



## 8Gb/s Fibre Channel Switches

FibreConnect™ 8308

FibreConnect™ 8316

FibreConnect™ 8324

Scalable SAN connectivity that provides enterprise-level features for small to mid-range SANs to enable high performance and low latency collaborative workflows.

### Superior Workflow Performance

FibreConnect switches provide high-performance connectivity with all ports capable of operating at 2, 4 and 8Gb/s to enable up to 192Gb/s of uncongested throughput. ATTO-exclusive latency management features ensure smooth and reliable data transfer on the SAN, a critical requirement for high-bandwidth video streaming or backup applications. This level of SAN performance provides organizations with improved storage utilization and enables faster LAN-free backup to increase overall system performance and productivity.

### Increased Efficiency

FibreConnect switches significantly increase performance and functionality for SANs at a reasonable price, combining auto-sensing 2, 4 and 8Gb/s throughput with features that greatly enhance workflow efficiency. Implementing FibreConnect switches into a SAN allow users to interconnect and share media resources for applications such as video production, editing and post-production. FibreConnect switches are an affordable solution for consolidating storage on a SAN, which increases productivity and streamlines workflow processes to meet project deadlines.

### Advanced Scalability

The FibreConnect family of switches integrate innovative hardware and software features that make it easy to manage and deploy into a wide range of video and IT environments. With powerful and flexible Ports-On-Demand scalability from 8 to 16 or 24 ports in 8-port increments, FibreConnect allows organizations to start small and grow their storage networks in a non-disruptive manner.

### Simplified Management

FibreConnect switches are easy to setup and configure with the Web Tools interface, making switch configuration, deployment and management an easy process. The FibreConnect has self-configuring switch ports that adjust to match device speeds and allow for firmware updates and error logging to increase overall serviceability.

### Technical Highlights

- Ports-On-Demand (“pay-as-you-grow”) scalability from 8 to 16 or 24 ports
- Provides an affordable foundation for small to mid-range SANs
- Web Tools interface simplifies configuration and management
- Delivers full 8Gb/s, 1:1 performance for up to 24 ports in a 1U form factor
- Energy efficient solution with low power consumption
- Dual functionality as a full-fabric SAN switch or as an NPIV-enabled gateway
- Protects existing investments with auto-sensing 2, 4 and 8Gb/s capabilities
- Extensive ATTO and Brocade interoperability with leading video and IT infrastructure vendors
- Complete Fibre Channel SAN connectivity solution when combined with ATTO’s Celerity 8Gb/s Fibre Channel HBAs
- Includes one SFP for each active port, ear mount kit and 1-year standard product warranty

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## Technical Specifications

### Applications

FibreConnect switches are easy-to-configure SAN switches that allow SMBs and high-end media and entertainment professionals to efficiently and reliably share data. FibreConnect is ideal for video editing, post production, video-on-demand, and complex database applications that run on multiple workstations or servers. The FibreConnect family allows multiple users to share media resources while working simultaneously on projects, creating a productive and efficient workflow.

### System Architecture

#### Fibre Channel Standards

- FC-PH, FC-PH-2, FC-PH-3, FC-GS-2, FC-FLA, FC-FG, FC-SW3

#### Certified Maximum

- Single FOS fabric: 56 domains, 19 hops

#### Fibre Channel Ports

- 24 ports in 8-port increments through Ports-on-Demand licenses at 8,16 and 24 universal (E, F, M, FL, or N) ports

#### Performance

- Full line-speed switching at:
  - 2.125Gb/s line speed, full duplex
  - 4.25Gb/s line speed, full duplex
  - 8.50Gb/s line speed, full duplex
- Auto-sensing of 2, 4, and 8Gb/s port speed
- Optionally programmable to fixed port speed
- Speed matching between 2, 4, and 8Gb/s

#### ISL Trunking

- Up to 68Gb/s per ISL trunk (8 ports x 8.5Gb/s (line rate))
- Exchange-based load balancing across ISLs with DPS included in Fabric OS

#### Aggregate Bandwidth

- 408Gb/s: 24 ports x 8.5Gb/s (line rate) x 2 (full duplex)

#### Maximum Fabric Latency

- 700ns with no contention, cut-through routing at 8Gb/s

#### Maximum Frame Size

- 2,112-byte payload

#### Frame Buffers

- 700 dynamically allocated, 484 maximum per port

#### Classes of Service

- Class 2, Class 3, Class F (Interswitch Frames)

#### Media Types

- Requires FibreConnect hot-pluggable SFP+, LC connector; Short-Wavelength Laser (SWL); distance depends on fiber-optic cable and port speed

#### Data Traffic Types

- Fabric switches supporting unicast, multicast (255 groups), and broadcast

#### Port Types

- FL\_Port, F\_Port, M\_Port (Mirror Port), and E\_Port; self-discovery based on switch type (U\_Port)

### Fabric Services

- Simple Name Server (SNS); Registered State Change Notification (RSCN); NTPv3; Reliable Commit Service (RCS); Dynamic Path Selection (DPS); NPIV; N-Port Trunking; FDMI; Management Server; FSPF; IPoFC, Frame Redirection; Port Fencing; BB credit recovery

### Connectivity Management

#### Interface

- Telnet, HTTP, SNMPv1/v3 (FE MIB, FC Management MIB); Auditing, Syslog, Change Management tracking; Web Tools; SMI-S compliant, SMI-S scripting toolkit

#### Management Access

- 10/100 Ethernet (RJ-45), in-band over Fibre Channel; serial port (RJ-45)

#### Security

- SSL, SSH v2, HTTPS, LDAP, RADIUS, Role-Based Access Control (RBAC), DHCHAP (between switches and end devices), Port Binding, Switch Binding, Secure RPC, Secure Copy (SCP), Trusted Switch, IPsec, IP Filtering

#### Diagnostics

- POST and embedded online/offline diagnostics, including RAStrac logging, environmental monitoring, non-disruptive daemon restart, FCping and Pathinfo (FC traceroute), port mirroring (SAN port)

### Physical Specifications

#### Enclosure

- Non-port to port-side airflow; 1U; 19-inch EIA-compliant, power from port side
- Includes mounting hardware that will extend the width to fit a 19" rack

#### Size

- Width: 42.88 cm (16.88 in), Height: 4.29 cm (24.11 in), Depth: 30.66 cm (12.07 in), System Weight: 4.2 kg (9.3 lb), without SFP/SFP+ media

### Environmental Specifications

#### Temperature

- Operating: 0°-40°C (32°-104°F)
- Non-operating: -25°-70°C (-13°-158°F)

#### Relative Humidity

- Operating: 10% to 85% non-condensing
- Non-operational and storage (non-condensing): 10% to 95% non-condensing

#### Altitude (meters/feet)

- Operating: Up to 3,000 meters (9,842 feet)
- Storage: Up to 12 kilometers (39,370 feet)

### Shock

- Operating: 20 G, 6 ms, half-sine
- Non-operating: Half-sine, 33 G, 11 ms, 3/eg Axis

### Vibration

- Operating: 0.5 G sine, 0.4 grms random, 5 to 500 Hz
- Non-operating: 2.0 G sine, 1.1 grms random, 5 to 500 Hz

### Heat Dissipation

- Maximum 24 ports: 195 BTU/hr

### CO<sup>2</sup> Emissions

- 210 kg per year (with 16 ports at 0.42 kg/kWh)
- 1.09 kg per Gb/s per year

### Input Voltage

- 85 to 264 VAC nominal

### Frequency

- 47 to 63 Hz

### Power Consumption

- Nominal 48 watts; maximum 57 watts with 24 ports at 8Gb/s

### Regulatory Requirements

United States - Safety: UL60950; EMI: FCC Part 15 Class A

Canada - Safety: CSA No. 60950; EMI: ICES-003 Class A

Australia/New Zealand - EMI: EN550022 Level A

Japan - Safety: IEC 60950; EMI: VCCI Class A

International - Safety: IEC 60950; EMI: CSPR22 Class A

European Community - Safety: EN60950, TUV, NEMKO; EMI: EN55022 Level A, EN55024

Taiwan - Safety: CNS; EMI: 13438 Class A

### Warranty

- 1 Year

# HDDisk