



PRODUCT BULLETIN NO. 2211

## NEW CISCO CATALYST 6500 SERIES HIGH PERFORMANCE ETHERNET INTERFACE MODULES

**Cisco® Catalyst® 6500 Series Switch—Setting the new standard for multilayer switches with operational consistency and evolutionary innovation, end-to-end.**

Building on the Cisco Catalyst 6500 Series next-generation xCEF720 high performance architecture, the following modules and features extend the Cisco Catalyst 6500 series leadership in the integrated data center, distribution, and core layers as well as Metro Ethernet deployments with:

- Industry's first datacenter-class high-performance (40Gbps/slot) 48-port 10/100/1000 Mbps Ethernet over copper module
- Industry's first platform supporting 10 Gigabit Ethernet over multi-mode fiber, enabled by new XENPAK modular optics
- High performance (20 Gbps/slot) 24-port mixed-media (fiber and copper) Gigabit Ethernet module with modular (small form-factor pluggable, SFP) connectors, increases port density by 50 percent, decreases price per port by 33 percent, ideal for distribution and core layers, the data center and Metro gigabit Ethernet aggregation
- Maximum-performance, feature-rich distributed forwarding daughter card for the Cisco Catalyst 6500 series WS-X67xx (CEF720) interface modules

**Note:** As is customary for all new Cisco products, initially these modules will be assigned New Product Hold (NPH) status. NPH covers the period of time (typically six weeks) between First Customer Shipment (FCS) and general availability. This time is required to ensure a smooth transition to full production and availability with a high level of quality for all shipments. Cisco manufacturing will manually schedule all orders and shipments during the time of limited availability and shipment.

### NEW PRODUCTS

#### High-Performance 48 Port 10/100/1000 Mbps Ethernet over Copper Module

##### WS-X6748-GE-TX for Enterprise and Service Provider Data Centers

As the premier modular multilayer Cisco switch for integrated data center switching, the Cisco Catalyst 6500 Series now offers a new, high-performance 48-port 10/100/1000 Ethernet over copper module designed specifically for use with the Cisco Catalyst 6500 Series Supervisor Engine 720 in data center and distribution layer deployments.

The WS-X6748-GE-TX features a 40-Gbps interconnection to the Cisco Catalyst 6500 Series Supervisor Engine 720's switch fabric—ideal for high-demand, high-density Gigabit Ethernet requirements across all 48 ports.

Other Key Features include:

- Up to 386 high-performance 10/100/1000 Ethernet over copper ports in a single Cisco Catalyst 6500 Series chassis
- Flexible, scalable, field-upgradable daughter card options to support full locally distributed forwarding through the DFC3A for investment protection and “pay as you grow” performance

- Jumbo frame support, up to 9000 bytes, commonly required in data centers.
- RJ-45 interfaces to support existing copper cabling infrastructures
- Future support for an integrated time-domain reflectometer for cable fault detection and ease of troubleshooting

**Note:** This module is supported only on the Cisco Catalyst 6500 Series Supervisor Engine 720 running Cisco Catalyst OS Version 8.1.2 or Cisco IOS® Software Release 12.2(17a)SX (available in the next few months) and future software releases.

Initially, the CEF720 interface modules, for example, WS-X67xx will be supported only on the following chassis: Cisco Catalyst 6506, 6509, and 6513. Support for the Cisco Catalyst 6503 is under consideration for a future software release. Please consult the Cisco Catalyst OS or Cisco IOS software release notes for additional information.

### **High-Performance, 24-Port Mixed-Media (SFP) Gigabit Ethernet Interface**

#### **WS-X6724-SFP for Redundant Uplinks to Distribution Layer, GE Aggregation, Core and Data Center Deployments**

Designed specifically for use with the Cisco Catalyst 6500 Series Supervisor Engine 720, the WS-X6724-SFP features 24 Gigabit Ethernet ports that use a 20-Gbps connection to the 720-Gbps switch fabric. As a result, this CEF720-based module can be deployed in every Cisco Catalyst 6500 Series chassis slot, increasing modular fiber-based Gigabit Ethernet port density to 288 ports in a single Cisco Catalyst 6513 chassis. This module also provides the following features and benefits:

- Scalable and flexible high-performance, field-upgradable daughter card options supporting distributed Cisco Express Forwarding
- Jumbo frame support, up to 9000 bytes
- “Pay as you grow” investment protection and flexible redeployment options using new, industry-standard SFP high-density modular optics that are hot-pluggable
- Increases Cisco Catalyst 6500 series fiber optic-based Gigabit port densities by 50 percent and decreases price per gigabit ports by 33 percent enabling a broader range of Cisco Catalyst 6500 Series deployment options

**Note:** This module is supported only on the Cisco Catalyst 6500 Series Supervisor Engine 720 using Cisco Catalyst OS Version 8.1.2 or Cisco IOS Software Release 12.2(17a)SX (available in the next few months) or subsequent software releases.

Initially, the CEF720 interface modules, for example, WS-X67xx will be supported only on the following chassis: Cisco Catalyst 6506, 6509, and 6513. Support for the Cisco Catalyst 6503 is under consideration for a future software release. Please consult the Cisco Catalyst OS or Cisco IOS software release notes for additional information

### **10 GbE over Multimode Fiber, 1310 nm and 850 nm XENPAK Modular Optics for Use with 4-port 10GbE Module**

#### **XENPAK-10GB-LX4 and XENPAK-10GB-SR for High Bandwidth 10GbE Uplinks to Distribution Layer, GE Aggregation, Core and Data Center Deployments**

Enables the industry’s first 10 Gigabit Ethernet over multimode fiber (MMF) deployments. Industry standard form factor XENPAK modular optics provide flexibility and improved serviceability. Supported on the Cisco Catalyst 6500 series market-leading 4 port 10 Gigabit Ethernet module, MMF XENPAK optics broaden 10 Gigabit Ethernet deployment options using the large installed base of MMF in customer network infrastructures.

- Supports the 4-port 10 Gigabit Ethernet Cisco Catalyst 6500 series module (WS-X6704-10GE)
- IEEE 802.3ae (10GbE standard) compliant modular optics

- LX4 (1310nm wavelength) station to station distances of 300 meters over 62.5µm multimode fiber and 50µm 500 MHz\*km multimode fiber SR (850nm wavelength) station to station distances of 26 meters over 62.5µm FDDI grade multimode fiber, up to 300m over 50µm 2000 MHz\*km multimode fiber
- Enables “Pay-as-You-Populate” cost structure during installation
- Hot-Swappable to minimize downtime during system upgrade or reconfiguration

### Distributed Forwarding Daughter Card for WS-X67xx (CEF720) Interface Modules, Distributed Forwarding Card 3A (DFC3A)

#### WS-F6700-DFC3A for High Performance Service Provider and Enterprise Deployments

The Distributed Forwarding Card 3A is a field-upgradable daughter card for the WS-X67xx interface modules, enabling “pay as you grow” performance and service enhancements. Designed expressly for use with Cisco IOS Software, this daughter card is compatible with the new Cisco Catalyst 6500 Series Supervisor Engine 720 and enables full local-distributed forwarding of packets up to 48 Mpps per interface card, with Cisco Catalyst 6500 Series system throughput of up to 400 Mpps. The DFC3A supports hardware-accelerated IPv6, generic routing encapsulation (GRE), Network Address Translation (NAT), egress policing, and more. This card is ideal for high-performance enterprise distribution-core, data center, and Metro Ethernet deployments. Supports the following interface modules:

- WS-X6724-SFP, 24-port mixed media gigabit Ethernet module, CEF720
- WS-X6748-GE-TX, 48-port 10/100/1000 Ethernet module for datacenters, CEF720
- WS-X6704-10GE, 4-port 10 gigabit Ethernet module, CEF720

**Note:** Distributed Cisco Express Forwarding requires Cisco IOS Software support. The WS-F6700-DFC3A requires Cisco IOS Software Release 12.2(17a)SX (available in the next few months) and future software releases.

**Table 1.** New Products

Part Number	Product Name/Brief Description	Availability
<b>WS-X6748-GE-TX</b>	Cisco Catalyst 6500 48-port 10/100/1000 Ethernet, CEF720-40	Limited Volume Shipments in September 03, Volume Shipments in October 03
<b>WS-F6700-DFC3A</b>	Cisco Catalyst 6500 Distributed Forwarding Daughter card-3A for 67xx modules	Limited Volume Shipments in October 03, Volume Shipments in November 03
<b>WS-X6724-SFP</b>	Cisco Catalyst 6500 24-port Mixed Media Gigabit Ethernet Module, (requires SFPs), CEF720-20	Limited Volume Shipments in September 03, Volume Shipments in October 03
<b>XENPAK-10GB-LX4</b>	10GBASE-LX4 XENPAK, 300m over FDDI grade multimode fiber	Shipment in Q2CY04
<b>XENPAK-10GB-SR</b>	10GBASE-SR XENPAK, 26m over FDDI grade MMF and 300m over 50µm 2000 MHz*km MMF	Shipment in Q2CY04

**Table 2.** Software Support

Part Number	Earliest Cisco Catalyst OS Supported	Cisco IOS Software Release (native mode) Supported
WS-X6748-GE-TX	Cisco Catalyst OS 8.1.2 for Supervisor 720	Future 12.2(17a)SX release for Supervisor 720
WS-X6724-SFP	Cisco Catalyst OS 8.1.2 for Supervisor 720	Future 12.2(17a)SX release for Supervisor 720
WS-F6700-DFC3A	Not Supported in Cisco Catalyst OS	Future 12.2(17a)SX release for Supervisor 720
XENPAK-10GB-LX4	Cisco Catalyst OS 8.2.1	Cisco IOS 12.2(17a)SX1

XENPAK-10GB-SR

Cisco Catalyst OS 8.3.1

Cisco IOS 12.2(17a)SX1



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