

# ExpressPCI UL4D

## Dual-channel Ultra320 SCSI Host Adapter With PCI-X Support



### **Product Features**

#### **Blazing Fast Performance**

- Maximize data throughput with dual channel connectivity aggregating performance across multiple SCSI ports
- Leveraging the latest in SCSI storage connectivity, the UL4D delivers up to 640 MB/ sec. data throughput, making it twice as fast as Ultra160 SCSI.

#### **Smooth Data Streaming**

- Maintain accessibility to mission-critical data by transparently redirecting data requests through alternate channels.
- Alleviate data transfer bottlenecks and move data more efficiently while managing latency with ATTO's exclusive ADS™ technology.

#### **One Click Installation**

- Save time with factory preset configuration for plug and play operation.
- Simplify installation, management and monitoring with multi-platform Configuration Utility featuring an intuitive GUI.

The UL4D dual-channel Ultra320 host adapter is the perfect complement to ATTO's ExpressPCI family of high-performance SCSI host adapters for data-intensive environments. Boasting data-transfer rates of up to 640 MB/sec. and offering support for advanced PCI-X busses, the UL4D is an ideal fit for Enterprise servers and high-end workstations running high-volume, mission-critical applications such as messaging and databases.

ATTO host adapters offer ATTO's exclusive Advanced Data Streaming (ADS<sup>TM</sup>) technology, and the ExpressPCI UL4D is no exception. By effectively managing latency and allowing for fast and efficient data movement, utilization of the CPU is reduced, freeing it up to perform other mission critical tasks.

Installation of the ExpressPCI UL4D host adapter is a fast and easy. Thanks to ATTO's factory-preset configurations, the UL4D is ready out-of-the-box for plug and play operation. The included Configuration Utility, featuring an easy-to-use GUI, simplifies the effort associated with installation, management and monitoring of the host adapter.

The ExpressPCI UL4D is the first choice for users working in environments with demanding server and professional workstation environments. By offering support for Ultra320 SCSI and PCI-X, in addition to ATTO-designed performance-enhancing technologies including ADS, the ExpressPCI UL4D offers both the performance and feature set necessary for today's data-intensive applications.

## **Technical Highlights**

- Ultra320 SCSI
- Up to 320 MB/sec. per channel data-transfer rates
- Dual independent SCSI channels (2 internal and 2 external connector availability)
- 64-bit/133 MHz PCI-X with backward compatibility
- Exclusive ADS<sup>™</sup> technology
- Supports up to 30 SCSI bus IDs
- Up to 12 meter cable lengths
- RoHS Compliant
- 3-year standard product warranty



Hardware Specifications	
SCSI Interface	320 MB/sec. per channel data-transfer rates     Two (2) external VHDCI and two (2) internal high-density connectors per channel     Low Voltage Differential (LVD) signaling     Support for tagged command queuing     Backward compatible with Ultra160, Ultra2, Ultra/WIDE, Fast/WIDE & Narrow SCSI devices
Advanced SCSI	<ul> <li>Supports dynamic bus rescan (OS X)</li> <li>Double transition clocking</li> <li>Domain validation</li> <li>Cyclical Redundancy Checking (CRC)</li> <li>Packetization</li> <li>Quick Arbitration Select (QAS)</li> <li>ASPI compliant (for PC users)</li> <li>Bootable from attached disks</li> <li>Support for disconnect/reconnect</li> <li>Support for multiple block sizes</li> </ul>
Accelerated PCI Bus Management	<ul> <li>PCI-X bus master rate of 1 GB/sec.</li> <li>PCI-X 1.0a compliant</li> <li>PCI 2.2 and PCI 99 compliant</li> <li>64-bit/133 MHz PCI-X (backward compatible with standard PCI)</li> </ul>
General Characteristics	<ul> <li>Automatic termination</li> <li>Upper-byte termination for Narrow devices</li> <li>Flash ROM for easy field upgrades</li> <li>Plug and play compatible</li> <li>Includes ATTO ExpressPro-Tools<sup>TM</sup> &amp; ATTO Configuration Tool formatting &amp; utility software</li> </ul>
Software Specifications	
Driver Support	Windows® Server 2003, 2008, XP, Vista  Mac® OS X (v10.4.x & v10.5.x)  Linux (Fedora, Red Hat and SuSE)  Novell Netware® v6.5
Advanced Data Streaming (ADS <sup>™</sup> )	Improved PCI system bandwidth use     Optimized SCSI-3 algorithms     Tagged command queuing     Embedded RISC I/O processor
RAID Options	RAID 0 support with ATTO Express Power Center or ExpressStripe RAID software utilities
Agency Approvals	
Safety and Environmental	FCC Rules, Part 15 Sub-Part B, Class A CE Mark: CISPR 22 / EN 55022, Class A
Environmental & Physical Specifications	
Dimensions	<ul><li>Length 6.521"</li><li>Height 4.450"</li></ul>
Operating Environment	<ul> <li>Temperature: 0-45° C</li> <li>Humidity: 10-90% non-condensing</li> <li>Airflow: 100 LFM (min)</li> </ul>
Reliability	<ul> <li>MTBF = 150,000 hours</li> <li>MTTR &lt; 15 Minutes</li> </ul>
Power	0.75 typical/2.0 max. Amps @ + 5.0 VDC     0.05 Amps @ + 12.0 VDC
PCI Signal Compatibility	3.3 Volts/5 Volts universal
RoHS Compliant	• Yes
Ordering Information	
Model Number	• EPCI-UL4D-0R0 (RoHS)



or to Purchase: www.ATTOStore.com (716) 691-1999