

Cisco Catalyst 6500 16-Port 10 Gigabit Ethernet Copper Module

PB575203

Cisco announces its first 16-port 10 Gigabit Ethernet copper module (Figure 1) for the Cisco Catalyst® 6500 Series. The Cisco Catalyst 16-Port 10 Gigabit Ethernet Copper Module extends the 10 Gigabit Ethernet portfolio on the Cisco Catalyst 6500 Series, providing up to 130 copper ports of 10 Gigabit Ethernet in a single Cisco Catalyst 6509 Switch chassis. It is ideal for deployment in the data center access for high-speed server connectivity and also for switch-to-switch connectivity within a 330-foot (100-meter) distance. The new 16-port 10 Gigabit Ethernet copper module complements the existing modules and integrated services on the Cisco Catalyst 6500 Series, enabling customers to build scalable, resilient, and manageable data centers and help meet their growing business needs to consolidate and virtualize servers and storage devices while increasing resource utilization and reducing capital expenses.

Figure 1. Cisco Catalyst 6500 16-Port 10 Gigabit Ethernet Copper Module



Product Overview

There are two versions of the Cisco Catalyst 6500 16-Port 10 Gigabit Ethernet Copper Module:

- 16-Port 10 Gigabit Ethernet Copper Module with Distributed Forwarding Card 3C (DFC3C)
- 16-Port 10 Gigabit Ethernet Copper Module with Distributed Forwarding Card 3CXL (DFC3CXL)

Both modules contain the WS-X6716-10GT base board and a distributed forwarding card. See Table 1 for the differences between the DFC3C version and the DFC3CXL version. The base module supports up to 16 RJ-45 connectors and has a 40-Gbps connection to the fabric and is therefore 4:1 oversubscribed. The distributed forwarding card provides hardware-based multicast replication, NetFlow, and MAC-address learning and forwards traffic at 48 million packets per second (mpps). The 16-port 10 Gigabit Ethernet copper module can operate in a mix of oversubscription mode and performance mode, providing flexibility for the customer to connect some ports to the server and some ports to interconnect switches. When operating in performance mode, the 10 Gigabit Ethernet copper ports can also be used to create a virtual switch link in a Cisco Catalyst 6500 Virtual Switching System (VSS).

Table 1. Differences Between DFC3C and DFC3CXL

Feature	DFC3C	DFC3CXL
IPv4 routes	256,000	1,000,000
IPv6 routes	128,000	500,000
NetFlow entries	128,000	256,000

Reflexive access control lists (ACLs)	128,000	256,000
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The 16-port 10 Gigabit Ethernet copper module is supported in the Cisco Catalyst 6500 Series chassis. When operating in a Cisco Catalyst 6500 E-Series chassis (Cisco Catalyst 6503-E, 6504-E, 6506-E, 6509-E, or 6509-V-E) or Cisco Catalyst 6509--NEB-A chassis with dual fan tray, the configuration is NEBS 3 compliant, as it supports operating temperatures up to 55°C (131°F). When operating in a Cisco Catalyst 6500 Series chassis other than an E-Series chassis (Cisco Catalyst 6506, 6509, or 6513) or Cisco Catalyst 6509--NEB-A with single fan tray, fan tray 2 and 2500 watts (W) or higher power supplies are required, and the configuration is not NEBS 3 compliant as it supports operating temperatures up to 40°C (104°F) only. The module can be deployed in all slots of a 3-, 4-, 6-, or 9-slot chassis. When operating in a 13-slot chassis, it must be deployed in slots 9 through 13. The module is not supported in the Cisco Catalyst 6503 non-E Series chassis or in the Cisco® 7600 Series Routers.

The 16-port 10 Gigabit Ethernet copper module is interoperable with all models of the Cisco Catalyst 6500 Series Virtual Switching Supervisor Engine 720 with 10 Gigabit Ethernet uplinks or Cisco Catalyst 6500 Series Supervisor Engine 720, including VS-S720-10G-3C, VS-S720-10G-3CXL, WS--Sup720, WS-Sup720-3B, and WS-Sup720-3BXL. Note that when DFCs are mixed in the same chassis, the chassis will operate in the lowest common mode.

The following cabling types will be supported on the 16-port 10 Gigabit Ethernet copper module at first customer shipment (FCS): Cat6 unshielded twisted pair (UTP) and shielded twisted pair (STP), Cat6A UTP and STP, and Cat7 UTP and STP. Cat6-type cabling will provide 10-Gbps operation with distances of up to 181.5 feet (55 meters) over UTP and up to 330 feet (100 meters) over shielded cabling. Both Cat6A and 7 cabling will provide 10-Gbps operation with distances of up to 330 feet (100 meters) over UTP and shielded cabling. Table 2 summarizes the choices.

Table 2. Cabling Types and Operational Distance Comparisons

Cabling Type	Specifications	Supported Distance
Cat6	UTP	Up to 181.5 feet (55 meters)
Cat6	STP	Up to 330 feet (100 meters)
Cat6A	UTP and STP	Up to 330 feet (100 meters)
Cat7	UTP and STP	Up to 330 feet (100 meters)

Availability

Both versions of the 16-port 10 Gigabit Ethernet module will be supported in an upcoming release of the Cisco IOS® Software and Cisco IOS Software Modularity Release, slated for the first half of calendar year 2010 (1HCY10).

Table 3 provides ordering information, and Table 4 summarizes software requirements.

Table 3. Ordering Information

Part Number	Description	FCS
WS-X6716-10T-3C	Cisco Catalyst 6500 16-Port Gigabit Ethernet Module with DFC3C	1HCY10
WS-X6716-10T-3CXL	Cisco Catalyst 6500 16-Port Gigabit Ethernet Module with DFC3CXL	1HCY10

Table 4. Minimum Software Requirements

Part Number	Minimum Software Version
WS-X6716-10T-3C	Cisco IOS Software Release 12.2(33)SX14
WS-X6716-10T-3CXL	Cisco IOS Software Release 12.2(33)SX14

For More Information

For more information about Cisco Catalyst 6500 Series Switches, visit <http://www.cisco.com/en/US/products/hw/switches/ps708/index.html> or contact your local account representative.



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