

Cisco UCS 6600 Series Fabric Interconnects



CISCO UCS 6664 FABRIC INTERCONNECT

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Overview

The Cisco 6664 Fabric Interconnects are a core part of the Cisco Unified Computing System, providing both network connectivity and management capabilities for the system. The Cisco 6664 offer line-rate, low-latency, lossless 10/25/40/100 Gigabit Ethernet, Fibre Channel over Ethernet (FCoE), and 16/32/64 Fibre Channel.

The Cisco UCS 6664 Fabric Interconnect provides the management and communication backbone for the Cisco UCS X-Series compute nodes, UCS X9508 X-series chassis and UCS C-Series Rack Servers. All servers attached to a Cisco UCS 6664 Fabric Interconnect become part of a single, highly available management domain. In addition, by supporting a unified fabric, Cisco UCS 6664 Fabric Interconnect provides both the LAN and SAN connectivity for all servers within its domain.

From a networking perspective, the Cisco UCS 6664 uses a cut-through architecture, supporting deterministic, low-latency, line-rate 10/25/40/100 Gigabit Ethernet ports, a bandwidth of 11.65 Tbps per FI and 23.3 Tbps per unified fabric domain, independent of packet size and enabled services. It enables 1600 Gbps bandwidth per X9508 chassis per domain with a X9108-IFM-100G in addition to enabling end-to-end 100G ethernet and 200G aggregate bandwidth per X-series compute node. With X9108-IFM-25G it enables 400 Gbps bandwidth per chassis per FI domain. The product family supports Cisco low-latency, lossless 10/25/40/100 Gigabit Ethernet unified network fabric capabilities, which increase the reliability, efficiency, and scalability of Ethernet networks. The fabric interconnect supports multiple traffic classes over a lossless Ethernet fabric from the server through the fabric interconnect. Significant TCO savings come from Cisco's unified fabric design in which Network Interface Cards (NICs), Host Bus Adapters (HBAs), cables, and switches can be consolidated.

Cisco UCS 6664 64-Port Fabric Interconnect

The Cisco UCS 6664 Fabric Interconnect (FI) is a 2-RU top-of-rack switch that mounts in a standard 19-inch rack such as the Cisco R Series rack. The 6664 is a 40/100 Gigabit Ethernet, FCoE and Fiber Channel switch offering up to 11.65 Tbps throughput and up to 64 ports. The switch has 16 unified ports (port numbers 25-40) that can support 10/25-Gbps SFP28 Ethernet ports or 16/32/64-Gbps Fibre Channel ports, 24 10/25/40/100-Gbps Ethernet QSFP28 ports (port numbers 1-24), which can also operate at 10/25 Gbps using SFP28 transceivers via QSA or QSA28 adapters, and 24 10/25/40/100-Gbps Ethernet QSFP28 uplink ports (port numbers 41-64). All Ethernet ports are capable of supporting FCoE.

The Cisco UCS 6664 Fabric Interconnect also has one network management port, one console port for setting the initial configuration, and one USB port for saving or loading configurations. The FI also includes L1/L2 ports for connecting two fabric interconnects for high availability.

The 64-port chassis is shown in [Figure 1](#).

Figure 1 Cisco UCS Fabric Interconnect 6664 (2RU)

Front View



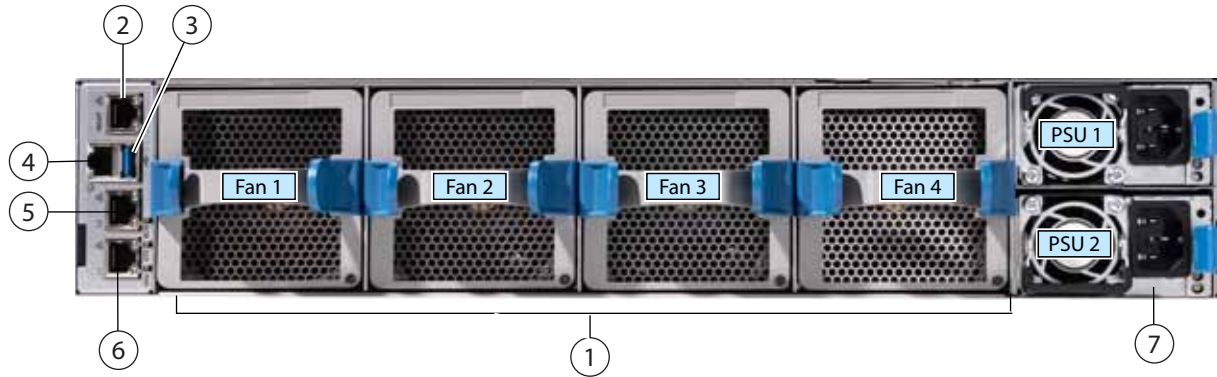
Rear View



Detailed Front View

The Cisco UCS FI 6664 front view shown in [Figure 2](#).

Figure 2 Front View of FI 6664

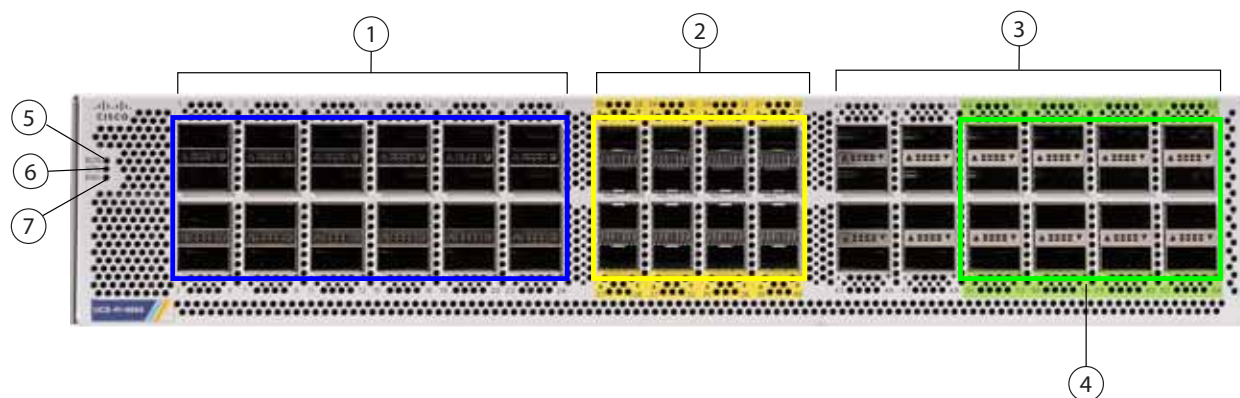


1	Cooling fans (hot swappable, 3+1 redundancy)	2	Network management port (RJ-45 connector)
3	USB port	4	RS-232 serial console port (RJ-45 connector)
5	L1 high-availability ports (RJ-45 connector)	6	L2 high-availability ports (RJ-45 connector)
7	Power supplies Two identical AC PSUs, hot-swappable, 1+1 redundancy	-	-

Detailed Rear View

Figure 3 is an overall rear view of the Cisco UCS 6664 Fabric Interconnect.

Figure 3 Cisco UCS 6664 64-port Fabric Interconnect Chassis Overall Rear View



1	Ports 1-24: <ul style="list-style-type: none"> ■ 40/100 Gbps Ethernet/FCoE or ■ 10/25 Gbps via QSA or QSA28 	2	Unified ports 25-40: <ul style="list-style-type: none"> ■ 10/25 Gbps Ethernet/FCoE or ■ 16/32/64 Gbps FC
3	Ports 41-64: <ul style="list-style-type: none"> ■ 40/100 Gbps Ethernet or FCoE ■ 10/25 Gbps by QSA or QSA28 	4	Recommended uplink ports 49-64: <ul style="list-style-type: none"> ■ 40/100 Gbps Ethernet/FCoE ■ 10/25 Gbps via QSA or QSA28
5	System environment (fan fault) LED	6	System status LED
7	Beacon LED	-	

Cisco UCS 6600 series Fabric Interconnect Capabilities And Features

Table 1 lists the capabilities and features of the Cisco UCS 6600 series Fabric Interconnects. Details about how to configure this Fabric Interconnect series for a particular feature or capability are provided in *CONFIGURING the FABRIC INTERCONNECT on page 7*.

Table 1 Capabilities and Features of FI 6664

Capability/Feature	Description
Chassis	2RU 64-port Fabric Interconnect
Throughput	11.65 Tbps
Fan Modules	Four variable speed fans
Unified Ports	16
Power Supply	Two AC Power Supplies
Management by Cisco Intersight	Allows all elements connected to the interconnects to participate in a single, highly available management domain
Unified Fabric	<ul style="list-style-type: none"> ■ Decreases total cost of ownership (TCO) by reducing the number of NICs, HBAs, switches, and cables needed ■ Transparently encapsulates Fibre Channel packets into Ethernet
Fabric Extender Architecture	<ul style="list-style-type: none"> ■ Scales to 20 chassis without adding complexity by eliminating the need for dedicated chassis management and blade switches and by reducing the number of cables needed ■ Provides deterministic latency for optimized application performance
SFP+ ports	<ul style="list-style-type: none"> ■ Increases flexibility with a range of interconnect solutions, including copper Twinax cable for short runs and fiber for long runs ■ Consumes less power per port than traditional solutions <p>NOTE: e.g., 10 Gigabit Ethernet support via SFP+ transceivers using QSA adapters or unified ports</p>
SFP28-compatible ports	Allows fixed ports to be configured to operate in 10/25 Gigabit Ethernet mode with the transceiver options specified for use with SFP28-compatible ports in <i>Table 6 on page 12</i> .
Transceivers	<ul style="list-style-type: none"> ■ The Cisco UCS 6600 series FIs support a wide variety of 10/25/40/100 Gigabit Ethernet connectivity options using Cisco 10/25/40/100 Gbps modules. ■ Unified ports (UP) on the Cisco UCS 6600 series FIs support 10/25 Gigabit Ethernet connectivity or 16/32/64 Gigabit Fibre Channel.
Perpetual Licensing	This license activates all the ports and software features of 6600 series Fabric Interconnect
Front-to-Back Cooling	Fan side intake, port side exhaust

Table 1 Capabilities and Features (*continued*) of FI 6664

Capability/Feature	Description
Redundant hot-swappable fans and power supplies	<ul style="list-style-type: none">■ Helps enable high availability in multiple configurations■ Increases serviceability■ Provides uninterrupted service during maintenance
Rear Ports	Helps keep cable lengths short and efficient
Performance	<ul style="list-style-type: none">■ Provides high-speed, low-latency connectivity to the chassis■ Provides approximately 50% reduction in end-to-end system latency (latency is less than 1 microsecond)
Lossless Fabric	Provides a reliable, robust foundation for unifying LAN and SAN traffic on a single transport
Priority Flow Control (PFC)	<ul style="list-style-type: none">■ Simplifies management of multiple traffic flows over a single network link■ Supports different classes of service, helping enable both lossless and classic Ethernet on the same fabric
Systemwide Bandwidth Management	Helps enable consistent and coherent quality of service (QoS) throughout the system

CONFIGURING the FABRIC INTERCONNECT

Follow these steps to configure the Cisco UCS 6600 series Fabric Interconnect:

- *STEP 1 VERIFY FABRIC INTERCONNECT SKU, page 8*
- *STEP 2 SELECT MANAGEMENT MODE (REQUIRED), page 9*
- *STEP 3 CHOOSE SOFTWARE IMAGE (REQUIRED), page 10*
- *STEP 4 SOFTWARE LICENSE (INCLUDED), page 11*
- *STEP 5 CHOOSE TRANSCEIVERS (OPTIONAL), page 12*
- *STEP 6 CHOOSE POWER SUPPLIES, page 17*
- *STEP 7 SELECT AC POWER CORDS, page 18*
- *STEP 8 ACCESSORY KIT AND FAN MODULE (INCLUDED), page 21*

STEP 1 VERIFY FABRIC INTERCONNECT SKU

Verify the product ID (PID) of the desired 6600 series Fabric Interconnects as shown in [Table 2](#).

Table 2 PID of the Base 6600 series Fabric Interconnects

Product ID (PID)	Description
UCS-FI-6664-U	Standalone model: UCS 6664 2RU Fabric Interconnect, with no PSU

The base Cisco UCS 6600 series Fabric Interconnects do not include the following components. They must be selected during product ordering:

- Power supplies
- Transceivers
- Cables
- Power cords
- Warranty Services



NOTE: Use the steps on the following pages to order the desired Fabric Interconnect with the configurable components that you want configured in your order.

STEP 2 SELECT MANAGEMENT MODE (REQUIRED)

The available management modes are listed in [Table 3](#).

Table 3 Management Modes

Product ID (PID)	Description
IMM-MANAGED	Deployment mode for UCS FI connected Servers in Intersight Managed Mode (IMM)
UMM-MANAGED	Deployment mode for UCS FI connected Servers in UCS Manager (UCSM) Mode

STEP 3 CHOOSE SOFTWARE IMAGE (REQUIRED)

Select Software Image

The software image PIDs are shown in [Table 4](#).

Table 4 6600 series software image PIDs

Product ID (PID)	Description
N10-MGT020	UCS Manager v6.0 and Intersight Managed Mode (IMM)

STEP 4 SOFTWARE LICENSE (INCLUDED)

Table 5 shows the Software License Options. This is included as a default line item under standalone FI ordering PID.

Table 5 Software License

Product ID (PID)	Description
UCS-FI-6664-SW	Perpetual software license for the 6600 series Fabric Interconnect. This license activates all the ports and software features of 6600 series Fabric Interconnect

STEP 5 CHOOSE TRANSCEIVERS (OPTIONAL)

The Cisco UCS 6600 series supports a wide variety of 10/25/40/100 Gigabit Ethernet connectivity options using Cisco 10/25/40/100 Gbps modules. Unified ports (UP) on the Cisco UCS 6600 series support 10/25 Gigabit Ethernet connectivity or 16/32/64 Gigabit Fibre Channel modules.

Choose Transceivers and Cables



NOTE:

- Transceiver modules and cables that are supported on a specific Fabric Interconnect are not always supported on all VIC adapters, FEXs that are compatible with that Fabric Interconnect. Detailed compatibility matrices for the transceiver modules are available here:
<https://www.cisco.com/c/en/us/support/interfaces-modules/transceiver-modules/products-device-support-tables-list.html>
- S-Class transceivers, (for example QSFP-40G-SR4-S), do not support FCoE.

The supported transceivers for the UCS 6600 series are listed in [Table 6](#).

Table 6 UCS 6600 series Supported Transceivers and Cables

Product ID (PID)	Description
100-Gigabit Transceivers and Cables	
QSFP-100G-SR4-S	100GBASE SR4 QSFP Transceiver, MPO, 100m over OM4 MMF
QSFP-100G-LR4-S	100GBASE LR4 QSFP Transceiver, LC, 10km over SMF
QSFP-100G-PSM4-S	100GBASE PSM4 QSFP Transceiver, MPO, 500m over SMF
QSFP-100G-SM-SR	100GBASE CWDM4 Lite QSFP Transceiver, 2km over SMF, 10-60C
QSFP-100G-SL4	100GBASE SL4 for up to 30M over OM4 MMF
QSFP-100G-ER4L-S	100GBASE QSFP Transceiver, 40KM reach over SMF, Duplex LC
QSFP-40/100-SRBD	100G and 40GBASE SR-BiDi QSFP Transceiver, LC, 100m OM4 MMF
QSFP-100G-DR-S	100G QSFP28 Transceiver 100GBASE-DR, 500m SMF, duplex, LC
QSFP-100G-FR-S	100G QSFP28 Transceiver 100G-FR, 2km SMF, duplex, LC
QSFP-100G-LR-S	100G QSFP28 100G-LR, 10km SMF, duplex, LC Connector
QSFP-100G-SR1.2	100G SR1.2 BiDi QSFP Transceiver, LC, 100m OM4 MMF
QSFP-100G-CU1M	100GBASE-CR4 Passive Copper Cable, 1m
QSFP-100G-CU2M	100GBASE-CR4 Passive Copper Cable, 2m
QSFP-100G-CU3M	100GBASE-CR4 Passive Copper Cable, 3m

Table 6 UCS 6600 series Supported Transceivers (*continued*) and Cables

Product ID (PID)	Description
QSFP-100G-CU5M	100GBASE-CR4 Passive Copper Cable, 5m
QSFP-100G-AOC1M	100GBASE QSFP Active Optical Cable, 1m
QSFP-100G-AOC2M	100GBASE QSFP Active Optical Cable, 2m
QSFP-100G-AOC3M	100GBASE QSFP Active Optical Cable, 3m
QSFP-100G-AOC5M	100GBASE QSFP Active Optical Cable, 5m
QSFP-100G-AOC7M	100GBASE QSFP Active Optical Cable, 7m
QSFP-100G-AOC10M	100GBASE QSFP Active Optical Cable, 10m
QSFP-100G-AOC15M	100GBASE QSFP Active Optical Cable, 15m
QSFP-100G-AOC20M	100GBASE QSFP Active Optical Cable, 20m
QSFP-100G-AOC25M	100GBASE QSFP Active Optical Cable, 25m
QSFP-100G-AOC30M	100GBASE QSFP Active Optical Cable, 30m
CVR-QSFP28-SFP25G	100G to SFP25G adapter
40-Gigabit Transceivers and Supported Cables	
QSFP-40G-SR4	40GBASE-SR4 QSFP Transceiver Module with MPO Connector
QSFP-40G-SR4-S	40GBASE-SR4 QSFP Trnscvr Module, MPO Conn, Enterprise-Class
QSFP-40G-LR4	QSFP 40GBASE-LR4 OTN Transceiver, LC, 10KM
QSFP-40G-LR4-S	QSFP 40GBASE-LR4 Trnscvr Mod, LC, 10km, Enterprise-Class
QSFP-40G-SR-BD	QSFP40G BiDi Short-reach Transceiver
QSFP-H40G-CU1M	40GBASE-CR4 Passive Copper Cable, 1m
QSFP-H40G-CU3M	40GBASE-CR4 Passive Copper Cable, 3m
QSFP-H40G-CU5M	40GBASE-CR4 Passive Copper Cable, 5m
QSFP-H40G-ACU7M	40GBASE-CR4 Active Copper Cable, 7m
QSFP-H40G-ACU10M	40GBASE-CR4 Active Copper Cable, 10m
QSFP-H40G-AOC1M	40GBASE Active Optical Cable, 1m
QSFP-H40G-AOC2M	40GBASE Active Optical Cable, 2m
QSFP-H40G-AOC3M	40GBASE Active Optical Cable, 3m
QSFP-H40G-AOC5M	40GBASE Active Optical Cable, 5m
QSFP-H40G-AOC7M	40GBASE Active Optical Cable, 7m
QSFP-H40G-AOC10M	40GBASE Active Optical Cable, 10m

Table 6 UCS 6600 series Supported Transceivers (*continued*)and Cables

Product ID (PID)	Description
QSFP-H40G-AOC15M	40GBASE Active Optical Cable, 15m
QSFP-H40G-AOC20M	40GBASE Active Optical Cable, 20m
QSFP-H40G-AOC25M	40GBASE Active Optical Cable, 25m
QSFP-H40G-AOC30M	40GBASE Active Optical Cable, 30m
CVR-QSFP-SFP10G	QSFP to SFP10G adapter
25-Gigabit Transceivers on 100G port (QSA28)	
SFP-25G-SR-S	25GBASE-SR SFP Module
SFP-10/25G-LR-S	10/25GBASE-LR SFP28 Module
SFP-10/25G-CSR-S	Dual Rate 10/25GBASE-CSR SFP Module
SFP-10/25G-LR-I	10/25GBASE-LR-I SFP28 iTemp Module
SFP-25G-SL	25GBASE-SR SFP SL Module
25-Gigabit Transceivers on unified port	
SFP-25G-SR-S	25GBASE-SR SFP Module
SFP-10/25G-LR-S	10/25GBASE-LR SFP28 Module
SFP-10/25G-CSR-S	Dual Rate 10/25GBASE-CSR SFP Module
SFP-25G-SL	25GBASE-SR SFP SL Module
SFP-H25G-CU1M	25GBASE-CU SFP28 Cable 1 Meter
SFP-H25G-CU2M	25GBASE-CU SFP28 Cable 2 Meter
SFP-H25G-CU3M	25GBASE-CU SFP28 Cable 3 Meter
SFP-H25G-CU4M	25GBASE-CU SFP28 Cable 4 Meter
SFP-H25G-CU5M	25GBASE-CU SFP28 Cable 5 Meter
SFP-25G-AOC1M	25GBASE Active Optical SFP28 Cable, 1M
SFP-25G-AOC2M	25GBASE Active Optical SFP28 Cable, 2M
SFP-25G-AOC3M	25GBASE Active Optical SFP28 Cable, 3M
SFP-25G-AOC4M	25GBASE Active Optical SFP28 Cable, 4M
SFP-25G-AOC5M	25GBASE Active Optical SFP28 Cable, 5M
SFP-25G-AOC7M	25GBASE Active Optical SFP28 Cable, 7M
SFP-25G-AOC10M	25GBASE Active Optical SFP28 Cable, 10M
10-Gigabit Transceivers on 100G port (QSA)	

Table 6 UCS 6600 series Supported Transceivers (*continued*) and Cables

Product ID (PID)	Description
SFP-10G-SR	10GBASE-SR SFP Module
SFP-10G-SR-S	10GBASE-SR SFP Module, Enterprise-Class
SFP-10G-LR	10GBASE-LR SFP Module
SFP-10G-LR-S	10GBASE-LR SFP Module, Enterprise-Class
10-Gigabit Transceivers on unified port	
SFP-10G-SR	10GBASE-SR SFP Module
SFP-10G-SR-S	10GBASE-SR SFP Module, Enterprise-Class
SFP-10G-LR	10GBASE-LR SFP Module
SFP-10G-LR-S	10GBASE-LR SFP Module, Enterprise-Class
SFP-H10GB-CU1M	10GBASE-CU SFP+ Cable 1 Meter
SFP-H10GB-CU2M	10GBASE-CU SFP+ Cable 2 Meter
SFP-H10GB-CU3M	10GBASE-CU SFP+ Cable 3 Meter
SFP-H10GB-CU5M	10GBASE-CU SFP+ Cable 5 Meter
SFP-H10GB-ACU7M	Active Twinax cable assembly, 7m
SFP-H10GB-ACU10M	Active Twinax cable assembly, 10m
SFP-10G-AOC1M	10GBASE Active Optical SFP+ Cable, 1M
SFP-10G-AOC2M	10GBASE Active Optical SFP+ Cable, 2M
SFP-10G-AOC3M	10GBASE Active Optical SFP+ Cable, 3M
SFP-10G-AOC5M	10GBASE Active Optical SFP+ Cable, 5M
SFP-10G-AOC7M	10GBASE Active Optical SFP+ Cable, 7M
SFP-10G-AOC10M	10GBASE Active Optical SFP+ Cable, 10M
Fibre Channel	
DS-SFP-FC16G-SW	16 Gbps Fibre Channel SW SFP+, LC
DS-SFP-FC32G-SW	32 Gbps Fibre Channel SW SFP+, LC
DS-SFP-FC64G-SW	64 Gbps Fibre Channel SW SFP+, LC
DS-SFP-FC16G-LW	16 Gbps Fibre Channel LW SFP+, LC
DS-SFP-FC32G-LW	32 Gbps Fibre Channel LW SFP+, LC
DS-SFP-FC64G-LW	64 Gbps Fibre Channel LW SFP+, Optic

Caveats

- The maximum length of fiber optic runs is limited to 300 meters on FI server ports. This limitation is imposed by the system's use of 802.3X/802.1Qbb Priority Pause frames.
- The FI-6664 does not support any breakout cable functionality on its ports.
- Breakout configurations, such as 4x25G or 4x10G, are not supported on the FI-6664's QSFP ports and instead use QSA or QSA28 for 10G/25G connectivity on these ports.
- When using QSA or QSA28 adapters with SFP+/SFP28 transceivers in 100G QSFP ports, only a single 10G or 25G link is supported per port (no breakout).
- While 400G/800G Nexus ToR switches may utilize breakout cables for their connectivity, the FI-6664 itself does not support breakout functionality.
 - QDD-400G-SR8-S
 - QDD-400G-SR4.2-BD
 - QDD-4X100G-FR-S
 - QDD-4X100G-LR-S
 - QDD-2X100-SR4-S
 - QDD-4ZQ100-CUxM 400G
- 100G auto-negotiation is not supported with server ports for IFM-100G & with Nexus 93180YC-FX3 in fex mode. therefore, auto-neg needs to be disabled on the FI when using 100G-CU cables towards these fabric extenders.

STEP 6 CHOOSE POWER SUPPLIES

The Cisco UCS 6600 series Fabric Interconnects use AC power supplies.

Choose Power Supplies

The supported power supplies for the Cisco UCS 6600 series Fabric Interconnects are listed in [Table 7](#).

Table 7 Supported 6600 Series FI Power Supplies

Product ID (PID)	Description
UCS-PSU-6600-AC	UCS 6600 2KW AC Power Supply, Port-side Exhaust

Supported Configurations

- You must choose two power supplies

STEP 7 SELECT AC POWER CORDS

Select the appropriate AC power cords listed in [Table 8](#).



NOTE: You must select two identical power cords. If you select the option “NO-POWER-CORD”, no power cord is shipped with the server.

Table 8 Available Power Cords

Product ID (PID)	PID Description	Images
NO-POWER-CORD	ECO-friendly green option, no power cable will be shipped	Not applicable
CAB-AC-L620-C13	AC Power Cord, NEMA L6-20 - C13, 2M/6.5ft	
CAB-250V-10A-AR	Power Cord, 250V, 10A, Argentina	
CAB-250V-10A-BR	Power Cord - 250V, 10A - Brazil	
CAB-9K10A-AU	Power Cord, 250VAC 10A 3112 Plug, Australia	
CAB-250V-10A-CN	AC Power Cord - 250V, 10A - PRC	

Table 8 Available Power Cords (*continued*)

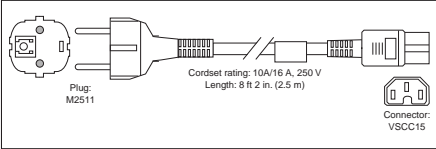
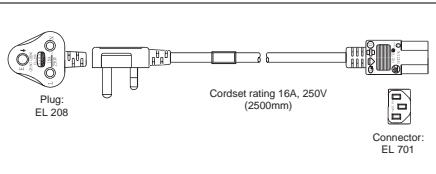
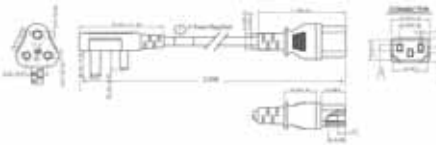
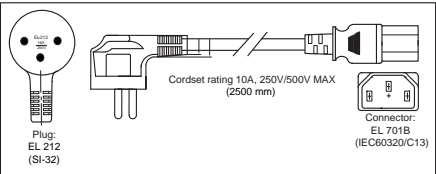
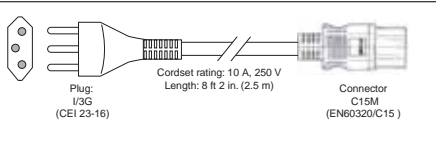
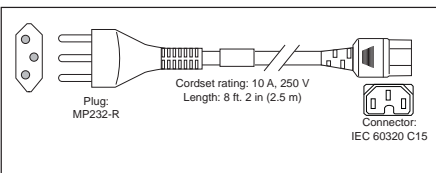
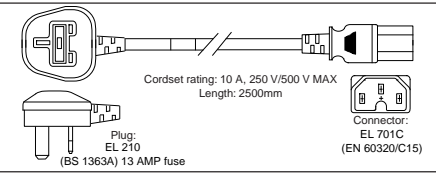
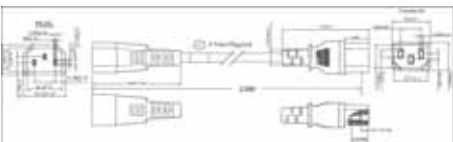
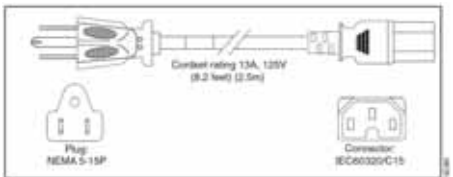
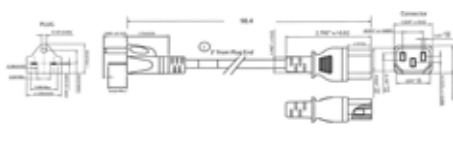
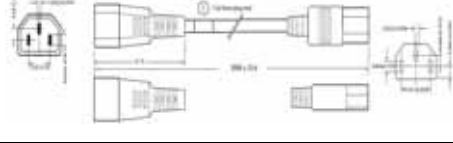
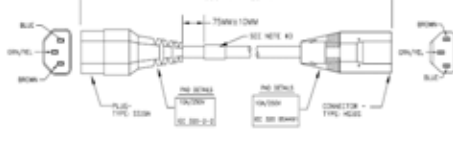
Product ID (PID)	PID Description	Images
CAB-9K10A-EU	Power Cord, 250VAC 10A CEE 7/7 Plug, EU	 <p>Plug: M2511</p> <p>Cordset rating: 10A/16 A, 250 V Length: 8 ft 2 in. (2.5 m)</p> <p>Connector: VSCC15</p>
CAB-250V-10A-ID	Power Cord, 250V, 10A, India	 <p>Plug: EL 208</p> <p>Cordset rating: 16A, 250V (2500mm)</p> <p>Connector: EL 701</p>
CAB-IND-10A	10A Power cable for India	
CAB-250V-10A-IS	Power Cord, 250V, 10A, Israel	 <p>Plug: EL 212 (SI-32)</p> <p>Cordset rating: 10A, 250V/500V MAX (2500 mm)</p> <p>Connector: EL 701B (IEC60320/C13)</p>
CAB-9K10A-IT	Power Cord, 250VAC 10A CEI 23-16/VII Plug, Italy	 <p>Plug: I/3G (CEI 23-16)</p> <p>Cordset rating: 10 A, 250 V Length: 8 ft 2 in. (2.5 m)</p> <p>Connector: C15M (EN60320/C15)</p>
CAB-9K10A-SW	Power Cord, 250VAC 10A MP232 Plug, Switzerland	 <p>Plug: MP232-R</p> <p>Cordset rating: 10 A, 250 V Length: 8 ft. 2 in (2.5 m)</p> <p>Connector: IEC 60320 C15</p>
CAB-9K10A-UK	Power Cord, 250VAC 10A BS1363 Plug (13 A fuse), UK	 <p>Plug: EL 210 (BS 1363A) 13 AMP fuse</p> <p>Cordset rating: 10 A, 250 V/500 V MAX Length: 2500mm</p> <p>Connector: EL 701C (EN 60320/C15)</p>

Table 8 Available Power Cords (*continued*)

Product ID (PID)	PID Description	Images
CAB-C13-C14-2M	CABASY,WIRE,JUMPER CORD, PWR, 2 Meter, C13/C14,10A/250V	
CAB-9K12A-NA	Power Cord, 125VAC 13A NEMA 5-15 Plug, North America	
CAB-N5K6A-NA	Power Cord, 200/240V 6A North America	
CAB-C13-C14-AC	Power cord, C13 to C14 (recessed receptacle), 10A	
CAB-C13-CBN	CABASY,WIRE,JUMPER CORD, 27" L, C13/C14, 10A/250V	
CAB-JPN-3PIN	Power Cord 3PIN, Japan	Image not available
CAB-C13-C14-IN	Power Cord Jumper,C13-C14 Connectors,1.4 Meter Length, India	Image not available
CAB-C13-C14-3M-IN	Power Cord Jumper, C13-C14 Connectors, 3 Meter Length, India	Image not available
CAB-C13-C14-2M-JP	Power Cord C13-C14, 2M/6.5ft Japan PSE mark	Image not available

STEP 8 ACCESSORY KIT AND FAN MODULE (INCLUDED)

Accessory Kit



NOTE: An accessory kit is included for the Cisco UCS 6664 Fabric Interconnect.

The supported accessory kits for the Cisco UCS 6600 series Fabric Interconnects are listed in [Table 9](#).

Table 9 Accessory Kit

Product ID (PID)	Description
6664 FI Accessory Kit	
UCS-ACC-6664	UCS 6664 Chassis Accessory Kit

The Cisco UCS 6600 series Fabric Interconnect accessory kit includes the following items:

- 2 slider rails
- 2 rack-mount guides
- 2 rack-mount brackets
- 12 M4 x 0.7 x 8-mm Phillips countersunk screws
- 10 10-32 rack nuts
- 10 10-32 x 3/4-inch Phillips pan-head screws
- 1 console cable with an RJ-45-RS-232 adapter and a DB9 adapter
- 1 ground lug kit
- 1 ESD wrist strap
- 1 power cord clip (a wire clip that is used to retain the power cord)
- 1 pointer document (specifies where to find the online product documentation)

Fan Module



NOTE: Four modules are included in the Cisco UCS 6664 Fabric Interconnect.

The supported fan module for the Cisco UCS 6600 series Fabric Interconnect is listed in [Table 10](#).

6664 FI Fan Module

The 6664 Fabric Interconnect comes with four variable speed fans, 3+1 redundant (hot-swappable).

Table 10 6664 FI Fan Module

Product ID (PID)	Description
UCS-FAN-6664	UCS 6664 Fan Module

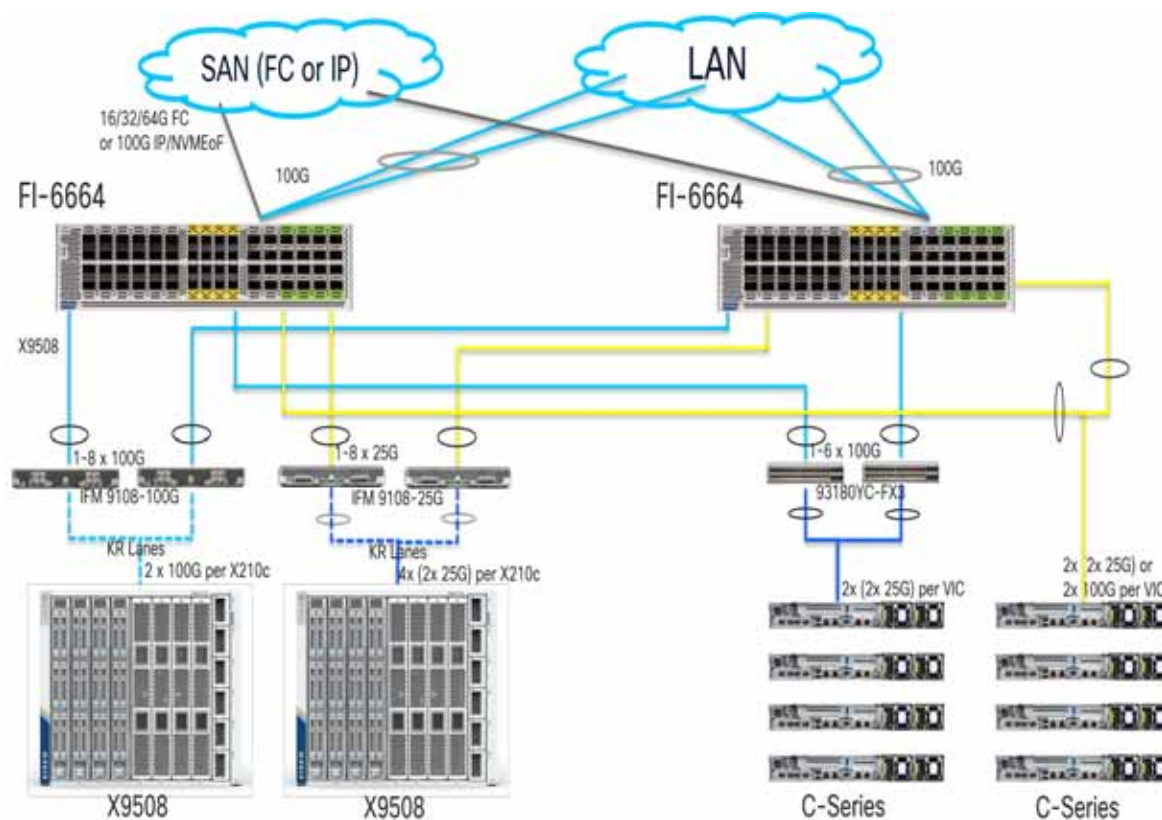
Cisco UCS 6664 Supported Speeds

Speed	Port Range		
	1-24	25-40	41-64
10/25 Gbps	Yes	Yes	Yes
40/100 Gbps	Yes	No	Yes
16/32/64 Gbps FC	No	Yes	No

Connectivity

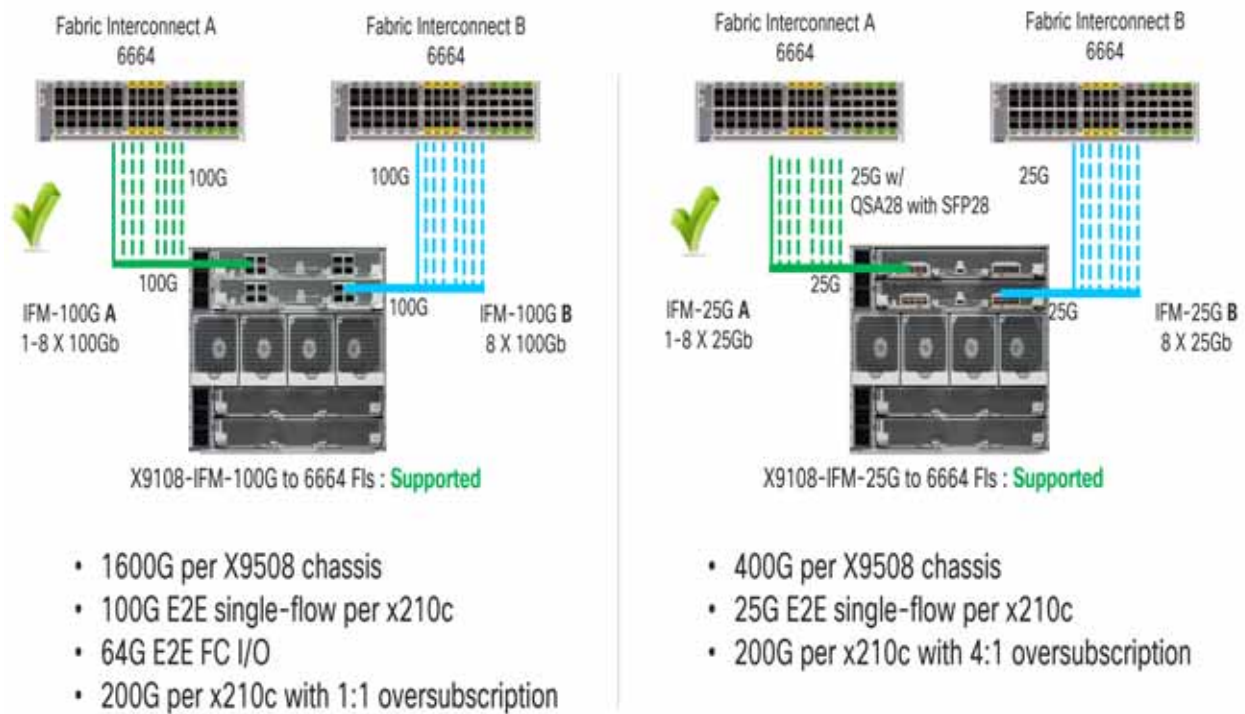
FI-6664 100G End-to-End

Figure 5 FI-6664 100G End-to-End



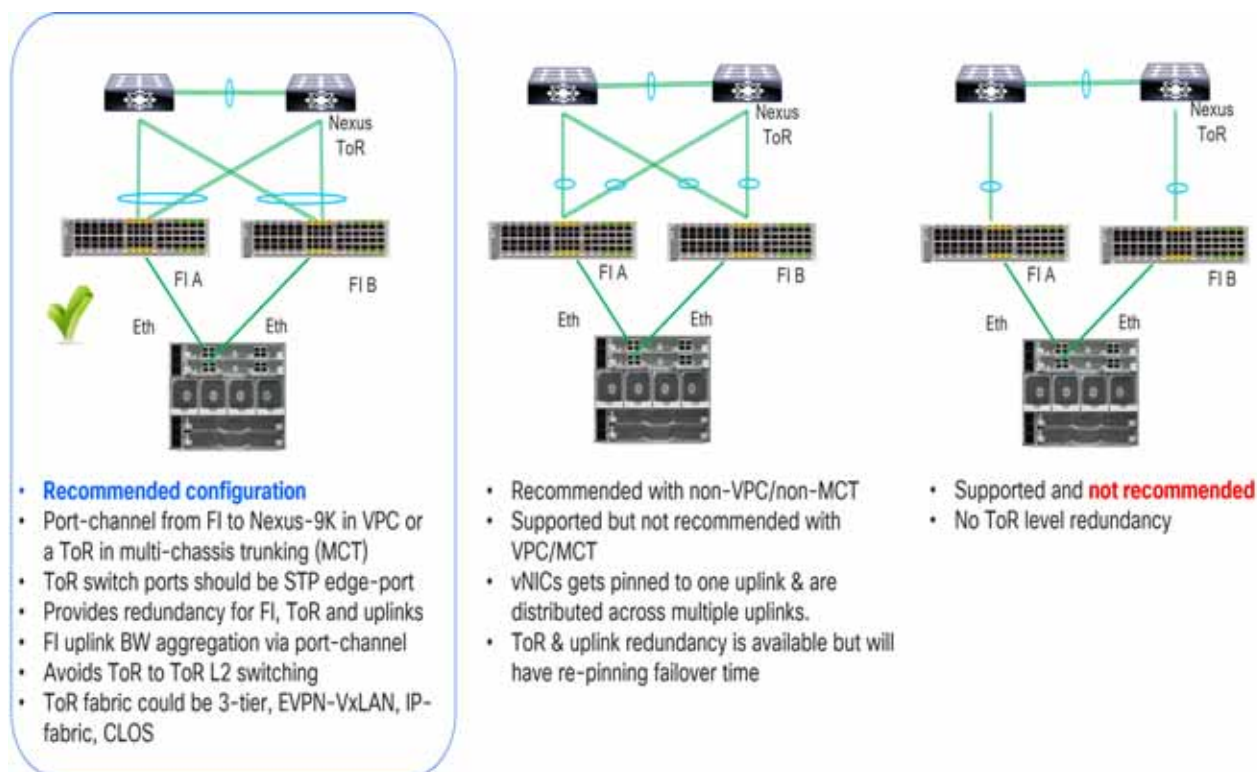
FI 6664 to IFM-100G/25G Connectivity

Figure 6 FI 6664 to IFM-100G/25G Connectivity



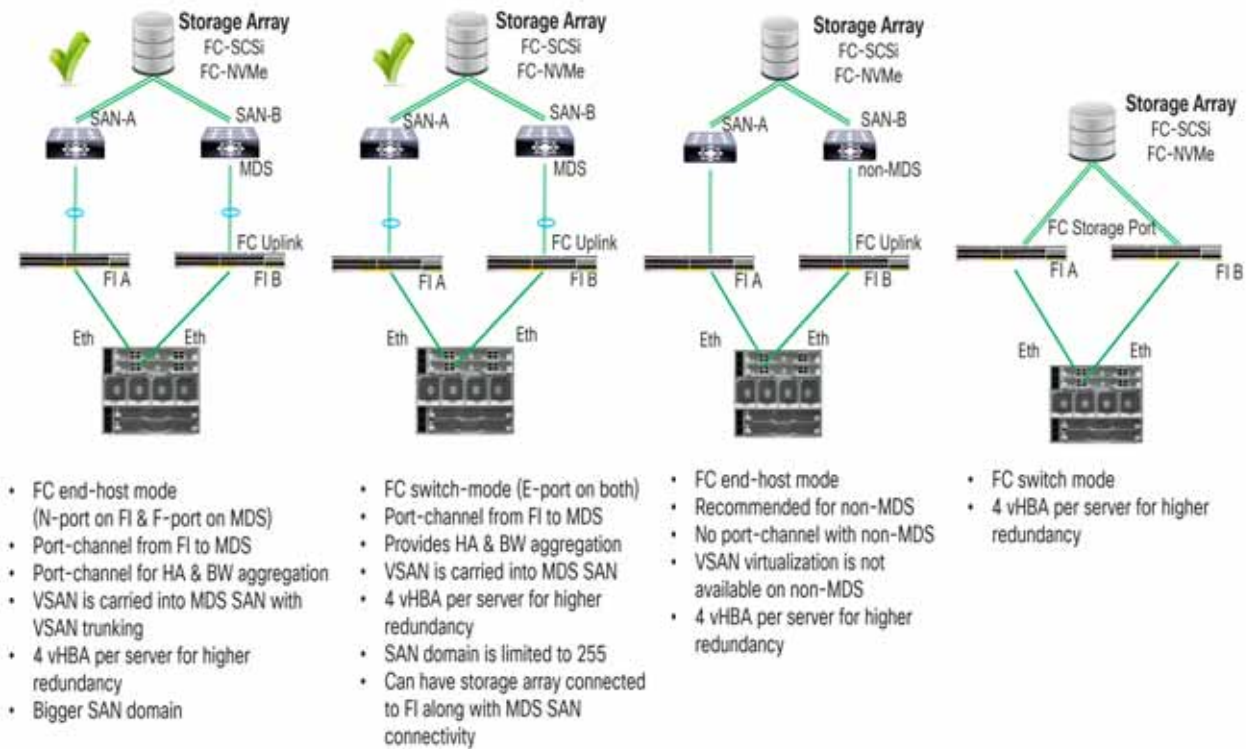
LAN connectivity with 6th Gen FI in end-host mode

Figure 7 LAN connectivity with 6th Gen FI in end-host mode



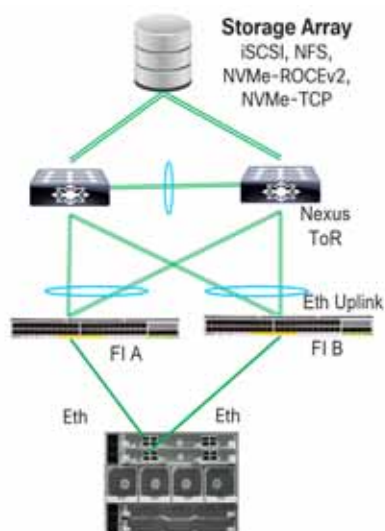
FC-SAN connectivity with 6th Gen FI

Figure 8 FC-SAN connectivity with 6th Gen FI

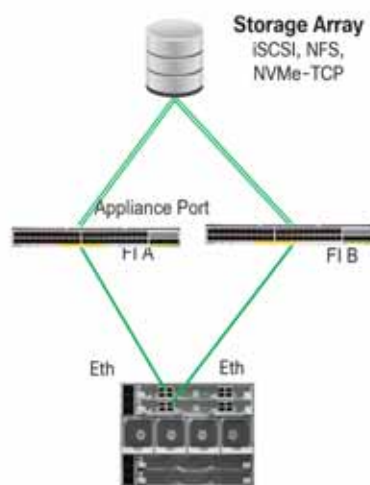


IP-SAN connectivity with 6th Gen FI

Figure 9 IP-SAN connectivity with 6th Gen FI



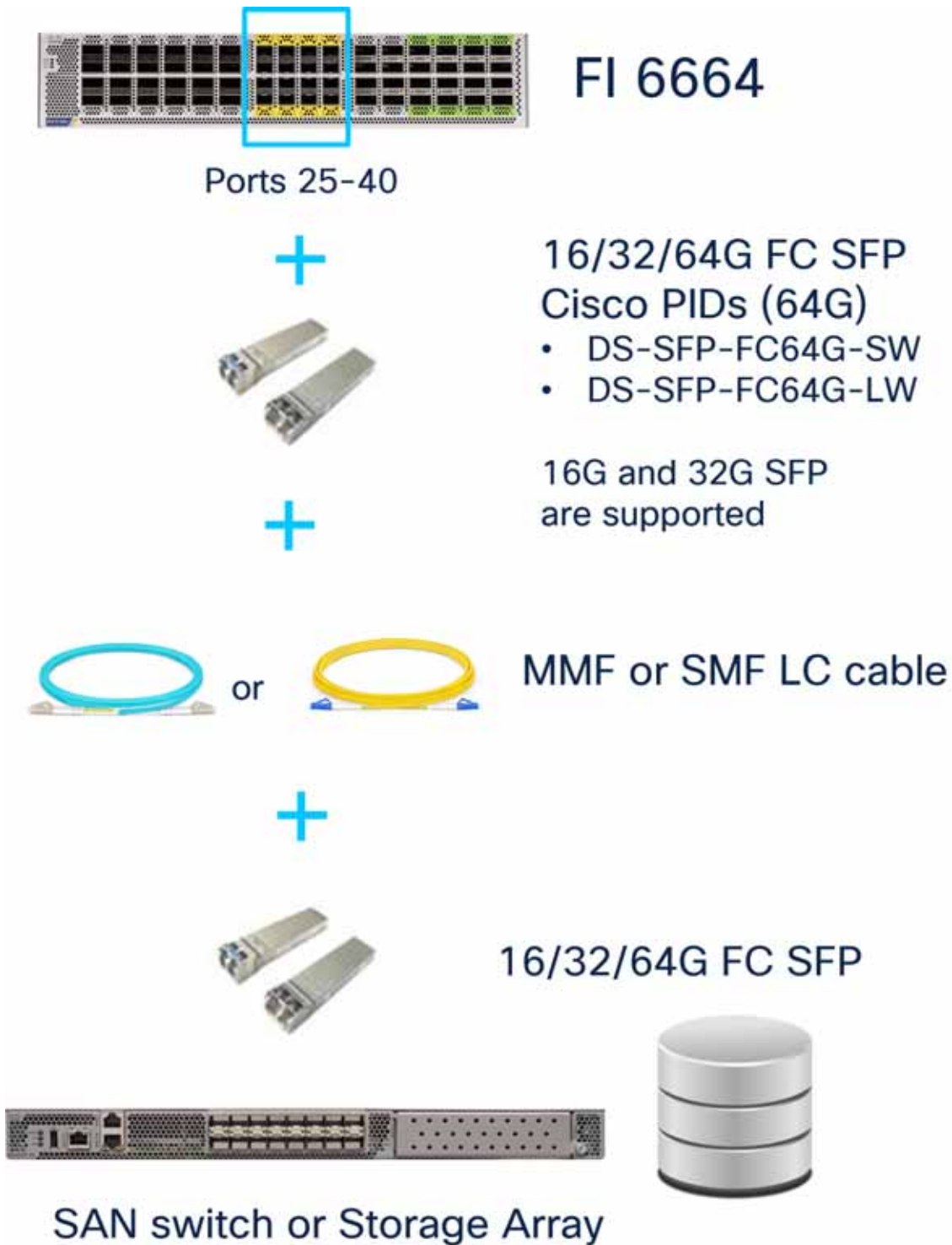
- VPC/MCT port-channel is recommended
- MTU 9216 should be enabled in system-qos
- TCP based storage can use best-effort class but if required no-drop could be enabled across FI & TOR
- ROCEv2 would require no-drop QoS-class along with PFC enabled on FI & ToR
- Multiple vNICs on server for redundancy
- Best-practice connectivity from Nexus to Storage is different for each vendor



- For small to medium deployments
- MTU 9216 should be enabled in system-qos
- Can avoid ToR for storage access
- Direct port-channel from an FI to a Storage controller is possible.
- No VPC like port-channel towards Storage Array

Fiber channel connectivity

Figure 10 Fiber channel connectivity



TECHNICAL SPECIFICATIONS

Physical and Environmental Specifications

Table 11 Physical and Environmental Specifications

Description	Specification
Cisco UCS 6664 FI	
Dimensions (H x W x D)	3.39 in. x 17.41 in x 22.28 in (8.6 cm x 44.2 cm x 56.6 cm)
Weight (with two power supplies and six fans installed)	44 lb (20 kg)
Temperature, operating	32 to 104° F (0 to 40° C)
Temperature, non-operating	-40 to 158° F (-40 to 70° C)
Humidity (RH), non-condensing	5 to 95%
Altitude	0 to 10000 ft (0 to 3048 m)

Power Supply Specifications

Table 12 Specifications for the Cisco UCS 6600 AC Power Supply (UCS-PSU-6600-AC)

AC Power Supply Properties	Description
Maximum AC input current	1100W
Maximum voltage (AC)	100 to 240 VAC
Power supply (up to two)	1400W (AC)
Typical operating power	650W
Frequency	50 to 60 Hz

For configuration-specific power specifications, use the Cisco UCS Power Calculator at:

<https://express.salire.com/Go/Cisco/Cisco-UCS-Power-Calculator.aspx>

Transceiver Specifications

For transceiver specifications, see the following link:

http://www.cisco.com/c/en/us/td/docs/interfaces_modules/transceiver_modules/compatibility/matrix/GE_Tx_Matrix.html



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