

New hardware features

- New hardware in Cisco UCS X-Series M7 6.0(2.260180) and C-Series M7 6.0(2.260180) Server Firmware Release, on page 1
- New hardware in Cisco UCS B-Series M5 6.0(1.260031) Server Firmware Release — None, on page 2
- New hardware in Cisco UCS X-Series M8, M7 6.0(2.260143) and C-Series M8 6.0(2.260143) Server Firmware Release, on page 2
- New hardware in Cisco UCS X-Series M8, M7 6.0(2.260069) and C-Series M8 6.0(2.260069) Server Firmware Release, on page 3
- New hardware in Cisco UCS B-Series M5 6.0(1.260012) Server Firmware Release — None, on page 3
- New hardware in Cisco UCS X-Series M8, M7 Server Firmware Release, 6.0(2.260040), on page 3
- New hardware in Cisco UCS XE-Series M8 Server Firmware Release, 6.0(1.260001) — None, on page 5
- New hardware in Cisco UCS C-Series M8 6.0(1.250194) Server Firmware Release — None, on page 5
- New hardware in Cisco UCS X-Series M8 6.0(1.252114), M7, M6 6.0(1.250179), B-Series M6, M5 6.0(1.250169), and C-Series M8, M7, M6 6.0(1.250192) Server Firmware Release — None, on page 5
- New hardware in Cisco UCS XE-Series M8 Server Firmware Release, 6.0(1.251030), on page 5
- New hardware in Cisco UCS X-Series M8 Server Firmware Release, 6.0(1.252039), on page 8
- New hardware in Cisco UCS X-Series M8, M7, M6 6.0(1.250162), B-Series M6, M5 6.0(1.250157), and C-Series M8, M7, M6 6.0(1.250174) Server Firmware Release — None, on page 9
- New hardware in Cisco UCS X-Series M8, M7, M6 6.0(1.250122), B-Series M6, M5 6.0(1.250127), and C-Series M8, M7, M6 6.0(1.250131) Server Firmware Release — None, on page 9
- New hardware in Cisco UCS X-Series M8, M7, M6 6.0(1.250120) and C-Series M8, M7, M6 6.0(1.250127) Server Firmware Release, on page 9

New hardware in Cisco UCS X-Series M7 6.0(2.260180) and C-Series M7 6.0(2.260180) Server Firmware Release

- Added support for the following DDR5 Dual Inline Memory Modules (DIMMs), rated for a memory transfer speed of 6400 MT/s on Cisco UCS X215c M8 Compute Node and Cisco UCS C245 M8 and C225 M8 Rack servers:
    - UCS-MRX16G1RE5

- UCS-MRX32G1RE5
- UCS-MR128G2RG5

Note The listed DDR5-6400 DIMMs are supported with 4th Gen and 5th Gen AMD EPYC CPUs on Cisco UCS X215c M8 Compute Node and Cisco UCS C245 M8 and C225 M8 Rack servers.

- Added support for the following DDR5 Dual Inline Memory Modules (DIMMs), rated for a memory transfer speed of 6400 MT/s on Cisco UCS X210c M7 Compute Node and Cisco UCS C240 M7 and C220 M7 Rack servers:
  - UCS-MRX16G1RE5
  - UCS-MRX32G1RE5
  - UCS-MR128G2RG5

Note The listed DDR5-6400 DIMMs are supported with 5th Gen Intel® Xeon® Scalable Processors on Cisco UCS X210c M7 Compute Node and Cisco UCS C240 M7 and C220 M7 Rack servers.

New hardware in Cisco UCS B-Series M5 6.0(1.260031) Server Firmware Release — None

New hardware in Cisco UCS X-Series M8, M7 6.0(2.260143) and C-Series M8 6.0(2.260143) Server Firmware Release

- Support for UCSX-GPU-L40S Graphics Processing Unit (GPU) on Cisco UCS X210c M7 server when used with the X580p PCIe node.
- Support for NVIDIA RTX Pro 4500 GPU 160W 32GB Gen5 FHFL 1-slot (UCSX-GPU-RTXP4500) with Cisco UCS C245 M8 and C240 M8 servers.
- Support for NVIDIA RTX Pro 6000D GPU 600W, 84GB, 2-slot FHFL PCIe GPU (UCSC-GPU-RTX6000D) with Cisco UCS C240 M8 servers.
- Support for NVIDIA RTX Pro 4500 GPU (UCSX-GPU-RTXP4500) on Cisco UCS X580p PCIe node with Cisco UCS X210c M7, Cisco UCS X215c M8, and X210c M8 servers.
- Support for 15.3 TB Micron 7500 drive on Cisco UCS X410c M8 servers.

New hardware in Cisco UCS X-Series M8, M7 6.0(2.260069) and C-Series M8 6.0(2.260069) Server Firmware Release

- Support for NVIDIA OEM BlueField-3 B3220 DPU 2x200G QSFP112, Crypto Disabled (UCSC-P-N3220) on Cisco UCS C245 M8 and C240 M8 and C240 M7 servers.
- Support for NVIDIA BlueField-3 B3220L SuperNIC 2x200G QSFP112, PCIe Gen5.0 x16, Crypto Disabled (UCSC-P-N3220L) on Cisco UCS C225 M8, C245 M8, C220 M8, C240 M8 and C240 M7 servers.
- Support for NVIDIA Crypto B3220 Data Processing Unit (DPU) (UCSC-P-NC3220) on Cisco UCS C245 and C240 M8 servers.
- Support for 30 TB E3.S TLC Micron 9550 drive on Cisco UCS C240, C220, X215c, and X210c M8 servers.
- Support for E3.S FIPS (Kioxia CM-7) drives on Cisco UCS C240, C220, X215c, and X210c M8 servers.

New hardware in Cisco UCS B-Series M5 6.0(1.260012) Server Firmware Release — None

New hardware in Cisco UCS X-Series M8, M7 Server Firmware Release, 6.0(2.260040)

- **X-Series M8 6.0(2.260040) Server Firmware**

  Cisco UCS X410c M8 Compute Node

  A Cisco UCS X410c M8 compute node is a second-generation, four-socket compute node that is purpose-built for the Cisco UCS X-Series Modular System.

  The 7-rack-unit (7-RU) Cisco UCS X9508 server chassis supports up to four Cisco UCS X410c M8 compute nodes. This configuration provides the flexibility to adapt to diverse workloads.

  The Cisco UCS X410c M8 compute node provides these main features:

  - **CPU**: Four Intel Xeon 6 processors with up to 86 cores per processor.
  - **Memory**: Up to 16 TB of main memory using 64 256-GB DDR5-6400 DIMMs.
  - **Storage**: The node supports these storage configurations:
    - Up to nine hot-pluggable EDSFF E3.S NVMe drives with a passthrough front mezzanine controller.
    - Up to six hot-pluggable 2.5-inch Solid-State Drives (SSDs) or Non-Volatile Memory Express (NVMe) drives with enterprise-class RAID options.

- Up to two M.2 SATA or NVMe drives for boot and local storage.

- **mLOM virtual interface cards (VICs)**: The node supports these modular LAN on motherboard (mLOM) options:
  - Cisco UCS VIC 15420: Enables up to 50 Gbps (2 x 25 Gbps) of unified fabric connectivity to each intelligent fabric module (IFM).
  - Cisco UCS VIC 15230: Enables up to 100 Gbps of unified fabric connectivity to each IFM.
- **Optional mezzanine card**: The optional 5th-Gen Cisco UCS VIC 15422 occupies the mezzanine slot. A bridge card extends the network connections to provide a total bandwidth of 200 Gbps per server.
- **Security**: Support for an optional Trusted Platform Module (TPM), a secure boot FPGA, and ACT2 anti-counterfeit provisions.

For more information, see Cisco UCS X410c M8 Compute Node Data Sheet and Cisco UCS X410c M8 Compute Node Spec Sheet.

- **X-Series M7 6.0(2.260040) Server Firmware**

  Support for Cisco UCS X580p PCIe Node with Cisco UCS X210c M7 servers

  Added support for Cisco UCS X580p PCIe Node with Cisco UCS X210c M7 servers. The UCSX-GPU-H200-NVL and UCSX-GPU-RTXP6000 GPUs are supported on the Cisco UCS X210c M7 server when used with the X580p PCIe node.

Note

- The UCSX-GPU-L40S GPU is currently not supported on the Cisco UCS X210c M7 server when used with the X580p PCIe node.
- Support for the Cisco UCS X210c M7 server with the X580p PCIe node is available only when using 5th Generation Intel Xeon Scalable processors (Emerald Rapids).

New hardware in Cisco UCS XE-Series M8 Server Firmware Release, 6.0(1.260001) — None

New hardware in Cisco UCS C-Series M8 6.0(1.250194) Server Firmware Release — None

New hardware in Cisco UCS X-Series M8 6.0(1.252114), M7, M6 6.0(1.250179), B-Series M6, M5 6.0(1.250169), and C-Series M8, M7, M6 6.0(1.250192) Server Firmware Release — None

New hardware in Cisco UCS XE-Series M8 Server Firmware Release, 6.0(1.251030)

Cisco UCS XE130c M8 Compute Node

Cisco Unified Edge brings together computing, storage, routing, switching, and security into a single configurable solution to help IT organizations simplify the deployment, operations, and lifecycle management of edge infrastructure at global scale.

Cisco Unified Edge is a modular edge platform, with a 3RU, short-depth, multi-mountable chassis with features to operate in extended temperature range (5°C to 45°C), maintain a quiet acoustic profile (40s dBA at 25°C and 20% PWM), and offer protection against high particulate environments, allowing deployments in a wide range of physical spaces.

The Cisco UCS XE130c M8 is a family of 1RU, half-width compute nodes; up to five Cisco UCS XE130c M8 compute nodes can be housed inside a Cisco UCS XE9305 chassis. It delivers enterprise class performance, versatility and density but in a compact edge-optimized form factor.

Key Features and Benefits

- **Form factor and chassis:**
  - 1RU-high and half-width compute node
  - The Cisco UCS XE130c M8 compute node mounts in a Cisco UCS XE9305 chassis
- **CPU:** One Intel® Xeon® 6 System on a Chip (SoC) with Performance-cores (P-cores) Processor, with 12, 20, or 32 physical cores.
- **Memory:**
  - 8 total DDR5 DIMM Slots, at up to 6400 MT/s RDIMMs

  - Up to 768GB of main memory with eight 96 GB DDR5-6400 DIMMs

- **GPU:** One dedicated PCIe Gen5 GPU slot for a half-height, half-length GPU.
- **Networking:**
  - Two integrated 25 Gbps host ports connecting via chassis mid-plane to the embedded switches on both Cisco UCS XE chassis management controllers.
  - Two integrated 1/10 Gbps RJ45 host ports.
- **Storage:**

  There are two types of flash storage options simultaneously available in the Cisco UCS XE130c M8 compute node:
  - Internal M.2 SSDs: Up to two M.2 SSDs protected by hardware RAID 1
  - Front-Facing E3.S NVMe Drives
- **PCIe adapter:** One PCIe Gen5 slot for a half-height, half-length PCIe adapter requires IO-optimized configuration, which includes three front-panel hot-swappable E3.S NVMe drives, each supporting up to15 TB.
- **Front panel interfaces:**
  - One KVM connector
  - One USB-C console port for UART connection to the IMC
- **Power subsystem:** Power is supplied from the Cisco UCS XE9305 chassis power supplies. The Cisco UCS XE130c M8 Compute Node consumes a maximum of 425W.
- **Fans:** Integrated in the Cisco UCS XE9305 chassis.
- **Integrated management processor:**
  - The built-in Cisco Integrated Management Controller enables monitoring of Cisco UCS XE130c M8 Compute Node inventory, health, and system event logs.
  - ASPEED AST2600
- **Firmware standards:**
  - UEFI Spec 2.9
  - ACPI 6.5
  - SMBIOS Ver 3.7
- **Front indicators:**
  - Power button and indicator
  - System activity indicator
  - Location button and indicator

- **Security:** The server has an onboard Trusted Platform Module (TPM) connected to the server's Baseboard Management Controller (BMC), which acts as secure key storage and also assists in anti-counterfeit protection. Additionally, the server supports an optional TPM for the host system.

For more information, see Cisco UCS XE130c M8 Compute Node Data Sheet and Release Notes for Cisco Intersight Unified Edge eCMC Infrastructure Firmware Release, 6.0.

Debug Capability Test for Cisco UCS XE-Series M8 Server

Please choose the method that corresponds to your connection setup.

Method 1: Using a Direct USB-C Connection

You can plug a USB-C cable directly into the console port on the front of the server. The detailed steps provided under **Method 2** are specific to the debug breakout cable and do not apply to this direct connection method.

Method 2: Using the Debug Breakout Cable (UCSX-C-DEBUGCBL)

Follow these steps to use the serial port for Server Debug Capability testing when using the debug breakout cable UCSX-C-DEBUGCBL:

1. **Connect the Serial Cable:**
   a. Use a DB9 serial cable or a USB-to-Serial adapter as needed.
   b. Connect the cable from the server's serial port to your debug console or host syste.
2. **Configure BIOS/UEFI Settings:**
   a. Access the server BIOS/UEFI during boot.
   b. Enable the **Serial Console Redirection** option.
   c. Set the baud rate (typically 115200), data bits (8), parity (None), and stop bits (1).
3. **Launch Serial Terminal:**
   a. Use terminal emulation tools such as PuTTY, Tera Term, or minicom.
   b. Select the correct COM port corresponding to your serial connection.
   c. Match the baud rate and other serial settings configured in BIOS.
4. **Verify Output:**
   a. Reboot the server and observe the serial console for POST messages and system logs.
   b. Confirm you can interact with the system if needed (e.g., login prompt or shell access).
5. **Log and Capture:**
   a. Enable logging in your terminal tool to capture debug output for later analysis.
   b. Save logs with timestamps for traceability.
6. **Troubleshooting:**
   a. If no output appears, verify cable connections, BIOS settings, and COM port configuration.

b. Ensure no other service or application is occupying the serial port.

New hardware in Cisco UCS X-Series M8 Server Firmware Release, 6.0(1.252039)

This section provides a brief description of the new hardware features.

Cisco UCS X580p PCIe Node

The Cisco UCS X580p PCIe Node is the latest PCIe resource node for the UCS X-Series Modular System. It delivers high-performance GPU support for workloads such as generative and agentic AI fine-tuning, inference, and other applications that require GPU acceleration.

The Cisco UCS X580p PCIe Node supports up to four PCIe GPUs. It can be paired with the Cisco UCS X210c M8 server (with Intel® Xeon® processors) or the UCS X215c M8 server (with EPYC processors). The X580p uses Cisco UCS X-Fabric technology for GPU connectivity.

The X580p occupies two node slots in the X-Series chassis and allows assignment of up to four GPUs per node. Each 7RU Cisco UCS X9508 chassis supports up to two PCIe Nodes, with each node pairing with one or two servers.

For more information, see Cisco UCS X580p PCIe Node Installation and Service Guide and Cisco UCS X580p PCIe Node Spec Sheet.

Cisco UCS X9516 X-Fabric

The Cisco UCS X9516 X-Fabric is the second-generation X-Fabric module for the UCS X9508 chassis. It provides ultra-low-latency PCIe Gen5 switching and SmartNIC support, enabling flexible and composable IT resources. Managed via Cisco Intersight®, the UCS X9516 X-Fabric allows GPUs and NICs to be dynamically provisioned across servers using policy-based management.

Paired with the UCS X580p PCIe Node, the X9516 X-Fabric supports up to four dual-slot GPUs per node with NVLink Bridge support, serving as the control point for modular GPU composability in AI-driven environments.

For more information, see Cisco UCS X9516 X-Fabric Data Sheet.

Minimum Firmware Requirements to Support Cisco UCS X580p PCIe Node and Cisco UCS X9516 X-Fabric

- X580p PCIe Node Firmware: 6.0(1.252044)
- X9508 Chassis Firmware: 6.0(1.252044)
- Cisco UCS X-Series M8 Server Firmware: 6.0(1.252039)
- Fabric Interconnect Infrastructure Firmware: 6.0(1.250229)

Note The X580p PCIe Node firmware 6.0(1.252044) and X9508 Chassis firmware 6.0(1.252044) are available as separate bundles.

New hardware in Cisco UCS X-Series M8, M7, M6 6.0(1.250162), B-Series M6, M5 6.0(1.250157), and C-Series M8, M7, M6 6.0(1.250174) Server Firmware Release — None

New hardware in Cisco UCS X-Series M8, M7, M6 6.0(1.250122), B-Series M6, M5 6.0(1.250127), and C-Series M8, M7, M6 6.0(1.250131) Server Firmware Release — None

New hardware in Cisco UCS X-Series M8, M7, M6 6.0(1.250120) and C-Series M8, M7, M6 6.0(1.250127) Server Firmware Release

- Support for 30TB 2.5 inch QLC drive on Cisco UCS C225 M8 servers.
- Support for next generation large form factor (3.5-inch) hard disk drives on Cisco UCS C-Series M8 and C240L M6 servers.
- Dual support for the Cisco Tri-Mode M1 24G RAID (UCSC-RAID-M1L16) controllers on Cisco UCS C240 M8 Servers, enabling independent configuration and management of two controllers within the same server environment.
- Starting with the Infra Firmware release 6.0(1), Cisco UCS X-Series and C-Series servers support Cisco UCS 6664 Fabric Interconnects.

  For more information, see Release Notes for Cisco Intersight Managed Mode Infrastructure Firmware, Release 6.0.