COMPAQ

Hot-Pluggable SCSI Hard Drive Compatibility

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

The following guidelines apply when selecting drives for Compaq systems:

- Drives for Hot-Pluggable systems are mounted on the appropriate Compaq 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 hardware (refer to the Non-Hot Pluggable SCSI Hard Drive Compatibility Table). These drives require appropriate terminated internal SCSI cabling.

- Rack-mountable servers are included in the listing of the tower version of the same model.

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

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

- For ease of deployment, do not combine Ultra2 or Ultra3 drives and previous version SCSI drives. Mixed RAID sets can be used, however, some combinations may require reconfiguring the RAID array (such as adding Ultra2 drives to an existing RAID array of ProLiant-type Wide-Ultra drives).

- 1.6-inch ProLiant style Wide-Ultra Hot-Pluggable drives can be installed in systems designed for 1-inch drives, however, each will occupy two drive slots.

A Word About Compaq Disk Drives

The high performance and reliability requirements of server environments mean that selecting the right drives for your system is critical. Compaq 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 Compaq drive, the array controller lets you know in advance so you can replace the drive under the Compaq Pre-Failure Warranty.* Additionally, Compaq Wide-Ultra, Ultra2, and Ultra3 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 Compaq SMART Array controllers and Compaq Insight Manager software. Compaq Wide-Ultra, Ultra2 and Ultra3 SCSI drives that experience SMART trips are also covered under the Compaq Pre-Failure Warranty.

- **Quality**—Compaq 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 Compaq's qualification process and are considered "best in class."

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

  *Requires installation in a Compaq server using Compaq Insight Manager and a Compaq array controller.

Compaq Hot-Pluggable Ultra2/Ultra3 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 model 4214	StorageWorks enclosure model 4314	StorageWorks RA4100	TaskSmart C1200R, C1500R, C2000R	TaskSmart N2400	ProLiant CL1850	ProLiant CL380	ProLiant DL580	ProLiant ML570	ProLiant ML530	ProLiant DL380	ProLiant ML370	ProLiant DL360	ProLiant ML350 HP	ProLiant ML750	ProLiant DL760	Supported Drive Models
176496-B22+ (177986-001)	36.4	WU3	1"	80	1,2	2,4	1	1	1	4	1	4	4	5	7	4	6	X	6		X	6	6	4	4	4	4	4	4	4	7	4	BD0366349C, BD036635C5, BD03663622, BD03663992
188122-B22± (189395-001)	18.2	WU3	1"	80	1,2	2,4	1	4	1	4	1	4	4	5	7	4	6	X	6		X	6	6	4	4	4	4	4	4	4	7	4	BF01863644
142673-B22+ (152190-001)	18.2	WU3	1"	80	1,2	2,4	1	4	1	4	1	4	4	5	7	4	6	X	6		X	6	6	4	4	4	4	4	4	4	7	4	BD01862376, BD01862A67, BD0186349B, BD018635C4, BD018635CC, BD0186398C
128418-B22+ (143920-001)	18.2	WU2	1"	80	1,2	2,3	1	3	1	X	1	X	3	5	7	X	X	X	X		X	X	X	X	X	X	X	X	X	X	7	X	BD018122C9, BD018122C0, BD01812579
128418-B21+ (143920-001)	18.2	WU2	1"	80	1,2	2,3	1	3	1	X	1	X	3	5	7	X	X	X	X		X	X	X	X	X	X	X	X	X	X	7	X	BD018122C9
388144-B22 (104663-001)	18.2	WU2	1"	80	1	3	1	3	1	X	1	X	3	5	7	X	X	X	X		X		X	X	X	X	X	X	X	X	7	X	BB01811C9C, BB018122B7, BB01813467, BB01835B5
388144-B21 (104663-001)	18.2	WU2	1"	80	1	3	1	3	1	X	1	X	3	5	7	X	X	X	X		X		X	X	X	X	X	X	X	X	7	X	BB01811C9C, BB018122B7
188120-B22± (189393-001)	9.1	WU3	1"	80	1,2	2,4	1	4	1	4	1	4	4	5	7	4	6	X	6		X	6	6	4	4	4	4	4	4	4	7	4	BF00963643
142671-B22+ (152188-001)	9.1	WU3	1"	80	1,2	2,4	1	4	1	4	1	4	4	5	7	4	6	X	6	6	X	6	6	4	4	4	4	4	4	4	7	4	BD00962373, BD00962A66, BD0096349A, BD009635C3, BD009635CB, BD0096398B
123065-B22 (104665-001)	9.1	WU2	1"	80	1	3	1	3	1	X	1	X	3	5	7	X	X	X	X		X		X	X	X	X	X	X	X	X	7	X	BB00911CA0, BB00912301, BB00913466, BB009135B4
123065-B21 (104665-001)	9.1	WU2	1"	80	1	3	1	3	1	X	1	X	3	5	7	X	X	X	X		X		X	X	X	X	X	X	X	X	7	X	BB00911CA0, BB00912301
328939-B22+ (386536-001)	9.1	WU2	1"	80	1,2	2,3	1	3	1	X	1	X	3	5	7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	7	X	BB00911934, BD009122C6, BD009122BA, BD00912578
328939-B21+ (386536-001)	9.1	WU2	1"	80	1,2	2,3	1	3	1	X	1	X	3	5	7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	7	X	BD00911934, BD009122C6
349514-B21 (349531-001)	9.1	WU2	1"	80	1	3	1	3	1	X	1	X	3	5	7	X	X	X	X		X		X	X	X	X	X	X	X	X	7	X	BB00911C49

Drive | Hot-Pluggable Systems | Hot-Pluggable Drive Bays ****

+ 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**
   WU2 = Wide Ultra2 SCSI
   WU3 = Wide Ultra3 SCSI

****Compatibility Notes:
   Blank = Not compatible.
   X = Compatible unconditionally. (Ultra2/Ultra3 cage is included in base server.)
   1 = Requires optional Ultra2/Ultra3 drive cage. Compaq Ultra2 Controller required to run at Ultra2 speeds. Compaq Ultra3 controller and/or cabling required to run at Ultra3 speeds.
   2 = When used in a rack-mounted server in conjunction with the Compaq 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 = Compaq Ultra2 Controller required to run at Ultra2 speeds.
   4 = Requires Compaq Ultra3 Controller and/or cabling to run at Ultra3 speeds.
   5 = Requires optional Ultra2/Ultra3 drive cage. Compaq Ultra2 Controller required to run at Ultra2 speeds. Ultra3 controller not supported on this platform. Limited to Ultra2 operation.
   6 = Limited to Wide Ultra2 bus speeds.
   7 = Operation limited to Wide Ultra.

** **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.

Compaq Hot-Pluggable Wide Ultra SCSI Hard Drive Compatibility Table

Option Kits (Spares Kit)	Capacity (GB)	Interface*	Form Factor**	Connector***	ProLiant 850R-H	ProLiant 1000, 2000, 4000	ProLiant 1200	ProLiant 1500	ProLiant 1600 6/450 & below	ProLiant 1600 6/500 & above	ProLiant 1850R 6/450 & below	ProLiant 2500	ProLiant 3000, 5500	ProLiant 4500	ProLiant 5000	ProLiant 6500	ProLiant 6000, 7000	ProLiant Storage System	ProLiant Storage System /F	ProLiant Storage System /U	Fibre Channel Storage System, StorageWorks RA4000	Supported Drive Models
176498-B21+ (177988-001)	36.4	WU	1"	80	X		10	3	10	10,12	X	10	X	6	3	X	X	4,6	9	X	X	BD036635C5, BD03663622, BD0366349C
128420-B21+ (143916-001)	36.4	WU	1.6"	80	X		11	3	11	11,12	X	11	X	6	3	X	X	4,6	9	X	X	AC03632378, AC036322C2
400740-B21 (104659-001)	36.4	WU	1.6"	80	X	2,5,6	X	3	X	12	X	X	X	6	3	X	X	4,6	9	X	X	AA03631AC6
128417-B21+ (143919-001)	18.2	WU	1"	80	X		10	3	10	10,12	X	10	X	6	3	X	X	4,6	9	X	X	AD018322C8, AD01832375, AD018322BC, AD018335CA, AD01833627, AD018334A8
400739-B21 (104660-001)	18.2	WU	1"	80	X	2,5,6	X	3	X	12	X	X	X	6	3	X	X	4,6	9	X	X	HB01831B95, AB01831AC4, AB018322B6, AB018335B9, AB0183346B
336358-B21+ (336382-001)	18.2	WU	1.6"	80	X		11	3	11	11,12	X	11	X	6	3	X	X	4,6	9	X	X	HC0183172A
313756-B21 (313764-001)	18.2	WU	1.6"	80	X	2,5,6	X	3	X	12	X	X	X	6	3	X	X	4,6	9	X	X	DGHS18Y, MAA3182SC, HA01831932
313706-B21 (313715-001)	9.1	WU	1"	80	X	2,5,6	X	3	X	12	X	X	X	6	3	X	X	4,6	9	X	X	DGHS09Y, MAB3091SC, WDE9100S, HB00931931, HB00931B93, AB00931B92, AB009322B4, AB009335B8, AB0093346A
336357-B21+ (336381-001)	9.1	WU	1"	80	X		10	3	10	10,12	X	10	X	6	3	X	X	4,6	9	X	X	HD0093172C, HD00931C35, AD009322C5, AD00932372, AD009322B9, AD009335C9, AD00933626, AD009334A7
304865-B21+ (304866-001)	9.1	WU	1.6"	80			1	1,3	1	1,12		1	1	1,6	1,3	1	1	1,4,6	1,8,9	1,8	1,8	ST19101WC
199882-001 (199888-001)	9.1	WU	1.6"	80		2,5,6	X	3	X	12	X	X	X	6	3	X	X	4,6	9	X	X	3391SS, ST19171WC, DCHS09Y

Drive Information — Hot-Pluggable Systems — Hot-Pluggable Drive Bays ****

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

* Interface
WU = Wide-Ultra SCSI-3
FW = Fast-Wide SCSI-2
F = Fast-SCSI-2

** 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-Ultra SCSI-3, SCA connector
68 = 68-pin, Female, Fast-Wide SCSI-2 or Wide-Ultra SCSI-3 connector
50 = 50-pin, Male, Standard Fast-SCSI-2 (Narrow) connector

**** Compatibility Notes:

Blank = Not compatible.
X = Compatible unconditionally.
1 = These 10,000 RPM hard disk drives are designed to exist in a stable thermal environment. Sustained room temperatures above 30°C (86°F) could reduce the drive's useful life and should be avoided.
2 = Requires optional Fast-Wide SCSI-2 controller or adapter, and/or Fast-Wide SCSI-2 cabling.
3 = Requires optional Wide-Ultra SCSI-3 controller and/or cabling to use Wide-Ultra bus speeds.
4 = Requires Fast-Wide SCSI-2 ProLiant Storage System.
5 = Requires optional Fast-Wide SCSI-2 backplane upgrade.
6 = Limited to Fast-Wide SCSI2-2 operations.
7 = Requires Tray Option Kit (199875-001) for Fast-Wide SCSI-2 drives or Tray Option Kit (272564-001) for Fast SCSI-2 drives.
8 = Requires optional redundant power supply fan unit (224206-001) in rack installations for adequate cooling.
9 = Requires optional upgrade to support Wide-Ultra SCSI-3 (Single Bus Option – 304148-B21; Dual Bus option-304149-B21). Without option, operation is limited to Fast-Wide SCSI-2.
10 = When used in a rack-mounted server in conjunction with the Compaq Hot Plug Redundant Power Supply (PN 283697-B21/291 or 480083-001/291) at altitudes above 5,000 feet (1,520 meters), the server should not be operated in ambient temperatures exceeding 86°F (30°C).
11 = When used in a tower-mounted server in conjunction with the Compaq Hot Plug Redundant Power Supply (PN 283697-B21/291) at altitudes above 5,000 feet (1,520 meters), the server should not be operated in ambient temperatures exceeding 86°F (30°C). 1.6-inch 10K hard drives are not supported in rack configurations with the Compaq Hot-Plug Redundant power supply.
12 = Requires optional Wide Ultra drive cage (271912-001) or the optional Duplex drive cage (268368-001).