

Cisco UCS XE150c M8 Compute Node Overview

This chapter contains the following topics:

- Compute Node Overview, on page 1
- Compute Node Configurations, on page 2
- Compute Node Front Panel, on page 2
- Compute Node LEDs, on page 4
- Supported PCIe Cards, on page 5
- Supported GPUs, on page 5

Compute Node Overview

The Cisco UCS XE150c M8 Compute Node is a half-width, short-depth, 2-RU compute node for the Cisco UCS XE9305 Chassis. The chassis supports up to two compute nodes. The node supports Intel Granite Rapids-D HCC processor with 20-core or 32-core options, and provides expansion capacity for a high-power GPU.

The Cisco UCS XE150c M8 Compute Node has the following features

- Eight DDR5-6400 registered DIMM (RDIMM) slots support two, four, or eight DIMMs, with capacities of 16, 32, 48, 64, 96, or 128 GB per DIMM and up to 1,024 GB total.
- Two front-facing 10-Gbps RJ-45 ports provide host connectivity. Two 25-Gbps backplane links provide data-plane connectivity to the chassis management controllers; one link is active and one is standby.
- Front storage supports three or four hot-pluggable E3.S NVMe drives, depending on configuration. SKU 1 includes three drive bays and a PCIe card; SKU 2 includes four drive bays. Each drive supports up to 30 TB.
- Optional boot storage supports up to two M.2 SSDs using SATA or NVMe storage options. The specification lists 480-GB and 960-GB capacities and RAID 0 or RAID 1 support.
- A dedicated PCIe Gen5 x16 slot supports a GPU with a power envelope up to 450 W.
- The front panel provides a USB Type-C console, a UCS-X KVM connector, two host ports, status and locator indicators, a power button, and a reset button.
- The node includes a Trusted Platform Module (TPM) 2.0 for the host and a separate TPM 2.0 module for baseboard management controller (BMC) secure boot. Cisco Intersight provides system management.

Compute Node Configurations

The two configurations provide either an additional PCIe expansion option or a fourth E3.S drive bay. Both configurations retain the dedicated PCIe Gen5 x16 GPU slot.

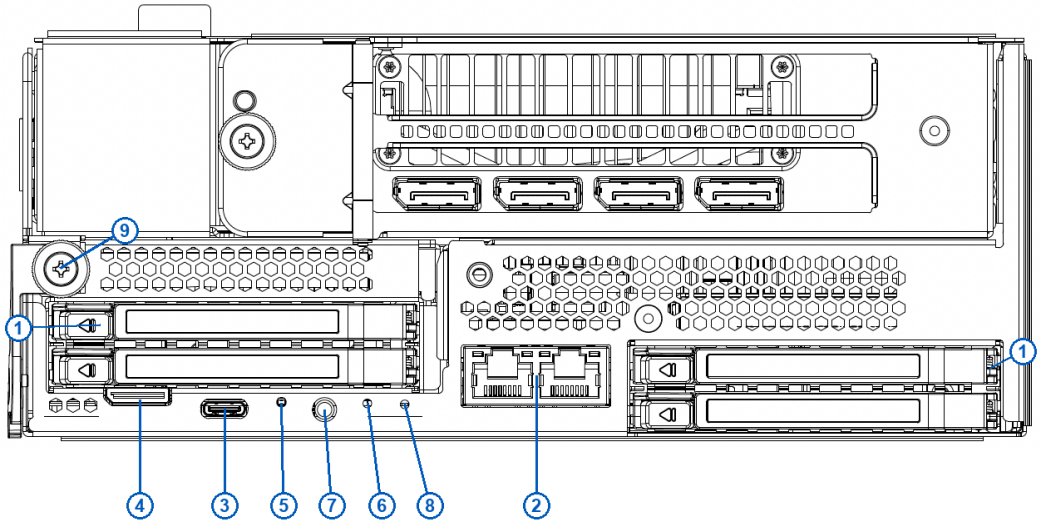
Table 1: Compute node configurations

Configuration	Front storage	Expansion
SKU1	Three E3.S drive bays	Left-side PCIe expansion option
SKU2	Four E3.S drive bays	Fourth drive bay occupies the left-side expansion position

Compute Node Front Panel

Four-Drive Compute Node

The four-drive configuration has the following features.



Three-Drive Compute Node

The three-drive configuration has the following features.

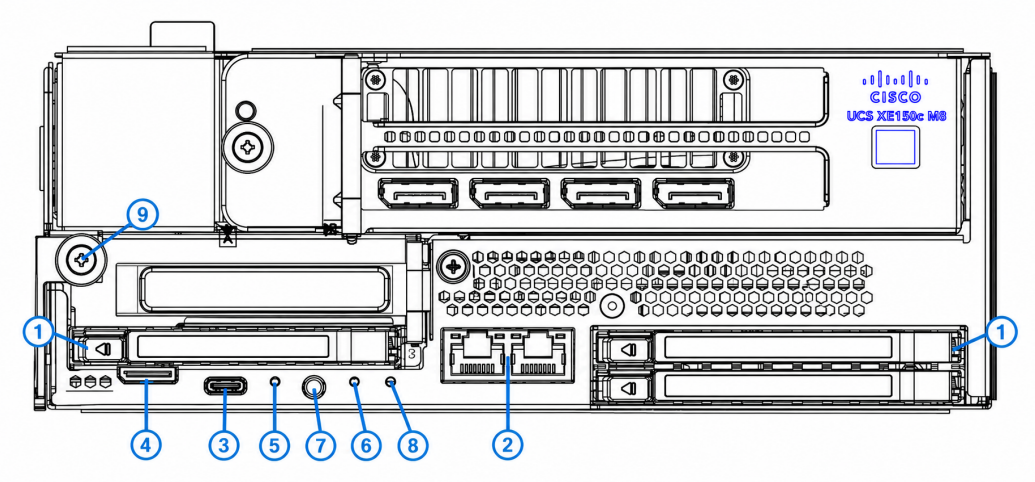


Table 2: Four and Three-Drive Compute Node features

1	**Four Drive Compute Node**: Four hot-pluggable E3.S drive (slots 1, 2, 3, and 4) **Three-Drive Compute Node**: Three hot-pluggable E3.S drive (slots 1, 2, and 3)	**2**	10GBASE-T host ports. Two RJ-45 ports provide 10-Gbps host connectivity.
3	USB Type-C console port. Provides the BIOS UART console connection.	**4**	UCS-X KVM connector. Supports local console access with the supported KVM cable or debug board.
5	Reset button. Recessed reset control on the front panel.	**6**	Status LED. Green and amber indicator reports node status.
7	Power button and power LED. The button supports ACPI-compliant power control; the LED indicates power state.	**8**	Locator LED. Blue indicator identifies a selected compute node.
9	Node ejector thumbscrew. Secures the compute node in the chassis.		

Compute Node LEDs

Each of the Cisco UCS XE150c M8 Compute Node features the following module indicator LEDs.

Table 3: Compute Node Status LEDs

LED	Color	Description
Locater LED	Blue, Steady	Compute sled is not being selected
	Blue, Blinking	Compute sled is being selected
	Off	Locater is not enabled
Status LED	Green, Steady	Normal operation condition
	Green, Blinking	System initialization or memory check
	Amber, Steady	Degrade operation • System is in a degraded operational state • Processor fault • Memory RAS failure • Drive failure
	Amber, Blinking	Critical Error • Boot failure • Fatal processor or bus error detected • Loss of both eCMC connection • Over temperature condition
	Off	Power Off
Power LED 	Green, Steady	Processor is in S0 state
	Amber, Steady	Processor is not in S0 state
	Off	Compute sled power is off

Supported PCIe Cards

The Cisco UCS XE150c M8 Compute Node offers customizable PCIe connectivity through a configurage PCIe riser cage that can accept up to one PCIe adapter card, a NIC or an HBA.

The optional PCIe card can be installed on the left side of the node, above slot 3 or in slots 3 and 4 depending on whether the PCIe cage is one slot or two. The following PCIe cages are supported to complete either a three drive or four drive configuration.

- Left E3.S 2-Drive Riser Assembly for UCS XE9305 Chassis, four drives (UCSXE-1U-E3S-2L).
- Left E3.S 2-Drive Riser Assembly for UCS XE9305 Chassis, three drives (UCSXE-1U-E3S-1L). With this configuration a separate riser (UCSXE-1U-PCI-L) is also required.

Each riser cage can accept one of the following third-party PCIe cards.

Table 4: PCIe Cards

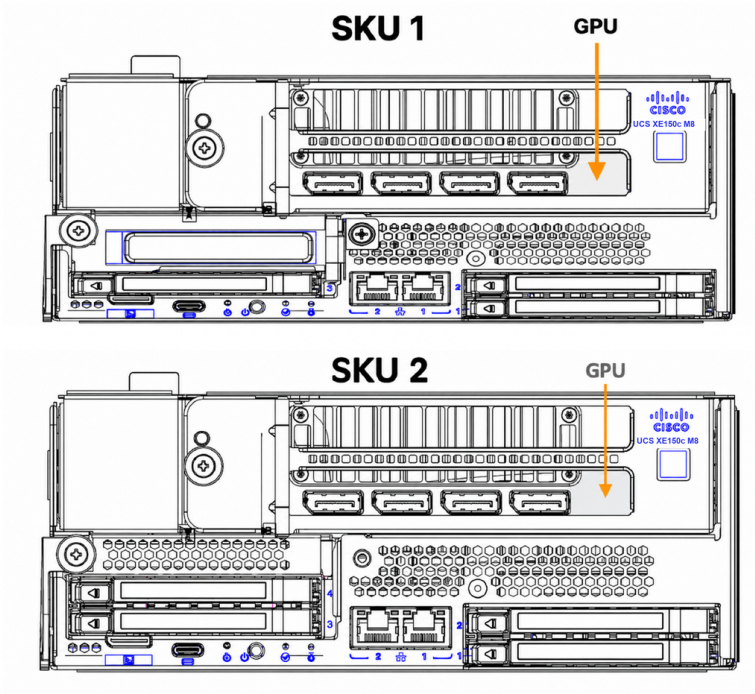
Card Type	Card	Cisco PID
NIC	Cisco(R) I710T4LG 4x1 GbE RJ45 PCIe NIC	UCSXE-P-IQ1GC
	Intel E835CQDA2 2x100 GbE QSFP28 PCIe NIC	UCSXE-P-I835D100GF
	Intel E835XXVDA4 4x25/10 GbE SFP PCIe NIC	UCSXE-P-I835Q25GF
	Intel E835XXVDA2 2x25/10 GbE SFP PCIe NIC	UCSXE-P-I835D25GF
	Cisco - Intel E810CQDA2 2x100 GbE QSFP28 PCIe NIC	UCSXE-P-I8D100GF
	Cisco - Intel E810XXVDA2 2x25/10 GbE SFP PCIe NIC	UCSXE-P-I8D25GF
	Cisco - Intel X710T2LG 2x10 GbE RJ45 PCIe NIC	UCSXE-P-ID10GC
	Cisco(R) X710T4LG 4x10 GbE RJ45 PCIe NIC	UCSXE-P-IQ10GC
HBA	Cisco-QLogic QLE2872 2x64GFC Gen 7 PCIe HBA	UCSXE-P-Q7D64GF

Supported GPUs

Through the use of optional PCI riser cages, each Cisco UCS XE150c M8 Compute Node can be customized to accept up to one GPU.

The riser cage and GPU can be installed on the right side of the node, above slots 1 and 2.

If you order a GPU with your initial shipment, the GPU will be pre-installed, but additional GPUs can be ordered and installed in the field, as your deployment scales out.



The following table shows the model and form factor of GPU supported by the compute node.

Table 5: Full-Height, Full Length (FHFL) Single-Slot and Double-Slot GPUs

GPUs	Cisco PID
NVIDIA RTX Pro 4500: 160W, 32GB, Gen5 1-slot FHFL GPU	UCSXE-GPU-RTXP4500
NVIDIA RTX Pro 6000: 600W, 96GB, 2-slot FHFL GPU	UCSXE-GPU-RTXP6000
NVIDIA L40S: 350W, 48GB, 2-slot FHFL GPU	UCSXE-GPU-L40S