

ADAPTEC® ULTRA160 SCSI CARD FAMILY

160 MBytes/sec Performance with the Best Connectivity Options from the SCSI Leader

Adaptec's Ultra160 SCSI products are the storage I/O solutions ideally matched to the ever-increasing demands of bandwidth-hungry applications. Five different Ultra160 SCSI cards provide a range of solutions, fine-tuned for specific uses from desktops to entry-level, thin rack-mount, and enterprise-level servers.

Adaptec's Ultra160 SCSI family features Ultra160 SCSI (LVD) technology, delivering twice the speed of Ultra2 SCSI and four times that of Ultra Wide SCSI. Ultra160 SCSI is 240% faster than UDMA's maximum data rate of just 66 MBytes/sec.

To ensure data integrity and reliability with high performance, Ultra160 SCSI includes two new additional features—CRC (Cyclical Redundancy Checking) and Domain Validation. CRC checks all transferred data, adding significantly to data integrity. Domain Validation intelligently verifies system configuration for improved reliability.

When critical applications and multiple devices run at full speed on your system, you need to ensure that your data transfers are reliable. The Adaptec Ultra160 SCSI cards protect the integrity of your data and provide reliable connectivity. The MTBF (Mean Time Between Failure) of most UDMA hard drives is 300K-500K. SCSI hard drives are twice as reliable with an MTBF of 1000K hours. The advanced new features of Adaptec's Ultra160 SCSI cards, such as CRC, detect and minimize such errors during data transfer, thereby providing the most reliable solution.

Adaptec's Ultra160 SCSI products enable up to 12 meter cable-lengths for maximum configuration flexibility, unlike UDMA, which limits cable lengths to 18 inches.

These days, space is at a premium and the industry is adopting thin, rack-mount devices. Adaptec offers the 29160LP especially for your low profile SCSI needs.

Adaptec's exclusive SpeedFlex technology ensures that all devices connected to an Ultra160 SCSI card will deliver top performance regardless of SCSI generation. Your legacy technology investments are protected, and the risks of migrating to Ultra160 are eliminated. With Ultra160, your devices can keep pace with the ever-increasing speed requirements of today's and tomorrow's technologies.

Like all Adaptec cards, the Ultra160 SCSI family has been rigorously tested with hundreds of SCSI systems and devices to assure compatibility and reliability. Each card carries a 5-year warranty.

Product Benefits

- 160 MByte/sec performance
- 32- and 64-bit PCI solutions
- SpeedFlex technology ensures top performance of all connected devices, regardless of SCSI generation*
- Seamless backwards compatibility protects legacy devices
- Industry-leading compatibility, reliability
- CRC (Cyclical Redundancy Checking) improves data integrity
- Domain Validation intelligently verifies system configuration for improved reliability

**Included on all Adaptec Ultra160 SCSI cards, except the 39160 and 29160LP, where it is not necessary.*

Ultra160 SCSI

The Adaptec SCSI Card 19160

Affordable Ultra160 SCSI performance for the Windows® desktop power user. The Adaptec SCSI Card 19160 is the choice for Windows desktop users. It delivers Ultra160 SCSI technology at an affordable price. This card offers the best connectivity for internal hard drives and both internal and external desktop devices.

The Adaptec SCSI Card 29160N

Ultra160 SCSI performance, with easy connectivity to internal hard disk drives and external narrow SCSI devices. The Adaptec SCSI Card 29160N with its wide array of OS support is tailored to the needs of small multi-user work group servers and powerful workstation users who need to attach external narrow SCSI devices. This 32-bit PCI card gets the most out of high-performance Ultra160 SCSI internal hard drives and popular external narrow SCSI devices.

The Adaptec SCSI Card 29160

Maximum Ultra160 SCSI performance, with greatest connectivity options for internal and external hard disk drives. The Adaptec SCSI Card 29160 is tailored for entry to mid-range server environments. It delivers the maximum throughput for a single channel Ultra160 SCSI card by using a 64-bit PCI interface. The Adaptec SCSI Card 29160 provides the ideal connection to Ultra160 SCSI (LVD) hard disks and devices (internally and externally) and legacy devices (internally).

The Adaptec SCSI Card 29160LP

Maximum Ultra160 SCSI performance for thin rack-mount server environments. The Adaptec SCSI Card 29160LP conforms to the MD2 specification, optimal for thin rack-mount server environments. It includes a 68-pin VHDCI external connector for connections with LVD peripherals. This card provides an easy cable connection and a second, regular-height bracket. The 29160LP supports a full range of operating systems and enables the possible data transfer rates to help meet the demands of e-commerce engines, web servers, and databases.

The Adaptec SCSI Card 39160

Maximum dual-channel Ultra160 SCSI performance and scalability with connectivity to internal and external hard disk drives. The Adaptec SCSI Card 39160 delivers all-out performance for enterprise servers. Combining a 64-bit PCI interface with two Ultra160 SCSI channels, this card moves data at the fastest speeds possible. The Adaptec SCSI Card 39160 supports up to 30 devices, making it ideal for connecting external drive arrays for mirroring and striping multiple SCSI hard disk drives to deliver the ultimate performance in the most demanding environments.

Why to Buy	Affordable Ultra160 SCSI performance and connectivity to legacy devices and internal hard disk drives	Best Ultra160 SCSI performance and connectivity to internal hard disk drives and external legacy devices	Maximum Ultra160 SCSI performance for internal and external hard disk drive configurations	Maximum Ultra160 SCSI performance for thin rack-mount servers.	Ultimate dual Ultra160 SCSI channel performance and scalability for all hard disk drive configurations
Customer Needs	High performance and easy connectivity	High performance, O/S flexibility, and easy connectivity	Total performance solution on a single channel card	High performance, low profile form factor	The fastest performance in enterprise servers
System Environment	Professional desktops	Entry level servers and workstations	Entry level to mid-range servers	Rack-mount servers	High-end servers
Ideal for	Connecting Ultra160 SCSI hard disk drives, internally, and popular non-HDD SCSI devices such as CD-R, Jaz, and scanners, externally	Connecting Ultra160 SCSI hard disk drives, internally, and popular non-HDD SCSI devices such as tape, scanners, and removable drives, externally	Connecting Ultra160 SCSI hard disk drives and other SCSI hard disk drives, internally and externally	Connecting internal hard disk drives and external LVD SCSI devices	Connecting SCSI hard disk drives, internally and externally; creating two drive arrays on independent SCSI channels
Bus System Interface Type	32-bit PCI	32-bit PCI	64-bit PCI (32-bit compatible)	64-bit PCI (32-bit compatible)	64-bit PCI (32-bit compatible)
Data Transfer Method	Bus Mastering	Bus Mastering	Bus Mastering	Bus Mastering	Bus Mastering
SCSI Data Transfer Rate	160 MB/sec	160 MB/sec	160 MB/sec	160 MB/sec	160 MB/sec, on each channel
Internal Connectors	One 68-pin for LVD SCSI One 50-pin for Ultra SCSI†	One 68-pin for LVD SCSI One 50-pin for Ultra SCSI†	One 68-pin for LVD SCSI One 68-pin for Ultra Wide SCSI One 50-pin for Ultra SCSI†	One 68-pin for LVD SCSI	Two 68-pin for LVD SCSI One 50-pin for Ultra SCSI*
External Connectors	One 50-pin for Ultra SCSI†	One 50-pin for Ultra SCSI†	One 68-pin for LVD SCSI devices	One 68-pin VHDCI for LVD SCSI devices	Two 68-pin VHDCI for LVD SCSI devices
Maximum # of Devices	15	15	15	15	30
System Requirements	Intel PC or equivalent with available PCI slot (2.1 PCI compliant)	Intel PC or equivalent with available PCI slot (2.1 PCI compliant)	Intel PC or equivalent with available PCI slot (2.1 PCI compliant)	Intel PC or equivalent with available PCI slot (2.1 PCI compliant)	Intel PC or equivalent with available PCI slot
Operating Systems	Windows® 95 and 98 Windows NT™ 4.0 Windows 2000	Windows NT 4.0 W/S and Server, SCO Open Server 5.05 Windows 95 and 98, Windows 2000, NetWare 3.2, 4.2, 5.0, SCO UnixWare 2.1.3, SCO UnixWare 7.1.0, Solaris 7, 8, Linux**	Windows NT 4.0 W/S and Server, SCO Open Server 5.05 Windows 95 and 98, Windows 2000, NetWare 3.2, 4.2, 5.0, SCO UnixWare 2.1.3, SCO UnixWare 7.1.0, Solaris 7, 8, Linux**	Windows NT 4.0 W/S and Server, SCO Open Server 5.05 Windows 95 and 98, Windows 2000, NetWare 3.2, 4.2, 5.0, SCO UnixWare 2.1.3, SCO UnixWare 7.1.0, Solaris 7, 8, Linux**	Windows NT 4.0 W/S and Server, SCO Open Server 5.05 Windows 95 and 98, Windows 2000, NetWare 3.2, 4.2, 5.0, SCO UnixWare 2.1.3, SCO UnixWare 7.1.0, Solaris 7, 8, Linux**
Cables in Kit (all are internal)	One 3-position 68-pin LVD with terminator; One 3-position 50-pin	One 5-position 68-pin LVD with terminator; One 3-position 50-pin	One 5-position 68-pin LVD with terminator; One 3-position 68-pin Ultra Wide SCSI; One 3-position 50-pin	One 5-position 68-pin LVD with termination	One 5-position 68-pin LVD with terminator; One 3-position 50-pin
Software in Kit	Adaptec EZ-SCSI® software and supported operating systems drivers	Adaptec EZ-SCSI software and supported operating systems drivers	Adaptec EZ-SCSI software and supported operating systems drivers	Adaptec EZ-SCSI software and supported operating system drivers	Adaptec EZ-SCSI software and supported operating systems drivers
Physical Dimensions	6.87" x 3.87"	6.87" x 3.87"	6.87" x 3.87"	2.55" x 6.60" Kit includes regular bracket	6.87" x 3.87"
MTBF	658,150.9 hours	641,268.8 hours	561,251.7 hours	987,355.8 hours	591,351.5 hours
SpeedFlex	Yes	Yes	Yes	No	No

* Also supports Fast SCSI and SCSI-1 devices

** Available from O/S vendor



Adaptec SCSI Card 19160



Adaptec SCSI Card 29160N



Adaptec SCSI Card 29160



Adaptec SCSI Card 29160LP



Adaptec SCSI Card 39160

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