SCSI Bus Configuration Testing
The AIC-7892 fully supports Ultra160 and Ultra3 SCSI Domain Validation. Domain Validation provides SCSI bus configuration testing to help ensure Ultra160 SCSI devices operate at optimum speed.

Long Cables
The AIC-7892 supports a maximum of 15 LVD devices on 12 meters of cable. In a point-to-point configuration, the maximum cable length extends to 25 meters. The AIC-7892 is fully compatible with existing Ultra2 SCSI supported cable configurations. The cable-length distances provide greater system configuration flexibility – especially for clustering and RAID applications. The AIC-7892 also supports High Voltage Differential (HVD) busses when used with external HVD transceivers.

Backward Compatibility
The AIC-7892 incorporates an advanced multimode I/O cell that supports Ultra2, Ultra3, and Ultra160 SCSI LVD devices, as well as single-ended (SE) devices. With only Ultra2 and Ultra160 devices attached, the SCSI bus performs at full speed and full LVD cable lengths. When SE devices are attached, the bus defaults to SE speed and cable length.

In mixed environments of LVD and single-ended devices, the AIC-7892 host adapter chip can couple with an Adaptec AIC-3860 transceiver chip to bridge the signaling discontinuity. By dividing the SCSI bus into independent single-ended and LVD segments, the AIC-3860 supports legacy devices without limiting performance or LVD segment cable length. (see figure)

Ultra160 SCSI uses the same connectors and cables as Ultra2 and Ultra Wide SCSI, so upgrading system performance is easy and cost-effective.
AIC-7892

Performance

- 64-bit, 66 MHz PCI interface supports zero wait-state memory – also operates on PCI busses down to 32-bit, 33 MHz
- Up to 160 MByte/sec on the Ultra160 SCSI bus
- 20-MIPS PhaseEngine® RISC processor for fast SCSI command processing
- 1024-byte data FIFO buffer for efficient PCI bus utilization
- Cache line-streaming for improved PCI bus utilization
- Dual Address Cycle (DAC) provides greater system memory addressibility
- Target mode to support clustering, bridge, and RAID applications
- Tagged command queuing enables changing SCSI command execution order to improve performance

Additional Features

- Advanced multimode Ultra160 SCSI I/O cell for supporting Low Voltage Differential (LVD) or single-ended devices
- Ultra160 and Ultra3 SCSI Domain Validation and CRC support
- JTAG boundary scan to support system-level interconnect testing
- 3.3V/5V PCI interface for providing flexibility in designing high-performance, low-power systems
- Enhanced Logical Unit Number (LUN) supports up to a maximum of 32 LUNs
- Microsoft PC99 compatible
- PCI Hot-Plug compatible
- Fully compatible with the AIC-3860 SCSI transceiver chip

Software Support

- Microsoft® Windows NT®, Windows® 95 and 98, Novell NetWare, SCO Openserver, SCO UnixWare, IBM OS/2, Sun Solaris, and Linux

SCSI Device Support

- Connection for up to 15 devices
- Support for a combination of 16-bit Ultra160, Ultra3, Ultra2, Ultra, and standard SCSI devices, including disk drives, disk arrays, tape drives, CD-ROM and CD-R drives, jukeboxes, removable drives, scanners, and printers
- Slower Ultra SCSI legacy devices can be connected to Adaptec’s AIC-3860 LVD-to-single-ended SCSI transceivers for optimal SCSI bus performance