

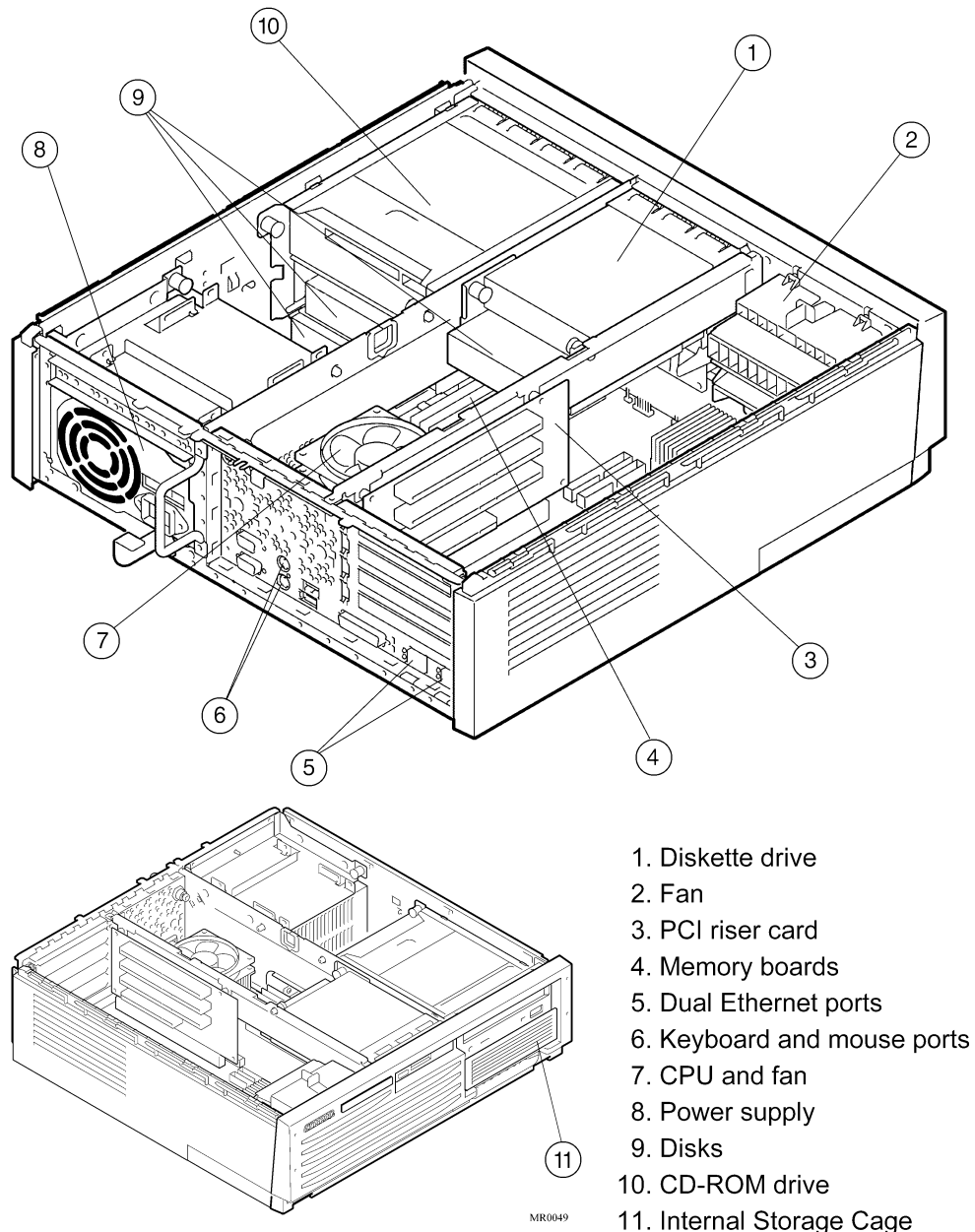
Overview

At A Glance

AlphaServer™ TS10 3U Systems include:

- Alpha 600-MHz CPU with 2-MB onboard ECC cache
- 256-MB, 512-MB, or 1-GB SDRAM memory – expandable to 2-GB maximum memory capacity
- Onboard dual 10/100 BaseT Ethernet ports
- Four PCI expansion slots – three 64-bit PCI slots and one 32-bit PCI slot
- Onboard dual IDE controller
- 1.44-MB diskette drive
- 600-MB CD-ROM drive
- Internal Storage Cage for IDE/SCSI tapes/drives
- TS10 Systems can be configured with: three internal 3.5" x 1" hard disk drives or two internal 3.5" x 1" hard disk drives and one 5.25" x 1.6" removable media device
- Maximum Internal storage capacity: 108-GB SCSI or 120-GB IDE
- Two serial ports: COM1 port is both an RMC port with modem control and a full-duplex asynchronous communications port; COM2 port is a full-duplex asynchronous communications port
- Bi-directional enhanced parallel port
- PS/2-style keyboard port and mouse port
- Rackmount kit, adjustable for Standard and Telco cabinets
- Metal front bezel (Carbon Black)
- 300W (-48VDC) power supply
- U.S. English documentation
- *Tru64™* UNIX® or *OpenVMS™* Factory Installed Software
- 90-day software product warranty
- Protected by Compaq Services, including three-year, on-site hardware with next business day response
- TS10 system is certified NEBS Level 3

NOTE: Keyboard and mouse must be ordered separately.



1. Diskette drive
2. Fan
3. PCI riser card
4. Memory boards
5. Dual Ethernet ports
6. Keyboard and mouse ports
7. CPU and fan
8. Power supply
9. Disks
10. CD-ROM drive
11. Internal Storage Cage

Standard Features

Processor	Alpha 21264A 600-MHz processor	
Cache Memory	2-MB onboard cache	
Upgradability	Supports upgrades of memory and hard drives	
	Standard	One CPU
Memory	Standard	256 MB, 512 MB, or 1 GB (one memory kit) – Tru64 UNIX, OpenVMS;
	Maximum	2 GB (two memory kits, kits include two industry-standard DIMMs with ECC support)
Network Controller	Onboard dual 10/100 BaseT Ethernet ports	
Expansion	Storage bays	Five total – CD-ROM, FDD, and three storage bays: Three internal 3.5" x 1" hard disk drives or two internal 3.5" x 1" hard disk drives and one 5.25" x 1.6" removable media device
	PCI slots	Four full-length slots (three 64-bit, one 32-bit)
Storage	Diskette Drive	1.44-MB diskette drive
	CD-ROM	5.25" half height 40X CD-ROM drive
	Hard Drives	20-GB and 40-GB IDE disk drives or 9.1-GB, 18.2-GB, 36.4-GB Wide Ultra3™. SCSI disk drives require optional SCSI adapter
Storage Adapter/Controller	Onboard IDE controller for internal storage, choice of optional storage adapters/controllers	
Expansion Ports	Parallel	One bi-directional enhanced port
	Serial	Two ports, one serial port with full-duplex asynchronous modem control and one RMS dedicated serial port with full-duplex asynchronous modem control
	Keyboard	One PS/2-style port
	Mouse	One port
Power Supply	300W (-48VDC nominal, -36 to -72VDC full range, with dual inputs and Reverse Polarity Protection. Two DC power cables are included.	
Manageability	Compaq <i>Insight Manager</i> ™	
Supported Options	A detailed summary of options supported on the AlphaServer/AlphaStation™ TS10 is available at http://www.compaq.com/alphaserver/options/asds10/asds10_options.html	
OS Support	AlphaServer TS10 Tru64 UNIX systems include pre-installed software (V5.1A), Base license, Unlimited User license, Server Extension license, Internet Express, iPlanet Directory Server, iPlanet Enterprise Server, and Compaq Secure Web Server. AlphaServer TS10 OpenVMS systems include pre-installed software (V7.3), Base license with System Manager license and Compaq Enterprise Integration Server License Package for OpenVMS V3.0A. Minimum OS support: Tru64 UNIX V4.0F or OpenVMS V7.1 –2	
Service and Support	Protected by Compaq Services, including a three-year, on-site hardware warranty with next business day response. Software warranty is a 90-day telephone advisory. Training, consulting, network integration, software support, comprehensive system maintenance and guaranteed uptime services are also available for customers requiring higher levels of service and support.	

Systems/Options

Step 1 – Select system

AlphaServer TS10 600-MHz systems require the **mandatory** selection of the following items:

- One IDE or one internal SCSI system disk drive
- Mandatory selection of SCSI adapter and SCSI cable kit required for internal SCSI disks and tape
- Software media and documentation for first system on site
- Minimum OS support: Tru64 UNIX V4.0F or OpenVMS V7.1-2

NOTES: Country-specific keyboard and mouse are recommended. See Step 11.

For system integration of any options with 6-3 part numbers, contact *CustomSystems*.

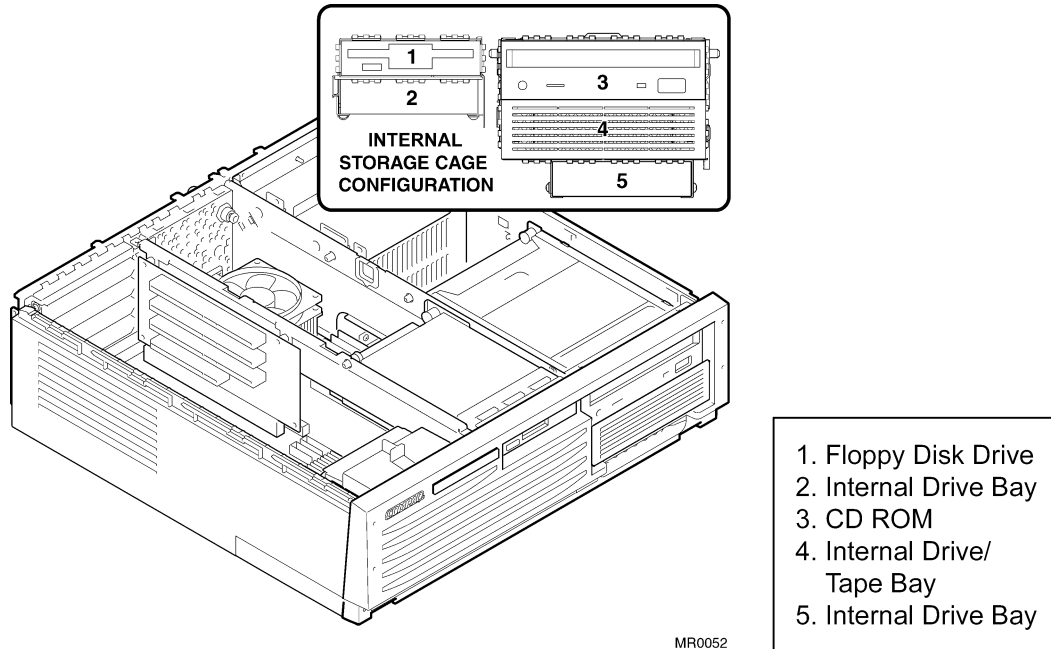
Option part numbers identified with the notation "US/Canada orders" and "Other country orders" refers specifically to the country where the order originates, and indicates the valid and orderable part numbers in the respective geographies.

AlphaServer TS10 600-MHz Base Systems						
OS	CPU	Memory	PCI	2-10/100t Ports	Hard Drive	Order No.
Tru64 UNIX	600 MHz	256 MB	4	Onboard	Mandatory	DA-T73BA-DA
Tru64 UNIX	600 MHz	512 MB	4	Onboard	Mandatory	DA-T73BA-EA
Tru64 UNIX	600 MHz	1 GB	4	Onboard	Mandatory	DA-T73BA-FA
OpenVMS	600 MHz	256 MB	4	Onboard	Mandatory	DY-T73BA-DA
OpenVMS	600 MHz	512 MB	4	Onboard	Mandatory	DY-T73BA-EA
OpenVMS	600 MHz	1 GB	4	Onboard	Mandatory	DY-T73BA-FA

Options

Step 2 – Select Mandatory Options (System Disk, SCSI Controller)

Step 2a - Internal Storage Cage - System Disk Drive - Mandatory



AlphaServer TS10 Storage Configuration Rules for Internal Storage Cage:

- AlphaServer TS10 Systems include the Internal Storage Cage
- AlphaServer TS10 Systems include a 600-MB 40X half height CD-ROM and 1.44-MB diskette in dedicated drive slots
- AlphaServerTS10 Systems include three internal storage bays (two in the Storage cage plus one in the system box) that can be configured as follows:
 - Maximum three internal disk drives (3.5" x 1" drives) or two internal disk drives (3.5" x 1") and one 5.25" half height removable media device
- Mandatory selection of SCSI adapter and SCSI cable kit is required for internal SCSI disks or tapes
- IDE Disk drive cable kits are included with the system

NOTE: When a tape drive is ordered, it will be installed in the top slot (Slot 3); the CD will be installed in Slot 4.

Internal IDE Disk Drives	20 GB 7,200 rpm IDE (UDMA) drive	3X-RE58A-AA
	40-GB 7,200 rpm IDE (UDMA) drive	3X-RE58A-BA
NOTE: Requires minimum console firmware V5.9-6 or higher. Updates available at http://ftp.digital.com/pub/Digital/Alpha/firmware/interim/TS10/v5.9-6/		
Internal SCSI Disk Drives	18.2-GB 10,000 rpm Ultra3 SCSI drive	DS-RZ3EF-WA
	36.4-GB 10,000 rpm Ultra3 SCSI drive	DS-RZ3FD-WA
Internal Tape Drives	12/24-GB DAT 4 mm internal SCSI tape drive – requires SN-PBXKP-BA wide-to-narrow SCSI adapter (Tru64 UNIX and OpenVMS only)	TLZ10-LB
	20/40-GB DAT tape drive, top gun blue (Tru64 UNIX and OpenVMS only)	3X-SD20X-LB
	35/70-GB AIT tape drive, top gun blue (Tru64 UNIX and OpenVMS only)	3X-SZ35X-LB
	35/70-GB AIT tape drive (LVD), carbon black	3R-A2392-AA
	50/100-GB AIT tape drive, top gun blue (Tru64 UNIX and OpenVMS only)	3X-SZ50X-LB
	Wide-to-narrow SCSI adapter	SN-PBXKP-BA

Options

Step 2 – Select Mandatory Options (System Disk, SCSI Controller) *(continued)*

Step 2b – Internal SCSI Adapters and Cable Kits

- Internal Storage Cage:
 - Mandatory selection of SCSI adapter and SCSI cable kit are required for Standard Storage Cage systems with SCSI disk or tapes

SCSI Adapters	PCI 1-channel Ultra2™ SCSI adapter (LVD)	3X-KZPCA-AA
	PCI 2-channel multi-mode Ultra3 LVD SCSI adapter, VHDCI (Tru64 UNIX V5.1 or higher and OpenVMS V7.2-2 or higher)	3X-KZPEA-DB
	NOTE: Patch kit required, kit available at http://ftp1.support.compaq.com/public/Digital_UNIX/v5.1/	
	PCI combo card – PCI 2-channel UltraSCSI single-ended adapter and 10/100 Mbit	KZPCM-DA
	PCI combo card – 1-channel Ultra2 SCSI (LVD) Graphics, 10/100 Ethernet (Tru64 UNIX and OpenVMS only)	3X-DEPVZ-AA
	PCI 1-channel UltraSCSI RAID controller (Tru64 UNIX and OpenVMS only)	KZPAC-AA
	NOTE: Internal Disk Drives connected to a KZPAC controller are not capable of implementing the fault management features of this controller, such as 'hot spare' and 'automatic rebuilds' – manual rebuilds are supported.	
PCI 3-port UltraSCSI RAID controller (4-MB/8-MB cache) (Tru64 UNIX V4.0F, OpenVMS V7.2-1)	KZPAC-CA/CB	
NOTE: Internal Disk Drives connected to a KZPAC controller are not capable of implementing the fault management features of this controller, such as 'hot spare' and 'automatic rebuilds' – manual rebuilds are supported.		
DS10 SCSI cable kit (with connections for three internal drives)	3X-BN51A-SE	
NOTE: The DS10 SCSI cable kit is required for Internal Storage Cage systems with SCSI disks or tapes.		

Step 3 – Memory – Optional

- Maximum 2-GB memory
- Systems include one memory kit; maximum two memory kits per system – each kit includes two industry-standard DIMMs with ECC support

256-MB memory kit, two 200-pin, 100-MHz, 128-MB DIMMs	3X-MS310-CA
512-MB memory kit, two 200-pin, 100-MHz, 256-MB DIMMs	3X-MS310-DA
1-GB memory kit, two 200-pin, 100-MHz, 512-MB DIMMs	3X-MS310-EA

Step 4 – Cabinets – Optional

- Each TS10 system includes a rackmount kit, which is adjustable for 600mm deep NEBS cabinets and deeper commercial cabinets such as Compaq's M-series
- Each TS10 system includes two 6-foot long DC power input cables which are compatible for connection to the 3X-H7603-AB Power Distribution Unit included in 3X-H9705-series 600mm deep NEBS cabinets
- For M-series cabinet information, refer to Step 4 of AlphaServer DS10 QuickSpecs
- NEBS Cabinet information
 - TS10 systems were certified NEBS Level-3 in 3X-H9705-series cabinets
 - 3X-H9705-series cabinets include one 3X-H7603-AB –48VDC Power Distribution Unit (PDU), which is mounted in the top-rear of the cabinet and occupies 2U vertical rack space
 - Devices not exceeding 8-inch depth may be mounted in front of PDU
 - PDU includes twelve TS10-compatible power connections; each TS10 uses two connections; one PDU supports a maximum of six TS10's with no other devices connected
 - Additional PDUs may be added for additional connectivity; each added PDU occupies 2U vertical rack space as above

76-inch NEBS Cabinet with 38U usable rack space (2U already allocated for included PDU), 1920mm x 600mm x 600mm, 19-inch RETMA mounting with non-threaded holes; carbon black; includes rear door and 3X-H7603-AB Power Distribution Unit	3X-H9705-AB
71-inch NEBS Cabinet with 35U usable rack space (2U already allocated for included PDU), 1800mm x 600mm x 600mm, 19-inch RETMA mounting with non-threaded holes; carbon black; includes rear door and 3X-H7603-AB Power Distribution Unit	3X-H9705-BB

Options

Step 4 – Cabinets – Optional *(continued)*

Compaq CustomSystems Support

- Cabinets that contain systems and storage must be assembled by qualified assemblers: Compaq Manufacturing, Compaq CustomSystems, or an authorized Compaq Certified Integration Partner.
- For custom integration of systems, options, cabinet expansion offerings, and additional Compaq and third-party devices, or for other cabinets, doors, and trim kits of a different color, contact Compaq CustomSystems at 1-800-AT COMPAQ, or your local authorized Compaq Certified Integration Partner.

Step 5 – External Storage – Optional

- AlphaServer TS10 supports the same external storage options and devices as the AlphaServer DS10. Refer to the AlphaServer DS10 QuickSpecs for details – http://www.compaq.com/products/quickspecs/10908_na/10908_na.HTML
- The following additional devices are supported:

StorageWorks™ Universal Drive Shelf – Model 4314R (Ultra3) by Compaq	StorageWorks Model 4314R Ultra3 rackmount, single bus, certified NEBS Level 3. Includes dual –48VDC power supplies, NEBS Cabinet rackmount kit, and two 6-foot DC power input cables	3X-SL13R-TA
StorageWorks Universal Drive Shelves – Model 4354R (Ultra3)	StorageWorks Model 4354R Ultra3 rackmount, dual bus, certified NEBS Level 3. Includes dual –48VDC power supplies, NEBS Cabinet rackmount kit, and two 6-foot DC power input cables	3X-SL13R-TB
System Disk Drives (Supported in Model 4314R or 4354R Universal Drive Shelf)	18.2-GB Ultra3 (LVD) 10,000 rpm 1-inch Universal drive	3R-A0585-AA
	18.2-GB Ultra3 (LVD) 15,000 rpm 1-inch Universal drive	3R-A1543-AA
	36.4-GB Ultra3 (LVD) 10,000 rpm 1-inch Universal drive	3R-A0919-AA
	36.4-GB Ultra3 (LVD) 15,000 rpm 1-inch Universal drive	3R-A3079-AA
	72.8-GB Ultra3 (LVD) 10,000 rpm 1-inch Universal drive	3R-A3050-AA

Step 6 – UltraSCSI RAID Array Controllers & UltraSCSI RAID Packaged Solutions – Optional

AlphaServer TS10 supports the same UltraSCSI RAID Array Controllers and UltraSCSI RAID Packaged Solutions as the AlphaServer DS10. Refer to the AlphaServer DS10 QuickSpecs for details – http://www.compaq.com/products/quickspecs/10908_na/10908_na.HTML

Step 7 – Networks and Communications – Optional

- Systems include dual embedded 10/100 BaseT Ethernet ports (BN25G-xx cable must be ordered separately)
- AlphaServer TS10 supports the same networks and communications options and devices as the AlphaServer DS10. Refer to the AlphaServer DS10 QuickSpecs for details – http://www.compaq.com/products/quickspecs/10908_na/10908_na.HTML

Step 8 – Graphics Adapters – Optional

- AlphaServer TS10 supports the same graphics adapters as the AlphaServer DS10. Refer to the AlphaServer DS10 QuickSpecs for details – http://www.compaq.com/products/quickspecs/10908_na/10908_na.HTML

Step 9 – Monitors – Optional

- AlphaServer TS10 supports the same monitors as the AlphaServer DS10. Refer to the AlphaServer DS10 QuickSpecs for details – http://www.compaq.com/products/quickspecs/10908_na/10908_na.HTML

Step 10 – Keyboards, Mouse

- AlphaServer TS10 supports the same keyboards and mouse as the AlphaServer DS10. Refer to the AlphaServer DS10 QuickSpecs for details – http://www.compaq.com/products/quickspecs/10908_na/10908_na.HTML
- Keyboards are not included with the system and must be ordered separately

Options

Step 11 – Console Terminal – Optional

- AlphaServer TS10 supports the same console terminals as the AlphaServer DS10. Refer to the AlphaServer DS10 QuickSpecs for details – http://www.compaq.com/products/quickspecs/10908_na/10908_na.HTML

Step 12– MEMORY CHANNEL – Optional

- AlphaServer TS10 supports the same Memory Channel options and devices, and follows the same configuration rules, as the AlphaServer DS10. Refer to the AlphaServer DS10 QuickSpecs for details – http://www.compaq.com/products/quickspecs/10908_na/10908_na.HTML

Step 13 – Software

- AlphaServer TS10 includes and supports the same software as the AlphaServer DS10 (OpenVMS and Tru64 UNIX). Refer to the AlphaServer DS10 QuickSpecs for details – http://www.compaq.com/products/quickspecs/10908_na/10908_na.HTML

Step 14 – Hardware and Software Support Services

- Compaq Services provides a wide range of service offerings, which are available as Statement of Work/Customized contracts. Contact you local Services Department for details and pricing. For information on Compaq service options available for AlphaServers and AlphaStations, consult a Compaq Sales Account Manager or visit <http://www.compaq.com/services/>

Technical Specifications

Physical Characteristics	Dimensions (H x W x D)	5.1 x 17.6 x 20.6* in/13 x 45 x 52* cm *indicates maximum depth; depth at PCI cable bulkhead is 19 in/48 cm	
	Weight (maximum)	36 lb/16.3 kg	
System Unit	Environmental		
	Temperature	Operating (Rackmount)	50° to 104°F/10° to 40°C NOTE: Maximum operating temperature at sea level. Reduce by 1.8°F (1°C) for each 2,000 ft (660 m) above sea level.
		Non-operating	-40° to 151°F/-40° to 66°C
	Humidity	Operating	10% to 95%
		Non-operating	20% to 80%
	Heat Dissipation	Single unit, typical system =	176 Watts = 601 BTU/Hr
		Rack of six systems =	1056 Watts = ~3606 BTU/Hr
	Typical System	AlphaServer TS10 600 MHz	
		Power Supply, 300W	
		Main logic board containing Alpha CPU, EV6, 600 MHz	
		Main memory = 1 GB	
		(3) Hard disk drive	
(1) Floppy disk drive			
(1) CD-ROM disk drive			
Altitude (unpressurized)	Operating	40,000 ft/12,192 m	
	Non-operating	10,000 ft/3,048 m	
	NOTE: Higher altitudes are possible if maximum operating temperature is reduced.		
Electrical (Power supply)	Nominal Voltage)	- 48 VDC	
	Operating Voltage Range	- 36 VDC to - 72 VDC	
Regulatory	Agency Approvals	UL: Listed to UL1950 (3rd edition)	
		CUL Listed: CAN/CSA-C22.2 No. 950-M95	
		TUV: EN 60950/A11: 1997 GS marked	
		FCC: Part 15 Class B	
		CE: EN55022, EN50082	
		VCCI Class II ITE	
		BMSI: CISPR22, CNS13438	
	C-Tick: CISPR22, AS/NZS 3548		
	Reviewed to	AS/NZ 3260:1993 Australian/New Zealand Standard	
		EN 60950/A11: 1997 European Norm IEC950 (2nd edition, 4th amend)	
Telecom	NEBS Level 3 Certification No. 000002, Telcordia Report DA-1134, Volume 1 (July 2000) "DS10CO"		

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