



ATTO's Celerity 16Gb Gen 6 Fibre Channel Host Bus Adapters provide the highest performing SAN storage connectivity for physical and virtual infrastructures.

### TECHNICAL FEATURES

- Single-, dual- and quad-channel configurations (SFPs included for single and dual)
- 1600 MB/s per channel throughput
- Driver support for Windows®, Linux, Mac® OS X, VMware® and more
- Exclusive Advanced Data Streaming (ADS™) Technology
- ATTO Config Tool for customized performance settings
- Proven interoperable with leading storage hardware and software vendors
- Support for N\_Port ID Virtualization and Virtual Fabric
- Target mode (Developer and SCST) support
- 3-year standard product warranty
- Low power consumption

### MULTIPATH DIRECTOR™

- Multiple paths to storage for improved data integrity and reliability
- High-performance shared storage for workgroups
- Load-balancing and failover in heterogeneous OS environments
- Available through authorized OEMs

### INDUSTRY PROVEN TECHNOLOGY

ATTO has over 25 years of experience developing and delivering reliable first-to-market Fibre Channel storage connectivity solutions to customers. Celerity Fibre Channel connectivity solutions are consistently the highest performing HBAs for server virtualization deployments, faster backups, and scalable cloud initiatives. Offering performance to match new multi-core processors and faster PCIe 3.0 server host bus architectures, the integrated family of Celerity 16Gb Gen 6 Fibre Channel host bus adapters boast an extensive list of customer design wins and certifications with respected industry partners.

### FLEXIBLE CONNECTIVITY SOLUTIONS

With single-, dual- and quad-channel configurations, Celerity 16Gb Gen 6 Fibre Channel HBAs are an ideal solution for users looking to achieve the highest I/O and data throughput for advanced video and enterprise-class IT applications. Celerity 16Gb Gen 6 host bus adapters offer driver support for Windows®, Linux, Mac® OS X, VMware® and more, providing a single connectivity solution for customers with heterogeneous operating system environments.

### PERFORMANCE ENGINEERED

Celerity HBAs are designed to provide fast, redundant and highly available connectivity to Fibre Channel storage, and are engineered to manage latency for real-time applications. ATTO's exclusive Advanced Data Streaming (ADS™) technology provides controlled acceleration of data to deliver the highest consistent performance and reliable data transfers. ATTO pays close attention to detail in board design and signal integrity to minimize transmission errors and data corruption. Specialized Fibre Channel drivers with support for multiple OS platforms and OEM-specific solutions, such as target mode and multipathing, make ATTO the premier choice for high-performance Fibre Channel SAN connectivity.

### ADVANCED MANAGEMENT TOOLS

ATTO's easy-to-use Config Tool features an intuitive GUI that simplifies the installation, management and monitoring of the host bus adapter. With advanced troubleshooting and performance tuning capabilities, Celerity HBAs provide users with sophisticated diagnostics and the flexibility to control settings for specific applications.

## APPLICATIONS

Celerity Fibre Channel host bus adapters deliver high-performance and reliable connectivity solutions for the most demanding storage environments, including physical and virtual datacenters, tape streaming and backup, rich content delivery and server clustering. Celerity HBAs enable users to achieve the ultimate in I/O performance for real-time and transactional applications.

## ADVANCED DATA STREAMING (ADS™)

Latency-management technology that controls the acceleration of data transfers to move large amounts of data faster and more efficiently.

## KEY FEATURES

- Auto Negotiation to 16Gb, 8Gb and 4Gb devices
- Supports point-to-point and direct fabric/switch attach
- ANSI Fibre Channel: FC-FS, FCP
- Flash ROM for easy field upgrades
- FC Class 3 Support
- Buffer Credits: 81
- Pluggable optical LC SFP+, SFF for 164p
- Initiator and target mode (OEM) support
- Supports FDMI and WMI
- Supports NPIV and Virtual Fabric
- Supports Thunderbolt™

## USER BENEFITS

- Superior performance for enterprise applications
- Increased switch port availability
- Seamless integration into existing FC SANs
- Extensive certification with SAN infrastructure components
- Support for virtualized server environments
- Quad port card maximizes usage of server slots

## MANAGEMENT TOOLS

- ATTO Config Tool (w/GUI) BIOS-based management and configuration utility

## BUS SPECIFICATIONS

- x8 PCI Express 3.0 host interface
- Supports PCI Express Base Spec 3.0
- Supports FC-PH6
- Supports SFF-8431
- Supports PCI Express CEM Spec 3.0
- PCI Hot Plug spec 1.1

## EXTERNAL CONNECTIVITY

- Low profile installed with spare brackets
- Full height brackets for FC-162P, FC-161P
- Single (1), Dual (2) pluggable 16Gb optical LC SFP+ modules included, SFF for 164P
- External LEDs for boot status and visual indication of the operating state

## OPERATING SYSTEM SUPPORT

- Windows® Server
- Windows
- Mac OS® X
- SUSE Linux® Enterprise Server (SLES)
- openSUSE Linux
- Red Hat Enterprise Linux (RHEL)
- CentOS Linux
- VMware ESXi Server®
- Hyper-V

## AGENCY APPROVALS

- UL, cUL, CSA: US and Canada
- TUV: Europe
- FCC class A: US
- ICES: Canada
- EMC Directives (CE Mark) Class A: Europe
- VCCI class A: Japan
- BSMI class A: Taiwan
- MSIP (Formerly KCC): Korea
- RCM: Australia

## COMPLIANCE

- RoHS (meet EU and China standards)

## DIMENSIONS

### FC-164P

- Length 6.600", Height 2.713"

### FC-162P, FC-161P

- Length 6.600", Height 2.713"

## OPERATING TEMPERATURE

### HARDWARE ENVIRONMENT

- Temperature: 0-55° C
- Humidity: 10 - 90% non-condensing

### STORAGE ENVIRONMENT

- Temperature: -40°-70°C (-40°-157°F)
- Humidity: 5 - 95% non-condensing

## OPERATING POWER (TYPICAL)

### FC-164P

- 11.9W

### FC-162P

- 10.7W

### FC-161P

- 10.0W

## WARRANTY

- 3 Year

ATTO Celerity	FC-161P	FC-162P	FC-164P
<b>Ports</b>	Single	Dual	Quad
<b>Bus Characteristics</b>	x8 PCIe 3.0	x8 PCIe 3.0	x8 PCIe 3.0
<b>Form Factor</b>	Low Profile	Low Profile	Low Profile
<b>Max Transfer Rate</b>	1600 MB/s	3200 MB/s	6400 MB/s
<b>SKU</b>	CTFC-161P-000	CTFC-162P-000	CTFC-164P-000