



Overview

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Overview

Cisco Application Services Engine provides a common platform for deploying Cisco Data Center applications. These applications provide real time analytics, visibility and assurance for policy and infrastructure.

The Cisco Application Services Engine server is required for installing and hosting the Cisco Application Services Engine application.

The server is orderable in the following version:

- SE-CL-L3 — Small form-factor (SFF) drives, with 10-drive backplane. Supports up to 10 2.5-inch SAS/SATA drives. Drive bays 1 and 2 support NVMe SSDs.

External Features

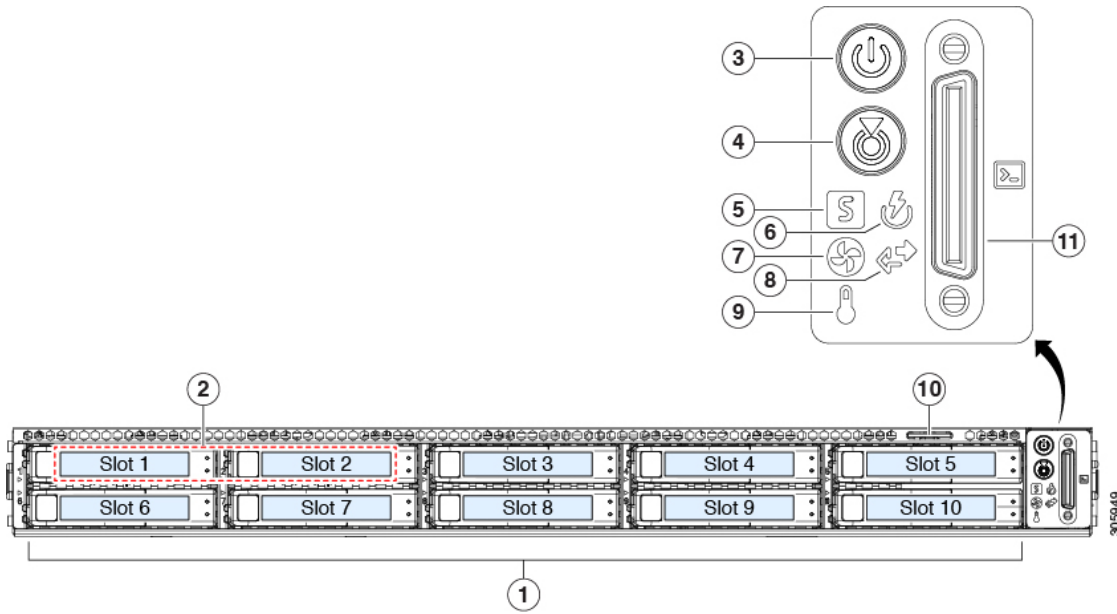
This topic shows the external features of the server versions.

Cisco SE-CL-L3 (SFF Drives) Front Panel Features

The following figure shows the front panel features of the small form-factor drive versions of the server.

For definitions of LED states, see [Front-Panel LEDs](#).

Figure 1: Cisco SE-CL-L3 (SFF Drives) Front Panel



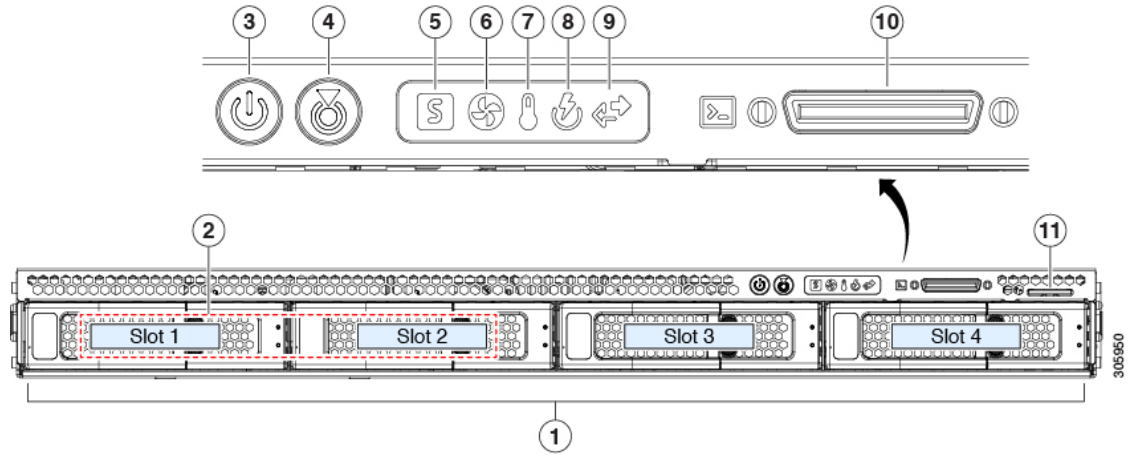
1	Drive bays 1 – 10 support SAS/SATA hard disk drives (HDDs) and solid state drives (SSDs)	7	Fan status LED
2	<ul style="list-style-type: none"> SE-CL-L3 : Drive bays 1 and 2 support NVMe PCIe SSDs. 	8	Network link activity LED
3	Power button/power status LED	9	Temperature status LED
4	Unit identification button/LED	10	Pull-out asset tag
5	System status LED	11	KVM connector (used with KVM cable that provides one DB-15 VGA, one DB-9 serial, and two USB connectors)
6	Power supply status LED	-	

SE-CL-L3 (LFF Drives) Front Panel Features

The following figure shows the front panel features of the large form-factor drive version of the server.

For definitions of LED states, see [Front-Panel LEDs](#).

Figure 2: SE-CL-L3 (LFF Drives) Front Panel



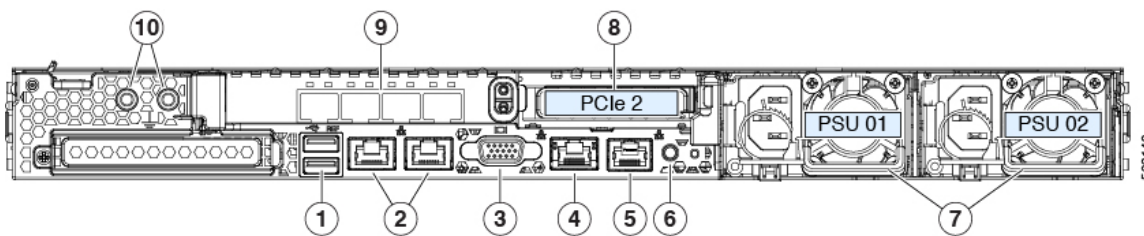
1	Drive bays 1 – 4 support SAS/SATA HDDs and SSDs	7	Temperature status LED
2	Drive bays 1 and 2 support NVMe PCIe SSDs. A size-converter drive sled is required if 2.5-inch SSDs are used.	8	Power supply status LED
3	Power button/power status LED	9	Network link activity LED
4	Unit identification button/LED	10	KVM connector (used with KVM cable that provides one DB-15 VGA, one DB-9 serial, and two USB connectors)
5	System health LED	11	Pull-out asset tag
6	Fan status LED	-	

SE-CL-L3 Rear Panel Features

The rear panel features are the same for all versions of the server.

For definitions of LED states, see [Rear-Panel LEDs](#).

Figure 3: SE-CL-L3 Rear Panel



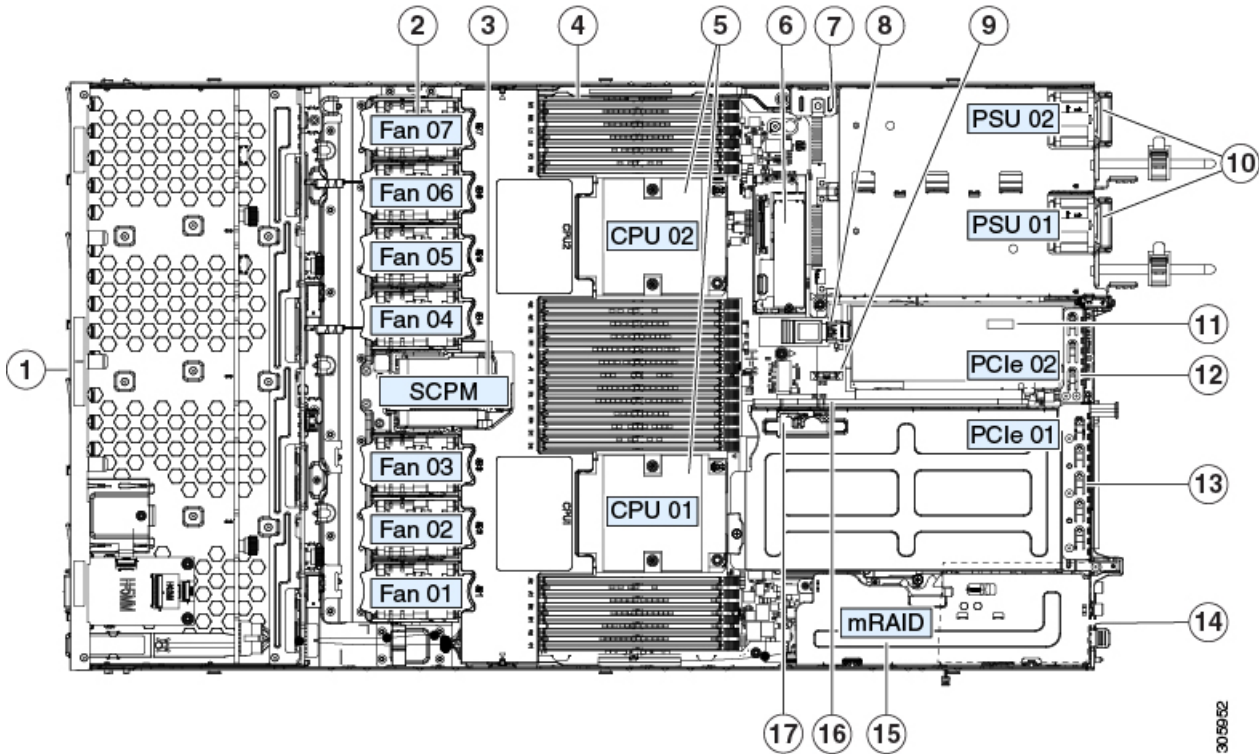
1	USB 3.0 ports (two)	6	Rear unit identification button/LED
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2	Dual 1-Gb/10-Gb Ethernet ports (LAN1 and LAN2) The dual LAN ports can support 1 Gbps and 10 Gbps, depending on the link partner capability. These correspond to <code>eth1-1</code> (<code>eth0</code>) and <code>eth1-2</code> (<code>eth1</code>) respectively.	7	Power supplies (two, redundant as 1+1)
3	VGA video port (DB-15 connector)	8	PCIe riser 1/slot 1 (x16 lane) Includes PCIe cable connectors for front-loading NVMe SSDs (x8 lane)
4	1-Gb Ethernet dedicated management port	9	Quad 10-Gb/25-Gb ports. These correspond to <code>eth 2-1</code> to <code>eth 2-4</code> . Only 2 interfaces out of the 4 are active at a time (<code>eth2-1/2-2</code> or <code>eth2-3/2-4</code>) in active/standby mode.
5	Serial port (RJ-45 connector)	10	Threaded holes for dual-hole grounding lug

Serviceable Component Locations

This topic shows the locations of the field-replaceable components and service-related items. The view in the following figure shows the server with the top cover removed.

Figure 4: SE-CL-L3, Serviceable Component Locations



<p>1</p>	<p>Front-loading drive bays 1–10 support SAS/SATA drives.</p> <ul style="list-style-type: none"> • SE-CL-L3 : Drive bays 1 and 2 support NVMe PCIe SSDs. 	<p>10</p>	<p>Power supplies (hot-swappable when redundant as 1+1)</p>
<p>2</p>	<p>Cooling fan modules (seven, hot-swappable)</p>	<p>11</p>	<p>Trusted platform module (TPM) socket on motherboard (not visible in this view)</p>
<p>3</p>	<p>Supercap unit mounting bracket (RAID backup)</p>	<p>12</p>	<p>PCIe riser 2/slot 2 (half-height, x16 lane) Includes PCIe cable connectors for front-loading NVMe SSDs (x8 lane)</p>
<p>4</p>	<p>DIMM sockets on motherboard (12 per CPU)</p>	<p>13</p>	<p>PCIe riser 1/slot 1 (full-height, x16 lane) Includes socket for Micro-SD card</p>
<p>5</p>	<p>CPUs and heatsinks (up to two)</p>	<p>14</p>	<p>Modular LOM (mLOM) card bay on chassis floor (x16 PCIe lane), not visible in this view</p>

6	Mini-storage module socket. Options: <ul style="list-style-type: none"> • SD card module with two SD card slots • M.2 module with slots for either two SATA M.2 drives or two NVMe M.2 drives • Cisco Boot-Optimized M.2 RAID Controller (module with two slots for SATA M.2 drives, plus an integrated SATA RAID controller that can control the two M.2 drives in a RAID 1 array) 	15	Modular RAID (mRAID) riser, can optionally be a riser that supports either: <ul style="list-style-type: none"> • Hardware RAID controller card • Interposer card for embedded SATA RAID
7	Chassis intrusion switch (optional)	16	PCIe cable connectors for front-loading NVMe SSDs on PCIe riser 2
8	Internal USB 3.0 port on motherboard	17	Micro-SD card socket on PCIe riser 1
9	RTC battery, vertical socket	-	

Summary of Server Features

The following table lists a summary of server features.

Feature	Description
Chassis	One rack-unit (1RU) chassis
Central Processor	Up to two CPUs from the Intel Xeon Processor Scalable Family. This includes CPUs from the following series: <ul style="list-style-type: none"> • Intel Xeon Silver 4XXX Processors
Memory	24 DDR4 DIMM sockets on the motherboard (12 each CPU)
Multi-bit error protection	Multi-bit error protection is supported
Baseboard management	BMC, running Cisco Integrated Management Controller (Cisco IMC) firmware. Depending on your Cisco IMC settings, Cisco IMC can be accessed through the 1-Gb dedicated management port, the 1-Gb/10-Gb Ethernet LAN ports, or a Cisco virtual interface card.

Feature	Description
Network and management I/O	<p>Rear panel:</p> <ul style="list-style-type: none"> • One 1-Gb Ethernet dedicated management port (RJ-45 connector) • Two 1-Gb/10-Gb BASE-T Ethernet LAN ports (RJ-45 connectors) <p>The dual LAN ports can support 1 Gbps and 10 Gbps, depending on the link partner capability.</p> <ul style="list-style-type: none"> • One RS-232 serial port (RJ-45 connector) • One VGA video connector port (DB-15 connector) • Two USB 3.0 ports <p>Front panel:</p> <ul style="list-style-type: none"> • One front-panel keyboard/video/mouse (KVM) connector that is used with the KVM cable, which provides two USB 2.0, one VGA, and one DB-9 serial connector.
Modular LOM	One dedicated socket (x16 PCIe lane) that can be used to add an mLOM card for additional rear-panel connectivity.
Power	<p>One power supply:</p> <ul style="list-style-type: none"> • AC power supplies 1050 W AC each
ACPI	The advanced configuration and power interface (ACPI) 4.0 standard is supported.
Cooling	Seven hot-swappable fan modules for front-to-rear cooling.
PCIe I/O	Two horizontal PCIe expansion slots on a PCIe riser assembly. See PCIe Slot Specifications for specifications of the slots.
InfiniBand	The PCIe bus slots in this server support the InfiniBand architecture.
Storage, front-panel	<p>The server is orderable in three different versions, each with a different front panel/drive-backplane configuration.</p> <ul style="list-style-type: none"> • SE-CL-L3 , Small form-factor (SFF) drives, with 10-drive backplane. Supports up to 10 2.5-inch SAS/SATA drives. Drive bays 1 and 2 support NVMe SSDs.

Feature	Description
Storage, internal	<p>The server has these internal storage options:</p> <ul style="list-style-type: none"> • One USB port on the motherboard. • One micro-SD card socket on PCIe riser 1. • Mini-storage module socket, optionally with either: <ul style="list-style-type: none"> • SD card module. Supports up to two SD cards. • M.2 SSD module. Supports either two SATA M.2 SSDs or two NVMe M.2 SSDs. • Cisco Boot-Optimized M.2 RAID Controller (module with two slots for SATA M.2 drives, plus an integrated SATA RAID controller that can control the two SATA M.2 drives in a RAID 1 array)
Storage management	<p>The server has a dedicated internal mRAID riser that supports one of the following storage-controller options:</p> <ul style="list-style-type: none"> • A PCIe-style Cisco modular RAID controller card (SAS/SATA). • A PCIe-style interposer card for the server's embedded SATA RAID controller. <p>For a detailed list of storage controller options, see Supported Storage Controllers and Cables.</p>
RAID backup	<p>The server has a mounting bracket near the cooling fans for the supercap unit that is used with the Cisco modular RAID controller card.</p>
Integrated video	<p>Integrated VGA video.</p>