Cisco Expands the Cisco Nexus 2000 Series Fabric Extenders Product Line with the Cisco Nexus 2248TP GE and 2232PP 10GE Fabric Extenders

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The Cisco Nexus® 2248TP GE and 2232PP 10GE Fabric Extenders expand the Cisco Nexus 2000 Series Fabric Extenders product line to provide a unified server access platform across a range of 100 Megabit Ethernet, Gigabit Ethernet, 10 Gigabit Ethernet, unified fabric, rack, and blade server environments (Figure 1).

Figure 1.   Cisco Nexus 2000 Series Fabric Extenders

Table 1 summarizes the Cisco Nexus 2000 Series product line. Fabric extenders work in conjunction with a parent Cisco Nexus 5000 Series Switch. Cisco Nexus 2000 Series Fabric Extenders can be mixed and matched to a parent switch to provide various connectivity options.

Table 1.   Cisco Nexus 2000 Series Specifications

Product	Specification
Cisco Nexus 2148T GE Fabric Extender	48 1000BASE-T ports and 4 10 Gigabit Ethernet uplinks (SFP+)
Cisco Nexus 2248TP GE Fabric Extender	48 100/1000BASE-T ports and 4 10 Gigabit Ethernet uplinks (SFP+)
Cisco Nexus 2232PP 10GE Fabric Extender	32 10 Gigabit Ethernet and FCoE ports (SFP+) and 8 10 Gigabit Ethernet and FCoE uplinks (SFP+)

Cisco Nexus 2000 Series Virtual Modular System

The Cisco Nexus 2000 Series Fabric Extenders behave as remote I/O modules for a parent Cisco Nexus 5000 Series Switch. The fabric extender is essentially an extension of the parent Cisco Nexus switch fabric, with the fabric extender and the parent Cisco Nexus switch together forming a virtual modular system.

The Cisco Nexus 2000 Series forwards all traffic to the parent Cisco Nexus 5000 Series Switch over 10 Gigabit Ethernet uplinks. Passing all traffic to the parent switch allows traffic to be shaped according to policies established on the parent Cisco Nexus 5000 Series Switch with a single point of management.

The virtual modular system architecture includes the following benefits:

● **Architecture Flexibility and Scalability:** Up to 576 Gigabit Ethernet ports or 384 10 Gigabit Ethernet ports per virtual modular system

● **Simplified Operations:** One single point of management, configuration, and software upgrade

● **Optimal Cabling:** Optimal intra-rack and inter-rack cabling

● **Business Resiliency:** Physical redundancy, virtual PortChannel (vPC), and In Service Software Upgrade (ISSU)

New Features

Cisco Nexus 2248TP GE Fabric Extender

- The Cisco Nexus 2248TP supports the following features:
- 48 Fast Ethernet and Gigabit Ethernet server access ports with RJ-45 connectors
- 4 10 Gigabit Ethernet uplink ports using Small Form-Factor Pluggable Plus (SFP+) short-reach (SR) and long-reach (LR) optical or CX1 direct-attach copper interconnects
- Host PortChannel and vPC (up to 8 PortChannel members per PortChannel, with no restriction on the number of PortChannels)
- ISSU
- Highly scalable virtual modular system with up to 576 Gigabit Ethernet ports
- Compact one-rack-unit (1RU) form factor
- Front-to-back cooling compatible with data center hot-aisle and cold-aisle designs, with all switch ports at the rear of the unit in close proximity to server ports
- Dual-redundant power supplies included in default configuration
- Hot-swappable fan trays
- All user-serviceable components accessible from the front panel
- Hardware capable of back-to-front cooling (requires new power supply and fan tray)
- Operates as a remote I/O module, extending the switch fabric for Cisco Nexus 5010 and 5020 Switches
- Can be mixed and matched with different types of Cisco Nexus 2000 Series Fabric Extenders on the same parent switch to support various types of connectivity
- Zero-touch provisioning, including configuration and upgrade

Cisco Nexus 2232PP 10GE Fabric Extender

- The Cisco Nexus 2232PP supports the following features:
- 32 10 Gigabit Ethernet and Fibre Channel over Ethernet (FCoE) server access ports using SFP+ SR and LR optical or CX1 direct-attach copper interconnects
- 8 10 Gigabit Ethernet and FCoE uplink ports using SFP+ SR and LR optical or CX1 direct-attach copper interconnects
- Low-latency, cut-through switching, ideal for 10 Gigabit Ethernet server and pass-through blade server connectivity
- Unified fabric environments
- IEEE Data Center Bridging (DCB)
- Host PortChannel and vPC (up to 8 PortChannel members per PortChannel, with no restriction on the number of PortChannels)
- ISSU
- Highly scalable virtual modular system with up to 384 10 Gigabit Ethernet and FCoE ports
- Compact 1RU form factor
- Front-to-back cooling compatible with data center hot-aisle and cold-aisle designs, with all switch ports at the rear of the unit in close proximity to server ports
- Hardware capable of back-to-front cooling (requires new power supply and fan tray)
- Dual-redundant power supplies included in default configuration

- Hot-swappable fan trays
- All user-serviceable components accessible from the front panel
- Hardware capable of Gigabit Ethernet on all ports (requires new software)
- Operates as a remote I/O module, extending the switch fabric for Cisco Nexus 5010 and 5020 Switches
- Can be mixed and matched with different types of Cisco Nexus 2000 Series Fabric Extenders to the same parent switch to support various types of connectivity
- Zero-touch provisioning, including configuration and upgrade

Availability

The Cisco Nexus 2248TP and 2232PP are available for ordering today. First customer shipment (FCS) is expected in the second quarter of 2010.

Ordering Information

Table 2 provides ordering information for the Cisco Nexus 2248TP and 2232PP fabric extenders.

Table 2.   Ordering Information

Part Number	Description
Chassis	
N2K-C2248TP-1GE	Cisco Nexus 2000 Series 1GE Fabric Extender, 2PS, 1 Fan Module, 48x100/1000-BaseT + 4x10GE (req SFP+)
N2K-C2232PP-10GE	Cisco Nexus 2000 Series 10GE Fabric Extender, 2PS, 1 Fan Module, 32x10GE (req SFP+) + 8x10GE (req SFP+)
Fan Modules	
N2K-C2248-FAN=	Cisco Nexus 2248TP FEX Fan Module, spare
N2K-C2232-FAN=	Cisco Nexus 2232PP FEX Fan Module, spare
Power Supplies	
N2200-PAC-400W=	Cisco Nexus 2200 Power supply
N2200-P-BLNK=	Cisco Nexus 2200 Power supply Blank, spare
Transceivers and Cables	
SFP-10G-SR(=)	10GBASE-SR SFP+ Module
SFP-10G-LR(=)	10GBASE-LR SFP+ Module
SFP-H10GB-CU1M(=)	10GBASE-CU SFP+ Passive Cable 1 Meter
SFP-H10GB-CU3M(=)	10GBASE-CU SFP+ Passive Cable 3 Meter
SFP-H10GB-CU5M(=)	10GBASE-CU SFP+ Passive Cable 5 Meter
Accessory Kit	
N2200-ACC-KIT=	Cisco Nexus 2200 FEX Accessory Kit, spare
Power Cords	
CAB-N5K6A-NA(=)	Power Cord, 210/220V 30A North America
CAB-AC-250V/13A(=)	Power Cord for North America, 125VAC/13A
CAB-C13-C14-JMPR(=)	Recessed receptacle AC power cord 27
CAB-C13-C14-2M(=)	Power Cord Jumper, C13-C14 Connectors, 2 Meter Length
CAB-9K12A-NA(=)	Power Cord, 125VAC 15A NEMA 5-15 Plug, North America
CAB-C13-CBN(=)	Cabinet Jumper Power Cord, 250 VAC 16A, C14-C13 Connectors
SFS-250V-10A-AR(=)	SFS Power Cord - 250V, 10A - Argentina
CAB-9K10A-AU(=)	Power Cord, 250VAC 10A 3112 Plug, Australia
SFS-250V-10A-CN(=)	SFS Power Cord - 250V, 10A - PRC
CAB-9K10A-EU(=)	Power Cord, 250VAC 10A CEE 7/7 Plug, EU
SFS-250V-10A-ID(=)	SFS Power Cord - 250V, 10A - South Africa, UAE, India

Part Number	Description
CAB-IND-10A(=)	10A Power cable for India
SFS-250V-10A-IS(=)	SFS Power Cord - 250V, 10A - Israel
CAB-9K10A-IT(=)	Power Cord, 250VAC 10A CEI 23-16/VII Plug, Italy
CAB-9K10A-SW(=)	Power Cord, 250VAC 10A MP232 Plug, Switzerland
CAB-9K10A-UK(=)	Power Cord, 250VAC 13A BS1363 Plug (13 A fuse), UK

To place an order, visit the Cisco Ordering Home Page. To download software, visit the Cisco Software Center.

Figure 2 provides part number nomenclature information for the Cisco Nexus 2000 Series Fabric Extenders.

Figure 2. Nexus 2000 Series Fabric Extender: Part Numbers/SKU Identification Scheme

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
N2K-C2232PP-10GE

1–3: Cisco Nexus 2000 Series Identifier
4: Dash
5: Chassis
6: Series Number
7: Series Generation
8–9: Number of Ports
10: Host Physical Interface Type (P = SFP+ and T = Copper)
11: Uplink Physical Interface Type (P = SFP+ and T = Copper)
12: Dash
13–16: Host Connection Speed

Warranty

The Cisco Nexus 2248TP and 2232PP fabric extenders have a 1-year limited hardware warranty. The warranty includes hardware replacement with a 10-day turnaround from receipt of a return materials authorization (RMA).

Cisco Services

Cisco offers a wide range of services to help accelerate your success in deploying and optimizing the Cisco Nexus 5000 Series Switches and Cisco Nexus 2000 Series Fabric Extenders in your data center. The innovative Cisco® Services offerings are delivered through a unique combination of people, processes, tools, and partners and are focused on helping you increase operational efficiency and improve your data center network. Cisco Advanced Services uses an architecture-led approach to help you align your data center infrastructure with your business goals and achieve long-term value. Cisco SMARTnet® Service helps you resolve mission-critical problems with direct access at any time to Cisco network experts and award-winning resources. With this service, you can take advantage of the Smart Call Home service capability, which offers proactive diagnostics and real-time alerts on your Cisco Nexus 5000 Series Switches. Spanning the entire network lifecycle, Cisco Services offerings help increase investment protection, optimize network operations, support migration operations, and strengthen your IT expertise. For more information about Cisco Nexus Services, visit http://www.cisco.com/go/nexusservices.

For More Information

- Cisco Nexus 2000 Series Fabric Extenders: http://www.cisco.com/go/nexus2000
- Cisco Nexus 5000 Series Switches: http://www.cisco.com/go/nexus5000
- Cisco NX-OS Software: http://www.cisco.com/go/nxos

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