

Introducing Cisco Catalyst 4500 Series Supervisor Engine II-Plus-10GE and Cisco Catalyst 4500 Series 48-Port 100BASE-X SFP Line Card

Cisco Catalyst 4500 Series Supervisor Engine II-Plus-10GE

Cisco Systems® is pleased to internally announce the Cisco® Catalyst® 4500 Series Supervisor Engine II-Plus-10GE (Figure 1).

The Supervisor Engine II-Plus-10GE complements the Catalyst 4500 Series Supervisor Engine portfolio by delivering 10-Gigabit Ethernet capability in an enhanced Layer 2 supervisor engine. The Supervisor Engine II-Plus-10GE is equipped with both Gigabit (Small Form-Factor Pluggable [SFP]) and line-rate 10-Gigabit (X2) ports, providing 10-Gigabit scalability and an easy and cost-efficient migration to 10-Gigabit Ethernet. The Supervisor Engine II-Plus-10GE provides 108 Gbps of nonblocking enhanced Layer 2 switching and 81-million packets-per-second (mpps) throughput with basic Layer 3 and Layer 4 intelligent services. It helps enable resilient, multilayer switching solutions for converged data, voice, and video networks. The Supervisor Engine II-Plus-10GE is designed with ample performance and resources to allow customers to deploy networkwide intelligent services, such as advanced quality of service (QoS), advanced security, and management features without impacting switching performance. Compatible with the widely deployed Cisco Catalyst 4503, Catalyst 4506, and Catalyst 4507R chassis as well as existing Catalyst 4500 Series line cards, the Supervisor Engine II-Plus-10GE provides investment protection while extending the deployment of the modular Cisco Catalyst 4500 Series.

Figure 1

Cisco Catalyst 4500 Series Supervisor Engine II-Plus-10GE



The Supervisor Engine II-Plus-10GE is ideal for enterprises and medium-sized businesses that require secure, high-performance connectivity with maximum uptime in the LAN access layer. It is also well suited for DSLAM aggregation in Metro Ethernet environments. All four Gigabit and both 10-Gigabit ports are active and may be used concurrently.

Orderability for the new Cisco Catalyst 4500 Series Supervisor Engine II-Plus-10GE is planned for November 1, 2005. Volume shipments are expected to begin in December.

Cisco Catalyst 4500 Series 48-Port 100BASE-X SFP Line Card

The Cisco Catalyst 4500 Series 48-Port 100BASE-X Line Card (Figure 2) provides customers the ability to combine various SFP optics, based on the network need. One to forty-eight 100BASE-X SFP optics can be populated on a single line card. 100BASE-X SFP optic bundles are also available, details are included in the product overview section. This nonblocking line card is compatible with any Cisco Catalyst 4500 Series chassis.

Figure 2

Cisco Catalyst 4500 Series 48-Port 100BASE-X SFP Line Card



Orderability for the new line card is planned for November 3, 2005.

Product Overview and Portfolio Positioning

Cisco Catalyst 4500 Supervisor Engine II-Plus-10GE

The Cisco Catalyst 4500 Series Supervisor Engine II-Plus-10GE provides investment protection and an enhanced Layer 2 upgrade path to 10 Gigabit Ethernet. It includes dual wire-speed 10-Gigabit Ethernet ports (X2 optics) as well as 4 Gigabit Ethernet ports (SFP optics) on the faceplate. Both the 10-Gigabit X2 interfaces and the Gigabit SFP interfaces can be enabled simultaneously for maximum flexibility and scalability, providing an easy migration path from Gigabit Ethernet to 10-Gigabit Ethernet. The Supervisor Engine II-Plus-10GE SDRAM is also optionally expandable from 256 MB to 512 MB for further scalability. The Supervisor Engine II-Plus-10GE is an enhanced Layer 2 supervisor engine. For customers requiring full Layer 3 Enhanced Routing Protocol support with routing tables four times larger and double the QoS/Security table size, the Catalyst 4500 Series Supervisor Engine V-10GE is the appropriate choice.

Key features of the Supervisor Engine II-Plus-10GE include:

- Wire-speed performance for 1-Gigabit and 10-Gigabit connectivity
 - 108-Gbps switching fabric with 81-mpps forwarding rate for enhanced Layer 2
- Supervisor engine redundancy for nonstop operation
 - Stateful Switchover (SSO) support for subsecond failover
- Robust security
 - Protection against man-in-the-middle and IP spoofing attacks
 - Port, router, and VLAN access control lists (ACLs)
 - Network Admission Control Phase 2 support
 - Secure Shell (SSH) Protocol Version 1 and 2
 - Simple Network Management Protocol Version 3 (SNMPv3) for secure remote access and network management

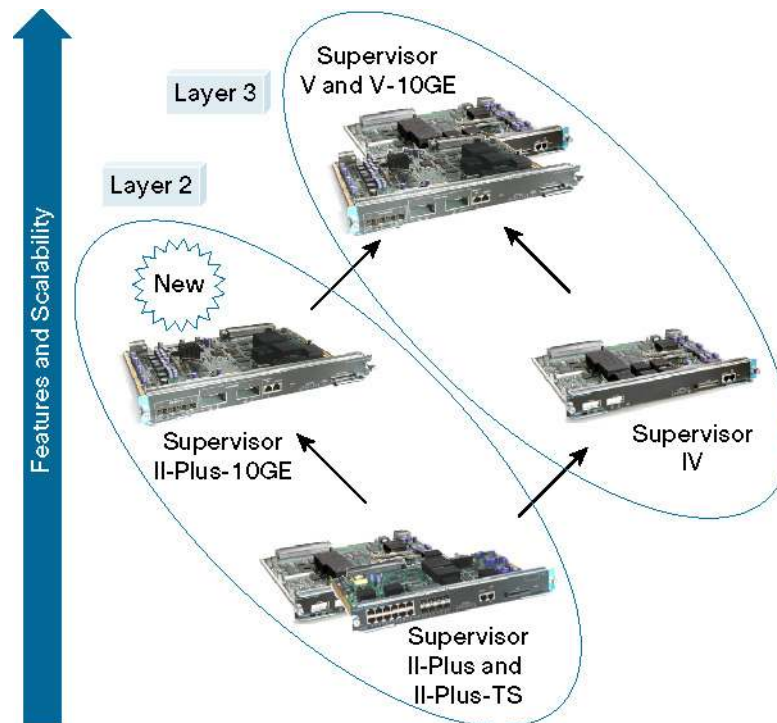
- Metro Ethernet ready
 - Q-in-Q support
 - 10 Gigabit for DSLAM aggregation
- Comprehensive management
 - Dedicated 10/100 console port and dedicated 10/100/1000 management port
 - Remote in-band management via SNMP

Cisco Catalyst 4500 Series Supervisor Engine Portfolio Positioning

The Cisco Catalyst 4500 Series Supervisor Engine II-Plus-10GE complements the Cisco supervisor engine product portfolio. Customers are provided clear choices based on their feature and scalability requirements. The enhanced Layer 2 Gigabit supervisor engines (Supervisor Engine II-Plus, Supervisor Engine II-Plus-TS) have a clear migration path to an enhanced Layer 2 10-Gigabit supervisor engine (Supervisor Engine II-Plus-10GE) or to a Layer 3 supervisor engine (Supervisor Engine IV). The Layer 3 Gigabit Supervisor Engine IV can migrate to the Layer 3 10-Gigabit Supervisor Engine V-10GE. Similarly, there is a clear migration path from the enhanced Layer 2 Supervisor Engine II Plus-10-GE to the Layer 3 Supervisor Engine V-10GE (Figure 3). This migration path is made smoother with the proven investment protection of the Catalyst 4500 Series architecture. Customers can upgrade all the capabilities of all switch ports by merely upgrading the supervisor engine, protecting their chassis, line card, and power supply investment.

Figure 3

Cisco Catalyst 4500 Series Supervisor Engine Upgrade Path



Cisco Catalyst 4500 Series 48-Port 100BASE-X SFP Line Card

The Cisco Catalyst 4500 Series 48-port, nonblocking, 100BASE-X line card allows customers to combine various SFP optics based on the network need. One to forty-eight 100BASE-X SFP optics can be populated on a single line card, as 100BASE-X SFP optics are optional.

Customers can take advantage of the line card's flexibility, which provides:

- SFP optics support, including 100BASE-FX, 100BASE-LX10, 100BASE-BX-D, and 100BASE-BX-U
- A flexible alternative to the Cisco Catalyst 4500 Series fixed 100BASE-X line cards
- Enterprise and commercial applications: For server farms and fiber-to-the-desktop
- Metro Ethernet: For service providers running point-to-point Fast Ethernet to the home or business

Based on the same line card, customers also have the following ordering options:

- No SFP optics included (WS-X4248-FE-SFP)
- 24 unit bundle of 100BASE-FX SFP optics
- 48 unit bundle of 100BASE-FX SFP optics
- 48 unit bundle of 100BASE-LX10 SFP optics
- 48 unit bundle of 100BASE-BX-D SFP optics
- Individual 100BASE-FX SFP optics
- Individual 100BASE-LX10 SFP optics
- Individual 100BASE-BX-D SFP optics

Product Numbers

Part numbers for the Cisco Catalyst 4500 Series Supervisor Engine II-Plus-10GE and 48-Port 100BASE-X SFP Line Card are as follows:

Table 1. Ordering Information

Model Number	Product Description
WS-X4013+10GE(=)	Cisco Catalyst 4500 Supervisor Engine II-Plus-10GE, 2x10GE (X2) and 4x1GE (SFP), Console RJ-45
WS-X4013+10GE/2	Cisco Catalyst 4500 Redundant Supervisor Engine II-Plus-10GE, 2x10GE (X2) and 4x1GE (SFP), Console RJ-45
S45IPB-12225SG	Cisco IOS® Software for the Cisco Catalyst 4500 Series Supervisor Engine II-Plus, II-Plus-TS, II-Plus-10GE, IV, V, and V-10GE (IP Base image with EIGRP-stub support)
S45IPBK9-12225SG	Cisco IOS Software for the Cisco Catalyst 4500 Series Supervisor Engines II-Plus, II-Plus-TS, II-Plus-10GE, IV, V, and V-10GE (IP Base image with Triple Data Encryption Standard [3DES] and EIGRP-stub support)
X2-10GB-LR	LR X2 optics: 10 km on SMF (G.652)
X2-10GB-CX4	CX4 X2 optic: Up to 15 meters on CX4 cable
X2-10GB-LX4	LX4 X2 optics: 300m on MMF
X2-10GB-SR	SR X2 optic: 26m on MMF (300m with 2000 MHz/km MMF)
X2-10GB-ER	ER X2 optic: 40 km on SMF
MEM-C4K-FLD64M	Cisco Catalyst 4500 Cisco IOS Software-based Supervisor, compact Flash memory, 64-MB option
MEM-C4K-FLD128M	Cisco Catalyst 4500 Cisco IOS Software-based Supervisor, compact Flash memory, 128-MB option
MEM-C4K-256-SDRAM=	Spare 256-MB SDRAM

Model Number	Product Description
MEMC4K-U512D-SDRAM	512-MB SDRAM Factory Upgrade
MEMC4K-512D-SDRAM=	Spare 512-MB SDRAM
WS-X4248-FE-SFP(=)	Cisco Catalyst 4500 Series 48-port 100BASE-X (SFP optics optional)
GLC-FE-100FX24	24 units of GLC-FE-100FX
GLC-FE-100FX48	48 units of GLC-FE-100FX
GLC-FE-100LX48	48 units of GLC-FE-100LX
GLC-FE-100BX-D48	48 units of GLC-FE-100BX-D
GLC-FE-100FX	100BASE-FX SFP for Fast Ethernet SFP ports
GLC-FE-100LX	100BASE-LX10 SFP for Fast Ethernet ports
GLC-FE-100BX-U	100BASE-BX10-U SFP for Fast Ethernet ports
GLC-FE-100BX-D	100BASE-BX10-D SFP for Fast Ethernet SFP ports

Software Requirements

Product	Software Type	Minimum Software Requirement
Cisco Catalyst 4500 Series Supervisor Engine II-Plus-10GE	Cisco IOS Software	Cisco IOS Software Release 12.2(25)SG or later
Cisco Catalyst 4500 Series 48-Port 100BASE-X SFP Line Card	Cisco IOS Software	Cisco IOS Software Release 12.2(25)SG or later

First Customer Shipment Schedule and Leadtimes

Product	Ordering Opened	Target FCS	Vol Ship	Lead Time
WS-X4013+10GE(=)	October 28, 2005	November 1, 2005	December 2005	3 weeks
WS-X4248-FE-SFP(=)	November 1, 2005	November 3, 2005	January 2006	3 weeks

Online Documentation

Cisco Catalyst 4500 Series Supervisor Engine II-Plus-10GE product information, including data sheet and Q & A, available at:

Cisco Catalyst 4500 Series Supervisor Engine II-Plus-10GE Data Sheet:

http://www.cisco.com/en/US/products/hw/modules/ps2710/products_data_sheet0900aecd80356bde.html

Cisco Catalyst 4500 Series Supervisor Engine II-Plus-10GE Q & A:

http://www.cisco.com/en/US/products/hw/switches/ps4324/prod_qandas_list.html

Cisco Catalyst 4500 Series Line Card Data Sheet:

http://www.cisco.com/en/US/products/hw/switches/ps4324/products_data_sheet0900aecd802109ea.html

Marketing Contacts

If you have a question, e-mail the GSBU Product Marketing team at ask-c4500-pm@cisco.com alias.

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