Spec Sheet

Cisco UCS C845A M8 AI Server

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https://www.cisco.com/c/en/us/products/servers-unified-computing/ucs-c-series-rack-servers/datasheet-listing.html

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OVERVIEW

The Cisco UCS C845A M8 Rack Server is a highly scalable, flexible, and customizable AI system based on the NVIDIA MGX reference design for accelerated computing. With support for two to eight AMD or NVIDIA PCIe GPUs and NVIDIA AI Enterprise software (for NVIDIA GPUs), it delivers high performance for a wide range of AI workloads – including Generative AI fine-tuning and inference.

Built on the NVIDIA MGX modular reference design, the Cisco UCS C845A M8 Rack Server is a flexible, scalable, and customizable AI system capable of growing as your AI needs grow. Configure with 2, 4, 6, or 8 PCIe GPUs to address a multitude of workloads ranging from generative AI, graphics and rendering, to virtual desktop infrastructure.

UCS C845A M8 servers can be configured with two to eight NVIDIA GPUs. Depending on the configuration, customers can choose between the PCIe-based GPUs (check *Table 4* for available GPU Cards). Thanks to the sophistication of the MGX design, other next-generation NVIDIA and AMD GPUs are planned to be introduced on this same platform as these GPUs become available.

With a compute node powered by AMD's new high-end Turin (5th Gen) CPUs, designed specifically for AI workloads, the UCS C845A M8 provides a no-compromise solution for CPU or GPU performance required to avoid bottlenecks within an AI server. Another benefit is the ability to configure the server with the NVIDIA ConnectX-7 NIC and/or NVIDIA BlueField-3 DPUs to handle data traffic in and out of the server.

Systems equipped with NVIDIA GPUs come with a five-year license for NVIDIA AI Enterprise, a cloud-native software platform that streamlines development and deployment of production-grade AI solutions, including AI agents, generative AI, computer vision, speech AI, and more. Easy-to-use microservices optimize model performance with enterprise-grade security, support, and stability, ensuring a smooth transition from prototype to production for enterprises that run their businesses on AI.

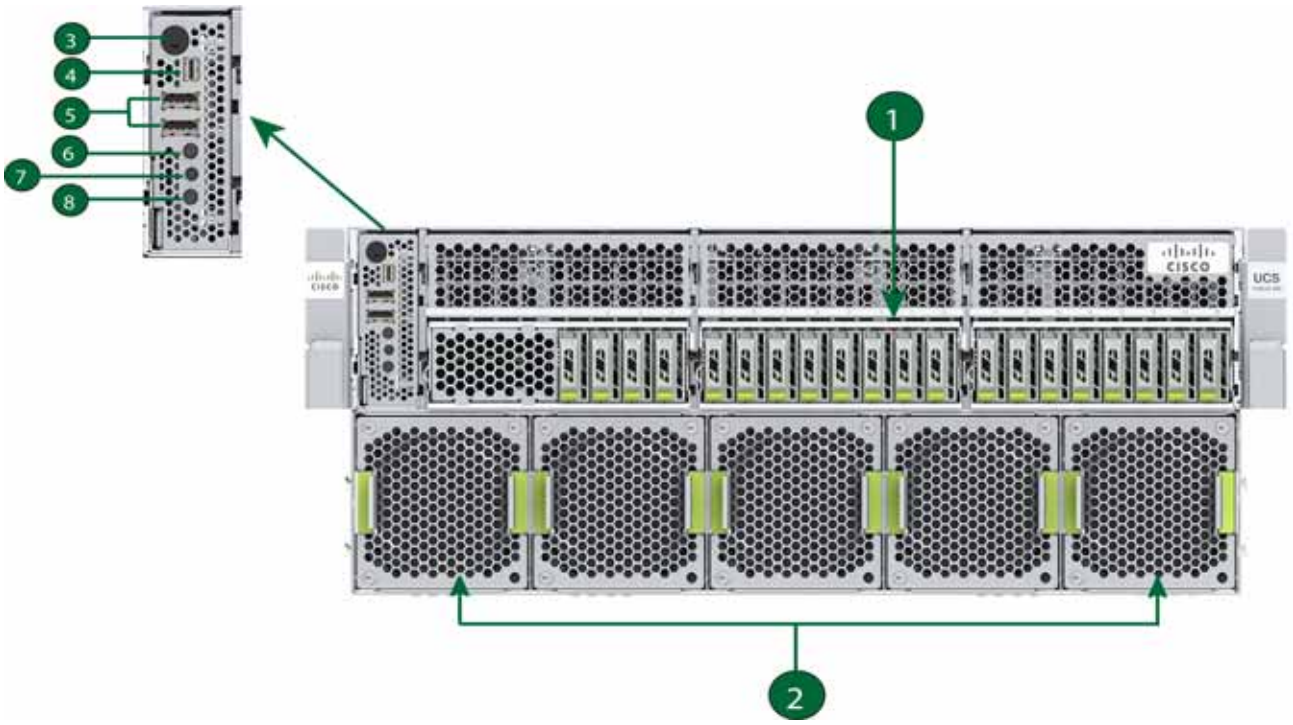
Using Cisco Intersight®, customers can see, control, and automate their compute, storage, and networking infrastructure, wherever it is, from one place just as they can do today with their other Cisco UCS® blade or rack servers.

Figure 1 Front view of the UCS C845A M8 AI Server

DETAILED VIEWS

Detailed Chassis Front View

Figure 2 Detailed Chassis Front View



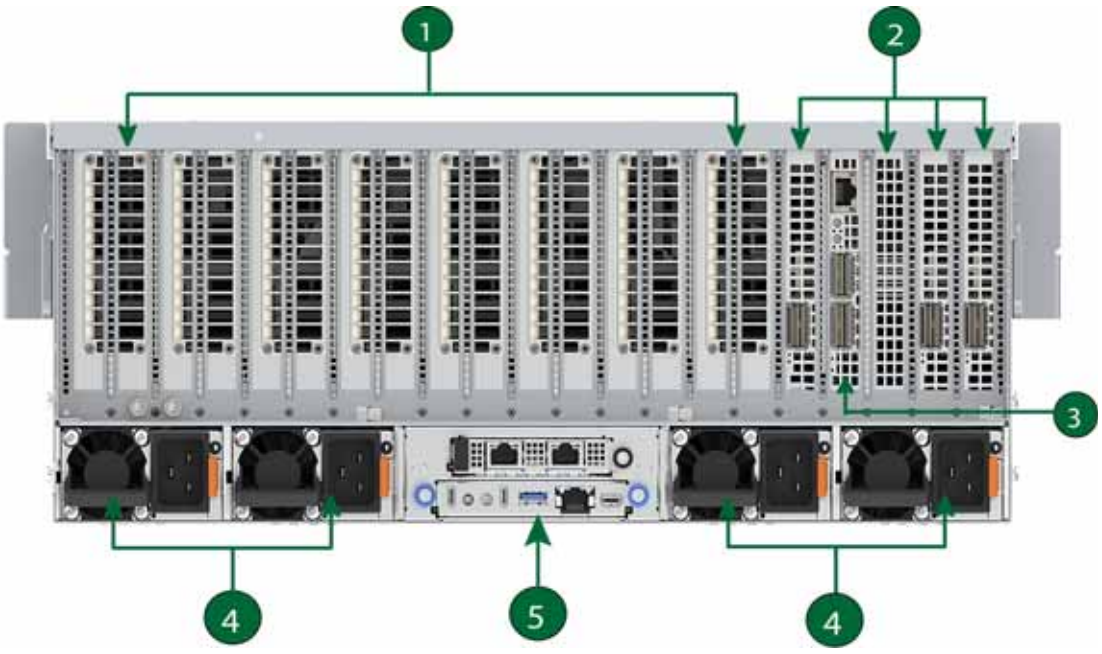
1	Twenty hot-pluggable E1.S drives	**5**	Two USB 3.0 ports
2	Hot-pluggable Fans	**6**	Power button with power/Fault LED
3	Thermal sensor	**7**	Power reset button
4	Mini display port[1]	**8**	ID button with LED

Notes:

1. We recommend connecting AST DP with native DP monitor for optimum performance. If an external adapter is needed (ex. DP to VGA, DP to HDMI, or DP to DVI) please use active type adapter only. This module does not support DP++ type adapter.

Detailed Chassis Rear Views

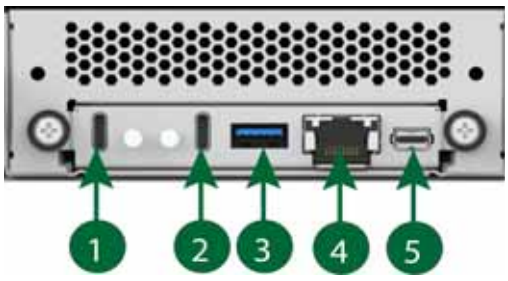
Figure 3 Chassis Rear View



1	Eight PCIe GPU Double Wide Slots	**4**	Power supplies (Four, redundant as N +1)
2	CX7/ BF3 Single Wide E-W Traffic (4x)	**5**	DC-SCM (BMC) (Refer to *Figure 4* for complete details)
3	CX7/BF3 Dual port N-S Traffic	**-**	-

DC-SCM Module

Figure 4 DC-SCM Module



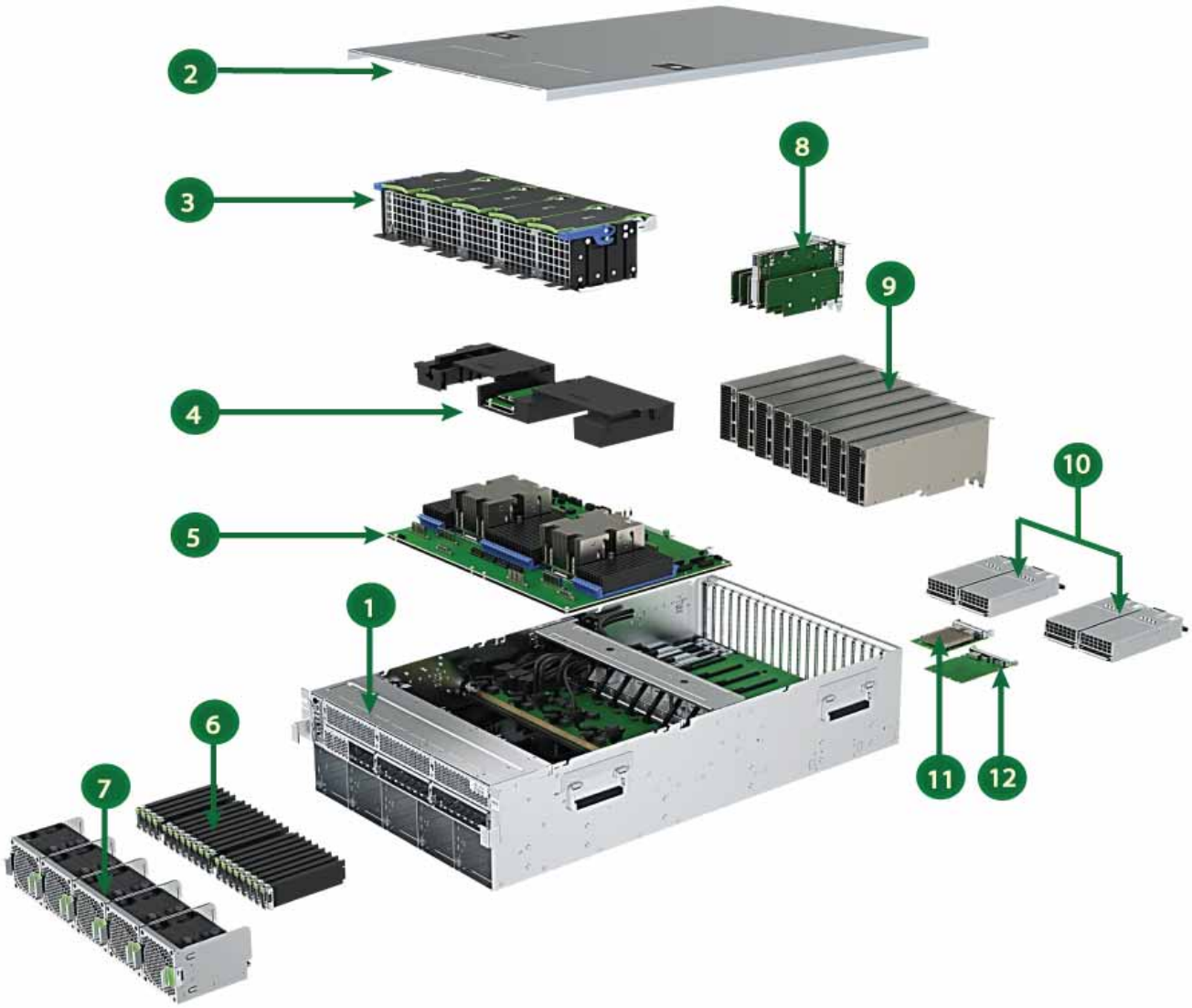
1	USB type C debug port	4	RJ45 for management ethernet port
2	USB 3.2 Gen1x1 type C port	5	Mini display port[1]
3	USB 3.2 Gen1x1 type A port	-	-

Notes:

1. We recommend connecting AST DP with native DP monitor for optimum performance. If an external adapter is needed (ex. DP to VGA, DP to HDMI, or DP to DVI) please use active type adapter only. This module does not support DP++ type adapter

Server Components

Figure 5 Server components



1	Four rack unit (4RU) chassis	7	Five lower cooling and hot-swappable fans
2	Top cover	8	PCIe E-W and N-S Option

3	Five upper cooling and hot-swappable Fans	9	GPU cards backplane or module
4	M.2 Drive Module	10	Four 3.2kW AC titanium power supplies
5	Host processor module	11	OCP 3.0 NIC (RJ45) Intel X710-DA2 (2x10GbE)
6	Twenty E1.S NVMe drives	12	DC-Secure control module (BMC)

BASE SERVER STANDARD CAPABILITIES and FEATURES

Table 1 lists the capabilities and features of the base server. Details about how to configure the server for a particular feature or capability (for example, number of processors, GPUs, drives, or amount of memory) are provided in *CONFIGURING the SERVER, page 9*.

Table 1 Capabilities and Features

Capability/Feature	Description
Chassis	■ Four rack unit (4RU) chassis
CPU	■ Two 5th Gen AMD EPYC Processors ■ Each CPU has 8 channels with up to two DIMMs per channel, for up to Sixteen DIMMs per CPU
Memory	■ 32 total DDR5-6400 MT/s DIMM slots with 5th Gen AMD EPYC Processors (16 per CPU) ■ Up to sixteen RDIMM 5200 MT/s
GPUs	■ Up to eight NVIDIA or AMD PCIe GPUs
Storage	■ Up to twenty E1.S NVMe SSDs
Boot Storage	■ Up to two M.2 SATA SSDs (hardware RAID option available)
PCIe Slots	■ One PCIe Gen5x16 FHHL for north-south traffic – NVIDIA ConnectX-7 (2x200G), NVIDIA OEM CX713104AS-ADAT (4x25GbE), NVIDIA BlueField-3 B3220 DPU ■ Four PCIe Gen5x16 FHHL for east-west traffic – NVIDIA ConnectX-7 (1x400G), or NVIDIA OEM CX713104AS-ADAT (4x25GbE), or NVIDIA BlueField-3 3140H SuperNIC ■ Four PCIe Gen5x16 FHHL for east-west traffic – AMD Pollara 400G, NVIDIA ConnectX-7 (1x400G), or NVIDIA OEM CX713104AS-ADAT (4x25GbE), or NVIDIA BlueField-3 3140H SuperNIC + Crypto Options ■ One PCIe Gen5x16 FHHL for north-south traffic – AMD Pollara 400G, or NVIDIA ConnectX-7 (2x200G), NVIDIA OEM CX713104AS-ADAT (4x25GbE), NVIDIA BlueField-3 B3220 DPU + crypto options
OCP 3.0 Slots	■ Intel® X710-DA2 (dual-port 10GBaseT) for x86 management
Power subsystem	■ Four 3200W (AC) hot-swappable power supplies, support N+1 redundancy.
Fans	■ Ten hot-swappable fans for front-to-rear cooling
Front IO	■ Two USB 3.0, One ID Button, One Power Button, One Reset Button, One mini display port
Rear IO	■ One USB 3.0 A, One USB 3.0 C, One mDP, One ID Button, One Power Button, One USB 2.0 C (for debugging), One RJ45 (Mgmt.)
Intersight	■ Provides server management capabilities

CONFIGURING the SERVER

Follow these steps to configure the UCS C845A M8 AI Server:

- *STEP 1 VERIFY SERVER SKU, page 10*
- *STEP 2 SELECT GPU CARDS (REQUIRED), page 11*
- *STEP 3 SELECT NETWORKING CARDS, page 15*
- *STEP 4 SELECT CPU(s) (REQUIRED), page 17*
- *STEP 5 SELECT MEMORY (REQUIRED), page 18*
- *STEP 6 SELECT DRIVES (OPTIONAL), page 20*
- *STEP 7 SELECT POWER SUPPLY (REQUIRED), page 21*
- *STEP 8 SELECT INPUT POWER CORD(s) (REQUIRED), page 22*
- *STEP 9 SELECT M.2 SATA SSDs (OPTIONAL), page 23*
- *STEP 10 SELECT REVERSIBLE CABLE MANAGEMENT ARM (OPTIONAL), page 24*
- *STEP 11 SELECT OPTICS OPTIONS (REQUIRED), page 25*
- *STEP 12 SELECT NVIDIA AIE ESSENTIAL LICENSE (REQUIRED), page 26*
- *STEP 13 SELECT CISCO INTERSIGHT (REQUIRED), page 28*

STEP 1 VERIFY SERVER SKU

Top level ordering product ID (PID) is shown in *Table 2*

Table 2 Top level ordering PID (major line bundle)

Product ID (PID)	Description
UCS-MGPUM8-MLB	M8 AI Server MLB

Select Base Server

Select server product ID (PID) from *Table 3*.

CAUTION: These products may not be purchased outside of the approved bundles. (must be ordered under the MLB)

Table 3 Base PID of the C845A M8 AI Server

Product ID (PID)	Description
CAI-845A-M8[1]	UCS C845A M8 base server with no CPU, memory, drives, or power supply.

Notes:

1. This product may not be purchased outside of the approved bundles (must be ordered under the MLB)

The Cisco UCS C845A M8 AI Server:

- Includes a 20-drive backplane
- Includes rail kit
- Does not include GPUs, CPUs, PCIe Cards, memory DIMMs, drives, power supplies.

NOTE: Use the steps on the following pages to configure the server with the components that you want to include.

STEP 2 SELECT GPU CARDS (REQUIRED)

Select GPU Options

The available GPU PCIe options are listed in *Table 4*

NOTE:

- All GPU cards must be procured from Cisco as there is a unique SBIOS ID required by CIMC and UCSM.
- GPUs cannot be mixed.
- Cisco recommends starting with slot 8 for the initial GPU, and placing any additional GPU pairs in adjacent slots. Refer to *Table 6* for the population rules.

Table 4 Available PCIe GPU Cards

Product ID (PID)	PID Description	Configuration	Card Size	Slots
CAI-GPU-H200-NVL	NVIDIA OEM H200-NVL GPU 600W, 141GB, 2-slot FHFL;	2, 4, 6 or 8	FHFL, double-wide	All Slots (1-8)
CAI-GPU-L40S[1]	NVIDIA L40S: 350W, 48GB, 2-slot FHFL GPU	2, 4, 6 or 8	FHFL, double-wide	All Slots (1-8)
CAI-GPU-MI210	AMD Instinct MI210: 300W, 64GB, 2-slot FHFL GPU	2, 4, 6 or 8	FHFL, double-wide	All Slots (1-8)
CAI-GPU-RTXP6000[1]	NVIDIA RTX Pro 6000: 600W, 96GB, 2-Slot FHFL GPU	2, 4, 6 or 8	FHFL, double-wide	All Slots (1-8)
CAI-GPU-RTX6000D[1]	NVIDIA RTX Pro 6000D: 600W, 84GB, 2-Slot FHFL GPU	2, 4, 6 or 8	FHFL, double-wide	All Slots (1-8)
CAI-GPU-RTXP4500[1]	Nvidia RTX Pro 4500 GPU 165W 32GB Gen5 FHFL 1-slot	2, 4, 6 or 8	FHFL, single-wide	All Slots (1-8)
CAI-GPU-MI350P	AMD Instinct MI350P: 600W, 144GB, 2-slot FHFL GPU	2, 4, 6 or 8	FHFL, double-wide	All Slots (1-8)
Accessories/spare included with GPU: ■ CAI-CBL-GPU-N is included with the selection of RTX Pro 6000, H200NVL, L40S GPUs. MI350P. ■ CAI-CBL-GPU-A is included with the selection of MI210 GPUs. ■ CAI-BRK-GPU (GPU Bracket)				

Notes:

1. NVIDIA NVAIE license selection required (either select license or opt-out)

Select NVL Bridge (optional)

The available GPU bridges options are listed in *Table 5*

NOTE:

- Maximum GPUs Supported: Up to 8 GPUs can be supported.
- 2-Way Bridge Configuration:
  - Minimum of 2 adjacent GPUs per bridge.
  - If selected, each 2-way bridge must be fully populated with GPUs.
- 4-Way Bridge Configuration:
  - Minimum of 4 adjacent GPUs per bridge.
  - If selected, each 4-way bridge must be fully populated with GPUs.
- 2-Way Bridge and 4-Way Bridge can not be mixed in same configuration.
- All GPUs have to be bridged

Table 5 PCIe NVL Bridge

Product ID (PID)	PID Description	Supported GPUs
CAI-NVL2-H200	NVIDIA NVL-2way Bridge for H200 NVL GPU; NVPN 900-23945-0000-000	CAI-GPU-H200-NVL
CAI-NVL4-H200	NVIDIA NVL-4way Bridge for H200 NVL GPU; NVPN 900-23946-0000-000	CAI-GPU-H200-NVL
CAI-INF2-MI210	AMD Infinity-2way Bridge for MI210 GPU	CAI-GPU-MI210
CAI-INF4-MI210	AMD Infinity-4way Bridge for MI210 GPU	CAI-GPU-MI210
Accessories/spare included: ■ CAI-GPU-RKIT-NV: NVIDIA GPU and NVLINK Bridge Removal Tool Kit ■ CAI-GPU-RKIT-AMD: AMD GPU and NVLINK Bridge Removal Tool Kit		

GPU Cards Population

Table 6 GPU Cards Population Rules[1]

# of GPUs	Recommended Population	Recommended Population
2	(S8, S7)	2 GPUs at GPU Block1
4	(S8, S7, S6, S5)	4 GPUs at GPU Block1
	(S8, S7) (S4, S3)	2 GPUs at GPU Block1; 2 GPUs at GPU Block2
6	(S8, S7, S6, S5) (S4, S3)	4 GPUs at GPU Block1; 2 GPUs at GPU Block2
8	(S8, S7, S6, S5) (S4, S3, S2, S1)	4 GPUs at GPU Block1; 4 GPUs at GPU Block2

Notes:

1. NVL Bridge requires special service tools

GPU Cards Population Rules when NVL Bridge Selected

Table 7 GPU Cards Population Rules[1]

# of GPUs	Recommended Population	NVL Bridge	Infinity Bridge	Recommended Population
2	(S8, S7)	1x NVL2	1x 2-way	1x 2-way bridge for GPU Block1
4	(S8, S7, S6, S5)	2x NVL2	2x 2-way	2x 2-way bridge for GPU Block1
		1x NVL4	1x 4-way	1x 4-way bridge for GPU Block1
	(S8, S7) (S4, S3)	2x NVL2	2x 2-way	1x 2-way bridge for GPU Block1 and 1x 2-way bridge for GPU Block2
6	(S8, S7, S6, S5) (S4, S3)	3x NVL2	3x 2-way	2x 2-way bridge for GPU Block1 and 1x 2-way bridge for GPU Block2
8	(S8, S7, S6, S5) (S4, S3, S2, S1)	4x NVL2	4x 2-way	2x 2-way bridge for GPU Block1 and 2x 2-way bridge for GPU Block2
		2x NVL4	2x 4-way	1x 4-way bridge for GPU Block1 and 1x 4-way bridge for GPU Block2

Notes:

1. H200 NVL support: NVL2 or NVL4, support: NVL2 only. NVL Bridge requires special service tools

GPU Card Memory Population Rules

NOTE: It is suggested that the total compute memory size should be at least three times the combined memory of the configured H200 NVL HBM GPUs, and at least twice the memory of the configured L40S or MI210 HBM GPUs.

Table 8 GPU Memory Population Rules

Total GPU Memory	Number of GPUs	GPU Memory Size (GBs)	Recommended Minimum System Memory Capacity (GBs)
H200NVL (141GB GPU memory)	2	282	1024
	4	564	2048
	6	846	3072
	8	1128	4096
L40S (48GB GPU memory)	2	96	256
	4	192	384
	6	288	768
	8	384	768
MI210 (AMD) (64GB GPU memory)	2	128	256
	4	256	512
	6	384	768
	8	512	1024
RTXP6000 (NV) (96GB GPU memory)	2	192	384
	4	384	768
	6	576	1024
	8	768	2048

STEP 3 SELECT NETWORKING CARDS

Select NIC Options

The available PCIe Cards listed in *Table 9*.

Table 9 Available PCIe Cards

Product ID (PID)	PID Description	Networking Path	Slots occupancy[1]
Networking Interface Card			
CAI-P-N7S400GFO	NVIDIA OEM MCX715105AS-WEAT 1x400GbE QSFP112 PCIe Gen5 NIC	E-W	Slot 9, 11, 12, 13
CAI-P-N3140H	NVIDIA OEM BlueField-3 B3140H SuperNIC 1x400G	E-W	Slot 9, 11, 12, 13
CAI-P-NC3140H	NVIDIA BF-3 B3140H SuperNIC 1x400G Crypto enabled	E-W	Slot 9, 11, 12, 13
CAI-P-N7Q25GFO	NVIDIA OEM CX713104AS-ADAT: 4x25GbE SFP56 Gen4x16, PCIe NIC	E-W	Slot 9, 11, 12, 13
		N-S	Slot 10 Only
CAI-P-N7D200GFO	NVIDIA OEM MCX755106AS-HEAT 2x200GbE QSFP112 PCIe Gen5 NIC	N-S	Slot 10 Only
CAI-P-N3220	NVIDIA OEM BlueField-3 B3220 DPU 2x200G	N-S	Slot 10 Only
CAI-P-NC3220	Nvidia Crypto B3220 DPU 2x200GbE/IB QSFP112 Gen5x16 FHHL	N-S	Slot 10 Only
CAI-P-APS400GF	AMD Pollara 1Q400P 1x 400GbE, QSFP112, PCIe Gen5.0 x16, HHHL	N-S	Slot 10 Only
CAI-P-APS400GF	AMD Pollara 1Q400P 1x 400GbE, QSFP112, PCIe Gen5.0 x16, HHHL	E-W	Slot 9, 11, 12, 13
Open Compute Project (OCP) 3.0			
CAI-O-ID10GC	Intel X710T2LOCPV3G1L 2x10GbE RJ45 OCP3.0 NIC		OCP

Notes:

1. Refer to *Table 10* Networking cards population.

Networking cards population

Table 10 Networking Cards Population[1]

Number of NIC (E-W traffic)	Recommended Population	Number of NIC (N-S traffic)	Recommended Population
1	(S9)	1	S10
2	(S9, S13)		
2	(S9, S12)		
3	(S9, S13, S12)		
4	(S9, S13, S11, S12)		

Notes:

1. Support NIC: CX7 or BF3 (E-W Traffic, single port), CX7 or BF3 (N-S Traffic, dual port) Need to include transceiver

STEP 4 SELECT CPU(s) (REQUIRED)

5th Gen. AMD EPYC™ processors highlights include:

- CPU-to-CPU communication using Infinity Fabric Interconnect
- Cache size of up to 384 MB
- Up to 96 cores
- Power: Up to 400Watts

Select CPUs

The available CPUs are listed in *Table 11*.

Table 11 Available CPUs

Product ID (PID)	Maximum Socket	Core	Frequency	Default TDP	Cache Size	Highest DDR5 DIMM Clock
	(S)	(C)	(GHz)	(W)	(MB)	(MT/s)[1]
CAI-CPU-A9655	2S	96	2.60	400	384	5200
CAI-CPU-A9575F	2S	64	3.30	400	256	5200
CAI-CPU-A9555	2S	64	3.20	360	256	5200
CAI-CPU-A9475F	2S	48	3.65	400	256	5200
CAI-CPU-A9455	2S	48	3.15	300	256	5200
CAI-CPU-A9375F	2S	32	3.85	320	256	5200
CAI-CPU-A9355	2S	32	3.55	280	256	5200

Notes:

1. If higher or lower speed DIMMs are selected than what is shown in *Table 11 on page 17* for a given CPU speed, the DIMMs will be clocked at the lowest common denominator of CPU clock and DIMM clock.

Approved Configurations

(1) 2-CPU configurations:

- Select two identical CPUs from *Table 11*

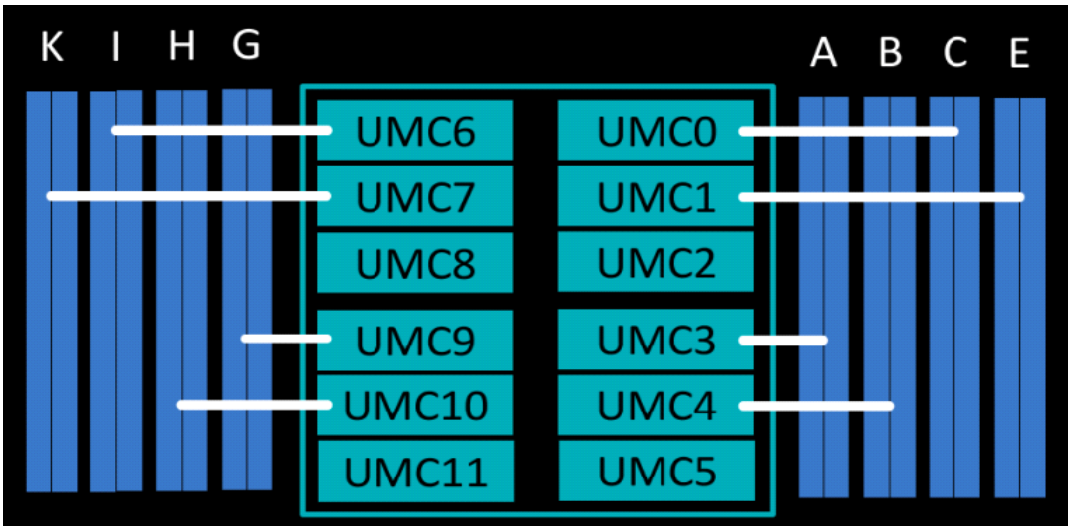
STEP 5 SELECT MEMORY (REQUIRED)

Table 12 below describes the main memory DIMM features supported on server.

Table 12 Main Memory Features

Memory DIMM server technologies	Description
DDR5 Memory clock speed	5th Gen. AMD EPYC CPUs: Up to 5200 MT/s 1DPC; Up to 4400 MT/s 2DPC
Operational voltage	1.1 Volts
DRAM Fab density	16Gb, 24Gb, and 32Gb
DRAM DIMM Type	RDIMM (Registered DDR5 DIMM)
Memory DIMM organization	Eight memory DIMM channels per CPU; up to 2 DIMMs per channel
Maximum number of DRAM DIMMs per server	32 (2-Socket)
DRAM DIMM densities and Rank	Refer to *Table 13* for the list
Maximum system Capacity	8TB (32x256GB)

Figure 6 8-channel Memory Organization



Select DIMMs

The supported memory DIMMs are listed in *Table 13*.

Table 13 Available DDR5 DIMMs for 5th Gen. AMD EPYC™ CPUs

Product ID (PID)	PID Description	Ranks/DIMM
CAI-MRX32G1RE5	32GB RDIMM 1Rx4 1.1Volts (16Gb)	1
CAI-MRX64G2RE5	64GB RDIMM 2Rx4 1.1Volts (16Gb)	2
CAI-MRX96G2RF5	96GB RDIMM 2Rx4 1.1Volts (24Gb)	2
CAI-MR128G2RG5	128GB RDIMM 2Rx4 1.1Volts (32Gb)	2
CAI-MR256G4RG5	256GB RDIMM 4Rx4 1.1Volts (32Gb)	4

NOTE: For full details on supported memory configurations and for system memory upgrades, refer to the guidelines in Chapter 5 of the **C845A M8 Memory guide.**

STEP 6 SELECT DRIVES (OPTIONAL)

The standard disk drive features are:

- E1.S 1T NVMe Drives
- Hot-pluggable
- Drives come mounted in sleds

Select Drives

The available drive options are listed in *Table 14*.

Table 14 Available E1.S NVMe Drives

Product ID (PID)	PID Description	Drive Type	Form Factor	Capacity
CAI-NVES1T9K1V	1.9TB E1.S 15mm Kioxia XD7P Hg Perf Med End Gen4 1X NVMe	NVMe	E1.S	1.9 TB
CAI-NVES3T8K1V	3.8TB E1.S 15mm Kioxia XD7P Hg Perf Med End Gen4 1X NVMe	NVMe	E1.S	3.8 TB
CAI-NVES7T6K1V	7.6TB E1.S 15mm Kioxia XD7P Hg Perf Med End Gen4 1X NVMe	NVMe	E1.S	7.6 TB
CAI-NVES1T9K2V	1.9TB E1.S 15mm Kioxia XD8 Hg Perf Med End Gen5 1X NVMe	NVMe	E1.S	1.9 TB
CAI-NVES3T8K2V	3.8TB E1.S 15mm Kioxia XD8 Hg Perf Med End Gen5 1X NVMe	NVMe	E1.S	3.8 TB
CAI-NVES7T6K2V	7.6TB E1.S 15mm Kioxia XD8 Hg Perf Med End Gen5 1X NVMe	NVMe	E1.S	7.6 TB
CAI-NVES1T9D1V	1.9TB E1.S 15mm Sandisk SN861 Hg Perf Med End Gen5 1X NVMe	NVMe	E1.S	1.9 TB
CAI-NVES3T8D1V	3.8TB E1.S 15mm Sandisk SN861 Hg Perf Med End Gen5 1X NVMe	NVMe	E1.S	3.8 TB
CAI-NVES7T6D1V	7.6TB E1.S 15mm Sandisk SN861 Hg Perf Med End Gen5 1X NVMe	NVMe	E1.S	7.6 TB
CAI-NVES15T3D1V	15.3TB E1.S 15mm Sandisk SN861 Hg Perf Med End Gen5 1X NVMe	NVMe	E1.S	15.3 TB

Table 15 Drive Slot Population

Number of E1.S Drive Slots	Description
Slot 1-12	CPU storage
Slot 13, 14, 15, 16	GPU Block 1 Storage
Slot 17, 18, 19, 20	GPU Block 2 Storage

STEP 7 SELECT POWER SUPPLY (REQUIRED)

Power supplies share a common electrical and physical design that allows for hot-plug and tooless installation. Each power supply is certified for high-efficiency operation. Use the power calculator at the following link to determine the needed power based on the options chosen (CPU, drives, memory, and so on):

WARNING: Starting January 1st 2024, only Titanium-rated PSUs are allowed to be shipped to European Union (EU), European Economic Area (EEA), United Kingdom (UK), Switzerland and other countries that adopted Lot 9 Regulation.

Table 16 Power Supply

Product ID (PID)	PID Description
CAI-845A-PSU	UCS C845A M8 3200W AC Power Supply Titanium

NOTE:

- In a server with four power supplies, all four must be identical.
- Ensure that all four power supply units (PSUs) are populated.
- Supports N+1 Redundancy
- Use Power Calculator to determine the correct power supply. The Power Calculator can be found at https://ucspowercalculator.cisco.com/

STEP 8 SELECT INPUT POWER CORD(s) (REQUIRED)

Select Power Cords

Use the *Table 17* to select the appropriate power cords.

Table 17 Available Power Cord

Product ID (PID)	PID Description
CAB-C13-CBN	CABASY,WIRE,JUMPER CORD, 27" L, C13/C14, 10A/250V
CAB-C19-C20-IND	Power Cord C19-C20 India
CAB-SABS-C19-IND	SABS 164-1 to IEC-C19 India
CAB-C19-C20-3M-JP	Power Cord C19-C20, 3M/10ft Japan PSE mark
CAB-AC-16A-AUS	Power Cord, 250VAC, 16A, Australia C19

STEP 9 SELECT M.2 SATA SSDs (OPTIONAL)

- Order Cisco boot optimized M.2 RAID controller from *Table 18*. The boot optimized RAID controller plugs into a connector on the motherboard and holds up to two M.2 SATA drives.

NOTE:

- The Cisco boot optimized M.2 RAID controller supports Linux Operating Systems
- The Cisco boot optimized M.2 RAID controller supports RAID 1 and JBOD mode
- The Cisco boot optimized M.2 RAID controller is available only with 240GB and 960GB M.2 SSDs.
- CIMC is supported for configuring of volumes and monitoring of the controller and installed SATA M.2 drives
- The SATA M.2 drives can boot in UEFI mode only. Legacy boot mode is not supported
- Up to 1 Boot-Optimized RAID Controller is supported per system

Table 18 Boot-Optimized RAID Controller

Product ID (PID)	PID Description	Controller Type	Hot- Swappable
CAI-M2-HWRAID[1]	Cisco Boot optimized M.2 RAID controller	Internal	No

Notes:

1. CAI-M2-HWRAID plugs into a connector on the motherboard and holds up to two M.2 SATA drives. The server must be powered off. If you are adding M.2 RAID controller as spare, you may need to order accessories with it.

- Order one or two matching M.2 SATA SSDs from *Table 19* along with a boot-optimized RAID controller (see *Table 18*). Each boot-optimized RAID controller can accommodate up to two SATA M.2 SSDs.

NOTE:

- It is recommended that M.2 SATA SSDs be used as boot-only devices.
- Order one or two identical M.2 SATA SSDs for the boot optimized RAID controller
- You cannot mix M.2 SATA SSD capacities.

Table 19 M.2 SATA SSDs

Product ID (PID)	PID Description
CAI-M2-240G	240GB M.2 SATA Micron G2 SSD
CAI-M2-960G	960GB M.2 SATA Micron G2 SSD

STEP 10 SELECT REVERSIBLE CABLE MANAGEMENT ARM (OPTIONAL)

Select Optional Reversible Cable Management Arm

The reversible cable management arm mounts on either the right or left slide rails at the rear of the server and is used for cable management. Select an Optional Reversible Cable Management Arm from *Table 20*.

Table 20 Cable Management Arm

Product ID (PID)	PID Description
CAI-845A-CMA	Reversible CMA for C845A M8 ball bearing rail kit

STEP 11 SELECT OPTICS OPTIONS (REQUIRED)

Select Optic Cables

The recommended Cisco Optics for the server are listed in *Table 21*.

Table 21 Supported Optic Cables

Product ID (PID)	Description
Optics	
QSFP-200G-SL4	200GBASE SL4 QSFP56 Transceiver, MPO, 30m over OM4 MMF
QSFP-200G-SR4-S	200GBASE SR4 QSFP56 Transceiver, MPO, 100m over OM4 MMF
QSFP-400G-DR4	400G QSFP112 Transceiver, 400GBASE-DR4, MPO-12,500m parallel
Single Mode Patch Cable	
CB-M12-M12-SMF10M	CABLE, MPO12-MPO12, TRUNK CABLE, TYPE B, SMF, 10M
CB-M12-M12-SMF15M	CABLE, MPO12-MPO12, TRUNK CABLE, TYPE B, SMF, 15M
CB-M12-M12-SMF1M	CABLE, MPO12-MPO12, TRUNK CABLE, TYPE B, SMF, 1M
CB-M12-M12-SMF20M	CABLE, MPO12-MPO12, TRUNK CABLE, TYPE B, SMF, 20M
CB-M12-M12-SMF25M	CABLE, MPO12-MPO12, TRUNK CABLE, TYPE B, SMF, 25M
CB-M12-M12-SMF2M	CABLE, MPO12-MPO12, TRUNK CABLE, TYPE B, SMF, 2M
CB-M12-M12-SMF30M	CABLE, MPO12-MPO12, TRUNK CABLE, TYPE B, SMF, 30M
CB-M12-M12-SMF3M	CABLE, MPO12-MPO12, TRUNK CABLE, TYPE B, SMF, 3M
CB-M12-M12-SMF5M	CABLE, MPO12-MPO12, TRUNK CABLE, TYPE B, SMF, 5M
CB-M12-M12-SMF7M	CABLE, MPO12-MPO12, TRUNK CABLE, TYPE B, SMF, 7M
Multi-mode Patch Cable	
CB-M12-M12-MMF1.5	CABLE, MPO12-MPO12, TRUNK CABLE, TYPE B, MMF, 1.5M
CB-M12-M12-MMF10M	CABLE, MPO12-MPO12, TRUNK CABLE, TYPE B, MMF, 10M
CB-M12-M12-MMF15M	CABLE, MPO12-MPO12, TRUNK CABLE, TYPE B, MMF, 15M
CB-M12-M12-MMF1M	CABLE, MPO12-MPO12, TRUNK CABLE, TYPE B, MMF, 1M
CB-M12-M12-MMF20M	CABLE, MPO12-MPO12, TRUNK CABLE, TYPE B, MMF, 20M
CB-M12-M12-MMF25M	CABLE, MPO12-MPO12, TRUNK CABLE, TYPE B, MMF, 25M
CB-M12-M12-MMF2M	CABLE, MPO12-MPO12, TRUNK CABLE, TYPE B, MMF, 2M
CB-M12-M12-MMF30M	CABLE, MPO12-MPO12, TRUNK CABLE, TYPE B, MMF, 30M
CB-M12-M12-MMF3M	CABLE, MPO12-MPO12, TRUNK CABLE, TYPE B, MMF, 3M
CB-M12-M12-MMF4M	CABLE, MPO12-MPO12, TRUNK CABLE, TYPE B, MMF, 4M
CB-M12-M12-MMF5M	CABLE, MPO12-MPO12, TRUNK CABLE, TYPE B, MMF, 5M
CB-M12-M12-MMF7M	CABLE, MPO12-MPO12, TRUNK CABLE, TYPE B, MMF, 7M

STEP 12 SELECT NVIDIA AIE ESSENTIAL LICENSE (REQUIRED)

Select NVIDIA AIE Essential License

Select NVIDIA AIE License option as desired from *Table 22*

NOTE: NIVIDIA is Cisco recommended selection, if you have not previously purchased, please make selection. The quantity of NIVIDIA License under Offer: NV-AIE-LIC= should be 8x the quantity of servers selected (1 per GPU).

Table 22 NVIDIA AIE Essential License

Product ID (PID)	PID Description
Software License	
NV-AIE-LIC=	NVIDIA AI Essential Software License Spare(Order QTY 1 only)
Standard License	
NV-AIE-P-5Y	24x7 Support Services for NVIDIA AIE Essentials per GPU,5 Yr
NV-AIE-24X7S-1Y	NVIDIA AIE Essential Subscription & 24x7 Supp per GPU, 1Y
NV-AIE-P-1Y	24x7 Support Services for NVIDIA AIE Essentials per GPU,1 Yr
NV-AIE-24X7S-3Y	NVIDIA AIE Essential Subscription & 24x7 Supp per GPU, 3Y
NV-AIE-P-3Y	24x7 Support Services for NVIDIA AIE Essentials per GPU,3 Yr
NV-AIE-24X7S-5Y	NVIDIA AIE Essential Subscription & 24x7 Supp per GPU, 5Y
NV-AIE-P-5Y	24x7 Support Services for NVIDIA AIE Essentials per GPU,5 Yr
NV-AIE-S-1Y	NVIDIA AI Enterprise Essentials Subscription per GPU, 1 Year
NV-AIE-S-3Y	NVIDIA AI Enterprise Essentials Subscription per GPU, 3 Year
NV-AIE-S-5Y	NVIDIA AI Enterprise Essentials Subscription per GPU, 5 Year
Education	
NV-AIE-EDP-5Y	24x7 Support Services for NVIDIA AIE Ess per GPU, EDU, 5 Yr
NV-AIE-24X7EDS-1Y	NVIDIA AIE Essential Subscription & 24x7 Supp per GPU EDU 1Y
NV-AIE-EDP-1Y	24x7 Support Services for NVIDIA AIE Ess per GPU, EDU, 1 Yr
NV-AIE-24X7EDS-3Y	NVIDIA AIE Essential Subscription & 24x7 Supp per GPU EDU 3Y
NV-AIE-EDP-3Y	24x7 Support Services for NVIDIA AIE Ess per GPU, EDU, 3 Yr
NV-AIE-24X7EDS-5Y	NVIDIA AIE Essential Subscription & 24x7 Supp per GPU EDU 5Y
NV-AIE-EDP-5Y	24x7 Support Services for NVIDIA AIE Ess per GPU, EDU, 5 Yr
NV-AIE-EDS-1Y	NVIDIA AIE Essentials Subscription per GPU, EDU, 1 Year

Table 22 NVIDIA AIE Essential License

NV-AIE-EDS-3Y	NVIDIA AIE Essentials Subscription per GPU, EDU, 3 Years
NV-AIE-EDS-5Y	NVIDIA AIE Essentials Subscription per GPU, EDU, 5 Years

STEP 13 SELECT CISCO INTERSIGHT (REQUIRED)

Cisco Intersight™ is a Software-as-a-Service (SaaS) hybrid cloud operations platform that delivers intelligent automation, observability, and optimization to customers for traditional and cloud-native applications and infrastructure.

NOTE: Intersight is Cisco's recommended selection, if you have not previously purchased Intersight, please make selection. The quantity of Cisco Intersight License under Offer: DC-MGT-SAAS should be equal to the quantity of Server selected.

Table 23 Top Level Ordering PID

Product ID (PID)	
DC-MGT-SAAS	Cisco Intersight SaaS

Select Intersight

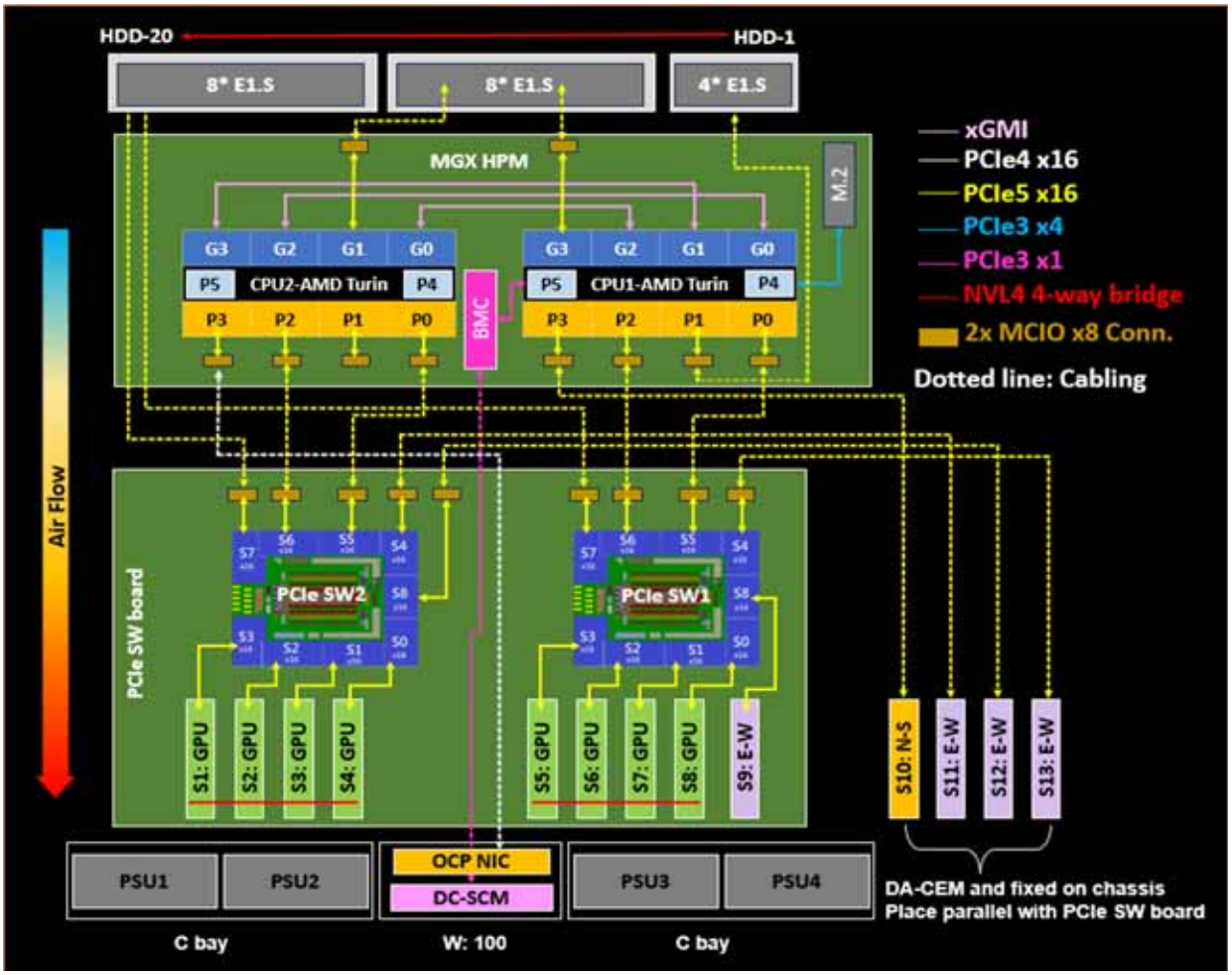
Select Cisco Intersight option as desired from *Table 24*

Table 24 Cisco Intersight SaaS

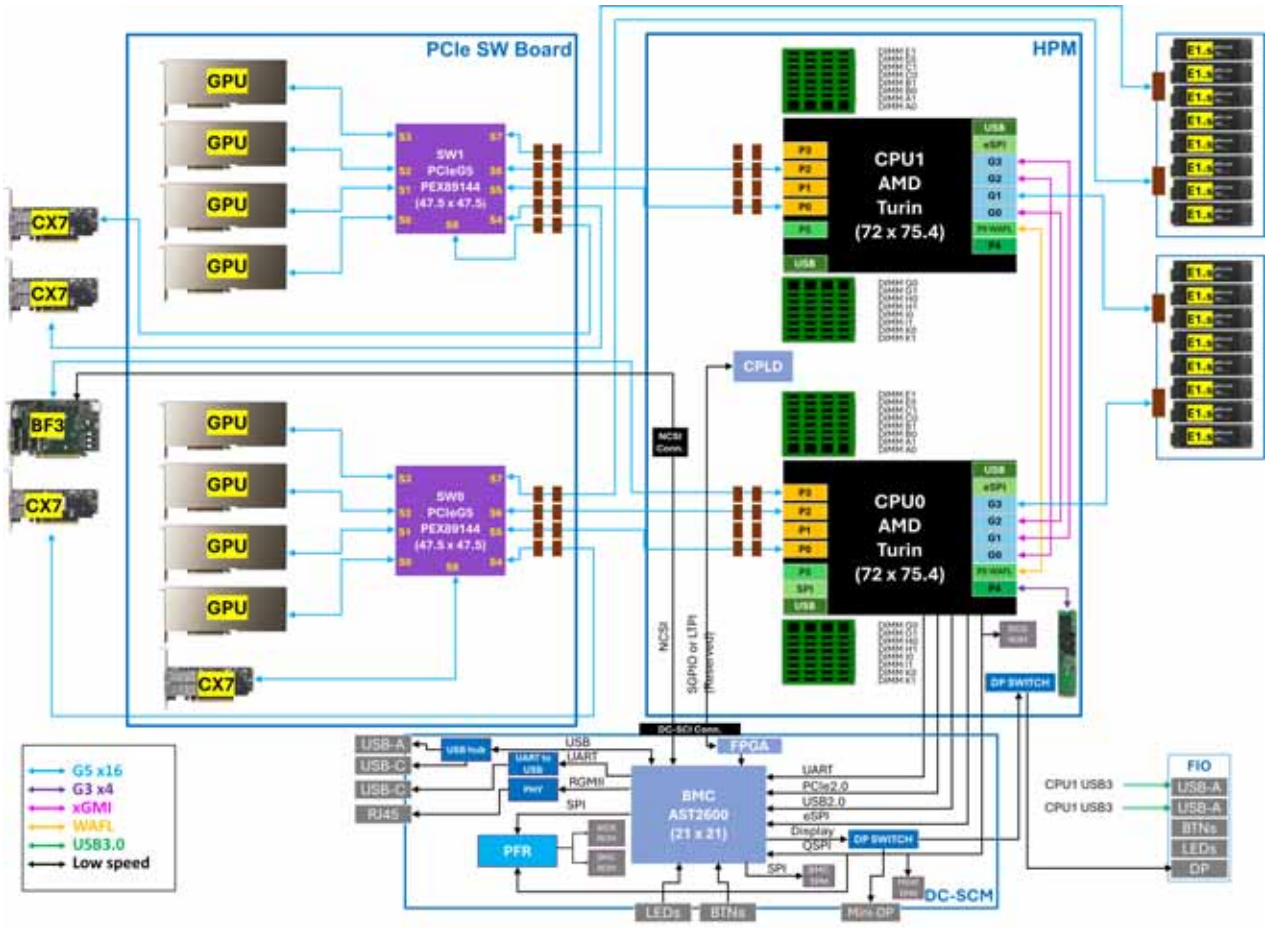
Product ID (PID)	PID Description
Cisco Intersight - SaaS	
DC-MGT-IS-SAAS-ES	Infrastructure Services PVA - Advantage
DC-MGT-IS-SAAS-AD	Infrastructure Services PVA - Essentials
Cisco Intersight - Private Virtual Appliance	
DC-MGT-IS-PVAPP-ES	Infrastructure Services SaaS/CVA - Advantage
DC-MGT-IS-PVAPP-AD	Infrastructure Services SaaS/CVA - Essentials

SUPPLEMENTAL MATERIAL

PCIe Topology



System Block Diagram



TECHNICAL SPECIFICATIONS

Dimensions and Weight

Table 25 Server Dimensions and Weight

Parameter	Value
Height	175 mm (6.8 in)
Width	482.6 mm (19 in)
Depth	801.9 mm (31.6 in)
Weight	55 kg (121 lb)

Power Specifications

Table 26 3200 W (AC) Power Supply Specifications

Parameter	Specification			
Input Connector	IEC320 C20			
Input Voltage Range (Vrms)	100 to 240			
Maximum Allowable Input Voltage Range (Vrms)	90 to 264			
Frequency Range (Hz)	47 to 63			
Maximum Allowable Frequency Range (Hz)	47 to 63			
Maximum Rated Output (W)	3200			
Maximum Rated Standby Output (W)	36			
Nominal Input Voltage (Vrms)	100Vac/60Hz	200Vac/50Hz	220Vac/50Hz	
Nominal Input Current (Arms)	16.594	15.765	15.486	
Maximum Input at Nominal Input Voltage (W)	1652.7	3146.4	3401.4	
Maximum Input at Nominal Input Voltage (VA)	1669.4	3279.2	3435.8	
Minimum Rated Efficiency (%)	90 @ 10% of max load	94 @ 20% of max load	96 @ 50% of max load	93 @ 100% of max load
Minimum Rated Power Factor[2]	0.92 @ 10% of max load	0.96 @ 20% of max load	0.98 @ 50% of max load	0.99 @ 100% of max load
Maximum Inrush Current (A peak)	35			
Maximum Inrush Current (ms)	10			
Minimum Ride-Through Time (ms)	10 @ 80% of rated load			

Compliance Requirements

Table 27 Regulatory Compliance Requirements

Parameter	Description
Regulatory Compliance	Products with the CE marking indicate compliance with the 2014/30/EU, 2014/35/EU and 2011/65/EU directives
Safety	• UL 60950-1 • UL 62368-1 • CAN/CSA-C22.2 No. 60950-1 • CAN/CSA-C22.2 No. 62368-1 • IEC/EN 62368-1 • EN 62368-1 • AS/NZS 62368-1 • GB4943.1-2022
EMC - Emissions	• 47CFR Part 15 (CFR 47) Class A • AS/NZS CISPR32 Class A • CISPR32 Class A • EN55032 Class A • ICES003 Class A • VCCI-CISPR32 Class A • EN61000-3-2 • EN61000-3-3 • KN32 Class A • CNS13438 Class A • EN 300386 Class A
EMC - Immunity	• EN55035 • EN55024 • CISPR24/35

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