



Product Bulletin:

Cisco Nexus 2000 Series Fabric Extenders

Revision History

31 August 2010 - Initial version

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This product bulletin informs NetApp sales and NetApp partners about new or changed NetApp® products or services.

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1. Summary

This product bulletin announces the availability of the Cisco Nexus 2148T, 2232PP-10G, and Nexus 2248TP fabric extenders.

The Nexus 2000 Series fabric extenders are part of Cisco's Nexus portfolio and can only be installed in conjunction with a Nexus 5010 or 5020 10GbE DCB switch. The Nexus 2232PP-10G and 2248TP-1GE will also be offered in bundles with the appropriate number of Fabric Extender Transceivers (FETs) for connections to the Nexus 5010/5020.

Support for the Nexus 2000 Series fabric extenders will continue to be offered via resale of Cisco SMARTnet service contracts, with contract durations ranging from one to five years.

2. What's New?

NetApp is currently reselling the Nexus 5010 and 5020, as well as the Nexus 2148T fabric extender. The Nexus 2232PP-10GE and Nexus 2248TP will now be added to the Nexus portfolio. In addition, the Nexus 2232PP-10GE and 2248TP-1GE will be sold bundled with Fabric Extender Transceivers for cost-effective optical connections to the Nexus 5010/5020 parent switch. Note that the FETs will not be sold as standalone products and will always be bundled with the Nexus 2232PP or 2248TP.

The primary use case for the Nexus 2232PP-10G is to provide additional 10GbE ports at a reduced rate as compared to having to purchase another Nexus 5010/5020. There are no software licenses or options associated with the Nexus 2232PP-10G. It is FCoE capable, but only when the Nexus 5010/5020 it is connected to has FCoE enabled. Since the Nexus 2232PP-10G is treated as a virtual blade for the Nexus 5010/5020, it does not perform FC forwarding functions (within FCoE) and an FCoE frame traversing through the Nexus 2232PP-10G to the Nexus 5010/5020 would not be considered as a multihop within the network.

The primary purpose of the Nexus 2148T and 2248TP is to aggregate many 1GbE links in a cost-effective manner and to terminate via 10GbE links to the Nexus 5010/5020. From that aspect, it can be considered a remote I/O module for the Nexus 5010/5020. The maximum distance between a Nexus 2000 Series extender and the associated Nexus 5010/5020 is 300 meters. The primary difference between the Nexus 2148T and 2248TP is that the Nexus 2148T supports 1GbE connections on the 48 host-facing ports while the Nexus 2248TP supports 100M or 1GbE connections on the host-facing ports.

The Nexus 2000 Series fabric extenders are supported in Cisco NX-OS software release 4.0(1A)N2(1) or later for Cisco Nexus 5000 series switches. Cisco NX-OS Software Release 4.1(3)N1(1) or later is required for vPC support.

3. Sales and Customer-Ready Tools (Training, SE, Customer Presentations, Datasheets, Sales Guides)

[NetApp SalesEdge FC Switches and Directors](#)

[NetApp PartnerCenter FC SAN](#)

4. System Requirements

The latest Cisco support statements can be found at the NetApp Fibre Channel Switch Support Matrix:

[Support Matrix](#)

5. Product Information

The Nexus 2232PP-10G is a 1RU fixed-port fabric extender with 32 customer-facing 10GbE ports and 8 Nexus 5010/5020 facing 10GbE ports. The eight uplinks to the Nexus 5K cannot be connected to any other switch at this time, and the Nexus 2232PP-10G is managed as a virtual blade on the Nexus 5010/5020 it is connected to. The Nexus 2232PP-10G will also be offered in a bundle with 16 FETs included (8 for the Nexus 2232PP uplinks and 8 FETs for the Nexus 5010/5020).

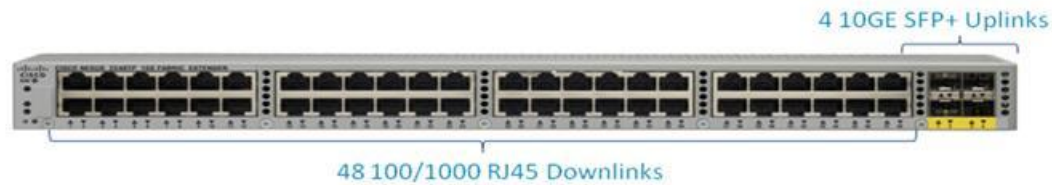


The Nexus 2232PP-10G has the following technical characteristics:

- 1RU form factor
- 32 customer- (host-) facing 10GbE SFP+ ports plus eight 10GbE uplinks with SFP+ optical modules (optics not included)
- SFP+ module supports Cisco 1/3/5m Twinax copper cables, as well as Short Reach (SR) and Long Reach (LR) SFP+ optics
- 4:1 oversubscription ratio when fully populated

The Nexus 2248TP and 2148T are both 1RU fixed-port fabric extenders with 48 x 100M/1GbE (no 100M support on the Nexus 2148T) customer-facing ports and four 10GbE Nexus 5K facing uplink ports. The four 10GbE uplinks can only be connected to a Nexus 5010/5020, and the Nexus 2148T/2248TP will be managed from the Nexus 5K. The Nexus 2248TP is also being offered with eight FETs included (eight FETs for the 2248TP uplinks,

eight FETs for the Nexus 5010/5020 it is connected to).



The Nexus 2248TP and Nexus 2148T share the following technical characteristics:

- 1RU form factor
- 48 customer- (host-) facing 100M/1GbE (no 100M support on the Nexus 2148T) RJ-45 ports plus four 10GbE uplinks with SFP+ optical modules (optics not included)
- SFP+ module supports Cisco 1/3/5m Twinax copper cables, as well as Short Reach and Long Reach SFP+ optics
- 1.2:1 oversubscription ratio when fully populated

The following part numbers are included in the NetApp price list and CustomerEdge/PartnerCenter systems.

Part Number	Description	Discount Category Code
X-N2K-C2232PP-10GE-R6-C	Switch,Cisco N2232 Fab Ext 32/8 10GE 2PSU,-C	C
X-N2K-C2248TP-1GE-R6-C	Switch,Cisco N2248 Fab Ext 48/4 10GE 2PSU,-C	C
X-N2K-C2248TF-1GE-R5-C	Switch,Cisco N2248 FEX 48/4 10GE 2PSU 8FET,-C	C
X-N2K-C2232PF-10GE-R5-C	Switch,Cisco N2232 FEX 32/8 10G 2PSU 16FET,-C	C
X-N2K-C2148T-1GE-R5-C	Cisco,Fabric Extender,N2148T,48/4,-C,R5	C
X-N2K-C2148T-FAN-R5	Cisco,Fan Module,N2148T,R5	C
X-N2K-C2232-FAN-R6	Fan,Cisco N2232 Fabric Extender	C
X-N2K-C2248-FAN-R6	Fan,Cisco N2248 Fabric Extender	C
X-N2200-PAC-400W-R6	Power Supply,Cisco N22XX 400 Watt	C
X-N2200-ACC-KIT-R6	Switch,Cisco N22XX Accessory Kit	C

Software Subscription Plans

There are no additional software licenses or subscriptions required as part of the Nexus 2000 Series introduction.

Downloading

For downloading all software, go to [NOW™ Download Software](#).

To download the latest Cisco NX-OS version, go to:

[Cisco Firmware Download Page](#)

Product Availability

The Nexus 2232PP-10G and Nexus 2248TP and FET bundles will be available to quote in the September 2010 release of the Quote Tool.

6. Regulatory Compliance

Products need to be validated against the NetApp Safety/EMI Regulatory Compliance List prior to order submission. This is required to ensure that products are being sold only in the countries in which NetApp has received regulatory compliance certification. This information can be found in the Field Portal by searching under "Compliance, Policies and Procedures" or following the links below:

- [RoHS Compliance](#)
- [Safety/EMI Regulatory Compliance \(XLS\)](#)
- [WEEE Compliance](#)

7. Warranty and Service

NetApp requires the purchase of a Cisco SMARTnet support contract for the Cisco Nexus 2000 Series fabric extenders at the time of equipment purchase. NetApp resells Cisco SMARTnet service contracts for the Nexus 2000 Series fabric extenders with one- to five-year duration. The SMARTnet service part numbers are as follows:

Part Number	Description
SVCVN-CON-OS-N2232P	Service, Cisco 2232 Onsite 8x5xNBD
SVCVN-CON-OSE-N2232P	Service, Cisco 2232 Onsite 8x5x4hr
SVCVN-CON-OSP-N2232P	Service, Cisco 2232 Onsite 24x7x4hr
SVCVN-CON-PREM-N2232P	Service, Cisco 2232 Onsite 24x7x2hr
SVCVN-CON-S2P-N2232P	Service, Cisco 2232 Part 24x7x2hr
SVCVN-CON-SNT-N2232P	Service, Cisco 2232 Part 8x5xNBD
SVCVN-CON-SNTE-N2232P	Service, Cisco 2232 Part 8x5x4hr
SVCVN-CON-SNTP-N2232P	Service, Cisco 2232 Part 24x7x4hr
SVCVN-CON-OS-N2248T	Service, Cisco 2248 Onsite 8x5xNBD
SVCVN-CON-OSE-N2248T	Service, Cisco 2248 Onsite 8x5x4hr
SVCVN-CON-OSP-N2248T	Service, Cisco 2248 Onsite 24x7x4hr
SVCVN-CON-PREM-N2248T	Service, Cisco 2248 Onsite 24x7x2hr
SVCVN-CON-S2P-N2248T	Service, Cisco 2248 Part 24x7x2hr
SVCVN-CON-SNT-N2248T	Service, Cisco 2248 Part 8x5xNBD
SVCVN-CON-SNTE-N2248T	Service, Cisco 2248 Part 8x5x4hr
SVCVN-CON-SNTP-N2248T	Service, Cisco 2248 Part 24x7x4hr
SVCVN-CON-OS-N2148	Service, Cisco 2148 Onsite 8x5xNBD
SVCVN-CON-OSE-N2148	Service, Cisco 2148 Onsite 8x5x4hr
SVCVN-CON-OSP-N2148	Service, Cisco 2148 Onsite 24x7x4hr
SVCVN-CON-PREM-N2148	Service, Cisco 2148 Onsite 24x7x2hr
SVCVN-CON-S2P-N2148	Service, Cisco 2148 Part 24x7x2hr
SVCVN-CON-SNT-N2148	Service, Cisco 2148 Part 8x5xNBD
SVCVN-CON-SNTE-N2148	Service, Cisco 2148 Part 8x5x4hr
SVCVN-CON-SNTP-N2148	Service, Cisco 2148 Part 24x7x4hr

8. Additional Information

Contact Information: Please contact your NetApp sales or channel partner representative with questions concerning this bulletin.

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