" 30130E product		300
32192A	**MRJE/3000 Multileaving Remote Job Entry.** Provides IBM HASP/JES/ASP multileaving workstation emulation for remote job entry by multiple users simultaneously. Includes: MRJE/3000 Reference Manual (32192-90001)	2,000	
32192R	"Right to Copy" 32192A product		800
32193A	**MTS/3000 Multipoint Terminal Support.** Provides synchronous and asynchronous multipoint terminal communications. Includes: MTS/3000 Site Preparation and Installation Manual (32193-90001)	1,000	
32193R	"Right to Copy" 32193A product		400

†Domestic U.S.A. prices only, and subject to change without notice. For a firm quotation, contact your Hewlett-Packard Sales Representative.

Manufacturing Applications Software

MFG/3000 is an integrated online system developed by Hewlett-Packard for managing the materials planning and control function of a manufacturing operation. The MFG/3000 software consists of four modules.

PRODUCT NUMBER	DESCRIPTION	STANDARD PRODUCT PRICE†	RIGHT TO COPY PRICE†
32380A	EDC/3000 Engineering Data Control. Maintains a data base for bills of materials, current and standard cost, data standard routings, and descriptive information. Includes: EDC/3000 User's Reference Manual (32380-90001) EDC/3000 Administrator's Reference Manual (32380-90002)	$5,000	
32380R	"Right to Copy" 32380A product		$2,000
32392A	SPC/3000 Standard Product Costing. Uses information from the EDC/3000 data base to calculate current product costs and to set standard costs. Includes: SPC/3000 User-Administrator's Manual (32392-90001)	3,500	
32392R	"Right to Copy" 32392A product		1,400
32384A	IOS/3000 Inventory and Order Status. Maintains a data base of current inventory balances, scheduled issues from inventory, and scheduled receipts from purchase and work orders. Includes: IOS/3000 User's Reference Manual (32384-90001) IOS/3000 Administrator's Reference Manual (32384-90002)	5,000	
32384R	"Right to Copy" 32384A product		2,000
32388A	MRP/3000 Materials Requirements Planning. Uses data from EDC/3000 and IOS/3000 to determine the timing and quantities of parts to be ordered; and to identify the current orders to be pulled up, pushed out, or cancelled. Includes: MRP/3000 User-Administrator's Reference Manual (32388-90001)	5,000	
32388R	"Right to Copy" 32388A product		2,000

*Available for sale only in North America, Europe and Australia.

†Domestic U.S.A. prices only, and subject to change without notice. For a firm quotation, contact your Hewlett-Packard Sales Representative.

Additional Applications Software

PRODUCT NUMBER	DESCRIPTION	STANDARD PRODUCT PRICE†	RIGHT TO COPY PRICE†
32205A	**Scientific Library.** Procedures that perform the functions required most often in scientific applications. Includes: Scientific Library Reference Manual (30000-90027)	$ 300	
32205R	"Right to Copy" 32205A product		$ 120
32900A	**SIS/3000 Student Information System.** Includes: SIS/3000 Reference Manual (32900-90001) SIS/3000 Technical Manual (32900-90005) SAS/3000 Reference Manual (32901-90001) SAS/3000 Technical Manual (32901-90005)	3,000	
32900R	"Right to Copy" 32900A product		1,200
32902A	**CIS/3000 College Information System.** Includes: CIS/3000 Reference Manual (32902-90001) CIS/3000 Technical Manual (32902-90005)	5,000	
32902R	"Right to Copy" 32902A product		2,000

HP 3000 Terminal Keyboard Templates

PRODUCT NUMBER	DESCRIPTION	PRICE†
	HP VIEW/3000 Soft Key Templates	
7120-1189	ENTRY Template.	$ 4
7120-1190	FORMSPEC/REFSPEC Template	4
	Templates should be ordered through the Hewlett-Packard Corporate Parts Center.	

†*Domestic U.S.A. prices only, and subject to change without notice. For a firm quotation, contact your Hewlett-Packard Sales Representative.*

HP 3000
SOFTWARE SUPPORT

Hewlett-Packard offers a broad range of software support services to help insure customer satisfaction with HP 3000 computer systems. Since support needs differ, different services are available to tailor a support plan appropriate to each customer. Consult the General Information Manual (30000-90008) for more information about Hewlett-Packard support services.

Alphabetic suffixes are used to indicate the particular service relating to a specific product. Standard software support is called Customer Support Service (CSS) and is denoted by the suffix T. Extensions to this coverage are specified by the suffix V for support of an additional site through a central site receiving CSS service, and the suffix P to permit additional callers to use Phone-In Consulting.

The Fundamental Operating Software and all software products residing on a system must be covered at the same level of service.

For experienced customers, reduced support under Software Subscription Service (suffix S) is available.

Customer Support Service—CSS (ordered as xxxxxT)

CSS is Hewlett-Packard's standard software support plan, and provides the highest level of support available. All customers are strongly encouraged to buy CSS to maximize their satisfaction with their HP 3000 system. CSS helps to develop a close working relationship between the account-responsible Systems Engineer (SE) and the customer, thereby enabling the SE to advise on applications development and future system planning.

CSS is critically important to customers purchasing their first HP 3000. Whether the customer is relatively new to data processing or already has a highly-skilled team of DP professionals, the HP 3000 is a new system to that customer. Until the customer gains at least 12 months' experience with the HP 3000, problems are likely to arise and design assistance may be needed from HP.

Features

- Right to use software and firmware updates on one system
- Delivery and installation of software and firmware updates
- Software Status Bulletin (twice a month)
- Software problem reporting
- HP 3000 Communicator (digest of articles relevant to programming the HP 3000)
- Product manual updates
- Phone-In Consulting Service (PICS)
- On-site Systems Engineering assistance
- Account-responsible Systems Engineer

Additional Site Support (ordered as xxxxxV)

Customers who have more than one HP 3000 and want to support additional systems from a central location may order Additional Site Support through a single Systems Manager. On-site Systems Engineering assistance to the remote site is not included, but is available to the central site to identify and verify software problems encountered on the remote systems.

Features

- The right to make one copy of the software updates which are delivered to the central site and the right to distribute to and use these updates on one additional computer system.
- Delivery and installation of firmware updates, if appropriate
- The right to copy and distribute one copy of the appropriate product manual updates for use with one additional computer system.
- Use of Phone-In Consulting Service through the central system on behalf of problems identified at the additional site.
- On-site assistance by a Systems Engineer at the central system to identify and verify software problems encountered on the additional system.

Additional PICS Caller (ordered as 32400P)

This service provides an additional Phone-In Consulting Service (PICS) caller. Each additional caller is provided the same PICS benefits as the System Manager, except no requests may be made for on-site assistance by a Hewlett-Packard Systems Engineer. Only the designated System Manager under CSS coverage may request on-site assistance by a Hewlett-Packard Systems Engineer. As many 32400P's may be ordered as desired; each one must have a name specified as the authorized caller.

Software Subscription Service—SSS (ordered as xxxxxS)

Certain customers may not need all the services provided by Customer Support Service. For those customers who do not require any Systems Engineering assistance, Software Subscription Service is available. SSS does not provide Phone-In Consulting or any other HP Systems Engineering assistance available with CSS.

Customers should only purchase Software Subscription Service if they are very experienced with the HP 3000 and have enough in-house expertise that they will not require the personal assistance of an HP Systems Engineer. (If an SE is needed, the customer will be charged on a time and materials basis.)

Features

- Right to use software and firmware updates on one system
- Delivery and installation of software and firmware updates
- Software Status Bulletin (twice a month)
- Software problem reporting through the mail
- HP 3000 Communicator (digest of articles relevant to programming the HP 3000)
- Reference manual updates

Purchasing Support

Support products as described previously must be ordered with the following qualifications:

- An HP-trained System Manager responsible for maintaining the integrity of the system's hardware and software, or a trained designated alternate, must be identified as a contact for Hewlett-Packard.
- The same level of service must be purchased for all of the HP software products which make up one computer system. Due to the interaction among software elements, service cannot be given to specific software products while omitting others.
- Product 32400P (Additional PICS Caller) can be purchased as many times as desired. The name of a single authorized caller must be provided for each 32400P ordered. 32400P cannot be purchased unless 32400T has been purchased.
- Central system CSS support of additional systems (xxxxxV) can be purchased by customers with multiple installations only. It cannot be purchased unless one of the installations has purchased Customer Support Service (xxxxxT).
- A minimum of three (3) months of support must be purchased.
- If 12 months of software support is ordered concurrently with the HP 3000 software, Hewlett-Packard will provide an additional 90-day period of the services ordered at no charge.

All HP 3000 software products are discountable under Hewlett-Packard Computer Products Purchase Agreements. Software support services are not discountable.

HP 3000 Software Support

PRODUCT DESCRIPTION	CUSTOMER SUPPORT SERVICE	ADDITIONAL PICS CALLER	ADDITIONAL SITE SUPPORT	SOFTWARE SUBSCRIPTION SERVICE
Fundamental Operating Software (FOS)	32400T $300.00 Add Option 003 to indicate CSS for a Series III. OR Add Option 033 to indicate CSS for a Series 30 or a Series 33.	32400P $100.00	32400V $75.00 Add Option 003 to indicate CSS for a Series III. OR Add Option 033 to indicate CSS for a Series 30 or a Series 33.	32400S $100.00 Add Option 003 to indicate SSS for a Series III. OR Add Option 033 to indicate SSS for a Series 30 or a Series 33.
Languages		Additional PICS callers are associated with the HP 3000 system installation and not individual software products. 32400P callers may discuss any software products on their system receiving Hewlett-Packard software support service (T or V coverage).		
COBOL/3000	32213T $100		32213V $50	32213S $30
SPL/3000	32100T $ 50		32100V $25	32100S $10
RPG/3000	32104T $100		32104V $50	32104S $30
BASIC/3000	32111T $ 50		32111V $25	32111S $15
FORTRAN/3000	32102T $ 50		32102V $25	32102S $15
APL\3000	32105T $125		32105V $65	32105S $40
Communications				
DS/3000	32190T $125		32190V $65	32190S $40
RJE/3000	30130T $ 25		30130V $15	30130S $10
MRJE/3000	32192T $ 75		32192V $40	32192S $25
MTS/3000	32193T $ 50		32193V $25	32193S $15
Manufacturing				
EDC/3000	32380T $150		32380V $35	32380S $35
IOS/3000	32384T $150		32384V $35	32384S $35
MRP/3000	32388T $150		32388V $35	32388S $35
SPC/3000	32392T $ 60		32392V $15	32392S $15
Miscellaneous				
Scientific Library	32205T $ 25		32205V $10	32205S $10
SIS/3000	32900T $200		32900V $50	32900S $60
CIS/3000	32902T $200		32902V $50	32902S $60

HP 3000 MANUALS AND DOCUMENTATION SERVICES

For customers with large programming staffs, additional documentation updating services are available. Individual manuals can be ordered by manual part number using the form contained in the HP 3000 Communicator.

The software support services (CSS and SSS) include only one copy of the updates corresponding to the manual sets for a given software product. Using the Manual Update Service (five-digit product number plus a "Q" suffix), additional manual sets can receive this service.

Manual Update Service—MUS (ordered as xxxxxQ)

Manual Update Service provides the customer with one copy of updates or new editions of product manuals whenever they are published. For a monthly fee, product manual changes are released as needed and are automatically mailed to the System Manager. This service is purchased independently of software support products and is in addition to the manual updates included in CSS or SSS. An original set of manuals is not included in this service. A minimum of 12 months of MUS must be purchased.

Automatic manual updates are recommended for installations that have several copies of HP 3000 manuals. Purchasing MUS eliminates the need for customers to note when updates are published and then request that they be sent, one at a time. MUS helps to eliminate problems that arise from using outdated documentation.

Software Notification Service—SNS (ordered as 32499A)

Software Notification Service provides the customer with one copy of each of two periodicals: the Software Status Bulletin (SSB) and the HP 3000 Communicator. The SSB is mailed to the System Manager twice monthly with a cumulative bulletin mailed quarterly. It lists known bugs for all software products and temporary work-arounds if available. The HP 3000 Communicator is mailed to the System Manager four times yearly and contains feature articles, information on documentation available from Hewlett-Packard, new software products and operational or programming tips. Information on newly released software updates is included in a separate section of the HP 3000 Communicator to help the customer plan for their implementation.

The following table shows the manual sets that can be purchased and the manual sets that can receive the updating service (MUS).

HP 3000 Manuals

Overview

Guide to a Successful Installation 30000-90135 **$3.25**	General Information Manual 30000-90008 **$5.00**
Using the HP 3000 03000-90121 **$8.25**	Using files 30000-90102 **$4.50**

HP 3000 Series III Hardware

Site Prep Manual 30000-90145 **$6.00**	Site Planning Workbook 30000-90146 **$9.00**	System Reference Manual 30000-90020 **$8.25**	Machine Instruction Set 30000-90022 **$5.50**	Instruction Decoding PG 30000-90057 **$1.55**

HP 3000 Series 30 & 33 Hardware

Site Prep Manual, Series 30 30080-60050 **$4.00**	Site Prep Manual, Series 33 30070-90007 **$4.00**	Instruction Decoding PG 30070-90026 **$2.75**

MPE

Software Pocket Guide 30000-90049 **$5.25**	System Manager/ System Supervisor 30000-90014 **$9.00**	Series III Console Operator's Guide 30000-90013 **$13.50**	Series 33 Console Operator's Guide 30070-90025 **$12.75**	MPE Commands 30000-90009 **$13.50**	MPE Intrinsics 30000-90010 **$14.00**
Segmenter 30000-90011 **$3.40**	System Utilities 30000-90044 **$4.80**	Debug/Stack Dump 30000-90012 **$4.40**	Error Messages 30000-90015 **$14.00**	Index to MPE 30000-90045 **$3.70**	

Utilities

EDIT 03000-90012 **$6.00**	FCOPY 03000-90064 **$4.50**	SORT 32214-90001 **$3.50**	Compiler Library 30000-90028 **$8.50**

Data Management

Using HP VIEW/3000 32209-90004 *	HP VIEW/3000 Reference Manual 32209-90001 **$12.75**	HP VIEW/3000 Operator's Guide 32209-90003 **$2.50**	HP VIEW/3000 Programmer's Pocket Guide 32209-90002 **$1.00**
KSAM/3000 30000-90079 **$10.00**	IMAGE/3000 32215-90003 **$9.50**	QUERY/3000 3000-90042 **$7.50**	

Languages

Using COBOL/3000 32213-90003 **$6.50**	RPG/3000 Listing Analyzer 32104-90003 **$.50**	FORTRAN/3000 Pocket Guide 32102-90002 **$1.55**	BASIC/3000 Pocket Guide 03000-90050 **$.75**	BASIC/3000 Compiler 32103-90001 **$2.90**	SPL Pocket Guide 32100-90001 **$2.05**	APL\3000 Pocket Guide 32105-90003 **$4.40**
COBOL/3000 32213-90001 **$12.00**	RPG/3000 32104-90001 **$22.00**	FORTRAN/3000 30000-90040 **$8.50**	BASIC/3000 Interpreter 30000-90026 **$10.50**	BASIC/3000 for Beginners 03000-90025 **$6.00**	SPL 30000-90024 **$9.50**	APL\3000 32105-90002 **$9.50**
		Scientific Library 30000-90027 **$4.20**			SPL Textbook 30000-90025 **$7.50**	

Data Communications

Guidebook to Data Communications 5955-1715 **$3.10**	Data Communications Pocket Guide 30000-90105 **$14.00**	RJE/3000 30000-90047 **$7.50**	DS/3000 32190-90001 **$11.00**	DS/3000 to DS/1000 32190-90005 **$7.25**	MRJE/3000 32192-90001 **$8.75**	MTS/3000 32193-90002 **$6.50**

Manufacturing

MFG/3000 General Information Manual **$5.00** 30000-90188	EDC/3000 User Manual 32380-90001 **$20.00**	EDC/3000 System Admin. Manual 32380-90002 **$8.50**	IOS/3000 User Manual 32384-90001 **$25.00**	IOS/3000 System Admin. Manual 32384-90002 **$11.00**	MRP/3000 User/Admin. Manual 32388-90001 **$19.50**	SPC/3000 User Manual 32392-90001 **$11.00**

Conversions

System/3 to HP 3000 Conversion 32104-90004 **$5.75**	3000CX to Series II Conversion 30000-90046 **$3.30**

Consult your Hewlett-Packard Sales Representative for current prices.

PRODUCT NUMBER	OPT.	DESCRIPTION	PRICE†
		HP 3000 Manual Sets	
30381A		*Note: See next page for information on and prices of HP 3000 software manual update services for additional manuals.*	
		HP 3000 Series 30 and Series 33 and Series III User Manual Set.	$200
		Includes System Reference Manual plus all manuals in the following categories on the preceding chart: Overview MPE Utilities Data Management	
		Note: This product provides manuals shipped in advance of the system.	
	003	Specifies Series III Console Operator's Guide.	0
	033	Specifies Series 30 and Series 33 Console Operator's Guide.	0
	699	Deletes binders	−25
30093A		**Programmer Manuals.** Includes the following manuals:	90
		MPE Pocket Guide Compiler Library MPE Commands EDIT/3000 SORT-MERGE/3000 FCOPY/3000 Using Files Segmenter Error Messages MPE Intrinsics Debug	
32379A		**MFG/3000 Manual Set.** Includes: EDC/3000 User's Reference Manual EDC/3000 Administrator's Reference Manual IOS/3000 User's Reference Manual IOS/3000 Administrator's Reference Manual MRP/3000 User Administrator's Reference Manual SPC/3000 User's Reference Manual	80

Individual manuals may be purchased by part number (see chart on the preceding page) using the form in the HP 3000 Communicator.

HP 3000 Software Notification Service*

PRODUCT NUMBER	OPT.	DESCRIPTION	MONTHLY FEE†
32499A		HP 3000 Software Notification Service. Includes SSB, Communicator.	$20

*Must be ordered for 12 months or made coterminous with existing contract.

†Domestic U.S.A. prices only, and subject to change without notice. For a firm quotation, contact your Hewlett-Packard Sales Representative.

PRODUCT NUMBER	. OPT.	DESCRIPTION	MONTHLY PRICE†

HP 3000 Manual Update Service

PRODUCT NUMBER	. OPT.	DESCRIPTION	MONTHLY PRICE†
		Note: See previous page for information on and prices of additional HP 3000 manual sets. *The figure in parentheses is the number of manuals.*	
32400Q		**HP 3000 Systems Manual Updates.** Includes updates for all user manuals supplied in 30381A and the base HP 3000 system. Must order option 003 or option 033. (26)	$400
	003	Specifies Series III Console Operator's Guide	0
	033	Specifies Series 30 and Series 33 Console Operator's Guide	0
30093Q		**Programmer's Manual Updates.** Includes updates for all manuals supplied in 30093A. (11)	16
		Data Management	
32235Q		DBMS/3000 Manual Updates. Includes updates for IMAGE and QUERY Reference Manuals. (2)	4
32208Q		KSAM/3000 Manual Updates. Includes updates for KSAM Reference Manual. (1)	2
32209Q		HP VIEW/3000 Manual Updates. Includes updates for HP VIEW/3000 manuals. (4)	5
		Languages	
32213Q		COBOL/3000 Manual Update Service. Includes COBOL Reference Manual, Using COBOL. (2)	4
32100Q		SPL/3000 Manual Update Service. Includes 3 SPL manuals. (3)	7
32104Q		RPG/3000 Manual Update Service. Includes RPG Reference Manual and RPG Listing Analyzer. (2)	3
32111Q		BASIC/3000 Manual Update Service. Includes 4 BASIC manuals. (4)	5
32102Q		FORTRAN/3000 Manual Update Service. Includes FORTRAN Reference Manual and Pocket Guide. (2)	3
32105Q		APL\3000 Manual Update Service. Includes APL Reference Manual and Pocket Guide. (2)	5
		Data Communications	
32190Q		DS/3000 Manual Update Service. Includes DS/3000 and DS/3000 to DS/1000 Manual. (2)	4
30130Q		RJE/Manual Update Service. Includes RJE Reference Manual. (1)	2
32192Q		MRJE/3000 Manual Update Service. Includes MRJE Reference Manual. (1)	2
32193Q		MTS/3000 Manual Update Service. Includes MTS Reference Manual. (1)	2

PRODUCT NUMBER	OPT.	DESCRIPTION	MONTHLY PRICE†

HP 3000 Manual Update Service (Cont.)

		Manufacturing	
32380Q		EDC/3000 Manual Update Service. Includes EDC User and System Admin. Manual. (2)	4
32384Q		IOS/3000 Manual Update Service. Includes IOS User and System Admin. Manual. (2)	4
32388Q		MRP/3000 Manual Update Service. Includes MRP User/Admin. Manual. (1)	2
32392Q		SPC/3000 Manual Update Service. Includes SPC User Manual. (1)	2
		Miscellaneous	
32205Q		Scientific Library Manuaul Update Service. Includes Scientific Library Reference Manual. (1)	2
32900Q		SIS/3000 Manual Update Service. Includes all 4 SIS manuals. (4)	7
32902Q		CIS/3000 Manual Update Service. Includes both CIS manuals. (2)	4

†Domestic U.S.A. prices only, and subject to change without notice. For a firm quotation, contact your Hewlett-Packard Sales Representative.

HP 3000 SOFTWARE
ORDERING EXAMPLES

Example 1. Purchase of a customer's first HP 3000 system. Shown below are alternative orders for Customer Support Service (CSS) and Software Subscription Service (SSS). Note that all software on an HP 3000 system must have the same type of software support service; i.e., all Customer Support Service or all Software Subscription Service. In addition to the HP 3000 Fundamental Operating Software, COBOL/3000, RPG/3000, and DS/3000 software products are purchased.

Ordering Software

PART NO.	QTY.	DESCRIPTION	PRICE†
(System Processor Unit)	1	HP 3000 System Processor Unit includes Fundamental Operating Software (FOS)—MPE III, EDIT/3000, FCOPY/3000, SORT-MERGE/3000, IMAGE/3000, QUERY/3000, HP VIEW/3000, KSAM/3000 and the facility to execute compiled programs without the source language compiler on the system (except for programs written in APL\3000).	(Included with System Processor Unit)
32213C	1	COBOL/3000	$1,500
32104A	1	RPG/3000	1,500
32190A	1	DS/3000	3,000
		TOTAL	$6,000

Ordering Software Support

PART NO.	QTY.	DESCRIPTION	MO. FEE†

Customer Support Service (CSS) ordered for twelve months

PART NO.	QTY.	DESCRIPTION	MO. FEE†
32400T	12	CSS for Fundamental Operating Software	$300
32400T-003 033	12	Order correct configuration option to correspond to hardware system: Option 003 for Series III or Option 033 for Series 30 or Series 33.	0
32213T	12	CSS for COBOL/3000	100
32104T	12	CSS for RPG/3000	100
32190T	12	CSS for DS/3000	125
		TOTAL MONTHLY FEE	$625

†Domestic U.S.A. prices only, and subject to change without notice. For a firm quotation, contact your Hewlett-PaiSales Representative.

Ordering Software Support (Cont.)

PART NO.	QTY.	DESCRIPTION	MO. FEE†

Software Subscription Service (SSS) ordered for twelve months

PART NO.	QTY.	DESCRIPTION	MO. FEE†
32400S	12	SSS for Fundamental Operating Software	$100
32400S-003 033	12	Order correct configuration option to correspond to hardware system: Option 003 for Series III or Option 033 for Series 30 or Series 33.	0
32213S	12	SSS for COBOL/3000	30
32104S	12	SSS for RPG/3000	30
32190S	12	SSS for DS/3000	40
		TOTAL MONTHLY FEE	$200

Example 2. Purchase of the second HP 3000 system by the same customer:

A customer desiring to purchase a second copy of a software product for an additional HP 3000 system should purchase the right to copy the software products.

Ordering Remote System Software

PART NO.	QTY.	DESCRIPTION	PRICE†
(System Processor Unit)	1	HP 3000 System Processor Unit includes Fundamental Operating Software (FOS)—MPE III, EDIT/3000, FCOPY/3000, SORT-MERGE/3000, IMAGE/3000, QUERY/3000, HP VIEW/3000, KSAM/3000 and the facility to execute compiled programs without the source language compiler on the system (except for programs written in APL\3000)	(Included with System Processor Unit)
32213R*	1	COBOL/3000 RIGHT TO COPY	$ 600
32104R*	1	RPG/3000 RIGHT TO COPY	600
32190R*	1	DS/3000 RIGHT TO COPY	1,200
		TOTAL	$2,400

*Purchase of "R" software products requires previous or concurrent purchase of corresponding standard software product.

†Domestic U.S.A. prices only, and subject to change without notice. For a firm quotation, contact your Hewlett-Packard Sales Representative.

Software support may be ordered as shown in Example 1: Customer Support Service (CSS) or Software Subscription (SSS). Another alternative is available for a "remote" HP 3000 system:

Ordering Remote System Support

Support of a "remote" HP 3000 by the system manager at the central HP 3000 site under Customer Support Service (CSS) is available as "V" support products. The example below illustrates ordering 12 months of support.

Central System Customer Support Service ordered for twelve months

PART NO.	QTY.	DESCRIPTION	MO. FEE†
32400V	12	Central system customer support service for Fundamental Operating Software for an additional system.	$ 75
32400V-003 033	12	Order correct configuration option to correspond to hardware system: Option 003 for Series III or Option 033 for Series 30 or Series 33.	0
32213V	12	Central system customer support service for COBOL/3000 for an additional system.	50
32104V	12	Central system customer support service for RPG/3000 for an additional system	50
32190V	12	Central system customer support service for DS/3000 for an additional system	65
		TOTAL MONTHLY FEE	$240

Example 3. Ordering Documentation Distribution Services: If a user has an extra system manual set plus an extra COBOL/3000 Reference Manual and wants updates, order the following:

PART NO.	QTY.	DESCRIPTION	MO. FEE†
32400Q	12	Manual update service for Fundamental Operating Software.	$40
32400Q-003 033	12	Order correct configuration option to correspond to hardware system: Option 003 for Series III or Option 033 for Series 30 or Series 33.	0
32213Q	12	Manual update service for COBOL/3000.	4
		TOTAL MONTHLY FEE	$44

If a system has a programmer who wants to monitor the current HP 3000 software status; i.e., receive the HP 3000 Communicator and Software Status Bulletin, order the following HP 3000 Software Notification Service:

PART NO.	QTY.	DESCRIPTION	MO. FEE†
32499A	12	HP 3000 Software Notification Service	$20

†Domestic U.S.A. prices only, and subject to change without notice. For a firm quotation, contact your Hewlett-Packard Sales Representative.

PRODUCT NUMBER	DESCRIPTION	PRICE†

Training and Consulting

Note: Refer to the HP 3000 General Information Manual (30000-90008) for course descriptions and prerequisites.

PRODUCT NUMBER	DESCRIPTION	PRICE†
22801B	**HP 3000—A Programmer's Introduction.** Five-day course given at an HP Technical Center. Tuition per student.	$ 500
22801X	**HP 3000—A Programmer's Introduction.** Five-day course given on site.	4,500
22802B	**HP 3000 System Management and Operation.** Five-day course given at an HP Technical Center. Tuition per student.	500
22802X	**HP 3000 System Management and Operation.** Five-day on-site course.	4,000
22956A	**HP 3000 IMAGE/3000 (Data Base Management).** Five-day course given at an HP Technical Center. Tuition per student.	500
22956X	**HP 3000 IMAGE/3000 (Data Base Management).** Five-day on-site course.	4,500
22805A	**HP 3000 MPE III Special Capabilities.** Five-day course given at an HP Technical Center. Tuition per student.	500
22804A	**HP 3000 SPL File System Introduction.** Five-day course given at an HP Technical Center. Tuition per student.	500
22818A	**Conversion from HP3000CX or Series I System to higher capability HP 3000.** A one-day on-site course.	575
22830A	**HP VIEW/3000.** Four-day course given at an HP Technical Center. Tuition per student.	400
22830X	**HP VIEW/3000.** Four-day on-site course.	3,600
22828X	**KSAM/3000 (Keyed Sequential Access Method).** A two-day on-site course.	1,150
36900E	**Distributed Systems/3000.** A three-day on-site course.	3,000
22825A	**HP 3000 Software Consulting.** A consultation service to help in applying HP software to your specific applications problems. Cost per day. Must order one no cost option 001-002-003 (001 Commercial Applications, 002 Scientific Applications, 003 Communications Applications)	500
32381A	**EDC/3000 Project Implementation Consulting.** Three one-day sessions conducted by a Manufacturing Industry Specialist. On-site.	1,500
32385A	**IOS/3000 Project Implementation Consulting.** Three one-day sessions conducted by a Manufacturing Industry Specialist. On-site.	1,500
32389A	**MRP/3000 Project Implementation Consulting.** Three one-day sessions conducted by a Manufacturing Industry Specialist. On-site.	1,500
32378A	**MFG/3000 Administrator and User Training.** A 5-day course given at an HP Technical Center. Training on EDC/3000, IOS/3000, MRP/3000, and SPC/3000. Tuition per student. *Note: Fee for on-site classes includes up to 10 students. Additional students (up to the maximum permissible) can be accommodated at a charge of $50.00/student. Hewlett-Packard reserves the right to cancel any class upon three-weeks notice.*	500

†Domestic U.S.A. prices only, and subject to change without notice. For a firm quotation, contact your Hewlett-Packard Sales Representative.

PRODUCT NUMBER	DESCRIPTION	PRICE†

Training and Consulting (cont'd)

PRODUCT NUMBER	DESCRIPTION	PRICE†
32383B	EDC/3000 and SPC/3000 Administrator and User Training. A two day on-site course.	1,150
32387B	IOS/3000 Administrator and User Training. A two day on-site course.	1,150
32391B	MRP/3000 Administrator and User Training. A one day on-site course.	575
22705A	Manufacturing Industry Consulting. One day performed by Manufacturing Industry Specialist. *Note:* *Fee for on-site classes includes up to 10 students. Additional students (up to the maximum permissible) can be accommodated at a charge of $50.00/student.* *Hewlett-Packard reserves the right to cancel any class upon three-weeks notice.*	500

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