

# FE-12s plug-in card



## D E S C R I P T I O N

The Calix C7 FE-12s plug-in card provides 12 Fast Ethernet (10/100) interfaces. Each interface supports Layer 2 switching, Transparent LAN Services (TLS), 802.1Q VLAN tagging, MultiPoint-to-MultiPoint VLANs, VLAN stacking, Ethernet Packet Rings (EPR), Virtual Concatenation, and rate policing in 1 Mbps increments.

The Calix C7 FE-12s can be plugged into any of the 20 universal slots within the Calix C7 shelf. Physical access to each 10/100 interface is provided through standard RJ-45 connectors mounted on the back of the shelf.

## K E Y   A T T R I B U T E S

**VIRTUAL CONCATENATION:** The Calix C7 supports standard (ITU G.707-2000) Virtual Concatenation, enabling virtual concatenation of non-contiguous STS-1s (STS-1 to STS-21) in STS-1 increments - versus traditional SONET ADMs that use inefficient standard concatenated STS-1, STS-3c, or STS-12c SONET payloads.

**ETHERNET PACKET RING:** Ethernet Packet Rings provide a shared pool of bandwidth to all Ethernet ports, emulating a large LAN environment. EPRs are provisionable in STS-1 increments (STS-1 to STS-21) and support multiple point-to-point and multipoint-to-multipoint VLANs.

**VLAN TAGGING AND STACKING:** The FE-12s supports 802.1Q VLAN tagging to differentiate customers from one another. VLAN stacking (VLAN double tagging) is supported for customers with pre-tagged 802.1Q frames. Up to 4093 VLANs are supported per XLAN.

**RATE-TUNABLE INTERFACES:** Each Ethernet interface on the FE-12s is rate-tunable in 1 Mbps increments (ingress and egress) using standards-based IEEE flow-control 802.3x PAUSE frames.

**INTERFACE DENSITY:** The 14-inch high Calix C7 shelf can be equipped with up to 20 FE-12s cards for a total of 240 FE interfaces per shelf. Up to five shelves can be deployed in a single node configuration to deliver 1,200 FE interfaces from a single 7-foot bay.

**PLUG AND PLAY:** New FE-12s cards can be added to the system with ease and minimum user intervention, allowing quick and easy turn up of new services. The FE-12s interoperates seamlessly with the GE-4s card.

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## SPECIFICATIONS

# FE-12s plug-in card

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### ORDERING INFORMATION

Calix Part No. 100-00054

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### PORTS

12 Fast Ethernet (10/100) interfaces  
per card

20 cards per shelf

240 FE interfaces per shelf

1,200 FE interfaces per 7-foot rack  
(5 shelves)

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### STATUS INDICATORS

ACTIVE: Green – Indicates card is  
active and operating properly

FAIL: Red – Indicates card has failed

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### POWER DISSIPATION

35 Watts per card

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### PHYSICAL DIMENSIONS

Size: 9.3 inches (height) x 0.7 inches  
(width) x 9.0 inches (depth)

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### OPERATING ENVIRONMENT

Temperature: –40 C to +65 C  
(–40 F to +149 F)

Humidity: 5 to 90% non-condensing

Altitude: to 13,125 feet

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### STORAGE TEMPERATURE

–40 C to +70 C (–40 F to +158 F)

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### NEBS LEVEL 3 COMPLIANCE

Telcordia GR-63-CORE, Network  
Equipment-Building System  
(NEBS) Requirements.

Telcordia GR-1089-CORE,  
Electromagnetic Compatibility and  
Electrical Safety.

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### SAFETY

NTRL-UL-60950-1

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### EMI/RFI

FCC Part 15 Class A

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### STANDARDS SUPPORT

IEEE 802.3, Ethernet (CSMA/CD)

IEEE 802.1Q, VLAN

IEEE 802.1D, MAC Bridging

ITU-G.707 Virtual Concatenation



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