



DELL EMC MX7116N FABRIC EXPANDER MODULE

Low latency 25 Gigabit Ethernet fabric expansion for the PowerEdge MX platform

The Dell EMC Networking MX7116n Fabric Expander Module is a key component in the MX Scalable Fabric Architecture. This module transparently extends the networking capabilities of the MX9116n Fabric Switching Engine to multiple PowerEdge™ MX7000 chassis, providing high performance networking at a low TCO.

Maximum scalability

The MX7116n extends the capabilities of the MX9116n Fabric Switching Engine to a total of ten MX7000 chassis and 80 PowerEdge MX compute sleds.

In addition to 16 internal 25GbE ports, the MX7116n provides two QSFP28-Double Density uplink ports. Each QSFP28-DD port provides capacity for eight 25GbE connections from PowerEdge MX compute sleds for a total of 200GbE of bandwidth per QSFP28-DD cable, and 400GbE bandwidth per MX7116n.

Performance and latency

The non-blocking switching architecture in the MX9116n Fabric Switching Engine provides line-rate 25GbE L2 and L3 forwarding capacity to all connected servers. The MX7116n extends that capability to additional MX7000 chassis, adding less than 75ns of latency for a total of less than 600ns latency between any two compute sleds in a Scalable Fabric.

The design of the MX Scalable Fabric Architecture also allows for zero oversubscription between any two compute sleds in the fabric.

Zero touch management

The MX7116n does not run an operating system or have firmware that requires frequent updating to keep “in sync” with the Fabric Switching Engine. It is transparently managed by the MX7000 infrastructure and does not require user configuration.

Product	Description
MX7116n Fabric Expander Module	
Cables	2x 100GbE, QSFP28-DD to QSFP28-DD, active optical, passive DAC 2x 100GbE, QSFP28-DD to 2xQSFP28, active optical, passive DAC 2x 100GbE, QSFP28-DD to 8xSFP28 (8x10/25GbE), active optical, passive DAC 2x 100GbE, MPO12-DD to MPO12-DD optical 2x 100GbE, MPO12DD to 2xMPO12 optical breakout 2x 100GbE, MPO12DD to 8xLC optical breakout 2x 40GbE, QSFP28-DD to 2xQSFP+, active optical, passive DAC 2x 40GbE, QSFP28-DD to 8xSFP+ (8x10/10GbE), active optical, passive DAC
Optics	Transceiver, 2x100GbE, 2SR4 QSFP28-DD Transceiver, 2x40GbE, 2SR4 QSFP28-DD

Physical

25GbE Fabric Expander in PowerEdge MX Fabric

A/B I/O sled form factor

Indicators:

Power/Health LED

ID LED

Supported Optic LED

Compute sled link/activity LEDs

Size: 1.18" h x 17.11" w x 10.94" d

Weight: 6.83lbs (3.1kg)

Max. power consumption: 21.9 Watts

Typ. power consumption: 16.0 Watts

Max. operating specifications:

Standard Operating Temperature 10°C to 35°C (50°F to 95°F)

Operating Relative Humidity 5% to 85%, noncondensing

Max. non-operating specifications:

Storage temperature: -40°C to 65°C (-40°F to 149°F)

Storage humidity: 5 to 95% (RH), noncondensing

Expanded Operating Temperature, Continuous

Operation: 5°C to 40°C at 5% to 85% RH with 29°C dew point

Note: Outside the standard operating temperature, the system can operate continuously in temperatures as low as 5°C and as high as 40°C.

For temperature between 35°C to 40°C, de-rate maximum allowable temperature by 1°C per 175m above 950m (1°F per 319 ft)

Fresh Air Compliant to 45°C

Redundancy

Redundant Power and Cooling provided by

Dell EMC PowerEdge MX7000 Chassis

Performance

Latency: Sub 75ns

Regulatory compliance

Safety

UL/CSA 60950-1, Second Edition

EN 60950-1, Second Edition

IEC 60950-1, Second Edition Including all National Deviations and Group Differences

EN 60825-1 Safety of Laser Products Part 1:

Equipment Classification Requirements and User's Guide

EN 60825-2 Safety of Laser Products Part 2:

Safety of Optical Fiber Communication Systems

FDA Regulation 21 CFR 1040.10 and 1040.11

Emissions

Australia/New Zealand: AS/NZS CISPR 32:2015, Class A

Canada: ICES-3/NMB-3, Class A

Europe: EN 55024:2010 (CISPR 24:2010), Class A

Japan: VCCI V-3/2010.04 Class A

USA: FCC CFR 47 Part 15, Subpart B:2011, Class A Immunity

EN 300 386 V1.6.1 EMC for Network Equipment

EN 55024:2010

EN 61000-3-2: Harmonic Current Emissions

EN 61000-3-3: Voltage Fluctuations and Flicker

EN 61000-4-2: ESD

EN 61000-4-3: Radiated Immunity

EN 61000-4-4: EFT

EN 61000-4-5: Surge

EN 61000-4-6: Low Frequency Conducted Immunity

RoHS

EN 50581:2012 All MX7116n components are EU

RoHS compliant



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