Sun Microsystems U.S. Price List
End User and OEM Version

Effective December 1, 1988

Contents

Overview

Sun Product Family

This price list is organized by family and packaging type. There are three Sun product lines, the Sun-3™, Sun-4™ and the Sun386*i*™ families. Within each family the price list is sectioned by packaging type: Desktop Workstations, Deskside Workstations and Servers, and Data Center Servers.

Sun-3 Family

The Sun-3 family of workstations and servers includes four distinct levels of performance and four packaging types. The four performance levels are represented by the 1.5-MIPS Sun-3/50, the 2-MIPS Sun-3/100 Series, the 3-MIPS Sun-3/60 Series, and the 4-MIPS Sun-3/200 Series.

The Sun-3/50 Series features:
- Full 32-bit architecture, 15-MHz MC68020 CPU
- 16.67-MHz MC68881 floating-point coprocessor (optional)
- 4-Mbyte main memory
- High-resolution display
  - 19-inch landscape monitor
  - 1152 (h) x 900 (v) pixel resolution
  - 66 Hz, noninterlaced refresh
- Built-in thin Ethernet transceiver
- Desktop packaging
- The Sun-3/50M and related packaged systems

The Sun-3/60 Series features:
- Full 32-bit architecture, 20-MHz MC68020 CPU
- 20-MHz MC68881 floating-point coprocessor
- 4-Mbytes main memory
- High-resolution display (optional for Sun-3/60S)
  - 19-inch landscape monitor (16-inch color monitor available on the Sun-3/60FC)
  - 1600 (h) x 1280 (v) pixel resolution for high-resolution monochrome monitors
  - 1152 (h) x 900 (v) pixel resolution for monochrome, color, and grayscale monitors
  - 66 Hz, noninterlaced refresh
- Built-in thin Ethernet transceiver
- Desktop packaging
- The Sun-3/60M, Sun-3/60HM, Sun-3/60C, Sun-3/60FC, Sun-3/60G, Sun-3/60S, and related packaged systems

The Sun-3/100 Series features:
- Full 32-bit architecture, 16.67-MHz MC68020 CPU
- 16.67-MHz MC68881 floating-point coprocessor
- 4-Mbytes main memory (16 Mbytes maximum)
  - 12-Mbytes maximum on Sun-3/140
- High-resolution display (optional for Sun-3/140S, Sun-3/150S, Sun-3/160S, and Sun-3/180S)
  - 19-inch landscape monitor
  - 1152 (h) x 900 (v) pixel resolution
  - 66 Hz, noninterlaced refresh
- Desktop, deskside, or data center cabinet packaging
- The Sun-3/140M, Sun-3/150M, Sun-3/150C, Sun-3/150G, Sun-3/160M, Sun-3/160C, Sun-3/160CXP, Sun-3/160G workstations and the Sun-3/140S, Sun-3/150S, Sun-3/160S, and the Sun-3/180S servers and related packaged systems

The Sun–3/200 Series features:

- Full 32–bit architecture, 25–MHz MC68020 CPU
- 20–MHz MC68881 floating–point coprocessor
- 64–Kbyte virtual address, write–back cache
- 8–Mbyte ECC main memory (32 Mbytes maximum)
- High–resolution display (optional for Sun–3/260S and Sun–3/280S)
  –19–inch landscape monitor
  –1600 (h) x 1280 (v) pixel resolution for monochrome monitors
  –1152 (h) x 900 (v) pixel resolution for color and grayscale monitors
  – 66 Hz, noninterlaced refresh
- Deskside or data center cabinet packaging
- The Sun–3/260HM, Sun–3/260C, Sun–3/260CXP, Sun–3/260G workstations,
  and the Sun–3/260S and Sun–3/280S servers and related packaged systems

Sun–4 Family

The Sun–4 family of supercomputing workstations and servers includes two distinct levels of performance and three packaging types. The two performance levels are represented by the 7–MIPS Sun–4/100 desktop supercomputing workstations and the 10–MIPS Sun–4/260 series supercomputing workstations, and the Sun–4/280 data center servers.

The Sun–4/100 Series features:

- Full 32–bit SPARC™ architecture, 14.28–MHz MB86900 CPU
- Weitek 1164/1165 floating–point unit (optional on Sun–4/110, standard on Sun–4/150CXP)
- 8–Mbyte parity main memory (32 Mbytes maximum)
- High–resolution display (optional for Sun–4/110S)
  – 1600 (h) x 1280 (v) pixel resolution for high–resolution monochrome monitors
  – 1152 (h) x 900 (v) pixel resolution for monochrome, color, and grayscale monitors
  – 19–inch landscape monitor (16–inch color monitor available on the Sun–4/110FC)
  – 66 Hz, noninterlaced refresh
- Desktop or deskside packaging
- The Sun–4/110M, Sun–4/110FC, Sun–4/110C, Sun–4/110TFC, Sun–4/110TC
  workstations, the Sun–4/110S server and related packaged systems, and the Sun–4/150CXP,
  and Sun–4/150TAAC workstation

The Sun–4/200 Series features:

- Full 32–bit SPARC architecture, 16.67–MHz MB86900 CPU
- Weitek 1164/1165 floating–point unit
- 128–KByte virtual address, write–back data and instruction cache
- 8– or 32–Mbyte ECC main memory (128 Mbytes maximum)
- High–resolution display (optional for Sun–4/260S and Sun–4/280S)
  – 19–inch landscape monitor
  – 1600 (h) x 1280 (v) pixel resolution for high–resolution monochrome monitors
  – 1152 (h) x 900 (v) pixel resolution for color and grayscale monitors
  – 66 Hz, noninterlaced refresh
- Deskside or data center cabinet packaging
- The Sun–4/260HM, Sun–4/260C, Sun–4/260CXP, Sun–4/260G workstations,
  and the Sun–4/260S and Sun–4/280S servers and related packaged systems

Overview

Sun CXP Graphics Workstations

The Sun CXP models feature:

- Graphic acceleration hardware (GP+ or GP2)
- 19-inch landscape color monitor with 1152 (h) x 900 (v) pixel resolution
- 256 colors displayed from of a palette of over 16.7 million
- Double-buffering standard on Sun-3/260CXP, Sun-4/150CXP and Sun-4/260CXP (optional on Sun-3/160CXP)
- 16-bit Z-buffer standard on Sun-3/260CXP, Sun-4/150CXP and Sun-4/260CXP (optional on Sun-3/160CXP)
- Software compatiblity (SunCGI™, SunCore®, SunGKS™ or G.P.C.I.)

TAAC-1 Application Accelerator

- The TAAC-1™ Application Accelerator is a 2-board set C-programmable processor for Sun-3 and Sun-4 configurations. You can store and manipulate data within an 8-Mbyte on-board memory, which can also be treated as a 24-bit frame buffer with an 8-bit alpha channel (1024 x 2048 total size). This may be viewed within the Sun window system or displayed on an external monitor.

All Sun-3 and Sun-4 workstations and servers standard features:

- Low-profile keyboard and mouse pointing device (optional for all servers)
- Ethernet 10-Mbits/sec local area network interface
- Two RS-423 serial ports with modem control
- 8-bit color on all color systems
- Right-to-use licenses for SunOS™, ONC™ (including NFS™), SunPro™, SunView™, C, SunCore, and SunCGI are available as a no-charge product for all single-user Sun-3 workstations
- Right to use licenses for SunOS, ONC (including NFS), SunPro, SunView, C, SunCore, and SunCGI are available as a no-charge product for all single-user Sun-4 workstations

Sun386*i* Family

The Sun386*i* family of workstations includes two basic deskside packaging models: the 3–MIPS Sun386*i*/150 and the 5–MIPS Sun386*i*/250. You can optionally configure the Sun386*i*/150 with the Sun386*i*/250's XP Cache memory board for a 4–MIPS system, the Sun386*i*/150X. You can also configure both models with the optional EXP peripheral expansion box.

The Sun386*i*/150 features:

- Full 32–bit architecture, 20–MHz Intel 80386 CPU
- 20–MHz Intel 80387 floating–point coprocessor
- Dynamic memory card with 4–Mbyte main memory standard (exceeds 3 MIPS)
- XP cache memory card with 4–Mbyte main memory optional (exceeds 4 MIPS)
- Choice of high–resolution display:
  - 15–inch 1024 (h) x 768 (v) monochrome
  - 19–inch 1152 (h) x 900 (v) monochrome
  - 14–inch 1024 (h) x 768 (v) color
  - 16–inch 1152 (h) x 900 (v) color
  - 19–inch 1152 (h) x 900 (v) color
  - 66 Hz, noninterlaced refresh
- Deskside packaging (desktop placement with optional kit)
- The Sun386*i*/150SM, Sun386*i*/150M, Sun386*i*/150SC, Sun386*i*/150FC, and Sun386*i*/150C

The Sun386*i*/250:

- Full 32–bit architecture, 25 MHz Intel 80386 CPU
- 25–MHz Intel 80387 floating–point coprocessor standard
- XP cache memory card with 4–Mbyte main memory standard (exceeds 5 MIPS)
- Choice of high resolution display:
  - 19–inch 1152 (h) x 900 (v) monochrome
  - 16–inch 1152 (h) x 900 (v) color
  - 19–inch 1152 (h) x 900 (v) color
  - 66 Hz, non–interlaced refresh
- Deskside packaging (desktop placement with optional kit)
- The Sun386*i*/250M, Sun386*i*/250FC, and Sun386*i*/250C

Key to Hardware Matrix Entries

	System
Description	X/XXX–X–PX ◄── Order Number
	\$YYYYYY / Z ◄── List Price / Discount Category

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3/50xx-4-PxV4  ◄──  Order Number
└┴┘└┘└┘└┴┘
   │  │ │  └──────── 240V option (see note)
   │  │ └─────────── mass–storage option
   │  └───────────── Mbytes of main memory
   │  └────────────── Floating–Point Coprocessor (available on Sun-3/50 and Sun-4/110)
   └─────────────── monitor option
   └──────────────── workstation model
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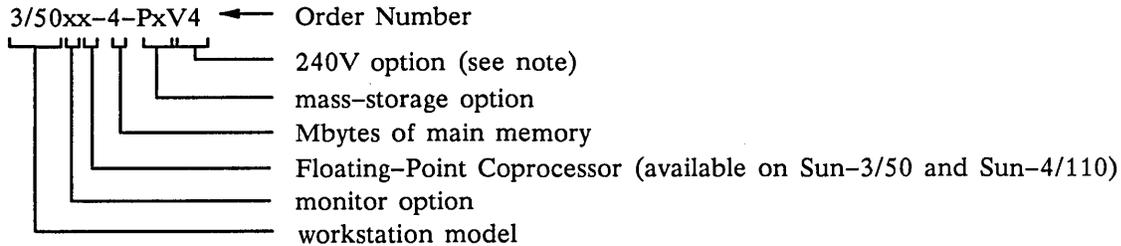
Monitor options

(Not all monitors available for all series)

SM = 15" monochrome (1024 x 768)
 M = 19" monochrome (1152 x 900)
MQ = 19" monochrome with OCLI filter (1152 x 900)
HM = 19" high–resolution monochrome (1600 x 1280, OCLI filter not available)
 SC = 14" color (1024 x 768)
 FC = 16" color (1152 x 900, AR coating standard)
 LC = 15" color (1152 x 900, AR coating standard)
  C = 19" color (1152 x 900, AR coating standard)
  G = 19" grayscale (1152 x 900, OCLI filter not available)
  S =   server (no monitor, keyboard, or mouse

NOTES:
1. *Please read and thoroughly understand the Sun Configuration Guide before ordering these products.*
2. *Some products and options in this price list have longer than normal delivery lead time. Please contact a Sun sales office for current availability.*
3. *Software licenses, tapes, and manuals must be ordered separately, unless otherwise noted. All software products run on current release of SunOS unless otherwise noted.*
4. *Ethernet transceiver and branch cable must be ordered separately (Sun-3/50 and Sun-3/60 include integral thin Ethernet transceiver).*
5. *Sun-3 and Sun-4 systems are configured for 115 VAC, 60–Hz line power. "V4" must be appended to the order number for 240 VAC European operation. "V3" must be appended to the order number for 230 VAC Domestic operation. 230 VAC is available only on data center server products. Options being ordered separately from a system (e.g., an expansion disk) must also have "V4" or "V3" appended in order to operate with 240 VAC workstations and servers, or 230 VAC servers.*
6. *"Order Number" designates a Sun standard product line item.*
7. *"Description" provides general information about the item. For more information, contact a Sun sales office.*
8. *Software products are available only under applicable license agreements.*
9. *All orders subject to the review and acceptance procedures of Sun Microsystems, Inc.*
10. *Sun Microsystems, Inc., is licensed to distribute software based upon the UNIX® operating system.*
11. *Prices may change without notice.*
12. *See individual product data sheets for complete descriptions.*

Sun–3/50 Desktop Monochrome Workstation

System / Package	3/50M	3/50MQ (Includes OCLI filter)	3/50ME (Includes MC68881 FPC)	3/50MQE (Includes MC68881 FPC and OCLI filter)
Diskless with 4 Mbytes	3/50M–4 $5,495 / A	3/50MQ–4 $6,495 / A	3/50ME–4 $5,895 / A	3/50MQE–4 $6,895 / A
3/50xx–x–P1 Includes the following: ▪ Sun–3/50M workstation ▪ 511A (71–Mbyte disk with 60–Mbyte 1/4–inch tape drive)	3/50M–4–P1 $10,495 / A	3/50MQ–4–P1 $11,495 / A	3/50ME–4–P1 $10,895 / A	3/50MQE–4–P1 $11,895 / A
3/50xx–x–P5 Includes the following: ▪ Sun–3/50M workstation ▪ 514A (141–Mbyte disk with 60–Mbyte 1/4–inch tape drive)	3/50M–4–P5 $11,995 / A	3/50MQ–4–P5 $12,995 / A	3/50ME–4–P5 $12,395 / A	3/50MQE–4–P5 $13,395 / A
3/50xx–x–P9 Includes the following: ▪ Sun–3/50M workstation ▪ 501A (71–Mbyte disk)	3/50M–4–P9 $8,495 / A	3/50MQ–4–P9 $9,495 / A	3/50ME–4–P9 $8,895 / A	3/50MQE–4–P9 $9,895 / A
3/50xx–x–P10 Includes the following: ▪ Sun–3/50M workstation ▪ 504A (141–Mbyte disk)	3/50M–4–P10 $9,995 / A	3/50MQ–4–P10 $10,995 / A	3/50ME–4–P10 $10,395 / A	3/50MQE–4–P10 $11,395 / A
3/50xx–x–P14 Includes the following: ▪ Sun–3/50M workstation ▪ 516A (327–Mbyte disk with 60–Mbyte 1/4–inch tape drive)	3/50M–4–P14 $14,895 / A	3/50MQ–4–P14 $15,895 / A	3/50ME–4–P14 $15,295 / A	3/50MQE–4–P14 $16,295 / A

Sun–3/60 Monochrome Workstations and Servers

System / Package	3/60S	3/60M	3/60MQ (Includes OCLI filter)	3/60HM
Diskless with 4 Mbytes	3/60S–4 $7,450 / A	3/60M–4 $9,450 / A	3/60MQ–4 $10,450 / A	3/60HM–4 $10,450 / A
3/60xx–4–P1 Includes the following: ▪ Sun–3/60xx workstation ▪ 511A (71–Mbyte disk with 60–Mbyte 1/4–inch tape drive)	3/60S–4–P1 $12,450 / A	3/60M–4–P1 $14,450 / A	3/60MQ–4–P1 $15,450 / A	3/60HM–4–P1 $15,450 / A
3/60xx–4–P5 Includes the following: ▪ Sun–3/60xx workstation ▪ 514A (141–Mbyte disk with 60–Mbyte 1/4–inch tape drive)	3/60S–4–P5 $13,950 / A	3/60M–4–P5 $15,950 / A	3/60MQ–4–P5 $16,950 / A	3/60HM–4–P5 $16,950 / A
3/60xx–4–P9 Includes the following: ▪ Sun–3/60xx workstation ▪ 501A (71–Mbyte disk)	3/60S–4–P9 $10,450 / A	3/60M–4–P9 $12,450 / A	3/60MQ–4–P9 $13,450 / A	3/60HM–4–P9 $13,450 / A
3/60xx–4–P10 Includes the following: ▪ Sun–3/60xx workstation ▪ 504A (141–Mbyte disk)	3/60S–4–P10 $11,950 / A	3/60M–4–P10 $13,950 / A	3/60MQ–4–P10 $14,950 / A	3/60HM–4–P10 $14,950 / A
3/60xx–4–P14 Includes the following: ▪ Sun–3/60xx workstation ▪ 516A (327–Mbyte disk with 60–Mbyte 1/4–inch tape drive)	3/60S–4–P14 $16,850 / A	3/60M–4–P14 $18,850 / A	3/60MQ–4–P14 $19,850 / A	3/60HM–4–P14 $19,850 / A

NOTE: *To order the above systems configured for 240V European operation, append "V4" to the order number (e.g., 3/50M–4–P5V4).*

Sun–3 Desktop Workstations and Servers

Sun–3/60 Grayscale and Color Workstations

System ⟍ Package	3/60G	3/60FC	3/60C
Diskless with 4 Mbytes	3/60G–4 $12,450 / A	3/60FC–4 $11,700 / A	3/60C–4 $14,450 / A
3/60xx–4–P1 Includes the following: • Sun–3/60xx workstation • 511A (71–Mbyte disk with 60–Mbyte 1/4–inch tape drive)	3/60G–4–P1 $17,450 / A	3/60FC–4–P1 $16,700 / A	3/60C–4–P1 $19,450 / A
3/60xx–4–P5 Includes the following: • Sun–3/60xx workstation • 514A (141–Mbyte disk with 60–Mbyte 1/4–inch tape drive)	3/60G–4–P5 $18,950 / A	3/60FC–4–P5 $18,200 / A	3/60C–4–P5 $20,950 / A
3/60xx–4–P9 Includes the following: • Sun–3/60xx workstation • 501A (71–Mbyte disk)	3/60G–4–P9 $15,450 / A	3/60FC–4–P9 $14,700 / A	3/60C–4–P9 $17,450 / A
3/60xx–4–P10 Includes the following: • Sun–3/60xx workstation • 504A (141–Mbyte disk)	3/60G–4–P10 $16,950 / A	3/60FC–4–P10 $16,200 / A	3/60C–4–P10 $18,950 / A
3/60xx–4–P14 Includes the following: • Sun–3/60xx workstation • 516A (327–Mbyte disk with 60–Mbyte 1/4–inch tape drive)	3/60G–4–P14 $21,850 / A	3/60FC–4–P14 $21,100 / A	3/60C–4–P14 $23,850 / A

NOTES:

1. **To order more memory:** *All systems on the above table contain 4 Mbytes of memory. Sun–3/60 systems may also be ordered with a total of 8–, 12–, 16–, 20–, or 24–Mbytes of memory by changing the memory designation ("–4") in the product number to the desired amount of memory. For example, to order a Sun–3/60FC with 8–Mbytes, order 3/60FC–8 instead of 3/60FC–4. Likewise, order 3/60C–8–P5 instead of 3/60C–4–P5. The table below lists the amount to add to the list price of the base system.*

   When ordering additional memory for a TOTAL of: **Add:**

8–Mbytes total memory	*$3,400*
12–Mbytes total memory	*$6,800*
16–Mbytes total memory	*$10,200*
20–Mbytes total memory	*$13,600*
24–Mbytes total memory	*$17,000*

2. *To order systems configured for 240V European operation, append "V4" to the order number (e.g., 3/60C–8–P5V4).*

Sun-3/140 Workstations and Servers

Package \\ System	3/140S	3/140M	3/140MQ (Includes OCLI filter)
Diskless with 4 Mbytes	3/140S-4 $15,200 / A	3/140M-4 $17,200 / A	3/140MQ-4 $18,200 / A
Diskless with 8 Mbytes	3/140S-8 $19,200 / A	3/140M-8 $21,200 / A	3/140MQ-8 $22,200 / A
3/1xx-4-P5 Includes the following: • Sun-3/1xx-4 workstation • 514D (141-Mbyte disk with 60-Mbyte 1/4-inch tape drive)	3/140S-4-P5 $21,700 / A	3/140M-4-P5 $23,700 / A	3/140MQ-4-P5 $24,700 / A
3/1xx-8-P5 Includes the following: • Sun-3/1xx-4 workstation • 104B (4-Mbyte memory expansion board) • 514D (141-Mbyte disk with 60-Mbyte 1/4-inch tape drive)	3/140S-8-P5 $25,700 / A	3/140M-8-P5 $27,700 / A	3/140MQ-8-P5 $28,700 / A

NOTES: 1. *To order systems configured for 240V European operation, append "V4" to the order number (e.g. 3/140S-4V4)*
            2. *You can configure the Sun-3/140 desktop workstation as a deskside system by installing the pedestal feet that are shipped with each system. (Only applicable desktop options may be added to a system.)*

Sun-3 Desktop Product Options

Order Number			Description	List Price	Discount Category
3/50	**3/60**	**3/140**			
N/A	N/A	*104B	4-Mbyte main memory expansion board *NOTE: Maximum of two memory expansion boards per system for 3/140*	$ 4,000	A
N/A	N/A	*108B	8-Mbyte main memory expansion boards ■ 2 x 4-Mbyte memory expansion boards *NOTE: Maximum of two memory expansion boards per system for 3/140*	6,800	A
N/A	.*.X104C	N/A	4-Mbyte main memory expansion module	3,400	A
N/A	.*.X108C	N/A	8-Mbyte main memory expansion module	6,800	A
N/A	.*.X112C	N/A	12-Mbyte main memory expansion module	10,200	A
N/A	.*.X116C	N/A	16-Mbyte main memory expansion module	13,600	A
N/A	.*.X120C	N/A	20-Mbyte main memory expansion module	17,000	A
N/A	N/A	*150A	FPA (Floating-Point Accelerator) board	4,900	A
N/A	N/A	*160B	Dual-width to triple-width VME adapter board	400	A
N/A	.*.X251B†	*251A	Add monochrome monitor, keyboard, and mouse *NOTE: For 3/60S or 3/140S systems only.*	3,000	A
N/A	.*.X252B†	N/A	Add 19" high-resolution monochrome monitor, keyboard, and mouse *NOTE: For 3/60S system only.*	4,000	A
N/A	.*.X253B†	N/A	Add 19" color monitor, CG4 color board, keyboard, and mouse *NOTE: For 3/60S systems only.*	8,000	A
N/A	.*.X254B†	N/A	Add 16" color monitor, CG4 color board, keyboard, and mouse *NOTE: For 3/60S system only.*	5,250	A
N/A	.*.X255B†	N/A	Add 19" grayscale monitor, CG4 color board, keyboard, and mouse *NOTE: For 3/60S systems only.*	6,000	A
N/A	N/A	*450A	Add second Ethernet controller	1,395	B
N/A	N/A	*482A	ALM-2™ (Enhanced 16-Channel Asynchronous Line Multiplexer)	3,495	A
*504A†	*504A†	*504D†	141-Mbyte formatted disk subsystem	4,800	B
*505A†	*505A†	*505A†	141-Mbyte formatted expansion disk *NOTE: System must also include option 504 or 514.*	4,800	B
*506A†	*506A†	*506D†	327-Mbyte formatted disk subsystem	7,700	B

Order Number			Description	List Price	Discount Category
3/50	*3/60*	*3/140*			
*507A†	*507A†	*507A†	**327–Mbyte formatted expansion disk** *NOTE: System must also include option 504, 506, 510, 514, or 516.*	$ 7,700	B
*509A†	*509A†	*509A†	**654–Mbyte (2x327) formatted expansion disk** *NOTE: System must also include option 504, 506, 510, 514, or 516.*	15,000	B
*510A†	*510A†	*510D†	**654–Mbyte (2x327) formatted disk subsystem**	15,000	B
*514A†	*514A†	*514D†	**141–Mbyte formatted disk subsystem** **with 60–Mbyte 1/4–inch cartridge tape** *NOTE: Options 504 and 514 are mutually exclusive.*	6,800	B
*516A†	*516A†	*516D†	**327–Mbyte formatted disk subsystem** **with 60–Mbyte 1/4–inch cartridge tape** *NOTE: Options 506, 510, and 516 are mutually exclusive.*	9,700	B
TAP	TAP	TAP	**Ethernet transceiver with 15–meter (49–ft.)** **branch cable and ''vampire tap''** **cable connector** *NOTE: Not required with Sun–3/50M when using the integral thin Ethernet transceiver. TAP requires ETH–TAP–TOOL for installation.*	500	N/D
INLINE	INLINE	INLINE	**Ethernet transceiver with 15–meter (49–ft.)** **branch cable and ''N–series'** **inline cable connectors** *NOTE: Not required with Sun–3/50M when using the integral thin Ethernet transceiver.*	500	N/D
N/A	N/A	THIN	**Ethernet transceiver with 15–meter (49–ft.)** **branch cable and thin** **Ethernet BNC connectors**	500	N/D

NOTES: *   *You can order these options as standalone expansion options to existing equipment by adding an X before the option number. Example: X504A is a 141–Mbyte disk ordered without a system.*

       **   *The X designation indicates that these options are always ordered as standalone options. Example: X251B.*

       †   *To order systems configured for 240V European operation, append "V4" to the order number (e.g., 514AV4)*

13

Sun-3 Deskside Workstations and Servers

Sun-3/150 Workstation and Servers

Package \ System	3/150S	3/150M	3/150MQ (Includes OCLI filter)	3/150G	3/150C
Diskless with 4 Mbytes	3/150S-4 $19,900 / A	3/150M-4 $21,900 / A	3/150MQ-4 $22,900 / A	3/150G-4 $27,900 / A	3/150C-4 $29,900 / A
3/150xx-4-P5 Includes the following: ■ Sun-3/150xx-4 workstation ■ 514D (141-Mbyte disk with 60-Mbyte 1/4-inch tape drive)	3/150S-4-P5 $26,400 / A	3/150M-4-P5 $28,400 / A	Not available	Not available	3/150C-4-P5 $36,400 / A
3/150xx-4-P14 Includes the following: ■ Sun-3/150xx-4 workstation ■ 516D (327-Mbyte disk with 60-Mbyte 1/4-inch tape drive)	3/150S-4-P14 $29,300 / A	3/150M-4-P14 $31,300 / A	Not available	Not available	3/150C-4-P14 $39,300 / A

Sun-3/160 Monochrome Workstations and Servers

Package \ System	3/160S	3/160M	3/160MQ (Includes OCLI filter)
Diskless with 4 Mbytes	3/160S-4 $23,400 / A	3/160M-4 $25,400 / A	3/160MQ-4 $26,400 / A
3/160x-P2 Includes the following: ■ Sun-3/160xx-4 workstation ■ 104B (4-Mbyte memory expansion board) ■ 606A (560-Mbyte (2x280) disk subsystem) ■ 650A (60-Mbyte 1/4-inch tape drive)	3/160S-P2 $54,400 / A	3/160M-P2 $56,400 / A	Not available
3/160xx-P6 Includes the following: ■ Sun-3/160xx-4 workstation ■ 104B (4-Mbyte memory expansion board) ■ 514C (141-Mbyte disk with 60-Mbyte 1/4-inch tape drive)	3/160S-P6 $33,500 / A	3/160M-P6 $35,500 / A	Not available
3/160x-P8 Includes the following: ■ Sun-3/160xx-4 workstation ■ 104B (4-Mbyte memory expansion board) ■ 605A (280-Mbyte disk) ■ 650A (60-Mbyte 1/4-inch tape drive)	3/160S-P8 $45,000 / A	3/160M-P8 $47,000 / A	Not available
3/160xx-P14 Includes the following: ■ Sun-3/160xx-4 workstation ■ 104B (4-Mbyte memory expansion board) ■ 516C (327-Mbyte disk with 60-Mbyte 1/4-inch tape drive)	3/160S-P14 $36,000 / A	3/160M-P14 $38,000 / A	Not available
3/160xx-P15 Includes the following: ■ Sun-3/160xx-4 workstation ■ 104B (4-Mbyte memory expansion board) ■ 517A (654-Mbyte (2x327) disk with 60-Mbyte 1/4-inch tape drive)	3/160S-P15 $43,400 / A	3/160M-P15 $45,400 / A	Not available

NOTE: To order systems configured for 240V European operation, append "V4" to the order number (e.g., 3/160M-P2V4).

Sun-3/160 Color and Grayscale Workstations

Package \ System	3/160C	3/160CXP (Includes GP+)	3/160G
Diskless with 4 Mbytes	3/160C-4 $33,400 / A	3/160CXP-4 $38,400 / A	3/160G-4 $31,400 / A
3/160x-P2 Includes the following: ▪ Sun-3/160xx-4 workstation ▪ 104B (4-Mbyte memory expansion board) ▪ 606A (560-Mbyte (2x280) disk subsystem) ▪ 650A (60-Mbyte 1/4-inch tape drive)	3/160C-P2 $64,400 / A	3/160CXP-P2 $69,400 / A	Not available
3/160xx-P6 Includes the following: ▪ Sun-3/160xx-4 workstation ▪ 104B (4-Mbyte memory expansion board) ▪ 514C (141-Mbyte disk with 60-Mbyte 1/4-inch tape drive)	3/160C-P6 $43,500 / A	3/160CXP-P6 $48,500 / A	Not available
3/160x-P8 Includes the following: ▪ Sun-3/160xx-4 workstation ▪ 104B (4-Mbyte memory expansion board) ▪ 605A (280-Mbyte disk) ▪ 650A (60-Mbyte 1/4-inch tape drive)	3/160C-P8 $55,400 / A	3/160CXP-P8 $60,400 / A	Not available
3/160xx-P14 Includes the following: ▪ Sun-3/160xx-4 workstation ▪ 104B (4-Mbyte memory expansion board) ▪ 516C (327-Mbyte disk with 60-Mbyte 1/4-inch tape drive)	3/160C-P14 $46,000 / A	3/160CXP-P14 $51,000 / A	Not available
3/160xx-P15 Includes the following: ▪ Sun-3/160xx-4 workstation ▪ 104B (4-Mbyte memory expansion board) ▪ 517A (654-Mbyte (2x327) disk with 60-Mbyte 1/4-inch tape drive)	3/160C-P15 $53,400 / A	3/160CXP-P15 $58,400 / A	Not available

NOTE: To order systems configured for 240V European operation, append "V4" to the order number (e.g., 3/160C-P2V4).

Sun–3 Deskside Workstations and Servers

Sun–3/260 High–Resolution Monochrome Workstations and Servers

System / Package	3/260S	3/260HM
Diskless with 8 Mbytes	3/260S–8 $27,900 / A	3/260HM–8 $30,900 / A
3/260xx–P1 Includes the following: • Sun-3/260xx-8 workstation • 605A (280-Mbyte disk) • 650A (60-Mbyte 1/4-inch tape drive)	3/260S–P1 $46,500 / A	3/260HM–P1 $49,500 / A
3/260xx–P1J Includes the following: • Sun-3/260xx-8 workstation • 615B (688-Mbyte disk subsystem with SMD-4) • 650A (60-Mbyte 1/4-inch tape drive)	3/260S–P1J $48,400 / A	3/260HM–P1J $51,400 / A
3/260xx–P2 Includes the following: • Sun-3/260xx-8 workstation • 606A (560-Mbyte (2x280) disk subsystem) • 650A (60-Mbyte 1/4-inch tape drive)	3/260S–P2 $55,500 / A	3/260HM–P2 $58,500 / A
3/260xx–P2J Includes the following: • Sun-3/260xx-8 workstation • 616B (1376-Mbyte (2x688) disk subsystem with SMD-4) • 650A (60-Mbyte 1/4-inch tape drive)	3/260S–P2J $62,000 / A	3/260HM–P2J $65,000 / A
3/260xx–P6 Includes the following: • Sun-3/260xx-8 workstation • 514C (141-Mbyte disk with 60-Mbyte 1/4-inch tape drive)	3/260S–P6 $34,400 / A	3/260HM–P6 $37,400 / A
3/260xx–P14 Includes the following: • Sun-3/260xx-8 workstation • 516C (327-Mbyte disk with 60-Mbyte 1/4-inch tape drive)	3/260S–P14 $36,500 / A	3/260HM–P14 $39,500 / A
3/260xx–P15 Includes the following: • Sun-3/260xx-8 workstation • 517A (654-Mbyte (2x327) disk with 60-Mbyte 1/4-inch tape drive)	3/260S–P15 $43,500 / A	3/260HM–P15 $46,500 / A

NOTE: *1. To order systems configured for 240V European operation, append "V4" to the order number (e.g., 3/260S–P1V4).*
2. Refer to Appendix A for specific ordering instructions when ordering SMD–4 based packages.

Sun-3/260 Grayscale and Color Workstations

Package / System	3/260C	3/260CXP (Includes GP2)	3/260G
Diskless with 8 Mbytes	3/260C-8 $38,900 / A	3/260CXP-8 $50,400 / A	3/260G-8 $36,900 / A
3/260xx-P1 Includes the following: • Sun-3/260xx-8 workstation • 605A (280-Mbyte disk) • 650A (60-Mbyte 1/4-inch tape drive)	3/260C-P1 $57,500 / A	3/260CXP-P1 $69,000 / A	Not available
3/260xx-P1J Includes the following: • Sun-3/260xx-8 workstation • 615B (688-Mbyte disk subsystem with SMD-4) • 650A (60-Mbyte 1/4-inch tape drive)	3/260C-P1J $59,400 / A	3/260CXP-P1J $70,900 / A	Not available
3/260xx-P2 Includes the following: • Sun-3/260xx-8 workstation • 606A (560-Mbyte (2x280) disk subsystem) • 650A (60-Mbyte 1/4-inch tape drive)	3/260C-P2 $66,500 / A	3/260CXP-P2 $78,000 / A	Not available
3/260xx-P2J Includes the following: • Sun-3/260xx-8 workstation • 616B (1376-Mbyte (2x688) disk subsystem with SMD-4) • 650A (60-Mbyte 1/4-inch tape drive)	3/260C-P2J $73,000 / A	3/260CXP-P2J $84,500 / A	Not available
3/260xx-P6 Includes the following: • Sun-3/260xx-8 workstation • 514C (141-Mbyte disk) with 60-Mbyte 1/4-inch tape drive)	3/260C-P6 $45,400 / A	3/260CXP-P6 $56,900 / A	Not available
3/260xx-P14 Includes the following: • Sun-3/260xx-8 workstation • 516C (327-Mbyte disk with 60-Mbyte 1/4-inch tape drive)	3/260C-P14 $47,500 / A	3/260CXP-P14 $59,000 / A	Not available
3/260xx-P15 Includes the following: • Sun-3/260xx-8 workstation • 517A (654-Mbyte (2x327) disk with 60-Mbyte 1/4-inch tape drive)	3/260C-P15 $54,500 / A	3/260CXP-P15 $66,000 / A	Not available

NOTES:
1. To order systems configured for 240V European operation, append "V4" to the order number (e.g., 3/260C-P1V4).
2. Sun-3/260CXP workstations require SunOS 3.5 or above.
3. Refer to Appendix A for specific ordering instructions when ordering SMD-4 based packages.

Sun–3 Deskside Options

Order Number			Description	List Price	Discount Category
3/150	3/160	3/260			
*104B	*104B	N/A	4–Mbyte main memory expansion board *NOTE: Maximum of three memory expansion boards per system.*	$ 4,000	A
*108B	*108B	N/A	8–Mbyte main memory expansion boards ▪ 2 x 4–Mbyte memory expansion boards *NOTE: Maximum of three memory expansion boards per system.*	6,800	A
*112B	*112B	N/A	12–Mbyte main memory expansion boards ▪ 3 x 4–Mbyte memory expansion boards *NOTE: Maximum of three memory expansion boards per system.*	10,200	A
N/A	N/A	*108A	8–Mbyte ECC main memory expansion board *NOTE: Maximum of three memory expansion boards per system.*	8,000	A
*150A	*150A	*150A	FPA (Floating–Point Accelerator) board	4,900	A
*160B	*160A	*160A	Dual–width to triple–width VME adapter board	400	A
*202A	*202A	*202A	GB (Graphics Buffer) board *NOTE: For 3/150C, 3/160C or 3/160CXP systems only. 3/150C and 3/160C must include option 211A.*	4,000	A
*211A	*211A	*211A	GP+ (Graphics Processor) board *NOTE: Upgrades 3/160C to 3/160CXP*	5,900	A
N/A	N/A	*212A	GP2 (Enhanced Graphics Processor) board *NOTE: Upgrades deskside server to CXP graphics workstations. Requires option 253C and SunOS 3.5 or above.*	13,900	A
*221A	*221A	*221A	TAAC–1 Application Accelerator *NOTE: Requires option 221A–01 or 221A–02*	29,400	A
221A–01	221A–01	221A–01	TAAC–1 1/4" software	600	N/D
221A–02	221A–02	221A–02	TAAC–1 1/2" software	600	N/D
*251A†	*251A†	N/A	Add 19" monochrome monitor, keyboard, and mouse *NOTE: For 3/150S and 3/160S systems only.*	3,000	A
N/A	N/A	*252A†	Add 19" high resolution monochrome monitor, keyboard, and mouse *NOTE: For 3/260S system only.*	4,000	A
*253A†	*253A†	*253A†	Add 19" color monitor, CG3 color board, keyboard, and mouse *NOTE: For deskside server or upgrading monochrome systems only.*	12,000	A
*253C†	*253C†	*253C†	Add 19" color monitor, CG5 color board, keyboard, and mouse *NOTE: For deskside server or upgrading monochrome systems only.*	15,000	A
*255A†	*255A†	*255A†	Add 19" grayscale monitor, CG3 color board, keyboard, and mouse *NOTE: For deskside server or upgrading monochrome systems only.*	10,900	A

Order Number			Description	List Price	Discount Category
3/150	3/160	3/260			
N/A	⁂X410A	⁂X410A	SMD-4 controller with cables for 575-Mbyte and 688-Mbyte disks. *NOTE: Refer to Appendix A for specific SMD-4 ordering instructions.*	$ 4,500	B
*450A	*450A	*450A	Add second Ethernet controller	1,395	B
*482A	*482A	*482A	ALM-2 (Enhanced 16-Channel Asynchronous Line Multiplexer) *NOTE: Can support up to four 16-channel ALM-2s.*	3,495	A
*504D†	504C**	504C**	141-Mbyte formatted disk subsystem	4,800	B
*505A†	N/A	N/A	141-Mbyte formatted expansion disk *NOTE: System must also include option 504, 506, 510, 514, or 516.*	4,800	B
*506D†	506C**	506C**	327-Mbyte formatted disk subsystem	7,700	B
*507A†	N/A	N/A	327-Mbyte formatted expansion disk *NOTE: System must also include option 504, 514, 506, 510, or 516.*	7,700	B
*509A†	N/A	N/A	654-Mbyte (2 x327) formatted expansion disks *NOTE: System must also include option 504, 506, 510, 514, or 516.*	15,000	B
*510D†	N/A	N/A	654-Mbyte (2x327) formatted disk subsystem	15,000	B
*514D†	514C**	514C**	141-Mbyte formatted disk subsystem with 60-Mbyte 1/4-inch cartridge tape *NOTE: Options 504 and 514 are mutually exclusive.*	6,800	B
N/A	515A**	515A**	282-Mbyte (2 x 141) formatted disk subsystem with 60-Mbyte 1/4-inch cartridge tape drive	11,600	B
*516D†	516C**	516C**	327-Mbyte formatted disk subsystem with 60-Mbyte 1/4-inch cartridge tape *NOTE: Options 506, 510 and 516 are mutually exclusive.*	9,700	B
N/A	517A**	517A**	654-Mbyte (2x327) formatted disk subsystem with 60-Mbyte 1/4-inch cartridge tape drive	17,000	B
N/A	*605A†	*605A†	280-Mbyte formatted disk subsystem	17,500	B
N/A	*606A†	*606A†	560-Mbyte (2 x 280) formatted disk subsystem	27,500	B
N/A	*615B†	*615B†	688-Mbyte formatted disk subsystem with SMD-4 *NOTE: Refer to Appendix A for specific SMD-4 ordering instructions.*	19,000	B
N/A	*616B†	*616B†	1376-Mbyte (2x688) formatted disk subsystem with SMD-4. *NOTE: Refer to Appendix A for specific SMD-4 ordering instructions.*	33,000	B

Sun–3 Deskside Options

Order Number			Description	List Price	Discount Category
3/150	**3/160**	**3/260**			
N/A	650A**	650A**	60–Mbyte 1/4–inch cartridge tape subsystem	$ 3,000	B
N/A	*670A††	*670A††	1600 bpi 1/2–inch tape drive subsystem	9,500	B
N/A	*675A†***ŧ	*675A†***ŧ	6250/1600 bpi 1/2–inch tape drive subsystem	16,900	B
N/A	*950A	*950A	Meter–high cabinet	2,250	B
N/A	*960B†	*960B†	76–inch data center cabinet	3,900	B
TAP	TAP	TAP	Ethernet transceiver with 15–meter (49–ft.) branch cable and "vampire tap" cable connector *NOTE: TAP requires ETH-TAP-TOOL for installation.*	500	N/D
INLINE	INLINE	INLINE	Ethernet transceiver with 15–meter (49–ft.) branch cable and "N–series" inline cable connectors	500	N/D
THIN	THIN	THIN	Ethernet transceiver with 15–meter (49–ft.) branch cable and thin Ethernet BNC connectors	500	N/D

NOTES: *Options 504, 514, 506, 515, 516, 517 and 650 are mutually exclusive.*

  * *You can order these options as standalone expansion options to existing equipment by adding an X before the option number. Example: X615B is a 688–Mbyte disk ordered without a system.*

  ** *Not customer–installable; only available with initial system purchase.*

  *** *Sun Customer Support will only install Option 675A at a customer's site, if option 675A is factory installed in Option 960B. Any Option 675A not ordered as a 675AR1 with an option 960B must be installed by the customer.*

  † *Append an "R1" to the order number of these options if they are ordered with a data center cabinet and they are to be factory installed in the cabinet. These options are not available in the meter–high cabinet. Example: 675A becomes 675AR1 when it is to be installed in a data center cabinet. Option 960B must also be ordered.*

  †† *Append an "R1" to the order number of these options if they are to be factory installed in a data center cabinet, or append an "R2" if they are to be factory installed in a meter–high cabinet. Example: 670A becomes 670AR2 when it is to be installed in a meter–high cabinet. Option 950A must also be ordered. If neither "R1" nor "R2" is appended to the order number, the product will be shipped in a box, not in a cabinet. (If customer is installing option 670A in his own Meter high cabinet and it is to be mounted horizontally with the reels on the top, then order X670A and appropriate mounting hardware, without ordering the Sun cabinet, option 950A).*

  ŧ *To order systems configured for 240V European operation, append "V4" to the order number. Example: 605A becomes 605AV4 when it is to be configured for 240V operation. Option 670A is not available in 240V operation.*

  .*. *The X designation indicates that these options are always ordered as standalone options only. Example: X410A.*

Sun–3 Data Center Servers

Sun–3/180 Data Center Servers

System / Package	3/180S
Diskless with 4 Mbytes	3/180S–4 † $23,900 / A
3/180S–P4 Includes the following: • Sun–3/180S–4 Data Center Server • 104B (4–Mbyte memory expansion board) • 960A (76–inch Data Center Cabinet) • 625A (575–Mbyte disk subsystem)	3/180S–P4 $51,500 / A
3/180S–P11 Includes the following: • Sun–3/180S–4 Data Center Server • 104B (4–Mbyte memory expansion board) • 960A (76–inch Data Center Cabinet) • 629F (892–Mbyte disk subsystem)	3/180S–P11 $53,500 / A

NOTES: 1. *To order systems configured for 240V European operation, append "V4" to the order number (e.g., 3/280S–P4V4). To order systems configured for 230V Domestic operation, append "V3" to the order number (e.g., 3/180S–P4V3).*
   2. *Any data center server that will have more than two 892–Mbyte disk drives installed must be ordered in either a 230V or 240V configuration. 115V systems support a maximum of two 892–Mbyte disk drives.*

21

Sun–3 Data Center Servers

Sun–3/280 Data Center Servers

Package \ System	3/280S
Diskless with 8–Mbytes	3/280S–8 † $28,900 / A
3/280S–P1 Includes the following: • Sun-3/280S-8 Data Center Server • 960A (76-inch Data Center Cabinet) • 625A (575-Mbyte disk)	3/280S–P1 $52,900 / A
3/280S–P2 Includes the following: • Sun-3/280S-8 Data Center Server • 960A (76-inch Data Center Cabinet) • 625A (575-Mbyte disk) • 626A (575-Mbyte expansion disk)	3/280S–P2 $70,900 / A
3/280S–P4 Includes the following: • Sun-3/280S-8 Data Center Server • 108A (8-Mbyte ECC memory expansion board) • 960A (76-inch Data Center Cabinet) • 625A (575-Mbyte disk) • 626A (575-Mbyte expansion disk) • 675A (6250 bpi 1/2-inch tape)	3/280S–P4 $93,500 / A
3/280S–P11 Includes the following: • Sun-3/280S-8 Data Center Server • 960A (76-inch Data Center Cabinet) • 629F (892-Mbyte disk subsystem)	3/280S–P11 $54,500 / A
3/280S–P11J Includes the following: • Sun-3/280S-8 Data Center Server • 960A (76-inch Data Center Cabinet) • 641A (892-Mbyte disk subsystem with SMD-4)	3/280S–P11J $54,500 / A
3/280S–P13 Includes the following: • Sun-3/280S-8 Data Center Server • 960A (76-inch Data Center Cabinet) • 631F (2x892-Mbyte disk subsystem)	3/280S–P13 $73,500 / A
3/280S–P13J Includes the following: • Sun-3/280S-8 Data Center Server • 960A (76-inch Data Center Cabinet) • 642A (2x892-Mbyte disk subsystem with SMD-4)	3/280S–P13J $73,500 / A
3/280S–P14 Includes the following: • Sun-3/280S-8 Data Center Server • 108A (8-Mbyte ECC memory expansion board) • 960A (76-inch Data Center Cabinet) • 631F (2x892-Mbyte disk subsystem) • 675A (6250 bpi 1/2-inch tape)	3/280S–P14 $97,900 / A
3/280S–P14J Includes the following: • Sun-3/280S-8 Data Center Server • 108A (8-Mbyte ECC memory expansion board) • 960A (76-inch Data Center Cabinet) • 642A (2x892-Mbyte disk subsystem with SMD-4) • 675A (6250 bpi 1/2-inch tape)	3/280S–P14J $97,900 / A

NOTES:
1. *To order systems configured for 240V European operation, append "V4" to the order number (e.g. 3/280S-P1V4). To order systems configured for 230V Domestic operation, append "V3" to the order number (e.g. 3/280S-P1V3).*
2. *Any data center server that will have more than two 892-Mbyte disk drives installed must be ordered in either a 230V or 240V configuration. 115V systems support a maximum of two 892-Mbyte disk drives.*
3. *Refer to Appendix A for specific ordering instructions when ordering SMD-4 based packages.*

Sun–3 Data Center Server Options

Order Number		Description	List Price	Discount Category
3/180	3/280			
*104B	N/A	4–Mbyte main memory expansion board *NOTE: Maximum of three memory expansion boards per system.*	$ 4,000	A
*108B	N/A	8–Mbyte main memory expansion boards ▪ 2 x 4–Mbyte memory expansion boards *NOTE: Maximum of three memory expansion boards per system.*	6,800	A
*112B	N/A	12–Mbyte main memory expansion boards ▪ 3 x 4–Mbyte memory expansion boards *NOTE: Maximum of three memory expansion boards per system.*	10,200	A
N/A	*108A	8–Mbyte ECC main memory expansion board *NOTE: Maximum of three memory expansion boards per system.*	8,000	A
*150A	*150A	FPA (Floating–Point Accelerator) board	4,900	A
*160A	*160A	Dual–width to triple–width VME adapter board	400	A
*202A	*202A	GB (Graphics Buffer) board *NOTE: System must include option 211A.*	4,000	A
*211A	*211A	GP+ (Graphics Processor) board *NOTE: System must include option 253A*	5,900	A
N/A	*212A	GP2 (Enhanced Graphics Processor) board *NOTE: Upgrades Sun–3 and Sun–4 servers to CXP Graphics workstations. Requires option 253C and SunOS 3.5 or above.*	13,900	A
*221A	*221A	TAAC–1 Application Accelerator *NOTE: Requires option 221A–01 or 221A–02*	29,400	A
221A–01	221A–01	TAAC–1 1/4" software	600	N/D
221A–01	221A–02	TAAC–1 1/2" software	600	N/D
*251A†	N/A	Add 19" monochrome monitor, keyboard, and mouse	3,000	A
N/A	*252A†	Add 19" high–resolution monochrome monitor, keyboard, and mouse	4,000	A
*253A†	*253A†	Add 19" color monitor, CG3 color board, keyboard, and mouse	12,000	A
*253C†	*253C†	Add 19" color monitor, CG5 color board, keyboard, and mouse	15,000	A
*255A†	*255A†	Add 19" grayscale monitor, CG3 color board, keyboard, and mouse	10,900	A
**X401A	**X401A	SMD–4 controller with cables for 892–Mbyte disk *NOTE: Refer to Appendix A for specific SMD–4 ordering instructions.*	4,500	B
**X410A	**X410A	SMD–4 controller with cables for 575–Mbyte and 688–Mbyte disks. *NOTE: Refer to Appendix A for specific SMD–4 ordering instructions.*	4,500	B
*450A	*450A	Add second Ethernet controller	1,395	B

Sun–3 Data Center Server Options

Order Number		Description	List Price	Discount Category
3/180	3/280			
*482B	*482B	ALM–2 (Enhanced 16–Channel Asynchronous Line Multiplexer) NOTE: The data center server can support up to four 16-channel ALM-2s.	$ 3,495	A
*625A††	*625A††	575-Mbyte formatted disk subsystem	22,900	B
*626A††	*626A††	575-Mbyte formatted expansion disk NOTE: System must include option 625A.	19,900	B
*629F††	*629F††	892-Mbyte formatted disk subsystem	22,900	B
*.X630F†	*.X630F†	892-Mbyte formatted expansion disk NOTE: System must also include Option 629F.	19,900	B
*631F††	*631F††	2x892-Mbyte formatted disk subsystem	42,800	B
*641A††	*641A††	892-Mbyte formatted disk subsystem with SMD-4 NOTE: Refer to Appendix A for specific SMD-4 ordering instructions.	23,900	B
642A††	642A††	2x892-Mbyte formatted disk subsystem with SMD-4 NOTE: Refer to Appendix A for specific SMD-4 ordering instructions.	43,800	B
643A†‡	643A††	3x892-Mbyte formatted disk subsystem with SMD-4 NOTE: Refer to Appendix A for specific SMD-4 ordering instructions.	63,700	B
644A††	644A††	4x892-Mbyte formatted disk subsystem with SMD-4 NOTE: Refer to Appendix A for specific SMD-4 ordering instructions.	8,600	B
*.X645A†	*.X645A†	892-Mbyte formatted expansion disk NOTE: For systems already installed with options 641A or 643A. Refer to Appendix A for specific SMD-4 ordering instructions.	19,900	B
*.X646A†	*.X646A†	892-Mbyte formatted expansion disk with SMD-4. NOTE: For systems already installed with option 642A. Refer to Appendix A for specific SMD-4 ordering instructions.	19,900	B
650B**	650B**	60-Mbyte 1/4-inch cartridge tape subsystem	3,000	B
*670A†	*670A†	1600 bpi-1/2-inch tape drive subsystem	9,500	B
*675A†***†	*675A†***†	6250/1600 bpi-1/2-inch tape drive subsystem	16,900	B
*960A†‡	*960A†‡	76-inch data center cabinet	3,900	B

Order Number		Description	List Price	Discount Category
3/180	*3/280*			
TAP	TAP	Ethernet transceiver with 15–meter (49–ft.) branch cable and "vampire tap" cable connector *NOTE: TAP requires ETH-TAP-TOOL for installation.*	$ 500	N/D
INLINE	INLINE	Ethernet transceiver with 15–meter (49–ft.) branch cable and "N–series" in–line cable connectors	500	N/D
THIN	THIN	Ethernet transceiver with 15–meter (49–ft.) branch cable and thin Ethernet BNC connectors	500	N/D

NOTES: * *You can order these options as standalone expansion options to existing equipment by adding an X before the option number. Example: X641A is a 892–Mbyte disk ordered without a system.*

** *Not customer–installable; only available with initial system purchase.*

*** *Sun Customer Support will only install Option 675A at a customer's site, if option 675A is factory installed in Option 960A. Any option 675A not ordered as a 675AR1 with an Option 960A must be installed by the customer.*

† *Append an "R1" to the order number of these options if they are ordered with a data center cabinet and they are to be factory installed in the cabinet. Example: 642A becomes 642AR1 when it is to be installed in a data center cabinet. Option 960A must also be ordered.*

† *To order systems configured for 240V European operation, append "V4" to the order number. Example: 642A becomes 642AR1V4 when it is to be installed in a data center cabinet and configured for 240V operation. To order systems configured for 230V Domestic operation, append "V3" to the order number. Option 670A is not available in 230V or 240V operation.*

‡ *Data center expansion cabinets for use with 892–Mbyte drives must be ordered in 230V or 240V configurations. The 892–Mbyte drive is not supported in 115V expansion cabinets. A maximum of 2x892–Mbyte drives are supported in 115V system data center cabinets.*

*** *The X designation indicates that these options are always ordered as standalone options. Example: X645A.*

Sun–4 Desktop Workstations and Servers

Sun–4/110 Desktop Monochrome and Color Workstations and Servers

Package \ System	4/110S	4/110M	4/110FC	4/110C
Diskless with 8 Mbytes	4/110S–8 $16,950 / A	4/110M–8 $19,950 / A	4/110FC–8 $22,200 / A	4/110C–8 $24,950 / A
Diskless with 8 Mbytes Includes FPU	4/110SE–8 $19,600 / A	4/110ME–8 $22,600 / A	4/110FCE–8 $24,850 / A	4/110CE–8 $27,600 / A
4/110xx–8–P5 Includes the following: • Sun–4/110xx workstation • 153A (Floating point unit) • 514A (141–Mbyte disk with 60–Mbyte 1/4–inch tape drive)	Not available	4/110ME–8–P5 $29,100 / A	Not available	4/110CE–8–P5 $34,100 / A
4/110xx–8–P14 Includes the following: • Sun–4/110xx workstation • 153A (Floating point unit) • 516A (327–Mbyte disk with 60–Mbyte 1/4–inch tape drive)	Not available	4/110ME–8–P14 $32,000 / A	Not available	4/110CE–8–P14 $37,000 / A

Package \ System	4/110TFC	4/110TC
Diskless with 8 Mbytes	4/110TFC–8 $27,500 / A	4/110TC–8 $31,250 / A
Diskless with 8 Mbytes Includes FPU	4/110TFCE–8 $30,150 / A	4/110TCE–8 $33,900 / A
4/110xx–8–P5 Includes the following: • Sun–4/110xx workstation • 153A (Floating point unit) • 514A (141–Mbyte disk with 60–Mbyte 1/4–inch tape drive)	Not available	4/110TCE–8–P5 $40,400 / A
4/110xx–8–P14 Includes the following: • Sun–4/110xx workstation • 153A (Floating point unit) • 516A (327–Mbyte disk with 60–Mbyte 1/4–inch tape drive)	Not available	4/110TCE–8–P14 $43,300 / A

NOTES:
1. *Sun–4/110 servers are also used as building blocks for other monitor configurations. To configure a Sun–4/110HM, Sun–4/110G, or Sun–4/110MQ, order a Sun–4/110S and the appropriate monitor option.*
2. *Order systems with FPU for any floating–point oriented application use.*
3. *You can configure the Sun–4/110 desktop as a deskside system by installing the pedestal feet that are shipped with each system.*
4. **To order more memory:** *All systems on the above table contain 8 Mbytes of memory. Sun–4/110 systems may also be ordered with a total of 16 or 32 Mbytes of memory by changing the memory designation ("–8") in the product number to the desired amount of memory. For example, to order a Sun–4/110FC with 16 Mbytes, order 4/110FC–16 instead of 4/110FC–8.*

   When ordering additional memory for a TOTAL of: **Add:**
   - *16–Mbytes total memory*   *$6,800*
   - *32–Mbytes total memory*   *$20,400*

5. *To order systems configured for 240V European operation, append "V4" to the order number (e.g., 4/110CE–8–P5V4).*

Sun–4 Desktop Options

Order Number	Description	List Price	Discount Category
⁂X116D	16–Mbyte main memory expansion	$ 13,600	A
⁂X153A	FPU (floating–point unit)	2,650	A
*251D†	Add 19" monochrome monitor, mono board, keyboard, and mouse	3,000	A
*251DQ†	Add 19" OCLI monochrome monitor, mono board, keyboard, and mouse	4,000	A
*252D†	Add 19" high resolution monochrome monitor, mono board, keyboard, and mouse	4,000	A
*253A†	Add 19" color monitor, CG3 color board, keyboard, and mouse *NOTE: For upgrading monochrome or server systems only.*	12,000	A
*253C†	Add 19" color monitor, CG5 color board, keyboard, and mouse *NOTE: For upgrading monochrome or server systems only.*	15,000	A
*253D†	Add 19" color monitor, CG4 color board, keyboard, and mouse *NOTE: For upgrading monochrome or server systems only.*	8,000	A
*253E†	Add 19" color monitor, 24–bit color board, keyboard, and mouse *NOTE: For upgrading monochrome or server systems only.*	15,000	A
*254D†	Add 16" color monitor, CG4 color board, keyboard, and mouse *NOTE: For upgrading monochrome or server systems only.*	5,250	A
*254E†	Add 16" color monitor, 24–bit color board, keyboard, and mouse *NOTE: For upgrading monochrome or server systems only.*	11,000	A
*255D†	Add 19" grayscale monitor, CG4 color board, keyboard and mouse *NOTE: For upgrading monochrome or server systems only.*	6,000	A
*450A	Add second Ethernet controller	1,395	B
*482A	ALM–2 (Enhanced 16–Channel Asynchronous Line Multiplexer)	3,495	A
*504A†	141–Mbyte formatted disk subsystem	4,800	B
*505A†	141–Mbyte formatted expansion disk *NOTE: System must also include Option 504 or 514.*	4,800	B
*506A†	327–Mbyte formatted disk subsystem	7,700	B
*507A†	327–Mbyte formatted expansion disk *NOTE: System must also include option 504, 506, 510, 514, or 516.*	7,700	B

Sun–4 Desktop Options

Order Number	Description	List Price	Discount Category
*509A†	654–Mbyte (2x327) formatted expansion disk *NOTE: System must also include option 504, 506, 510, 514, or 516.*	$ 15,000	B
*510A†	654–Mbyte (2x327) formatted disk subsystem *NOTE: Options 506, 510, and 516 are mutually exclusive.*	15,000	B
*514A†	141–Mbyte formatted disk subsystem with 60–Mbyte 1/4–inch cartridge tape *NOTE: Options 504 and 514 are mutually exclusive*	6,800	B
*516A†	327–Mbyte formatted disk subsystem with 60–Mbyte 1/4–inch cartridge tape	9,700	B
TAP	Ethernet transceiver with 15–meter (49–ft.) branch cable and "vampire tap" cable connector *NOTE: TAP requires ETH–TAP–TOOL for installation.*	500	N/D
INLINE	Ethernet transceiver with 15–meter (49–ft.) branch cable and "N–series" inline cable connectors	500	N/D

NOTES: *   *You can order these options as standalone expansion options to existing equipment by adding an X before the option number. Example: X504A is a 141–Mbyte disk ordered without a system.*

            **   *The X designation indicates that these options are always ordered as standalone options. Example: X153A.*

            †   *To order systems configured for 240V European operation, append "V4" to the order number (e.g., 510AV4)*

Sun–4/150 Color Graphics Workstations and Servers

System Package	4/150CXP (Includes FPU and GP2)	4/150TAAC (Includes FPU and TAAC-1)
Diskless with 8 Mbytes	4/150CXP-8 $44,900 / A	4/150TAAC-8 $63,400 / A
4/150xx–8–P5 Includes the following: • Sun–4/150xx–8 workstation • 514A (141-Mbyte disk with 60-Mbyte 1/4-inch tape drive)	4/150CXP-8-P5 $51,400 / A	Not available
4/150xx–8–P14 Includes the following: • Sun–4/150xx–8 workstation • 516A (327-Mbyte disk with 60-Mbyte 1/4-inch tape drive)	4/150CXP-8-P14 $54,300 / A	Not available

NOTES: 1. **To order more memory:** *All systems on the above table contain 8 Mbytes of memory. Sun–4/150 systems may also be ordered with a total of 16 Mbytes or 32 Mbytes of memory by changing the memory designation ("–8") in the product number to the desired amount of memory. For example, to order a Sun–4/150TAAC with 16 Mbytes, order 4/150TAAC-16 instead of 4/150TAAC-8. The table below lists the amount to add to the list price of the base system.*

When ordering additional memory for a TOTAL of: **Add:**

16–Mbytes total memory	*$6,800*
32–Mbytes total memory	*$20,400*

   2. *To order systems configured for 240V European operation, append "V4" to the order number (e.g., 4/150TAAC-8-V4).*

Sun–4 Deskside Workstations and Servers

Sun–4/260 High Resolution Monochrome Workstations and Servers

Package \ System	4/260S	4/260HM
Diskless with 8 Mbytes	4/260S–8 $39,800 / A	4/260HM–8 $42,800 / A
Diskless with 32 Mbytes	4/260S–32 $56,600 / A	4/260HM–32 $59,600 / A

4/260xx–P1
Includes the following:
• Sun–4/260xx–32 workstation
• 606A (560–Mbyte (2x280)
  disk subsystem)
• 650A (60–Mbyte 1/4–inch
  tape drive)
	4/260S–P1
	$84,200 / A
		4/260HM–P1
		$87,200 / A

4/260xx–P1J
Includes the following:
• Sun–4/260xx–32 workstation
• 616B (1376– Mbyte(2x688)
  disk subsystem with SMD–4)
• 650A (60–Mbyte 1/4–inch
  tape drive)
	4/260S–P1J
	$89,700 / A
		4/260HM–P1J
		$92,700 / A

4/260xx–P2 Includes the following: • Sun–4/260xx–8 workstation • 605A (280–Mbyte disk subsystem) • 650A (60 Mbyte 1/4–inch tape drive)	4/260S–P2 $58,400 / A	4/260HM–P2 $61,400 / A

4/260xx–P2J
Includes the following:
• Sun–4/260xx–8 workstation
• 615B (688–Mbyte disk subsystem
  with SMD–4)
• 650A (60–Mbyte 1/4–inch
  tape drive)
	4/260S–P2J
	$59,900 / A
		4/260HM–P2J
		$62,900 / A

4/260xx–P14 Includes the following: • Sun–4/260xx–8 workstation • 516C (327–Mbyte disk with 60–Mbyte 1/4–inch tape drive)	4/260S–P14 $48,400 / A	4/260HM–P14 $51,400 / A

4/260xx–P15
Includes the following:
• Sun–4/260xx–8 workstation
• 517A (654–Mbyte (2x327) disk
  with 60–Mbyte 1/4–inch
  tape drive)
	4/260S–P15
	$55,400 / A
		4/260HM–P15
		$58,400 / A

NOTES: 1.   *To order systems configured for 240V European operation, append "V4" to the order number (e.g., 4/260C–32V4).*
         2.   *Sun–4/260CXP workstations require SunOS 4.0 or above.*
         3.   *Refer to Appendix A for specific ordering instructions when ordering SMD–4 based packages.*

Sun-4/260 Grayscale and Color Workstations

Package / System	4/260C	4/260CXP (includes GP2)	4/260G
Diskless with 8 Mbytes	4/260C-8 $50,800 / A	4/260CXP-8 $62,300 / A	4/260G-8 $48,800 / A
Diskless with 32 Mbytes	4/260C-32 $67,600 / A	4/260CXP-32 $79,100 / A	4/260G-32 $65,600 / A
4/260xx-P1 Includes the following: • Sun-4/260xx-32 workstation • 606A (560-Mbyte (2x280) disk subsystem) • 650A (60-Mbyte 1/4-inch tape drive)	4/260C-P1 $95,200 / A	4/260CXP-P1 $106,700 / A	Not available
4/260xx-P1J Includes the following: • Sun-4/260xx-32 workstation • 616B (1376-Mbyte (2x688) disk subsystem with SMD-4) • 650A (60-Mbyte 1/4-inch tape drive)	4/260C-P1J $100,700 / A	4/260CXP-P1J $112,200 / A	Not available
4/260xx-P2 Includes the following: • Sun-4/260xx-8 workstation • 605A (280-Mbyte disk subsystem) • 650A (60-Mbyte 1/4-inch tape drive)	4/260C-P2 $69,400 / A	4/260CXP-P2 $80,900 / A	Not available
4/260xx-P2J Includes the following: • Sun-4/260xx-8 workstation • 615B (688-Mbyte disk subsystem with SMD-4) • 650A (60-Mbyte 1/4-inch tape drive)	4/260C-P2J $70,900 / A	4/260CXP-P2J $82,400 / A	Not available
4/260xx-P14 Includes the following: • Sun-4/260xx-8 workstation • 516C (327-Mbyte disk with 60-Mbyte 1/4-inch tape drive)	4/260C-P14 $59,400 / A	Not available	Not available
4/260xx-P15 Includes the following: • Sun-4/260xx-8 workstation • 517A (654-Mbyte (2x327) disk with 60-Mbyte 1/4-inch tape drive)	4/260C-P15 $66,400 / A	Not available	Not available

NOTES: 1. To order systems configured for 240V European operation, append "V4" to the order number (e.g., 4/260S-32V4)
2. Refer to Appendix A for specific ordering instructions when ordering SMD-4 based packages.

Sun–4 Deskside Options

Order Number		Description	List Price	Discount Category
4/150	**4/260**			
N/A	*108A	8–Mbyte ECC main memory expansion board NOTE: Maximum of three memory expansion boards per system.	$ 8,000	A
**X116D	N/A	16–Mbyte main memory expansion	13,600	A
N/A	*132A	32–Mbyte ECC main memory expansion board NOTE: Maximum of three memory expansion boards per system.	28,000	A
*160A	*160A	Dual–width to triple–width VME adapter board	400	A
N/A	*202A	GB (Graphics Buffer) board NOTE: System must include option 211A.	4,000	A
N/A	*211A	GP+ (Graphics Processor) board NOTE: System must include option 253A	5,900	A
N/A	*212A	GP2 (Enhanced Graphics Processor) board NOTE: Upgrades deskside server to CXP Graphics workstations. Requires option 253C and SunOS 3.5 or above.	13,900	A
N/A	*221A	TAAC–1 Application Accelerator NOTE: Requires option 221A–01 or 221A–02	29,400	A
N/A	221A–01	TAAC–1 1/4" software	600	N/D
N/A	221A–02	TAAC–1 1/2" software	600	N/D
N/A	*252A†	Add 19" high–resolution monochrome monitor, keyboard, and mouse NOTE: For 4/260S system only.	4,000	A
N/A	*253A†	Add 19" color monitor, CG3 color board, keyboard and mouse NOTE: For deskside server or upgrading monochrome systems only	12,000	A
N/A	*253C†	Add 19" color monitor, CG5 color board, keyboard, and mouse NOTE: For deskside server or upgrading monochrome systems only.	15,000	A
N/A	*255A†	Add 19" grayscale monitor, CG3 color board, keyboard, and mouse NOTE: For deskside server or upgrading monochrome systems only.	10,900	A
N/A	**X410A	SMD–4 controller with cables for 575–Mbyte and 688–Mbyte disks. NOTE: Refer to Appendix A for specific SMD–4 ordering instructions.	4,500	B
*450A	*450A	Add second Ethernet controller	1,395	B
*482A	*482A	ALM2 (Enhanced 16–Channel Asynchronous Line Multiplexer) NOTE: Can support up to four 16–channel ALM–2's.	3,495	A
*504A†	N/A	141–Mbyte formatted disk subsystem	4,800	B
*505A†	N/A	141–Mbyte formatted expansion disk NOTE: System must also include option 504 or 514.	4,800	B
506A**	506C**	327–Mbyte formatted disk subsystem	7,700	B

Order Number		Description	List Price	Discount Category
4/150	4/260			
*507A†	N/A	327–Mbyte formatted expansion disk NOTE: System must also include option 504, 506, 510, 514, or 516.	$ 7,700	B
*509A†	N/A	654–Mbyte (2x327) formatted expansion disk NOTE: System must also include Option 504, 506, 510, 514, or 516.	15,000	B
*510A†	N/A	654–Mbyte (2x327) formatted disk subsystem	15,000	B
*514A†	N/A	141–Mbyte formatted disk subsystem with 60–Mbyte 1/4–inch cartridge tape NOTE: Options 504 and 514 are mutually exclusive	6,800	B
*516A†	516C**	327–Mbyte formatted disk subsystem with 60–Mbyte 1/4–inch cartridge tape NOTE: Options 506, 510 and 516 are mutually exclusive.	9,700	B
N/A	517A**	654–Mbyte (2x327) formatted disk subsystem with 60–Mbyte 1/4–inch cartridge tape drive	17,000	B
N/A	*605A†	280–Mbyte formatted disk subsystem	17,500	B
N/A	*606A†	560–Mbyte (2x280) formatted disk subsystem	27,500	B
N/A	*615B†	688–Mbyte formatted disk subsystem with SMD–4 NOTE: Refer to Appendix A for specific SMD–4 ordering instructions.	19,000	B
N/A	*616B†	1376–Mbyte (2x688) formatted disk subsystem with SMD–4 NOTE: Refer to Appendix A for specific SMD–4 ordering instructions.	33,000	B
N/A	650A**	60–Mbyte 1/4–inch cartridge tape subsystem	3,000	B
N/A	*675A†***†	6250/1600 bpi 1/2–inch tape drive subsystem	16,900	B
N/A	*960B†	76–inch data center cabinet	3,900	B
TAP	TAP	Ethernet transceiver with 15–meter (49–ft.) branch cable and "vampire tap" cable connector. NOTE: TAP requires ETH–TAP–TOOL for installation	500	N/D
INLINE	INLINE	Ethernet transceiver with 15–meter (49–ft.) branch cable and "N–series" inline cable connectors	500	N/D
THIN	THIN	Ethernet transceiver with 15–meter (49–ft.) branch cable and thin Ethernet BNC connectors	500	N/D

NOTES: * These options may be ordered as standalone expansion options to existing equipment by adding an X before the option number. Example: X615B is a 688–Mbyte disk ordered without a system.

   ** Not customer–installable; only available with initial system purchase.

   *** Sun Customer Support will only install option 675A at a customer's site, if option 675A is factory installed in option 960B. Any option 675A not ordered as a 675AR1 with an option 960B must be installed by the customer.

   ⁂ The X designation indicates that these options are always ordered as standalone options. Example: X410A.

   † Append an "R1" to the order number of these options if they are ordered with a data center cabinet and they are to be factory installed in the cabinet. These options are not available in the meter–high cabinet. Example: 675A becomes 675AR1 when it is to be installed in a data center cabinet. Option 960B must also be ordered.

   † To order systems configured for European operation, append "V4" to the order number (e.g., 615AV4)

Sun–4 Data Center Servers

Sun–4/280 Data Center Servers

System / Package	4/280S
Diskless with 8 Mbytes	4/280S–8 † $40,200 / A
Diskless with 32 Mbytes	4/280S–32 † $57,000 / A
4/280S–P1 Includes the following: ▪ Sun–4/280S–32 Data Center Server ▪ 960A (76–inch Data Center Cabinet) ▪ 625A (575–Mbyte disk subsystem) ▪ 626A (575–Mbyte expansion disk)	4/280S–P1 $99,000 / A
4/280S–P2 Includes the following: ▪ Sun–4/280S–32 Data Center Server ▪ 960A (76–inch Data Center Cabinet) ▪ 625A (575–Mbyte disk subsystem) ▪ 626A (575–Mbyte expansion disk) ▪ 675A (6250 bpi 1/2–inch tape)	4/280S–P2 $114,000 / A
4/280S–P3 Includes the following: ▪ Sun–4/280S–32 Data Center Server ▪ Three 132A (32–Mbye ECC memory expansion board) ▪ Two 960A (76–inch Data Center Cabinet) ▪ Two 625A (575–Mbyte disk subsystem) ▪ Two 626A (575–Mbyte expansion disk) ▪ 675A (6250 bpi 1/2–inch tape)	4/280S–P3 $231,200 / A
4/280S–P4 Includes the following: ▪ Sun–4/280S–32 Data Center Server ▪ 960A (76–inch Data Center Cabinet) ▪ 625A (575–Mbyte disk subsystem)	4/280S–P4 $81,000 / A
4/280S–P5 Includes the following: ▪ Sun–4/280S–32 Data Center Server ▪ 960A (76–inch Data Center Cabinet) ▪ 625A (575–Mbyte disk subsystem) ▪ 675A (6250 bpi 1/2–inch tape)	4/280S–P5 $96,600 / A

NOTES: 1.   *To order systems configured for 240V European operation, append "V4" to the order number (e.g., 4/280S–P3V4). To order systems configured for 230V Domestic operation append "V3" to the order number (e.g. 4/280S–P3V3).*

            2.   *Any data center server that will have more than two 892–Mbyte disk drives installed must be ordered in either a 230V or 240V configuration. 115V systems support a maximum of two 892–Mbyte disk drives.*

Sun–4/280 Data Center Servers

Package \ System	4/280S
4/280S–P11 Includes the following: ▪ Sun–4/280S–32 Data Center Server ▪ 960A (76–inch Data Center Cabinet) ▪ 629F (892–Mbyte disk subsystem)	4/280S–P11 $81,600 / A
4/280S–P11J Includes the following: ▪ Sun–4/280S–32 Data Center Server ▪ 960A (76–inch Data Center Cabinet) ▪ 641A (892–Mbyte disk subsystem with SMD–4)	4/280S–P11J $81,600 / A
4/280S–P12 Includes the following: ▪ Sun–4/280S–32 Data Center Server ▪ 960A (76–inch Data Center Cabinet) ▪ 629F (892–Mbyte disk subsystem) ▪ 675A (6250 bpi 1/2–inch tape)	4/280S–P12 $98,000 / A
4/280S–P12J Includes the following: ▪ Sun–4/280S–32 Data Center Server ▪ 960A (76–inch Data Center Cabinet) ▪ 641A (892–Mbyte disk subsystem with SMD–4) ▪ 675A (6250 bpi 1/2–inch tape)	4/280S–P12J $98,000 / A
4/280S–P13 Includes the following: ▪ Sun–4/280S–32 Data Center Server ▪ 960A (76–inch Data Center Cabinet) ▪ 631F (2x892–Mbyte disk subsystem)	4/280S–P13 $101,000 / A
4/280S–P13J Includes the following: ▪ Sun–4/280S–32 Data Center Server ▪ 960A (76–inch Data Center Cabinet) ▪ 642A (2x892–Mbyte disk subsystem with SMD–4)	4/280S–P13J $101,000 / A

NOTES: 1. *To order systems configured for 240V European operation, append "V4" to the order number (e.g. 4/280S–P3V4). To order systems configured for 230V Domestic operation, append "V3" to the order number (e.g. 4/280S–P3V3).*
2. *Any data center server that will have more than two 892–Mbyte disk drives installed must be ordered in either a 230V or 240V configuration. 115V systems support a maximum of two 892–Mbyte disk drives.*
3. *Refer to Appendix A for specific ordering instructions when ordering SMD–4 based packages.*

Sun–4 Data Center Servers

Sun–4/280 Data Center Servers

Package \ System	4/280S
4/280S–P14 Includes the following: • Sun-4/280S-32 Data Center Server • 960A (76-inch Data Center Cabinet) • 631F (2x892-Mbyte disk subsystem) • 675A (6250 bpi 1/2-inch tape)	4/280S–P14 $117,600 / A
4/280S–P14J Includes the following: • Sun-4/280S-32 Data Center Server • 960A (76-inch Data Center Cabinet) • 642A (2x892-Mbyte disk subsystem with SMD-4) • 675A (6250 bpi 1/2-inch tape)	4/280S–P14J $117,600 / A
4/280S–P15 Includes the following: • Sun-4/280S-32 Data Center Server • Three 132A (32-Mbyte ECC memory expansion board) • 960A (76-inch Data Center Cabinet) • Two 631F (2x892-Mbyte disk subsystem) • 675A (6250 bpi 1/2-inch tape)	4/280S–P15 ‡ $233,800 / A
4/280S–P15J Includes the following: • Sun-4/280S-32 Data Center Server • Three 132A (32-Mbyte ECC memory expansion board) • 960A (76-inch Data Center Cabinet) • Two 642A (2x892-Mbyte disk subsystem with SMD-4) • 675A (6250 bpi 1/2-inch tape)	4/280S–P15J ‡ $233,800 / A

NOTES:
1. *To order systems configured for 240V European operation, append "V4" to the order number (e.g. 4/280S–P3V4). To order systems configured for 230V Domestic operation, append "V3" to the order number (e.g. 4/280S–P3V3).*
2. *Any data center server that will have more than two 892–Mbyte disk drives installed must be ordered in either a 230V or 240V configuration. 115V systems support a maximum of two 892–Mbyte disk drives.*
3. *The 4/280S–P15 and 4/280S–P15J are available in only 230V or 240V configurations.*
4. *Refer to Appendix A for specific ordering instructions when ordering SMD–4 based packages.*

Sun–4 Data Center Server Options

Order Number	Description	List Price	Discount Category
*108A	8–Mbyte ECC main memory expansion board *NOTE: Maximum of three memory expansion boards per system.*	$ 8,000	A
*132A	32–Mbyte ECC main memory expansion board *NOTE: Maximum of three memory expansion boards per system.*	28,000	A
*160A	Dual–width to triple–width VME adapter board	400	A
*202A	GB (Graphics Buffer) board *NOTE: System must include option 211A.*	4,000	A
*211A	GP+ (Graphics Processor) board *NOTE: System must include option 253A*	5,900	A
*212A	GP2 (Enhanced Graphics Processor) board *NOTE: Upgrades Sun–3 and Sun–4 servers to CXP graphics workstations. Requires option 253C and SunOS 4.0 or above.*	13,900	A
*221A	TAAC–1 Application Accelerator *NOTE: Requires option 221A–01 or 221A–02*	29,400	A
221A–01	TAAC–1 1/4" Software	600	N/D
221A–02	TAAC–1 1/2" Software	600	N/D
*252A†	Add 19" high resolution monochrome monitor, keyboard, and mouse	4,000	A
*253A†	Add 19" color monitor, CG3 color board, keyboard, and mouse	12,000	A
*253C†	Add 19" color monitor, CG5 color board, keyboard, and mouse	15,000	A
*255A†	Add 19" grayscale monitor, CG3 color board, keyboard, and mouse	10,900	A
**X401A	SMD–4 controller with cables for 892–Mbyte disk *NOTE: Refer to Appendix A for specific SMD–4 ordering instructions.*	4,500	B
**X410A	SMD–4 controller with cables for 575–Mbyte and 688–Mbyte disks. *NOTE: Refer to Appendix A for specific SMD–4 ordering instructions.*	4,500	B
*450A	Add second Ethernet controller	1,395	B
*482B	ALM–2 (Enhanced 16–Channel Asynchronous Line Multiplexer) *NOTE: The data center server can support up to four 16-channel ALM–2s.*	3,495	A
*625A††	575–Mbyte formatted disk subsystem	22,900	B
*626A††	575–Mbyte formatted expansion disk *NOTE: System must also include option 625A.*	19,900	B
*629F††	892–Mbyte formatted disk subsystem	22,900	B
**X630F†	892–Mbyte formatted expansion disk *NOTE: System must also include option 629F.*	19,900	B
*631F††	2x892–Mbyte formatted disk subsystem	42,800	B

Sun–4 Data Center Server Options

Order Number	Description	List Price	Discount Category
*641A††	892–Mbyte formatted disk subsystem with SMD–4 NOTE: Refer to Appendix A for specific SMD–4 ordering instructions.	$ 23,900	B
642A††	2x892–Mbyte formatted disk subsystem with SMD–4 NOTE: Refer to Appendix A for specific SMD–4 ordering instructions.	43,800	B
643A††	3x892–Mbyte formatted disk subsystem with SMD–4 NOTE: Refer to Appendix A for specific SMD–4 ordering instructions.	63,700	B
644A††	4x892–Mbyte formatted disk subsystem with SMD–4 NOTE: Refer to Appendix A for specific SMD–4 ordering instructions.	86,600	B
⁂X645A†	892–Mbyte formatted expansion disk NOTE: For systems already installed with options 641A or 643A. Refer to Appendix A for specific SMD–4 ordering instructions.	19,900	B
⁂X646A†	892–Mbyte formatted expansion disk with SMD–4. NOTE: For systems already installed with option 642A. Refer to Appendix A for specific SMD–4 ordering instructions.	19,900	B
650B**	60–Mbyte 1/4–inch cartridge tape subsystem	3,000	B
*675A†***†	6250/1600 bpi 1/2–inch tape drive subsystem	16,900	B
*960A†‡	76–inch data center cabinet	3,900	B
TAP	Ethernet transceiver with 15–meter (49–ft.) branch cable and "vampire tap" cable connector NOTE: TAP requires ETH–TAP–TOOL for installation.	500	N/D
INLINE	Ethernet transceiver with 15–meter (49–ft.) branch cable and "N–series" in–line cable connectors	500	N/D
THIN	Ethernet transceiver with 15–meter (49–ft.) branch cable and thin Ethernet BNC connectors	500	N/D

NOTES: * You can order these options as standalone expansion options to existing equipment by adding an X before the option number. Example: X641A is a 892–Mbyte disk ordered without a system.

** Not customer–installable; only available with initial system purchase.

*** Sun customer support will only install option 675A at a customer's site, if option 675A is factory installed in option 960A. Any option 675A not ordered as a 675AR1 with an option 960A must be installed by the customer.

† Append an "R1" to the order number of these options if they are ordered with a data center cabinet and they are to be factory installed in the cabinet. Example: 642A becomes 642AR1 when it is to be installed in a data center cabinet. Option 960A must also be ordered.

† To order systems configured for 240V European operation, append "V4" to the order number. Example: 642A becomes 642AR1V4 when it is to be installed in a data center cabinet and configured for 240V operation. To order systems configured for 230V domestic operation, append "V3" to the order number.

‡ Data center expansion cabinets for use with 892–Mbyte drives must be ordered in 230V or 240V configurations. The 892–Mbyte drive is not supported in 115V expansion cabinets. A maximum of 2x892–Mbyte drives are supported in 115V system data center cabinets.

⁂ The X designation indicates that these options should always be ordered as an standalone options. Example: X645A.

Sun386i/150 Workstations

Sun386i/150 Monochrome Workstations

System / Package	RR150SM	RR150M
Diskless with 8 Mbytes	RR150SM–8 $11,890 / A	RR150M–8 $12,890 / A
RR150xx–4–P9 Includes the following: • Sun386i/150xx–4 workstation • RR133 (91–Mbyte disk)	RR150SM–4–P9 $10,490 / A	RR150M–4–P9 $11,490 / A
RR150xx–4–P11 Includes the following: • Sun386i/150xx–4 workstation • RR134 (327–Mbyte disk)	RR150SM–4–P11 $14,490 / A	RR150M–4–P11 $15,490 / A

Sun386i/150 Color Workstations

System / Package	RR150SC	RR150FC	RR150C
Diskless with 8 Mbytes	RR150SC–8 $12,890 / A	RR150FC–8 $15,140 / A	RR150C–8 $17,140 / A
RR150xx–4–P9 Includes the following: • Sun386i/150xx–4 workstation • RR133 (91–Mbyte disk)	RR150SC–4–P9 $11,490 / A	RR150FC–4–P9 $13,740 / A	RR150C–4–P9 $15,740 / A
RR150xx–4–P11 Includes the following: • Sun386i/150xx–4 workstation • RR134 (327–Mbyte disk)	RR150SC–4–P11 $15,490 / A	RR150FC–4–P11 $17,740 / A	RR150C–4–P11 $19,740 / A

Sun386i/150 Workstations

Sun386i/150X Monochrome Workstations

System / Package	RR150SM	RR150M
Diskless with 8 Mbytes	RR150SM-8X $13,390 / A	RR150M-8X $14,390 / A
RR150xx-4X-P9 Includes the following: • Sun386i/150xx-4X workstation • RR133 (91-Mbyte disk)	RR150SM-4X-P9 $11,990 / A	RR150M-4X-P9 $12,990 / A
RR150xx-4X-P11 Includes the following: • Sun386i/150xx-4X workstation • RR134 (327-Mbyte disk)	RR150SM-4X-P11 $15,990 / A	RR150M-4X-P11 $16,990 / A

Sun386i/150X Color Workstations

System / Package	RR150SC	RR150FC	RR150C
Diskless with 8 Mbytes	RR150SC-8X $14,390 / A	RR150FC-8X $16,640 / A	RR150C-8X $18,640 / A
RR150xx-4X-P9 Includes the following: • Sun386i/150xx-4X workstation • RR133 (91-Mbyte disk)	RR150SC-4X-P9 $12,990 / A	RR150FC-4X-P9 $15,240 / A	RR150C-4X-P9 $17,240 / A
RR150xx-4X-P11 Includes the following: • Sun386i/150xx-4X workstation • RR134 (327-Mbyte disk)	RR150SC-4X-P11 $16,990 / A	RR150FC-4X-P11 $19,240 / A	RR150C-4X-P11 $21,240 / A

Sun386*i* Expansion Unit (Packaged Price)

RREXP Includes the following: ▪ RR127 (Expansion Unit) ▪ RR132 (60–Mbyte 1/4–inch tape)	RREXP $2,000 / A
RREXP-P7 Includes the following: ▪ RR127 (Expansion Unit) ▪ RR134 (327–Mbyte disk) ▪ RR132 (60–Mbyte 1/4–inch tape)	RREXP-P7 $8,000 / A

NOTES: 1. *Expansion Unit packaged price applies only when ordered with Sun386i system package.*
   2. **Export:** *To order Export version of system or expansion unit, append "E" to the product number (e.g., RR150M–4–P9E, REXP–P7E). Export version is 240V and includes exportable SunOS.*
   You MUST order country kit from System Options menu as separate $220 line item. Subtract $220 from package system list price to compensate for cost of country kit.
   3. **More memory:** *Memory designation in product number can only be "–8–" diskless or "–4–" or "–8–" diskfull (NO "–12–" or "–16–"); main memory above 8–Mbytes must be ordered as a separate line item:*

System / Memory	RR150 (3 MIP) –Dynamic memory board–		RR150X (4 MIP) RR250 (5 MIP) –XP Cache memory board–	
	Diskless	**–P9, –P11**	**Diskless**	**–P9, –P11**
4–Mbytes total	not offered as package	▪ order –4– package	not offered as package	▪ order –4– package
8–Mbytes total	▪ order –8– package	▪ order –8– package (add $3,400 to –4– package price)	▪ order –8– package	▪ order –8– package (add $3,400 to –4– package price)
12–Mbytes total	▪ order –8– package ▪ order RR108 $3,600	▪ order –8– package (add $3,400 to –4– package price) ▪ order RR108 $3,600	▪ order –8– package ▪ order RR107 $3,400	▪ order –8– package (add $3,400 to –4– package price) ▪ order RR107 $3,400
16–Mbytes total	▪ order –8– package ▪ order RR108 $3,600 ▪ order RR109 $3,400	▪ order –8– package (add $3,400 to –4– package price) ▪ order RR108 $3,600 ▪ order RR109 $3,400	▪ order –8– package ▪ order two RR107 $6,800	▪ order –8– package (add $3,400 to –4– package price) ▪ order two RR107 $6,800

   4. *All Sun386i system configurations include a 1.44–Mbyte 3.5" diskette drive and owner's documentation set. Disks have SunOS core system/DOS preloaded, SunOS right–to–use license (SYSLx) must be ordered separately.*
   5. *Systems are shipped without frame buffer or memory card installed. Factory installation can be ordered as a separate line item from Systems Options menu (RRINSTALL, $350).*
   6. *At least one tape drive per network is recommended (for disk backup).*
   7. *At least one copy of Application SunOS and documentation per site is recommended (see System Software Distribution).*

Sun386*i*/250 Workstations

System Package	RR250M	RR250FC	RR250C
Diskless with 8 Mbytes	RR250M-8 $16,140 / A	RR250FC-8 $18,390 / A	RR250C-8 $20,390 / A
RR250xx-4-P9 Includes the following: • Sun386i/250xx-4 workstation • RR133 (91-Mbyte disk)	RR250M-4-P9 $14,740 / A	RR250FC-4-P9 $16,990 / A	RR250C-4-P9 $18,990 / A
RR250xx-4-P11 Includes the following: • Sun386i/250xx-4 workstation • RR134 (327-Mbyte disk)	RR250M-4-P11 $18,740 / A	RR250FC-4-P11 $20,990 / A	RR250C-4-P11 $22,990 / A

Sun386*i* Expansion Unit (Packaged Price)

RREXP Includes the following: • RR127 (Expansion Unit) • RR132 (60-Mbyte 1/4-inch tape)	RREXP $2,000 / A
RREXP-P7 Includes the following: • RR127 (Expansion Unit) • RR134 (327-Mbyte disk) • RR132 (60-Mbyte 1/4-inch tape)	RREXP-P7 $8,000 / A

NOTES:
1. *Expansion Unit packaged price applies only when ordered with a Sun386i system.*
2. **Export:** *To order Export version of system or EXP-1, append "E" to the product number (e.g., RR250M-4-P9E, REXP-P7E). Export version is 240V and includes exportable SunOS; You must order country kit from System Options menu as a separate $220 line item. Subtract $220 from package system list price to compensate for cost of country kit.*
3. **More memory:** *Memory designation in product number can only be "-4-" diskless or "-4-" or "-8-" diskfull (not "-12-" or "-16-"), system memory above 8-Mbytes must be ordered as a separate line item. See memory chart on previous page.*
4. *All Sun386i system configurations include a 1.44-Mbyte 3.5" diskette drive and owner's documentation set. Disks have SunOS core system/DOS preloaded, SunOS right-to-use license (SYSLx) must be ordered separately.*
5. *Systems are shipped without frame buffer or memory card installed. Factory installation can be ordered as a separate line item from Systems Options menu (RRINSTALL, $350).*
6. *At least one tape drive per network is recommended (for disk backup).*
7. *At least one copy of Application SunOS and documentation per site is recommended (see System Software Distribtion).*

Sun386i System Options

Order Number	Description	List Price	Discount Category
RR100	SunVGA™ DOS Windows™ EGA/VGA option card NOTE: Order for color systems with 4.0.1 SunOS only 4-session AT bus board, single-session software. Order RR100-UP (n/c) for future 4-session software upgrade shipped when available.	$ 895	A
RR107	4-Mbyte SIMM memory expansion for XP Cache memory card (RR250, RR150X) NOTE: Maximum of 16 Mbytes per system: XP cache memory cards hold 16 Mbytes per card.	3,400	A
RR108	Dynamic memory card with 4-Mbyte memory (RR150) NOTE: Second memory card for Sun386i/150, hold 8-Mbytes per card (see RR109 note).	3,600	A
RR109	4-Mbyte SIMM memory expansion for Dynamic memory card (RR150) NOTE: Maximum of 16 Mbytes per system: dynamic memory cards hold 8 Mbytes per card, add second dynamic memory card (RR108) for 12 or 16 Mbytes.	3,400	A
RR118	Desktop Kit NOTE: Converts system from deskside to desktop operation.	125	A
RR135	Country Kit: European power cords, U.S. keyboard, mouse	220	B†
RR136	Country Kit: U.K. power cords, U.S. keyboard, mouse	220	B†
RR137	Country Kit: European power cords, French keyboard, mouse	220	B†
RR138	Country Kit: U.K. power cords, U.K. keyboard, mouse	220	B†
RR139	Country Kit: European power cords, German keyboard, mouse	220	B†
RR140	Country Kit: Swiss power cords, Swiss keyboard, mouse	220	B†
RR141	Country Kit: U.S. power cords, U.S. keyboard, mouse NOTE: Country kits must be ordered with all Export systems; Export systems include one country kit at no additional charge.	220	B†
RRINSTALL	Options installation NOTE: Factory installation of frame buffer and memory card.	350	N/D

NOTES: †   Country kits are Discount Category A when ordered with European packaged systems.

1.   All system boxes contain a 1.44-Mbyte 3.5" diskette drive and owner's documentation set. Disks have SunOS core system/DOS preloaded, SunOS right-to-use license (SYSLx) must be ordered separately.

2.   System boxes must be ordered with a monitor; "server" configurations are not supported.

Sun386i Expansion Options

Order Number	Description	List Price	Discount Category
RR101†	15-inch Monochrome monitor and frame buffer	$ 1,650	A
RR102†	14-inch Color monitor and frame buffer	3,300	A
RR103†	19-inch Color monitor and frame buffer	8,055	A
RR104†	19-inch Monochrome monitor and frame buffer	2,780	A
RR105†	16-inch Color monitor and frame buffer	5,055	A
RR110†	Sun386i/150 System Box with 91-Mbyte drive	9,670	A
RR111†	Sun386i/150 System Box with 327-Mbyte drive	14,070	A
	NOTE: Above system boxes include dynamic memory card with 4-Mbytes, floppy drive. Monitor, keyboard must be ordered separately.		
RR112†	Sun386i/250 System Box with 91-Mbyte drive	13,245	A
RR114†	Sun386i/250 System Box with 327-Mbyte drive	17,645	A
RR116†	Sun386i/250 System Box (Diskless)	11,045	A
	NOTE: Above system boxes include XP cache memory card with 4-Mbytes, floppy drive. Monitor, keyboard must be ordered separately.		
RR123†	Sun386i/150 System Box (Diskless)	7,470	A
	NOTE: Above system boxes include dynamic memory card with 4-Mbytes, floppy drive. Monitor, keyboard must be ordered separately.		
RR127†	Sun386i Expansion Unit (empty)	715	A
RR128†	Sun386i Expansion Unit with 60-Mbyte 1/4-inch tape drive	2,200	A
RR129†	Sun386i Expansion Unit with 60-Mbyte 1/4-inch tape drive and 327-Mbyte disk drive	8,800	A
RR132	60-Mbyte 1/4-inch tape drive (add-on)	1,485	B
RR133	91-Mbyte disk drive (add-on)	2,200	B
RR134	327-Mbyte disk drive (add-on)	6,600	B
	NOTE: Above components must be added to an existing Sun386i system or expansion unit.		
TAP	Ethernet transceiver with 15-meter (49-ft.) branch cable and "vampire tap" cable connector. NOTE: TAP requires ETH-TAP-TOOL for installation.	500	N/D
INLINE	Ethernet transceiver with 15-meter (49-ft.) branch cable and "N-series" inline cable connectors	500	N/D
THIN	Ethernet transceiver with 15-meter (49-ft.) branch cable and thin Ethernet" BNC connectors	500	N/D

NOTES: † To order components configured for 240V European operation, append "E" to the order number – Example: RR123 becomes RR123E.

1. All System Boxes contain a 1.44-Mbyte 3.5" diskette drive, owner's documentation set, SunOS/DOS right-to-use license. Disks have SunOS core system/DOS preloaded.

2. System boxes must be ordered with a monitor; "server" configurations are not supported.

3. Diskless system boxes should be ordered with 8 Mbytes main memory minimum.

System Software Distribution

SunOS System Software Includes:	Sun-3	Sun-4	Sun386*i* Appl. OS	Sun386*i* Develop. Toolkit
▪ SunOS and utilities (converged Sys V and 4.XBSD)*	Yes	Yes	Yes	N/A
▪ Sun Visual/Integrated Environment for Workstations (SunView)	Yes	Yes	Yes	N/A
▪ C compiler	Yes	Yes	N/A	Yes
▪ Assembler	MC68020	SPARC	N/A	80386
▪ ONC including Network File System (NFS)	Yes	Yes	Yes	N/A
▪ SunCore device independent graphics library	Yes	Yes	N/A	N/A
▪ Computer Graphics Interface (SunCGI)	Yes	Yes	N/A	Yes
▪ DOS Windows™	N/A	N/A	Yes	N/A
▪ Extended SunOS ease-of-use facilities	N/A	N/A	Yes	N/A

NOTE: *UNIX operating system based FORTRAN (f77) and Pascal (pc) compilers are not included with SunOS 4.X.*
Please refer to Sun FORTRAN and Sun Pascal entries in the Software Products section.

Key to Software Matrix Entries

	System
Description	XXX-X.X.X-XX ◄—— Order Number
	$YYYYYY / Z ◄—— List Price / Discount Category

```
SM3 -X.X.Y -01  ◄——  Order Number
 |    |  |    |_____ Media identifier
 |    |  |_____ Variant
 |    |_____ Release level
 |_____ System architecture
 |_____ Product name abbreviation
```
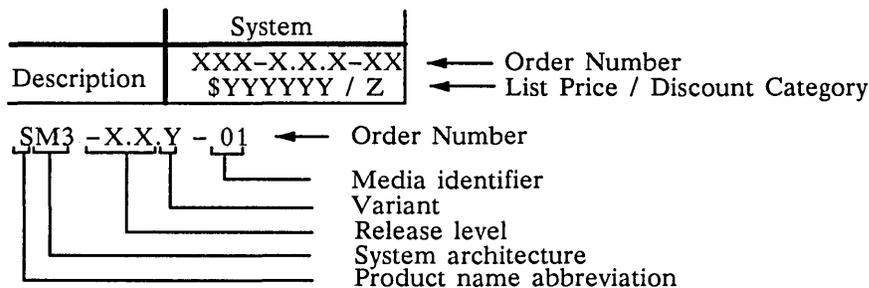
Media identifier:

01 =   1/4-inch tape for domestic use *only*; includes system documentation
02 =   1/2-inch tape for domestic use *only*; includes system documentation
03 =   1/4-inch tape for domestic or export; includes system documentation
04 =   1/2-inch tape for domestic or export; includes system documentation
05 =   1/4-inch tape for domestic use *only*; tape only
06 =   1/2-inch tape for domestic use *only*; tape only
07 =   1/4-inch tape for domestic or export; tape only
08 =   1/2-inch tape for domestic or export; tape only
09 =   Documents only; complete documentation set
10 =   3.5-inch diskettes for domestic use *only*; includes system documentation
11 =   3.5-inch diskettes for domestic use *only*; diskettes only
12 =   3.5-inch diskettes for domestic or export use; includes system documentation
13 =   3.5-inch diskettes for domestic or export use; diskettes only

Release level	Standard	Latest 3.X
Order number =	(blank)	3.X

Variant:
A =   Application SunOS (Sun386*i* only)
D =   SunOS Developer's Toolkit (Sun386*i* only)
E =   SunOS Encryption kit (Sun386*i*, domestic only)

System architecture:
M2 =   Motorola 68020 (Sun-3)
S1 =   SPARC (Sun-4)
R1 =   Intel 386 (Sun386*i*)

Product name abbreviation:
S   =   System software product identifier

System Software Distribution

Current SunOS 4.0 Standard Manuals and Media

Media \ Version	Domestic Only S/W & Manuals	Domestic Only S/W (no manuals)	Domestic or Export S/W & Manuals	Domestic or Export S/W (no manuals)
For Sun-3: MC68020 Based Systems 1/4"	SM2-01 $600 / A	SM2-05 $250 / A	SM2-03 $600 / A	SM2-07 $250 / A
1/2"	SM2-02 $600 / A	SM2-06 $250 / A	SM2-04 $600 / A	SM2-08 $250 / A
Sun-3 Manuals only	SM-09 $450 / A			
For Sun-4: SPARC Based Systems 1/4"	SS1-01 $600 / A	SS1-05 $250 / A	SS1-03 $600 / A	SS1-07 $250 / A
1/2"	SS1-02 $600 / A	SS1-06 $250 / A	SS1-04 $600 / A	SS1-08 $250 / A
Sun-4 Manuals only	SS-09 $450 / A			

Media \ Version	Application SunOS		Developer's Toolkit		Application SunOS & Developer's Toolkit	
	Domestic or Export S/W & Manuals	Domestic or Export S/W (no manuals)	Domestic or Export S/W & Manuals	Domestic or Export S/W (no manuals)	Domestic or Export S/W & Manuals	Domestic or Export S/W (no manuals)
For Sun386i: 1/4"	SR1-A-03 $325 / A	SR1-A-07 $125 / A	SR1-D-03 $275 / A	SR1-D-07 $125 / A	SR1-03 $550 / A	SR1-07 $250 / A
Diskettes	SR1-A-12 $550 / A	SR1-A-13 $325 / A	SR1-D-12 $300 / A	SR1-D-13 $125 / A	SR1-12 $850 / A	SR1-13 $450 / A
Encryption Kit DOMESTIC only Diskettes	SR1-E-11 $50 / A					
Sun386i Application Supplement & Developer's Toolkit Manuals Only (does not include owner's set)	SR-09 $450 / A					

NOTES:
1. These order numbers should be used for systems shipping with the SunOS release that is standard at the time the system is shipped.
2. See following system software licenses section for right-to-use licenses.
3. These media products apply only to systems licensed for the current standard release of SunOS, which includes the original purchase of a workstation or stand alone CPU board accompanied by the appropriate right-to-use license for that system.
4. Upgrading previously purchased workstations to the latest revision of software must be done using products on the Support Services Price List.
5. UNIX operating system-based FORTRAN (f77) and Pascal (pc) compilers are not included with SunOS 4.X. Refer to Sun FORTRAN and Sun Pascal entries in the Software Products section.
6. Sun386i: Only the Owner's Supplement manuals are included in the Application SunOS packages SR1-A-03 and SR1-A-12. The owner's set manuals are included with the Sun386i system unit.

Release–Specific Software Distribution

Current SunOS 3.X Manuals and Media

Media / Version		Domestic Only S/W & Manuals	Domestic S/W (no manuals)	International S/W & Manuals	International S/W (no manuals)
For Sun–3:	1/4"	SM2–3.X–01 $600 / A	SM2–3.X–05 $250 / A	SM2–3.X–03 $600 / A	SM2–3.X–07 $250 / A
	1/2"	SM2–3.X–02 $600 / A	SM2–3.X–06 $250 / A	SM2–3.X–04 $600 / A	SM2–3.X–08 $250 / A
Sun–3 Manuals only		SM–3.X–09 $450 / A			
For Sun–4:	1/4"	SS1–3.X–01 $600 / A	SS1–3.X–05 $250 / A	SS1–3.X–03 $600 / A	SS1–3.X–07 $250 / A
	1/2"	SS1–3.X–02 $600 / A	SS1–3.X–06 $250 / A	SS1–3.X–04 $600 / A	SS1–3.X–08 $250 / A
Sun–4 Manuals only		SS–3.X–09 $450 / A			

NOTES:
1. *These order numbers should be used for systems to be shipped only with the latest SunOS 3.X release at the time the system is shipped.*
2. *See following system software licenses section for right–to–use licenses.*
3. *These media products apply only to systems licensed for the latest release of SunOS 3.X, which includes the original purchase of a workstation or stand alone CPU board accompanied by the appropriate right–to–use license for that system.*
4. *Upgrading previously purchased workstations to the latest revision of software must be done using products on the Support Services Price List.*
5. *SunOS 3.X is not available for the Sun386i.*
6. *UNIX operating system–based FORTRAN (f77) and Pascal (pc) compilers are not included with SS1–3.X.*

Software Licenses

Right-to-Use Licenses for Standard Release of Sun-2, Sun-3, Sun-4, or Sun386i System Software

Maximum Number of Concurrent Users Allowed (See Sun Object Code License for Details):

2-user	4-user	20-user	Unlimited users
SYSL2 No charge line item	SYSL4 $600 / A	SYSL20 $1,200 / A	SYSLUN $2,000 / A

NOTES: 1. *All workstations ordered must include one of these licenses on the customer order.*
2. *A license can only be purchased with a workstation on the same order.*
3. *Licenses may be upgraded to later releases of software. (See Support Services Price List)*
4. *Licenses may be upgraded later to add more users (see below).*
5. *No media or manuals are included. (See System Software Distribution and System Software Documentation.)*
6. *Includes the right to run lower numbered releases of system software.*

License Upgrades to Add More Users

Upgrade		To		Unlimited users
	2-user	4-user	20-user	
Single-user	LU1-2 $200 / A	LU1/2-4 $800 / A	LU1/2-20 $1,400 / A	LU1/2-UN $2,200 / A
From 2-user	N/A	LU1/2-4 $800 / A	LU1/2-20 $1,400 / A	LU1/2-UN $2,200 / A
4-user	N/A	N/A	LU4-20 $800 / A	LU4-UN $1,600 / A
16-or more users	N/A	N/A	N/A	LU16P-UN $1,000 / A

NOTES: 1. *All workstations ordered prior to March 1, 1986, include a 16-user right-to-use license.*
2. *To upgrade software release, refer to the Support Service Price List.*

Software Documentation

Use the following order numbers to order any SunOS 4.0 documentation packages for Sun-4, Sun-3, Sun-2™ and Sun386i systems. Documentation is also offered in combination with the software distribution tapes -- see Manuals and Media order numbers on previous pages.

Order Number	Description	List Price	Discount Category
Manual Sets			
SX–9A	**Beginner's Guide**	$ 90	A
SX–9B	**System Administration Guide**	100	A
SX–9C	**System Reference Manual**	150	A
SX–9D	**Programmer's Reference Guide**	190	A
SS–9A	**SPARC Reference Manuals**	50	A
SR–9A	**Sun386i Owner's Set**	100	A
SR–9B	**Sun386i Owner's Supplement**	225	A
SR–9C	**Sun386i Developer's Toolkit**	175	A
SR–9D	**Sun386i Documentation Conversion Set for SX–9A through SX–9D** *NOTE: SR-9D contains documents from the Sun386i Owner's Supplement and Sun386i Developer's Toolkit that are not included in SX-9A, SX-9B, SX-9C and SX-9D.*	100	A
SR–09	**Full System Software Documentation for Sun386i** *NOTE: Includes SR-9B and SR-9C; Owner's set not included.*	400	A
SM–09	**Full System Software Documentation for Sun-2 and Sun-3** *NOTE: Includes SX-9A, SX-9B, SX-9C, and SX-9D.*	400	A
SS–09	**Full System Software Documentation for Sun-4** *NOTE: Includes SX-9A, SX-9B, SX-9C, SX-9D and SS-9A.*	400	A
Separate Manuals and Technical Reports			
UNIX–TECH–RPT	UNIX: A Sun Technical Report *NOTE: Minimum of 20 per order.*	10	N/D
ONC–NFS–SPECS	**Network Programming**	50	A
Sun Binders			
BINDER–PKG–1	**Sun Binder Package, 1" set** *NOTE: Includes 6 binders.*	50	B
BINDER–PKG–1.5	**Sun Binder Package, 1.5" set** *NOTE: Includes 6 binders.*	55	B
BINDER–PKG–2.5	**Sun Binder Package, 2.5" set** *NOTE: Includes 6 binders.*	66	B

NOTE: With SunOS 4.0, documentation is available both as the complete set or in smaller packages for users who do not require the full set.

Software Products

Key to Unbundled Software Matrix Entries

Description	System
	XXX–X–X–X–X ←— Order Number
	$YYYYYY / Z ←— List Price / Discount Category

```
PRO-1.0-3-23-5 ←— Order Number
                └———— Tape size, domestic/export, first node/additional node
              └—————— Architecture compatibility
          └—————————— System software compatibility
      └——————————————— Release level
  └————————————————————— Product name abbreviation
```
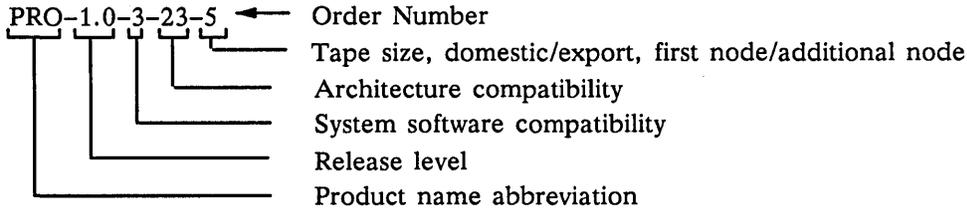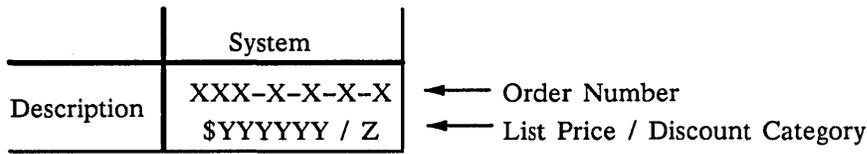
Tape size, domestic/export, first node/additional nodes

0   = Right to use license only
9   = Documents only
Lxx   = xx–unit corporate software license

1/4–inch	Additional nodes	First node
Domestic only	A	1
Export	C	3
Domestic or Export	E	5

1/2–inch	Additional nodes	First node
Domestic only	B	2
Export	D	4
Domestic or Export	F	6

Architecture:	Sun–2	Sun–3	Sun–4	Sun386*i*	Not applicable
Order number =	2	3	4	R	X

SunOS release:	2.X	3.X	4.0	Not applicable	
Order number =	2	3	4	X	

SunAlis Integrated Office Automation Software

Media and Manuals

Media \ Version	For Sun-2: First node S/W Manuals	Additional node S/W Manuals	For Sun-3: First node S/W Manuals	Additional node S/W Manuals
1/4"	SunAlis2-91 $3,500 / N/D	SunAlis2-01 $2,500 / B	SunAlis3-91 $3,500 / N/D	SunAlis3-01 $2,500 / B
1/2"	SunAlis2-92 $3,500 / N/D	SunAlis2-02 $2,500 / B	SunAlis3-92 $3,500 / N/D	SunAlis3-02 $2,500 / B
Release 1.0 Manuals only	SunAlis-09 $160 / B			

NOTES:
1. *Includes right-to-use license for one workstation.*
2. *Software runs on Sun-2 and Sun-3 systems only.*

Right-to-Use Licenses for Workstations

For Sun-2:	SunAlis2-00 $2,295 / B	For Sun-3:	SunAlis3-00 $2,295 / B

NOTES:
1. *Licenses are for one workstation.*
2. *No media or manuals are included.*

Right-to-Use Licenses for Character Terminals

For Sun-2: Add 1-3 terminals	Add 1-15 terminals	For Sun-3: Add 1-3 terminals	Add 1-15 terminals
SunAlis2-10 $1,295 / B	SunAlis2-11 $3,295 / B	SunAlis3-10 $1,295 / B	SunAlis3-11 $3,295 / B

NOTES:
1. *Terminal licenses are add-ons to a CPU previously licensed to run SunAlis.*
2. *No media or manuals are included.*
3. *Requires VT100 compatible terminals.*

SunTrac Project Management Software

Media and Manuals

Media \ Version	For Sun–2, Sun–3 and Sun–4: Domestic S/W Manuals	International S/W Manuals	For Sun386*i* Domestic S/W Manuals	International S/W Manuals
1/4"	TRC-1.2-34-234R-1 $2,495 / B	TRC-1.2-34-234R-3 $2,495 / B	TRC-1.2-34-234R-1 $2,495 / B	TRC-1.2-34-234R-3 $2,495 / B
1/2"	TRC-1.2-34-234R-2 $2,495 / B	TRC-1.2-34-234R-4 $2,495 / B	TRC-1.2-34-234R-2 $2,495 / B	TRC-1.2-34-234R-4 $2,495 / B
3.5" Diskette	Not available	Not available	TRC-1.2-4-R-11 $2,495 / B	TRC-1.2-4-R-12 $2,495 / B
Manual only	TRC-1.2-X-X-9DOM $100 / B	TRC-1.2-X-X-9EX $100 / B	TRC-1.2-X-X-9DOM $100 / B	TRC-1.2-X-X-9EX $100 / B

NOTES; 1. *Includes right–to–use license for one workstation.*
2. *Sun–2 and Sun–3 systems require SunOS release 3.X or higher.*
3. *Sun–4 and Sun386i systems require SunOS release 4.0 or higher.*

Right–to–Use Licenses for Workstations

TRC-X-X-X-0
$1,995 / B

NOTES: 1. *Licenses are for one workstation.*
2. *No media or manuals are included.*

Network extensible Window System (NeWS)

Media and Manuals

Media \ Version	For Sun–2 and Sun–3: Single Node S/W Manuals	For Sun–4: Single Node S/W Manuals
1/4"	NWB-1.1-34-23-5 $125 / N/D	NWB-1.1-34-4-5 $125 / N/D
1/2"	NWB-1.1-34-23-6 $125 / N/D	NWB-1.1-34-4-6 $125 / N/D
Manuals only	NWB-1.1-X-X-9 $100 / N/D	

NOTE: *All Sun systems require SunOS release 3.X or higher.*

Right–to–Use Licenses for Workstations

NWB-X-X-X-0
$25 / N/D

NOTE: *Licenses are for one workstation.*

Graphical Kernel System (SunGKS) Subroutine Library

Media and Manuals

Media \ Version	For Sun-2:	For Sun-3:	For Sun-4:	For Sun386*i*:
1/4"	SunGKS2-01 $1,800 / A	SunGKS3-01 $1,800 / A	SunGKS4-01 $1,800 / A	SunGKSRR-01 $1,800 / A
1/2"	SunGKS2-02 $1,800 / A	SunGKS3-02 $1,800 / A	SunGKS4-02 $1,800 / A	Not available
3.5" Diskette	Not available	Not available	Not available	SunGKSRR-FL $1,800 / A
Manual only	SunGKS-09 $150 / A			

NOTES:
1. *Includes right-to-use license for one workstation.*
2. *Software runs only with SunOS 3.5 and 4.0 on Sun-2 and Sun-3 systems.*
3. *Software runs only with SunOS 4.0 on Sun-4 and Sun386i systems.*

Right-to-Use Licenses for Workstations

For Sun-2:	SunGKS2-00 $1,500 / A	For Sun-3:	SunGKS3-00 $1,500 / A	For Sun-4:	SunGKS4-00 $1,500 / A	For Sun386*i*:	SunGKSRR-00 $1,500 / A

NOTES:
1. *Licenses are for one workstation.*
2. *No media or manuals are included.*

SunGKS Runtime License Fees for Workstations

Cumulative quantities	Fees
1 – 100	$150 / copy
101 – 500	$125 / copy
501 – 1000	$100 / copy
1001 – 5000	$75 / copy
5001 or more	$50 / copy

NOTES:
1. *Fees paid quarterly by redistributor of applications built with SunGKS.*
2. *Requires signing redistribution addendum to license agreement. (Please see agreement.)*
3. *Quantities are cumulative.*
4. *Runtime license fees are not ordered, but are paid to Sun after redistribution product is sold.*

Software Products

Sun Programmer's Hierarchical Interactive Graphics System (SunPHIGS) Subroutine Library

Media and Manuals

Media \ Version	For Sun-2:	For Sun-3:	For Sun-4:
1/4"	SunPHIGS2-01 $3,600 / A	SunPHIGS3-01 $3,600 / A	SunPHIGS4-01 $3,600 / A
1/2"	SunPHIGS2-02 $3,600 / A	SunPHIGS3-02 $3,600 / A	SunPHIGS4-02 $3,600 / A
Manuals only	SunPHIGS-09 $150 / A		

NOTES:
1. *Includes right-to-use license for one workstation.*
2. *Software runs only with SunOS 3.5 and SunOS 4.0 on Sun-2 and Sun-3 systems.*
3. *Software runs only with SunOS 4.0 on Sun-4 system.*
4. *Requires signed development license agreement with order.*

Right-to-Use Licenses for Workstations

For Sun-2:	SunPHIGS2-00 $3,300 / A	For Sun-3:	SunPHIGS3-00 $3,300 / A	For Sun-4:	SunPHIGS4-00 $3,300 / A

NOTES:
1. *Licenses are for one workstation.*
2. *No media or manuals are included.*
3. *See Corporate Software Licenses for volume discounts.*

SunPHIGS Runtime License Fees for Workstations

Cumulative quantities	Fees
1 – 100	$150 / copy
101 – 500	$125 / copy
501 – 1000	$100 / copy
1001 – 5000	$75 / copy
5001 or more	$50 / copy

NOTES:
1. *Fees paid quarterly by redistributor of applications built with SunPHIGS.*
2. *Requires signing redistribution addendum to license agreement. (Please see agreement.)*
3. *Quantities are cumulative.*
4. *Runtime license fees are not ordered, but are paid to Sun after redistribution product is sold.*

Sun Common Lisp 2.1

Media and Manuals

For Sun-2 and Sun-3:

Media \ Version	Programming System		Application Environment S/W & Manuals
	First node S/W Manuals	Additional node S/W Manuals	
1/4"	CLD-2.1-34-23-5 $4,000 / N/D	CLD-2.1-34-23-E $3,500 / B	CLE-1.1-3-23-5 $875 / B
1/2"	CLD-2.1-34-23-6 $4,000 / N/D	CLD-2.1-34-23-F $3,500 / B	CLE-1.1-3-23-6 $875 / B
Manuals only	CLD-2.1-X-23-9 $200 / B		CLE-1.1-X-X-9 $200 / B

For Sun-4:

Media \ Version	Programming System	
	First node S/W Manuals	Additional node S/W Manuals
1/4"	CLD-2.1-34-4-5 $4,000 / N/D	CLD-2.1-34-4-E $3,500 / B
1/2"	CLD-2.1-34-4-6 $4,000 / N/D	CLD-2.1-34-4-F $3,500 / B
Manuals only	CLD-2.1-X-4-9 $200 / B	

NOTES: 1. *Includes right-to-use License for one workstation.*
2. *The Application Environment does not include a Lisp compiler.*
3. *The Application Environment is not available for Sun-4 systems.*
4. *Sun Common Lisp requires 8 Mbytes of memory.*

Right-to-Use Licenses for Workstations

Development Environment	Application Environment
CLD-X-X-X-0 $3,300 / B	CLE-X-X-X-0 $550 / B

NOTES: 1. *Right-to-use licenses are for one workstation.*
2. *No media or manuals are included.*
3. *Right-to-use licenses are for either Sun Common Lisp 2.1 or 3.0.*

Sun Common Lisp 3.0

Media and Manuals

Version / Media	For Sun–3:		For Sun–4:	
	First node S/W Manuals	Additional node S/W Manuals	First node S/W Manuals	Additional node S/W Manuals
1/4"	CLD-3.0-34-3-5 $4,000 / B	CLD-3.0-34-3-E $3,500 / B	CLD-3.0-34-4-5 $4,000 / B	CLD-3.0-34-4-E $3,500 / B
1/2"	CLD-3.0-34-3-6 $4,000 / B	CLD-3.0-34-3-F $3,500 / B	CLD-3.0-34-4-6 $4,000 / B	CLD-3.0-34-4-F $3,500 / B
Manuals only	CLD-3.0-X-X-9 $200 / B			

NOTES: 1. *Includes right–to–use License for one workstation.*
2. *Sun Common Lisp 3.0 works with either SunOS 3.X or 4.0.*
3. *Sun Common Lisp requires 8 Mbytes of memory.*

Symbolic Programming Environment (SPE™) 1.0

Media and Manuals

Version / Media	For Sun–3:		For Sun–4 :	
	First node S/W Manuals	Additional node S/W Manuals	First node S/W Manuals	Additional node S/W Manuals
1/4"	SPL-1.0-34-3-5 $3,500 / B	SPL-1.0-34-3-E $3,100 / B	SPL-1.0-34-4-5 $3,500 / B	SPL-1.0-34-4-E $3,100 / B
1/2"	SPL-1.0-34-3-6 $3,500 / B	SPL-1.0-34-3-F $3,100 / B	SPL-1.0-34-4-6 $3,500 / B	SPL-1.0-34-4-F $3,100 / B
Manuals only	SPL-1.0-X-X-9 $100 / B			

NOTES: 1. *Includes right–to–use license for one workstation.*
2. *SPE 1.0 requires the Sun Common Lisp 2.1 Programming System. It will not run with Sun Common Lisp 3.0.*
3. *Requires 12 Mbytes of main memory to run SPE and Sun Common Lisp.*

Right–To–Use License for Workstation

SPL-X-X-X-0
$2,800 / B

NOTES: 1. *Licenses are for one workstation only.*
2. *No media or manuals are included.*

Network Software Environment (NSE)

Media and Manuals

Media \ Version	For Sun-2 and Sun-3:	For Sun-4:
1/4"	NSE-1.1-3-23-5 $3,000 / A	NSE-1.1-3-4-5 $3,000 / A
1/2"	NSE-1.1-3-23-6 $3,000 / A	NSE-1.1-3-4-6 $3,000 / A
Manuals only	NSE-1.1-X-X-9 $ 100 / N/D	

NOTES: 1. *Includes right-to-use license for one workstation.*
2. *Supports SunOS 3.X.*
3. *Obsoletes NSE 1.0 and NSE 1.05.*

Right-to-Use Licenses for Workstations

NSE-X-X-X-0 $2,200 / A

NOTES: 1. *Licenses are for one workstation.*
2. *No media or manuals are included.*

NSE Network Licenses

Quantity per Order \ Product	Network License
1 Server Network License	NSE-X-X-X-S1 $6,000 / N/D
5 Server Network Licenses	NSE-X-X-X-S5 $25,000 / N/D
10 Server Network Licenses	NSE-X-X-X-S10 $40,000 / N/D
25 Server Network Licenses	NSE-X-X-X-S25 $70,313 / N/D
50 Server Network Licenses	NSE-X-X-X-S50 $112,500 / N/D

NOTES: 1. *Network licenses must be purchased on a single order and only in quantities listed above.*
2. *Prices are non-discountable.*
3. *No media or manuals are shipped with licenses above; appropriate first node copy and manuals must be purchased separately.*
4. *Licenses include right-to-install and use NSE software on the server(s). [The term server in the context of network pricing means a diskful Sun workstation with NSE loaded on while other workstations (connected to the first workstation) use that copy of the NSE via NFS.]*
5. *Maximum of 20 nodes per server have the right to use NSE software, but this software must be resident on the server only.*
6. *Licenses may not be purchased for resale.*

Software Products

Ada

TeleSoft's TeleGen2 Ada Development System

Media and Manuals

Media \ Version	For Sun-3: Development Environment	For Sun-4: Development Environment	For Sun386i: Development Environment
1/4"	ATD-1.3A-34-3-5 $7500 / B	ATD-1.3A-4-4-5 $7500 / B	ATD-1.2-4-R-5 $7500 / B
1/2"	ATD-1.3A-34-3-6 $7500 / B	ATD-1.3A-4-4-6 $7500 / B	ATD-1.2-4-R-6 $7500 / B
Manual only	ATD-1.3A-34-3-9 $150 / B	ATD-1.3A-4-4-9 $150 / B	ATD-1.2-4-R-9 $150 / B

NOTES:
1. *Includes right-to-use Development Environment license for one workstation and 90 days of warranty support from the TeleSoft Support Center (619-457-2700).*
2. *All of the above products have active validations on file with the Ada Joint Program Office. Validations are performed by TeleSoft.*
3. *Software support including product updates are provided directly by TeleSoft.*
4. *A software support contract is strongly encouraged for all customers since every Ada product requires a yearly re-validation process that necsesitates product changes. Furthermore, many new Sun-specific features are being added and several new revisions of each product are expected within the next year.*
5. *TeleSoft offers a one-year contract for any of the above products at $1,620 per year. This includes automatic software updates as well as telephone support.*

Right-to-Use Licenses for Workstations

For Sun-3: Development Environment	Runtime System Only	For Sun-4: Development Environment	Runtime System Only	For Sun386i: Development Environment	Runtime System Only
ATD-X-X-3-0 $6200 / B	ATR-X-X-3-0 $350 / B	ATD-X-X-4-0 $6200 / B	ATR-X-X-4-0 $350 / B	ATD-X-X-R-0 $6200 / B	ATR-X-X-R-0 $350 / B

NOTES:
1. *Licenses are for one workstation.*
2. *No media or manuals are included.*
3. *Any customer wishing to purchase the Runtime System Only right-to-use license must also purchase at least one copy of the respective Development Environment right-to-use license.*

TOPS for Sun Workstations

1 - 4 Users	$895
Unlimited Licenses	$1,595

NOTE: *Network software that allows Macintoshes and IBM compatible PC's to use a Sun-3 Workstation as a network fileserver, and a TOPS/NFS gateway. Call 1-800-445-TOPS to order.*

Sun FORTRAN

Media and Manuals for Sun FORTRAN under SunOS 3.X

Media \ Version	For Sun-2:	For Sun-3:	For Sun-4:
1/4"	FOR-1.0-3-2-5 $500 / A	FOR-1.0-3-3-5 $500 / A	FOR-1.05-3-4-5 $1,200 / A
1/2"	FOR-1.0-3-2-6 $500 / A	FOR-1.0-3-3-6 $500 / A	FOR-1.05-3-4-6 $1,200 / A
Manual only	FOR-1.0-X-X-9 $100 / A		

NOTES: 1. *The above numbers should be used when ordering Sun FORTRAN under SunOS 3.X.*
2. *Includes right-to-use license for one workstation.*
3. *Value-added FORTRAN with VAX® VMS® extensions for Sun-2, Sun-3, and Sun-4 systems.*
4. *For Sun-2 and Sun-3 systems FORTRAN-77 without extensions is bundled with SunOS 3.X.*
5. *All Sun-2 or Sun-3 systems running under SunOS 3.X require SunOS release 3.4 or higher. Sun-4 systems running under SunOS 3.X require SunOS SS1-3.X.*

Media and Manuals for Sun FORTRAN under SunOS 4.0

Media \ Version	For Sun-2:	For Sun-3:	For Sun-4:	For Sun386i:
1/4"	FOR-1.1-4-2-5 $1,200 / A	FOR-1.1-4-3-5 $1,200 / A	FOR-1.1-4-4-5 $1,200 / A	FOR-1.1-4-R-5 $1,200 / A
1/2"	FOR-1.1-4-2-6 $1,200 / A	FOR-1.1-4-3-6 $1,200 / A	FOR-1.1-4-4-6 $1,200 / A	Not available
Manual only	FOR-1.1-X-X-9 $100 / A			

NOTES: 1. *The above numbers should be used when ordering Sun FORTRAN under SunOS 4.0.*
2. *Includes right-to-use license for one workstation.*
3. *Value-added FORTRAN with VAX VMS extensions for Sun-2, Sun-3, Sun-4, and Sun386i systems.*
4. *Sun FORTRAN 1.1 will not run under SunOS 3.X.*

Right-to-Use License for Workstations

FOR-X-X-X-0 $1,000 / A

NOTES: 1. *Licenses are for one workstation.*
2. *No media or manuals are included.*

59

Software Products

Sun Pascal

Media and Manuals for Sun Pascal on Sun-4 under SunOS 3.X

Media \ Version	For Sun-4:
1/4"	PAS-1.05-3-4-5 $1,200 / A
1/2"	PAS-1.05-3-4-6 $1,200 / A

NOTES: 1. *Includes right-to-use license for one workstation.*
2. *Value-added Sun Pascal compiler for Sun-4 systems.*
3. *For Sun-2 and Sun-3 systems Pascal is bundled with SunOS 3.X.*
4. *Sun Pascal 1.05 requires SS1-3.X.*

Media and Manuals for Sun Pascal under SunOS 4.0

Media \ Version	For Sun-2:	For Sun-3:	For Sun-4:	For Sun386i:
1/4"	PAS-1.1-4-2-5 $1,200 / A	PAS-1.1-4-3-5 $1,200 / A	PAS-1.1-4-4-5 $1,200 / A	PAS-1.1-4-R-5 $1,200 / A
1/2"	PAS-1.1-4-2-6 $1,200 / A	PAS-1.1-4-3-6 $1,200 / A	PAS-1.1-4-4-6 $1,200 / A	Not available
Manual only	PAS-1.1-X-X-9 $100 / A			

NOTES: 1. *Includes right-to-use license for one workstation.*
2. *Value-added Sun Pascal compiler for Sun-2, Sun-3, Sun-4 and Sun386i systems.*
3. *Sun Pascal 1.1 will not run under SunOS 3.X.*

Right to-Use-Licenses for Workstations

PAS-X-X-X-0 $1,000 / A

NOTES: 1. *Licenses are for one workstation.*
2. *No media or manuals are included.*

Sun Cross Compilers

Media and Manuals

Media \ Version	For Sun-2:	For Sun-3:	For Sun-4:	Domesticating Kit (Domestic only)
1/4"	CRC-2.0-3-2-5 $1,000 / A	CRC-2.0-3-3-5 $1,000 / A	CRC-2.0-3-4-5 $1,000 / A	XCD-2.0-3-234-1 $100 / A
1/2"	CRC-2.0-3-2-6 $1,000 / A	CRC-2.0-3-3-6 $1,000 / A	CRC-2.0-3-4-6 $1,000 / A	XCD-2.0-3-234-2 $100 / A
Manual only	CRC-2.0-X-X-9 $100 / A			

NOTES:
1. *Includes right-to-use license for one Sun-2, Sun-3, or Sun-4 workstation.*
2. *Purchase cross compilers for the host machine to generate code for the other system. For example: Sun-2 to Sun-3 and Sun-4.*
3. *Includes C, FORTRAN, and Pascal.*
4. *All cross compilers shipped with Export version of* **crypt** *library routines. For domestic customers who require* **crypt***, order Domesticating Kit. Domesticating Kit contains one tape which addresses all architectures (Sun-2, Sun-3 and Sun-4).*
5. *Sun-2 and Sun-3 systems require SunOS 3.2 or higher. Sun-4 systems require SunOS SS1-3.X.*

Right-to-Use Licenses for Workstations

CRC-X-X-X-0
$900 / A

NOTES:
1. *Licenses are for one workstation.*
2. *No media or manuals are included.*

Sun Modula-2

Media and Manuals

Media \ Version	For Sun-2:	For Sun-3:
1/4"	MOD-2.0-3-2-5 $2,000 / A	MOD-2.0-3-3-5 $2,000 / A
1/2"	MOD-2.0-3-2-6 $2,000 / A	MOD-2.0-3-3-6 $2,000 / A
Manuals only	MOD-2.0-X-X-9 $100 / A	

NOTES:
1. *Includes right-to-use license for one workstation.*
2. *Software runs on Sun-2 and Sun-3 systems only.*
3. *Sun-2 and Sun-3 systems require SunOS release 3.2 or higher.*

Right-to-Use Licenses for Workstations

MOD-X-X-X-0
$1,850 / A

NOTES:
1. *Licenses are for one workstation.*
2. *No media or manuals are included.*

Software Products

SunLink Communication Products

Media and Manuals

Media \ Version	For Sun-2 & 3 with SunOS 3.X	For Sun-4 with SunOS Sys4-3.2	For Sun-2 & 3 with SunOS 4.0	For Sun-3 & 4 with SunOS 4.0	For Sun-2,-3,-4, 386i with SunOS 4.0
SNA3270 1/4"	S32-5.1-3-234-5 $3,000 / B	S32-5.1-3-234-5 $3,000 / B	S32-6.0-4-234-5 $3,000 / B	S32-6.0-4-234-5 $3,000 / B	S32-6.1-4-234R-5 $3,000 / B
SNA3270 1/2"	S32-5.1-3-234-6 $3,000 / B	S32-5.1-3-234-6 $3,000 / B	S32-6.0-4-234-6 $3,000 / B	S32-6.0-4-234-6 $3,000 / B	S32-6.1-4-234R-6 $3,000 / B
Manuals only	S32-5.1-X-X-9 $100 / B		S32-6.0-X-X-9 $100 / B		S32-6.1-X-X-9 $100 / B
BSC3270 1/4"	B32-3.0-3-23-5 $3,000 / B		B32-6.1-4-23-5** $3,000 / B		
BSC3270 1/2"	B32-3.0-3-23-6 $3,000 / B		B32-6.1-4-23-6** $3,000 / B		
Manuals only	B32-3.0-X-X-9 $100 / B		B32-6.1-XX-9 $100 / B		
Local 3270 1/4"	L32-5.0-3-23-5 $6,000 / B			L32-6.1-4-34-5*** $6,000 / B	
Local 3270 1/2"	L32-5.0-3-23-6 $6,000 / B			L32-6.1-4-34-6*** $6,000 / B	
Manuals only	L32-5.0-X-X-9 $100 / B			L32-6.1-X-X-9 $100 / B	
CG3270 * 1/4"			C32-6.0-4-234-5 $950 / B	C32-6.0-4-234-5 $950 / B	
CG3270 * 1/2"			C32-6.0-4-234-6 $950 / B	C32-6.0-4-234-6 $950 / B	
Manuals only			C32-6.0-X-X-9 $100 / B		
SNA Peer-to-Peer 1/4"	PTP-5.0-3-23-5 $6,000 / B		PTP-6.0-4-234-5 $6,000 / B	PTP-6.0-4-234-5 $6,000 / B	
SNA Peer-to-Peer 1/2"	PTP-5.0-3-23-6 $6,000 / B		PTP-6.0-4-234-6 $6,000 / B	PTP-6.0-4-234-6 $6,000 / B	
Manuals only	PTP-5.0-X-X-9 $100 / B		PTP-6.0-X-X-9 $100 / B		

NOTES:
1. Includes right-to-use license for one gateway or node, except for SunLink™ 6.0 CG3270, which includes right-to-use license for one CG3270 terminal session.
2. All release 6.0 and 6.1 products require SunOS 4.0.
3. SunLink 6.0 CG3270 must be used in conjunction with a SunLink 6.0 or 6.1 3270 communication gateway product (either SunLink 6.0/6.1 SNA3270, 6.0/6.1 BSC3270, or 6.0 Local 3270).
4. Sun systems on which CG3270 terminal sessions will be displayed require NeWS 1.1.
5. There will be no 6.0 release of BSC3270 or Local 3270. The 6.0 release has been superseded with 6.1 BSC3270 and 6.1 Local 3270
* See "Multisession right-to-use licenses" section.
** Sun386i and Sun-4 client also included.
***Sun386i and Sun-2 client also included.

SunLink Communication Products
Media and Manuals

Media \ Version	For Sun-2 with SunOS 3.X	For Sun-3 with SunOS 3.X	For Sun-4 with SunOS Sys4-3.2	For Sun-2,3, & 4 with SunOS 4.0
BSCRJE 1/4"	BRJ-5.0-3-23-5 $2,000 / B	BRJ-5.0-3-23-5 $2,000 / B		BRJ-6.0-4-234-5 $2,000 / B
1/2"	BRJ-5.0-3-23-6 $2,000 / B	BRJ-5.0-3-23-6 $2,000 / B		BRJ-6.0-4-234-6 $2,000 / B
Manuals only	BRJ-5.0-X-X-9 $100 / B			BRJ-6.0-X-X-9 $100 / B
MHS 1/4"	MHS-5.2-3-2-5 $6,000 / B	MHS-5.2-3-3-5 $6,000 / B		MHS-6.0-4-234-5 $6,000 / B
1/2"	MHS-5.2-3-2-6 $6,000 / B	MHS-5.2-3-3-6 $6,000 / B		MHS-6.0-4-234-6 $6,000 / B
Manuals only	MHS-5.2-X-X-9 $100 / B			MHS-6.0-X-X-9 $100 / B
OSI 1/4"	OSI-5.2-3-2-5 $2,500 / B	OSI-5.2-3-3-5 $2,500 / B		OSI-6.0-4-234-5 $2,500 / B
1/2"	OSI-5.2-3-2-6 $2,500 / B	OSI-5.2-3-3-6 $2,500 / B		OSI-6.0-4-234-6 $2,500 / B
Manuals only	OSI-5.2-X-X-9 $100 / B			OSI-6.0-X-X-9 $100 / B
X.25 1/4"	X.25-5.2-3-2-5 $2,500 / B	X.25-5.2-3-3-5 $2,500 / B	X.25-5.1-3-4-5 $2,500 / B	X.25-6.0-4-234-5 $2,500 / B
1/2"	X.25-5.2-3-2-6 $2,500 / B	X.25-5.2-3-3-6 $2,500 / B	X.25-5.1-3-4-6 $2,500 / B	X.25-6.0-4-234-6 $2,500 / B
Manuals only	X.25-5.2-X-X-9 $100 / B		X.25-5.1-X-X-9 $100 / B	X.25-6.0-X-X-9 $100 / B
DDN 1/4"	DDN-5.0-3-2-5 $4,000 / B	DDN-5.0-3-3-5 $4,000 / B		DDN-6.0-4-234-5 $4,000 / B
1/2"	DDN-5.0-3-2-6 $4,000 / B	DDN-5.0-3-3-6 $4,000 / B		DDN-6.0-4-234-6 $4,000 / B
Manuals only	DDN-5.0-X-X-9 $100 / B			DDN-6.0-X-X-9 $100 / B

NOTES: 1. Includes right-to-use license.
2. All release 6.0 products require SunOS 4.0.
3. FCS of SunLink X.25 6.0 will be in calender year Q1 '89.
4. FCS of SunLink X.25 6.1 will be in calender year Q3 '89.
5. FCS of SunLink MHS 6.0 and SunLink OSI 6.0 will be in calender year Q2 '89.

Software Products

SunLink Communication Products
Media and Manuals

Media	Version	For Sun-2 with SunOS 3.X	For Sun-3 with SunOS 3.X	For Sun-4 with SunOS Sys4-3.2	For Sun-2,-3,-4, 386i with SunOS 4.0
IR	1/4"	IR-5.0-3-2-5 $2,500 / B	IR-5.0-3-3-5 $2,500 / B		IR-6.0-4-234R-5 $2,500 / B
IR	1/2"	IR-5.0-3-2-6 $2,500 / B	IR-5.0-3-3-6 $2,500 / B		IR-6.0-4-234R-6 $2,500 / B
IR Manuals only		IR-5.0-X-X-9 $100 / B			IR-6.0-X-X-9 $100 / B
DNI	1/4"	DNI-5.0-3-2-5 $1,200 / B	DNI-5.0-3-3-5 $1,200 / B	DNI-5.1-3-4-5 $1,200 / B	DNI-6.0-4-234R-5 $1,200 / B
DNI	1/2"	DNI-5.0-3-2-6 $1,200 / B	DNI-5.0-3-3-6 $1,200 / B	DNI-5.1-3-4-6 $1,200 / B	DNI-6.0-4-234R-6 $1,200 / B
DNI Manuals only		DNI-5.0-X-X-9 $100 / B			DNI-6.0-X-X-9 $100 / B
TE100	1/4"	T10-4.0-3-2-5 $500 / B	T10-4.0-3-3-5 $500 / B	T10-5.1-3-4-5 $500 / B	T10-6.0-4-234R-5 $500 / B
TE100	1/2"	T10-4.0-3-2-6 $500 / B	T10-4.0-3-3-6 $500 / B	T10-5.1-3-4-6 $500 / B	T10-6.0-4-234R-6 $500 / B
TE100 Manuals only		T10-4.0-X-X-9 $100 / B			T10-6.0-X-X-9 $100 / B

NOTE: Includes right-to-use license.

SunLink Communication Products

Right-to-Use Licenses for Workstations

S32-X-X-X-0	B32-X-X-X-0	L32-X-X-X-0	PTP-X-X-X-0	BRJ-X-X-X-0
$2,350 / B	$2,350 / B	$5,850 / B	$5,850 / B	$1,850 / B
DNI-X-X-X-0	DDN-X-X-X-0	T10-X-X-X-0	OSI-X-X-X-0	IR-X-X-X-0
$1,050 / B	$3,850 / B	$350 / B	$2,350 / B	$2,350 / B
C32-X-X-X-0	X.25-X-X-X-0	MHS-X-X-X-0		
$800 / B	$2,350 / B	$5,850 / B		

NOTES: *1. Licenses are for one gateway or node, except for CG3270, which is for one terminal session.*
             2. No media or manuals are included.

SunLink Software Licensing Policies

Consider the following when ordering SunLink software:

Gateway Products

Transparent gateways: Some SunLink products provide transparent communication services to a TCP/IP internetwork. They allow any node on the internetwork to access the communication services as if they were local. Only one copy must be purchased for a communication gateway to service the entire internetwork.The following products provide transparent network access: SNA3270, BSC3270, Local 3270, SNA Peer-to-Peer, BSCRJE, MHS, IR, and DDN.

Some transparent gateway products include client and server components. One right-to-use license allows server programs to run on one gateway only, yet permits copying client programs to other nodes. The following SunLink products are client/server products: SNA3270, BSC3270, Local 3270, SNA Peer-to-Peer and BSCRJE.

Non transparent gateways: X.25 may be purchased on a gateway basis, but users on remote Sun nodes must log into the X.25 gateway to access its services.

Per Node Products

The following SunLink products must be purchased on a per node basis: DNI, TE100, and OSI.

Concurrent Usage Products (SunLink CG3270)

SunLink CG3270 is purchased on a concurrent usage basis. Customers license each CG3270 terminal session that will be used in conjunction with a SunLink 6.0 or 6.1 3270 communication gateway. Since CG3270 uses the NeWS network-based window system, a CG3270 terminal session can be displayed on a Sun system that has NeWS installed, regardless of whether CG3270 is installed locally or on a remote Sun system. Concurrent usage licensing requires customers to purchase CG3270 software licenses only for the maximum number of concurrent CG3270 sessions that will run over a given SunLink 3270 communication gateway. Since any Sun system with NeWS installed can have a CG3270 terminal session remotely displayed on it, the number of Sun systems on the network capable of using CG3270 sessions can be much greater than the number of software licenses purchased. Thus, the number of software licenses does not limit the number of end users who can use CG3270 terminal emulation, but determines how many end users will be able to concurrently use CG3270 over the SunLink 3270 communication gateway.

Software Products

SunLink Communication Products

SunLink Communication Hardware

Media \ Version	For VME Sun-2	For Sun-3 Deskside with SunOS 3.X	For Sun-3 Data Center with SunOS 3.X	For Sun-3 and Sun-4 Deskside with SunOS 4.0	For Sun-3 and Sun-4 Data Center with SunOS 4.0
Channel Adapter 1/4"		CHA-5.0-3-3-5 $20,000 / B	CHA-5.0-3-3-5 $20,000 / B	CHA-6.0-4-34-5 $20,000 / B	CHA-6.0-4-34-5 $20,000 / B
Channel Adapter 1/2"		CHA-5.0-3-3-6 $20,000 / B	CHA-5.0-3-3-6 $20,000 / B	CHA-6.0-4-34-6 $20,000 / B	CHA-6.0-4-34-6 $20,000 / B
Manuals only		CHA-5.0-X-X-9 $100 / B		CHA-6.0-X-X-9 $100 / B	
MCP 1/4"		MCP-5.2-3-3-5 $4,000 / B	MCP-5.2-3-3-5 $4,000 / B	MCP-6.0-4-34-5 $4,000 / B	MCP-6.0-4-34-5 $4,000 / B
MCP 1/2"		MCP-5.2-3-3-6 $4,000 / B	MCP-5.2-3-3-6 $4,000 / B	MCP-6.0-4-34-6 $4,000 / B	MCP-6.0-4-34-6 $4,000 / B
Manuals only	MCP-5.2-X-X-9 $100 / B			MCP-6.0-X-X-9 $100 / B	
MAPKIT	MAPKIT $800 / B	MAPKIT $800 / B	MAPKIT $800 / B	MAPKIT $800 / B	MAPKIT $800 / B

NOTES:
1. *All 6.0 products require SunOS 4.0.*
2. *Channel Adapter can be ordered standalone, or with Local 3270.*
3. *Channel Adapter and MCP include media and manuals.*
4. *The SunLink Channel Adapter is a two-VMEbus board set that provides a programmable, high-speed physical connection with an IBM mainframe via an IBM block multiplexer channel. Application programs such as SunLink Local 3270 or customer-developed emulation programs that emulate IBM control units and devices can be run on the Channel Adapter gateway system.*
5. *MCP board options available for SNA3270, BSCRJE, IR, X.25, 6.0 Peer-to-Peer and DDN only.*
6. *MCP can be installed in any Sun-3 or Sun-4 system with an available VMEbus slot.*

Sun Channel Server – Minimum Recommended Gateway Configuration

The Channel Server configuration is the minimum recommended hardware configuration for a SunLink Channel Adapter gateway server. It is intended as an example only of how to configure and order such a system; it is not a packaged system and offers no package discount. Components must be ordered separately. If Local 3270 is to be run on the Channel Server, it must also be ordered separately.

The SunLink Channel Server configuration

Order Number	Description	List Price	Discount Category
3/150S-4	Sun-3/150S-4 Deskside Server	$ 19,900	A
514D	141-Mbyte formatted disk subsystem with 60-Mbyte 1/4-inch cartridge tape	6,800	B
CHA-5.0-3-3-5	SunLink Channel Adapter	20,000	B

NOTES:

1. **SunLink DNI** *is a node product that provides VT100 emulation and Phase IV end–node DECnet connectivity.*

2. **SunLink TE100** *is a node product that provides SunView–based VT100 emulation. SunLink DNI includes SunLink TE100; so it is not necessary to order TE100 for a node for which SunLink DNI has been ordered.*

3. **SunLink MHS** *allows users of Sun systems (or users that can access Sun's mail programs) to transparently exchange electronic messages with users on public or private networks that support the X.400 international standard for electronic mail. MHS is a gateway package.*
   Requirements:
   - *For release 5.2 MHS, SunOS 3.2 or 3.5*
   - *SunLink MHS requires SunLink OSI in all cases. For release 5.2 MHS, 5.2 OSI is required*
   - *For release 6.0 MHS, 6.0 OSI is required.*
   - *For connection to X.25 subnetworks, SunLink X.25 is required*

4. **SunLink OSI** *is a node product that provides OSI protocols over, and network layer routing between, 802.3 and X.25 subnetworks. For connection to 802.4 subnetworks, contact SunLink Product Marketing.*
   Requirements:
   - *For connection to X.25 subnetworks, SunLink X.25 is required. Release 5.2 OSI requires 5.2 X.25, release 6.0 OSI requires 6.X X.25*

5. **SunLink X.25** *is a gateway product that allows Sun-2 or Sun-3 systems to connect to public or private packet switching networks adhering to CCITT X.25 protocols. It also incorporates X.3 and X.29 specifications for terminal–to–host communication. SunLink X.25 may be used with or without the MCP board.*

6. **SunLink IR** *is a gateway product that allows remote Ethernets to be interconnected via wide-area transmission facilities. It gives each Sun-2 or Sun-3 workstation/server transparent, application–independent access to remote Ethernets and resources on those Ethernets. SunLink IR may or may not be used with MCP.*

7. **SunLink DDN** *allows a Sun workstation or server to be a host system on the Defense Data Network and communicate directly with other hosts on the network. It allows Sun systems to provide DDN host services to an Ethernet and supports the three major DDN interfaces – DDN Standard X.25, DDN Basic X.25, and 1822/HDH. SunLink DDN may be used with or without the MCP board.*

8. **SunLink SNA3270** *is a gateway package. SNA3270 media orders include gateway and client software for all architectures supported. SNA3270 may be used with or without the MCP board.*

9. **SunLink BSC3270** *is a gateway package. BSC3270 media orders include gateway software for Sun-2 and Sun-3 systems (BSC3270 5.0 media orders include client software for Sun-2 and Sun-3 systems). BSC3270 6.1 media orders include client software for Sun-2, Sun-3 Sun-4 and Sun386i systems. BSC3270 does not support the Sun-4 or Sun368i as a gateway.*

10. **SunLink Local 3270** *is a gateway package that must be used in conjunction with the SunLink Channel Adapter. Local 3270 5.0 media orders include gateway software for Sun-3 systems only, and client software for Sun-2 and Sun-3 systems. Local 3270 5.0 therefore supports mixed installations of Sun systems where a Sun-3 gateway can serve Sun-2 and Sun-3 clients. Requires the SunLink Channel Adapter. Local 3270 6.1 media orders include gateway software for Sun-3 and Sun-4 systems, and client software for Sun-2, Sun-3, Sun-4, and Sun386i systems. Local 3270 6.1 therefore supports mixed installations of Sun systems where a Sun-3 or Sun-4 gateway can serve Sun-2, Sun-3, Sun-4, and Sun386i clients.*

11. **SunLink CG3270** *is an unbundled terminal emulator–only package that must be used in conjunction with one of the SunLink 6.0 or 6.1 3270 communication gateway products (SNA 3270, BSC 3270 or Local 3270). Client Sun systems on which CG3270 sessions will be displayed require NeWS 1.1 and SunOS 4.0. CG3270 6.0 media orders include client software for Sun-2, Sun-3 and Sun-4 systems.*

12. **SunLink SNA Peer–to–Peer** *is a gateway package. SNA Peer–to–Peer media orders include gateway and programming library software for all architectures supported. SNA Peer–to–Peer 6.0 supports the SunLink MCP board.*

13. **SunLink BSCRJE** *is a gateway package. BSCRJE media orders include gateway and client software for all architectures supported. BSCRJE may be used with or without the MCP board.*

Corporate Software Licenses

- Corporate licenses must be purchased on a single order and only in quantities listed below.
- Prices are non–discountable.
- No media or manuals are shipped with licenses below; appropriate first–node copy and manuals to be purchased separately. Sun–2, Sun–3, and Sun–4 versions are covered by this license as long as the cumulative total does not exceed the number of licenses purchased.
- Licenses may not be purchased for resale.
- Licenses must be purchased by a central corporate purchaser and billed to the same address.
- Labels provided with the licenses are to be applied to the workstations licensed for the software; a central log to track the software location is required.

Product Quan. per Order	SunAlis™	SunGKS	SunPHIGS™
10 RTU Licenses	SunAlisL10 $12,500 / N/D	SunGKSL10 $6,700 / N/D	SunPHIGSL10 $22,000 / N/D
25 RTU Licenses	SunAlisL25 $28,000 / N/D	SunGKSL25 $15,600 / N/D	SunPHIGSL25 $49,000 / N/D
50 RTU Licenses	SunAlisL50 $50,000 / N/D	SunGKSL50 $26,000 / N/D	SunPHIGSL50 $82,000 / N/D
100 RTU Licenses	SunAlisL100 $85,000 / N/D	SunGKSL100 $38,000 / N/D	SunPHIGSL100 $122,000 / N/D
150 RTU Licenses	SunAlisL150 $120,000 / N/D	SunGKSL150 $56,000 / N/D	SunPHIGSL150 $179,000 / N/D
200 RTU Licenses	SunAlisL200 $150,000 / N/D	SunGKSL200 $73,000 / N/D	SunPHIGSL200 $230,000 / N/D
250 RTU Licenses	SunAlisL250 $175,000 / N/D	SunGKSL250 $88,000 / N/D	SunPHIGSL250 $280,000 / N/D

Product Quan. per Order	Sun Modula–2	Sun Cross Compilers	SunTrac™
10 RTU Licenses	MOD–X–X–X–L10 $12,950 / N/D	CRC–X–X–X–L10 $6,460 / N/D	TRC–X–X–X–L10 $11,500 / N/D
25 RTU Licenses	MOD–X–X–X–L25 $27,750 / N/D	CRC–X–X–X–L25 $14,000 / N/D	Not available
50 RTU Licenses	MOD–X–X–X–L50 $46,250 / N/D	CRC–X–X–X–L50 $25,000 / N/D	TRC–X–X–X–L50 $42,500 / N/D
100 RTU Licenses	MOD–X–X–X–L100 $74,000 / N/D	CRC–X–X–X–L100 $42,500 / N/D	TRC–X–X–X–L100 $72,500 / N/D
150 RTU Licenses	MOD–X–X–X–L150 $108,225 / N/D	Not available	TRC–X–X–X–L150 $89,250 / N/D
200 RTU Licenses	MOD–X–X–X–L200 $140,600 / N/D	Not available	Not available
250 RTU Licenses	MOD–X–X–X–L250 $171,125 / N/D	Not available	TRC–X–X–X–L250 $123,750 / N/D

Product / Quantity per Order	NSE™	Sun Common Lisp™	SPE™	Sun FORTRAN 1.1	Sun Pascal 1.1
10 RTU Licenses	NSE-X-X-X-L10 $15,400 / N/D	CLD-X-X-X-L10 $22,000 / N/D	SPL-X-X-X-L10 $22,400 / N/D	FOR-X-X-X-L10 $7,700 / N/D	PAS-X-X-X-L10 $7,700 / N/D
25 RTU Licenses	NSE-X-X-X-L25 $34,300 / N/D	CLD-X-X-X-L25 $50,500 / N/D	SPL-X-X-X-L25 $49,000 / N/D	FOR-X-X-X-L25 $17,100 / N/D	PAS-X-X-X-L25 $17,100 / N/D
50 RTU Licenses	NSE-X-X-X-L50 $61,200 / N/D	CLD-X-X-X-L50 $87,700 / N/D	SPL-X-X-X-L50 $84,000 / N/D	FOR-X-X-X-L50 $30,600 / N/D	PAS-X-X-X-L50 $30,600 / N/D
100 RTU Licenses	NSE-X-X-X-L100 $103,800 / N/D	CLD-X-X-X-L100 $148,500 / N/D	SPL-X-X-X-L100 $140,000 / N/D	FOR-X-X-X-L100 $51,800 / N/D	PAS-X-X-X-L100 $51,750 / N/D
150 RTU Licenses	NSE-X-X-X-L150 $104,580 / N/D	Not available	Not available	FOR-X-X-X-L150 $56,700 / N/D	PAS-X-X-X-L150 $56,700 / N/D
200 RTU Licenses	NSE-X-X-X-L200 $122,840 / N/D	Not available	Not available	FOR-X-X-X-L200 $66,600 / N/D	PAS-X-X-X-L200 $66,600 / N/D
250 RTU Licenses	NSE-X-X-X-L250 $141,100 / N/D	CLD-X-X-X-L250 $311,850 / N/D	Not available	FOR-X-X-X-L250 $76,500 / N/D	PAS-X-X-X-L250 $76,500 / N/D
300 RTU Licenses	NSE-X-X-X-L300 $159,360 / N/D	Not available	Not available	FOR-X-X-X-L300 $86,400 / N/D	PAS-X-X-X-L300 $86,400 / N/D
400 RTU Licenses	NSE-X-X-X-L400 $199,200 / N/D	Not available	Not available	FOR-X-X-X-L400 $108,000 / N/D	PAS-X-X-X-L400 $108,000 / N/D
500 RTU Licenses	NSE-X-X-X-L500 $232,400 / N/D	CLD-X-X-X-L500 $519,750 / N/D	Not available	FOR-X-X-X-L500 $126,000 / N/D	PAS-X-X-X-L500 $126,000 / N/D

Product / Quantity per Order	Ada™	Ada Run time
10 RTU Licenses	ATD-X-X-X-L10 $45,880/ N/D	ATR-X-X-X-L10 $1,680 / N/D
25 RTU Licenses	ATD-X-X-X-L25 $102,300/ N/D	ATR-X-X-X-L25 $3,062 / N/D
50 RTU Licenses	ATD-X-X-X-L50 $182,900/ N/D	ATR-X-X-X-L50 $5,250 / N/D
100 RTU Licenses	ATD-X-X-X-L100 $310,000 / N/D	ATR-X-X-X-L100 $8,750 / N/D
150 RTU Licenses	ATD-X-X-X-L150 $437,100 / N/D	Not available
200 RTU Licenses	ATD-X-X-X-L200 $545,600 / N/D	Not available
250 RTU Licenses	ATD-X-X-X-L250 $643,250 / N/D	Not available

Software Products

Corporate Software Licenses

Product / Quantity per Order	SNA3270	Internetwork Router	X.25	BSCRJE	BSC3270
10 RTU Licenses	S32-X-X-X-L10 $18,800 / N/D	IR-X-X-X-L10 $18,800 / N/D	X.25-X-X-X-L10 $18,800 / N/D	BRJ-X-X-X-L10 $14,800 / N/D	B32-X-X-X-L10 $18,800 / N/D
25 RTU Licenses	S32-X-X-X-L25 $41,125 / N/D	IR-X-X-X-L25 $41,125 / N/D	X.25-X-X-X-L25 $41,125 / N/D	BRJ-X-X-X-L25 $32,375 / N/D	B32-X-X-X-L25 $41,125 / N/D
50 RTU Licenses	S32-X-X-X-L50 $70,500 / N/D	IR-X-X-X-L50 $70,500 / N/D	X.25-X-X-X-L50 $70,500 / N/D	BRJ-X-X-X-L50 $55,500 / N/D	B32-X-X-X-L50 $70,500 / N/D

Product / Quantity per Order	DNI	TE100	SNA Peer-to-Peer	OSI
10 RTU Licenses	DNI-X-X-X-L10 $8,400 / N/D	T10-X-X-X-L10 $2,800 / N/D	PTP-X-X-X-L10 $46,800 / N/D	OSI-X-X-X-L10 $18,800 / N/D
25 RTU Licenses	DNI-X-X-X-L25 $18,375 / N/D	T10-X-X-X-L25 $6,125 / N/D	PTP-X-X-X-L25 $102,375 / N/D	OSI-X-X-X-L25 $41,125 / N/D
50 RTU Licenses	DNI-X-X-X-L50 $31,500 / N/D	T10-X-X-X-L50 $10,500 / N/D	PTP-X-X-X-L50 $175,500 / N/D	OSI-X-X-X-L50 $70,500 / N/D
100 RTU Licenses	DNI-X-X-X-L100 $52,500 / N/D	T10-X-X-X-L100 $17,500 / N/D	Not available	OSI-X-X-X-L100 $117,500 / N/D
250 RTU Licenses	DNI-X-X-X-L250 $105,000 / N/D	T10-X-X-X-L250 $35,000 / N/D	Not available	Not available

Multisession Right-to-Use Licenses

Product / Quantity per Order	CG3270
8 RTU Licenses	C32-X-X-X-M8 $4,160 / N/D
32 RTU Licenses	C32-X-X-X-M32 $12,800 / N/D

PC–Compatible Products

Personal Computers Network File System (PC–NFS)

Volume Pricing

PC–NFS–56 Media

- Right–to–use license for one PC
- 5 1/4–inch floppy diskette media

1–4 copies	5–24 copies	25–99 copies	100–249 copies	250 or more copies
$325 / N/D	$245 / N/D	$225 / N/D	$210 / N/D	$175 / N/D

PC–NFS–56M Media

- Right–to–use license for one PC
- 3 1/2–inch microdiskette media

1–4 copies	5–24 copies	25–99 copies	100–249 copies	250 or more copies
$325 / N/D	$245 / N/D	$225 / N/D	$210 / N/D	$175 / N/D

PC–NFS–51 Media and Manuals

- Right–to–use license for one PC
- 5 1/4–inch floppy diskette media
- Full documentation

1–4 copies	5–24 copies	25–99 copies	100–249 copies	250 or more copies
$395 / N/D	$295 / N/D	$275 / N/D	$255 / N/D	$220 / N/D

PC–NFS–51M Media and Manuals

- Right–to–use license for one PC
- 3 1/2–inch microdiskette
- Full documentation

1–4 copies	5–24 copies	25–99 copies	100–249 copies	250 or more copies
$395 / N/D	$295 / N/D	$275 / N/D	$255 / N/D	$220 / N/D

NOTES:
1. *PC–NFS™ and SunIPC™ products can be ordered through your Sun sales representative or directly in the United States by calling* **1–800–334–SUNM.**
2. *Number of copies below are copies ordered on a single PO, regardless of site usage.*
3. *Prices shown are on a per–PC basis. Pricing varies according to number of copies as indicated.*
4. *For PC–NFS, users may choose quantity discount or Category B discounts, but not both.*

PC–Compatible Products

PC–NFS–3C–51 Media, Manuals, and Boards

- Right–to–use license for one PC
- 5 1/4–inch floppy diskette media
- Full documentation
- PC Ethernet controller

1–4 copies	5–24 copies	25–99 copies	100–249 copies	250 or more copies
$895 / N/D	$790 / N/D	$671 / N/D	$601 / N/D	$542 / N/D

PC–NFS–3C Ethernet Board

- PC Ethernet controller

1–24 boards	25–99 boards	100–249 boards	250 or more boards
$495 / N/D	$396 / N/D	$346 / N/D	$322 / N/D

PC–NFS–MC Ethernet Board

- PS/2 Microchannel Ethernet Controller

1–24 boards	25–99 boards	100 or more boards
$595 / N/D	$536 / N/D	$506 / N/D

PC–NFS–09 Manuals

- PS–NFS full documentation set

1–99 manuals	100 or more manuals
$75 / N/D	$50 / N/D

Discount Pricing

Order Number	Description	List Price	Discount Category
PC–NFS–56D	Media (See PC–NFS–56 for details.)	$ 325	B
PC–NFS–56MD	Media (See PC–NFS–56M for details.)	325	B
PC–NFS–51D	Media and Manual (See PC NFS–51 for details.)	395	B
PC–NFS–51MD	Media and Manual (See PC NFS–51M for details.)	395	B
PC–NFS–3C–51D	Media, Manual and Ethernet Board (See PC–NFS–3C–51 for details.)	895	B

PC–NFS Right-to-Copy Packages

Order Number	Description	List Price	Discount Category
PC–NFS–55–100	**Right-to-Copy Package for 100 copies of PC–NFS** Includes the following: ▪ Master PC–NFS–51 ▪ Serial number generator program for 100 copies ▪ One documentation set	20,000	N/D
PC–NFS–55–250	**Right-to-Copy Package for 250 copies of PC–NFS** Includes the following: ▪ Master PC–NFS–51 ▪ Serial number generator program for 250 copies ▪ One documentation set	35,000	N/D
PC–NFS–55–500	**Right-to-Copy Package for 500 copies of PC–NFS** Includes the following: ▪ Master PC–NFS–51 ▪ Serial number generator program for 500 copies ▪ One documentation set	50,000	N/D

PC–NFS LifeLine – Electronic Mail and Network Backup for PC–NFS

PC–LifeLine–51
▪ PC–NFS LifeLine™ software on 5 1/4–inch media
▪ PC–NFS LifeLine documentation
▪ Right–to–use license for one PC

1–9 copies	10 or more copies
$125 N/D	$99 / N/D

PC–Compatible Products

PC–LifeLine–51M
- PC–NFS LifeLine Software on 3 1/2–inch microdiskette media
- PC–NFS LifeLine Documentation
- Right–to–use license for one PC

1-9 copies	10 or more copies
$125 N/D	$99 / N/D

Order Number	Description	List Price	Discount Category
PC–LifeLine–SL	**PC–NFS LifeLine software** Includes the following: • PC–NFS LifeLine software on 3 1/2–inch media • PC–NFS LifeLine software on 5 1/4–inch media • 10 copies PC–NFS LifeLine documentation • Site License Agreement *NOTE: Site is one contiguous building; requires Site license to be signed.*	$ 2,995	N/D
PC–LifeLine–09	**PC–NFS LifeLine Documentation**	35	N/D

PC–NFS Programmer's Toolkit

PC–NFS–PTK	**Programmer's Toolkit** • Right–to–use license for one machine • 5 1/4–inch floppy diskette media • Full documentation	595	N/D
PC–NFS–PTK–SL	**Site license for the Programmer's Toolkit** Includes the following: • 2 copies of PC–NFS–PTK • 4 copies of PC–NFS–PTK–09 (full documentation) *NOTE: Site is one contiguous building; requires Site license to be signed.*	2,395	N/D
PC–NFS–PTK–09	**Programmer's Toolkit Documentation**	75	N/D

Sun Integrated Personal Computer (SunIPC)

Boards

SunIPC	**PC/AT®–Compatible Coprocessor Board** • 10–MHz 80286 • Occupies a single VME slot *NOTE: SunIPC software must be ordered with each board.*	1,495	B
SunIPC–87	**PC/AT–Compatible Coprocessor Board with 80287 math coprocessor** • 10–MHz 80286, 8–MHz 80287 • Occupies a single VME slot *NOTE: SunIPC software must be ordered with each board.*	1,885	B

Floppy Disk Drives

Order Number	Description	List Price	Discount Category
SunIPC–FPY1	**Single–floppy disk drive** ■ 5 1/4–inch half–height drive ■ Reads 360–Kbyte and 1.2–Mbyte diskettes ■ Writes 1.2–Mbyte diskettes	$ 850	B
SunIPC–FPY2	**Dual–floppy disk drive** ■ Two 5 1/4–inch half height drives ■ First reads and writes 1.2–Mbyte diskettes ■ Second reads and writes 360–Kbyte diskettes	995	B

Media and Manuals
- Software distribution and manuals
- Right–to–use license for one SunIPC
- Keyboard template
- Full documentation
- Multi–access version for occasional MS–DOS® capability shared over the network
- Choose one of the following with each hardware unit ordered:

Media \ Version	For Sun–2 or Sun–3 with SunOS 3.X:	For Sun–4 with Sun Sys4–3.2	For Sun–2, Sun–3 or Sun–4 with SunOS 4.0:
1/4"	IPC–1.1–3–23–5 $495 / N/D		IPC–1.2–4–234–5 $495 / N/D
1/2"	IPC–1.1–3–23–6 $495 / N/D		IPC–1.2–4–234–6 $495 / N/D
Additional Keyboard Template and Manuals only	IPC–1.1–X–X–9 $170 / N/D		IPC–1.2–X–X–9 $170 / N/D

NOTES: Conditions or products listed in the first four notes are needed for proper use of the SunIPC Coprocessor.
1. *An available VME slot on a Sun–2, Sun–3 or Sun–4 system or server. The Sun Multibus®–based systems can access the SunIPC remotely over the network.*
2. *A SunIPC or SunIPC–87 board. Choose the SunIPC–87 when running applications making use of the optional 80287 floating–point coprocessor.*
3. *SunIPC software must be ordered with each SunIPC or SunIPC–87 board. Release 1.2 only operates under SunOS 4.0 and is not available on a Sun–2 as a server.*
4. *A floppy disk drive or a PC on the same network with PC–NFS to load PC applications software or data files.*
5. *A floppy disk drive is strongly recommended for easy SunIPC access to 5 1/4–inch PC software.*
6. *The floppy drive is required for use of PC software applications requiring a software key diskette.*
7. *With PC–NFS and SunIPC sharing the same network, SunIPC can use software application programs loaded via the PC, provided those programs are not copy protected.*
8. *Choose the SunIPC–FPY2 when writing to 360–Kbyte diskettes. (For example: to transfer files to a PC/XT or compatible system that only reads 360–Kbyte diskettes, both versions of the floppy drive read 1.2–Mbyte and 360–Kbyte diskettes.)*
9. *A remote Sun System (client) running under SunOS 4.0 can not access a Sun system hosting a SunIPC coprocessor running under SunOS 3.X. The host system must be upgraded to SunOS 4.0 for client access under SunOS 4.0.*

Printers

Sun LaserWriter II

- MC68000 graphics controller with 2 Mbytes of memory
- 8-page per minute printing engine
- Supports PostScript® protocols with built-in fonts with point sizes from 4 points and up
- LaserWriter Interface Kit

LaserWriter Interface Kit
- Serial cable
- TranScript™ UNIX operating system filters for *troff*, *ditroff*, plot, and Diablo 630 print files
- User documentation

Media \ Version	LaserWriter 115 VAC	LaserWriter 240 VAC	LaserWriter Interface kit only
1/4"	LW1-01-2 $6,400 / B	LW2-01-2 $6,400 / B	LW-INT-01 $1,800 / N/D
1/2"	LW1-02-2 $6,400 / B	LW2-02-2 $6,400 / B	LW-INT-02 $1,800 / N/D
3.5" disk for Sun386i	LW1-11-2 $6,400 / B	LW2-11-2 $6,400 / B	LW-INT-11 $1,800 / N/D

Order Number	*Description*	*List Price*	*Discount Category*
LW-21-2	**Toner Cartridge for LaserWriter II – Four Pak**	$ 500	N/D
LW-21	**Toner Cartridge for LaserWriter I – Four Pak**	500	N/D

NOTE: Maximum discount of Sun LaserWriter is 15%

Accessories

Order Number	Description	List Price	Discount Category
ECX	Ethernet coaxial cable (15 meters) *NOTE: If an Ethernet cable is to run more than 15 meters between transceiver taps, Sun recommends that customers purchase longer single segments of Ethernet cable from cable vendors, (e.g., Belden (317) 983–5200 or 3Com (415) 961–9602).*	$ 200	N/D
ETR	Ethernet terminators (2), 50 Ohms, male	60	N/D
ETH–TAP–TOOL	Ethernet piercing tap tool kit for use on ETHKIT–TAP "vampire" type transceiver cable connections	75	N/D
BTC	1/4–inch 450–ft. certified tape cartridge (blank)	50	N/D
BTR	1/2–inch tape reel (blank)	50	N/D
TTC*	Thin Ethernet "T" connectors (Qty. 10)	150	N/D
TT–M	Thin Ethernet terminators (Qty. 2) for use at the "T" connector, male	35	N/D
TT–F	Thin Ethernet terminators (Qty. 2) for use at the thin cable end, female	30	N/D
TBC*	Thin "BNC" barrel connector for connecting Thin Ethernet cable segments (Qty. 10)	60	N/D
TS–5M	Thin Ethernet Cable segment. 5 meters. "BNC" male connectors on both ends	65	N/D
TS–15M	Thin Ethernet Cable segment. 15 meters. "BNC" male connectors on both ends	80	N/D
TA–F*	"BNC" connector to "N" series connector adapters for uses at cable ends, female (Qty. 10)	285	N/D
TA–M*	"BNC" connector to "N" series connector adapters for uses at the transceiver connection, male (Qty. 10)	100	N/D

NOTE: *   *These options are packaged in lots of 10 (e.g., quantity 1 option TBC delivers 10 each barrel connectors).*

Sun OEM Board Products

Sun Standalone OEM Boards

- CPU prices include right-to-use licenses for SunOS, ONC (including NFS), SunPro™, SunView, C, Pascal, FORTRAN, SunCore and SunCGI good for up to 2 users. Multi-user UNIX operating system licenses and other software products are priced separately. Documentation kits and distribution tapes must be ordered separately.

- To qualify for Category C discounts, an OEM must have signed a CAT C addendum to OEM agreement. Under this addendum, the customer can purchase any combination of boards and systems at a given level with the appropriate discount for the category of the products purchased.

6U Modular Eurocards

Order Number	Description	List Price	Discount Category
3E120	**Sun-3 Eurocard Single Board Computer** • MC68020 20-MHz CPU • MC68881 20-MHz Floating-point coprocessor • 4-Mbytes on-board memory • 32-bit VMEbus interface • 2 RS-423 serial ports; keyboard/mouse interface • 2-user license for UNIX operating system and C	$ 6,300	C
3E204	**Sun-3 Eurocard 4-Mbyte Expansion Memory** • Compatible with 3E120 only • Byte parity data protection • Private bus interface to CPU • Maximum 3 expansion boards per CPU	4,000	C
3E212	**Sun-3 Eurocard 12-Mbyte Expansion Memory** • Same description as 3E204 • Maximum 1 expansion board per CPU	10,200	C
3E340	**Sun-3 Eurocard SCSI/Ethernet Interface** • Buffered SCSI host adapter (64-Kbyte buffer) • Buffered Ethernet Interface (128-Kbyte buffer) • VMEbus Slave Interface	1,800	C
3E450	**Sun-3 Eurocard Monochrome Video Interface** • Compatible with 3E120 ONLY • 1152 x 900 pixel resolution • 256-Kbyte video frame buffer • Private bus interface to CPU	1,400	C
3E480	**Sun-3 Eurocard Color Video Interface** • Same description as 3E450 • 8 bit-per-pixel color • Monochrome overlay plane • Overlay enable plane • Requires Sun OS 3.5 or higher	2,500	C

6U Documentation and Patch Tape

3E-CPU-DOC	3E CPU Hardware Reference Manual	20	N/A
3E-ES-DOC	3E Ethernet/SCSI Reference Manual	20	N/A
SYS3-01-3E**	1/4" Patch Tape for OS Rev. 3.4	75	A
SYS3-02-3E**	1/2" Patch Tape for OS Rev. 3.4	75	A

NOTE: ** *This patch tape should only be ordered for customers who must configure to an installed base of SunOS 3.4. It is not required for SunOS 3.5 or higher.*

9U Fully Integrated Eurocards

All Sun-3/4 9U Eurocards feature:

- Ethernet interface
- 2 RS-423 serial ports; keyboard/mouse interface

Order Number	Description	List Price	Discount Category
4201	**Sun-4/200 SPARC Computer** • CPU board only • 32-bit SPARC CPU-16.67 MHz MB86900 integer unit MB86910 floating-point controller unit • Weitek 1164/1165 floating-point arithmetic units • 128-KByte virtual address, write back cache • High-resolution monochrome video interface (1600 x 1280) • 32-bit VMEbus interface	$ 23,500	C
4200	**Sun-4/200 SPARC Computer with 8 Mbytes** • 4201 CPU as described above • 8-Mbyte ECC memory board	30,300	C
4232	**Sun 4/200 SPARC Computer with 32 Mbytes** • 4201 CPU as described above • 32-Mbyte ECC memory board	51,500	C
4108	**Sun-4/100 SPARC Computer** • 32-bit SPARC architecture CPU-- 14.28 MHz • Integer unit • 8 Mbyte SIMM on-board memory • SCSI interface • Ethernet interface • 32-bit VMEbus interface (master only) • 2 RS-423 serial port; keyboard/mouse interface	15,950	C
4108-FPP	**Sun-4/100 SPARC Computer with Floating-Point Processor** • 4108 CPU as described above • Floating-point controller unit • Weitek 1164/1165 floating-point arithmetic units	18,450	C
MBUF-4110	**Sun-4/100 Monochrome Frame Buffer** • Daughter board for 4108 • 1152 x 900 pixel resolution • 256-Kbyte video frame buffer	1,500	C
CBUF-4110	**Sun-4/100 Color Frame Buffer** • Daughter board for 4108 • 8-bit per pixel color • Monochrome overlay plane • Overlay enable plane	2,540	C

Sun OEM Board Products

Order Number	Description	List Price	Discount Category
3201	**Sun–3/200 Cache Computer** • CPU board only • MC68020 CPU–25 MHz • MC68881 floating–point coprocessor • 64–Kbyte virtual address, writeback cache • High–resolution monochrome video interface (1600 x 1280) • 32–bit VMEbus interface	$ 13,600	C
3200	**Sun–3/200 Cache Computer with 8–Mbytes** • 3201 CPU as described above • 8–Mbyte ECC memory board	20,400	C
3004	**Sun–3/100 Single Board Computer** • MC68020 CPU–16.67 MHz • MC68881 floating point coprocessor • 4–Mbyte on–board memory • High–resolution monochrome video interface (1152x900) • 32–bit VMEbus interface	12,700	C
3VMEM–4	**4–Mbyte Main Memory Expansion Board** • Compatible with 3004 • Byte parity data protection • Maximum of 3 memory expansion boards per CPU	4,000	A
VMEM–8	**8–Mbyte ECC Main Memory Expansion Board** • Compatible with 3200, 3201, 4200, and 4201 • ECC data protection • Maximum of 3 memory expansion boards per CPU	8,000	A
VMEM–32	**32–Mbyte ECC Main Memory Expansion Board** • Compatible with 3200, 3201, 4200, and 4201 • ECC data protection • Maximum of 3 memory expansion boards per CPU	28,000	A
VCOL	**VME Color Graphics Adapter** • High–resolution video interface (1152 x 900) • 8–bits per pixel • 256 colors from a palette of over 16 million	6,000	C

Order Number	*Description*	*List Price*	*Discount Category*
Busless Products			
3050	**Sun–3/50 Single Board Computer** ▪ MC68020 CPU–15 MHz ▪ 4–Mbytes on–board memory ▪ High–resolution monochrome video interface (1152 x 900) ▪ On–board SCSI interface	$ 3,500	C
3060	**Sun–3/60 Single Board Computer** ▪ MC68020 CPU–20 MHz ▪ MC68881 floating–point coprocessor–20 MHz ▪ 4–Mbytes on–board memory ▪ High–resolution monochrome video interface (1152x900) ▪ On–board SCSI interface	7,100	C
CG4	**Sun–3/60 color Frame Buffer** ▪ Compatible with 3/60 only ▪ 8–bit per pixel color ▪ Monochrome overlay plane ▪ Overlay enable plane ▪ 1152 x 900 pixel resolution ▪ Private P4 bus interface	2,540	C
CG5	**Sun–3/200 and Sun–4/200 Double Buffered Color Frame Buffer** ▪ Compatible with 3004, 3200 ,3201, 4200, and 4201 ▪ 8–bit per pixel color ▪ 1152 x 900 pixel resolution ▪ Private bus interface to GP2	9,000	C

NOTE: Contract Support Services are not available for Sun OEM Board Products.

Secure Computing Products

Sun–3/60T Deskside TEMPEST Systems and Options

Order Number	Description	List Price	Discount Category
3/60MT–4–H[1]	Sun–3/60 TEMPEST 4–Mbyte monochrome deskside workstation	$ 9,450	A
3/60HMT–4–H[1]	Sun–3/60 TEMPEST 4–Mbyte high resolution monochrome deskside workstation	10,450	A
3/60CT–4–H[1]	Sun–3/60 TEMPEST 4–Mbyte color deskside workstation	13,900	A
3/60ST–4–H[1]	Sun–3/60 TEMPEST 4–Mbyte deskside server	7,450	A
TPQL–H	TEMPEST Adder	10,000	N/D
T–104F	4–Mbyte SIMM memory expansion boards	3,400	A
T–108F	8–Mbyte SIMM memory expansion boards	6,800	A
T–112F	12–Mbyte SIMM memory expansion boards	10,200	A
T–116F	16–Mbyte SIMM memory expansion boards	13,600	A
T–120F	20–Mbyte SIMM memory expansion boards	17,000	A
T–251E[2]	Add 19" monochrome monitor, keyboard and mouse	3,000	A
T–252E[2]	Add 19" high resolution monochrome monitor, keyboard and mouse	4,000	A
T–253F[2]	Add 19" color monitor, CG4 color board, keyboard and mouse	8,000	A
DTMT	TEMPEST Adder for monitor, keyboard and mouse when ordered as a standalone option	7,000	N/D
T–455E	Fiber Optic Ethernet adapter	4,000	B
TR–506F[3]	Removable 327–Mbyte hard disk drive	7,700	B
TR–510F[3]	Removable dual 327–Mbyte hard disk drives	15,000	B
TR–510F/2[4]	2 x 327–Mbyte hard disk drives in individually removable modules	15,000	B
TR–516F[3]	Removable 327–Mbyte hard disk and fixed 60–Mbyte 1/4–inch tape drive	9,700	B
TR–517F[3]	Removable dual 327–Mbyte hard disk drives and fixed 60–Mbyte 1/4–inch tape	17,000	B
TR–REMOV	TEMPEST Adder for Removable Peripheral Module	3,000	N/D
T–650G	Fixed 60–Mbyte 1/4" cartridge tape subsystem	3,000	B
OE–15M	Optical Ethernet cable (15m)	175	B
OE–50M	Optical Ethernet cable (50m)	400	B
OE–100M	Optical Ethernet cable (100m)	650	B

NOTES:
1. While these products are available commercially as desktop products, they are only available as endorsed TEMPEST products in a deskside enclosure.
2. Every system must be ordered with either a fiberoptic Ethernet interface (T–455E) or removable disk (TR–REMOV plus T–506, –510, –516, –517).
3. To order systems configured for 240V European operation, append "V4" to the order number. Example: 3/60CT–4–H becomes 3/60CT–4–HV4 when it is to be configured for 240V operation.
4. Each Deskside TEMPEST System requires TPQL–H.
5. Requires DTMT
6. Each disk subsystem requires option TR–REMOV. Hard disk drives are only available in removable peripheral modules.
7. Option 510F/2 requires two TR–REMOV options. Each 327 hard disk is in an individual removable peripheral module. Option T–650G may not be ordered with this option.

Sun–3/160T Deskside TEMPEST Systems and Options

Order Number	Description		List Price	Discount Category
3/160MT–4–H[1]	Sun–3/160 TEMPEST 4–Mbyte monochrome deskside workstation	$	25,400	A
3/160CT–4–H[1]	Sun–3/160 TEMPEST 4–Mbyte color deskside workstation		33,400	A
3/160ST–4–H[1]	Sun–3/160 TEMPEST 4–Mbyte deskside server		23,400	A
TPQL–H	TEMPEST Adder		10,000	N/D
T–104E	4–Mbyte main memory expansion board		4,000	A
T–109E	8–Mbyte main memory expansion boards NOTE: 2 x 4–Mbyte memory expansion boards		6,800	A
T–112E	12–Mbyte main memory expansion boards NOTE: 3 x 4–Mbyte memory expansion boards		10,200	A
T–202E	GB (Graphics Buffer) board		4,000	A
T–211E	GP+ (Enhanced Graphics Processor) board		5,900	A
T–251E[2]	Add 19" monochrome monitor, keyboard and mouse		3,000	A
T–253E[2]	Add 19" color monitor, CG5 color board, keyboard and mouse		15,000	A
DTMT	TEMPEST Adder for monitor, keyboard and mouse when ordered as a standalone option		7,000	N/D
T–455E	Fiber Optic Ethernet adapter		4,000	B
T–456E	Second FiberCom Fiber Optic Ethernet board		5,395	B
TR–506E[3]	Removable 327–Mbyte hard disk drive		7,700	B
TR–510E[3]	Removable Dual 327–Mbyte hard disk drives		15,000	B
TR–510E/2[4]	2 x 327–Mbyte hard disk drives in individually removable modules		15,000	B
TR–516E[3]	Removable 327–Mbyte hard disk and fixed 60–Mbyte 1/4–inch tape drive		9,700	B
TR–517E[3]	Removable dual 327–Mbyte hard disk drives and fixed 60–Mbyte 1/4–inch tape		17,000	B
TR–REMOV	TEMPEST Adder for Removable Peripheral Module		3,000	N/D
T–605E[5]	280–Mbyte formatted disk subsystem		17,500	B
T–606E[5]	560–Mbyte (2x280) formatted disk subsystem		27,500	B
TPQL–HEXP	TEMPEST Adder for SMD expansion enclosure		8,000	N/D
T–650F	Fixed 60–Mbyte 1/4" cartridge tape subsystem		3,000	B
T–SUNIPC/E[6]	Sun IPC coprocessor board		1,495	B
OE–15M	Optical Ethernet cable (15m)		175	B
OE–50M	Optical Ethernet cable (50m)		400	B
OE–100M	Optical Ethernet cable (100m)		650	B

NOTES:
1. To order systems configured for 240V European operation, append "V4" to the order number. Example: 3/160CT–4–H becomes 3/160CT–4–HV4 when it is to be configured for 240V operation.
2. Every system must be ordered with either a fiberoptic Ethernet interface (T–455E), SMD disk, or removable disk (TR–REMOV plus T–506, –510, –516, –517).
3. Each Deskside TEMPEST System requires TPQL–H.
4. Requires DTMT
5. Each disk subsystem requires option TR–REMOV. Hard disk drives are only available in removable peripheral modules.
6. Option 510E/2 requires two TR–REMOV options. Each 327 hard disk is in an individual removable peripheral module. Option T–650F may not be ordered with this option.
7. Option T–605E or T–606E requires option TPQL–HEXP
8. Access to either the floppy SunIPC floppy disk drive port or the SunIPC parallel port is not available in the TEMPEST version.

Secure Computing Products

Sun-3/260T Deskside TEMPEST Systems and Options

Order Number	Description	List Price	Discount Category
3/260HMT-8-H[1]	Sun-3/260 TEMPEST 8-Mbyte high resolution monochrome deskside workstation	$ 30,900	A
3/260CT-8-H[1]	Sun-3/260TEMPEST 8-Mbyte color deskside workstation	38,900	A
3/260CXPT-8-H[1]	Sun-3/260 TEMPEST 8-Mbyte color graphics deskside workstation	50,400	A
3/260ST-8-H[1]	Sun-3/260 TEMPEST 8-Mbyte deskside server	27,900	A
TPQL-H	TEMPEST Adder	10,000	N/D
T-108E	8-Mbyte ECC memory expansion board	8,000	A
T-150E	Floating Point Accelerator board	4,900	A
T-212E	GP2 (Enhanced Graphics Processor board)	13,900	A
T-252E[2]	Add 19" high resolution monochrome monitor, keyboard and mouse	4,000	A
T-253E[2]	Add 19" color monitor, CG5 color board, keyboard and mouse	15,000	A
DTMT	TEMPEST Adder for monitor, keyboard and mouse when ordered as a standalone option	7,000	N/D
T-455E	FiberCom fiber optic Ethernet interface board	4,000	B
T-456E	Second FiberCom fiber optic Ethernet board	5,395	B
TR-506E[3]	Removable 327-Mbyte hard disk drive	7,700	B
TR-510E[3]	Removable Dual 327-Mbyte hard disk drives	15,000	B
TR-510E/2[4]	2 x 327-Mbyte hard disk drives in individually removable modules	15,000	B
TR-516E[3]	Removable 327-Mbyte hard disk and fixed 60-Mbyte 1/4-inch tape drive	9,700	B
TR-517E[3]	Removable dual 327-Mbyte hard disk drives and fixed 60-Mbyte 1/4-inch tape	17,000	B
TR-REMOV	TEMPEST Adder for Removable Peripheral Module	3,000	N/D
T-605E[5]	280-Mbyte formatted disk subsystem	17,500	B
T-606E[5]	560-Mbyte (2x280) formatted disk subsystem	27,500	B
TPQL-HEXP	TEMPEST Adder for SMD expansion enclosure	8,000	N/D
T-650F	60 Mbyte 1/4" cartridge tape subsystem	3,000	B
T-SUNIPC/E[6]	Sun IPC coprocessor board	1,495	B
OE-15M	Optical Ethernet cable (15m)	175	B
OE-50M	Optical Ethernet cable (50m)	400	B
OE-100M	Optical Ethernet cable (100m)	650	B

NOTES:
1. To order systems configured for 240V European operation, append "V4" to the order number. Example: 3/260CT-8-H becomes 3/260CT-8-HV4 when it is to be configured for 240V operation.
2. Every system must be ordered with either a fiberoptic Ethernet interface (T-455E), SMD disk, or removable disk (TR-REMOV plus T-506, -510, -516, -517).
3. Each Deskside TEMPEST System requires TPQL-H.
4. Requires DTMT
5. Each disk subsystem requires option TR-REMOV. Hard disk drives are only available in removable peripheral modules.
6. Option 510E/2 requires two TR-REMOV options. Each 327 hard disk is in an individual removable peripheral module. Option T-650F may not be ordered with this option.
7. Option T-605E or T-606E requires option TPQL-HEXP
8. Access to either the floppy SunIPC floppy disk drive port or the SunIPC parallel port is not available in the TEMPEST version.

Sun–4/110T Deskside TEMPEST Systems and Options

Order Number	Description	List Price	Discount Category
4/110MT-8-H[1]	Sun–4/110 TEMPEST 8–Mbyte monochrome deskside workstation	$ 19,950	A
4/110CT-8-H[1]	Sun–4/110 TEMPEST 8–Mbyte color deskside workstation	24,950	A
4/110ST-8-H[1]	Sun–4/110 TEMPEST 8–Mbyte deskside server	16,950	A
4/110MT-16-H[1]	Sun–4/110 TEMPEST 16–Mbyte monochrome deskside workstation	26,750	A
4/110CT-16-H[1]	Sun–4/110 TEMPEST 16–Mbyte color deskside workstation	31,750	A
4/110ST-16-H[1]	Sun–4/110 TEMPEST 16–Mbyte deskside server	23,750	A
TPQL-H	TEMPEST Modification and Endorsement for Deskside Systems	10,000	N/D
T-116G	16–Mbyte SIMM memory expansion boards	13,600	A
T-153E	Weitek 1164/1165 Floating Point Unit	2,650	A
T-251E[2]	Add 19" monochrome monitor, keyboard and mouse	3,000	A
T-252E[2]	Add 19" high resolution monochrome monitor, keyboard and mouse	4,000	A
T-253F[2]	Add 19" color monitor, CG4 color board, keyboard and mouse	8,000	A
DTMT	TEMPEST Adder for monitor, keyboard and mouse when ordered as a standalone option	7,000	N/D
T-455E	Fiber Optic Ethernet adapter	4,000	B
TR-506F[3]	Removable 327–Mbyte hard disk drive	7,700	B
TR-510F[3]	Removable dual 327–Mbyte hard disk drives	15,000	B
TR-510F/2[4]	2 x 327–Mbyte hard disk drives in individually removable modules	15,000	B
TR-516F[3]	Removable 327–Mbyte hard disk and fixed 60–Mbyte 1/4–inch tape drive	9,700	B
TR-517F[3]	Removable dual 327–Mbyte hard disk drives and fixed 60–Mbyte 1/4–inch tape	17,000	B
TR-REMOV	TEMPEST Adder for Removable Peripheral Module	3,000	N/D
T-650G	60–Mbyte 1/4" cartridge tape subsystem	3,000	B
OE-15M	Optical Ethernet cable (15m)	175	B
OE-50M	Optical Ethernet cable (50m)	400	B
OE-100M	Optical Ethernet cable (100m)	650	B

NOTES:
1. While these products are available commercially as desktop products, they are only available as endorsed TEMPEST products in a deskside enclosure.
2. To order systems configured for 240V European operation, append "V4" to the order number. Example: 4/110CT-8-H becomes 4/110CT-8-HV4 when it is to be configured for 240V operation.
3. Every system must be ordered with either a fiberoptic Ethernet interface (T-455E), or removable disk (TR-REMOV plus T-506, -510, -516, -517).
4. Each Deskside TEMPEST System requires TPQL-H.
5. Requires DTMT
6. Each disk subsystem requires option TR-REMOV. Hard disk drives are only available in removable peripheral modules.
7. Option 510F/2 requires two TR-REMOV options. Each 327 hard disk is in an individual removable peripheral module. Option T-650G may not be ordered with this option.

Sun–4/260T Deskside TEMPEST Systems and Options

Order Number	Description	List Price	Discount Category
4/260HMT–8–H[1]	Sun–4/260 TEMPEST 8–Mbyte high resolution monochrome deskside workstation	$ 42,800	A
4/260CT–8–H[1]	Sun–4/260 TEMPEST 8–Mbyte color deskside workstation	50,800	A
4/260CXPT–8–H[1]	Sun–4/260 TEMPEST 8–Mbyte color graphics deskside workstation	62,300	A
4/260ST–8–H[1]	Sun–4/260 TEMPEST 8–Mbyte deskside server	39,800	A
TPQL–H	TEMPEST Adder	10,000	N/D
T–108E	8–Mbyte ECC Memory Expansion Board	8,000	A
T–132E	32–Mbyte ECC Memory Expansion Board	28,000	A
T–212E	GP2 (Enhanced Graphics Processor) Board	13,900	N/D
T–252E[2]	Add 19" high resolution monochrome monitor, keyboard and mouse	4,000	A
T–253E[2]	Add 19" color monitor, CG5 color board, keyboard and mouse	15,000	A
DTMT	TEMPEST Adder for monitor, keyboard and mouse when ordered as a standalone option	7,000	N/D
T–455E	FiberCom fiber optic Ethernet interface board	4,000	B
T–456E	Second FiberCom fiber optic Ethernet board	5,395	B
TR–506E[3]	Removable 327–Mbyte hard disk drive	7,700	B
TR–510E[3]	Removable Dual 327–Mbyte hard disk drives	15,000	B
TR–510E/2[4]	2 x 327–Mbyte hard disk drives in individually removable modules	15,000	B
TR–516E[3]	Removable 327–Mbyte hard disk and fixed 60 Mbyte 1/4–inch tape drive	9,700	B
TR–517E[3]	Removable dual 327–Mbyte hard disk drives and fixed 60–Mbyte 1/4–inch tape	17,000	B
TR–REMOV	TEMPEST Adder for Removable Peripheral Module	3,000	N/D
T–605E[5]	280–Mbyte formatted disk subsystem	17,500	B
T–606E[5]	560–Mbyte (2x280) formatted disk subsystem	27,500	B
TPQL–HEXP	TEMPEST Adder for SMD expansion enclosure	8,000	N/D
T–650F	60–Mbyte 1/4–inch cartridge tape subsystem	3,000	B
OE–15M	Optical Ethernet cable (15m)	175	B
OE–50M	Optical Ethernet cable (50m)	400	B
OE–100M	Optical Ethernet cable (100m)	650	B

NOTES:
1. *To order systems configured for 240V European operation, append "V4" to the order number. Example: 4/260CT–8–H becomes 4/260CT–8–HV4 when it is to be configured for 240V operation.*
2. *Every system must be ordered with either a fiberoptic Ethernet interface (T–455E), SMD disk, or removable disk (TR–REMOV plus T–506, –510, –516, –517).*
3. *Each Deskside TEMPEST System requires TPQL–H.*
4. *Requires DTMT*
5. *Each disk subsystem requires option TR–REMOV. Hard disk drives are only available in removable peripheral modules.*
6. *Option 510E/2 requires two TR–REMOV options. Each 327 hard disk is in an individual removable peripheral module. Option T–650F may not be ordered with this option.*
7. *Option T–605E or T–606E requires option TPQL–HEXP*

SunOS MLS Secure UNIX

Current SunOS MLS Release Media and Manuals

Version Media		Domestic Only S/W & Manuals	Domestic Only S/W (No Manuals)	Domestic or Export S/W & Manuals	Domestic or Export S/W (No Manuals)
For Sun-3: 68020 Based Systems	1/4"	SM2-MLS-01 $700/A	SM2-MLS-05 $300/A	SM2-MLS-03 $700/A	SM2-MLS-07 $300/A
	1/2"	SM2-MLS-02 $700/A	SM2-MLS-06 $300/A	SM2-MLS-04 $700/A	SM2-MLS-08 $300/A
Sun-3 Manuals Only		SM-MLS-09 $500/A			
For Sun-4: SPARC Based Systems	1/4"	SS1-MLS-01 $700/A	SS1-MLS-05 $300/A	SS1-MLS-03 $700/A	SS1-MLS-07 $300/A
	1/2"	SS1-MLS-02 $700/A	SS1-MLS-06 $300/A	SS1-MLS-04 $700/A	SS1-MLS-08 $300/A
Sun-4 Manuals Only		SS-MLS-09 $500/A			

Right-to-Use Licenses for SunOS MLS Release of Sun-3 or Sun-4 System Software

2-User	Unlimited Users
SYSL2-MLS	SYSLUN-MLS
$3,000/A	$5,000/A

NOTES:
1. *All workstations ordered must include the standard SunOS RTU license (e.g. SYSL2) and the SunOS MLS RTU license.*
2. *SunOS MLS and SunOS are mutually exclusive and each are complete releases. One is not a prerequisite for the other.*
3. *A license for SunOS MLS can be purchased for existing workstations.*
4. *Licenses may be upgraded to later releases of software (see Support Services Pricelist).*
5. *Licenses may be upgraded later to add more users (see below).*
6. *No media or manuals are included.*
7. *Security restrictions within SunOS MLS may cause incompatibilities with some other Sun software products.*
8. *Sun LaserWriters used with SunOS MLS require secure version of LaserWriter InterfacKit (see Printers Section).*

License Upgrades to Add More Users

>From 2-User to Unlimited Users

LU1-2-MLS-UN
$2,500/A

NOTE: 1.   *To upgrade software release, refer to Support Services Price List.*

Secure Computing Products

Sun LaserWriter II for SunOS MLS

- Provides printer software security for SunOS MLS
- MC68000 graphics controller with 2 Mbytes of memory
- 8-page per minute printing engine
- Supports PostScript® protocols with built-in fonts with point sizes from 4 points and up
- LaserWriter Interface Kit

LaserWriter Interface Kit

- Serial cable
- TranScript™ UNIX operating system filters for *troff*, *ditroff*, plot, and Diablo 630 print files
- User documentation

Media / Version	LaserWriter 115 VAC	LaserWriter 240 VAC	LaserWriter Interface kit only
1/4"	LW1-MLS-01-2 $6,400 / B	LW2-MLS-01-2 $6,400 / B	LW-MLS-INT-01 $1,800 / N/D
1/2"	LW1-MLS-02-2 $6,400 / B	LW2-MLS-02-2 $6,400 / B	LW-MLS-INT-02 $1,800 / N/D

Order Number	Description	List Price	Discount Category
LW-21-2	**Toner Cartridge for LaserWriter II – Four Pak**	$ 500	N/D
LW-21	**Toner Cartridge for LaserWriter I – Four Pak**	500	N/D

NOTES: 1. *Printers that operate with SunOS MLS require this printer/TransScript package.*
2. *The only difference between products (e.g. LW1-01-2 and a LW1-MLS-01-2) is the software component; all LaserWriter hardware is identical. This LaserWriter is not TEMPEST.*
3. *For previously installed LaserWriters, order LaserWriter Interface Kit.*
4. *Maximum discount of Sun LaserWriter is 15%.*

Upgrades

Overview

The SunUpgrades Program is the exchange of a returned Sun product for an enhanced replacement product. SunUpgrades offer increased product performance at the lowest possible cost by protecting the existing investment already made in Sun technology. This section includes all upgrade products available from Sun. Each upgrade product defines a specific migration path from one product family (source) to another (destination). The available upgrade paths are organized by destination product family.

System Upgrades

System upgrades may be as simple as swapping one CPU board for another. Other upgrades may require swapping out a complete pedestal unit including CPU, memory, FPA, and other interface boards.

Memory Upgrades

Memory upgrades also may be as simple as swapping one board for another. Where noted, some upgrades may require the return of the CPU board for factory retrofit.

Mass Storage Upgrades

Mass storage upgrades offer replacement of lower capacity devices. Upgrades are also available for adding a second device in a pedestal or shoebox and adding mass storage to diskless and/or tapeless systems. Controller upgrades are also available.

Ordering Information

Orders may be placed through the local sales office or a customer may call 1-800-USA4Sun (prompt 6).

Replaced Parts

Unless otherwise noted, all upgrade prices require the return (to Sun) of the replaced parts, which become the property of Sun. The customer is responsible for packaging and return shipment within 15 days of receipt of the upgrade. If Sun does not receive the replaced parts within 15 days, the customer will be billed for the full list price of the parts replaced.

Each upgrade includes the packaging, instructions and Return Material Authorization (RMA) number necessary to ship the replaced parts back to Sun. The parts should be shipped to:

> Sun Microsystems, Inc.
> 1550 Buckeye Drive
> Milpitas, California 95035
> Attn: Upgrades Department MST2-316
> RMA number:

Warranty

Warranty on SunUpgrades is 90 days return-to-factory.

Installation

Customers with a Sun on-site hardware service contract receive installation of upgrades free of charge. Customers not under one of these contracts may purchase fixed-fee installation service from Sun. In either case, to request installation service, call 1-800-USA4Sun. Unless otherwise noted, fixed fee installation is $500 per product.

Prices

Prices may change without notice.

Upgrades

Order Number	Description	List Price	Discount Category
Sun-2 Upgrades			
UG20-4	**Sun-2/130 or 2/160 to 3/160U (4 Mbyte)**	$ 8,800	A
UG20-8	**Sun-2/130 or 2/160 to 3/160U (4 Mbyte) plus 4-Mbyte Expansion Memory**	12,800	A
	Notes for UG20: • CPU exchange • Requires SunOS 3.0 or later release • SKY FPP must be replaced with Sun-3 FPA		
UPG-1003	**Sun-2 VME Systems 2 Mbyte to 4 Mbyte**	1,700	A
	Notes: • Factory installation only • CPU must be returned for upgrade • Contact CSD Upgrades coordinator (408-922-4923) for return pkg & RMA#		
UPG-4MBPRIME	**Sun-2 Multibus 4-Mbyte Expansion**	3,400	A
Sun-3/100 to Sun-3/200			
UG200-8	**Sun-3/160 to 3/260 (8 Mbyte)**	15,400	A
UG200-16	**Sun-3/160 to 3/260 (16 Mbyte)**	23,400	A
	Notes for UG200: • Pedestal exchange including CPU and memory • 3/160M requires purchase of 365-1005 high-resolution monochrome monitor • Not supported: SYSGEN SCSI tape, 41-Mbyte and 71-Mbyte disk drive • Requires SunOS 3.2 or later release • To order systems configured for 240V European operation, append "V4" to the UG order number(e.g. UG200-8V4).		
UG200R-8	**Sun-3/180 to 3/280 (8 Mbyte)**	14,500	A
UG200R-16	**Sun-3/180 to 3/280 (16 Mbyte)**	22,500	A
	Notes for UG200R: • CPU and memory exchange • Requires SunOS 3.2 or later release • Not supported: SYSGEN SCSI tape, 41-Mbyte and 71-Mbyte disk drives		
Sun-3/100 to Sun-4/100			
UG4/110S8	**Sun-3/140S to 4/110S-8 without FPA**	11,900	A
UG4/110M8	**Sun-3/140M to 4/110M-8 without FPA**	13,400	A
UG4/110C8	**Sun-3/110C to 4/110C-8 without FPA**	15,400	A
UG4/110G8	**Sun-3/110G to 4/110G-8 without FPA**	15,400	A
UG4/110S16	**Sun-3/140S to 4/110S-16 without FPA**	18,700	A
UG4/110M16	**Sun 3/140M to 4/110M-16 without FPA**	20,200	A
UG4/110C16	**Sun 3/110C to 4/110C-16 without FPA**	22,200	A
UG4/110G16	**Sun 3/110G to 4/110G-16 without FPA**	22,200	A
UG4/110S32	**Sun 3/140S to 4/110S-32 without FPA**	32,300	A
UG4/110M32	**Sun 3/140M to 4/110M-32 without FPA**	33,800	A

Sun–3/100 to Sun–4/100, *continued*

Order Number	Description	List Price	Discount Category
UG4/110C32	**Sun–3/110C to 4/110C–32 without FPA**	$ 35,800	A
UG4/110G32	**Sun–3/110G to 4/110G–32 without FPA**	35,800	A

Notes for Sun–3/100 to Sun–4/100:
- CPU and memory board replacement
- 4/110 CPU uses two slots
- Order UPSYS4–3.2 or USS1– (01F,02F,03F, or 04F) at no charge
- Sun–3 clients being served by Sun–4 server need Sun–3 OS 3.5 when using Sun–4 OS UPSYS4–3.2. Order UPSYS3(01F, 02F,03F, or 04F) No charge–with UPSYS4–3.2 only
- Not supported: 41–Mbyte/71–Mbyte and SMD disk drives and SYSGEN SCSI tape
- Not compatible: 3/100 Memory, FPA, SCP, MAPKIT, IPC and SCSI.

Order Number	Description	List Price	Discount Category
UG4/110SE8	**Sun–3/140S to 4/110SE–8 with FPA**	14,400	A
UG4/110ME8	**Sun–3/140M to 4/110ME–8 with FPA**	15,900	A
UG4/110CE8	**Sun–3/110C to 4/110CE–8 with FPA**	17,900	A
UG4/110GE8	**Sun–3/110G to 4/110GE–8 with FPA**	17,900	A
UG4/110SE16	**Sun–3/140S to 4/110SE–16 with FPA**	21,200	A
UG4/110ME16	**Sun–3/140M to 4/110ME–16 with FPA**	22,700	A
UG4/110CE16	**Sun–3/110C to 4/110CE–16 with FPA**	24,700	A
UG4/110GE16	**Sun–3/110G to 4/110GE–16 with FPA**	24,700	A
UG4/110SE32	**Sun–3/140S to 4/110SE–32 with FPA**	34,800	A
UG4/110ME32	**Sun–3/140M to 4/110ME–32 with FPA**	36,300	A
UG4/110CE32	**Sun–3/110C to 4/110CE–32 with FPA**	38,300	A
UG4/110GE32	**Sun–3/110G to 4/110GE–32 with FPA**	38,300	A

Notes for Sun–3/100 to Sun–4/100:
- CPU and memory board replacement
- Sun–4/110 CPU uses 2 slots
- Order UPSYS4–3.2 or USS1– (01F,02F,03F, or 04F) at no charge
- Sun–3 clients being served by Sun–4 server need Sun–3 OS 3.5 when using Sun–4 OS UPSYS4–3.2. Order UPSYS3(01F, 02F,03F, or 04F). No charge–with UPSYS4–3.2 only
- Not supported: 41–Mbyte/71–Mbyte and SMD disk drives and SYSGEN SCSI tape
- Not compatible: Sun–3/100 Memory, FPA, SCP, MAPKIT, IPC, and SCSI

Upgrades

Order Number	Description	List Price	Discount Category

Sun–3/100 to Sun–4/200

| UG1004–8 | Sun–3/160 to 4/260–8 | $ 27,300 | A |
| UG1004–32 | Sun–3/160 to 4/260–32 | 44,100 | A |

Notes for UG1004:
- Pedestal exchange including CPU and memory
- Order UPSYS4–3.2 or USS1– (01F,02F,03F or 04F) at no charge
- Sun–3 clients being served by Sun–4 server need Sun–3 OS 3.5 when using Sun–4 OS UPSYS4–3.2. Order UPSYS3 (01F, 02F,03F or 04F). No charge–with UPSYS4–3.2 only
- 3/160M requires purchase of 365–1005 high–resolution monitor
- Not supported: 41–Mbyte/71–Mbyte Disk drives, SYSGEN SCSI tape, and Tapemaster controller (1600BPI)
- 1600–bpi tape is supported with 472 controller for backup only
- To order systems configured for 240V European operation, append "V4" to the UG order number (e.g., UG200–8V4).

| UG1004R–8 | Sun–3/180 to 4/280–8 | 24,400 | A |
| UG1004R–32 | Sun–3/180 to 4/280–32 | 41,600 | A |

Notes for UG1004R:
- CPU and memory exchange
- Order UPSYS4–3.2 or USS1– (01F, 02F, 03F, or 04F) at no charge
- Sun–3 clients being served by Sun–4 server need Sun 3 OS 3.5 when using Sun–4 OS UPSYS4–3.2. Order UPSYS3(01F, 02F,03F, or 04F). No charge–with UPSYS4–3.2 only
- Not supported: 41–Mbyte/71–Mbyte disk drives, SYSGEN SCSI tape, and tapemaster controller (1600–bpi)
- 1600–bpi tape is supported with 472 controller for backup only

Sun–3/200 to Sun–4/200

| UG2004 | Sun–3/260 or 3/280 to Sun–4/260 or 4/280 | 14,900 | A |

- CPU board replacement
- Order UPSYS4–3.2 or USS1– (01F,02F,03F or 04F) at no charge
- Sun–3 clients being served by Sun–4 server need Sun–3 OS 3.5 when using Sun–4 OS UPSYS4–3.2. Order UPSYS3(01F, 02F,03F, or 04F). No charge–with UPSYS4–3.2 only
- Sun–3/260's with serial # below 724E2223 require installation of FCO#808–0067
- Not supported: 41–Mbyte/71–Mbyte disk drives, SYSGEN SCSI tape and tapemaster controller (1600BPI)
- 1600–BPI tape is supported with 472 controller for backup only

Sun386i Upgrade

| UPG–RR–327E | 91–Mbyte to 327–Mbyte Disk | 6,000 | B |

Order Number	Description	List Price	Discount Category

Other System Upgrades

Order Number	Description	List Price	Discount Category
UG832	**8–Mbyte to 32–Mbyte Memory Expansion** ■ Upgrades one 8–Mbyte board (Sun–4 only)	$ 26,000	A
UG832–4	**4 x 8–Mbyte boards exchange for** **1 x 32–Mbyte board** ■ Free up 3 expansion slots (Sun–4 only)	20,000	A
UG325	**CG3 to CG5 Color Board** ■ CG5 Supports GP+ or GP2 ■ Requires SunOS 3.5 or later release	5,500	A
UG525	**CG3 to CG5 Color board upgrade plus GP2** **Enhanced Graphics Processor Board** ■ Combines UG325 and X212A products ■ CG5 Supports GP+ or GP2 ■ Requires SunOS 3.5 or later release	18,900	A
UPG–152A	**Add FPC to Sun–3/50** ■ Factory installation only. CPU must be returned for upgrade ■ Contact CSD Upgrades Coordinator (408–922–4923) for return packaging & RMA#	700	A
UPG–SCSI–EA	**SCSI–2 to SCSI–3 Host Adapter** **for Desktop and Rackmount Systems** ■ CPU board revision level must be: 3/110 Rev. 06 or greater 3/140 Rev. 09 or greater 3/180 Rev. 09 or greater ■ Requires SunOS 3.3 or later release	1,200	B
UPG–SCSI–EB	**SCSI–2 to SCSI–3 Host Adapter** **for Deskside Systems** ■ CPU board revision level must be: Sun–3/160 Rev 09 or greater ■ Requires SunOS 3.3 or later release	1,200	B
UPG–MCP–5.X–3–3–5	**SCP TO MCP IN 1/4" Format**	2,800	B
UPG–MCP–5.X–3–3–6	**SCP TO MCP IN 1/2"Format** ■ Requires Sun–3 user ■ Requires SunOS 3.X or above ■ Requires SunLink 5.0 or above	2,800	B
UPG–MCP–6.X–4–34–5	**SCP TO MCP IN 1/4" Format**	2,800	B
UPG–MCP–6.X–4–34–6	**SCP TP MCP IN 1/2" Format** ■ Requires Sun–3 or a Sun–4 user ■ Requires running SunOS 4.0 ■ Requires SunLink 6.0	2,800	B

Tapeless System Upgrades

Order Number	Description	List Price	Discount Category
UPG–SB–T	**Shoebox Cartridge Tape Upgrade**	2,500	B
UPG–PD–T	**Pedestal Cartridge Tape Upgrade**	2,500	B
UPG–PD–TS	**Pedestal Cartridge Tape Upgrade w/SCSI–2**	3,000	B
UPG–RM–TS	**Rack Cartridge Tape Upgrade** ■ Older racks may not have cut out for drive Note for all above: ■ For Sun–3 and Sun–4 only	3,000	B

Upgrades

Order Number	Description	List Price	Discount Category

Controller Upgrades

Order Number	Description	List Price	Discount Category
UPG-SMD-4-1-575	**450/451 to SMD-4 Controller with 575-Mbyte Disk** ■ For Sun-3/160 and 3/180 only ■ System must be running on 501-1208-xx CPU ■ 501-1164 CPU-based systems will receive no charge CPU exchange (501-1208-xx) when buying this product. ■ Refer to SMD-4 information on page 97. ■ Requires SunOS 4.0 or greater	$ 3,500	B
UPG-SMD-4-2-575	**450/451 to SMD-4 Controller with 575-Mbyte Disk** ■ For Sun-3/260 and 3/280 only ■ Requires SunOS 4.0 or greater	3,500	B
UPG-SMD-4-3-575	**450/451 to SMD-4 Controller with 575-Mbyte Disk** ■ For Sun-4/260 & 4/280 only ■ System must be running on a 501-1274-13 or above ■ 501-1274-12 or lower CPU based systems will receive no charge CPU exchange (501-1274-13 or above) when purchasing this product ■ Refer to SMD-4 information on page 97 ■ Requires SunOS 4.0 or greater	3,500	B
UPG-SMD-4-1-892	**450/451 to SMD-4 Controller with 892-Mbyte Disk** ■ For Sun-3/160 and 3/180 only ■ System must be running 501-1208-xx CPU ■ CPU exchange (501-1208-xx) when buying this product ■ Refer to SMD-4 information on page 97 ■ Requires SunOS 4.0 or greater	3,500	B
UPG-SMD-4-2-892	**450/451 TO SMD-4 Controller with 892-Mbyte Disk** ■ For Sun-3/260 and 3/280 only ■ Requires SunOS 4.0 or greater	3,500	B
UPG-SMD-4-3-892	**450/451 to SMD-4 Controller with 892-Mbyte Disk** ■ For Sun-4/260 and 4/280 only ■ System must be running on a 501-1274-13 or greater ■ 501-1274-12 or lower CPU based systems will receive no charge CPU exchange (501-1274-13 or greater) when buying this product ■ Refer to SMD-4 information on page 97 ■ Requires SunOS 4.0 or greater	3,500	B
UPG-451	**Xylogics 450 to 451 Controller Upgrade**	5,800	B

94

Order Number	Description	List Price	Discount Category
Diskless System Upgrades 141–Mbyte and 327–Mbyte			
UPG–PD–141S	Diskless to 141–Mbyte disk for Pedestal	$ 4,800	B
UPG–PD–141TS	Diskless to 141–Mbyte disk plus 60–Mbyte 1/4–inch cartridge tape for pedestal	6,800	B
UPG–PD–282S	Diskless to 2 x 141–Mbyte disks for pedestal	9,600	B
UPG–Pd–282TS	Diskless to 2 x 141–Mbyte disks plus 60–Mbyte 1/4–inch cartridge tape for pedestal	11,600	B
UPG–PD–327S	Diskless to 327–Mbyte disk	7,700	B
UPG–PD–327TS	Diskless to 327–Mbyte disk plus 60–Mbyte 1/4–inch Cartridge Tape	9,700	B
UPG–PD–654S	Diskless to 2 x 327–Mbyte disks	15,000	B
UPG–PD–654TS	Diskless to 2 x 327–Mbyte disks plus 60–Mbyte 1/4–inch cartridge tape Notes for all above: ▪ Requires SunOS 3.2 or later ▪ For Sun–3 and Sun–4 only	17,000	B

71–Mbyte Disk Upgrades

Order Number	Description	List Price	Discount Category
UPG–PD–71	41–Mbyte to 71–Mbyte disk for pedestal	3,000	B
UPG–PD–71X	Add 2nd 71–Mbyte disk for pedestal	3,000	B
UPG–PD–71TX	Add 2nd 71–Mbyte disk plus a 60–Mbyte 1/4–inch cartridge tape for pedestal Note for all above: ▪ For Sun–3 only	5,000	B

141–Mbyte Disk Upgrades

Order Number	Description	List Price	Discount Category
UPG–SB–141	71–Mbyte to 141–Mbyte disk for shoebox	3,500	B
UPG–SB–141T	71–Mbyte to 141–Mbyte disk plus 60–Mbyte 1/4–inch cartridge tape for shoebox	5,500	B
UPG–PD–141	41– or 71–Mbyte to 141–Mbyte disk for pedestal	3,500	B
UPG–PD–141X	Add 2nd 141–Mbyte disk to pedestal	4,800	B
UPG–PD–141T	41– or 71–Mbyte to 141–Mbyte disk plus a 60–Mbyte 1/4–inch cartridge tape for pedestal	5,500	B
UPG–PD–141TX	Add 2nd 141–Mbyte disk plus 60–Mbyte 1/4–inch cartridge tape for pedestal	6,800	B
UPG–PD–282	2 x 41– or 71–Mbyte to 2 x 141–Mbyte disks	7,000	B
UPG–PD–282T	2 x 41– or 71–Mbyte to (2) 141–Mbyte disks plus 60–Mbyte 1/4–inch cartridge tape Notes for all above: ▪ Requires SunOS 3.2 or later ▪ For Sun–3 and Sun–4 only	9,000	B

327–Mbyte Disk Upgrades

Order Number	Description	List Price	Discount Category
UPG–SB–327	71– or 141–Mbyte to 327–Mbyte disk for shoebox	6,700	B
UPG–SB–327T	71– or 141–Mbyte to 327–Mbyte disk plus 60–Mbyte 1/4" cartridge tape for shoebox	8,700	B
UPG–PD–327	71– or 141–Mbyte to 327–Mbyte disk for pedestal	6,700	B

Upgrades

Order Number	Description	List Price	Discount Category
UPG–PD–327T	71– or 141–Mbyte to 327–Mbyte disk plus 60–Mbyte 1/4–inch cartridge tape for pedestal	$ 8,700	B
UPG–PD–327X	Add 2nd 327–Mbyte disk for pedestal	7,300	B
UPG–PD–327TX	Add 2nd 327–Mbyte disk plus 60–Mbyte 1/4–inch cartridge tape for Pedestal	9,300	B
UPG–PD–654	2 x 71– or 141–Mbyte disks to 2 x 327–Mbyte disks	13,400	B
UPG–PD–654T	2 x 71– or 141–Mbyte disks to 2 x 327–Mbyte disks plus 60–Mbyte 1/4–inch cartridge tape	15,400	B

Notes for all above:
- Requires SunOS 3.2 or later
- For Sun–3 and Sun–4 only

280–Mbyte Disk Upgrades

UPG–Exp–280C	Add 2nd 280–Mbyte disk	11,700	B
UPG–280	130–Mbyte to 280–Mbyte disk	10,000	B

Notes for UPG–EXP and UPG–280:
- Requires Xylogics 451 Controller
- For Sun–3 and Sun–4 only

688–Mbyte Disk Upgrades

UPG–EXP–688–S4	280–Mbyte disk with 451 to 688–Mbyte disk with SMD–4	15,000	B
UPG–EXP–688A–S4	2 x 280–Mbyte disk with 451 to 2 x 688–Mbyte disk with SMD–4	25,000	B
UPG–EXP–688B–S4	1x280–Mbyte with 451 to 2 x 688–Mbyte disk with SMD–4	29,000	B

Notes for all above:
- To order systems configured for 240V European Operation, append (V4) to the order number (eg. UPG–EXP–688A–S4V4)
- Expansion pedestal exchange including disk and controller
- Requires SunOS 4.0 or later
- Supported on Sun–3 & Sun–4 Deskside Products only
- Supported on Sun SMD–4 Controller only
- Requires CPU Upgrade Exchange for 3/160, 3/180, 4/260 or 4/280 (See SMD–4 and 688–Mbyte disk information on page 97)
- Installed only in mass storage expansion pedestals
- No intermixing of 280–Mbyte and 688–Mbyte disks in expansion pedestal
- Maximum of 2 SMD–4 Controller's in system pedestal
- Maximum of 2 expansion pedestals per system
- No daisy chaining between expansion pedestals
- Required feature tape are included
- Required boot prom upgrade kit included as needed except for CPU Upgrade
- Customer–installable

UPG–EXP–688	Add second 688–Mbyte disk to a pedestal with 688 Mbytes	15,500	B

- Must be installed by SUN qualified field service engineer

Order Number	Description	List Price	Discount Category

892-Mbyte Disk Upgrades

UPG-892-Z4-1-575	575-Mbyte to 892-Mbyte disk	$ 17,900	B
UPG-892-Z4-1-380	380-Mbyte to 892-Mbyte disk	18,700	B
UPG-892-Z4-2-575	2 x 575-Mbyte to 2 x 892-Mbyte disks	31,800	B
UPG-892-Z4-2-380	2 x3 80-Mbyte to 2 x 892-Mbyte disks	33,400	B

Notes for UPG-892-Z4-1 and 2:
- Includes disk(s), 451 controller, tray and cables.
- Fixed-fee installation is $650 for single disk, $800 for dual-disk upgrade; Call 1-800-USA4SUN to order
- Older racks with lower fan require retrofit
- Requires SunOS 3.5
- For Sun-3 and Sun-4 only

UPG-892-Z4-1E-575	575-Mbyte to 892-Mbyte expansion disk	14,900	B
UPG-892-Z4-1E-380	380-Mbyte to 892-Mbyte expansion disk	15,700	B

Notes for UPG-892-Z4-1E:
- Includes disk and cables
- Fixed fee installation is $500 Call 1-800-USA4SUN to order
- Older Racks with lower fan require retrofit
- Must have 451 controller with rev. level F, F1 or above

UPG-892-575	575-Mbyte to 892-Mbyte disk	15,200	B
UPG-892-380	380-Mbyte to 892-Mbyte disk	16,000	B

- Includes Disk, Cables and Tray
- Fixed Fee Installation $650
- Call 1-800-USA-4SUN to order installation
- Older Racks with lower fan require retrofit
- Must have 451 Controller with Rev. level F, F1, or above
- Requires SunOS 3.5
- For Sun-3 and Sun-4 only

SMD-4 Controller and 688-Mbyte Disk Upgrade Information

The following information applies to ordering a CPU "no charge" upgrade when ordering the SMD-4 controller upgrade either by itself or packaged with the 688-Mbyte disk upgrade

CPU board upgrade must be ordered for all Sun-3/160, 3/180, 4/260, and 4/280 systems installed prior to 11/9/88.

For Sun-3/160 or Sun-3/180: CPU-31	For Sun-4/260 or Sun-4/280: CPU-42

NOTES: *1. CPU board upgrade is not required for any Sun-3/260 or 3/280.*
           2. CPU board upgrade must be ordered at zero dollars ($0) as a separate line item on same sales orders as SMD-4 based upgrades (i.e. UPG-SMD-4-1-575 or UPG-EXP-688-S4)

Appendix A

SMD-4 Ordering Instructions

SMD-4 based packages

- Must order SMD-4 feature tape (see matrix below).
- Must be running SunOS 4.0.

SMD-4 Options

- Standalone SMD-4 controller options (X401A or X410A) or SMD-4 based disk subsystems (i.e. X615B, X641A, etc.) must be ordered with a feature tape, boot prom and/or CPU board upgrade from matrixes below.
- All SMD-4 controllers require SunOS 4.0.
- Option X645A can only be ordered for systems already installed with option 641A or 643A.
- Option X646A can only be ordered for systems already installed with option 642A.
- 892-Mbyte standalone disk expansion subsystems with SMD-4 (X645A or X646A) are not factory installed and must be ordered as 230V or 240V by appending V3 or V4 to option number (e.g., X645AV3).

SMD-4 Feature Tape

Media \ Version		Domestic Only S/W (no manuals)	Domestic or Export S/W (no manuals)
For Sun-3: 68020 Based Systems	1/4"	FM2-4.0-05	FM2-4.0-07
	1/2"	FM2-4.0-06	FM2-4.0-08
For Sun-4: SPARC Based Systems	1/4"	FS1-4.0-05	FS1-4.0-07
	1/2"	FS1-4.0-06	FS1-4.0-08

NOTE: *1. One feature tape must be ordered at no charge as a separate line item on the same sales order with any SMD-4 option or SMD-4 based system package.*

SMD-4 Boot Prom for Sun-3

For Sun-3/160 or Sun-3/180: X31618J $50 / N/D	For Sun-3/260 or Sun-3/280: X32628J $50 / N/D

NOTES:
1. Boot prom must be ordered with any SMD-4 standalone option (e.g., X410A, X642A) for integration in any currently installed Sun-3 deskside or server system.
2. Boot prom must be ordered as separate line item on same sales order as SMD-4 based standalone option (e.g., X410A, X642A).
3. Boot prom is not required for any Sun-4 systems or Sun-3 systems ordered after 11-9-88.

CPU Board Upgrades

CPU board upgrade must be ordered for all Sun-3/160, 3/180, 4/260 and 4/280 systems installed prior to 11/9/88.

For Sun-3/160 or Sun-3/180: CPU-31	For Sun-4/260 or Sun-4/280: CPU-42

NOTES:
1. CPU board upgrade is not required for any Sun-3/260 or 3/280.
2. CPU board upgrade is not required for any new system shipped after 11/9/88.
3. CPU board upgrade must be ordered at zero dollars ($0) as a separate line item on same sales orders as SMD-4 based standalone option (e.g., X641A, X401A)
4. CPU board upgrade includes bootpProm. Do not order boot prom 31618J or 32628J when ordering CPU board upgrade.

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