

# Cisco UCS 6100 Series Fabric Interconnect

## Overview

The Cisco® UCS 6100 Series Fabric Interconnects are low-latency, lossless, 10-Gbps Ethernet interconnect switches that consolidate I/O within the system. The UCS 6100 Series accommodates expansion modules that provide Fibre Channel and 10 Gigabit Ethernet connectivity.

**Figure 1.** Cisco UCS 6120XP 20-Port Fabric Interconnect (1RU)



|                                                                                                                    |                                                                                                              |                                                                                                                |                                                               |                          |
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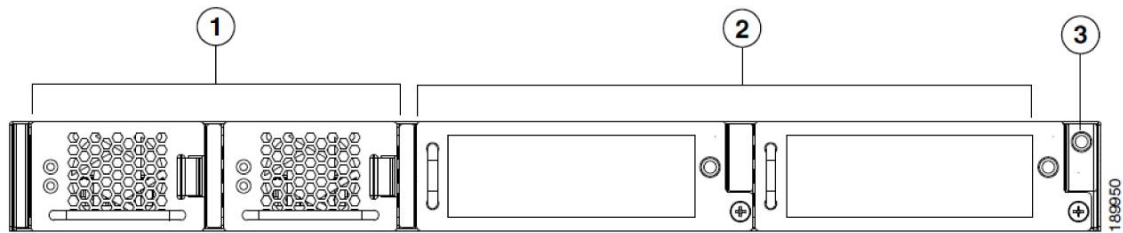
**Figure 2.** Cisco UCS 6140XP 40-Port Fabric Interconnect (2RU)



|                  |                                        |                                     |                                     |                                |                          |
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# Detailed Views

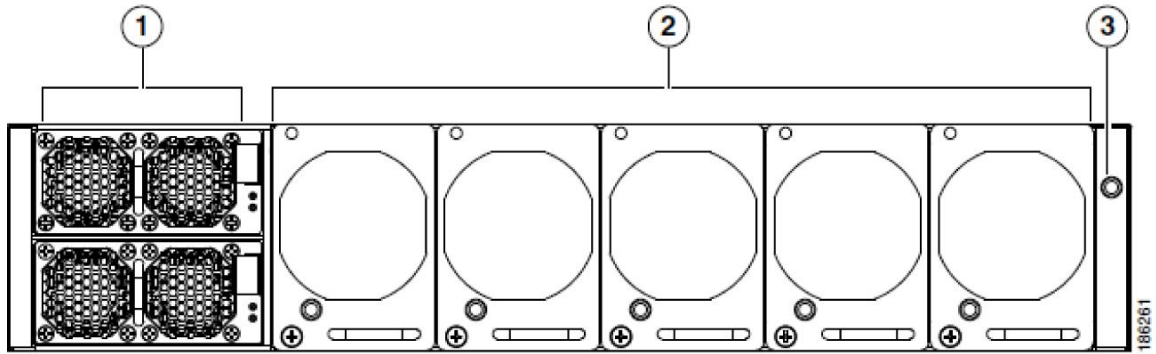
**Figure 3.** Front View of the Cisco UCS 6120XP Fabric Interconnect



| Front Panel Features |                    |   |                 |
|----------------------|--------------------|---|-----------------|
| 1                    | Two power supplies | 2 | Two fan modules |
| 3                    | System status LED  |   |                 |

|           |                                        |                                     |                                     |                                |                          |
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**Figure 4.** Front View of the Cisco 6140XP Fabric Interconnect



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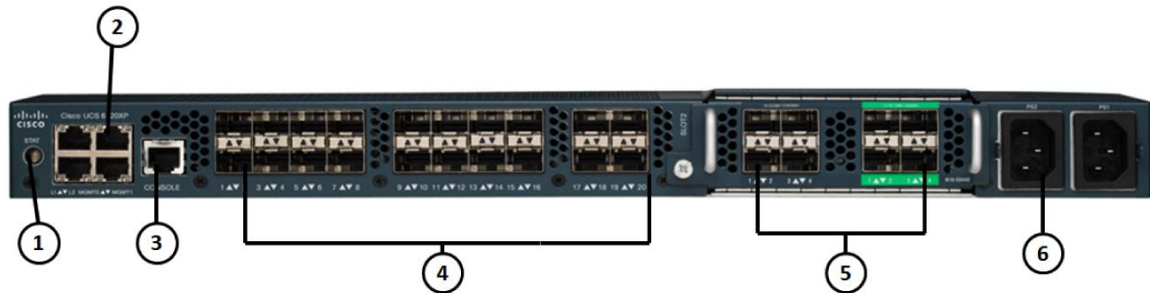
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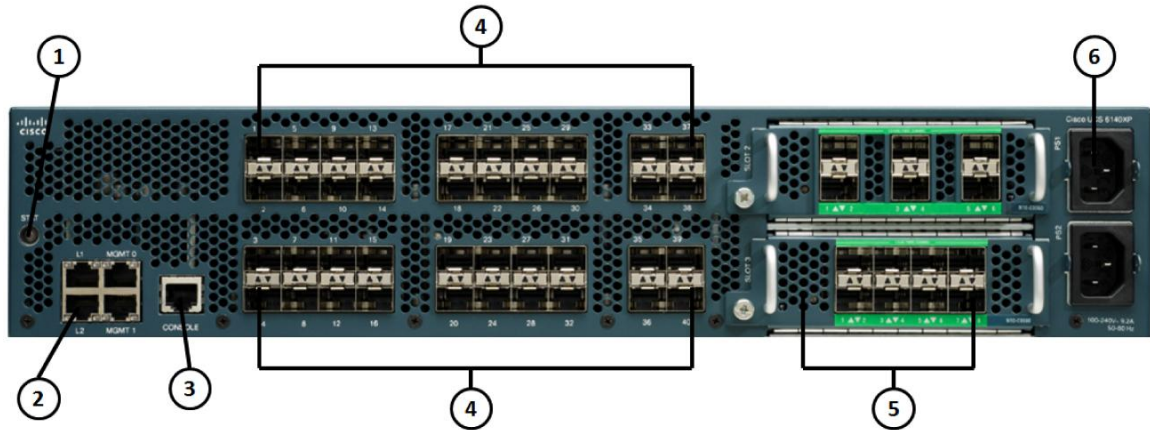
**Figure 5.** Rear View of the Cisco UCS 6120XP Fabric Interconnect



| Rear Panel Features |                        |   |                                                                                                                                             |
|---------------------|------------------------|---|---------------------------------------------------------------------------------------------------------------------------------------------|
| 1                   | System status LED      | 2 | Ethernet connector with two cross-connect ports on the left (top and bottom) and two network management ports on the right (top and bottom) |
| 3                   | Console connector port | 4 | 20 fixed Small Form-Factor Pluggable (SFP+) 10 Gigabit Ethernet ports (up to 8 can be 1 Gigabit Ethernet SFP)                               |
| 5                   | Expansion module bay   | 6 | 2 x AC power connectors                                                                                                                     |

|                                           |                                     |                                     |                                |                          |
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**Figure 6.** Rear View of the Cisco UCS 6140XP Fabric Interconnect



| Rear Panel Features |                           |   |                                                                                                                                             |  |  |
|---------------------|---------------------------|---|---------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| 1                   | System status LED         | 2 | Ethernet connector with two cross-connect ports on the left (top and bottom) and two network management ports on the right (top and bottom) |  |  |
| 3                   | Console connector port    | 4 | 40 fixed SFP+ 10 Gigabit Ethernet ports (up to 16 can be 1 Gigabit Ethernet SFP)                                                            |  |  |
| 5                   | 2 x expansion module bays | 6 | 2 x AC power connectors                                                                                                                     |  |  |

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## Base Unit Features

**Table 1.** Feature Specifications for the Cisco UCS 6120XP and 6140XP Fabric Interconnects

| Feature                     | Specification                                                                                                                                                                                     |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Ports</b>                | 6120XP Base system has 20 ports and with expansion modules has capacity for 28 ports.<br>6140XP Base system has 40 ports and with expansion modules has capacity for 56 ports.                    |
| <b>Expansion module bay</b> | 6120XP has one expansion bay. 6140XP has two expansion bays.                                                                                                                                      |
| <b>Console port</b>         | Asynchronous RS-232 serial port with an RJ-45 connector                                                                                                                                           |
| <b>Throughput</b>           | UCS 6120 XP: 520 Gbs ; UCS 6140XP: 1040 Gbs                                                                                                                                                       |
| <b>Transceiver</b>          | SFP+ Ethernet transceivers, SFP transceivers, and SFP Fibre Channel transceiver.                                                                                                                  |
| <b>Power subsystem</b>      | Up to two 550W (6120XP) or 750W(6140XP) power supplies, hot swappable (N+1 or no redundancy)                                                                                                      |
| <b>Fans</b>                 | 6120XP: Two fan modules. Each fan module contains six fans for a total of 12 fans per chassis.<br>6140XP: Five fan modules. Each fan module contains six fans for a total of 30 fans per chassis. |

|                                           |                                     |                                     |                                |                          |
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## Configuring the Cisco UCS 6100 Series Fabric Interconnect

Select the Cisco UCS 6120XP Fabric Interconnect or the 6140XP Fabric Interconnect.

You must select either the 6120XP or 6140XP:

- |                                  |           |
|----------------------------------|-----------|
| • UCS 6120XP Fabric Interconnect | N10-S6100 |
| • UCS 6140XP Fabric Interconnect | N10-S6200 |

### STEP 1: Select the Expansion Model Type.

Select one or two expansion modules from this list:

- |                                                                            |           |
|----------------------------------------------------------------------------|-----------|
| • 4- Ports 10GbE SFP+, 4 Fibre Channel 1/2/4G SFP based uplink connections | N10-E0440 |
| • 6-Ports 10GbE SFP+ based uplink connections                              | N10-E0600 |
| • 8- Ports 4/2/1 G Fibre Channel, SFP-based uplink connections             | N10-E0080 |
| • 6- Ports 8/4/2/1 G Fibre Channel uplink connections                      | N10-E0060 |

### STEP 2: Select the Transceiver and Cable Type. (optional)

Select a transceiver and or cables from these lists.

#### SFP+ Transceivers

Bidirectional device with transmitter and receiver in same physical package:

- |                                                       |             |
|-------------------------------------------------------|-------------|
| • 10 Gigabit Ethernet - short-range SFP+ module (MMF) | SFP-10GB-SR |
| • 10 Gigabit Ethernet - long-range SFP+ module (SMF)  | SFP-10GB-LR |
| • 10 Gigabit Ethernet-FET SFP+ module (MMF)           | FET-10G     |

|                                           |                                     |                                     |                                |                          |
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## SFP Transceivers

Bidirectional transmitter and receiver within the same physical package:

- |                                                                             |           |
|-----------------------------------------------------------------------------|-----------|
| • 1 GbE copper SFP Module                                                   | GLC-T     |
| • 1 GbE short-range (550m max) SFP Module                                   | GLC-SX-MM |
| • 1 GbE long-range (10 km max) SFP Module                                   | GLC-LH-SM |
| • 1 GbE SFP, extended temperature range module                              | SFP-GE-T  |
| • 1 GbE SFP, LC connector SX transceiver (MMF), ext. temp. range and DOM    | SFP-GE-S  |
| • 1 GbE SFP, LC connector LX/LH transceiver (SMF), ext. temp. range and DOM | SFP-GE-L  |

## SFP+ Copper Cables

Copper cables are available for use with the 10 Gigabit Ethernet SFP+ modules:

- |                                 |                |                  |
|---------------------------------|----------------|------------------|
| • 10 GbE Base-CU SFP+, 1 meter  | (Twinax cable) | SFP-H10GB-CU1M   |
| • 10 GbE Base-CU SFP+, 3 meter  | (Twinax cable) | SFP-H10GB-CU3M   |
| • 10 GbE Base-CU SFP+, 5 meter  | (Twinax cable) | SFP-H10GB-CU5M   |
| • 10 GbE Base-CU SFP+, 7 meter  | (Twinax cable) | SFP-H10GB-ACU7M  |
| • 10 GbE Base-CU SFP+, 10 meter | (Twinax cable) | SFP-H10GB-ACU10M |

## SFP Fibre Channel Transceivers

Support for multimode 850nm 4-Gbs SFPs with 150m reach:

- |                                   |                |
|-----------------------------------|----------------|
| • 4-Gbs Fibre Channel-SW SFP, LC  | DS-SFP-FC4G-SW |
| • 4-Gbs Fibre Channel-SW SFP, LC  | DS-SFP-FC4G-LW |
| • 8-Gbs Fibre Channel-SW SFP+, LC | DS-SFP-FC8G-SW |
| • 8-Gbs Fibre Channel-SW SFP+, LC | DS-SFP-FC8G-LW |

|                                           |                                     |                                     |                                |                          |
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### STEP 3: Select a Software License Option.

There are eight pre-licensed ports (out of 20) included with the Cisco UCS 6120XP. Sixteen pre-licensed ports (out of 40) are included with the UCS 6140XP. All additional ports require a license.

Module ports are pre-licensed and included with each module.

- UCS 6100 Series Fabric Interconnect, one 10GbE port license N10-L001

**Note:** A software license is required for each and every 10 GbE port on the Cisco UCS 6120XP and Cisco UCS 6140XP Fabric Interconnects.

### STEP 4: Select a Software Image Option.

A software image is required. Please inquire for the latest version.

- Cisco UCS Manager v1.3 N10-MGT005
- Cisco UCS Manager v1.4 N10-MGT006

### STEP 5: Select a Power Supply.

One power supply is required. A redundant power supply may be ordered.

- 6120XP 550W Power supply unit 100-240 VAC N10-PAC1-550W
- 6140XP 750W Power supply unit 100-240 VAC N10-PAC2-750W

|                                           |                                     |                                     |                                |                          |
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## STEP 6: Select the Power Cords.

You can select a maximum of two power cables from this list:

- |                                                                  |                  |
|------------------------------------------------------------------|------------------|
| • AC Power Cable, 6A, 250V, North America, 2.5m                  | CAB-N5K6A-NA     |
| • AC Power Cable, 13A, 250V, North America, 2.5m                 | CAB-AC-250V/13A  |
| • AC Power Cable, 13A, 125V, Nema 5-15 Plug, North America, 2.5m | CAB-9K12A-NA     |
| • AC Power Cable, 6A, 250V, Power Strip Type                     | CAB-C13-C14-JMPR |
| • Power cord jumper, C13-C14 connectors, 2m                      | CAB-C13-C14-2M   |
| • Cabinet jumper power cord, 250VAC, 10A, C14-C13 connectors     | CAB-C13-CBN      |
| • AC Power Cable, 10A, 250V, Argentina, 2.5m                     | SFS-250V-10A-AR  |
| • AC Power Cable, 10A, 250V, Australia, 2.5m                     | CAB-9K10A-AU     |
| • AC Power Cable, 10A, 250V, China, 2.5m                         | SFS-250V-10A-CN  |
| • AC Power Cable, 10A, 250V, Europe, 2.5m                        | CAB-9K10A-EU     |
| • AC Power Cable, 10A, 250V, India, 2.5m                         | SFS-250V-10A-ID  |
| • AC Power Cable, 10A, 250V, India, 2.5m                         | CAB-IND-10A      |
| • AC Power Cable, 10A, 250V, Israel, 2.5m                        | SFS-250V-10A-IS  |
| • AC Power Cable, 10A, 250V, Italy, 2.5m                         | CAB-9K10A-IT     |
| • AC Power Cable, 10A, 250V, Switzerland, 2.5m                   | CAB-9K10A-SW     |
| • AC Power Cable, 10A, 250V, United Kingdom, 2.5m                | CAB-9K10A-UK     |

|                                           |                                     |                                     |                                |                          |
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## STEP 7: Order an Accessory Kit. (optional)

- |                                |           |
|--------------------------------|-----------|
| • Accessory Kit for UCS 6120XP | N10-SACCA |
| • Accessory Kit for UCS 6140XP | N10-SACCB |

## STEP 8: Select the Appropriate Services. (optional)

Various service options are available, as listed here.

### Cisco Unified Computing Mission Critical Support Service

This service delivers personalized technical account management, expedited technical support, and expert field support engineering for the Cisco Unified Computing System™.

The Mission Critical Support Service provides a designated technical account manager (TAM) who acts as a strategic resource to help assure the unified computing environment runs at peak efficiency. Should a problem arise that threatens business continuity, the TAM provides crisis management leadership, and customer IT staff gets expedited access to Cisco's award-winning Technical Assistance Center (TAC).

**Please note:** This service has qualification criteria. There should be US\$1.2 million of UCS equipment, 200 blades, and a single location to qualify for this service level.

### UCS 6120XP

- |                              |         |                 |
|------------------------------|---------|-----------------|
| • UC Mission Critical 24x7x4 | On-site | CON-UCM7-1S6100 |
| • UC Mission Critical 24x7x2 | On-site | CON-UCM8-1S6100 |

|                                           |                                     |                                     |                                |                          |
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## UCS 6140XP

- |                              |         |                 |
|------------------------------|---------|-----------------|
| • UC Mission Critical 24x7x4 | On-site | CON-UCM7-1S6200 |
| • UC Mission Critical 24x7x2 | On-site | CON-UCM8-1S6200 |

## Cisco Unified Computing Support Service

For support of the entire Unified Computing System, Cisco offers the Cisco Unified Computing Support Service. This service provides expert software and hardware support to help sustain performance and high availability of the unified computing environment. This service includes access to the award-winning Cisco Technical Assistance Center (TAC) around the clock, from anywhere in the world.

For Cisco UCS blade servers, there is Smart Call Home, which provides proactive, embedded diagnostics and real-time alerts. For systems that include the Cisco UCS Manager, the support service includes downloads of UCS Manager upgrades. The Unified Computing Support Service includes flexible hardware replacement options, including replacement in as little as two hours. There is also access to Cisco's extensive online technical resources to help maintain optimal efficiency and uptime of the unified computing environment.

## UCS 6120XP

- |                      |             |                 |
|----------------------|-------------|-----------------|
| • UC Support 8X5XNBD | Not on-site | CON-UCS1-1S6100 |
| • UC Support 8X5X4   | Not on-site | CON-UCS2-1S6100 |
| • UC Support 24x7x4  | Not on-site | CON-UCS3-1S6100 |
| • UC Support 24x7x2  | Not on-site | CON-UCS4-1S6100 |
|                      |             |                 |
| • UC Support 8X5XNBD | On-site     | CON-UCS5-1S6100 |
| • UC Support 8X5X4   | On-site     | CON-UCS6-1S6100 |
| • UC Support 24x7x4  | On-site     | CON-UCS7-1S6100 |
| • UC Support 24x7x2  | On-site     | CON-UCS8-1S6100 |

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## UCS 6140XP

- |                      |             |                 |
|----------------------|-------------|-----------------|
| • UC Support 8X5XNBD | Not on-site | CON-UCS1-1S6200 |
| • UC Support 8X5X4   | Not on-site | CON-UCS2-1S6200 |
| • UC Support 24x7x4  | Not on-site | CON-UCS3-1S6200 |
| • UC Support 24x7x2  | Not on-site | CON-UCS4-1S6200 |
|                      |             |                 |
| • UC Support 8X5XNBD | On-site     | CON-UCS5-1S6200 |
| • UC Support 8X5X4   | On-site     | CON-UCS6-1S6200 |
| • UC Support 24x7x4  | On-site     | CON-UCS7-1S6200 |
| • UC Support 24x7x2  | On-site     | CON-UCS8-1S6200 |

## Unified Computing Warranty Plus Service

For faster parts replacement than is provided with the standard Cisco Unified Computing System warranty, Cisco offers the Cisco Unified Computing Warranty Plus Service. Customers can choose from several levels of advanced parts replacement coverage, including onsite parts replacement in as little as two hours. Warranty Plus provides remote access anytime to Cisco support professionals who can determine if a return materials authorization (RMA) is required.

## UCS 6120XP

- |                                     |                 |
|-------------------------------------|-----------------|
| • UC Warranty Plus 24x7x4           | CON-UCW3-1S6100 |
| • UC Warranty Plus 8X5XNBD On- Site | CON-UCW5-1S6100 |

## UCS 6140XP

- |                                     |                 |
|-------------------------------------|-----------------|
| • UC Warranty Plus 24x7x4           | CON-UCW3-1S6200 |
| • UC Warranty Plus 8X5XNBD On- Site | CON-UCW5-1S6200 |

For more information, consult:

[Unified Computing Warranty and Support Services](#)

For a complete listing of available Services for Cisco Unified Computing System, visit:

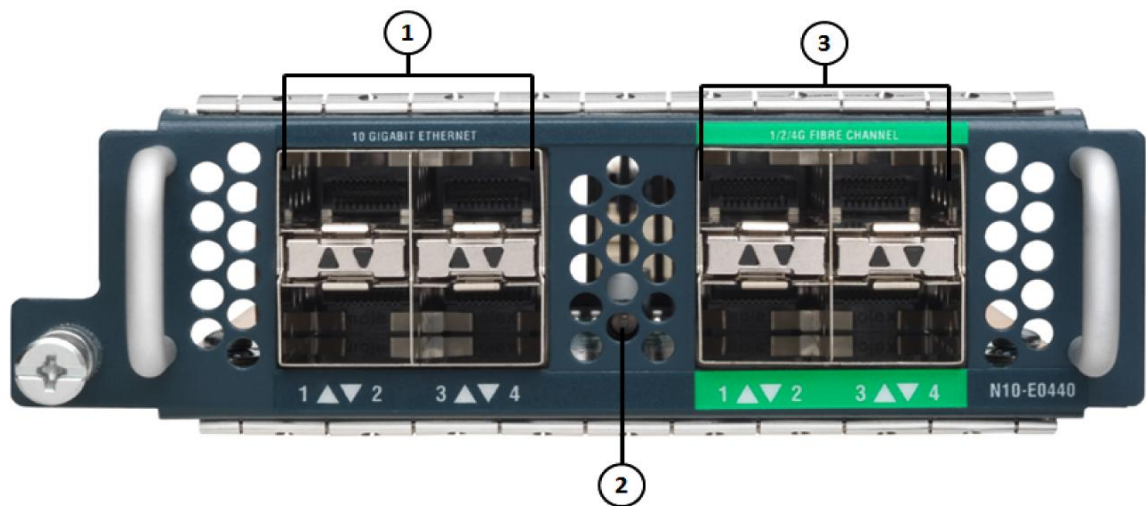
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# Product Notes

## Expansion Module Notes

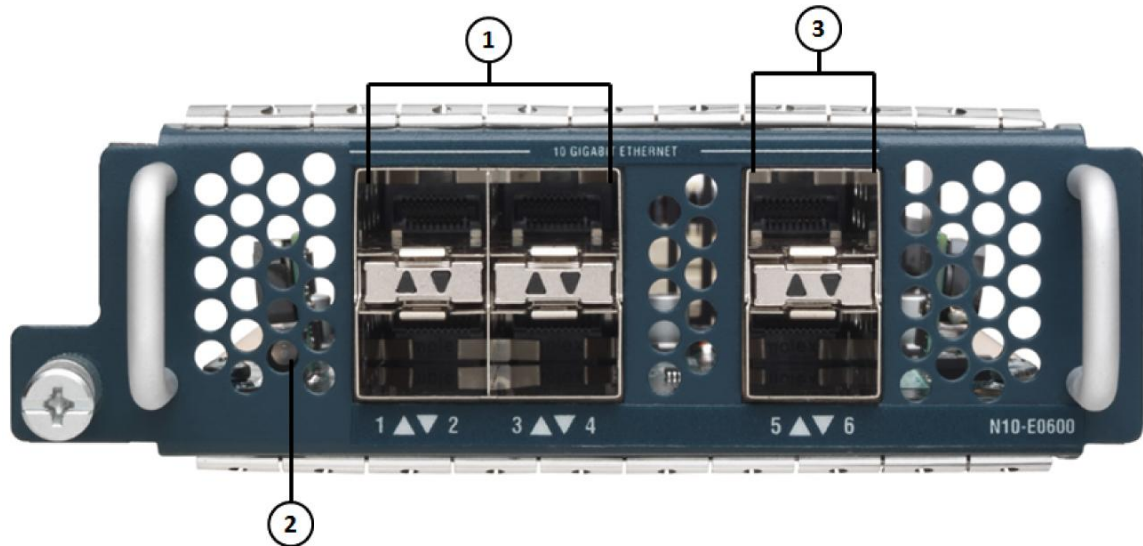
**Figure 7.** Front View of the Cisco UCS N10-E0440 Expansion Module



|   |                                |   |            |   |                                          |
|---|--------------------------------|---|------------|---|------------------------------------------|
| 1 | Four 10 Gigabit Ethernet ports | 2 | Module LED | 3 | Four 1, 2, or 4 Gbps Fibre Channel ports |
|---|--------------------------------|---|------------|---|------------------------------------------|

|           |                                        |                                     |                                     |                                |                          |
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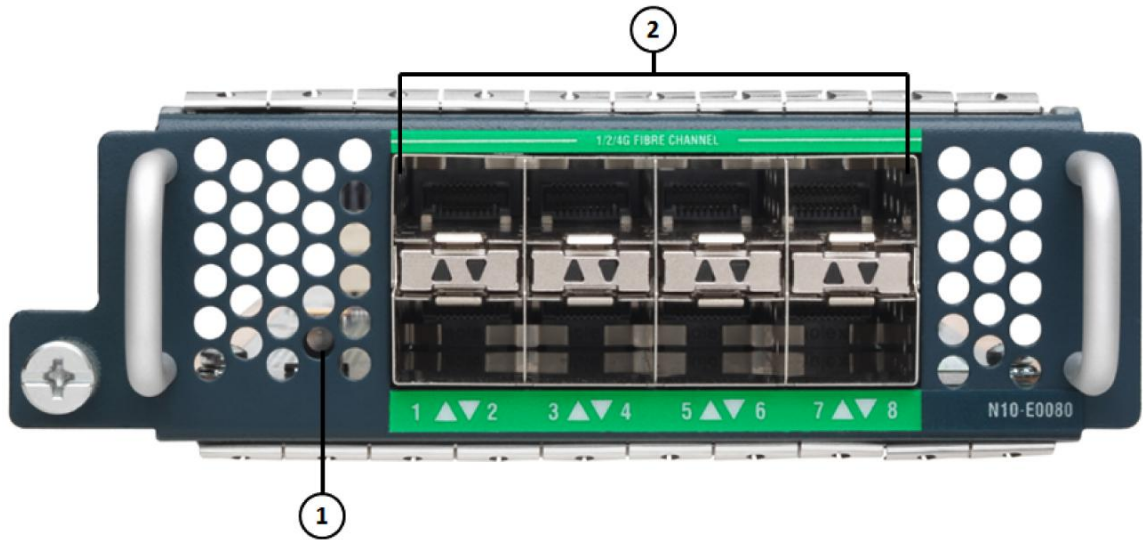
**Figure 8.** Front View of the Cisco UCS N10-E0600 Expansion Module



|   |                                |   |            |   |                               |
|---|--------------------------------|---|------------|---|-------------------------------|
| 1 | Four 10 Gigabit Ethernet ports | 2 | Module LED | 3 | Two 10 Gigabit Ethernet ports |
|---|--------------------------------|---|------------|---|-------------------------------|

|           |                                        |                                     |                                     |                                |                          |
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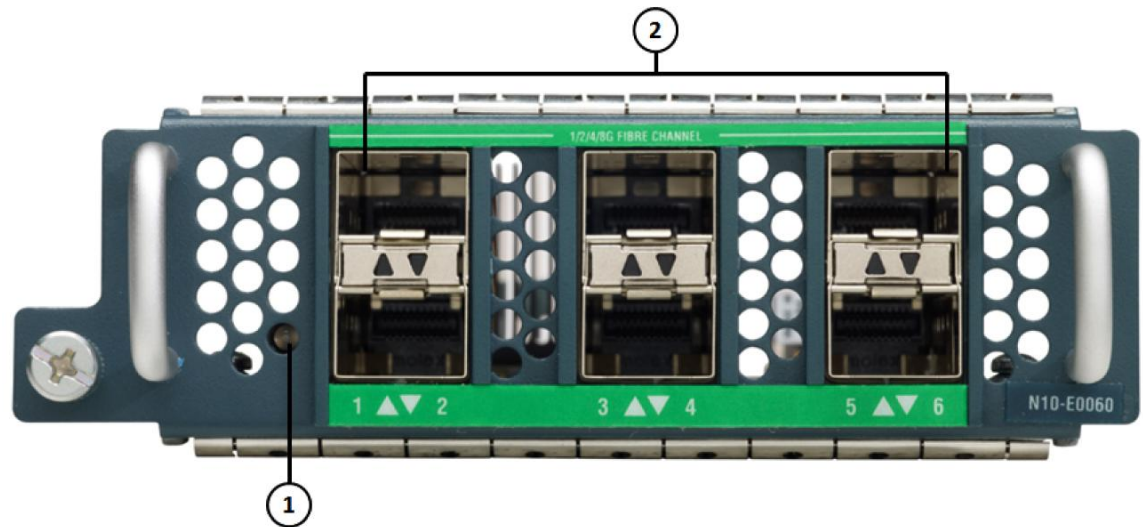
**Figure 9.** Front View of the Cisco UCS N10-E0080 Expansion Module



|   |                                            |   |            |
|---|--------------------------------------------|---|------------|
| 1 | Eight 1, 2, 4, 8, Gbps Fibre Channel ports | 2 | Module LED |
|---|--------------------------------------------|---|------------|

|                  |                                        |                                     |                                     |                                |                          |
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**Figure 10.** Front View of the Cisco UCS N10-E0060 Expansion Module



|   |                                          |   |            |
|---|------------------------------------------|---|------------|
| 1 | Six 1, 2, 4, 8, Gbps Fibre Channel ports | 2 | Module LED |
|---|------------------------------------------|---|------------|

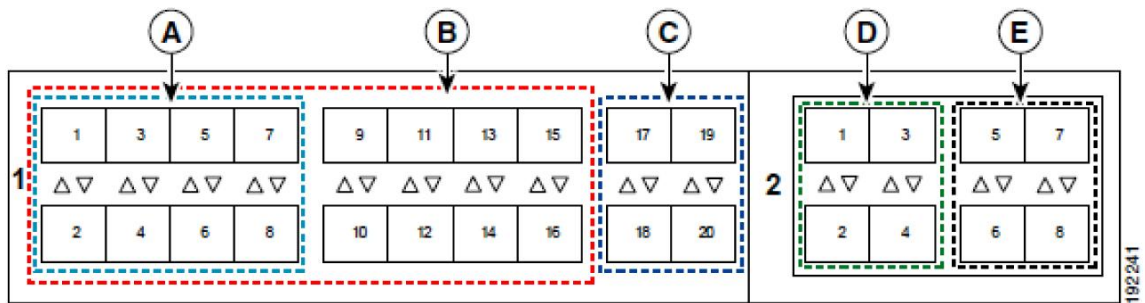
### UCS 6120XP with Expansion Modules Installed

There are 20 to 28 ports on the Cisco UCS 6120XP, depending on which expansion module is installed. The fixed ports form group 1 and are named 1/port\_number. Ports 1 through 16 are unencrypted Ethernet ports. Of these, ports 1 through 8 are 10 Gigabit Ethernet and 1 Gigabit Ethernet capable ports. Ports 17 through 20 are encryption-capable Ethernet ports. Group 2 includes the ports in the expansion module or modules. Group 2 ports 1 through 4 are encrypted Ethernet ports. Group 2 ports 5 through 8 are Fibre Channel ports.

|                                           |                                     |                                     |                                |                          |
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| <a href="#">Power Specs</a>               | <a href="#">Environmental Specs</a> | <a href="#">Transceiver Specs</a>   |                                |                          |

Figures 11, 12, and 13 provide examples to illustrate the port grouping.

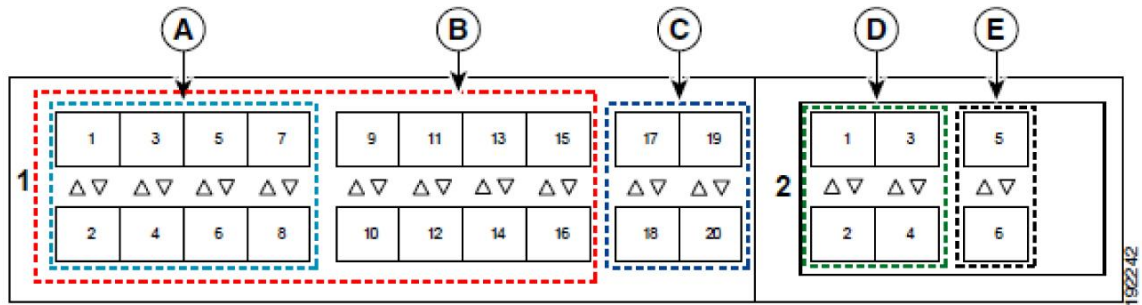
**Figure 11.** Cisco UCS 6120XP with the Cisco UCS N10-E0440 Expansion Module with Port Numbering



|          |                                                                                       |          |                                                     |
|----------|---------------------------------------------------------------------------------------|----------|-----------------------------------------------------|
| <b>A</b> | Group 1 ports 1 through 8: 10 Gigabit or 1 Gigabit Ethernet capable unencrypted ports | <b>D</b> | Group 2 ports 1 through 4: Encrypted Ethernet ports |
| <b>B</b> | Group 1 ports 1 through 16: Unencrypted Ethernet ports                                | <b>E</b> | Group 2 ports 5 through 8: Fibre Channel ports      |
| <b>C</b> | Group 1 ports 17 through 20: Encrypted                                                |          |                                                     |

|                  |                                        |                                     |                                     |                                |                          |
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|                  | <a href="#">Expansion Module Notes</a> | <a href="#">Accessory Kit Notes</a> | <a href="#">Console Cable Notes</a> | <a href="#">Physical Specs</a> |                          |
|                  | <a href="#">Power Specs</a>            | <a href="#">Environmental Specs</a> | <a href="#">Transceiver Specs</a>   |                                |                          |

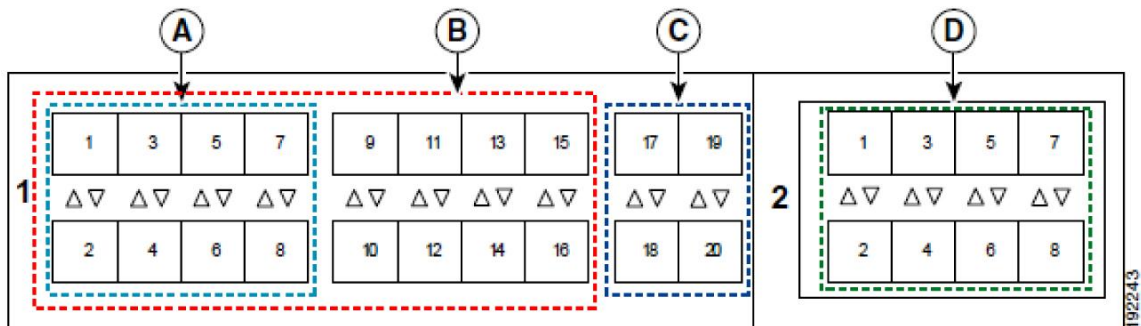
**Figure 12.** Cisco UCS 6120XP with the Cisco UCS N10-E0600 Expansion Module with Port Numbering



|          |                                                                                       |          |                                                     |
|----------|---------------------------------------------------------------------------------------|----------|-----------------------------------------------------|
| <b>A</b> | Group 1 ports 1 through 8: 10 Gigabit or 1 Gigabit Ethernet capable unencrypted ports | <b>D</b> | Group 2 ports 1 through 4: Encrypted Ethernet ports |
| <b>B</b> | Group 1 ports 1 through 16: Encrypted Ethernet ports                                  | <b>E</b> | Group 2 ports 5 and 6: Unencrypted Ethernet ports   |
| <b>C</b> | Group 1 ports 17 through 20: Encrypted Ethernet ports                                 |          |                                                     |

|                  |                                        |                                     |                                     |                                |                          |
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**Figure 13.** Cisco UCS 6120XP with the Cisco UCS N10-E0080 Expansion Module with Port Numbering



|          |                                                                          |          |                                                        |
|----------|--------------------------------------------------------------------------|----------|--------------------------------------------------------|
| <b>A</b> | Group 1 ports 1 through 8: 10 Gigabit Ethernet capable unencrypted ports | <b>B</b> | Group 1 ports 1 through 16: Unencrypted Ethernet ports |
| <b>C</b> | Group 1 ports 17 through 20: Encrypted Ethernet ports                    | <b>D</b> | Group 2 ports 1 through 8: Fibre Channel ports         |

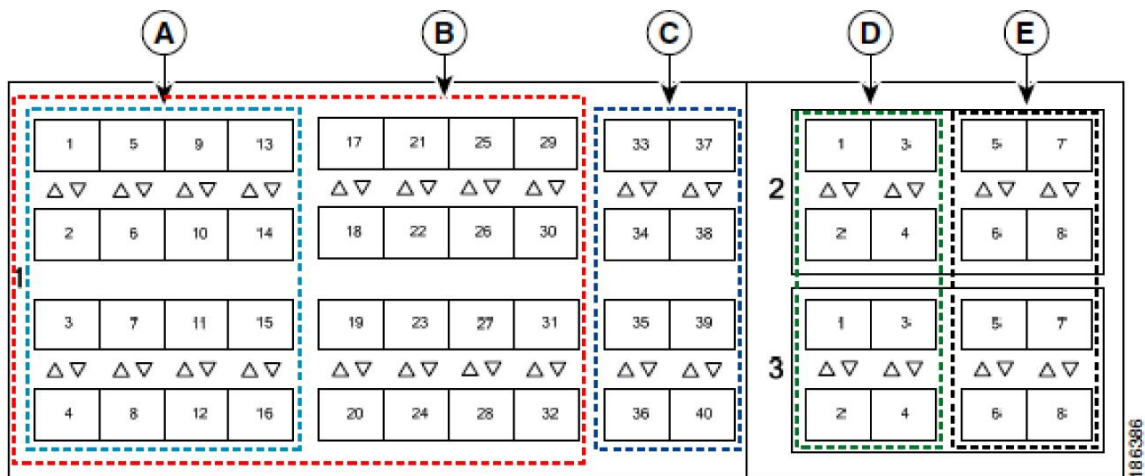
## UCS 6140XP with Expansion Modules Installed

There are 40 to 56 ports on the Cisco UCS 6140XP, depending on which expansion module is installed. The fixed ports form group 1 and are named 1/port\_number. Ports 1 through 32 are unencrypted Ethernet ports. Of these, ports 1 through 16 are 10 Gigabit Ethernet and 1 Gigabit Ethernet capable ports. Ports 33 through 40 are encryption-capable Ethernet ports. Group 2 includes the ports in the top-most expansion module. Group 2 ports 1 through 4 are encrypted Ethernet ports. Group 2 ports 5 through 8 are Fibre Channel ports. Group 3 includes the ports in the bottom-most expansion module. Group 3 ports 1 through 4 are encrypted Ethernet ports. Group 3 ports 5 through 8 are Fibre Channel ports.

|                                           |                                     |                                     |                                |                          |
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| <a href="#">Power Specs</a>               | <a href="#">Environmental Specs</a> | <a href="#">Transceiver Specs</a>   |                                |                          |

Figures 14 and 15 provide examples to illustrate the port grouping.

**Figure 14.** Cisco UCS 6140XP Fabric Interconnect with the Cisco UCS N10-E0080 Expansion Module with Port Numbering



|          |                                                                           |          |                                                            |
|----------|---------------------------------------------------------------------------|----------|------------------------------------------------------------|
| <b>A</b> | Group 1/ports 1 through 16: 10 Gigabit Ethernet capable unencrypted ports | <b>D</b> | Groups 2 and 3/ports 1 through 4: Encrypted Ethernet ports |
| <b>B</b> | Group 1/ports 1 through 32: Unencrypted Ethernet ports                    | <b>E</b> | Groups 2 and 3/ports 5 through 8: Fibre Channel ports      |
| <b>C</b> | Group 1/ports 33 through 40: Encrypted 10 Gigabit Ethernet ports          |          |                                                            |

|                  |                                        |                                     |                                     |                                |                          |
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|                  | <a href="#">Power Specs</a>            | <a href="#">Environmental Specs</a> | <a href="#">Transceiver Specs</a>   |                                |                          |

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|          |                                                                                  |          |                                                              |
|----------|----------------------------------------------------------------------------------|----------|--------------------------------------------------------------|
| <b>A</b> | Group 1/ports 1 through 16: 10 Gigabit Ethernet or 1-GbE capable Encrypted ports | <b>D</b> | Groups 2 and 3/ports 1 through 4: Encrypted Ethernet ports   |
| <b>B</b> | Group 1/ports 1 through 32: 10-Gb Unencrypted Ethernet ports                     | <b>E</b> | Groups 2 and 3/ports 5 through 6: Unencrypted Ethernet ports |
| <b>C</b> | Group 1/ports 33 through 40: Encrypted Ethernet ports                            |          |                                                              |

## Accessory Kit Notes

The Cisco UCS 6120XP 20-Port Fabric Interconnect accessory kit includes the following items:

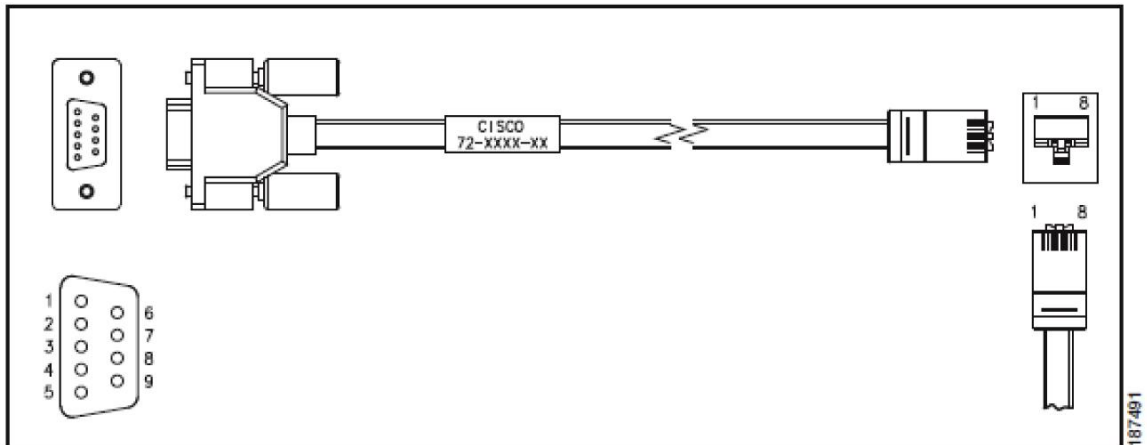
- 2 slider rails
- 2 rack-mount guides
- 2 rack-mount brackets
- 12 M4 x 0.7 x 8-mm Phillips countersunk screws
- 10 10-32 rack nuts
- 10 10-32 x 3/4-inch Phillips pan-head screws
- 1 console cable with an RJ-45-RS-232 adapter and a DB9 adapter
- 1 ground lug kit
- 1 ESD wrist strap

## Console Cable Notes

The console cable has an RJ-45 connector on one end and a DB9 connector on the other; this cable is used to connect into the RS-232 console.

|           |                                        |                                     |                                     |                                |                          |
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**Figure 16.** Console cable and connectors for the 6100 series fabric interconnects.



| Signal Name | P1, P1-45 Pins | P2, DB-9 Pins | Signal Name |
|-------------|----------------|---------------|-------------|
| RTS         | 1              | 8             | CTS         |
| DTR         | 2              | 6             | DSR         |
| TXD         | 3              | 2             | ZXD         |
| GND         | 4              | 5             | GND         |
| GND         | 5              | 5             | GND         |
| ZXD         | 6              | 3             | TXD         |
| DSR         | 7              | 4             | DTR         |
| CTS         | 8              | 7             | RTS         |

|                                           |                                     |                                     |                                |                          |
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## Console Port

The console port is an asynchronous RS-232 serial port with an RJ-45 connector. The pinouts for the console port on the Cisco UCS 6100 Series Fabric Interconnects are shown below.

| Pin | Signal |
|-----|--------|
| 1   | RTS    |
| 2   | DTR    |
| 3   | TxD    |
| 4   | GND    |
| 5   | GND    |
| 6   | RxD    |
| 7   | DSR    |
| 8   | CTS    |

|                                           |                                     |                                     |                                |                          |
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## Technical Specifications

### Physical Dimension Specifications

**Table 2.** Physical Dimension Specifications for the Cisco UCS 6120XP and 6140XP Fabric Interconnects

| Specification | UCS 6120XP              | UCS 6140XP         |
|---------------|-------------------------|--------------------|
| Height        | 1.72 in. (4.4 cm)       | 3.47 in. (8.8 cm)  |
| Width         | 17.3 in.(43.9 cm)       | 17.3 in. (43.9 cm) |
| Depth         | 30.0 in. (76.2 cm)      | 30.0 in. (76.2 cm) |
| Weight        | 35.00 lbs (15.875 kg) * | 50 lbs (22.680 kg) |

**\*Note:** The system weight listed here is an estimate for a fully configured system (two power supplies and one expansion module) and will vary depending on number of peripheral devices.

### Power Specifications

**Table 3.** Power Specifications for the Cisco UCS 6120XP Fabric Interconnect

| Description                           | Specification                            |
|---------------------------------------|------------------------------------------|
| AC-input voltage                      | 90 to 264 VAC                            |
| AC-input frequency                    | 50 to 60 Hz nominal (Range: 47 to 63 Hz) |
| AC-input current                      | 7.5 Amps @ 90 VAC                        |
| Maximum input VA                      | 675 VA @ 90 VAC                          |
| Maximum output power per power supply | 550W @ 12 V (up to two power supplies)   |
| Maximum inrush current                | 35 A <sub cycle duration                 |
| Maximum heat output                   | 1876 BTU/hr                              |
| Maximum hold up time                  | 12 ms                                    |
| Power supply output voltage           | 12 VDC                                   |
| Efficiency rating                     | 87%                                      |

|                                        |                                     |                                     |                                |                          |
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**Table 4.** Power Specifications for the Cisco UCS 6140XP Fabric Interconnect

| Description                           | Specification                            |
|---------------------------------------|------------------------------------------|
| AC-input voltage                      | 90 to 264 VAC                            |
| AC-input frequency                    | 50 to 60 Hz nominal (Range: 47 to 63 Hz) |
| AC-input current                      | 9.2 Amps @ 90 VAC                        |
| Maximum input VA                      | 828 VA @ 90 VAC                          |
| Maximum output power per power supply | 750W @ 12 VDC (up to two power supplies) |
| Maximum inrush current                | 35 A <sub cycle duration                 |
| Maximum heat output                   | 2561 BTU/hr                              |
| Maximum hold-up time                  | 12 ms                                    |
| Power supply output voltage           | 12 VDC                                   |
| Efficiency rating                     | 89% (Climate Savers Gold qualified)      |

**Note:** AC input connector is an IEC 320 C-14 15A/250VAC power inlet.

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

[http://www.cisco.com/assets/cdc\\_content\\_elements/flash/dataCenter/cisco\\_ucs\\_power\\_calculator/](http://www.cisco.com/assets/cdc_content_elements/flash/dataCenter/cisco_ucs_power_calculator/)

## Environmental Specifications

**Table 5.** Environmental Specifications for the Cisco UCS 6100 Series Fabric Interconnects

| Environment                  | Specification                  |
|------------------------------|--------------------------------|
| Temperature operating        | 0°C to 40°C (32°F to 104°F)    |
| Temperature nonoperating     | -40°C to 70°C (-40°F to 158°F) |
| Altitude operating           | 0 to 3,000 m (0 to 10,000 ft.) |
| Humidity (RH), noncondensing | 5 to 95%, non condensing       |

|                                           |                                     |                                     |                                |                          |
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## Transceiver Specifications

**Table 6.** Environmental Specifications and Power Requirement Specification for the 10 Gigabit Ethernet SFP and SFP+ Transceiver Module

| Parameter                          | Symbol | Minimum       | Maximum      |
|------------------------------------|--------|---------------|--------------|
| Storage temperature <sup>1</sup>   | TS     | -40°C (-40°F) | 85°C (185°F) |
| Case temperature <sup>1,2</sup>    | TC     | 0°C (32°F)    | 70°C (158°F) |
| Relative humidity <sup>1</sup>     | RH     | 5 %           | 95 %         |
| Module supply voltage <sup>1</sup> | VCCT,R | 3.1 V         | 3.5 V        |

<sup>1</sup> Absolute maximum ratings are those values beyond which damage to the device may occur if these limits are exceeded for other than a short period of time.

<sup>2</sup> Functional performance is not intended, device reliability is not implied, and damage to the device may occur over an extended period of time between absolute maximum ratings and the recommended operating conditions.

**Table 7.** General Specifications for the Cisco Fibre Channel SFP Transceivers

| Description                | Short Wavelength               |                                  |
|----------------------------|--------------------------------|----------------------------------|
| Connector type             | LC                             |                                  |
| Wavelength                 | 850 nm                         |                                  |
| Fibre type                 | MMF                            |                                  |
| Core size - Cable distance | 50 microns - 328.08 yd (300 m) | 62.5 microns - 164.04 yd (150 m) |
| Transmit power             | -9 to -2.5 dBm                 |                                  |

<sup>1</sup>..Approximate; actual distance may vary depending on fiber quality and other factors.

**Table 8.** General Specifications for the 10 Gigabit Ethernet SFP+ Transceivers Module

| Description                | Short Range        |                     |
|----------------------------|--------------------|---------------------|
| Connector type             | LC                 |                     |
| Wavelength                 | 850 nm             |                     |
| Core size - Cable distance | 50 microns - 300 m | 62.5 microns - 33 m |

|                                        |                                     |                                     |                                |                          |
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---

You will find specifications for these transceivers at:

[http://www.cisco.com/en/US/docs/interfaces\\_modules/transceiver\\_modules/installation/note/78\\_15160.html](http://www.cisco.com/en/US/docs/interfaces_modules/transceiver_modules/installation/note/78_15160.html).

## For More Information

Please visit <http://www.cisco.com/go/ucs>.



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