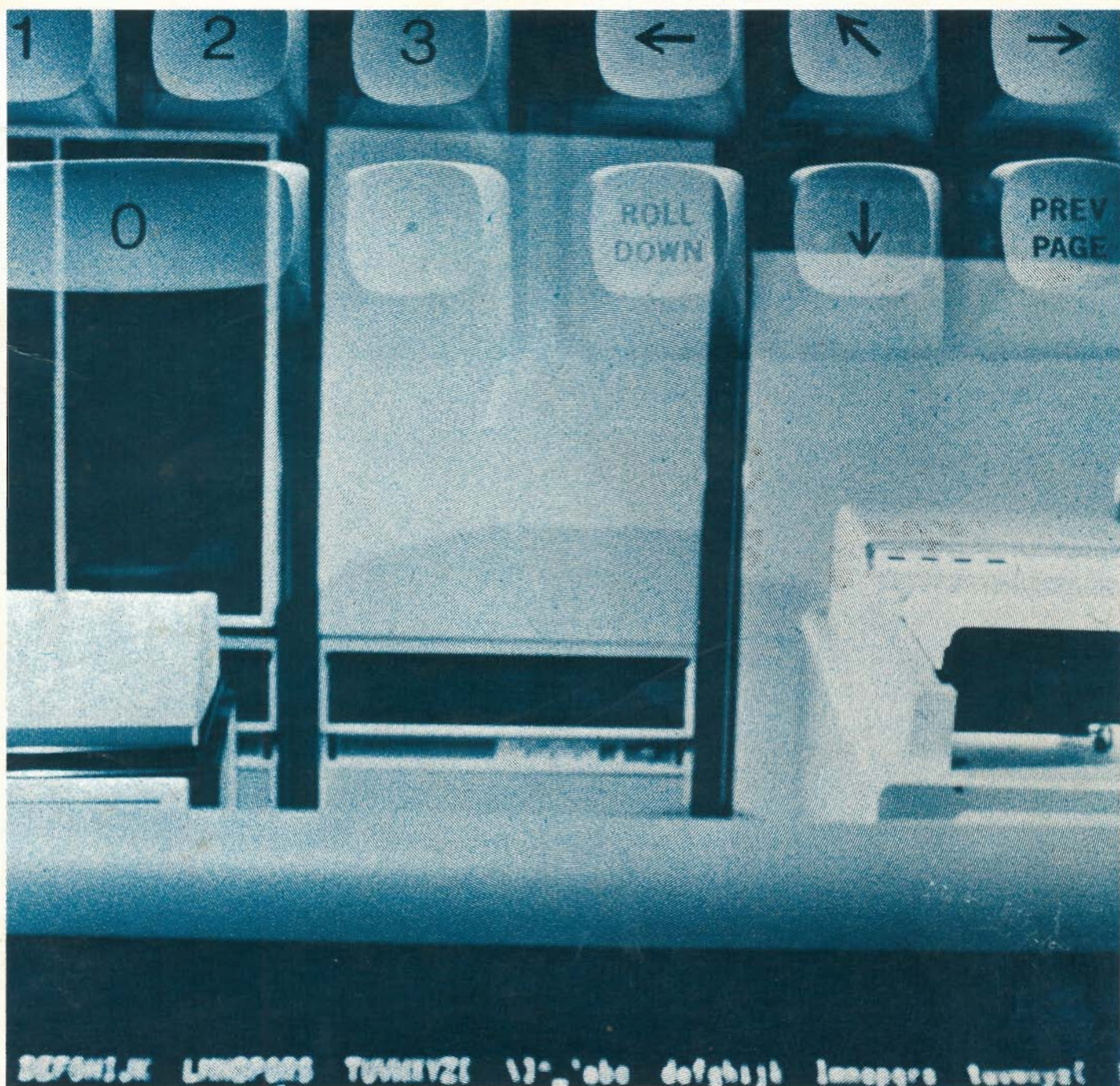


3000CX Series Price/Configuration Guide



The HP 3000CX Series offers a family of four small-scale, disc-based, virtual memory systems with true multiprogramming and multilingual capabilities. Each 3000CX model contains the hardware and systems software necessary for a fully operational system. Optional software packages on the Models 100, 200, and 300 facilitate system tailoring to specific timeshare, business management, and scientific problem areas. The Model 50 provides a building block system for more specialized configurations.

The 3000CX Series pricing and configuring is described in the following pages. List prices, monthly maintenance charges, information on each 3000CX system model, supplemental 3000CX hardware, unbundled software, customer training, and system configuration data are included for ready reference.

On Ordering A 3000CX

1. Specify one of the four 3000CX Models by order number.
2. Specify the options associated with that model which are necessary for the application in question.
3. Select any required supplementary hardware from the following areas:
 - PERIPHERAL DEVICES
 - MEMORY AND CPU ENHANCEMENTS
 - DATA COMMUNICATIONS EQUIPMENT
 - EXPANDED I/O CAPABILITY
 - ADD-ON DEVICE INTERFACING
 - REAL-TIME CAPABILITY
 - MISCELLANEOUS EQUIPMENT
4. Select any additional software required from the unbundled software section.
5. Specify the training courses described by the customer.

NOTE: No product options can be ordered on a stand-alone basis. In all cases the related subsystem or model must also be specified.

Prices are for domestic U.S.A. only.

Model 50

PRODUCT NUMBER	OPTION NUMBER	DESCRIPTION	PRICE	MONTHLY MAINT. CHARGE
3000C		<p>Starter system for a customer seeking low cost terminal capability. It can be used as a basic building block because it is upgradeable to all other models. It also makes an attractive package for potential OEM's.</p> <p>Hardware Provided:</p> <ul style="list-style-type: none"> • Central processor with 96 Kbytes of core memory • One multiplexer channel (16 device capacity) • Asynchronous terminal controller (16 ports) • System console and cabinets • Mag tape unit (30115A). Note: For 1600 bpi unit place of 800 bpi unit, order Option 100. • 4.9 Mbyte cartridge disc unit (30110A) • Standard power with 120/208V and 3 phase/60 Hz 	\$ 99,500.00	586.00

3000CX SERIES FUNDAMENTAL OPERATING SOFTWARE

- 32000C MPE Operating System
- 32211C Compiler Library
- 32212A Utilities
- 32222A TRACE/3000
- 32100A SPL/3000
- 32214B SORT/3000
- 32201A EDIT/3000

OPTIONS AVAILABLE ON MODEL 50

015	System AC power option with 230V (208V-245V) single phase 50 Hz operation.	0.00	0.00
100	1600 bpi tape unit replace 800 bpi tape unit. All software will be supplied on 1600 bpi mag tape.	1,500.00	9.00
181	Increases memory to 128 Kbytes	10,000.00	32.00
202	Adds 202 type data set control to asynchronous terminal controller.	1,240.00	6.00
403	Deletes disc cartridge subsystem (30110A). This deletion requires ordering either a 30102A or a 30129A.	-8,000.00	-117.00

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 Model 300
 Model 200
 Model 100
 Model 50

HP Computer Museum
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For research and education purposes only.

Model 100

PRODUCT NUMBER	OPTION NUMBER	DESCRIPTION	PRICE	MONTHLY MAINT. CHARGE
32400C		<p>System provides low cost terminal as well as background batch capabilities. Attractively-priced software options allow the user of this system to operate in timeshare, commercial and scientific environments for a package price that falls below that of a system upgraded from a Model 50.</p> <p>Hardware Provided:</p> <ul style="list-style-type: none"> • Central processor with 96 Kbytes of core memory • One multiplexer channel (16 device capacity) • Asynchronous terminal controller (16 ports) • System console and cabinets • Mag tape unit (30115A). Note: For 1600 bpi unit in place of 800 bpi unit, order Option 100. • 14.75 Mbyte cartridge disc unit (30129A) and selector channel (30030A). • 600 cpm card reader subsystem (30106A) • 200 lpm dot matrix printer (30118A) • Standard power with 120/208V and 3 phase/60 Hz 	\$129,500.00	725.00

3000CX SERIES FUNDAMENTAL OPERATING SOFTWARE

- 32000C MPE Operating System
- 32211C Compiler Library
- 32212A Utilites
- 32222A TRACE/3000
- 32100A SPL/3000
- 32214B SORT/3000
- 32201A EDIT/3000

OPTIONS AVAILABLE ON MODEL 100

015	System AC power option with 230V (208V-235V) single phase 50 Hz operation.	0.00	0.00
100	1600 bpi tape unit replaces 800 bpi tape unit. All software will be supplied on 1600 bpi mag tape.	1,500.00	9.00
102	128 character option for LP	500.00	0.00
181	Increases memory to 128 Kbytes	10,000.00	32.00
202	Adds 202 type data set control to asynchronous terminal controller.	1,240.00	6.00
401	Deletes 600 cpm card reader (30106A)	-6,000.00	-64.00
402	Deletes dot matrix printer (30118A)	-9,000.00	-83.00

PRODUCT NUMBER	OPTION NUMBER	DESCRIPTION	PRICE	MONTHLY MAINT. CHARGE
32400C (Cont.)	600	Timeshare package. Includes the BASIC interpreter (32101A) and the BASIC compiler (32103A).	0.00	40.00
	601	Scientific package. Includes the Extended Floating Point instruction set (30011A), STAR/3000 (32204A), Scientific Library (32205A), and FORTRAN/3000 (32102A).	\$ 5,000.00	41.00
	602	Commercial package. Includes RPG (32104A), and Decimal Firmware (30011A plus 30011A-001).	5,000.00	31.00
	603	Commercial and Scientific package. Includes contents of Options 601 and 602. (Option 601 and Option 602 cannot be ordered together. Hardware and subsequent order processing requirements necessitate ordering Option 603 when both Scientific and Commercial capabilities are required.)	9,000.00	61.00

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Model 200
Model 100

Model 200

PRODUCT NUMBER	OPTION NUMBER	DESCRIPTION	PRICE	MONTHLY MAINT. CHARGE
32401C		<p>This model offers greater terminal capability than the 50 and 100 because of its system swap disc and 32 Kbytes of incremental core memory. It also offers greater disc storage capacity with its 47 Mbyte moving head disc. The timeshare and scientific options available on the 100 are also available on the 200. In addition, an expanded commercial option is available which offers COBOL (32213A) as well as RPG (32104A) and decimal firmware (30011A plus 30011A-001).</p> <p>Hardware Provided:</p> <ul style="list-style-type: none"> • Central processor with 128 Kbytes of core memory. • One multiplexer channel (16 device capacity) • Asynchronous terminal controller (16 ports) • System console and cabinets • Mag tape unit (30115A). Note: For 1600 bpi unit in place of 800 bpi unit, order Option 100. • 14.75 Mbyte cartridge disc unit (30129A) and selector channel (30030A) • 47 Mbyte moving head disc (30102A) • 600 cpm card reader subsystem (30106A) • 200 lpm dot matrix line printer (30118A) • Standard power with 120/208V and 3 phase/60 Hz 	\$171,000.00	929.00
3000CX SERIES FUNDAMENTAL OPERATING SOFTWARE				
		<ul style="list-style-type: none"> • 32000C MPE Operating System • 32211C Compiler Library • 32212A Utilities • 32222A TRACE/3000 • 32100A SPL/3000 • 32214B SORT/3000 • 32201A EDIT/3000 		
OPTIONS AVAILABLE ON MODEL				
015		System AC power option with 230V (208V-245V) single phase 50 Hz operation.	0.00	0.00
100		1600 bpi tape unit replaces 800 bpi tape unit. All software will be supplied on 1600 bpi mag tape.	1,500.00	9.00
102		128 character option for LP.	500.00	0.00

PRODUCT NUMBER	OPTION NUMBER	DESCRIPTION	PRICE	MONTHLY MAINT. CHARGE
32401C (Cont.)	202	Adds 202 type data set control to asynchronous terminal controller.	\$ 1,240.00	6.00
	401	Deletes 600 cpm card reader (30106A).	-6,000.00	-64.00
	402	Deletes 200 lpm dot matrix printer (30118A).	-9,000.00	-83.00
	600	Timeshare package. Includes the BASIC interpreter (32101A) and the BASIC compiler (32103A).	0.00	40.00
	601	Scientific package. Includes the Extended Floating Point instruction set (30011A), STAR/3000 (32204A), Scientific Library (32205A), and FORTRAN/3000 (32102A).	5,000.00	41.00
	602	Commercial package. Includes RPG (32104A), COBOL (32213B), and Decimal Firmware (30011A plus 30011A-001).	6,000.00	51.00
	603	Commercial and Scientific package. Includes contents of Options 601 and 602. (Options 601 and 602 cannot be ordered together. Hardware and subsequent order processing requirements necessitate ordering Option 603 when both Scientific and Commercial capabilities are required.)	10,000.00	81.00

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Model 300

PRODUCT NUMBER	OPTION NUMBER	DESCRIPTION	PRICE	MONTHLY MAINT. CHARGE
32402C		<p>This model, like the 200, will operate efficiently in a terminal intensive environment, and in addition, will concurrently accommodate intensive batch operation because of its card-oriented peripherals. As with the 100 and 200, package pricing makes the Model 300 more attractive from a price standpoint than any equivalent system upgraded from a lower level model. The timeshare and scientific options available on the 100 and 200 are also available on the 300. The commercial option, which was expanded to include COBOL on the 200, adds still another capability to the 300 with the addition of the IMAGE/QUERY Data Base Management System.</p> <p>Hardware Provided:</p> <ul style="list-style-type: none"> • Central processor with 128 Kbytes of core memory • One multiplexer channel (16 device capacity) • Asynchronous terminal controller (16 ports) • System console and cabinets • Mag tape unit (30115A). Note: For 1600 bpi unit in place of 800 bpi unit, order Option 100. • 14.75 Mbyte cartridge disc unit (30129A) and selector channel (30030A) • 47 Mbyte moving head disc (30102A) • 1,250 lpm printer (30128A) • Reader/Punch subsystem (30119A) • Standard power with 120/208V and 3 phase/60 Hz 	\$203,500.00	1070.00
3000CX SERIES FUNDAMENTAL OPERATING SOFTWARE				
		<ul style="list-style-type: none"> • 32000C MPE Operating System • 32211C Compiler Library • 32212A Utilities • 32222A TRACE/3000 • 32100A SPL/3000 • 32214B SORT/3000 • 32201A EDIT/3000 		
OPTIONS AVAILABLE ON MODEL 300				
015		System AC power option with 230V (208V-245V) single phase 50 Hz operation	0.00	0.00

PRODUCT NUMBER	OPTION NUMBER	DESCRIPTION	PRICE	MONTHLY MAINT. CHARGE
32402C (Cont.)	100	1600 bpi tape unit replaces 800 bpi tape unit. All software will be supplied on 1600 bpi mag tape.	\$ 1,500.00	9.00
	102	96 character option for LP.	2,000.00	0.00
	106	30119A-002 is added to 30119A. (Keyboard and verify capability are added to Reader/Punch).	2,000.00	0.00
	202	Adds 202 type data set control to asynchronous terminal controller.	1,240.00	6.00
	404	Delete card reader/punch subsystem (30119A).	-12,000.00	-129.00
	405	Delete high speed printer (30128A)	-28,000.00	-159.00
	600	Timeshare package. Includes BASIC interpreter (32101A) and the BASIC compiler (32103A).	0.00	40.00
	601	Scientific package. Includes Extended Floating Point (30011A), STAR/3000 (32204A), Scientific Library (32205A), and FORTRAN/3000 (32102A).	5,000.00	41.00
	602	Commercial package. Includes Decimal Firmware (30011A plus 30011A-001), RPG (32104A), COBOL (32213B), IMAGE (32215A), and QUERY (32216A).	12,000.00	91.00
	603	Commercial and Scientific package. Includes contents of Options 601 and 602. (Option 601 and Option 602 cannot be ordered together. Hardware and order processing requirements necessitate ordering Option 603 when these scientific and commercial capabilities are required.)	16,000.00	121.00
	604	Commercial package without data base management capability. Includes decimal firmware (30011A plus 30011A-001), RPG (32104A), and COBOL (32213A).	6,000.00	51.00
	605	Commercial and Scientific package without data base management capability. Includes contents of Options 601 and 604, which cannot be ordered together because of hardware and order processing constraints.	10,000.00	81.00

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Supplemental Hardware

PRODUCT NUMBER	OPTION NUMBER	DESCRIPTION	PRICE	MONTHLY MAINT. CHARGE
PERIPHERAL DEVICES				
Line Printers				
30118A		200 lpm subsystem with 132 columns and 64 characters	\$ 9,750.00	83.00
	001	128 character set	500.00	0.00
	015	230V/50 Hz AC power option	0.00	0.00
30127A		300 lpm subsystem with 136 columns and 64 characters	13,500.00	138.00
	001	96 character set	2,000.00	0.00
	015	230V/50 Hz AC power option	0.00	0.00
30128A		1250 lpm subsystem with 132 columns and 64 characters	36,000.00	159.00
	001	96 character set	2,000.00	0.00
	015	230V/50 Hz AC power option	0.00	0.00
Card Subsystems				
30106A		Card reader subsystem: 600 cpm	7,160.00	64.00
	015	230V/50 Hz AC power option	0.00	0.00
30107A		Card reader subsystem: 1200 cpm	18,540.00	121.00
	001	Adds double read station	2,575.00	2.00
	015	230V/50 Hz power option	0.00	0.00
30119A		Card reader/punch subsystem: reads 200 cpm, punches 75 cpm	13,500.00	129.00
	002	Adds off-line keyboard punch and verify capability	2,000.00	0.00
	015	230V/50 Hz AC power option	0.00	0.00
Disc Subsystems				
30102A		47 Mbyte disc file subsystem: includes disc pack and controller interface with power units and a junction panel capable of controlling and interfacing up to eight 30102A type disc drives .	32,000.00	172.00
	010	Specifying this option will delete the controller from the 30102A, thereby allowing the customer to add the 2nd, 3rd, 4th, 5th, 6th, 7th, and 8th drives to the subsystem. Each drive includes a disc pack.	-12,000.00	-41.00
	015	230V/50 Hz AC power option	0.00	0.00
30110A		Cartridge disc subsystem: includes 7900 disc drive (4.9 Mbytes), power supply, controller interface, disc cartridge and necessary system cabinets. Controller interface will handle up to four 7900 discs.	12,000.00	117.00
	010	Specifying this option will delete the controller from the 30110A, thereby allowing the customer to add the 2nd, 3rd, and 4th drives to the subsystem. Each drive includes a disc pack and power supply, as well as any necessary cabinetry.	-5,025.00	-19.00
	015	230W/50 Hz AC power	0.00	0.00

PRODUCT NUMBER	OPTION NUMBER	DESCRIPTION	PRICE	MONTHLY MAINT. CHARGE
30129A		Cartridge disc subsystem: includes 7905A disc drive (14.75 Mbytes), power supply, controller interface, disc cartridge and necessary system cabinets. Each 3000CX will support one controller interface via a selector channel. (The high transfer rate of the 7905A makes the selector channel necessary.) The controller interface will handle up to eight drives.	\$ 15,000.00	96.00
	015	230V/50 Hz AC power	0.00	0.00
30329A		Cartridge disc drive: includes a 7905 cartridge disc drive and the necessary system cabinetry. (A controller is not included; this is an add-on drive.)	9,975.00	70.00
	015	230V/50 Hz AC power		0.00

Magnetic Tape Subsystems

30115A		Mag tape subsystem: 9 channel, 800 cpi, 45 ips. Includes controller interface, 2400 feet of tape and the necessary systems cabinets. The controller interface will handle up to four 9-channel mag tape units – one 30115A and a mixture of up to three additional units (i.e., either 30115A-200's, 30115A-300's, or 30115A-400's).	12,000.00	85.00
	100	Mag tape subsystem: 9 channel, 1600 cpi, 45 ips. Includes controller interface, 2400 feet of tape and the necessary systems cabinets. The controller interface will handle up to four 9 channel mag tape units – one 30115A-100 and a mixture of up to three additional units (i.e., either 30115A-200's, 30115A-300's or 30115A-400's).	1,500.00	9.00
	200	Adds an additional 800 cpi, 45 ips, 9 channel drive. Includes 2400 feet of tape and necessary cabinets, but no controller.	-2,450.00	-21.00
	300	Adds a 9 channel, 1600 cpi, 45 ips, <i>master</i> drive. Includes 2400 foot tape and necessary cabinets, but no controller.	-975.00	-12.00
	400	Adds a 9 channel, 1600 cpi, 45 ips, <i>slave</i> drive. Includes 2400 foot tape and necessary cabinets, but no controller. Before this option can be ordered, either a 30115A-100 or a 30115A-300 Master must be on the system.	-2,500.00	-20.00

Paper Tape Subsystem

30104A		Paper tape reader subsystem: reads 500 cps. Necessary system cabinets and the controller interface are included in subsystem price.	3,350.00	23.00
30105A		Paper tape punch subsystem: punches 75 cps. Necessary system cabinets and the controller interface are included in subsystem price.	4,225.00	48.00

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Supplemental Hardware (Cont'd)

PRODUCT NUMBER	OPTION NUMBER	DESCRIPTION	PRICE	MONTHLY MAINT. CHARGE
Terminals				
2640A		Interactive Display Terminal: character mode; 64 character upper case Roman set; 1024 bytes of storage, expandable to 8192 bytes maximum; inverse video; 110-2400 Baud; RS232; includes 2 option slots. (Option 005 required).	\$ 3,000.00 (Qty 1-5)	25.00
			2,640.00 (Qty 6-74)	25.00
	001	128 Character Set - Roman Add lower case and displayable control codes.	100.00	0.00
	005	103/202 Modem Cable - for connection to 103/202 modem or HP 3000 asynchronous terminal controller (male RS232 connector)	50.00	0.00
	010	Simplified Keyboard Replace standard multi-task keyboard with typewriter compatible keyboard (including numeric pad).	-100.00	0.00
	015	230V/50 Hz	0.00	0.00
2762A		Printer Terminal (GE Terminet 1200): Standard Printer Terminal with keyboard; 75 column; Friction Feed; 117V AC/60 Hz.	4,835.00	29.00
	015	220V AC/50 Hz	230.00	0.00
	016	240V AC/50 Hz	230.00	0.00
	017	Pin Feed replaces Friction Feed	195.00	0.00
	018	Adds pedestal	195.00	0.00
2762B		Printer Terminal (GE Terminet 1200): Tractor Feed terminal with keyboard; 120 column; 10/30/120 CPS switch selectable; 117V AC/60 Hz.	5,865.00	58.00
	001	Auto Answer Back	120.00	0.00
	002	Vertical Forms Control	255.00	0.00
	003	Horizontal Tabs	240.00	0.00
	005	Pedestal	210.00	0.00
	015	220V AC/50 Hz	260.00	0.00
	016	240V AC/50 Hz	260.00	0.00
30124A		Teletype terminal: 10 cps (ASR-33)	2,650.00	60.00
	015	230V/50 Hz AC power option	200.00	0.00
MEMORY & CPU ENHANCEMENTS				
30011A		Expanded instruction set. If this subsystem is ordered without specifying any options, the extended precision floating point instruction set alone will be added to the standard instruction set.	3,250.00	11.00
	001	This option replaces the extended precision floating point instruction set with the decimal firmware instruction set.	1,000.00	0.00
	002	This option adds the decimal firmware instruction set to the extended precision floating point instruction set.	2,000.00	0.00
30401A		Field upgrade kit: upgrades the decimal firmware instruction set (30011A-001) to include extended precision floating point (30011A-002).	1,100.00	0.00
30402A		Field upgrade kit: upgrades the extended precision floating point instruction set (30011A) to include decimal firmware (30011A-002).	2,200.00	0.00
30431A		This field installed memory upgrade kit increases memory from 96 Kbytes to 128 Kbytes.	11,000.00	32.00

PRODUCT NUMBER	OPTION NUMBER	DESCRIPTION	PRICE	MONTHLY MAINT. CHARGE
DATA COMMUNICATIONS CAPABILITY				
30130B		2780/3780 Emulation Subsystem	\$ 4,500.00	8.00
EXPANDED I/O CAPABILITY				
30030A		High speed selector channel: 1.9 Mbytes/sec. data rate capacity. Supports eight devices with one device at a time operating in block transfer mode. (Note: May be used only with disc subsystems in cases where multiplexer channel data rate is insufficient.)	3,600.00	13.00
30032B		Asynchronous terminal controller.	3,000.00	15.00
	001	For 103 type modems only.	1,240.00	6.00
	002	For 103 and 202 type modems.	2,480.00	12.00
30441A		Asynchronous Terminal Controller Field Upgrade Kit. This kit allows you to convert a standard 30032B to a 30032B-001. The same kit converts a 30032B-001 to a 30032B-002. Ordering of two kits converts a standard 30032B to a 30032B-002.	1,500.00	6.00
ADD-ON DEVICE INTERFACING				
30126A		CalComp plotter interface for 500 Series CalComp plotters.	1,030.00	14.00
30300A		Programmable controller with 8K of memory. Necessary system cabinets are included. BCS software also included.	18,000.00	147.00
	001	Separate cabinet (2860B-001) in place of system cabinet.	0.00	6.00
	015	230V/50 Hz AC power option	0.00	0.00
	016	Expands memory from 8K to 16K words	4,000.00	18.00
	024	Expands memory from 8K to 24K words	7,000.00	36.00
	032	Expands memory from 8K to 32K words	9,000.00	54.00
30361A		Programmable Controller Interface Kit. Includes interfaces for HP 2100 and HP 3000; 50 ft. signal cable; BCS/3000 software.	5,000.00	28.00
30404A		BCS/3000 Field Upgrade Kit. Provides the software necessary for operating an installed real-time programmable controller (30301A) as a standard programmable controller.	1,000.00	0.00
REAL-TIME CAPABILITY				
30301A		Real-time programmable controller. Includes HP 2100S computer with 8K words of memory, DMA, programmable time-base generator, hardware extended arithmetic and floating point instructions; HP 12925A Paper Tape Reader; HP 2752A Teleprinter; interconnection interfaces for the HP 2100 and HP 3000; signal cable, necessary cabinetry; supporting HP 3000 and HP 2100 software.	23,000.00	181.00
RTE-C/3000 SOFTWARE				
HP 3000 Resident Software				
<ul style="list-style-type: none"> • HP 32223A Cross Assembler program XA2100 • HP 32226A Cross Loader program XL2100 • Cross RTE-C Generation program XRTCGEN • Download-Program Library routine DNLDUSER • Download-System Library routine DNLDSYS • Diagnostic program LINETEST 				

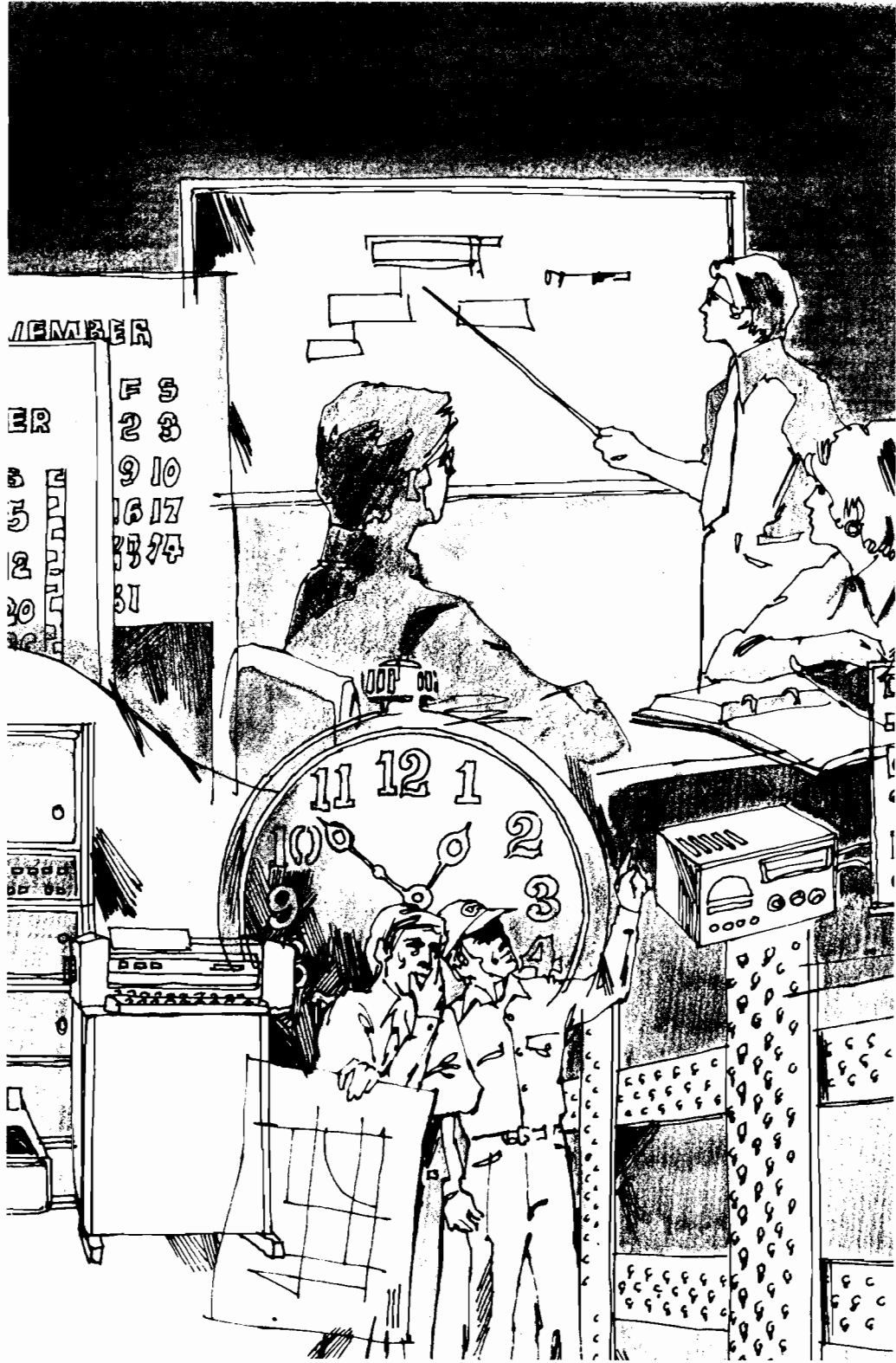
Configuration Notes
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PRODUCT NUMBER	OPTION NUMBER	DESCRIPTION	PRICE	MONTHLY MAINT. CHARGE
		HP 2100 Resident Software		
		<ul style="list-style-type: none"> • Basic Binary Link Loader (BBLL) • RTE-C Operating System (3000 version) • Diagnostic Program LTEST 		
	001	Mounts programmable controller in a stand-alone cabinet (2860B-001 required)	\$ 0.00	6.00
	015	230V/50 Hz AC power option	0.00	0.00
	016	Expands memory from 8K to 16K words	4,000.00	18.00
	024	Expands memory from 8K to 24K words	7,000.00	36.00
	032	Expands memory from 8K to 32K words	9,000.00	54.00
30361A	001	This option to the programmable controller interface kit replaces the BCS/3000 software with the RTE-C/3000 software for an additional \$2,000. (Order 30361A as well as 30361A-001 to obtain the interface kit with real time capability.)	+2,000.00	30.00
30403A		RTE-C/3000 Field Upgrade Kit. Provides the software necessary for operating an installed programmable controller (30300A) as a real-time programmable controller (30301A).	3,000.00	30.00
MISCELLANEOUS EQUIPMENT				
30333A		11-high disc pack for 30102A and 2888A	620.00	0.00
30334A		Disc cartridge for 30110A (7900A)	130.00	0.00
30390A		Extension bay: May be ordered when installation exceeds <i>normal</i> HP configuration or when additional matching bays are required. (Note: These bays are for 30000A or 30000B systems only. They cannot be used for the 3000CX series. Additional CX cabinets will be handled as a specials basis. Call the factory for further information. Additional Note: Option 001 must be ordered in all cases.)	1,850.00	6.00
	001	I/O Bay configuration	600.00	-2.00
	015	230V/50 Hz AC power option	0.00	0.00
Cables				
30062-60004		Data set cable for 103 and 202 type data modems; 25 feet	55.00	0.00
30062-60006		Hardwired device cable; 25 feet	55.00	0.00
30062-60007		Data set cable for 103 and 202 type data modems; 50 feet	70.00	0.00
30062-60009		Hardwired device cable; 50 feet	70.00	0.00
30062-60012		Hardwired device cable; 100 feet	80.00	0.00
30062-60013		Hardwired terminal cable adapter allowing use of existing 12584-60007 cable	20.00	0.00

Unbundled Software

PRODUCT NUMBER	OPTION NUMBER	DESCRIPTION	PRICE	MONTHLY MAINT. CHARGE
32000C		MPE Operating System	\$ 10,000.00	70.00
32101A		BASIC/3000 interpreter	3,500.00	15.00
32102A		FORTRAN/3000 compiler	4,500.00	20.00
32103A		BASIC/3000 compiler	4,500.00	25.00
32104A		RPG/3000 compiler	4,500.00	20.00
32201A		EDIT/3000	1,000.00	10.00
32204A		STAR/3000	1,500.00	5.00
32205A		Scientific Library/3000	1,000.00	5.00
32213B		COBOL/3000 compiler	4,500.00	20.00
32215A		IMAGE/3000 data base management package	10,000.00	30.00
32216A		QUERY/3000	1,000.00	10.00
32900A		SIS/3000: Student Information System — member of TOADS family. Includes family information facility, mark reporting, and attendance subsystem. 800 bpi mag tape, reference manual and system overview included in this package. A license agreement is required for SIS/3000. The following software is also required: MPE/3000, SPL/3000, SORT/3000, EDIT/3000, IMAGE/3000, and COBOL/3000. Training is included with this package.	9,500.00	35.00
32901A		SAS/3000: Student Assignment System — member of TOADS family. Provides student scheduling; shipped on 800 bpi tape; includes reference manual and system overview. A license agreement is required for SAS/3000. The following software is also required: MPE/3000, SPL/3000, SORT/3000, EDIT/3000, IMAGE/3000, and COBOL/3000. Training is included with this package.	9,500.00	35.00

Ordering Note: All unbundled software will be shipped on 800 bpi tape unless Option 100 is specified. Adding Option 100 to any software product will result in shipment on a 1600 bpi tape.



SEPTEMBER

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Customer Training

3000CX SYSTEM MANAGEMENT COURSE (22964A)

This course acquaints the System Manager with the things he must do to initially set up his system and maintain its integrity and efficiency. The user will learn how to design, implement, and modify the user/account structure. He will also learn to utilize system commands to control system activity, to maintain system records, to operate the system, and to take appropriate action for system failures.

Length: 3 days

Lab time: 30% of course

Pre-requisites: Attendance at either 3000CX User Course or equivalent 3000CX user experience.

3000CX COMMERCIAL/BUSINESS USER TRAINING COURSE (22963A)

This course teaches the user how to utilize the 3000CX's interactive terminals for solving problems commonly encountered in business applications. He will be given an opportunity to create, debug and execute COBOL and/or RPG programs, with the emphasis being on real-life situations. An overview of system hardware and software will be included, but the general tone of the course will be oriented more toward problem solutions than system internals.

Length: 5 days

Lab time: 50% of course

Pre-requisites: Knowledge of a relevant computer language — preferably COBOL.

3000CX SCIENTIFIC/ENGINEERING USER TRAINING COURSE (22962A)

This course is designed to provide the scientific/engineering user with a working knowledge of those 3000CX features which can help him solve his problems. After receiving an overview of system software and hardware, the student will be given an opportunity to create, debug, and execute scientific/engineering programs in FORTRAN and/or BASIC. He will also be given an opportunity to experience applicable system utilities, as well as any other system features relevant to the scientific/engineering area.

Length: 5 days

Lab time: 50% of course

Pre-requisites: Knowledge of a relevant computer language — preferably FORTRAN.

HP IMAGE/3000 (22956A)

This course is designed to provide the student with a working knowledge of QUERY/3000 and IMAGE/3000. The student will use QUERY to produce reports, updates, and listings from an IMAGE Data Base. Additionally, he will use the Data Base Definition Language and IMAGE utilities to create and perform maintenance on an IMAGE Data Base. The student will modify an existing host program (COBOL, FORTRAN or SPL) to exercise the capabilities of the Data Base Procedures Library.

Length: 5 days

Lab time: Approximately 25-40%

Pre-requisites: Programming experience in COBOL, FORTRAN or SPL. HP 3000CX System user experience.

NOTE: Consult the factory for Customer Training pricing information.

Configuration Notes

SYSTEM CONSOLE

A Printer Terminal is provided as a console for the 3000CX Series. Its interface is contained in the CPU/Mainframe of each of the four models.

TERMINALS

The Hewlett-Packard terminals that are supported under the MPE/C Operating System and can be connected to the HP 3000CX Series models are:

30124A	Teleprinter (ASR 33)
2640A	CRT
2762A	Printer Terminal
2762B	Printer Terminal

Non-Hewlett-Packard terminals which can be connected to the 3000CX Series models and are supported under the MPE Operating Systems are:

- IBM 2741
- Memorex 1240
- Execuport 300
- G.E. Terminet 300
- Teletype ASR 33, 35, and 37
- Data Point 3300

All terminals, except Teletype ASR 37, can be hardwired to the asynchronous terminal controller. Teletype ASR 37 requires connection via data set.

The distance which a terminal can be placed from a 3000CX is normally a function of the baud rate of the terminal in question. The controller is designed to operate a teletype at 10 characters per second (110 baud) at a distance of one mile. As the baud rate increases, the maximum distance decreases. There have been reported instances of a 2400 baud CRT operating at 2000 feet. Incidentally, if a customer wishes to operate a terminal from a building across a street from where the computer is located, it is usually more advantageous to lease a wire that runs under the street from the telephone company than to use modems.

The asynchronous terminal controller which is supplied with all models will handle up to 16 hardwired terminals and/or Bell 103® Data Sets. In most cases, customer installation requirements will also call for additional cable length. Optional cables are listed below:

CABLE LENGTH	HP PART NUMBERS	
	DATA SET	HARDWIRED
25 feet	30062-60004	30062-60006
50 feet	30062-60007	30062-60009
100 feet		30062-60012

The addition of Option 202 to any system order will equip the asynchronous terminal controller to handle Bell 202® Data Sets to HP 2640A terminals only.

SYSTEM ACCENT COLOR

The 3000CX Series comes with blue-accented cabinets. There are no optional colors available at this time.

MEMORY

The minimum core memory supplied on any 3000CX model is 96 Kbytes (standard on the models 50 and 100). Additional memory can be specified on the original orders for these two models or can be acquired at a later date through field memory upgrade kits.

The maximum core memory size for the 3000CX Series is currently 128 Kbytes, which comes standard on the Models 200 and 300.

CABINETS

The price of system cabinet bays is allocated to subsystems. Thus, if you order additional peripherals, the necessary system bays will be included at no additional charge. Additional bays need only be ordered when a customer desires cabinetry for a special purpose that differs from standard HP 3000CX configuration and racking procedures.

AC POWER

In configurations requiring 230V/50 Hz operation, Option 015 must be specified for both the system model and all add-on peripheral devices.

MAGNETIC TAPE UNITS

One magnetic tape drive subsystem is included in each HP 3000CX system. All software, including updates, will be distributed on magnetic tape.

All 9-track magnetic tape drives use the same basic product number (30115A), because they all use the same interface controller. The two-drive, 9-track interface controller can serve a mix of drives: 800 cpi and 1600 cpi drives (the 1600 cpi drive must be a master); a 1600 cpi master and 1600 cpi slave; two 1600 cpi masters; two 800 cpi masters; and an 800 cpi master and 800 cpi slave.

Two masters on the same controller are more reliable than a master and a slave. With the master-slave relationship, the slave shares the master's electronics; if the master goes down so does the slave. With a master-master relationship, if the first master goes down it has absolutely no effect on the second master's performance.

The 1600 cpi units have twice the transfer rate of 800 cpi units. Tape speed for both is 45 ips. HP 1600 cpi units are considerably less than twice the price of HP 800 cpi units; thus they exhibit a better price/performance ratio. All tape units are mounted at the top of a bay. Two tape units, for example, will automatically result in at least a four bay system.

DISCS

Every 3000CX series system requires at least one disc because MPE/C is a disc-based operating system. In systems configured with minimum disc storage the space needed for MPE/C should be considered when planning for total disc space requirements.

Configuration Notes (Cont'd)

The 30110A Cartridge Disc Subsystem (which comes standard on the Model 50) has as its heart the 4.9 Mbyte HP 7900A disc. The interface controller will handle up to four discs.

The HP 30102A, 47 Mbyte, 11-high Moving-Head Disc Subsystem (standard on the Models 200 and 300) is recommended when greater mass storage is required. The interface controller will handle up to eight disc drives.

The 14.75 Mbyte HP 30129A Cartridge Disc (standard on the Models 100, 200 and 300) is our high performance disc subsystem. Twenty to thirty percent performance improvement generally can be expected by adding this 7905A-based subsystem to a configuration. It should be noted that the 30129A requires a selector channel, and that only one selector channel can be used per 3000CX system. Because the selector channel can only support one controller, no more than one 30129A controller can be placed on a system. This one controller can support up to eight drives, however, and, as a result, 7905A's can be used as data discs as well as for swapping purposes. Another configuration consideration is the fact that only two moving-head subsystems can coexist on a CX system when one of them is a 30129A. The other drive may be a 30110A *or* a 30102A, but under no circumstances can all three drives coexist on a single 3000CX.

SELECTOR CHANNEL

Aggregate data transfer rate on the SIO Multiplexer Channel Bus greater than 880,000 bytes/second requires the addition of a selector channel. Because the maximum transfer rate for the 30129A is 937,500 bytes/sec, it will require a selector channel in every case. Selector channel inputs completely by-pass the Input/Output Processor permitting concurrent data transfer with the Multiplexer Channel. Single device transfer rates on the selector channel may be up to 1.9 million bytes per second. The High Speed Selector Channel interfaces to eight devices through a single controller. Data transfer rates for the high speed 3000CX Series peripherals follow for easy reference:

HIGH SPEED DISC SUBSYSTEM	AVG. TRANSFER RATE (BYTES/SEC)
30102A	236,000
30110A	245,760
30129A	735,810

HEAT DISSIPATION TABLE

ORDERING NUMBER	NOMENCLATURE	KILOCALORIES/BTU*
30000C	Minimum System "Model 50"	3023/12000
30102A	Moving Head Disc Subsystem	882/3500
—	Power Supply	277/1100
30104A	Punched Tape Reader Subsystem	172/683
30105A	Tape Punch Subsystem	172/683
30106A	Card Reader Subsystem	310/1230
30107A	Card Reader Subsystem	576/2276
30110A	Cartridge Disc Subsystem	351/1393
30115A	Mag Tape Subsystem	350/1400
30118A	Line Printer Subsystem	630/2500
30119A	Reader Punch Subsystem	365/1450
2762A	Printer Terminal	95/375
2762B	Printer Terminal	190/756
30124A	Teleprinter Terminal	195/775
2640A	CRT Character mode	107/426
30127A	Line Printer Subsystem	453/1800
30128A	Line Printer Subsystem	1662/6600
30129A	Cartridge Disc Subsystem	430/1707

* Use for planning only. These are approximations and should not be used as a basis for determining precise air conditioning requirements.



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