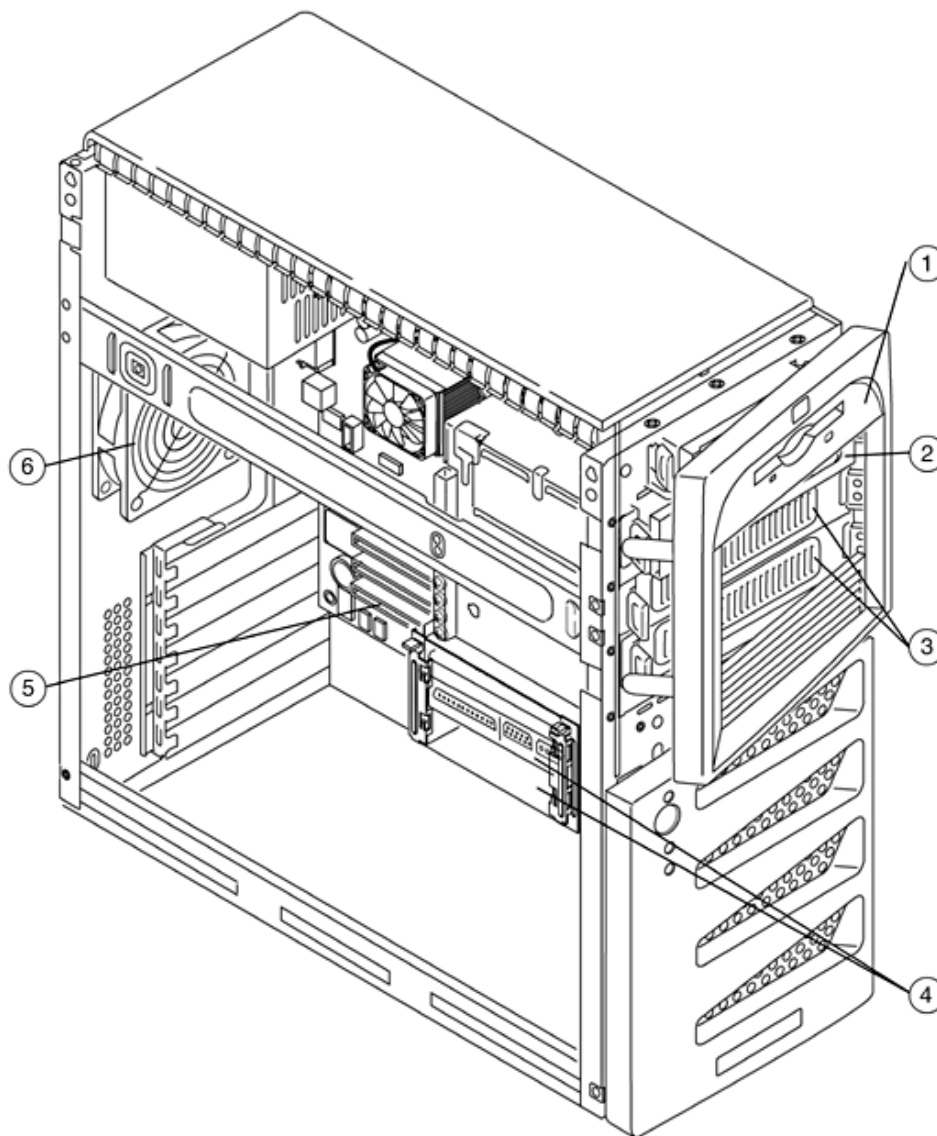*Overview*

1. 1.44 MB Floppy Drive
2. 48x CD-ROM
3. Two Removable Media Bays

4. Two 1" Non-Hot Plug Drive Bays
5. Five 64-bit/33-MHz PCI Slots
6. System Fan

What's New

- Supports 1 Intel® Celeron® 2.2 GHz, processor with 128-KB second level ECC cache standard, 400MHz front-side-bus
- Supports 1 Intel Pentium® 4 2.8 GHz processor with 512-KB second level ECC cache standard 533MHz front-side-bus

QuickSpecs

HP Server tc2120

Overview

At A Glance

- ServerWorks GC-SL Chipset with 400-MHz FSB (Celeron Models); or 533MHz FSB (Pentium 4 Models)
- 128-MB (Celeron model) or 256-MB (Pentium 4 models) of PC2100 DDR SDRAM running at 200MHz (Celeron Models) or 266MHz (Pentium 4 Models), with Advanced ECC capabilities standard, expandable to 4 GB
- NC7760 PCI Gigabit NIC (embedded) 10/100/1000 WOL (Wake on LAN)
- Integrated Dual Channel Ultra ATA/100 Adapter (ATA Models) or a Single Channel Wide Ultra3 SCSI Adapter (SCSI Models)
- Support for up to three 1" Ultra320 NHP SCSI hard drives or three 1" ATA/100 NHP Drives (depending on Model)
- Five total slots (5 available on ATA models, 4 available on SCSI models): four 64-bit/33MHz PCI at 3.3 volt and one 64-bit/33MHz PCI at 5 volt
- Internal storage capacity of up to 109.2 GB (3 x 36.4-GB non-hot plug 1" SCSI HD) (SCSI Models)
- Internal storage capacity of up to 240 GB (3x 80-GB 1" ATA/100 drives) (ATA Models)
- Integrated ATI Rage XL with 8MB SDRAM video
- 250W Power Supply
- Two USB ports
- ROM Based Setup Utility (RBSU) and PXE support
- Protected by HP Services, including a one-year, limited warranty, Next Business Day 1 year on-site limited Global warranty – Certain restrictions and exclusions apply. Consult the Customer Support Center at 1-800-345-1518 for details

invent

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QuickSpecs

Standard Features

Processor *One of the following depending on Model*	Intel Pentium 4 processor 2.66 GHz or 2.8 GHz, 533 MHz Front Side Bus Intel Celeron processor 2.0 GHz or 2.2 GHz, 400 MHz Front Side Bus	

Cache Memory *One of the following depending on Model*	Integrated 512-KB Level 2 ECC cache (Pentium 4 models only) Integrated 128-KB Level 2 ECC cache (Celeron models only)	

Memory *One of the following depending on Model*	Standard	128 MB PC2100 DDR SDRAM running at 200MHz, with Advanced ECC capabilities (on Celeron models)
	Maximum	4 GB
	Standard	256 MB PC2100 DDR SDRAM running at 266MHz, with Advanced ECC capabilities (on Pentium 4 models)
	Maximum	4 GB

Network Controller	NC7760 PCI Gigabit NIC (embedded) 10/100/1000 WOL (Wake on LAN)

Expansion Slots	I/O (5 Total, 5 Available in ATA models, 4 Available in SCSI models)	PCI Voltage:
	64-bit/33MHz PCI 4	3.3 volts
	1	5 volts

Storage Controller *One of the following depending on Model*	HP Single Channel Ultra3 SCSI Adapter (SCSI Models) Integrated Dual Channel Ultra ATA-100 IDE (ATA Models)

Storage	Diskette Drives	1.44 MB
	CD-ROM	48x IDE (ATAPI) CD-ROM Drive
	Hard Drives	One of the following:
		• 36.4-GB Ultra320 SCSI 10,000 rpm 1"Drive (SCSI models)
		• 40-GB ATA/100 7200 rpm 1"Drive (ATA Models only)
	Maximum Internal Storage (SCSI Models)	109.2 GB Internal Drive Cage Maximum SCSI capacity (3 x 36.4 GB)
	Maximum Internal Storage (ATA Models)	240 GB (3 x 80.0 GB) (internal drive bays and removable media bays)

Interfaces	Parallel	1
	Serial	1
	Pointing Device (Mouse)	1
	Graphics	1
	Keyboard	1
	USB	2
		NOTE: Please see the following URL for additional information regarding USB support: http://h18004.www1.hp.com/products/servers/platforms/usb-support.html.
	Network RJ-45 (Ethernet)	1

Standard Features

Graphics	Integrated ATI RAGE XL Video Controller with 8MB SDRAM Video Memory

Form Factor	Tower (5U)

Industry Standard Compliance	ACPI V1.0b Compliant PCI 2.2 Compliant PXE Support WOL Support Microsoft® Logo certifications Novell Logo certifications

Manageability	Online ROM Flash Utility BIOS Serial Console

Security	Power-on password Setup password Diskette boot control Intruder Alert Message

Server Power Cords	One Lowline NEMA power cord and one Highline IEC Power cord ships standard

Power Supply	250 Watts, PFC (Power Factor Correcting)

System Fans	1 – Non-hot plug, Non-redundant system fan shipped standard 1 – Non-hot plug, Non-redundant CPU heatsink fan shipped standard

OS Support	Microsoft BackOffice Small Business Server 2000 Microsoft Windows® 2000 Server Microsoft Windows Server 2003 Microsoft Windows Small Business Server 2003 Novell NetWare 5.1 Novell Netware 6 Novell Small business Suite 6 LINUX (Red Hat, SuSE) NOTE: For an up-to-date listing of the latest tc2120 OS support matrix, please see: http://www.hp.com/go/supportos. NOTE: For an up-to-date listing of the latest drivers available for the HP server tc2120, please see: http://h20004.www2.hp.com/soar_rnotes/bsdmatrix/matrix296540en_US.html NOTE: For a more complete and up-to-date information on Linux support, please visit HP Linux Web site at http://h18000.www1.hp.com/products/servers/linux/hpLinuxcert.html.

Standard Features

Service and Support

One-year limited warranty, including hardware diagnostic support, pre-failure warranty (coverage of hard drives, memory and processors). The warranty is fully supported by HP Services and a worldwide network of resellers and service providers. In addition 90-day's getting started software telephone support may be covered under the warranty or available for an additional fee. Enhancements to warranty services are available through HP Care Pack services.

NOTE: Limited warranty includes 1 year parts, 1 year labor, 1-year on-site support

Care Pack services provide a range of life cycle support options that let you choose the service levels that meet your business requirements, from basic to mission-critical.

A full range of HP Care Pack hardware and software services are available including:

- Installation and start up
- Education courses
- Extended onsite hardware coverage hours from same business day 13 hours, 5 day to 24 hours, 7 days call window with options including 4-hour response or 6-hour Call To Repair
- Comprehensive range of software technical support for Microsoft, Linux, ProLiant Essentials and VMWare-based IT solutions helping to deliver high level of application availability. Response times range from 30 mins for critical problems to 2 hours.
- System Management, Performance Services and Mission Critical Support Solution

Service includes HP branded hardware options qualified for the server, purchased at the same time or afterwards, internal to the enclosure, and 22" and smaller external monitors will be covered at the same service level and coverage period as the server. For servers or storage systems installed within a rack, service also covers all HP qualified rack options installed within the same rack.

NOTE: For more information on HP Care Pack services, contact any of our worldwide sales offices or resellers or visit our worldwide Web site on the internet at: http://www.hp.com/hps/carepack

NOTE: For more complete information on HP Services offerings, customers and resellers, please visit us at:http://www.hp.com/hps

NOTE: Additional information regarding worldwide limited warranty and technical support is available at: http://h18004.www1.hp.com/products/servers/platforms/warranty/index.html

QuickSpecs

Models

tc2120T01 P2.66-512KB 512MB, 40GB, ATA with Win SBS 2003 351215-xx1		
	Processor	(1) Intel Pentium 4 2.66 GHz (standard)
	Cache Memory	Integrated 512-KB Level 2 cache
	Memory	512 MB (Standard) to 4 GB (Maximum) PC2100 DDR SDRAM DIMM Memory running at 266MHz, with Advanced ECC capabilities
	Network Controller	NC7760 PCI Gigabit NIC (embedded) 10/100/1000 WOL (Wake on LAN)
	Storage Controller	HP Single Channel Ultra3 SCSI Adapter
	Hard Drive	40 GB Ultra ATA/100
	Internal Storage	240 GB maximum
	Optical Drive	48x IDE (ATAPI) CD-ROM Drive
	Form Factor	Tower (5U)
	OS	Microsoft Windows Small Business Server 2003 + 5 CALs standard (pre-installed)

tc2120T01 C2.2-128KB 128MB, 40GB, ATA 345692-xx1		
	Processor	(1) Intel Celeron 2.2 GHz (standard)
	Cache Memory	Integrated 128-KB Level 2 cache
	Memory	128 MB (Standard) to 4 GB (Maximum) PC2100 DDR SDRAM DIMM Memory running at 200MHz, with Advanced ECC capabilities
	Network Controller	NC7760 PCI Gigabit NIC (embedded) 10/100/1000 WOL (Wake on LAN)
	Storage Controller	Integrated Dual Channel Ultra ATA-100 IDE
	Hard Drive	40 GB Ultra ATA/100
	Internal Storage	240 GB maximum (with optional hard drives)
	Optical Drive	48x IDE (ATAPI) CD-ROM Drive
	Form Factor	Tower (5U)

tc2120T01 P2.8-512KB 256MB, 40GB, ATA 335876-xx1		
	Processor	(1) Intel Pentium 4 2.8 GHz (standard)
	Cache Memory	Integrated 512-KB Level 2 cache
	Memory	256 MB (Standard) to 4 GB (Maximum) PC2100 DDR SDRAM DIMM Memory running at 266MHz, with Advanced ECC capabilities
	Network Controller	NC7760 PCI Gigabit NIC (embedded) 10/100/1000 WOL (Wake on LAN)
	Storage Controller	Integrated Dual Channel Ultra ATA-100 IDE
	Hard Drive	40 GB Ultra ATA/100
	Internal Storage	240 GB maximum (with optional hard drives)
	Optical Drive	48x IDE (ATAPI) CD-ROM Drive
	Form Factor	Tower (5U)

tc2120T01 P2.8-512KB 256MB, 36GB, SCSI 335877-xx1		
	Processor	(1) Intel Pentium 4 2.8 GHz (standard)
	Cache Memory	Integrated 512-KB Level 2 cache
	Memory	256 MB (Standard) to 4 GB (Maximum) PC2100 DDR SDRAM DIMM Memory running at 266MHz, with Advanced ECC capabilities
	Network Controller	NC7760 PCI Gigabit NIC (embedded) 10/100/1000 WOL (Wake on LAN)
	Storage Controller	HP Single Channel Ultra3 SCSI Adapter
	Hard Drive	36.4 GB Ultra320 SCSI 10,000 rpm 1"Drive
	Internal Storage	109.2 GB maximum
	Optical Drive	48x IDE (ATAPI) CD-ROM Drive
	Form Factor	Tower (5U)

Models

tc2120T01 P2.8-512KB 256MB, 36GB, SCSI with W2K 335878-xx1	Processor	(1) Intel Pentium 4 2.8 GHz (standard)
	Cache Memory	Integrated 512-KB Level 2 cache
	Memory	256 MB (Standard) to 4 GB (Maximum) PC2100 DDR SDRAM DIMM Memory running at 266MHz, with Advanced ECC capabilities
	Network Controller	NC7760 PCI Gigabit NIC (embedded) 10/100/1000 WOL (Wake on LAN)
	Storage Controller	HP Single Channel Ultra3 SCSI Adapter
	Hard Drive	36.4 GB Ultra320 SCSI 10,000 rpm 1"Drive
	Internal Storage	109.2 GB maximum
	Optical Drive	48x IDE (ATAPI) CD-ROM Drive
	Form Factor	Tower (5U)
	OS	Windows 2000 Server + 5 CALs standard with W2K (pre-installed)

tc2120T01 C2.0-128KB 128MB, 40GB, ATA 323741-xx1	Processor	(1) Intel Celeron 2.0 GHz (standard)
	Cache Memory	Integrated 128-KB Level 2 cache
	Memory	128 MB (Standard) to 4 GB (Maximum) PC2100 DDR SDRAM DIMM Memory running at 200MHz, with Advanced ECC capabilities
	Network Controller	NC7760 PCI Gigabit NIC (embedded) 10/100/1000 WOL (Wake on LAN)
	Storage Controller	Integrated Dual Channel Ultra ATA-100 IDE
	Hard Drive	40 GB Ultra ATA/100
	Internal Storage	240 GB maximum (with optional hard drives)
	Optical Drive	48x IDE (ATAPI) CD-ROM Drive
	Form Factor	Tower (5U)

tc2120T01 P2.66-512KB 256MB, 40GB, ATA 335873-xx1	Processor	(1) Intel Pentium 4 2.66 GHz (standard)
	Cache Memory	Integrated 512-KB Level 2 cache
	Memory	256 MB (Standard) to 4 GB (Maximum) PC2100 DDR SDRAM DIMM Memory running at 266MHz, with Advanced ECC capabilities
	Network Controller	NC7760 PCI Gigabit NIC (embedded) 10/100/1000 WOL (Wake on LAN)
	Storage Controller	Integrated Dual Channel Ultra ATA-100 IDE
	Hard Drive	40 GB Ultra ATA/100
	Internal Storage	240 GB maximum (with optional hard drives)
	Optical Drive	48x IDE (ATAPI) CD-ROM Drive
	Form Factor	Tower (5U)

tc2120T01 P2.66-512KB 256MB, 36GB, SCSI 335874-xx1	Processor	(1) Intel Pentium 4 2.66 GHz (standard)
	Cache Memory	Integrated 512-KB Level 2 cache
	Memory	256 MB (Standard) to 4 GB (Maximum) PC2100 DDR SDRAM DIMM Memory running at 266MHz, with Advanced ECC capabilities
	Network Controller	NC7760 PCI Gigabit NIC (embedded) 10/100/1000 WOL (Wake on LAN)
	Storage Controller	HP Single Channel Ultra3 SCSI Adapter
	Hard Drive	36.4 GB Ultra320 SCSI 10,000 rpm 1"Drive
	Internal Storage	109.2 GB maximum
	Optical Drive	48x IDE (ATAPI) CD-ROM Drive
	Form Factor	Tower (5U)

QuickSpecs

Models

tc2120T01	Processor	(1) Intel Pentium 4 2.66 GHz (standard)
P2.66-512KB	**Cache Memory**	Integrated 512-KB Level 2 cache
256MB, 36GB, SCSI with	**Memory**	256 MB (Standard) to 4 GB (Maximum) PC2100 DDR SDRAM DIMM Memory running at 266MHz, with Advanced ECC capabilities
W2K		
335875-xx1	**Network Controller**	NC7760 PCI Gigabit NIC (embedded) 10/100/1000 WOL (Wake on LAN)
	Storage Controller	HP Single Channel Ultra3 SCSI Adapter
	Hard Drive	36.4 GB Ultra320 SCSI 10,000 rpm 1"Drive
	Internal Storage	109.2 GB maximum
	Optical Drive	48x IDE (ATAPI) CD-ROM Drive
	Form Factor	Tower (5U)
	OS	Windows 2000 Server + 5 CALs standard with W2K (pre-installed)

Country Code Key	XX=00	NA	XX=42	Euro
	XX=01	Australia	XX=AB	Taiwan
	XX=03	UK	XX=AD	Korea
	XX=04	Germany	XX=AA	PRC
	XX=05	France	XX=29	Japan
	XX=37	AP		

Options

Memory (DIMMs)	1024MB of Advanced ECC PC2100 DDR SDRAM DIMM Memory Kit (1 x 1024 MB)	287497-B21
	512MB of Advanced ECC PC2100 DDR SDRAM DIMM Memory Kit (1 x 512 MB)	287496-B21
	256MB of Advanced ECC PC2100 DDR SDRAM DIMM Memory Kit (1 x 256 MB)	287495-B21
	128MB of Advanced ECC PC2100 DDR SDRAM DIMM Memory Kit (1 x 128 MB)	287494-B21

Optical Drives	CD-RW/DVD-ROM Combo Drive Option Kit	331346-B21

Hard Drives	**Wide Ultra3 SCSI – Non-Hot Plug**	
	NOTE: These drives require an additional SCSI controller in ATA models.	
	36-GB U320 10,000 rpm Non-Hot Plug Hard Drive,(1")	271832-B21
	ATA 100 – Non-Hot Plug (ATA Models only)	
	80-GB ATA/100 7,200 rpm Drive (1")	278424-B21
	40-GB ATA/100 7,200 rpm Drive (1")	230534-B21

Storage Controllers – SCSI Drives	NOTE: The following Storage Controllers are qualified for SCSI drives only. They do not support the ATA Drives.	
	HP Single Channel Ultra3 SCSI Adapter Kit	311863-B21
	Adaptec PCI 2100S SCSI RAID controller	335956-B21

Communications	NC3123 Fast Ethernet NIC PCI 10/100 WOL and PXE	174830-B21
	NC7131Gigabit Server Adapter, 64-bit/66MHz, PCI, 1000 SX	158575-B21
	56K v.90 PCI Modem	239137-xx1

Country Key Code

XX = 00	US	XX = 15	Greece
XX = 01	Austria	XX = 16	S. America
XX = 03	UK	XX = 17	ARAB
XX = 04	Germany	XX = 18	Belgium
XX = 05	France	XX = 24	Poland
XX = 06	Italy	XX = 28	Thailand
XX = 07	Spain	XX = 29	Japan
XX = 08	Denmark	XX = 33	Netherlands
XX = 09	Norway	XX = 35	Finland
XX = 10	Sweden/Finland	XX = 37	APD
XX = 11	Switzerland	XX = AB	Taiwan
XX = 12	French Canadian	XX = AD	Korea
XX = 13	Portugal	XX = BB	HE
XX = 14	Turkey	XX = C9	LA MERCO

Options

Tape Backup Drives	NOTE: In order to install certain tape drives internally, you may need to remove the rails that come standard on the drives and then re-insert the screws in the mounting holes. Mounting screws are shipped standard with server.	
	NOTE: External tape devices, including both tape drives and tape arrays/enclosures, can be directly connected to the VHDCI SCSI port located on the back of the server. Use of a SCSI adapter to connect these devices is optional, not required.	

Internal, External, Hot-Plug, and Rack-Mount DAT Drives

HP StorageWorks DAT 72e Tape Drive, External (Carbon)	Q1523A
HP StorageWorks DAT 72i Tape Drive, Internal (Carbon)	Q1522A
HP StorageWorks DAT 40e Tape Drive, External (Carbon)	C5687C
HP StorageWorks DAT 40i Tape Drive, Internal (Carbon)	C5686B
HP StorageWorks DAT 24e Tape Drive, External (Flint)	C1556D
HP StorageWorks DAT24i Tape Drive, Internal (Flint)	C1555D

NOTE: When installing a DAT 24i, DAT 40i or a DAT 72i in a tc2120 ATA model a SCSI controller kit will be required (PN: 284688-B21 (U3 Alt OS) or 268351-B21 (U320)).

Other	
Internal SCSI Cable Option Kit, 4 drops	166389-B21
Internal SCSI Cable Option Kit, 2 drops	273463-B21

NOTE: For a complete list of keyboards and mice please view the following URL:
http://h30143.www3.hp.com/options.cfm?oid=89301
&from=enter.cfm&param=oid&val=89301#m_11

Service and Support Offerings (HP Care Pack Services)

Hardware Services 4-Hour On-site Service

13-Hour x 5-Day Coverage, 3 Years (U.S. Part Number)	331136-002
13-Hour x 5-Day Coverage, 3 Years (Canadian Part Number)	FP-TU3EC-36
13-Hour x 5-Day Coverage, 3 Years (Global/EMEA Part Number)	U4434A U4434E
24-Hour x 7-Day Coverage, 3 Years (U.S. Part Number)	321653-002
24-Hour x 7-Day Coverage, 3 Years (Canadian Part Number)	FP-TU7EC-36
24-Hour x 7-Day Coverage, 3 Years (Global/EMEA Part Number)	U4435A U4435E

Hardware Services Next Business Day On-Site Service

9-Hour x 5-Day Coverage, 3 Years (U.S. Part Number)	321651-002
9-Hour x 5-Day Coverage, 3 Years (Canadian Part Number)	FP-TUXEC-36
9-Hour x 5-Day Coverage, 3 Years (Global/EMEA Part Number)	U4433A U4433E
Hardware Installation (US Part Number)	321671-002
Hardware Installation (Canadian Part Number)	FP-TUINS-EC
Hardware Installation (Global/EMEA Part Number)	U4444A U4444E

NOTE: For more information, customer/resellers can contact http://www.hp.com/services/carepack.

QuickSpecs

Tested Product List

NOTE: The Tested Product List (TPL) is a list of HP and standard 3rd party devices (hardware or software) that have been tested by either HP or independent test houses for basic compatibility with the HP server tc2120. HP products are supported by HP, non-HP products are not supported by HP. For non-HP products, you must obtain support from their own manufacturer. Non-HP third party products have been tested only for compatibility with the specified HP server. This level of testing confirms proper device recognition by the HP server and basic compatibility with the identified HP server. HP disclaims all responsibility and liability for the manufacturing, distribution, marketing, licensing, installation, use, performance, maintenance, safety, regulatory certification, and support of these 3rd party products.

IDE RAID Controller	Manufacturer	Promise Technology, Inc.
	Product	FastTrak 100 TX2 IDE RAID Controller
	Channels	Two (2) Independent Data Channels
	RAID Configurations	RAID levels 0,1
	Capacity	240GB (3x80GB ATA) in tc2120
	Data Transfer Method	32-bit, 33MHz PCI Bus Master
	Manufacturer's Website	http://www.promise.com/

Memory

HP server tc2120 Celeron Models
Standard Memory

128-MB of PC2100 DDR SDRAM running at 200MHz, with Advanced ECC capabilities Memory installed (1 x 128-MB SDRAM DIMM).

Standard Memory Plus Optional Memory

Up to 3200-MB memory is available with the optional installation of PC2100 Registered ECC DDR SDRAM DIMM Memory kits.

Standard Memory Replaced with Optional Memory

Up to 4096-MB of memory is available with the removal of the standard 128-MB of memory and the optional installation of PC2100 Registered ECC DDR SDRAM DIMM Memory kits.

NOTE: Charts do not represent all possible memory configurations.

Memory		Slot			
		1	2	3	4
Standard	128 MB	Empty	Empty	Empty	128 MB
Optional	3200 MB	1024 MB	1024 MB	1024 MB	128 MB
Maximum	4096 MB	1024 MB	1024 MB	1024 MB	1024 MB

Following are memory options available from HP:
- 128MB of Advanced ECC PC2100 DDR SDRAM DIMM Memory Kit (1 x 128 MB)   287494-B21
- 256MB of Advanced ECC PC2100 DDR SDRAM DIMM Memory Kit (1 x 256 MB)   287495-B21
- 512MB of Advanced ECC PC2100 DDR SDRAM DIMM Memory Kit (1 x 512 MB)   287496-B21
- 1024MB of Advanced ECC PC2100 DDR SDRAM DIMM Memory Kit (1 x 1024 MB)   287497-B21

HP server tc2120 Pentium 4 Models
Standard Memory

256-MB of PC2100 DDR SDRAM running at 266MHz, with Advanced ECC capabilities Memory installed (1 x 256-MB SDRAM DIMM).

Standard Memory Plus Optional Memory

Up to 3328-MB memory is available with the optional installation of PC2100 Registered ECC DDR SDRAM DIMM Memory kits.

Standard Memory Replaced with Optional Memory

Up to 4096-MB of memory is available with the removal of the standard 256-MB of memory and the optional installation of PC2100 Registered ECC DDR SDRAM DIMM Memory kits.
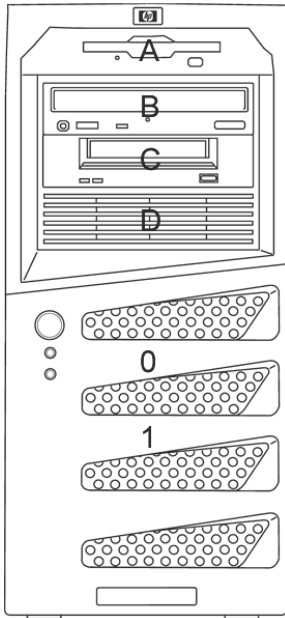
NOTE: Charts do not represent all possible memory configurations.

Memory		Slot			
		1	2	3	4
Standard	256 MB	Empty	Empty	Empty	256 MB
Optional	3328 MB	1024 MB	1024 MB	1024 MB	256 MB
Maximum	4096 MB	1024 MB	1024 MB	1024 MB	1024 MB

Following are memory options available from HP:
- 128MB of Advanced ECC PC2100 DDR SDRAM DIMM Memory Kit (1 x 128 MB)   287494-B21
- 256MB of Advanced ECC PC2100 DDR SDRAM DIMM Memory Kit (1 x 256 MB)   287495-B21
- 512MB of Advanced ECC PC2100 DDR SDRAM DIMM Memory Kit (1 x 512 MB)   287496-B21
- 1024MB of Advanced ECC PC2100 DDR SDRAM DIMM Memory Kit (1 x 1024 MB)   287497-B21

Storage

B		48x IDE (ATAPI) CD-ROM
A		3.5 in. Diskette Drive
B, C, D		Removable Media Bays (1.6" each)
0, 1		Two 1" Non-Hot Plug Drive Bays

Drive Support

	Quantity Supported	Position Supported	Controller
Removable Media			
1.44-MB Diskette Drive	Up to 1	E	Integrated
IDE (ATAPI) CD-ROM Drive	Up to 2	B or C	Integrated IDE (ATAPI)
DVD-ROM Drive Option Kit	Up to 2	B or C	Integrated IDE (ATAPI)

Hard Drives (SCSI Models only)

Ultra 320 SCSI — Non-Hot Plug

	Quantity Supported	Position Supported	Controller
1-inch 36.4-GB 10,000 rpm	Up to 3	0,1, or D	HP Single Channel Ultra3 SCSI Adapter (SCSI Models)

Hard Drives (ATA Models only)

ATA/100 IDE — Non-Hot Plug

	Quantity Supported	Position Supported	Controller
1-inch 80.0-GB 40.0-GB	Up to 3	0,1, or D	Integrated Dual Channel Ultra ATA-100 Adapter (ATA Models)

Maximum Storage Capacity - SCSI Models

Internal	109.2 GB (3 x 36.4 GB non-hot-plug hard drives)
Total	109.2 GB

QuickSpecs

Storage

Tape Drives

NOTE: For an up-to-date listing of the latest O/S Support details for each of the Tape Drives listed below, please see the following:
http://www5.compaq.com/products/quickspecs/North_America/10233.html (North America)
http://www5.compaq.com/products/quickspecs/Division/10233.html (Worldwide)

	Quantity Supported	Position Supported	Controller
HP StorageWorks DAT 72 Tape Drive, Internal HP StorageWorks DAT 40 Tape Drive, Internal HP StorageWorks DAT 24 Tape Drive, Internal	Up to 2	C or D	HP Single Channel Ultra3 SCSI Adapter (on SCSI server models) 64-Bit/133Mhz Dual Channel Ultra320 SCSI Adapter 64-Bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS
HP StorageWorks DAT 72 Tape Drive, External HP StorageWorks DAT 40 Tape Drive, External HP StorageWorks DAT 24 Tape Drive, External	Up to 2 per bus	External	HP Single Channel Ultra3 SCSI Adapter (on SCSI server models) 64-Bit/133Mhz Dual Channel Ultra320 SCSI Adapter 64-Bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS

QuickSpecs

Power Specifications

Part Number	311868-001
Spare Kit	311178-001
Operational Input Voltage Range (V rms)	90 to 140 or 180 to 264 switch selectable
Frequency Range (Nominal) (Hz)	43 to 66 (50/60)

Nominal Input Voltage (Vrms)	100	115	208	220	230	240
Max Rated Output Wattage Rating	N/A	250	N/A	N/A	250	N/A
Nominal Input Current (A rms)	N/A	4.0	N/A	N/A	2.0	N/A
Max Rated Input Wattage Rating (Watts)	N/A	310	N/A	N/A	310	N/A
Max. Rated VA (Volt-Amp)	N/A	460	N/A	N/A	460	N/A
Efficiency (%)	N/A	>65%	N/A	N/A	>65	N/A
Power Factor	N/A					
Leakage Current (mA)	N/A	3.5mA	N/A	N/A	3.5mA	N/A
Maximum Inrush Current (A peak)	N/A	120	N/S	N/A	120	N/A
Maximum Inrush Current duration (mS)	N/A					

System Specifications

	Power **
TC2120 Fully Configured	(see **)
Fully Loaded System Input Wattage (W)	248.7
Fully Loaded System Input Current (A rms)	1.1 4 @ 115V, 2A @ 230V
Fully Loaded System Thermal (BTU- Hr)	1108
Fully Loaded System VA (Volt-Amp)	N/A
System Leakage with all power supplies loaded (mA)	3.5mA
System Inrush Current with all power supplies loaded (A)	120
Power cord requirements	Nema 5-15P to IEC320-C13
	IEC320-C13 to IEC320-C14

**Power shown is for a fully configured system consisting of (1) CPU, (4) double-sided DIMMs, (3) HDDs, (1) CD-ROM, (1) DVD-ROM, (4) PCI cards, and (1) power supply.

Power Cords (13 Cord Sets)	
Country	Power Cord Part Number
APD	100614-009
Korea	100614-009
Italy	109197-008
Australia	100661-001
Euro	100614-009
France	100614-009
Germany	100614-009
Japan	139867-004
PRC	286496-001
UK	100613-008
US, Taiwan	121565-001

Technical Specifications

System Unit	Dimensions (HxWxD) (with feet)	18.6 x 8.1 x 18.4 in (47.3 x 20.5 x 46.7 cm)	
	Weight (approximate)	33.7 lb (15.3 kg)	
	Input Requirements (per power supply)	Range Input Voltage	90 to 140 VAC/180 to 264 VAC
		Normal Line Voltage	115 or 230 VAC
	Line Frequency	50 to 60 Hz	
	Rated Input Current	load 4A at 115VAC, 2A at 230VAC	
	BTU Rating	1,108 BTU	
	SCSI Connectors (SCSI Models only)	One internal LVD/SE connector for U160 devices, plus two internal SE connectors for legacy devices.	
	Power Supply Output Power (per power supply)	Rated Steady-State Power	250W
		Maximum Peak Power	310W
	Temperature Range	Operating	50° to 93° F (10° to 35° C)
		Shipping	-40° to 150° F (-40° to 66° C)
	Relative Humidity (non-condensing)	Operating	20% to 80%
		Non-operating	5% to 90%
	Acoustic Noise	Idle (Fixed Disk Drives Spinning)	
		L WAd (BELS)	4.3
		L pAm (dBA)	31
		Operating (Random Seeks to Fixed Disks)	
		L WAd (BELS)	5.0
		L pAm (dBA)	34

1.44-MB Diskette Drive	Diskette Size	3.5 in (8.89 cm)	
	LED Indicators (front panel)	Green	
	Read/Write Capacity per Diskette (high/low density)	1.44 MB/720 KB	
	Drive Supported	One	
	Drive Height	One-third	
	Drive Rotation	300 rpm	
	Transfer Rate (high/low)	500 K/250 K bits/s	
	Bytes/Sector	512	
	Sectors/Track (high/low)	18/9	
	Tracks/Side (high/low)	80/80	
	Access Times	Track-to-Track (high/low)	3/6 ms
		Average (high/low)	169/94 ms
		Settling Time	15 ms
		Latency Average	100 ms
	Cylinders (high/low)	80/80	
	Read/Write Heads	Two	

QuickSpecs

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Technical Specifications

Non-Hot Plug Ultra320 SCSI Hard Drives	36.4 GB 10K 271832-B21	**Capacity**	36,419.2 MB	
		Height	1 in (2.54 cm)	
		Width	4 in (10.16 cm)	
		Interface	Wide Ultra320 SCSI	
		Transfer Rate Synchronous (Maximum)	320 MB/s	
		Seek Time (typical reads, including settling)	Single Track	0.7 ms
			Average	5.4 ms
			Full-Stroke	11 ms
			Rotational Speed	10,000 rpm
		Physical Configuration	Bytes/Sector	512
			Logical Blocks	71,132,000
		Operating Temperature	50° to 95° F (10° to 35° C)	

Non-Hot Plug ATA/100 Hard Drives	40 GB 7.2K 230534-B21	**Capacity**	40027 MB	
		Height	1.0 in (2.54 cm)	
		Width	4.0 in (10.16 cm)	
		Interface	ATA 100	
		Transfer Rate Synchronous (Maximum)	100 MB/s	
		Seek Time (typical reads, including settling)	Single Track	0.8 ms
			Average	8.5 ms
			Full-Stroke	17.8 ms
			Rotational Speed	7,200 rpm
		Physical Configuration	Bytes/Sector	512
			Logical Blocks	78,177,792
		Operating Temperature	41° to 131° F (5° to 55° C)	

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Technical Specifications

48X Max IDE (ATAPI) CD-ROM Drive	Disk	Applicable Disk	CD-ROM, CD-XA, CD-DA (Mode 1, Mode 2, Form 1 and 2)
			Photo CD (Single and Multi-session)
			Mixed Mode (Audio and Data combined)
			CD-R
		Capacity	540 MB (Mode 1, 12 cm)
			650 MB (Mode 2, 12 cm)
	Block Size	Mode 1	2,048 bytes
		Mode 2	2,340 bytes, 2,336 bytes
		CD-DA	2,352 bytes
		CD-XA	2,328 bytes
	Interface	IDE (ATAPI)	
	Access Times (typical)	Random	<100 ms
		Full-Stroke	<150 ms
	Data Transfer Rate	Sustained	3000 to 7200 KB/s (20X to 48X)
		Burst	150 KBps to 7,200 KBps
		Bus Rate	16.7 MBp
	Cache Buffer	128 KB	
	Start-up Time (typical)	< 7seconds	
	Stop Time	< 4seconds	
	Laser Parameters	Type	Semiconductor Laser GaA1As
		Wave Length	780 ± 25 nm
	Operating Conditions	Temperature	41° to 113° F (5° to 45°C)
		Humidity	10% to 80%
	Dimensions	(HxWxD, maximum)	1.7 x 5.85 x 8.11 in (42.9 x 150 x 208 cm)
		Weight	2.09 lb (0.95 kg)

Integrated Dual Channel Ultra ATA-100 Adapter (ATA Models only)	Drives Supported	Up to 5 IDE devices (3 devices channel 1/2 devices channel 2)
	Channels	2 (primary and secondary)
	Storage Capacity	240 GB
	Data Transfer Method	32-bit/33-MHz PCI bus-master
	Maximum ATA Channel Transfer Rate	100 MB/s per channel
	Maximum Transfer Rate per PCI Bus (peak)	133 MB/s per channel
	ATA Protocols	UDMA Mode[0-5]
		PIO Mode[0-4]
	ATA 100 Cable	80-Conductor Cable
	Internal ATA Connectors	Two 40-Pin Connectors (primary and secondary)

Technical Specifications

HP Single Channel Ultra3 SCSI Adapter (SCSI Models only)	Drives Supported	Up to 3 SCSI devices Wide
	Data Transfer Method	64-bit/33-MHz PCI bus-master
	SCSI Channel Transfer Rate	160 MB/s per channel
	Maximum Transfer Rate per PCI Bus (peak)	267 MB/s per channel
	SCSI Protocols	Wide Ultra3 SCSI, Wide Ultra2 SCSI,Wide Ultra SCSI-3, Fast-Wide SCSI-2, and Fast SCSI-2
		Fast SCSI-2
	Electrical Protocol	Low Voltage Differential (LVD)
	SCSI Termination	Active Termination
	External SCSI Connectors	None

NC7760 PCI Gigabit Server Adapter (embedded)	Network Interface	10Base-T/100Base-TX/1000Base-TX	
	Compatibility	IEEE 802.3 10Base-T	
		IEEE 802.3 1000Base-T	
		IEEE 802.3 100Base-TX	
	Data Transfer Method	32-bit, 33MHz PCI	
	Network Transfer Rate	10Base-T (Half-Duplex)	10 Mb/s
		10Base-T (Full-Duplex)	20 Mb/s
		100Base-TX (Half-Duplex)	100 Mb/s
		100Base-TX (Full-Duplex)	200 Mb/s
		1000Base-TX (Half-Duplex)	1000Mb/s
		1000Base-TX (Full-Duplex)	2000 Mb/s
	Connector	RJ-45	
	Cable Support	10Base-T	Categories 3, 4 or 5 UTP; up to 328 ft (100 m)
		10/100/1000Base-TX	Category 5 UTP (2 Pair); up to 328 ft (100 m)