



Dell 8/4Gbps FC Pass-Through Module

For Dell M1000e blade enclosures

Transparently connect Dell M-Series blade servers into the Fibre Channel (FC) Storage Area Network (SAN) of your choice.

Highlights

- Interoperable with any standard based Fibre Channel SAN
- 1-to-1 port mapping simplifies Fibre Channel configurations from your blade chassis to your SAN
- Dedicated & isolated 8Gbps FC SAN connection from each blade within the enclosure
- Ships with all 32-ports enabled and 16 SFP+ optical transceivers preinstalled

Interoperability without consideration

The Dell 8/4Gbps FC Pass-Through Module ensures Fibre Channel interoperability for M-Series blade deployments. Since pass-through modules are transparent devices, they are unseen in SAN topologies and provide direct FC connectivity from blade server HBA's to external SANs. This level of interoperability can be beneficial when seeking to integrate blade servers into existing SANs from any FC SAN partner.

Plug and done

Because the Dell 8/4Gbps FC Pass-Through Module is an unmanaged device, it requires no setup, configuration or management. Simply plug the unit into the M1000e chassis and connect cables to the sixteen pre-installed short-wave SFP+ optical transceivers and you're done. The Pass-Through automatically connects at the highest common FC speed by port and begins passing traffic between the server blades and your FC SAN of choice.

Dedicated bandwidth

By statically tying each internal (server) port to its corresponding external (SAN) port, the Dell 8/4Gbps FC Pass-Through Module helps deliver dedicated and isolated bandwidth between each server blade and the SAN without compromise. The FC Pass-Through sixteen external ports also helps maximize the available Fibre Channel bandwidth from your M1000e to your SAN.

Looking for Aggregation? For blade users seeking the simplicity of a pass-through with the added port/cable aggregation and failover benefits of a switch, check out the Dell 8/4Gbps FC SAN Module, based on industry-standard NPIV technology.

8/4Gbps FC Pass-Through Module	
Feature	
Fibre Channel ports	<ul style="list-style-type: none"> 32 total Fibre Channel ports. 16 internal (server) ports and 16 external (SAN) ports Internal and external port pairs are dedicated static connections providing full isolated bandwidth between server blades and the SAN 16 shortwave optical SFP+ modules are pre-installed in the 16 external (SAN) ports All external ports are hot-pluggable
Connectivity	<ul style="list-style-type: none"> Dell 8/4 Gbps FC Pass-Through Module is transparent to all Fibre Channel topologies Connects to any industry standard Fibre Channel compliant Storage Area Network or device Port speeds operate independently at 8, 4, or 2 Gbps Auto-sensing of 8, 4 and 2 Gbps port speeds Speed matching to highest common 8, 4 and 2 Gbps speeds
Performance	<ul style="list-style-type: none"> 8.5Gbps line speed, full duplex 4.25 Gbps line speed, full duplex 2.125 Gbps line speed, full duplex
Total throughput	<ul style="list-style-type: none"> 256 Gbps throughput, full duplex (16 connections x 8Gbps x 2 (bi-directional))
Interoperability	<ul style="list-style-type: none"> Cisco and Brocade FC Switch Fabrics Emulex and Qlogic HBA's Dell / EMC storage arrays and tape libraries
Architecture	<ul style="list-style-type: none"> Dell 8/4 Gbps FC Pass-Through Module units are hot pluggable into the M1000e chassis Redundant units provide failover protection Up to four Pass-Through Modules may plug into Fabrics B and C I/O bays of the M1000e chassis
Options	<ul style="list-style-type: none"> None, device is fully enabled and populated Replacement short wave SFP+ modules are available and separately orderable
Management	
Management	<ul style="list-style-type: none"> None, device is fully enabled and populated Device status is available through the M1000e Chassis Management Controller (CMC)
Diagnostics	<ul style="list-style-type: none"> Dell 8/4 FC Pass-Through Module performs a power on self-test and various ongoing diagnostics to ensure proper operation
Mechanicals	
Size	<ul style="list-style-type: none"> Single-wide I/O Module for M1000e (Width: 272.75 mm, Height: 32.48 mm, Depth: 307.24 mm)
Weight	<ul style="list-style-type: none"> 2.6 kg without SFP's; 3.0 kg with SFP's
Environment	
Temperature	<ul style="list-style-type: none"> Operating: 0 °C to 40 °C (32 °F to 104 °F) Non-operating: -20 °C to 70 °C (-4 °F to 158 °F)
Humidity	<ul style="list-style-type: none"> Operating: 10% to 90%, non-condensing at 29 °C Non-operating: 5% to 95%, non-condensing at 38 °C
Altitude	<ul style="list-style-type: none"> Operating: Up to 3,048 m (10,000 ft) Non-operating: Up to 10,668 m (35,000 ft)
Shock	<ul style="list-style-type: none"> Operating: 20G for 6ms Non-operating: 50G with a velocity change of 4216 mm/sec²
Vibration	<ul style="list-style-type: none"> Operating: 0.4G at 5 Hz to 500 Hz for 60 minutes Non-operating: 0.5G at 2 Hz to 200 Hz for 15 minutes; 1.04 gms random for 15 minutes
Power	
DC input	<ul style="list-style-type: none"> 12V from shared power supplies in M1000e blade chassis
Power consumption	<ul style="list-style-type: none"> 45 Watts Max

Learn more at www.Dell.com/PowerConnect

