

DELL MX8116N FABRIC EXPANDER MODULE



Low latency 100 Gigabit Ethernet fabric expansion for the PowerEdge MX platform

The Dell Networking MX8116n Fabric Expander Module is a key component on the PowerEdge MX Platform for 100GbE Solution. This module transparently extends the networking capabilities of the Dell PowerSwitch Z9432F-ON to multiple PowerEdge™ MX7000 chassis, providing high performance networking at a low TCO.

Maximum scalability

The MX8116n extends the capabilities of the PowerSwitch Z9432F-ON to a total of fourteen MX7000 chassis and 112 PowerEdge MX compute sleds.

In addition to 8 internal 100GbE ports and 16 internal 25GbE ports, the MX8116n provides two QSFP56-Double Density uplink ports. Each QSFP56-DD port provides capacity for four 100GbE connections from PowerEdge MX compute sleds for a total of 400GbE of bandwidth per QSFP56-DD port, and 800GbE bandwidth per MX8116n.

Performance and latency

The non-blocking switching architecture in the PowerSwitch Z9432F-ON provides line-rate 100GbE L2 and L3 forwarding capacity to all connected servers. The MX8116n extends that capability to additional MX7000 chassis with a very low latency between any two compute sleds in a Multichassis group.

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

Zero touch management

The MX8116n runs a basic Linux UBoot operating system and have firmware that requires updating to keep “in sync” with the Fabric Switching Engine. It is transparently managed by the user to update through Command Line Interface on an MX7000 infrastructure.

Product	Description
MX8116n Fabric Expander Module	Fabric Expander Modular Switch for PowerEdge MX Platform.
Optics	400GbE, Q56DD,SR4.2,GEN3,MPO,MMF,1x400G p2p,4x100G breakout to BIDI or SR1.2 2x100G/2x40GbE QSFP28-DD, Dual rate 2SR4, MPO12-DD, MMF
Cables	400G Q56DD Passive Copper Direct Attach Cable – 0.5, 1, 2 Meter 400GbE QSFP56-DD to QSFP56-DD, Active Copper Cable – 3, 5, 7 Meter 400GbE QSFP56-DD to 4xQSFP28 100GbE, Active Copper Cable, Breakout – 3, 5 Meter 400GbE QSFP56-DD to 4x100G PAM4 QSFP56 Passive Copper DAC, Breakout – 1, 2 Meter 400GbE Q56DD Passive Copper Direct Attach Cable – 0.5, 2 Meter 400GbE QSFP56-DD Passive Direct Attach Cable, No FEC, 1 Meter 400GbE Breakout, QSFP56-DD to 4xQSFP56 Depop SFF DAC 3 Meter 200GbE QSFP28-DD Passive Direct Attach Cable, No FEC – 0.5, 1 2 Meter 200GbE QSFP28-DD Active Optical Cable, No FEC – 5, 10, 20 Meter 200GbE QSFP28-DD to 2x100GbE QSFP28 Active Optical Cable, Breakout, No FEC – 5, 7, 15 Meter 200GbE QSFP28-DD to 8x25GbE SFP28 Active Optical Cable, Breakout, No FEC – 7, 10 Meter 2x100GbE, QSFP28-DD to 8xSFP28 10/25GbE, DAC Breakout, No FEC – 1, 2 Meter 2x100GbE QSFP28-DD to 2x100GbE QSFP28 Passive DAC, Breakout – 2, 3 Meter

Technical specifications

Physical

100GbE 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: 7.5lbs (3.4kg)

Max. power consumption: 53.13 Watts

Typ. power consumption: 19.5 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 PowerEdge MX7000 Chassis

Regulatory compliance

Safety

UL/CSA 60950-1, Second Edition EN 60950-1, Second Edition
IEC 62368-1, Second Edition Including all National Deviations and Group
IEC 62368-1, Third Edition Including all National Deviations and Group
Differences
EN 60825-1 Safety of Laser Products Part 1: Equipment Classification
Requirements and User's Guide (for fiber module)
EN 60825-2 Safety of Laser Products Part 2: Safety of Optical Fiber
Communication Systems FDA Regulation 21 CFR 1040.10 and 1040.11 (for
fiber module)

Emissions & Immunity

Australia/New Zealand: AS/NZS CISPR 32:2015, Class A
Canada: ICES-3/NMB-3, Class A
Europe: EN 55035:2017, Class A
Japan: VCCI-CISPR 32: 2016 Class A
USA: FCC CFR 47 Part 15, Subpart B:2014, Class A
EN 300 386 V1.6.1 EMC for Network Equipment EN 55035:2017
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
EN61000-4-8 Power Frequency Magnetic Field
EN61000-4-11 Voltage Dips and Interruptions

RoHS

EN 50581:2012 All MX8116n components are EU RoHS compliant

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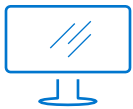
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