

Cisco Catalyst 6500 Series Virtual Switching Supervisor Engine 720 with 10 Gigabit Ethernet Uplinks and New Distributed Forwarding Card

PB423326

The Cisco® Catalyst® 6500 Series Virtual Switching Supervisor Engine 720 with 10 Gigabit Ethernet uplinks and IPv6 in hardware is an industry first. The new supervisor engine combines high-density uplinks, system virtualization, and increased throughput with scalable performance and a rich IP feature set. This supervisor engine is a key component of the Cisco VSS 1440 Virtual Switching System, enabling high availability, operational efficiency, and increased bandwidth with a greater ease of deployment.

The Cisco Catalyst 6500 Series Virtual Switching Supervisor Engine 720 with 10 Gigabit Ethernet uplinks has a new forwarding engine that combines all the capabilities of its predecessor, the Cisco Catalyst 6500 Series Supervisor Engine 720, with system virtualization and increased throughput.

The Cisco Virtual Switching Supervisor Engine 720 with 10 Gigabit Ethernet uplinks includes the following new features:

- The Cisco VSS 1440 system virtualization technology pools multiple Cisco Catalyst 6500 Series Switches into one virtual switch. This provides several benefits:
 - Increases operational efficiency by simplifying the network
 - Scales system bandwidth capacity to 1.4 Tbps by using Multichassis EtherChannel (MEC)
 - Boosts nonstop communications by way of interchassis failover and an EtherChannel mechanism for link recovery
 - Eases deployment by using existing multilayer switching architecture
- Two X2-based 10 Gigabit Ethernet uplinks are built into the supervisor engine, saving a slot in the chassis for additional integrated services or high-density chassis.
- All Gigabit Ethernet and 10 Gigabit Ethernet uplinks of the Cisco Virtual Switching Supervisor Engine 720 can be active simultaneously, even for redundant systems (systems with dual supervisor engines in the chassis).
- The Cisco Virtual Switching Supervisor Engine 720 with 10 Gigabit Ethernet uplinks has a new policy feature card (PFC) that increases throughput to 82 Mpps. As a result, the system throughput increases to 450 Mpps for IPv4 traffic and 225 Mpps for IPv6 traffic.
- The Cisco Virtual Switching Supervisor Engine 720 offers a deterministic, sub-second failover. This results in faster switchover to a standby supervisor in a redundant configuration.

For more information, please refer to the Cisco Virtual Switching Supervisor Engine 720 data sheet at [<url>](#).

Table 1 lists the specifications of the Cisco Virtual Switching Supervisor Engine 720 with 10 Gigabit Ethernet uplinks.

Specifications of the Cisco Virtual Switching Supervisor Engine 720 with 10 Gigabit Ethernet uplinks.

Table 1.

Feature/Specification	Cisco Virtual Switching Supervisor Engine 10G with 10 Gigabit Ethernet uplinks. (PFC3C)	Cisco Virtual Switching Supervisor Engine 10G with 10 Gigabit Ethernet uplinks. (PFC3CXL)
VSS	Yes	Yes
MAC Entries	96,000	96,000
IP Routes	256,000 entries	1,000,000 entries
NetFlow Entries	128,000 entries	256,000 entries
Memory	1 GB (on switch processor and route processor)	1 GB (on switch processor and route processor)

The new Cisco Catalyst 6500 Series Distributed Forwarding Card is an optional daughter card for CEF720-based line cards such as WS-X6704-10GE, WS-X6724-SFP, WS-X6748-SFP, and WS-X6748-GE-TX. The new Distributed Forwarding Card supports system virtualization through VSS 1440. The card provides localized forwarding decisions for each line card and scales the aggregate system performance to reach up to 400+ Mpps. The new cards are WS-F6700-DFC3C and WS-F6700-DFC3XL.

Following are highlights of the new Cisco Distributed Forwarding Card:

- Supports system virtualization through Cisco VSS 1440
- Supports all the functions that the DFC3B and DFC3BXL support
- Deployed in CEF720-based line cards such as WS-X6704-10GE, WS-X6724-SFP, WS-X6748-SFP, and WS-X6748-GE-TX.

Table 2 lists the supported combinations for the Distributed Forwarding Cards.

Table 2. Supported Combinations

	WS-F6700-DFC3B	WS-F6700-DFC3BXL	WS-F6700-DFC3C	WS-F6700-DFC3CXL
WS-SUP720-3B	PFC3B functionality	PFC3B functionality	PFC3B functionality	PFC3B functionality
WS-SUP720-3BXL	PFC3B functionality	PFC3BXL functionality	PFC3B functionality	PFC3BXL functionality
VS-S720-10G-3C	PFC3B functionality	PFC3B functionality	PFC3C functionality	PFC3C functionality
VS-S720-10G-3CXL	PFC3B functionality	PFC3BXL functionality	PFC3C functionality	PFC3CXL functionality

Table 3 gives specifications of the distributed forwarding card.

Table 3. Specifications of Distributed Forwarding Card

Specification	Cisco Distributed Forwarding Card 3C (DFC3C)	Cisco Distributed Forwarding Card 3CXL (DFC3CXL)
VSS	Yes	Yes
MAC Entries	96,000	96,000

Specification	Cisco Distributed Forwarding Card 3C (DFC3C)	Cisco Distributed Forwarding Card 3CXL (DFC3CXL)
Memory	512 MB	1 GB
IP Routes	256,000 entries	1,000,000 entries
NetFlow Entries	128,000 entries	256,000 entries

Product Numbers

Table 4 lists product numbers for both the Cisco Virtual Switching Supervisor Engine 720 and Cisco Distributed Forwarding Cards.

Table 4. Product Numbers

Product Number	Description
VS-S720-10G-3C	Cisco Catalyst 6500 Series Virtual Switching Supervisor Engine 720 with two 10 Gigabit Ethernet ports and MSFC3 PFC3C
VS-S720-10G-3CXL	Cisco Catalyst 6500 Series Virtual Switching Supervisor Engine 720 with two 10 Gigabit Ethernet ports and MSFC3 PFC3C XL
WS-F6700-DFC3C	Cisco Catalyst 6500 Series Distributed Forwarding Card 3C for WS-X67xx modules
WS-F6700-DFC3CXL	Cisco Catalyst 6500 Series Distributed Forwarding Card 3CXL for WS-X67xx modules

Minimum Software Requirements

Table 5 lists minimum software requirements for the Cisco Virtual Switching Supervisor Engine and Cisco Distributed Forwarding Cards.

Table 5. Minimum Software Requirements for New Chassis

Product Number	Software Release
VS-S720-10G-3C	<ul style="list-style-type: none"> Cisco IOS Software Release 12.2(33)SXH and later
VS-S720-10G-3CXL	<ul style="list-style-type: none"> Cisco IOS Software Release 12.2(33)SXH and later
WS-F6700-DFC3C	<ul style="list-style-type: none"> Cisco IOS Software Release 12.2(18)SXF5 and later with Cisco Supervisor Engine 720 3B Cisco IOS Software Release 12.2(33)SXH and later with Cisco Virtual Switching Supervisor Engine 720 with 10 Gigabit Ethernet uplinks
WS-F6700-DFC3CXL	<ul style="list-style-type: none"> Cisco IOS Software Release 12.2(18)SXF5 and later with Cisco Supervisor Engine 720 3B Cisco IOS Software Release 12.2(33)SXH and later with Cisco Virtual Switching Supervisor Engine 720 with 10 Gigabit Ethernet uplinks

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>



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