Hewlett-Packard

Hot-Pluggable SCSI Hard Drive Compatibility

This document provides current compatibility information between HP Universal SCSI drives and servers and storage systems for Hot-Pluggable systems. Basic drive characteristics are provided to help understand any compatibility limitations.

The following guidelines apply when selecting drives for HP systems:

■ Drives for Hot-Pluggable systems are mounted on the appropriate Hot-Pluggable drive tray or carrier.

■ Some Hot-Pluggable systems support Non-Pluggable drives in 5.25-inch removable media drive bays with appropriate mounting. These drives require appropriate terminated internal SCSI cabling.

■ The compatibility table in this document represents tested and supported configurations for these drives. Using HP Universal hard drives in unsupported configurations will void the warranty and could damage the drive and/or cause data loss.

■ Ultra2, Ultra3 and Ultra320 drives can be mixed on the same SCSI bus. Wide Ultra drives should not be used on the same SCSI bus as Ultra2, Ultra3 or Ultra320 devices.

A Word About HP Universal SCSI Disk Drives

The high performance and reliability requirements of server environments mean that selecting the right drives for your system is critical. HP has developed one of the industry's most rigorous programs for qualification, continuous testing, and system integration to ensure that our server and storage customers obtain the best drives available.

■ **Fault Prediction**—Drive firmware has been enhanced to enable monitoring software to detect conditions in the drive parameters that are precursors to failure. If problems develop in a HP Universal drive, the Smart Array controller lets you know in advance so you can replace the drive under the HP Pre-Failure Warranty.* Additionally, Ultra2, Ultra3 and Ultra320 SCSI drives now support SMART predictive failure reporting. SMART Pre-Failure reporting works in both array and nonarray controller server environments. SMART predictive failure reporting is a complement to the Pre-Failure notification provided by HP Smart Array controllers and HP Insight Manager software. Ultra2, Ultra3 and Ultra320 SCSI drives that experience SMART trips are also covered under the HP Pre-Failure Warranty.

■ **Quality**—HP drives undergo an intense qualification process that eliminates data integrity problems, firmware and O/S incompatibilities, and other causes of data corruption or premature failure.

■ **Performance**—Only those drives whose performance is suitable for a server environment are selected through HP's qualification process and are considered "best in class."

■ **Integration**—The integration of hard drives in HP systems means that cables, SCSI ID settings, terminations, hot-plug drive trays, and firmware are right for your server or storage system.

*Requires installation in a HP server using HP Insight Manager 2.1 or later and a HP Smart Array Controller.

HP Hot-Pluggable Ultra3/Ultra320 SCSI Hard Drive Compatibility Table

Option Kits (Spares Kit)	Capacity (GB)	Interface*	Form Factor**	Connector***	Wide-Ultra ProLiant 1600 6/450 & below	ProLiant 1600 6/500 & above	Wide-Ultra ProLiant 1850R 6/450 & below	ProLiant 1850R 6/500 & above	Wide-Ultra ProLiant 3000	ProLiant 3000 Array Models	Wide-Ultra ProLiant 5500	Ultra2 ProLiant 5500	ProLiant 6400R	Wide-Ultra ProLiant 6500	ProLiant 8000	ProLiant 8500	StorageWorks enclosure 4200 Family	Storage Works enclosure 4300 Family	StorageWorks RA4100	TaskSmart C1200R, C1500R, C2000R	TaskSmart N2400	ProLiant CL1850	ProLiant CL380	Supported Drive Models
286716-B22+ (289044-001)	146.8	U320	1"	80	1,2	2,4	1	1	1	4	1	4	4	5	7	4	6	8	6		8	6	6	BD14685A26, BD146863B3 BD14686225
286714-B22+ (289042-001)	72.8	U320	1"	80	1,2	2,4	1	1	1	4	1	4	4	5	7	4	6	8	6		8	6	6	BD07285A25, BD072863B2 BD07286224
286778-B22± (289243-001)	72.8	U320	1"	80	1,2	2,4	1	1	1	4	1	4	4	5	7	4	6	8	6		8	6	6	BF07285A36, BF072863B6 BF072863BA
232432-B22+ (233349-001)	72.8	U3	1"	80	1,2	2,4	1	1	1	4	1	4	4	5	7	4	6	X	6		X	6	6	BD07264546, BD0726459C BD0726536C, BD07265A22
286713-B22+ (289041-001)	36.4	U320	1"	80	1,2	2,4	1	1	1	4	1	4	4	5	7	4	6	8	6		8	6	6	BD03685A24, BD036863AC BD03686223
286776-B22-± (289241-001)	36.4	U320	1"	80	1,2	2,4	1	1	1	4	1	4	4	5	7	4	6	8	6		8	6	6	BF03685A35, BF036863B5 BF036863B9
232916-B22± (233350-001)	36.4	U3	1"	80	1,2	2,4	1	1	1	4	1	4	4	5	7	4	6	X	6		X	6	6	BF03664664, BF03665223 BF03665A32
176496-B22+ (177986-001)	36.4	U3	1"	80	1,2	2,4	1	1	1	4	1	4	4	5	7	4	6	X	6		X	6	6	BD0366349C, BD036635C5 BD03663622, BD03663992 BD03664545, BD0366459B BD03664553, BD0366536B BD036659CC
286775-B22± (289240-001)	18.2	U320	1"	80	1,2	2,4	1	1	1	4	1	4	4	5	7	4	6	8	6		8	6	6	BF01885A34, BF018863B4 BF018863B8
188122-B22± (189395-001)	18.2	U3	1"	80	1,2	2,4	1	1	1	4	1	4	4	5	7	4	6	X	6		X	6	6	BF01863644, BF01864663 BF01865222, BF01865A2C
142673-B22+ (152190-001)	18.2	U3	1"	80	1,2	2,4	1	1	1	4	1	4	4	5	7	4	6	X	6		X	6	6	BD01862376, BD01862A67 BD0186349B, BD018635C4 D018635CC, BD0186398C BD01864544, BD0186459A BD01864552

Hot-Pluggable Drive Bays ****

HP Hot-Pluggable Ultra3/Ultra320 SCSI Hard Drive Compatibility Table

Drive Information				Hot-Pluggable Systems																									
Option Kits (Spares Kit)	Capacity (GB)	Interface*	Form Factor**	Connector***	ProLiant DL580	ProLiant DL580 G2	ProLiant DL570	ProLiant DL560	ProLiant DL380	ProLiant DL380 G2/G3	ProLiant DL360	ProLiant DL360 G2	ProLiant DL360 G3	ProLiant DL740	ProLiant DL760	ProLiant DL760 G2	ProLiant DL560	ProLiantML530	ProLiant ML530 G2	ProLiant ML570 G2	ProLiant ML370	ProLiant ML370 G2	ProLiant ML370 G3	ProLiant ML350 HP	ProLiant ML 350 G2	ProLiant ML350 G3	ProLiant ML750	BL20p/G2	BL40p	Supported Drive Models
																		Hot-Pluggable Drive Bays ****												
286716-B22+ (289044-001)	146.8	U320	1"	80	4	9	4	9	4	9	4	8	8	8	4	8	9	4	9	9	4	8	9	4	8	9	6	8	8	BD14685A26, BD146863B3, BD14686225
286714-B22+ (289042-001)	72.8	U320	1"	80	4	9	4	9	4	9	4	8	8	8	4	8	9	4	9	9	4	8	9	4	8	9	6	8	8	BD07285A25, BD072863B2, BD07286224
286778-B22± (289243-001)	72.8	U320	1"	80	4	9	4	9	4	9	4	8	8	8	4	8	9	4	9	9	4	8	9	4	8	9	6	8	8	BF07285A36, BF072863B6, BF072863BA
232432-B22+ (233349-001)	72.8	U3	1"	80	4	X	4	X	4	X	4	X		X	4	X	X	4	4	X	4	X	X	4	X	X	6	X	X	BD07264546, BD0726459C, BD0726536C, BD07265A22
286713-B22+ (289041-001)	36.4	U320	1"	80	4	9	4	9	4	9	4	8	8	8	4	8	9	4	9	9	4	8	9	4	8	9	6	8	8	BD03685A24, BD036863AC, BD03686223
286776-B22-± (289241-001)	36.4	U320	1"	80	4	9	4	9	4	9	4	8	8	8	4	8	9	4	9	9	4	8	9	4	8	9	6	8	8	BF03685A35, BF036863B5, BF036863B9
232916-B22± (233350-001)	36.4	U3	1"	80	4	X	4	X	4	X	4	X		X	4	X	X	4	4	X	4	X	X	4	X	X	6	X	X	BF03664664, BF03665223, BF03665A32
176496-B22+ (177986-001)	36.4	U3	1"	80	4	X	4	X	4	X	4	X		X	4	X	X	4	4	X	4	X	X	4	X	X	6	X	X	BD0366349C, BD036635C5, BD03663622, BD03663992, BD03664545, BD0366459B, BD03664553, BD0366536B, BD036659CC

Part Number	Capacity	Interface	Form Factor	Connector																										Spare Part Numbers
286775-B22± (289240-001)	18.2	U320	1"	80	4	9	4	9	4	9	4	8	8	8	4	8	9	4	9	9	4	8	9	4	8	9	6	8	8	BF01885A34, BF018863B4 BF018863B8
188122-B22± (189395-001)	18.2	U3	1"	80	4	X	4	X	4	X	4	X		X	4	X	X	4	4	X	4	X	X	4	X	X	6	X	X	BF01863644, BF01864663 BF01865222, BF01865A2C
142673-B22+ (152190-001)	18.2	U3	1"	80	4	X	4	X	4	X	4	X		X	4	X	X	4	4	X	4	X	X	4	X	X	6	X	X	BD01862376, BD01862A67 BD0186349B, BD018635C4 D018635CC, BD0186398C BD01864544, BD0186459A BD01864552

+ Contains 10,000 RPM drives. All other drives are 7,200 RPM, unless noted otherwise.

± Contains 15,000 RPM drives. All other drives are 7,200 RPM, unless noted otherwise.

*   Interface
   U2 = Wide Ultra2 SCSI
   U3 = Wide Ultra3 SCSI
   U320=Wide Ultra320 SCSI

****Compatibility Notes:
   Blank = Not compatible.
   X = Compatible unconditionally. (Ultra2/Ultra3 cage is included in base server.)
   1 = Requires optional drive cage. HP Ultra2 Controller required to run at Ultra2 speeds.
      HP Ultra3 controller and/or cabling required to run at Ultra3 speeds.
      Does not support Ultra320 bus speeds.
   2 = When used in a rack-mounted server in conjunction with the HP Hot Plug Redundant Power Supply
      (PN 283697-B21/291) change at altitudes above 5,000 feet (1,520 meters), the server should not be
      operated in ambient temperatures exceeding 86°F (30°C).
   3 = HP Ultra2 Controller required to run at Ultra2 speeds.
   4 = Requires HP Ultra3 Controller and/or cabling to run at Ultra3 speeds. Does not support Ultra320 bus
      speeds.
   5 = Requires optional drive cage. HP Ultra2 Controller required to run at Ultra2 speeds.
      Ultra3 and Ultra320 controllers not supported on this platform. Limited to Ultra2 operation.
   6 = Limited to Wide Ultra2 bus speeds.
   7 = Limited to Wide Ultra bus speeds.
   8 = Limited to Wide Ultra3 bus speeds.
   9 = Requires HP Ultra320 Controller to run at Ultra320 speeds.

** Form Factor
   1.6" = standard half-height (1.6-inch) form factor drive.
   1" = standard third-height (1-inch) form factor drive.

*** Connector - SCSI signal connector on drive
   80 = 80-pin, Male, Wide Ultra2 SCSI, SCA connector.

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