

# Ultra3 SCSI HBAs

## Technical Specifications



### ATTO ExpressPCI UL3D

Dual Channel Ultra3 SCSI Host Adapter

#### Fast and Efficient Data Transfer

ATTO ExpressPCI Ultra3 SCSI dual channel host adapter, fully compatible with the Ultra160/m initiative, provides users with a high-speed SCSI interconnect to maximize overall system performance. Transfer rates of up to 160 MB/sec. per channel can be achieved. ATTO's exclusive Advanced Data Streaming (ADS™) Technology ensures maximum I/O performance for data-intensive applications.

### Technical Highlights

- Data Transfer Rates Up to 320 MB/sec.
- Double Transition Clocking
- Cyclical Redundancy Checks
- Domain Validation
- Two Channels—One PCI Slot
- Mac® and PC Compatible
- Exclusive ADS™ Technology

# ATTO

ATTO Technology, Inc.

[attotech.com](http://attotech.com)

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## ATTO ExpressPCI UL3D Ultra3 SCSI Dual Channel Host Adapter

- Data transfer rates up to 320 MB/sec.
- 64/32-bit PCI interface
- 66/33 MHz compatible
- Dual independent SCSI channels
- Exclusive ADS™ Technology
- Supports up to 30 SCSI device IDs

## Specifications:

### SCSI Bus

- Compatible with SCSI-3, SCSI-2 and SCSI-1 devices
- Low Voltage Differential/Single-Ended signaling
- Bus mastering capability
- Support for tagged command queuing
- Asynchronous I/O support
- Backward compatible with Ultra2, Ultra, Fast/WIDE and Narrow SCSI devices

### Advanced SCSI

- Bootable from attached disks
- Support for disconnect/reconnect
- Large command FIFO
- Support for multiple block sizes
- ASPI compliant (for PC users)
- Legacy device support for Macintosh® users

### General

- Compatible with PCI Based PCs and Macintosh straight out-of-the-box
- Automatic termination
- Upper-byte termination for Narrow devices
- Embedded RISC I/O processor
- Flash ROM for easy field upgrades
- PCI 2.2 compliant
- PC 99 compliant
- RAID ready
- Plug and play
- Includes ATTO ExpressPro-Tools formatting and utility software
- MTBF = 150,000 hours
- MTTR < 15 minutes

## Environmental and Physical

Dimensions:	Length	6.521"
	Height	4.450"
Operating Temperature:	0-50° Celsius	
Humidity:	10-90% non-condensing	
Power:	0.75 typical/2.0 max. Amps @ + 5.0 VDC 0.05 Amps @ +12.0 VDC	

## Operating Environments

Mac® OS 8.X, Mac OS 9.X, Windows® 2000,  
 Windows NT, Windows 95/98, Windows 3.x, MS-DOS

Which ExpressPCI Host Adapter Meets Your Needs?								
	UL3D	UL3S	UL2D	UL2S	DC	PSC	DCd	PSCd
Maximum Transfer Rate	320	160	160	80	80	40	80	40
Ultra3 SCSI	√	√						
Ultra2 SCSI (LVD)			√	√				
Ultra/WIDE SCSI					√	√	√	√
Low Voltage Differential SCSI	√	√	√	√				
High Voltage Differential SCSI							√	√
Single-Ended SCSI					√	√		
Dual Independent SCSI Channels	√		√		√		√	
Single SCSI Channels		√		√		√		√
32-bit PCI Compatible	√	√	√	√	√	√	√	√
64-bit PCI Compatible	√	√	√					
Support for up to 15 Bus IDs		√		√		√		√
Support for up to 30 Bus IDs	√		√		√		√	
Large File Transfers	√	√	√	√	√	√	√	√
Longer Cable Distances	√	√	√	√			√	√
Uncompressed Video	√	√	√	√	√		√	
33 MHz PCI Compatible	√	√	√	√	√	√	√	√
66 MHz PCI Compatible	√	√						