Cisco Compute Hyperconverged with Nutanix

HCIAF220C M7 All-NVMe/All-Flash Servers

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https://www.cisco.com/c/en/us/products/hyperconverged-infrastructure/compute-hyperconverged/datasheet-listing.html

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OVERVIEW

Cisco Compute Hyperconverged with Nutanix is a hyperconverged infrastructure solution integrating Cisco's best-in-class compute (Cisco Unified Computing System), datacenter networking, and SaaS infrastructure management platform (Cisco Intersight) with Nutanix's market-leading hyperconverged storage software, Nutanix Cloud Platform.

The Cisco Compute Hyperconverged with Nutanix family of appliances delivers pre-configured UCS servers that are ready to be deployed as nodes to form Nutanix clusters in a variety of configurations. Each server appliance contains three software layers: UCS server firmware, hypervisor (Nutanix AHV), and hyperconverged storage software (Nutanix AOS)

Physically, nodes are deployed into clusters, with a cluster consisting of Cisco Compute Hyperconverged All-NVMe/All-Flash Servers. Clusters support a variety of workloads like virtual desktops, general-purpose server virtual machines in edge, data center and mission-critical high-performance environments.

The Cisco Compute Hyperconverged HCIAF220C M7 All-NVMe/All-Flash Servers harnesses the power of the latest 4th Gen Intel® Xeon® Scalable Processors (codenamed Sapphire Rapids), and offers the following:

CPU: Up to 2x 4th Gen Intel® Xeon® Scalable Processors (codenamed Sapphire Rapids) with up to 52 cores per processor.

Memory: Up to 4TB with 32 x 128GB DDR5-4800 DIMMs, in a 2-socket configuration.

Drives:

- **HCIAF220C-M7SN (All-NVMe)** (see *Figure 1 on page 5*):
    - Up to 10 front direct-attach NVMe SSDs with 2 CPUs.
    - One to three half-height PCIe risers **or** one to two full-height PCIe risers
- **HCIAF220C-M7S (All-Flash)** (see *Figure 1 on page 5*):
    - Up to 10 front SFF SAS/SATA SSDs
    - One to three half-height PCIe risers **or** one to two full-height PCIe risers

Cluster Scale: Nutanix clusters can be scaled out to the max cluster server limit documented by Nutanix. The minimum depends on the management mode.

These servers can be interconnected and managed in two different ways:

UCS Managed mode: The nodes are connected to a pair of Cisco UCS® 6400 Series or a pair of Cisco UCS 6500 Series fabric interconnects and managed as a single system using UCS Manager. The minimum number of nodes in such a cluster is three. These clusters can support both general-purpose deployments and mission-critical high-performance environments.

> **NOTE:** One-node and two-node clusters are not supported with this solution.

Intersight Standalone mode: The nodes are connected to a pair of Top-of-Rack (ToR) switches and servers are centrally managed using Cisco Intersight®. While a minimum of three nodes are required to deploy a standard Nutanix cluster, we also offer an option to deploy a single node cluster and a two-node cluster for

Edge and branch locations and situations that already have a high-performance network fabric installed. Refer to Nutanix documentation on **single node.**

See *Figure 1 on page 5* for front and rear views of the Cisco Compute Hyperconverged HCIAF220C M7 All-NVMe/All-Flash Servers.

Figure 1   Cisco Compute Hyperconverged HCIAF220C M7 All-NVMe/All-Flash Servers

Front View - **HCIAF220C-M7SN (All-NVMe)**

10 front drives are All-NVMe (only) drives

Front View - **HCIAF220C-M7S (All-Flash)**

10 front drives are SAS/SATA SDDs drives

Rear View (one half-height riser card version)

Rear View (three half-height riser card version)

Rear View (two full-height riser card version - shown with riser blanks installed)

DETAILED VIEWS

Detailed Chassis Front View

Figure 2 shows the detailed front view of the Cisco Compute Hyperconverged HCIAF220C M7 All-NVMe/All-Flash Servers

Figure 2   **Detailed Chassis Front View**

1 - 10	■ HCIAF220C-M7SN (All-NVMe):
	
	  • Drive bays 1 – 10 support direct-attach NVMe SSDs with 2 CPUs.
	
	■ HCIAF220C-M7S (All-Flash):
	
	  • Drive bays 1 – 10 support SAS/SATA solid state drives (SSDs)[1]
		16	Fan status LED

11	Asset tag location	17	Temperature status LED
12	Control panel	18	Network link activity LED
13	Power button/power status LED	19	Power supply status LED
14	Unit Identification button/LED	20	KVM connector (used with KVM cable that provides two USB 2.0, one VGA, and one serial connector)
15	System status LED	-	-

Notes:

  1. NVMe + SSD configuration is not supported.

Detailed Chassis Rear Views

Figure 3 shows the details of the rear panel for the Cisco Compute Hyperconverged HCIAF220C M7 All-NVMe/All-Flash Servers with one rear half-height PCIe riser.

Figure 4 shows the details of the rear panel for the Cisco Compute Hyperconverged HCIAF220C M7 All-NVMe/All-Flash Servers with three rear half-height PCIe risers.

Figure 5 shows the details of the rear panel for the Cisco Compute Hyperconverged HCIAF220C M7 All-NVMe/All-Flash Servers with two rear full-height PCIe risers.

Cisco Compute Hyperconverged with Nutanix

One Half-Height Riser

NOTE: 1-CPU servers support 1 and 2 half-height risers. 2-CPU servers support all three half-height risers.

Figure 3   Chassis Rear View (one half-height, 3/4 length PCIe riser)

1	There are two half height riser 1 options:	6	System ID pushbutton/LED
	Riser 1A PCIe Gen4 (CPU1 control)		
	■ Supports one PCIe slot (slot 1)		
	■ Slot 1 is half-height, 3/4 length, x16, NCSI, Single Wide GPU		
	Riser 1B PCIe Gen5 (CPU1 control)		
	■ Supports one PCIe slot (slot 1)		
	■ Slot 1 is half-height, 3/4 length, x16, NCSI, Single Wide GPU		
2	Riser 2 blanking panel	7	VGA display port (DB15 connector)
3	Riser 3 blanking panel	8	COM port (RJ45 connector)
4	Power supplies (two, redundant as 1+1)	9	1GBE dedicated Ethernet management port
5	Modular LAN on motherboard (mLOM)/OCP 3.0 slot	10	USB 3.0 ports (two)

Three Half-Height Risers

> **NOTE:**
> - Only 2-CPU servers support all three half-height risers.
> - Gen4 and Gen5 risers cannot be mixed.

Figure 4   **Chassis Rear View (three half-height, 3/4 length PCIe risers)**

1	There are two half height riser 1 options: **Riser 1A PCIe Gen4 (CPU1 control)** - Supports one PCIe slot (slot 1) - Slot 1 is half-height, 3/4 length, x16, NCSI, Single Wide GPU **Riser 1B PCIe Gen5 (CPU1 control)** - Supports one PCIe slot (slot 1) - Slot 1 is half-height, 3/4 length, x16, NCSI, Single Wide GPU	6	System ID pushbutton/LED
2	There are two half height riser 2 options: **Riser 2A PCIe Gen4 x16 (CPU1 control)** - Supports one PCIe slot (slot 2) - Slot 2 is half-height, 3/4 length, x16, Single Wide GPU **Riser 2B PCIe Gen5 x16 (CPU1 control)** - Supports one PCIe slot (slot 2) - Slot 2 is half-height, 3/4 length, x16, Single Wide GPU	7	VGA display port (DB15 connector)

3	There is one half height riser 3 option: **Riser 3A PCIe Gen4 x16 (CPU2 control)** ■ Supports one PCIe slot (slot 3) ■ Slot 3 is half-height, 3/4 length, x16, NCSI, Single Wide GPU	8	COM port (RJ45 connector)
4	Power supplies (two, redundant as 1+1)	9	1GBE dedicated Ethernet management port
5	Modular LAN on motherboard (mLOM)/OCP 3.0 slot	10	USB 3.0 ports (two)

Two Full-Height Risers

> **NOTE:** 1-CPU servers support only full-height riser 1 while 2-CPU servers support both full-height risers.

Figure 5   Chassis Rear View (two full-height, 3/4-length PCIe risers)

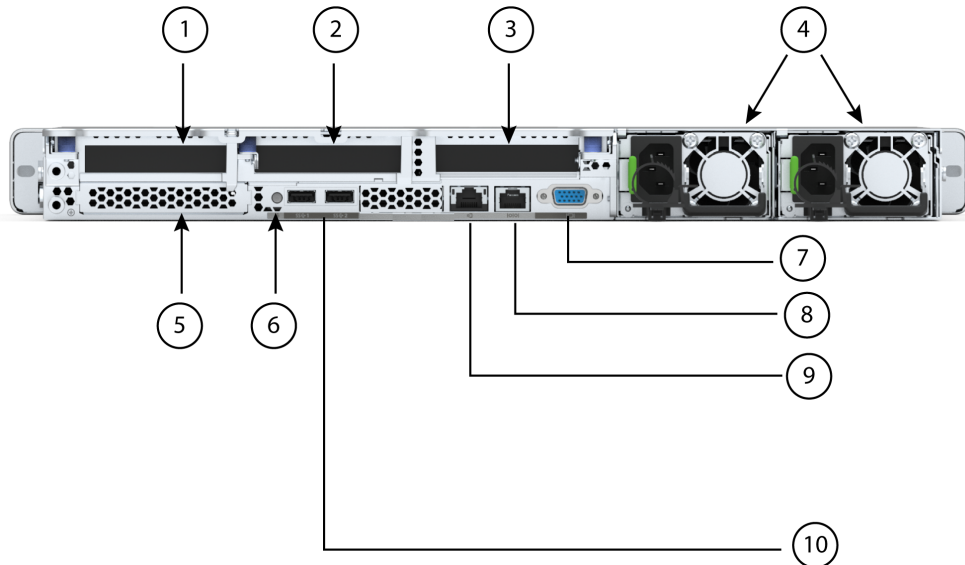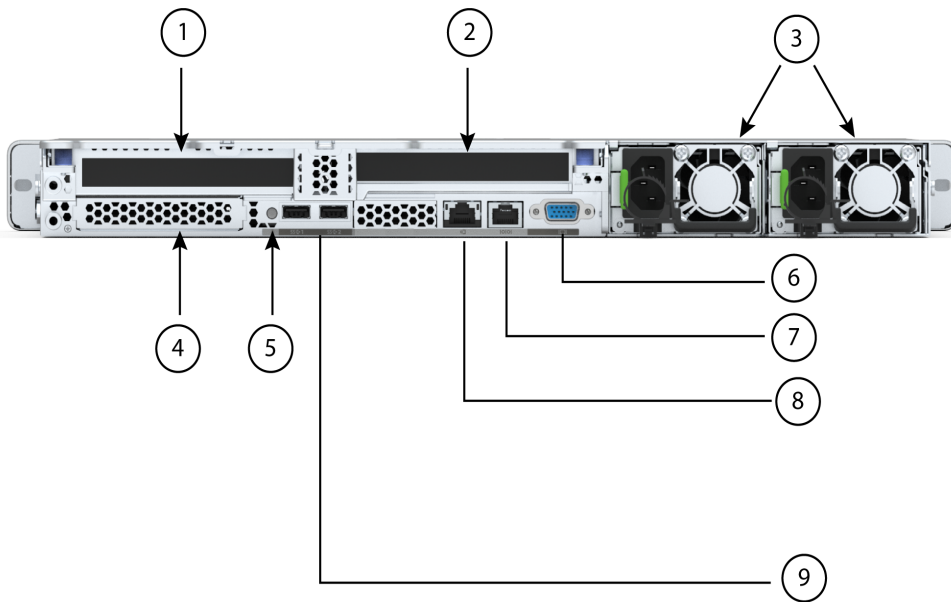| 1	**Riser 1C PCIe Gen5 (CPU1 control)** ■ Supports one PCIe slot (slot 1) ■ Slot 1 is full-height, 3/4 length, x16,NCSI, Single Wide GPU	6	VGA display port (DB15 connector)
2	**Riser 3C PCIe Gen5 x16 (CPU2 control)** ■ Supports one PCIe slot (slot 3) ■ Slot 3 is Full-height, 3/4 length, x16, NCSI, Single Wide GPU	7	COM port (RJ45 connector)
3	Power supplies (two, redundant as 1+1)	8	1GBE dedicated Ethernet management port
4	Modular LAN on motherboard (mLOM)/OCP 3.0 slot	9	USB 3.0 ports (two)
5	System ID pushbutton/LED	-	-

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, disk drives, or amount of memory) are provided in *CONFIGURING the SERVER, page 15*.

Table 1   Capabilities and Features

Capability/Feature	Description
Chassis	One rack unit (1RU) chassis
CPU	■ One or two 4th Gen Intel® Xeon® Scalable Processors (codenamed Sapphire Rapids) ■ Each CPU has 8 channels with up to 2 DIMMs per channel, for up to 16 DIMMs per CPU ■ UPI Links: Up to 3 at 16GT/s
Chipset	Intel® C741 series chipset
Memory	■ 32 total DDR5-4800 MT/s DIMM slots (16 per CPU) ■ 50% peak bandwidth increase over DDR4-3200, with on-die ECC; all densities are Registered DIMMs (RDIMMs) ■ Up to 4TB DDR5-4800 DIMM memory capacity (32x 128GB DIMMs)
Video	The Cisco Integrated Management Controller (CIMC) provides video using the Matrox G200e video/graphics controller: ■ Integrated 2D graphics core with hardware acceleration ■ Embedded DDR memory interface supports up to 512 MB of addressable memory (8 MB is allocated by default to video memory) ■ Supports display resolutions up to 1920 x 1200 16bpp @ 60Hz ■ High-speed integrated 24-bit RAMDAC ■ Single lane PCI-Express host interface running at Gen 1 speed
Power subsystem	Up to two of the following hot-swappable power supplies: ■ 770 W (AC) ■ 1200W (AC) ■ 1050W (DC) ■ 1600 W (AC) ■ 2300 W (AC) One power supply is mandatory; one more can be added for 1 + 1 redundancy.
Front Panel	A front panel controller provides status indications and control buttons
ACPI	This server supports the advanced configuration and power interface (ACPI) 6.2 standard.
Fans	Eight hot-swappable fans for front-to-rear cooling

Table 1   Capabilities and Features *(continued)*

Capability/Feature	Description

Expansion slots	■ Half-height riser slots (select up to three)
	   • Riser 1A PCIe Gen4 x16 HH
	   • Riser 1B PCIe Gen5 x16 HH
	   • Riser 2A PCIe Gen4 x16 HH
	   • Riser 2B PCIe Gen5 x16 HH
	   • Riser 3A PCIe Gen4 x16 HH (CPU2 Control)
	■ Full-height riser slots (select up to two)
	   • Riser 1C PCIe Gen5 x16 FH
	   • Riser 3C PCIe Gen5 x16 FH (CPU2 Control)

Interfaces	■ Rear panel
	   • One 1Gbase-T RJ-45 management port
	   • One RS-232 serial port (RJ45 connector)
	   • One DB15 VGA connector
	   • Two USB 3.0 port connectors
	   • One flexible modular LAN on motherboard (mLOM/OCP 3.0) slot that can accommodate various interface cards
	■ Front panel
	   • One KVM console connector (supplies two USB 2.0 connectors, one VGA DB15 video connector, and one serial port (RS232) RJ45 connector)

Integrated management processor	Baseboard Management Controller (BMC) running Cisco Integrated Management Controller (CIMC) firmware. Depending on your CIMC settings, the CIMC can be accessed through the 1GE dedicated management port, or Cisco virtual interface card (VIC). CIMC manages certain components within the server, such as the Cisco 12G SAS HBA.
Internal storage devices	Drive storage: Two different storage configurations are orderable: **HCIAF220C-M7SN (All-NVMe):** ■ Two to ten 2.5-inch direct-attach NVMe SSDs with 2 CPUs. **HCIAF220C-M7S (All-Flash):** ■ Two to ten SAS/SATA SSD or two to ten SED SAS/SATA SSD Other storage: ■ A mini-storage module connector on the motherboard supports a boot-optimized RAID controller carrier that holds up to two SATA M.2 used for hypervisor boot.
Storage controllers	Cisco 12G SAS HBA: ■ No RAID support ■ JBOD/Pass-through Mode support ■ Supports up to 10 SAS/SATA internal drives
CIMC	Cisco Integrated Management Controller 4.3(1) or later
Intersight	Intersight provides server management capabilities

CONFIGURING the SERVER

Follow these steps to configure the Cisco Compute Hyperconverged HCIAF220C M7 All-NVMe/All-Flash Servers:

STEP 1   SELECT 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
HCI-M7-MLB	Cisco Compute Hyperconverged M7 with Nutanix MLB This major line bundle (MLB) consists of the Cisco Compute Hyperconverged Server, with Intersight and Nutanix software PIDs.

Select one product ID (PID) as shown in *Table 3*.

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

Table 3   PID of the HCIAF220C M7 All-NVMe/All-Flash Servers Nodes

Product ID (PID)	Description
HCIAF220C-M7SN[1] (All-NVMe)	Cisco Compute Hyperconverged HCIAF220cM7 All-NVMe server
HCIAF220C-M7S (All-Flash)	Cisco Compute Hyperconverged HCIAF220cM7 All-Flash server

Notes:

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

The Cisco Compute Hyperconverged HCIAF220C M7 All-NVMe/All-Flash Servers:

■   Includes a 10 drive backplane.

■   Does not include power supply, CPU, memory, drives, riser 1, riser 2, riser 3, tool-less rail kit, or PCIe cards.

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

STEP 2 SELECT MANAGMENT MODE (REQUIRED)

The available management modes are listed in *Table 4*.

Table 4 Management Modes

Product ID (PID)	Description
HCI-FI-MANAGED	Deployment mode for Server Managed by FI
HCI-IS-MANAGED	Deployment mode for Standalone Server Managed by Intersight

NOTE:

HCI Data Center with Fabric Interconnect:

- This deployment option connects the server to Cisco Fabric Interconnects operating in UCS Manager mode. The installation for this type of deployment is performed using the Nutanix Foundation VM.

- IMC standalone and Intersight Managed modes are not currently supported with this solution and UCS Manager with FIs must be used.

- UCS 4th Gen and 5th Gen fabric interconnects (6454, 64108, 6536) are supported with this solution.

- If this deployment mode is selected, then HCI-MLOM from HCI Connectivity Mode must be selected from *STEP 8 SELECT CISCO COMPUTE HYPERCONVERGED CONNECTIVITY (REQUIRED), page 33* and additional cards should be selected from *STEP 9 SELECT PCIe CARDS (OPTIONAL FOR FI MANAGED MODE), page 35*.

HCI with Intersight Standalone:

- This deployment option allows server nodes to be directly connected to existing Top of Rack (ToR) switches without the need for a pair of UCS Fabric Interconnects. The installation for this type of deployment must need Prism Central and Intersight.

- If this deployment mode is selected, then either HCI-MLOM or HCI-PCIE Connectivity Mode is must be selected from *STEP 8 SELECT CISCO COMPUTE HYPERCONVERGED CONNECTIVITY (REQUIRED), page 33*

STEP 3 SELECT RISERS (REQUIRED)

The riser PIDs are listed in *Table 5*.

> ⚠️ **CAUTION:**
> - Full-height risers cannot be mixed with half-height risers.
> - Gen4 and Gen5 risers cannot be mixed.

Table 5   PIDs of the Risers and Riser Blanks

Product ID (PID)	Description
Riser 1 Option	
HCI-RIS1A-22XM7	UCS C-Series M7 1U Riser 1A PCIe **Gen4** x16 HH ■ Half-height riser 1 (controlled by **CPU 1**) ■ One x16 PCIe Gen4 riser, standard PCIe, supports Cisco VIC, half-height, 3/4 length
HCI-RIS1B-22XM7	UCS C-Series M7 1U Riser 1B PCIe **Gen5** x16 HH ■ Half-height riser 1 (controlled by **CPU 1**) ■ One x16 PCIe Gen5 riser, standard PCIe, supports Cisco VIC, half-height, 3/4 length
HCI-RIS1C-22XM7	UCS C-Series M7 1U Riser 1C PCIe **Gen5** x16 FH ■ Full-height riser 1 (controlled by **CPU 1**) ■ One x16 PCIe Gen5 riser, standard PCIe, supports Cisco VIC, full-height, 3/4 length
Riser 2 Option	
HCI-RIS2A-22XM7	UCS C-Series M7 1U Riser 2A PCIe **Gen4** x16 HH ■ Half-height riser 2 (controlled by **CPU 1**) ■ One x16 PCIe Gen4 riser, standard PCIe, half-height, 3/4 length
HCI-RIS2B-22XM7	UCS C-Series M7 1U Riser 2B PCIe **Gen5** x16 HH ■ Half-height riser 2 (controlled by **CPU1**) ■ One x16 PCIe Gen5 riser, standard PCIe, half-height, 3/4 length
Riser 3 Option	
HCI-RIS3A-22XM7	UCS C-Series M7 1U Riser 3A PCIe **Gen4** x16 HH (**CPU2**) ■ Half-height riser 3 (controlled by **CPU 2**) ■ One x16 PCIe Gen4 riser, standard PCIe, supports Cisco VIC, half-height, 3/4 length
HCI-RIS3C-22XM7	UCS C-Series M7 1U Riser 3C PCIe **Gen5** x16 FH (**CPU2**) ■ Full-height riser 3 (controlled by **CPU 2**) ■ One x16 PCIe Gen5 riser, standard PCIe, supports Cisco VIC, full-height, 3/4 length
Accessories/spare included along with selected risers:	
■ HCI-FBRS2-C220M7 for riser 2 and HCI-FBRS-C220 riser filler blank for riser 3 is auto included, if riser 2 or riser 3 are not selected. HCI-FBRSF-220M7 is auto included if only one full height riser is selected	

Approved Configurations

(1) Half-height riser 1A, 2A, and 3A only. riser 1A and 2A are controlled from CPU1 and Riser 3 is controlled from CPU2.

(2) Half-height risers 1B, 2B, and 3A only. Risers 1B and 2B are controlled from CPU1 and Riser 3A is controlled from CPU2

(3) Full-height risers 1C and 3C only. Riser 1C is controlled from CPU1 and riser 3C is controlled from CPU2.

STEP 4   SELECT CPU(s) (REQUIRED)

The standard CPU features are:

- The 4th Gen Intel® Xeon® Scalable Processors (codenamed Sapphire Rapids) are paired with Intel® C741 series chipset
- Up to 52 cores
- Cache size of up to 105 MB
- Power: Up to 300Watts
- UPI Links: Up to 3 at 16GT/s

Select CPUs

The available CPUs are listed in *Table 6*. See *Table 7 on page 22* for CPU suffix notations.

CAUTION: Normal operating temperature is limited to 35º C [95º F], and is lowered to 28º C [82.4º F], with a fan fault.

Table 6   Available CPUs

Product ID (PID)	Segment/Workload	Maximum Socket (S)	Cores (C)	Clock Freq (GHz)	Power (W)	Cache Size (MB)	Highest DDR5 DIMM Clock Support (MT/s)
8000 Series Processors							
HCI-CPU-I8471N	5G/Networking	1S	52	1.80	300	97.50	4800
HCI-CPU-I8470N	5G/Networking	2S	52	1.70	300	97.50	4800
HCI-CPU-I8462Y+	2S Performance	2S	32	2.80	300	60.00	4800
HCI-CPU-I8461V	Cloud/SaaS/Media	1S	48	2.20	300	97.50	4800
HCI-CPU-I8460Y+	2S Performance	2S	40	2.00	300	105.00	4800
HCI-CPU-I8454H	IMDB/Analytics	2S	32	2.10	270	82.50	4800
HCI-CPU-I8452Y	2S Mainline	2S	36	2.00	300	67.50	4800
HCI-CPU-I8450H	IMDB/Analytics	2S	28	2.00	250	75.00	4800
HCI-CPU-I8444H	IMDB/Analytics	2S	16	2.90	270	45.00	4800
6000 Series Processors							
HCI-CPU-I6454S	Storage	2S	32	2.20	270	60.00	4800
HCI-CPU-I6448Y	2S Performance	2S	32	2.10	225	60.00	4800
HCI-CPU-I6448H	IMDB/Analytics	2S	32	2.40	250	60.00	4800
HCI-CPU-I6444Y	2S Performance	2S	16	3.60	270	45.00	4800

Table 6 Available CPUs

Product ID (PID)	Segment/Workload	Maximum Socket (S)	Cores (C)	Clock Freq (GHz)	Power (W)	Cache Size (MB)	Highest DDR5 DIMM Clock Support (MT/s)
HCI-CPU-I6442Y	2S Performance	2S	24	2.60	225	60.00	4800
HCI-CPU-I6438Y+	2S Mainline	2S	32	2.00	205	60.00	4800
HCI-CPU-I6438N	5G/Networking	2S	32	2.00	205	60.00	4800
HCI-CPU-I6438M	Cloud/SaaS/Media	2S	32	2.20	205	60.00	4800
HCI-CPU-I6434H	IMDB/Analytics	2S	8	3.70	195	22.50	4800
HCI-CPU-I6434	2S Performance	2S	8	3.70	195	22.50	4800
HCI-CPU-I6430	2S Mainline	2S	32	2.10	270	60.00	4400
HCI-CPU-I6428N	5G/Networking	2S	32	1.80	185	60.00	4000
HCI-CPU-I6426Y	2S Performance	2S	16	2.50	185	37.50	4800
HCI-CPU-I6421N	5G/Networking	1S	32	1.80	185	60.00	4400
HCI-CPU-I6418H	IMDB/Analytics	2S	24	2.10	185	60.00	4800
HCI-CPU-I6416H	IMDB/Analytics	2S	18	2.20	165	45.00	4800
HCI-CPU-I6414U	1S gen. purpose	1S	32	2.00	250	60.00	4800
5000 Series Processors							
HCI-CPU-I5420+	2S Mainline	2S	28	2.00	205	52.50	4400
HCI-CPU-I5418Y	2S Mainline	2S	24	2.00	185	45.00	4400
HCI-CPU-I5418N	5G/Networking	2S	24	1.80	165	45.00	4000
HCI-CPU-I5416S	Storage	2S	16	2.00	150	30.00	4400
HCI-CPU-I5415+	2S Performance	2S	8	2.90	150	22.50	4400
HCI-CPU-I5412U	1S gen. purpose	1S	24	2.10	185	45.00	4400
HCI-CPU-I5411N	5G/Networking	1S	24	1.90	165	45.00	4400
4000 Series Processors							
HCI-CPU-I4416+	2S Mainline	2S	20	2.00	165	37.50	4000
HCI-CPU-I4410Y	2S Mainline	2S	12	2.00	150	30.00	4000
HCI-CPU-I4410T	IOT	2S	10	2.70	150	26.25	4000
Accessories/spare included with CPU configuration:							
■ HCI-HSLP-C220M7							
Please note, if you are adding a second CPU later, you may need to order accessories with it.							

Table 7   CPU Suffixes

CPU Suffix	Description	Features
P	Cloud (IaaS)	Designed for cloud IaaS environments to deliver higher frequencies at constrained TDPs
V	Cloud (SaaS)	Designed for high rack density, maximize VM/core, and lower power VM environment
M	Media Transcode	Designed for Media processing, AI, and HPC workloads
H	DB and Analytics	Designed for Data Analytics and Big Data usages
N	Network/5G/Edge (High TDP/Low latency)	Designed and optimized for a range of broadly-deployed network and 5G workload environments from Edge to the Data Center
S	Storage & HCI	Designed for Storage usages and workloads
T	Long-life Use/High Tcase	Designed for Network Environment-Building System (NEBS) and IoT market
U	1-Socket	Optimized for targeted platforms adequately served by the cores, memory bandwidth and IO capacity available from a single processor
Y	General SKU with SST-PP	Designator is used for general SKU stack to highlight SST-PP (Speed Select Technology Performance Profile) feature enabled
+	Feature Plus SKU	Designed to enable 1 instance of each DSA, IAA, QAT, DLB embedded accelerator

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Supported Configurations

■ For 1-CPU systems, the server can support up to:

— two half-height risers 1 and 2, or

— one full-height riser 1

■ For 2-CPU systems, the server can support up to:

— three half-height risers 1, 2, and 3, or

— two full-height risers 1 and 2,

NOTE:

■ You cannot have two I8471N, or two I8461V, two I6421N, two I6414U, two I5412U, two I5411N or two I3408U CPUs in a two-CPU configuration.

■ If you configure a server with one I8471N, or one I8461V, one I6421N, one I6414U, one I5412U, or one I5411N CPU you cannot later upgrade to a 2-CPU system with two of these CPUs.

■ Two CPUs are required with the HCIAF220C-M7SN server

The selection of 1 or 2 CPUs depends on the desired server functionality. See the following sections:

STEP 5   SELECT MEMORY (REQUIRED)

The *Table 8* below describes the main memory DIMM features supported on Cisco Compute Hyperconverged HCIAF220C M7 All-NVMe/All-Flash Servers.

Table 8   Main Memory Features

Memory DIMM server technologies	Description
Maximum DDR5 memory clock speed	Up to 4800MT/s 1DPC; Up to 4400MT/S 2DPC
Operational voltage	1.1 Volts
DRAM Fab. density	16Gb
DRAM DIMM type	RDIMM (Registered DDR5 DIMM with on die ECC)
Memory DIMM organization	Eight memory DIMM channels per CPU; up to 2 DIMMs per channel
Maximum number of DRAM DIMM per server	32 (2-Socket)
DRAM DIMM densities and ranks	16GB 1Rx8, 32GB 1Rx4, 64GB 2Rx4, 128GB 4Rx4
Maximum system capacity (DRAM DIMMs only)	4TB (32x 128GB)

Figure 6 Cisco Compute Hyperconverged HCIAF220C M7 All-NVMe/All-Flash Servers Memory Organization
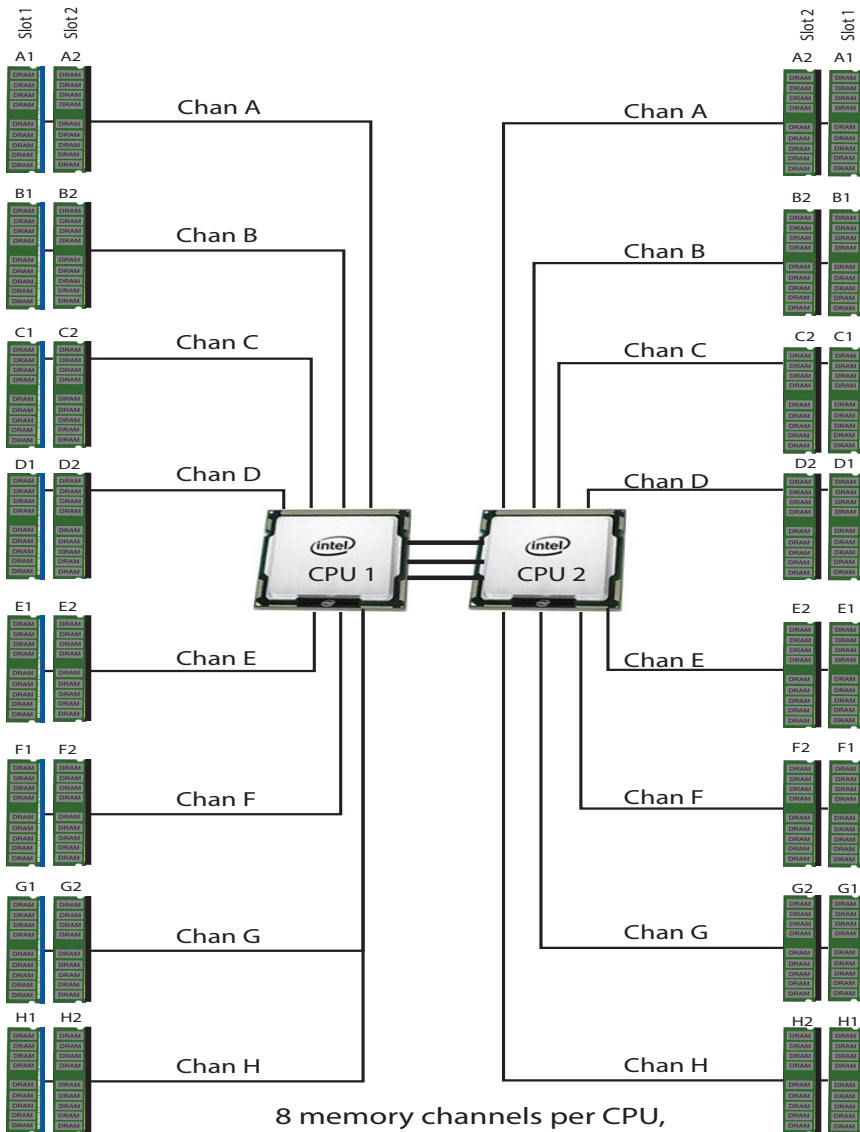
8 memory channels per CPU,
up to 2 DIMMs per channel

32 DIMMS total (16 DIMMs per CPU)

Select DIMMs

The available memory DIMMs option are listed in *Table 9*.

Table 9   Available DDR5 DIMMs

Product ID (PID)	PID Description
DRAMs	
HCI-MRX16G1RE1	16GB DDR5-4800 RDIMM 1Rx8 (16Gb)
HCI-MRX32G1RE1	32GB DDR5-4800 RDIMM 1Rx4 (16Gb)
HCI-MRX64G2RE1	64GB DDR5-4800 RDIMM 2Rx4 (16Gb)
HCI-MR128G4RE1	128GB DDR5-4800 RDIMM 4Rx4 (16Gb)
Accessories/spare included with Memory configuration:	
■ UCS-DDR5-BLK[1] is auto included for the unselected DIMMs slots	

Notes:

1. Any empty DIMM slot must be populated with a DIMM blank to maintain proper cooling airflow.

Memory configurations and mixing rules

■ Memory on every CPU socket shall be configured identically.

■ System speed is dependent on the CPU DIMM speed support. Refer to *Available CPUs, page 20* for DIMM speeds.

■ For full details on supported memory configurations see the **M7 Memory Guide.**

■ DIMM Count Rules:

■ Allowed DIMM count for 1-CPU:

— Minimum DIMM count = 1; Maximum DIMM count = 16

— 1, 2, 4, 6, 8, 12[1], or 16 DIMMs allowed

— 3, 5, 7, 9, 10, 11, 13, 14, 15 DIMMs not allowed.

■ Allowed DIMM count for 2-CPUs:

— Minimum DIMM count = 2; Maximum DIMM count = 32

— 2, 4, 8, 12, 16, 24[1], or 32 DIMMs allowed

— 6, 10, 14, 18, 20, 22, 26, 28, 30 DIMMs not allowed.

NOTE(1): 12 DIMMs count for 1-CPU, 24 DIMMs count for 2-CPU configurations are only allowed when all DIMMs have the same density.

■ DIMM Population Rules:

■ Each channel has two memory slots (for example, channel A = slots A1 and A2).

— A channel can operate with one or two DIMMs installed.

— If a channel has only one DIMM, populate slot 1 first (the blue slot).

■ When both CPUs are installed, populate the memory slots of each CPU identically. Fill the blue slots (slot 1) in the memory channels first according to the recommended DIMM populations in *Table 10*.

Table 10 M7 DIMM Population Order per socket

#DIMMs per CPU	Population of DIMM slots per socket[1]	
	Slot 1 (Blue)	Slot 2 (Black)
1	A1	-
2	A1, G1	-
4	A1, C1, E1, G1	-
6	A1, C1, D1, E1, F1, G1	-
8	A1, B1, C1, D1, E1, F1, G1, H1	-
12[2]	A1, B1, C1, D1, E1, F1, G1, H1	A2, C2, E2, G2
16	A1, B1, C1, D1, E1, F1, G1, H1	A2, B2, C2, D2, E2, F2, G2, H2

Notes:

1. See DIMM Mixing Rules for allowed combinations across slots 1 and 2.

2. Only valid when DIMMs in blue and black slots are the same density.

■ DIMM Mixing Rules:

■ Higher rank DIMMs shall be populated on Slot 1

■ Mixing different DIMM densities in the same slot across channels is not supported. All populated slots of the same color must have the same DIMM density.

■ The DIMM mixing rules matrix is described in the *Table 11*, below

Table 11 Supported DIMM mixing and population across 2 slots in each channel

Channel Mixing		DIMM Slot 2 (Black)			
DIMM Slot 1 (Blue)		16GB	32GB	64GB	128GB
		1Rx8	1Rx4	2Rx4	4Rx4
16GB	1Rx8	Yes[1]	No	No	No
32GB	1Rx4	No	Yes[1]	No	No
64GB	2Rx4	No	Yes[2]	Yes[1]	No
128GB	4Rx4	No	No	No	Yes[1]

Notes:

1. Only 6 or 8 channels are allowed (for 2, 4, or 8 DIMMs you would just populate 1 DPC on 2, 4, or 8 channels)
2. When mixing two different DIMM densities, all 8 channels per CPU must be populated. Use of fewer than 8 channels (16 slots per CPU) is not supported.

■ Memory Limitations:

   ■ Memory on every CPU socket shall be configured identically.

   ■ Refer to *Table 10* and *Table 11* for DIMM population and DIMM mixing rules.

   ■ Cisco memory from previous generation servers (DDR3 and DDR4) is not supported with the Cisco Compute Hyperconverged HCIAF220C M7 All-NVMe/All-Flash Servers.

■ For best performance, observe the following:

   ■ For optimum performance, populate at least one DIMM per memory channel per CPU. When one DIMM per channel is used, it must be populated in DIMM slot 1 (blue slot farthest away from the CPU) of a given channel.

   ■ The maximum 2 DPC speed is 4400 MT/s, refer to *Table 12* for the details below.

Table 12 DDR5-4800 DIMM 1DPC and 2DPC max speed matrix

CPU max speed/ DIMM max speed	DDR5 DIMM 1DPC	DDR5 DIMM 2DPC
CPU 4000 MT/s	4000 MT/s	4000 MT/s
CPU 4400 MT/s	4400 MT/s	4400 MT/s
CPU 4800 MT/s	4800 MT/s	4400 MT/s

NOTE: For full details on supported memory configurations see the **M7 Memory Guide.**

STEP 6 SELECT DRIVE CONTROLLERS (REQUIRED)

The following list summarizes how drives are controlled on the server:

■   Up to 10 SAS/SATA drives are controlled through a Cisco 12G SAS pass-through HBA.

RAID Controller Options

Select the drive controller from *Table 13*.

■   One Cisco 12G SAS HBA

NOTE: All RAID controllers are only supported on UCSC-C220-M7S For UCSC-C220-M7N, drives are controlled directly from the CPU.

Table 13 Hardware Controller Options

Product ID (PID)	PID Description
Controllers for Internal Drives	
HCI-SAS-M7T	Cisco M7 12G SAS HBA for (16 Drives) ■ This SAS HBA supports up to 10 SAS/SATA SSDs operating at 3Gbps, 6Gbps, and 12Gbps. ■ No RAID support ■ Supports JBOD or pass-through mode ■ The 12G SAS HBA plugs directly into a dedicated slot.
Accessories/spare included with drive controller (For HCIAF220C-M7S): ■ HCI-RDBKT-22XM7 is included with the selection of HCI-SAS-M7T drive controller.	

Approved Configurations

■   The Cisco 12G SAS HBA supports up to 10 internal drives with JBOD support.

STEP 7 SELECT DRIVES (REQUIRED)

The standard disk drive features are:

- 2.5-inch small form factor
- Hot-pluggable
- Drives come mounted in sleds

Select Drives - HCIAF220C-M7SN (All-NVMe)

The available drives are listed in *Table 14*.

> **NOTE:** Nutanix AOS supports a maximum of 216TB raw capacity per node for NCI use case

Table 14 Available Hot-Pluggable Sled-Mounted Drives

Product ID (PID)	PID Description	Drive Type	Capacity
Front Capacity Drive			
HCI-NVME4-1920	1.9TB 2.5in U.2 15mm P5520 Hg Perf Med End NVMe	NVMe	1.9TB
HCI-NVME4-3840	3.8TB 2.5in U.2 15mm P5520 Hg Perf Med End NVMe	NVMe	3.8TB
HCI-NVME4-7680	7.6TB 2.5in U.2 15mm P5520 Hg Perf Med End NVMe	NVMe	7.6TB
HCI-NVME4-15360	15.3TB 2.5in U.2 15mm P5520 Hg Perf Med End NVMe	NVMe	15.3TB
Boot Drive			
HCI-M2-240G	240GB M.2 SATA Micron G2 SSD	SATA	240GB
HCI-M2-480G	480GB M.2 SATA SSD	SATA	480GB
HCI-M2-I240GB	240GB M.2 Boot SATA Intel SSD	SATA	240GB
HCI-M2-I480GB	480GB M.2 Boot SATA Intel SSD	SATA	480GB
NOTE: Cisco uses solid state drives (SSDs) from a number of vendors. All solid state drives (SSDs) are subject to physical write limits and have varying maximum usage limitation specifications set by the manufacturer. Cisco will not replace any solid state drives (SSDs) that have exceeded any maximum usage specifications set by Cisco or the manufacturer, as determined solely by Cisco.			

Approved Configurations

- Two to ten capacity drives
- Two boot drives with M.2 Raid controller

Select Drives - HCIAF220C-M7S (All-Flash)

The available drives are listed in *Table 15*

⚠️ **CAUTION:** Cisco uses solid state drives (SSDs) from a number of vendors. All solid state drives (SSDs) are subject to physical write limits and have varying maximum usage limitation specifications set by the manufacturer. Cisco will not replace any solid state drives (SSDs) that have exceeded any maximum usage specifications set by Cisco or the manufacturer, as determined solely by Cisco.

Table 15 Available Hot-Pluggable Sled-Mounted Drives

Product ID (PID)	PID Description	Drive Type	Capacity
Front Capacity Drive			
HCI-SD19T6S1X-EV	1.9TB 2.5 inch Enterprise Value 6G SATA SSD (1x DWPD)	SATA	1.9TB
HCI-SD19TBM1X-EV	1.9TB 2.5in Enter Value 6G SATA Micron G2 SSD	SATA	1.9TB
HCI-SD38T6S1X-EV	3.8TB 2.5 inch Enterprise Value 6G SATA SSD (1x DWPD)	SATA	3.8TB
HCI-SD38T6I1X-EV	3.8TB 2.5in Enter Value 6G SATA Intel SSD (1x DWPD)	SATA	3.8TB
HCI-SD38TBM1X-EV	3.8TB 2.5in Enter Value 6G SATA Micron G2 SSD	SATA	3.8TB
HCI-SD19TKA1X-EV	1.9TB 2.5in Enter Value 12G SAS Kioxia G2 SSD (1x DWPD)	SAS	1.9TB
HCI-SD38TKA1X-EV	3.8TB 2.5in Enter Value 12G SAS Kioxia G2 SSD (1x DWPD)	SAS	3.8TB
HCI-SD76T6S1X-EV	7.6TB 2.5 inch Enterprise Value 6G SATA SSD (1x DWPD)	SAS	7.6TB
HCI-SD76TKA1X-EV	7.6TB 2.5in Enter Value 12G SAS Kioxia G2 SSD (1x DWPD)	SAS	7.6TB
HCI-SD15TKA1X-EV	15.3TB 2.5in Enter Value 12G SAS Kioxia G2 SSD (1x DWPD)	SAS	15.3TB
Front SED Capacity Drive			
HCI-SD38TBKANK9	3.8TB 2.5in Enter Value 12G SAS Kioxia G2 SSD (SED-FIPS) (1 DWPD)	SAS	3.8TB
HCI-SD76TBKANK9	7.6TB 2.5in Enter Value 12G SAS Kioxia G2 SSD (SED-FIPS) (1 DWPD)	SAS	7.6TB
Boot Drives			
HCI-M2-240G	240GB M.2 SATA Micron G2 SSD	SATA	240GB
HCI-M2-480G	480GB M.2 SATA SSD	SATA	480GB
HCI-M2-I240GB	240GB M.2 Boot SATA Intel SSD	SATA	240GB
HCI-M2-I480GB	480GB M.2 Boot SATA Intel SSD	SATA	480GB
HCI-M2-HWRAID	Cisco Boot optimized M.2 Raid controller		

Approved Configurations

■ Two to ten capacity drives

■ Two boot drives with M.2 Raid controller

> **NOTE:**
>
> ■ Dual M.2 SATA SSD with the HW RAID controller is the only supported boot configuration for this solution.
>
> ■ The Boot-Optimized RAID controller supports AHV and VMware Operating Systems.
>
> ■ UCSM 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.
>
> ■ Hot-plug replacement is not supported. The server must be powered off.
>
> ■ See *Figure 8 on page 98* for the location of the module connector on the motherboard. This connector accepts the boot-optimized RAID controller.

Caveats

SED drives can not be mixed with the **non-SED** drives.

Cisco Compute Hyperconverged with Nutanix

STEP 8 SELECT CISCO COMPUTE HYPERCONVERGED CONNECTIVITY (REQUIRED)

A. FI Managed Mode - HCI connectivity:

The following connectivity and cards options are available, if you select the FI Managed Mode from the *STEP 2 SELECT MANAGMENT MODE (REQUIRED)*.

Select Connectivity

The available connectivity are listed in *Table 16*.

> **NOTE:**
> - HCI MLOM Connectivity (HCI-MLOM) is mandatory for this solution.
> - Minimum and maximum one MLOM card is available from the *Table 17*.
> - Supported configuration maximum is Single MLOM + Single VIC (select VIC under the riser PCIe VIC card option from *Table 20*).
> - Additional NIC cards can be selected for user VM network traffic and will be directly connected to ToR (top of the rack), select NIC under the riser PCIe NIC options *Table 20*.

Table 16 Cisco Compute Hyperconverged Connectivity

Product ID (PID)	Description	Max cards available per node	Requirement
HCI-MLOM	Cisco VIC Connectivity	1	1 mLOM (Mandatory) + 1 PCIe VIC (optional) (select from *Table 17*)

The available cards for the Cisco Compute Hyperconverged MLOM are listed in *Table 17*

Table 17 Available Cards for the Cisco Compute Hyperconverged MLOM Connectivity

Product ID (PID)	Description	Location	Card Size[1]
MLOM Cards			
HCI-M-V5Q50G	Cisco VIC 15428 4x 10/25/50G mLOM C-Series	mLOM	HHHL, SS
HCI-M-V5D200G	Cisco VIC 15238 2x 40/100/200G mLOM C-Series	mLOM	HHHL, SS
HCI-M-V5Q50GV2	Cisco VIC 15427 4x 10/25/50G mLOM C-Series w/Secure Boot	mLOM	HHHL, SS
HCI-M-V5D200GV2	Cisco VIC 15237 2x 40/100/200G mLOM C-Series w/Secure Boot	mLOM	HHHL, SS

Notes:

1. HHHL = half-height, half-length; FHHL = full-height, half-length; SS = single-slot; DS = double-slot. SFF = small form factor.

B. Intersight Standalone Mode (IS Managed) - HCI connectivity:

Golden Rule: Mixing VIC and NIC in same server/cluster is not supported.

The following connectivity options are available, if you select the Intersight Standalone Mode (IS Managed) from the *STEP 2 SELECT MANAGMENT MODE (REQUIRED)*.

Select Connectivity

The available connectivity are listed in *Table 18*.

NOTE:
- Either Cisco VIC Connectivity (HCI-MLOM) **or** Third Party NIC Connectivity connectivity (HCI-PCIE) is mandatory for this solution.
- Use HCI-MLOM for VIC based connectivity and HCI-PCIE for NIC based connectivity.
- Minimum and maximum **one** MLOM card is available from the *Table 19*.
- When HCI-MLOM is selected up to two additional VIC can be selected from the *Table 20*.
- When HCI-PCIE is selected up to two additional NIC can be selected from the table *Table 20*.

Table 18 Cisco Compute Hyperconverged Connectivity

Product ID (PID)	Description	Max cards available per node	Requirement
HCI-MLOM	Cisco VIC Connectivity	1 MLOM VIC + 2 PCIe VIC	Select from MLOM VIC *Table 19* and additional VIC in the riser slot from the *Table 20*
HCI-PCIE	Third Party NIC Connectivity	3 dual port or 2 quad port in PCIe riser slot	Select NIC cards under riser from *Table 20*

The available cards for the MLOM connectivity are listed in *Table 19*.

Table 19 Available Cards for the Cisco Compute Hyperconverged MLOM Connectivity

Product ID (PID)	Description	Location	Card Size[1]
MLOM Cards			
HCI-M-V5Q50G	Cisco VIC 15428 4x 10/25/50G mLOM C-Series	mLOM	HHHL, SS
HCI-M-V5D200G	Cisco VIC 15238 2x 40/100/200G mLOM C-Series	mLOM	HHHL, SS
HCI-M-V5Q50GV2	Cisco VIC 15427 4x 10/25/50G mLOM C-Series w/Secure Boot	mLOM	HHHL, SS
HCI-M-V5D200GV2	Cisco VIC 15237 2x 40/100/200G mLOM C-Series w/Secure Boot	mLOM	HHHL, SS

Notes:
1. HHHL = half-height, half-length; FHHL = full-height, half-length; SS = single-slot; DS = double-slot. SFF = small form factor.

STEP 9 SELECT PCIe CARDS (OPTIONAL FOR FI MANAGED MODE)

For up-to-date server compatibility, please check the Hardware and Software compatibility list (HCL) at https://ucshcltool.cloudapps.cisco.com/public/.

The standard PCIe card offerings are:

■ Virtual Interface Cards (VICs)

■ Network Interface Cards (NICs)

Select Option Cards

The available PCIe cards are listed in *Table 20*

Table 20 Available PCIe Option Cards

Product ID (PID)	PID Description	Location	Card Size[1]	Supported Management Mode
Virtual Interface Cards (VICs)				
HCI-P-V5Q50G	Cisco UCS VIC 15425 Quad Port 10/25/50G CNA PCIE	Riser 1A (slot 2) or Riser 3A (slot 3)	HHHL, SS	IS Managed Mode FI Managed Mode
HCI-P-V5D200G	Cisco VIC 15235 Dual Port 40/100/200G CNA PCIE	Riser 1A (slot 2) or Riser 3A (slot 3)	HHHL, SS	IS Managed Mode FI Managed Mode
Network Interface Cards (NICs)				
10GbE NICs				
HCI-PCIEID10GF	Intel X710-DA2 Dual Port 10Gb SFP+ NIC	Riser 1, 2, or 3	HHHL, SS	FI Managed Mode (User VM traffic only)
HCI-PCIEIQ10GF	Intel X710 quad-port 10G SFP+ NIC	Riser 1, 2, or 3	HHHL, SS	FI Managed Mode (User VM traffic only)
HCI-P-ID10GC	Cisco-Intel X710T2LG 2x10GBE RJ45 PCIe NIC	Riser 1, 2, or 3	HHHL, SS	FI Managed Mode (User VM traffic only)
HCI-P-IQ10GC	Cisco-Intel X710T4LG 4x10GBE RJ45 PCIe NIC	Riser 1, 2, or 3	HHHL, SS	FI Managed Mode (User VM traffic only)
25GbE NICs				
HCI-P-I8D25GF[2]	Cisco-Intel E810XXVDA2 2x25/10GBE SFP28 PCIe NIC	Riser 1A (slot 1 or 2) and Riser 2A (slot 2), Riser 3A (slot 3)	HHHL, SS	IS Managed Mode FI Managed Mode (User VM traffic only)
HCI-P-I8Q25GF[2]	Cisco-Intel E810XXVDA4L 4x25/10GBE SFP28 PCIe NIC	Riser 1C or 3C	FHHL, SS	IS Managed Mode FI Managed Mode (User VM traffic only)
100GbE NICs				
HCI-P-I8D100GF[2]	Cisco-Intel E810CQDA2 2x100 GbE QSFP28 PCIe NIC	Riser 1, 2, or 3	HHHL, SS	FI Managed Mode (User VM traffic only)

Notes:

1. HHHL = half-height, half-length; FHHL = full-height, half-length; SS = single-slot; DS = double-slot. SFF = small form factor.
2. When present, the recommended Fan Speed Control policy setting is balanced.

Approved Configurations

(1) 1-CPU Systems

■ You can select a maximum of one of the PCIe option cards listed in *Table 20* to be installed in Riser 1 or Riser 2. Riser 1 and Riser 2 is controlled by CPU 1. Risers 3 cannot be used in a 1-CPU system.

(2) 2-CPU Systems

■ You can select a maximum of one of the PCIe option cards listed in *Table 20* for a two-riser system or a three-riser system. Risers 1 and 2 are controlled by CPU 1 and riser 3 is controlled by CPU 2.

Caveats

■ For 1-CPU systems:

— Half Height Riser 1 and Riser 2 is supported. Full Height Riser 1 is supported

— Only a single plug-in PCIe VIC card is supported and must be installed in Riser 1.

■ For 2-CPU systems:

— All risers (Risers 1, 2, and 3) are supported

ORDER OPTIONAL PCIe OPTION CARD ACCESSORIES

■ At the time of first launch, the 3rd Party Ethernet adapters were tested for interoperability with an initial selection of Optical Modules and Cables. Please check the Product Briefs for this initial list of interoperable optics and cables at https://www.cisco.com/c/en/us/products/servers-unified-computing/third-party-adapters-listing.html.

■ For list of supported optics and cables for VIC 15000 series , refer to the VIC 15000 series data sheet at https://www.cisco.com/c/en/us/products/collateral/interfaces-modules/unified-computing-system-adapters/HCI-vic-15000-series-ds.htm

— Cisco Transceiver Module Group (TMG) conducts tests with Cisco optics and cables and publishes the results in the TMG Compatibility Matrix. The latest compatibility with optical modules and DACs can be found at https://tmgmatrix.cisco.com/

STEP 10 ORDER GPU CARDS (OPTIONAL)

Select GPU Options

The available GPU PCIe options are listed in *Table 21*.

CAUTION:

■ Gen4 and Gen5 risers cannot be mixed, for example: If HCI-RIS2A-C22XM7 (GEN4) is selected, cannot select HCI-RIS2B-C22XM7 (GEN5)

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.

Table 21 Available PCIe GPU Cards[1]

Product ID (PID)	PID Description	Card Size	Maximum cards Per node	Riser Compatibility
HCI-GPU-L4	NVIDIA L4:70W, 24GB, 1-slot HHHL GPU	HHHL, single-wide	3	Gen 4 & Gen 5 Half Height and Full Hight Riser

Notes:

1. Refer to **C220 M7 installation guide** for more details.

STEP 11 ORDER POWER SUPPLY (REQUIRED)

Power supplies share a common electrical and physical design that allows for hot-plug and tool-less installation into M7 HCI-series servers. Each power supply is certified for high-efficiency operation and offers multiple power output options. This allows users to "right-size" based on server configuration, which improves power efficiency, lowers overall energy costs and avoids stranded capacity in the data center.

Use the power calculator at the following link to determine the needed power based on the options chosen (CPUs, drives, memory, and so on):

http://ucspowercalc.cisco.com

WARNING:

■ Starting 1st January 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.

■ DC PSUs are not impacted by Lot 9 Regulation and are EU/UK Lot 9 compliant

Table 22 Power Supply

Product ID (PID)	PID Description
PSU (Input High Line 210VAC)	
HCI-PSU1-770W	UCS C-series 770W AC PSU (Not EU/UK Lot 9 Compliant)
HCI-PSUV2-1050DC	Cisco UCS 1050W -48V DC Power Supply for Rack Server **Platinum**
HCI-PSU1-1200W	1200W Titanium power supply for C-Series Servers **Titanium**
HCI-PSU1-1600W	UCS 1600W AC PSU **Platinum** (Not EU/UK Lot 9 Compliant)
HCI-PSU1-2300W	Cisco UCS 2300W AC Power Supply for Rack Servers **Titanium**
PSU (Input Low Line 110VAC)	
HCI-PSU1-770W	UCS C-series 770W AC PSU (Not EU/UK Lot 9 Compliant)
HCI-PSU1-1200W	1200W Titanium power supply for C-Series Servers **Titanium**
HCI-PSU1-2300W	Cisco UCS 2300W AC Power Supply for Rack Servers **Titanium**

NOTE:

■ In a server with two power supplies, both power supplies must be identical.

■ Refer to *Power Specifications, page 105* section for the full details on the each power supply.

STEP 12 SELECT INPUT POWER CORD(s) (REQUIRED)

Using *Table 23* and *Table 24*, select the appropriate AC power cords. You can select a minimum of no power cords and a maximum of two. If you select the option R2XX-DMYMPWRCORD, no power cord is shipped with the server.

> **NOTE:** *Table 23* lists the power cords for servers that use power supplies less than 2300 W. *Table 24* lists the power cords for servers that use 2300 W power supplies. Note that the power cords for 2300 W power supplies use a C19 connector so they only fit the 2300 W power supply connector.
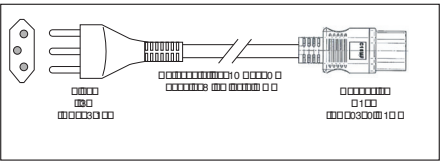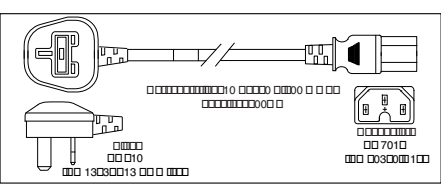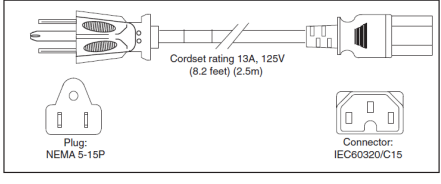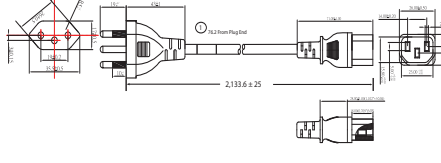
Table 23 Available Power Cords (for server PSUs less than 2300 W)

Product ID (PID)	PID Description	Images
NO-POWER-CORD	ECO friendly green option, no power cable will be shipped	
CAB-48DC40A8AWG	C-Series -48VDC PSU Power Cord, 3.5M, 3 Wire, 8AWG, 40A	
CAB-N5K6A-NA	Power Cord, 200/240V 6A, North America	
CAB-AC-L620-C13	AC Power Cord, NEMA L6-20 - C13, 2M/6.5ft	
CAB-C13-CBN	CABASY,WIRE,JUMPER CORD, 27" L, C13/C14, 10A/250V	
CAB-C13-C14-2M	CABASY,WIRE,JUMPER CORD, PWR, 2 Meter, C13/C14,10A/250V	

Table 23 Available Power Cords (for server PSUs less than 2300 W)

Product ID (PID)	PID Description	Images
CAB-C13-C14-AC	CORD,PWR,JMP,IEC60320/C14,IEC60320/C13, 3.0M	
CAB-250V-10A-AR	Power Cord, 250V, 10A, Argentina	
CAB-9K10A-AU	Power Cord, 250VAC 10A 3112 Plug, Australia	
CAB-250V-10A-CN	AC Power Cord - 250V, 10A - PRC	
CAB-9K10A-EU	Power Cord, 250VAC 10A CEE 7/7 Plug, EU	
CAB-250V-10A-ID	Power Cord, 250V, 10A, India	
CAB-C13-C14-3M-IN	Power Cord Jumper, C13-C14 Connectors, 3 Meter Length, India	Image not available
CAB-C13-C14-IN	Power Cord Jumper,C13-C14 Connectors,1.4 Meter Length, India	Image not available
CAB-250V-10A-IS	Power Cord, SFS, 250V, 10A, Israel	

Table 23 Available Power Cords (for server PSUs less than 2300 W)

Product ID (PID)	PID Description	Images
CAB-9K10A-IT	Power Cord, 250VAC 10A CEI 23-16/VII Plug, Italy	
CAB-9K10A-SW	Power Cord, 250VAC 10A MP232 Plug, Switzerland	
CAB-9K10A-UK	Power Cord, 250VAC 10A BS1363 Plug (13 A fuse), UK	
CAB-9K12A-NA[1]	Power Cord, 125VAC 13A NEMA 5-15 Plug, North America	
CAB-250V-10A-BR	Power Cord - 250V, 10A - Brazil	
CAB-C13C142M-JP	Power Cord C13-C14, 2M/6.5ft Japan PSE mark	Image not available
CAB-9K10A-KOR[1]	Power Cord, 125VAC 13A KSC8305 Plug, Korea	Image not available
CAB-ACTW	AC Power Cord (Taiwan), C13, EL 302, 2.3M	Image not available
CAB-JPN-3PIN	Japan, 90-125VAC 12A NEMA 5-15 Plug, 2.4m	Image not available
CAB-48DC40A-INT	C-Series -48VDC PSU PWR Cord, 3.5M, 3 Wire, 8AWG, 40A (INT)	Image not available
CAB-48DC-40A-AS	C-Series -48VDC PSU PWR Cord, 3.5M, 3Wire, 8AWG, 40A (AS/NZ)	Image not available

Notes:

1. This power cord is rated to 125V and only supported for PSU rated at 1050W or less

Table 24 Available Power Cords (for servers with 2300 W PSUs)

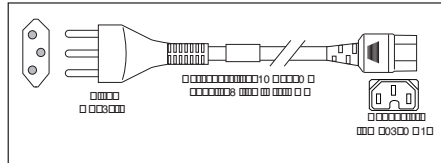| Product ID (PID)	PID Description	Images
CAB-C19-CBN	Cabinet Jumper Power Cord, 250 VAC 16A, C20-C19 Connectors	Not applicable
CAB-S132-C19-ISRL	S132 to IEC-C19 14ft Israeli	Image not available
CAB-IR2073-C19-AR	IRSM 2073 to IEC-C19 14ft Argen	Image not available
CAB-BS1363-C19-UK	BS-1363 to IEC-C19 14ft UK	Image not available
CAB-SABS-C19-IND	SABS 164-1 to IEC-C19 India	Image not available
CAB-C2316-C19-IT	CEI 23-16 to IEC-C19 14ft Italy	Image not available
CAB-L520P-C19-US	NEMA L5-20 to IEC-C19 6ft US	Image not available
CAB-US515P-C19-US	NEMA 5-15 to IEC-C19 13ft US	Image not available
CAB-US520-C19-US	NEMA 5-20 to IEC-C19 14ft US	Image not available
CAB-US620P-C19-US	NEMA 6-20 to IEC-C19 13ft US	Image not available

Cisco Compute Hyperconverged with Nutanix

STEP 13 ORDER TOOL-LESS RAIL KIT (REQUIRED) AND REVERSIBLE CABLE MANAGEMENT ARM (OPTIONAL)

■ Tool-less Rail Kit:

Select a tool-less rail kit (or no rail kit) from *Table 25*.

> **NOTE:**
> ■ Cisco recommends a minimum quantity of 1 Rail Kit
> ■ If you plan to rackmount your Cisco Compute Hyperconverged HCIAF220C M7 All-NVMe/All-Flash Servers, you must order a tool-less rail kit.

Table 25 Tool-less Rail Kit Options

Product ID (PID)	PID Description
HCI-RAIL-M7	Ball Bearing Rail Kit for C220 & C240 M6/M7 rack servers
HCI-RAIL-NONE	No rail kit option

■ 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 26*.

> **NOTE:** If you plan to rackmount your Cisco Compute Hyperconverged HCIAF220C M7 All-NVMe/All-Flash Servers, you must order a tool-less rail kit. The same rail kits and CMAs are used for M6 and M7 servers.

Table 26 Cable Management Arm

Product ID (PID)	PID Description
HCI-CMA-C220M7	Reversible CMA for C220 M7 ball bearing rail kit

For more information about the tool-less rail kit and cable management arm, check the *Cisco Compute Hyperconverged HCIAF220C M7 All-NVMe/All-Flash Servers Installation Guide*.

STEP 14 ORDER SECURITY DEVICES (REQUIRED)

A Trusted Platform Module (TPM) is a computer chip (microcontroller) that can securely store artifacts used to authenticate the platform (server). These artifacts can include passwords, certificates, or encryption keys. A TPM can also be used to store platform measurements that help ensure that the platform remains trustworthy. Authentication (ensuring that the platform can prove that it is what it claims to be) and attestation (a process helping to prove that a platform is trustworthy and has not been breached) are necessary steps to ensure safer computing in all environments.

A chassis intrusion switch gives a notification of any unauthorized mechanical access into the server.

The security device ordering information is listed in *Table 27*

NOTE:

■ The TPM module used in this system conforms to TPM v1.2 and 2.0, as defined by the Trusted Computing Group (TCG). It is also SPI-based.

■ TPM installation is supported after-factory. However, a TPM installs with a one-way screw and cannot be replaced, upgraded, or moved to another server. If a server with a TPM is returned, the replacement server must be ordered with a new TPM.

Table 27 Security Devices

Product ID (PID)	PID Description
HCI-TPM-002C	Trusted Platform Module 2.0 for UCS servers
HCI-INT-SW02	C220 and C240 M7 Chassis Intrusion Switch
HCI-TPM-OPT-OUT	OPT OUT, TPM 2.0, TCG, FIPS140-2, CC EAL4+ Certified[1]

Notes:

1. Please note that Microsoft certification requires a TPM 2.0 for bare-metal or guest VM deployments. Opt-out of the TPM 2.0 voids the Microsoft certification

STEP 15   SELECT HYPERVISOR

Cisco Hypervisor options are listed in *Table 28*.

Table 28 Hypervisor

Product ID (PID)	PID Description
HCI-AOSAHV-67-SWK9	Cisco Compute Hyperconverged Acropolis Operating System (AOS) Acropolis Hypervisor (AHV) 6.7 Software

NOTE:

■ This solution supports AHV hypervisor option. The Nutanix Foundation VM will perform bare-metal imaging for either hypervisor at time of install for FI management mode (HCI-FI-MANAGED-M6).

■ For IS Management mode (HCI-IS-MANAGED-M6) bare metal image can be performed thorough Prism Central.

STEP 16 SELECT NUTANIX SOFTWARE AND NUTANIX PROFESSIONAL SERVICES

       Cisco Compute Hyperconverged with Nutanix

Top Level Nutanix Software And Professional Services PIDs

Table 29 Top Level Nutanix Software And Professional Services PIDs

ATO Product ID (PID)	Description
NTX-SW	Nutanix Software 3Y and above **NOTE:** Please refer to the complete list of *Nutanix Software PIDs and Description, page 52*
NTX-SW-1Y	Nutanix Software 1Y **NOTE:** Please refer to the complete list of *Nutanix Software PIDs and Description, page 52*
NTX-SW-PS	Nutanix Professional Service **NOTE:** Please refer to the complete list of *Professional Services PIDs and Description, page 73*

NOTE:

(1) 1 Year Subscription term:

- All Nutanix software package subscription requires **mandatory** attach of Nutanix Professional Services.

(2) 3 Year Subscription term:

- For Nutanix Cloud Infrastructure (NCI) software, it is **recommended** to attach Nutanix Professional Services during ordering.
- For Nutanix Cloud Manager (NCM) software, only Professional (PRO) subscription and Ultimate (ULT) subscription requires **mandatory** Nutanix Professional Services.

(3) Any future expansion opportunity does not require mandatory Nutanix Professional Services attach.

(4) Cisco and Nutanix products are each subject to their own terms and conditions, including support timelines and milestones. This includes the Nutanix Cloud Platform software and qualified Cisco UCS hardware platforms sold together as part of the Cisco Compute Hyperconverged with Nutanix solution. Carefully review Nutanix's EoL portal for support timelines by hardware platform. Cisco's UCS hardware support milestones may not align with Nutanix's support milestones. Therefore, it is important to plan your hardware and software refresh cycles based on the earlier of the two dates (hardware support from Cisco and software support from Nutanix). It is your responsibility to check the Nutanix software term length desired against the support time frames for the quoted UCS hardware platform.

Nutanix licenses are transferable to newer generation Cisco UCS platforms subject to Nutanix's end user license agreement. Refer to Nutanix's Support FAQs for details and definitions of Nutanix's End of Life and End of Support Life milestones. Refer to Cisco's EoL policy for details and definitions of Cisco's End of Life and Last Date of Support milestones.

Cisco Compute Hyperconverged with Nutanix

Nutanix Software And Professional Services PID Decoder

Table 30.0 Nutanix Software PID Decoder (WW-XX-YY-ZZ)

Identifier#1 (WW)	Identifier#2 (XX)	Identifier#3 (YY)	Identifier#4 (ZZ)
Nutanix Product Family: NT	Nutanix Software Type/Category: **NCI:** Nutanix Cloud Infrastructure **NCI-D:** Nutanix Cloud Infrastructure Data **NCI-E:** Nutanix Cloud Infrastructure Edge **NCM:** Nutanix Cloud Manager **NCP:** Nutanix Cloud Platform **NUS:** Nutanix Unified Storage™ **NDL:** Nutanix Data Lens **EUC:** End User Computing	License Tiers: **STR:** Starter **PRO:** Professional **ULT:** Ultimate	Support Tier: **PR:** Production **MC:** Mission Critical **FP:** US Federal Production **FM:** US Federal Mission Critical
NOTE: Note for example "NT-NCI-STR-PR" PID can be decoded as, NT=Nutanix, NCI=Nutanix Cloud Infrastructure, STR=Starter, PR=Production			

Table 30.1 Nutanix Professional Services PID Decoder (WW-XX-YY-ZZ)

Identifier#1 (WW)	Identifier#2 (XX)	Identifier#3 (YY)	Identifier#4 (ZZ)
Nutanix Product Family: NT	Nutanix Professional Services Offering: **Design** W-DS: NCI Design Workshop W-SSD: NCM Self-Service Design Workshop W-OD: NCM Intelligent Operations Design Workshop **Deploy** S-DP: NCI Cluster Deployment or Expansion S-OP: NCM Intelligent Operations Deployment F-SS: FastTrack for NCM Self-Service F-CG: FastTrack for NCM Cost Governance **Migrate** W-MG: Virtual Machine Migration Workshop S-MG-VM: Virtual Machine Migration **Custom** FLEX-CST-CR: Flexible Credits	Nutanix Product Tier: **STR:** Starter **PRO:** Professional **ULT:** Ultimate	Nutanix Professional Services Option: **Design** ED: Enhanced Documentation SD: Standard Documentation **Deploy** AV-PB: Pro AHV Nodes Base AV-PV: Pro AHV Nodes Variable EX-PB: Pro ESX Nodes Base EX-PV: Pro ESX Nodes Variable AV-SB: Starter AHV Nodes Base AV-SV: Starter AHV Nodes Variable EX-SB: Starter ESX Nodes Base EX-SV: Starter ESX Nodes Variable AVB: Starter AHV Nodes Base AVV: Starter AHV Nodes Variable EXB: Starter ESX Nodes Base EXV: Starter ESX Nodes Variable AV-UB: Ultimate AHV Nodes Base AV-UV: Ultimate AHV Nodes Variable EX-UB: Ultimate ESX Nodes Base EX-UV: Ultimate ESX Nodes Variable
NOTE: Note for example "NT-W-DS-STR-SD" PID can be decoded as, NT=Nutanix, W-DS= Design Workshop, STR=Starter, SD= Standard Documentation			

Nutanix Software PIDs and Description

Table 31 Software Options and Metric

Software Option	Software Description	Metric
Nutanix Cloud Infrastructure (NCI)	NCI is a complete software stack to unify your hybrid cloud infrastructure including compute, storage and network, hypervisors, and containers, in public or enterprise clouds	Per Core
Nutanix Cloud Infrastructure Data (NCI-D)	Delivers rich data and storage services but does not include Nutanix compute and networking capabilities. No support for AHV	Per Core
Nutanix Cloud Infrastructure Edge (NCI-Edge)	Nutanix Cloud Infrastructure – Edge (NCI-Edge) provides a distributed infrastructure platform for small edge deployments. NCI-Edge provides the same capabilities as NCI, combining compute, storage, and networking resources from a cluster of servers into a single logical pool with integrated resiliency, security, performance, and simplified administration.	Per VM
Nutanix Cloud Manager (NCM)	NCM offers intelligent operations, self service and orchestration, visibility and governance of spend, security and teams	Per Core
Nutanix Cloud Platform (NCP)	Bundle for NCI and NCM	Per Core
Nutanix Unified Storage™ (NUS)	Nutanix Unified Storage™ (NUS) is a software-defined data services platform that consolidates the management and protection of siloed block, file, and object storage into a single, unified platform.	Per TIB
Nutanix Data Lens (NDL)	Nutanix Data Lens is a SaaS-based cyberstorage solution offering ransomware resilience and global data visibility for unstructured data on Nutanix Unified Storage (NUS).	Per TIB
End User Computing (EUC)	on-prem VDI and Desktop as a Service (DaaS) use cases	Per User

Table 32 Nutanix Software License Tiers

NCI Starter	NCI Professional	NCI Ultimate
Core set of software functionality	Rich data services, resilience and management features	Full suite of Nutanix software capabilities to tackle complex infrastructure challenges
Ideal for: Small-scale deployments with a limited set of workloads (on-prem only)	**Ideal for:** Running multiple applications or large-scale single workload deployments (on-prem or in public clouds)	**Ideal for:** Multi-site deployments and advanced security requirements (on-prem or in public clouds)

NOTE:

- Prism Central will be required for all licensing actions.
- Licenses are portable across Cisco hardware platforms in HCL.

(1) Nutanix Cloud Infrastructure (NCI):

Nutanix Cloud Infrastructure (NCI) converges the entire datacenter stack, including compute, storage, storage networking, and virtualization and is at the core of creating a hyperconverged infrastructure environment. Complex and expensive legacy infrastructure is replaced by NCI, running on industry-standard servers loaded with the latest hardware technologies. This allows enterprises to deploy what you need for the short term, and scale on-demand as infrastructure needs increase over time. Each server, often referred to as a node in the context of HCI, is an x86 platform with direct-attached storage drives. NCI software runs on each node, distributing all operating functions across the cluster for superior performance and resilience, and enabling seamless scalability.

NOTE:

- For more information about Nutanix Cloud Infrastructure (NCI), please visit https://www.nutanix.com/products/nutanix-cloud-infrastructure
- For more information about Nutanix Cloud Platform software options, please visit https://www.nutanix.com/products/cloud-platform/software-options
- Please note that the Federal Support program is reserved for US Federal accounts. US Federal accounts must select Federal Support Tier for the order to be fulfilled. If a non-Federal account selects a Federal Support program, Nutanix may not fulfill the order. Additionally, Nutanix's Mixed Support Level Guidelines(https://www.nutanix.com/support-services/product-support/support-policies-and-faqs?show=accordion-4) requires all software assets within a cluster to have the same support level, else software support will default to the lower option.
- Sellers in the Federal space need to ensure they have the Federal Support SKU's on the quote and order. All orders without the Federal Support SKU's will be rejected by Nutanix.Refer this Knowledge base article for more info: https://computekb.cisco.com/article/nutanix-support-for-federal-customers.html

Table 33.0 Nutanix Cloud Infrastructure (NCI)

Product ID (PID)	PID Description
STR - STARTER	
NT-NCI-STR-PR	Subscription, Nutanix Cloud Infrastructure (NCI) Starter Software License & Production Software Support Service for 1 CPU Core
NT-NCI-STR-MC	Subscription, Nutanix Cloud Infrastructure (NCI) Starter Software License & Mission Critical Software Support Service for 1 CPU Core
NT-NCI-STR-FP	Subscription, Nutanix Cloud Infrastructure (NCI) Starter Software License & Federal Production Software Support Service for 1 CPU Core
NT-NCI-STR-FM	Subscription, Nutanix Cloud Infrastructure (NCI) Starter Software License & Federal Mission Critical Software Support Service for 1 CPU Core
PRO - PROFESSIONAL	
NT-NCI-PRO-PR	Subscription, Nutanix Cloud Infrastructure (NCI) Pro Software License & Production Software Support Service for 1 CPU Core
NT-NCI-PRO-MC	Subscription, Nutanix Cloud Infrastructure (NCI) Pro Software License & Mission Critical Software Support Service for 1 CPU Core

Table 33.0 Nutanix Cloud Infrastructure (NCI)

NT-NCI-PRO-FP	Subscription, Nutanix Cloud Infrastructure (NCI) Pro Software License & Federal Production Software Support Service for 1 CPU Core
NT-NCI-PRO-FM	Subscription, Nutanix Cloud Infrastructure (NCI) Pro Software License & Federal Mission Critical Software Support Service for 1 CPU Core
ULT - ULTIMATE	
NT-NCI-ULT-PR	Subscription, Nutanix Cloud Infrastructure (NCI) Ultimate Software License & Production Software Support Service for 1 CPU Core
NT-NCI-ULT-MC	Subscription, Nutanix Cloud Infrastructure (NCI) Ultimate Software License & Mission Critical Software Support Service for 1 CPU Core
NT-NCI-ULT-FP	Subscription, Nutanix Cloud Infrastructure (NCI) Ultimate Software License & Federal Production Software Support Service for 1 CPU Core
NT-NCI-ULT-FM	Subscription, Nutanix Cloud Infrastructure (NCI) Ultimate Software License & Federal Mission Critical Software Support Service for 1 CPU Core
ADVANCED REPLICATION	
NT-A-NCI-ADR-PR	Subscription, Nutanix Cloud Infrastructure (NCI) Advanced Replication add-on Software License & Production Software Support Service for 1 CPU Core
NT-A-NCI-ADR-MC	Subscription, Nutanix Cloud Infrastructure (NCI) Advanced Replication add-on Software License & Mission Critical Software Support Service for 1 CPU Core
NT-A-NCI-ADR-FP	Subscription, Nutanix Cloud Infrastructure (NCI) Advanced Replication add-on Software License & Federal Production Software Support Service for 1 CPU Core
NT-A-NCI-ADR-FM	Subscription, Nutanix Cloud Infrastructure (NCI) Advanced Replication add-on Software License & Federal Mission Critical Software Support Service for 1 CPU Core
KUBERNETES	
NT-A-NCI-NKS-PR	Subscription, Nutanix Cloud Infrastructure (NCI) Kubernetes Engine add-on Software License & Production Software Support Service for 1 CPU Core
NT-A-NCI-NKS-MC	Subscription, Nutanix Cloud Infrastructure (NCI) Kubernetes Engine add-on Software License & Mission Critical Software Support Service for 1 CPU Core
NT-A-NCI-NKS-FP	Subscription, Nutanix Cloud Infrastructure (NCI) Kubernetes Engine add-on Software License & Federal Production Software Support Service for 1 CPU Core
NT-A-NCI-NKS-FM	Subscription, Nutanix Cloud Infrastructure (NCI) Kubernetes Engine add-on Software License & Federal Mission Critical Software Support Service for 1 CPU Core
SECURITY	
NT-A-NCI-SEC-PR	Subscription, Nutanix Cloud Infrastructure (NCI) Security add-on Software License & Production Software Support Service for 1 CPU Core
NT-A-NCI-SEC-MC	Subscription, Nutanix Cloud Infrastructure (NCI) Security add-on Software License & Mission Critical Software Support Service for 1 CPU Core

Table 33.0 Nutanix Cloud Infrastructure (NCI)

NT-A-NCI-SEC-FP	Subscription, Nutanix Cloud Infrastructure (NCI) Security add-on Software License & Federal Production Software Support Service for 1 CPU Core
NT-A-NCI-SEC-FM	Subscription, Nutanix Cloud Infrastructure (NCI) Security add-on Software License & Federal Mission Critical Software Support Service for 1 CPU Core

NOTE: The quantity of NCI-D license must match with total number for cores in hardware platforms.

Table 36.0, *Nutanix Software NCI, NCI-D, NCI-Edge, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 1 YEAR SUBSCRIPTION with professional services PID Mapping*

Table 36.1, *Nutanix Software NCI, NCI-D, NCI-Edge, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 3 YEAR SUBSCRIPTION with professional services PID Mapping*

(2) Nutanix Cloud Infrastructure Data (NCI-D):

Nutanix supports freedom of choice of hypervisor and container platform, by offering a version called NCI Data that delivers rich data and storage services but does not include Nutanix compute and networking capabilities. Support for Hypervisor specific features, such as GPU support on ESXi, is not impacted by NCI Data licensing tiers.

NOTE:

■ For more information about Nutanix Cloud Infrastructure (NCI), please visit https://www.nutanix.com/products/nutanix-cloud-infrastructure

■ For more information about Nutanix Cloud Platform software options, please visit https://www.nutanix.com/products/cloud-platform/software-options Please note, the grey rows in the software options table under NCI are not included in NCI Data.

■ Please note that the Federal Support program is reserved for US Federal accounts. US Federal accounts must select Federal Support Tier for the order to be fulfilled. If a non-Federal account selects a Federal Support program, Nutanix may not fulfill the order. Additionally, Nutanix's Mixed Support Level Guidelines(https://www.nutanix.com/support-services/product-support/support-policies-and-faqs?show=accordion-4) requires all software assets within a cluster to have the same support level, else software support will default to the lower option.

■ Sellers in the Federal space need to ensure they have the Federal Support SKU's on the quote and order. All orders without the Federal Support SKU's will be rejected by Nutanix.Refer this Knowledge base article for more info: https://computekb.cisco.com/article/nutanix-support-for-federal-customers.html

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Table 33.1 Nutanix Cloud Infrastructure Data (NCI-D)

Product ID (PID)	PID Description
STR - STARTER	
NT-NCI-D-STR-PR	Subscription, Nutanix Cloud Infrastructure Data (NCI-D) Starter Software License & Production Software Support Service for 1 CPU Core
NT-NCI-D-STR-MC	Subscription, Nutanix Cloud Infrastructure Data (NCI-D) Starter Software License & Mission Critical Software Support Service for 1 CPU Core
NT-NCI-D-STR-FP	Subscription, Nutanix Cloud Infrastructure Data (NCI-D) Starter Software License & Federal Production Software Support Service for 1 CPU Core
NT-NCI-D-STR-FM	Subscription, Nutanix Cloud Infrastructure Data (NCI-D) Starter Software License & Federal Mission Critical Software Support Service for 1 CPU Core
PRO - PROFESSIONAL	
NT-NCI-D-PRO-PR	Subscription, Nutanix Cloud Infrastructure Data (NCI-D) Pro Software License & Production Software Support Service for 1 CPU Core
NT-NCI-D-PRO-MC	Subscription, Nutanix Cloud Infrastructure Data (NCI-D) Pro Software License & Mission Critical Software Support Service for 1 CPU Core
NT-NCI-D-PRO-FP	Subscription, Nutanix Cloud Infrastructure Data (NCI-D) Pro Software License & Federal Production Software Support Service for 1 CPU Core

Table 33.1 Nutanix Cloud Infrastructure Data (NCI-D)

NT-NCI-D-PRO-FM	Subscription, Nutanix Cloud Infrastructure Data (NCI-D) Pro Software License & Federal Mission Critical Software Support Service for 1 CPU Core
ULT - ULTIMATE	
NT-NCI-D-ULT-PR	Subscription, Nutanix Cloud Infrastructure Data (NCI-D) Ultimate Software License & Production Software Support Service for 1 CPU Core
NT-NCI-D-ULT-MC	Subscription, Nutanix Cloud Infrastructure Data (NCI-D) Ultimate Software License & Mission Critical Software Support Service for 1 CPU Core
NT-NCI-D-ULT-FP	Subscription, Nutanix Cloud Infrastructure Data (NCI-D) Ultimate Software License & Federal Production Software Support Service for 1 CPU Core
NT-NCI-D-ULT-FM	Subscription, Nutanix Cloud Infrastructure Data (NCI-D) Ultimate Software License & Federal Mission Critical Software Support Service for 1 CPU Core
ADVANCED REPLICATION	
NT-A-NCI-D-ADR-PR	Subscription, Nutanix Cloud Infrastructure Data (NCI-D) Advanced Replication add-on Software License & Production Software Support Service for 1 CPU Core
NT-A-NCI-D-ADR-MC	Subscription, Nutanix Cloud Infrastructure Data (NCI-D) Advanced Replication add-on Software License & Mission Critical Software Support Service for 1 CPU Core
NT-A-NCI-D-ADR-FP	Subscription, Nutanix Cloud Infrastructure Data (NCI-D) Advanced Replication add-on Software License & Federal Production Software Support Service for 1 CPU Core
NT-A-NCI-D-ADR-FM	Subscription, Nutanix Cloud Infrastructure Data (NCI-D) Advanced Replication add-on Software License & Federal Mission Critical Software Support Service for 1 CPU Core
SECURITY	
NT-A-NCI-D-SEC-PR	Subscription, Nutanix Cloud Infrastructure Data (NCI-D) Security add-on Software License & Production Software Support Service for 1 CPU Core
NT-A-NCI-D-SEC-MC	Subscription, Nutanix Cloud Infrastructure Data (NCI-D) Security add-on Software License & Mission Critical Software Support Service for 1 CPU Core
NT-A-NCI-D-SEC-FP	Subscription, Nutanix Cloud Infrastructure Data (NCI-D) Security add-on Software License & Federal Production Software Support Service for 1 CPU Core
NT-A-NCI-D-SEC-FM	Subscription, Nutanix Cloud Infrastructure Data (NCI-D) Security add-on Software License & Federal Mission Critical Software Support Service for 1 CPU Core

NOTE: The quantity of NCI-D license must match with total number for cores in hardware platforms.

Table 36.0, *Nutanix Software NCI, NCI-D, NCI-Edge, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 1 YEAR SUBSCRIPTION with professional services PID Mapping*

Table 36.1, *Nutanix Software NCI, NCI-D, NCI-Edge, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 3 YEAR SUBSCRIPTION with professional services PID Mapping*

(3) Nutanix Cloud Infrastructure Edge (NCI-Edge):

Nutanix Cloud Infrastructure – Edge (NCI-Edge) provides a distributed infrastructure platform for small edge deployments. NCI-Edge provides the same capabilities as NCI, combining compute, storage, and networking resources from a cluster of servers into a single logical pool with integrated resiliency, security, performance, and simplified administration. With NCI-Edge, organizations can efficiently extend the Nutanix platform to remote office/branch office (ROBO) and other edge use cases.

- 1 TiB of NUS Pro per NCI-Edge cluster is included at no cost with NCI-Edge.

- NCI-Edge licenses must run on a dedicated licensed cluster with no core-based licensing. Mixing of NCI-Edge licenses with other types of NCI licensing within a cluster is not supported.

- NCI-Edge can be used with any cluster deployment type as long as the conditions mentioned are followed.

- Maximum nodes for the Edge cluster is 5.

NOTE:

- NCI-Edge is limited to a maximum of 25 VMs in a cluster, with each VM being limited to a maximum of 96GB of memory.

- For more information about Nutanix Cloud Infrastructure (NCI), please visit https://www.nutanix.com/products/nutanix-cloud-infrastructure

- For more information about Nutanix NCI Edge software options, please visit https://www.nutanix.com/products/cloud-platform/software-options

- Please note that the Federal Support program is reserved for US Federal accounts. US Federal accounts must select Federal Support Tier for the order to be fulfilled. If a non-Federal account selects a Federal Support program, Nutanix may not fulfill the order. Additionally, Nutanix's Mixed Support Level Guidelines(https://www.nutanix.com/support-services/product-support/support-policies-and-faqs?show=accordion-4) requires all software assets within a cluster to have the same support level, else software support will default to the lower option.

- Sellers in the Federal space need to ensure they have the Federal Support SKU's on the quote and order. All orders without the Federal Support SKU's will be rejected by Nutanix.Refer this Knowledge base article for more info: https://computekb.cisco.com/article/nutanix-support-for-federal-customers.html

Table 33.2 Nutanix Cloud Infrastructure Edge (NCI-Edge)

Product ID (PID)	PID Description
STR - STARTER	
NT-NCI-E-STR-PR	Subscription, Nutanix Cloud Infrastructure (NCI) Starter Software License for Edge sites & Production Software Support Service for 1 VM
NT-NCI-E-STR-MC	Subscription, Nutanix Cloud Infrastructure (NCI) Starter Software License for Edge sites & Mission Critical Software Support Service for 1 VM
NT-NCI-E-STR-FP	Subscription, Nutanix Cloud Infrastructure (NCI) Starter Software License for Edge sites & Federal Production Software Support Service for 1 VM
NT-NCI-E-STR-FM	Subscription, Nutanix Cloud Infrastructure (NCI) Starter Software License for Edge sites & Federal Mission Critical Software Support Service for 1 VM

Table 33.2 Nutanix Cloud Infrastructure Edge (NCI-Edge)

PRO - PROFESSIONAL	
NT-NCI-E-PRO-PR	Subscription, Nutanix Cloud Infrastructure (NCI) Pro Software License for Edge sites & Production Software Support Service for 1 VM
NT-NCI-E-PRO-MC	Subscription, Nutanix Cloud Infrastructure (NCI) Pro Software License for Edge sites & Mission Critical Software Support Service for 1 VM
NT-NCI-E-PRO-FP	Subscription, Nutanix Cloud Infrastructure (NCI) Pro Software License for Edge sites & Federal Production Software Support Service for 1 VM
NT-NCI-E-PRO-FM	Subscription, Nutanix Cloud Infrastructure (NCI) Pro Software License for Edge sites & Federal Mission Critical Software Support Service for 1 VM
ULT - ULTIMATE	
NT-NCI-E-ULT-PR	Subscription, Nutanix Cloud Infrastructure (NCI) Ultimate Software License for Edge sites & Production Software Support Service for 1 VM
NT-NCI-E-ULT-MC	Subscription, Nutanix Cloud Infrastructure (NCI) Ultimate Software License for Edge sites & Mission Critical Software Support Service for 1 VM
NT-NCI-E-ULT-FP	Subscription, Nutanix Cloud Infrastructure (NCI) Ultimate Software License for Edge sites & Federal Production Software Support Service for 1 VM
NT-NCI-E-ULT-FM	Subscription, Nutanix Cloud Infrastructure (NCI) Ultimate Software License for Edge sites & Federal Mission Critical Software Support Service for 1 VM

NOTE:

- NCI-Edge is limited to a maximum of 25 VMs in a cluster, with each VM being limited to a maximum of 96GB of memory.

- Maximum nodes for the Edge cluster is 5

- The quantity of NCI-Edge license must match with Total number for VMs running in the cluster.

- For the purpose of calculation, internal VMs (or Nutanix infrastructure VMs) such are Controller VM or Prism Central VM are not counted.

Table 36.0, Nutanix Software NCI, NCI-D, NCI-Edge, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 1 YEAR SUBSCRIPTION with professional services PID Mapping

Table 36.1, Nutanix Software NCI, NCI-D, NCI-Edge, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 3 YEAR SUBSCRIPTION with professional services PID Mapping

(4) Nutanix Cloud Manager (NCM):

Nutanix Cloud Manager (NCM) is a hybrid multi-cloud management platform for building a cloud operating model. NCM provides Intelligent Operations, Self-Service, Cost Governance, and Security natively with the Nutanix Platform or through a SaaS subscription.

- Self-service VMs and Apps are defined via simple blueprints, easily created, and managed via GUI/CLI.

- Management of IT lifecycle includes visibility, optimization, and financial control over multi-cloud deployments.

- Detect, monitor, and remediate security vulnerabilities and compliance near real-time across multiple cloud environment

> **NOTE:**
> - For more information Nutanix Cloud Manager (NCM), please visit https://www.nutanix.com/products/cloud-manager
> - For more information about Nutanix Cloud Platform software options, please visit https://www.nutanix.com/products/cloud-platform/software-options
> - Please note that the Federal Support program is reserved for US Federal accounts. US Federal accounts must select Federal Support Tier for the order to be fulfilled. If a non-Federal account selects a Federal Support program, Nutanix may not fulfill the order. Additionally, Nutanix's Mixed Support Level Guidelines(https://www.nutanix.com/support-services/product-support/support-policies-and-faqs?show=accordion-4) requires all software assets within a cluster to have the same support level, else software support will default to the lower option.
> - Sellers in the Federal space need to ensure they have the Federal Support SKU's on the quote and order. All orders without the Federal Support SKU's will be rejected by Nutanix.Refer this Knowledge base article for more info: https://computekb.cisco.com/article/nutanix-support-for-federal-customers.html

Table 33.3 Nutanix Cloud Manager (NCM)

Product ID (PID)	PID Description
STR - STARTER	
NT-NCM-STR-PR	Subscription, Nutanix Cloud Manager (NCM) Starter Software License & Production Software Support Service for 1 CPU Core
NT-NCM-STR-MC	Subscription, Nutanix Cloud Manager (NCM) Starter Software License & Mission Critical Software Support Service for 1 CPU Core
NT-NCM-STR-FP	Subscription, Nutanix Cloud Manager (NCM) Starter Software License & Federal Production Software Support Service for 1 CPU Core
NT-NCM-STR-FM	Subscription, Nutanix Cloud Manager (NCM) Starter Software License & Federal Mission Critical Software Support Service for 1 CPU Core
PRO - PROFESSIONAL	
NT-NCM-PRO-PR	Subscription, Nutanix Cloud Manager (NCM) Pro Software License & Production Software Support Service for 1 CPU Core

Table 33.3 Nutanix Cloud Manager (NCM)

NT-NCM-PRO-MC	Subscription, Nutanix Cloud Manager (NCM) Pro Software License & Mission Critical Software Support Service for 1 CPU Core
NT-NCM-PRO-FP	Subscription, Nutanix Cloud Manager (NCM) Pro Software License & Federal Production Software Support Service for 1 CPU Core
NT-NCM-PRO-FM	Subscription, Nutanix Cloud Manager (NCM) Pro Software License & Federal Mission Critical Software Support Service for 1 CPU Core
ULT - ULTIMATE	
NT-NCM-ULT-PR	Subscription, Nutanix Cloud Manager (NCM) Ultimate Software License & Production Software Support Service for 1 CPU Core
NT-NCM-ULT-MC	Subscription, Nutanix Cloud Manager (NCM) Ultimate Software License & Mission Critical Software Support Service for 1 CPU Core
NT-NCM-ULT-FP	Subscription, Nutanix Cloud Manager (NCM) Ultimate Software License & Federal Production Software Support Service for 1 CPU Core
NT-NCM-ULT-FM	Subscription, Nutanix Cloud Manager (NCM) Ultimate Software License & Federal Mission Critical Software Support Service for 1 CPU Core
COST GOVERNANCE	
NT-NCM-CM-FP	Subscription, NCM Cost Governance as a Service for US Federal including Production Support for 1 VM
NT-NCM-CM-OV-FP	Overage, NCM Cost Governance as a Service for US Federal including Production Support for 1 VM
NT-NCM-CM-OV-PR	Overage, NCM Cost Governance as a Service including Production Support for 1 VM
NT-NCM-CM-PR	Subscription, NCM Cost Governance as a Service including Production Support for 1 VM
SECURITY CENTRAL	
NT-NCM-SC-FP	Subscription, NCM Security Central as a Service for US Federal including Production Support for 1 VM
NT-NCM-SC-OV-FP	Overage, NCM Security Central as a Service for US Federal including Production Support for 1 VM
NT-NCM-SC-OV-PR	Overage, NCM Security Central as a Service including Production Support for 1 VM
NT-NCM-SC-PR	Subscription, NCM Security Central as a Service including Production Support for 1 VM
SELF SERVICE	
NT-NCM-SS-OV-PR	Overage, NCM Self-Service & Orchestration as a Service including Production Support for 1 VM
NT-NCM-SS-PR	Subscription, NCM Self-Service & Orchestration as a Service including Production Support for 1 VM

> **NOTE:** The quantity of NCM license must match with Total number for cores in hardware platforms.

Table 37.0, *Nutanix Software NCM STR 1 YEAR SUBSCRIPTION with professional services PID Mapping*

Table 37.1, *Nutanix Software NCM STR 3 YEAR AND ABOVE SUBSCRIPTION with Professional Services PID Mapping*

Table 38, *Nutanix Software NCM PRO, NCM ULT, NCP (NCM-PRO), NCP (NCM-ULT) 1 YEAR AND 3 YEAR & ABOVE SUBSCRIPTION with Professional services*

(5) Nutanix Cloud Platform (NCP):

Nutanix Cloud Infrastructure (NCI) and Nutanix Cloud Manager (NCM) can be purchased together in '**better together**' Nutanix Cloud Platform (NCP) bundles:

Nutanix Cloud Platform (NCP)	Nutanix Cloud Infrastructure (NCI) included	Nutanix Cloud Manager (NCM) Edition included
NCP Starter	NCI Professional	NCM Professional
NCP Professional	NCI Ultimate	NCM Professional
NCP Ultimate	NCI Ultimate	NCM Ultimate

NOTE:

- For more information on Nutanix Cloud Platform (NCP) bundles, please visit https://www.nutanix.com/products/cloud-platform/software-options
- For more information about Nutanix Cloud Platform software options, please visit https://www.nutanix.com/products/cloud-platform/software-options
- Please note that the Federal Support program is reserved for US Federal accounts. US Federal accounts must select Federal Support Tier for the order to be fulfilled. If a non-Federal account selects a Federal Support program, Nutanix may not fulfill the order. Additionally, Nutanix's Mixed Support Level Guidelines(https://www.nutanix.com/support-services/product-support/support-policies-and-faqs?show=accordion-4) requires all software assets within a cluster to have the same support level, else software support will default to the lower option.
- Sellers in the Federal space need to ensure they have the Federal Support SKU's on the quote and order. All orders without the Federal Support SKU's will be rejected by Nutanix. Refer this Knowledge base article for more info: https://computekb.cisco.com/article/nutanix-support-for-federal-customers.html

Table 33.4 Nutanix Cloud Platform (NCP)

Product ID (PID)	PID Description
STR - STARTER	
NT-NCP-STR-PR	Subscription, Nutanix Cloud Platform Starter Software License & Production Software Support Service for 1 CPU Core
NT-NCP-STR-MC	Subscription, Nutanix Cloud Platform Starter Software License & Mission Critical Software Support Service for 1 CPU Core
NT-NCP-STR-FP	Subscription, Nutanix Cloud Platform Starter Software License & Federal Production Software Support Service for 1 CPU Core
NT-NCP-STR-FM	Subscription, Nutanix Cloud Platform Starter Software License & Federal Mission Critical Software Support Service for 1 CPU Core
PRO- PROFESSIONAL	
NT-NCP-PRO-PR	Subscription, Nutanix Cloud Platform Pro Software License & Production Software Support Service for 1 CPU Core

Table 33.4 Nutanix Cloud Platform (NCP)

NT-NCP-PRO-MC	Subscription, Nutanix Cloud Platform Pro Software License & Mission Critical Software Support Service for 1 CPU Core
NT-NCP-PRO-FP	Subscription, Nutanix Cloud Platform Pro Software License & Federal Production Software Support Service for 1 CPU Core
NT-NCP-PRO-FM	Subscription, Nutanix Cloud Platform Pro Software License & Federal Mission Critical Software Support Service for 1 CPU Core
ULT-ULTIMATE	
NT-NCP-ULT-PR	Subscription, Nutanix Cloud Platform Ultimate Software License & Production Software Support Service for 1 CPU Core
NT-NCP-ULT-MC	Subscription, Nutanix Cloud Platform Ultimate Software License & Mission Critical Software Support Service for 1 CPU Core
NT-NCP-ULT-FP	Subscription, Nutanix Cloud Platform Ultimate Software License & Federal Production Software Support Service for 1 CPU Core
NT-NCP-ULT-FM	Subscription, Nutanix Cloud Platform Ultimate Software License & Federal Mission Critical Software Support Service for 1 CPU Core
NCI PROFESSIONAL	
NT-NCP-NCI-PRO-PR	Subscription, (included in NCP) Nutanix Cloud Infrastructure (NCI) Pro Software License & Production Software Support Service for 1 CPU Core
NT-NCP-NCI-PRO-MC	Subscription, (included in NCP) Nutanix Cloud Infrastructure (NCI) Pro Software License & Mission Critical Software Support Service for 1 CPU Core
NT-NCP-NCI-PRO-FP	Subscription, (included in NCP) Nutanix Cloud Infrastructure (NCI) Pro Software License & Federal Production Software Support Service for 1 CPU Core
NT-NCP-NCI-PRO-FM	Subscription, (included in NCP) Nutanix Cloud Infrastructure (NCI) Pro Software License & Federal Mission Critical Software Support Service for 1 CPU Core
NCI ULTIMATE	
NT-NCP-NCI-ULT-PR	Subscription, (included in NCP) Nutanix Cloud Infrastructure (NCI) Ultimate Software License & Production Software Support Service for 1 CPU Core
NT-NCP-NCI-ULT-MC	Subscription, (included in NCP) Nutanix Cloud Infrastructure (NCI) Ultimate Software License & Mission Critical Software Support Service for 1 CPU Core
NT-NCP-NCI-ULT-FP	Subscription, (included in NCP) Nutanix Cloud Infrastructure (NCI) Ultimate Software License & Federal Production Software Support Service for 1 CPU Core
NT-NCP-NCI-ULT-FM	Subscription, (included in NCP) Nutanix Cloud Infrastructure (NCI) Ultimate Software License & Federal Mission Critical Software Support Service for 1 CPU Core
NCM PROFESSIONAL	
NT-NCP-NCM-PRO-PR	Subscription, (included in NCP) Nutanix Cloud Manager (NCM) Pro Software License & Production Software Support Service for 1 CPU Core
NT-NCP-NCM-PRO-MC	Subscription, (included in NCP) Nutanix Cloud Manager (NCM) Pro Software License & Mission Critical Software Support Service for 1 CPU Core

Table 33.4 Nutanix Cloud Platform (NCP)

NT-NCP-NCM-PRO-FP	Subscription, (included in NCP) Nutanix Cloud Manager (NCM) Pro Software License & Federal Production Software Support Service for 1 CPU Core
NT-NCP-NCM-PRO-FM	Subscription, (included in NCP) Nutanix Cloud Manager (NCM) Pro Software License & Federal Mission Critical Software Support Service for 1 CPU Core
NCM ULTIMATE	
NT-NCP-NCM-ULT-PR	Subscription, (included in NCP) Nutanix Cloud Manager (NCM) Ultimate Software License & Production Software Support Service for 1 CPU Core
NT-NCP-NCM-ULT-MC	Subscription, (included in NCP) Nutanix Cloud Manager (NCM) Ultimate Software License & Mission Critical Software Support Service for 1 CPU Core
NT-NCP-NCM-ULT-FP	Subscription, (included in NCP) Nutanix Cloud Manager (NCM) Ultimate Software License & Federal Production Software Support Service for 1 CPU Core
NT-NCP-NCM-ULT-FM	Subscription, (included in NCP) Nutanix Cloud Manager (NCM) Ultimate Software License & Federal Mission Critical Software Support Service for 1 CPU Core

NOTE:

■ The total number of cores for NCI and NCM should be same

■ The support tiers for NCI and NCM should be same.

Table 37.0, Nutanix Software NCM STR 1 YEAR SUBSCRIPTION with professional services PID Mapping

Table 37.1, Nutanix Software NCM STR 3 YEAR AND ABOVE SUBSCRIPTION with Professional Services PID Mapping

Table 38, Nutanix Software NCM PRO, NCM ULT, NCP (NCM-PRO), NCP (NCM-ULT) 1 YEAR AND 3 YEAR & ABOVE SUBSCRIPTION with Professional services

(6) Nutanix Unified Storage™ (NUS):

Nutanix Unified Storage™ (NUS) is a software-defined data services platform that consolidates the management and protection of siloed block, file, and object storage into a single, unified platform. NUS harnesses the power of rich data services such as analytics, ransomware protection, lifecycle management, and data protection. These features enable organizations to seamlessly adapt to the ever-changing requirements of modern applications, allowing them to shift their management focus from data storage to data management. Leveraging the Nutanix Cloud Platform™ (NCP) software, NUS is specifically built to meet the needs of modern applications deployed across core, cloud, and edge infrastructure. With its capacity for seamless scaling, high performance, and integrated data security, NUS provides a comprehensive solution for organizations.

Includes:

- **Nutanix Files Storage:** simple and secure software-defined scale-out file storage solution to store, manage, and scale files data (NFS and SMB)
- **Nutanix Objects Storage:** distributed scale-out S3-compatible object storage for both archive and high-performance analytics
- **Nutanix Volumes Storage:** high-performance low-latency block storage
- **Nutanix Data Lens:** available as an add-on for data analytics, anomaly behavior detection and ransomware protection
- **Nutanix AOS:** scale-out storage technology that makes hyperconverged infrastructure (HCI) possible.
- **Nutanix AHV:** lightweight cloud hypervisor built into Nutanix platform and offers enterprise-grade storage capabilities and built-in Kubernetes support.
- **App VMs running on storage:** NUS dedicated clusters are entitled to 1 app/user VM per node in the cluster. NCI clusters don't have any limit on the number of app/user VMs on the cluster.

NOTE:

- For more information **Nutanix Unified Storage™ (NUS)**, please visit https://www.nutanix.com/products/cloud-platform/software-options#nus
- For more information about Nutanix Cloud Platform software options, please visit https://www.nutanix.com/products/cloud-platform/software-options
- Please note that the Federal Support program is reserved for US Federal accounts. US Federal accounts must select Federal Support Tier for the order to be fulfilled. If a non-Federal account selects a Federal Support program, Nutanix may not fulfill the order. Additionally, Nutanix's Mixed Support Level Guidelines(https://www.nutanix.com/support-services/product-support/support-policies-and-faqs?show=accordion-4) requires all software assets within a cluster to have the same support level, else software support will default to the lower option.
- Sellers in the Federal space need to ensure they have the Federal Support SKU's on the quote and order. All orders without the Federal Support SKU's will be rejected by Nutanix.Refer this Knowledge base article for more info: https://computekb.cisco.com/article/nutanix-support-for-federal-customers.html

Table 33.5 Nutanix Unified Storage™ (NUS)

Product ID (PID)	PID Description
PRO - PROFESSIONAL	
NT-NUS-PRO-PR	Nutanix Unified Storage Professional Software License & Production Software Support for 1 TiB
NT-NUS-PRO-MC	Nutanix Unified Storage Professional Software License & Mission Critical Software Support for 1 TiB
NT-NUS-PRO-FP	Nutanix Unified Storage Professional Software License & Federal Production Software Support for 1 TiB
NT-NUS-PRO-FM	Nutanix Unified Storage Professional Software License & Federal Mission Critical Software Support for 1 TiB
ADVANCED REPLICATION	
NT-A-NUS-ADR-PR	Nutanix Unified Storage Advanced Replication add-on Software License & Production Software Support 1 TiB
NT-A-NUS-ADR-MC	Nutanix Unified Storage Advanced Replication add-on Software License & Mission Critical Software Support 1 TiB
NT-A-NUS-ADR-FP	Nutanix Unified Storage Advanced Replication add-on Software License & Federal Production Software Support 1 TiB
NT-A-NUS-ADR-FM	Nutanix Unified Storage Advanced Replication add-on Software License & Federal Mission Critical Support 1 TiB
SECURITY	
NT-A-NUS-SEC-PR	Nutanix Unified Storage Security add-on Software License & Production Software Support 1 TiB
NT-A-NUS-SEC-MC	Nutanix Unified Storage Security add-on Software License & Mission Critical Software Support 1 TiB
NT-A-NUS-SEC-FP	Nutanix Unified Storage Security add-on Software License & Federal Production Software Support 1 TiB
NT-A-NUS-SEC-FM	Nutanix Unified Storage Security add-on Software License & Federal Mission Critical Software Support 1 TiB

Table 33.5.a Nutanix Unified Storage Allowed Capacity

Nutanix Unified Storage	Nutanix Unified Storage Support Tier	Storage Capacity Allowed (TIB)
Pro (Professional) License Tier (NT-NUS-PRO-*) **Advanced Replication (NT-A-NUS-ADR-*)** **Security (NT-A-NUS-SEC-*)**	**Production** **Mission Critical** **Federal Production** **Federal Mission Critical**	1-50
		75
		100
		150
		200
		250
		300
		350
		400
		450
		500
		550
		600
		700
		800
		900
		1000
		1200
		1400
		1600
		1800
		2000
		2200
		2400
		2600
		2800
		3000
		4000
		5000
		6000
		7000
		8000
		9000
		10000

(7) Nutanix Data Lens (NDL):

Nutanix Data Lens is a SaaS-based cyberstorage solution offering ransomware resilience and global data visibility for unstructured data on Nutanix Unified Storage (NUS). This cloud-based data analytics service proactively assesses and mitigates data security risks by identifying anomalous activity, auditing user behavior, and adhering to compliance requirements. while enabling efficient data lifecycle management.

Nutanix Data Lens is currently offered through a "Freemium" licensing model, consisting of two tiers:

1. "Free Tier" comprises limited capabilities that are available perpetually free for NUS Pro customers

2. "Premium Tier" comprises extended capabilities, including Ransomware security, and is licensed on a per TiB basis for all NUS customers.

Self-service onboarding for current Nutanix Unified Storage Customers through My Nutanix Portal.

NOTE:

■ For more information **Nutanix Data Lens (NDL)**, please visit https://www.nutanix.com/products/cloud-platform/software-options#nus

■ For more information about Nutanix Cloud Platform software options, please visit https://www.nutanix.com/products/cloud-platform/software-options

■ Please note that the Federal Support program is reserved for US Federal accounts. US Federal accounts must select Federal Support Tier for the order to be fulfilled. If a non-Federal account selects a Federal Support program, Nutanix may not fulfill the order. Additionally, Nutanix's Mixed Support Level Guidelines(https://www.nutanix.com/support-services/product-support/support-policies-and-faqs?show=accordion-4) requires all software assets within a cluster to have the same support level, else software support will default to the lower option.

■ Sellers in the Federal space need to ensure they have the Federal Support SKU's on the quote and order. All orders without the Federal Support SKU's will be rejected by Nutanix.Refer this Knowledge base article for more info: https://computekb.cisco.com/article/nutanix-support-for-federal-customers.html

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Table 33.6 Nutanix Data Lens (NDL)

Product ID (PID)	PID Description
NDL	
NT-NDL-PR	Nutanix Data Lens as a hosted service including Production Support for 1 TiB
NT-NDL-FP	Nutanix Data Lens as a hosted service incl Fed Production Support for 1 TiB

Table 33.6.a Nutanix Data Lens Allowed Capacity

Nutanix Data Lens	Nutanix Data Lens Support Tier	Storage Capacity Allowed (TIB)
NDL	Production Federal Production	1-50
		75
		100
		150
		200
		250
		300
		350
		400
		450
		500
		550
		600
		700
		800
		900
		1000
		1200
		1400
		1600
		1800
		2000
		2200
		2400
		2600
		2800
		3000

Cisco Compute Hyperconverged with Nutanix

(8) End User Computing (EUC):

Per user model offers hybrid cloud infrastructure capabilities appropriate for on-prem virtual desktop infrastructure (VDI) and Desktop as a Service (DaaS) use cases with pricing based on a Maximum Concurrent User basis (maximum number of provisioned end-user VMs). EUC per user is an alternative to the core-based NCI licensing option and is designed to provide simple, transparent licensing for all VDI users, regardless of the underlying hardware, hypervisor, or cloud.

- **Agnostic:** Works with any EUC management platform including Citrix Virtual Apps & Desktops and VMware Horizon
- **Term license:** Term license must run on a dedicated software licensed VDI cluster with no core-based licensing. Mixing of non-VDI workloads is not supported
- **Unified Storage:** Built-in and also available as a per TiB base add-on
- No additional license cost for DR site
- Portable across on-premises and public cloud, public cloud use requires Ultimate edition
- Available in Starter, Pro, and Ultimate editions
- Cloud Native and Database Service Add-ons not available with NCI EUC. Advanced Replication and Security Add-on features require NCI Ultimate edition

	EUC STARTER	EUC PROFESSIONAL	VDI ULTIMATE
NCI Feature Set	Everything in NCI Starter	Everything in NCI Professional	Everything in NCI Ultimate
Nutanix Unified Storage	1 TiB Free Capacity	50 GB Per User	100GB Per User

NOTE:

- For more information on End User Computing (EUC), please visit https://www.nutanix.com/solutions/end-user-computing
- For more information about Nutanix Cloud Platform software options, please visit https://www.nutanix.com/products/cloud-platform/software-options
- For '**PURE" EUC/VDI environment**, there is no NCI license required.
- If the end user wants to run a mixed workload on same server (virtual machines that are not part of the VDI environment), NCI license is required.
- Please note that the Federal Support program is reserved for US Federal accounts. US Federal accounts must select Federal Support Tier for the order to be fulfilled. If a non-Federal account selects a Federal Support program, Nutanix may not fulfill the order. Additionally, Nutanix's Mixed Support Level Guidelines(https://www.nutanix.com/support-services/product-support/support-policies-and-faqs?show=accordion-4) requires all software assets within a cluster to have the same support level, else software support will default to the lower option.
- Sellers in the Federal space need to ensure they have the Federal Support SKU's on the quote and order. All orders without the Federal Support SKU's will be rejected by Nutanix.Refer this Knowledge base article for more info: https://computekb.cisco.com/article/nutanix-support-for-federal-customers.html

Table 33.7 End User Computing (EUC)

Product ID (PID)	PID Description
STR - STARTER	
NT-EUC-STR-PR	Subscription, End User Computing (EUC) Starter Software License & Production Software Support Service for 1 User
NT-EUC-STR-MC	Subscription, End User Computing (EUC) Starter Software License & Mission Critical Software Support Service for 1 User
NT-EUC-STR-FP	Subscription, End User Computing (EUC) Starter Software License & Federal Production Software Support Service for 1 User
NT-EUC-STR-FM	Subscription, End User Computing (EUC) Starter Software License & Federal Mission Critical Software Support Service for 1 User
PRO- PROFESSIONAL	
NT-EUC-PRO-PR	Subscription, End User Computing (EUC) Pro Software License & Production Software Support Service for 1 User
NT-EUC-PRO-MC	Subscription, End User Computing (EUC) Pro Software License & Mission Critical Software Support Service for 1 User
NT-EUC-PRO-FP	Subscription, End User Computing (EUC) Pro Software License & Federal Production Software Support Service for 1 User
NT-EUC-PRO-FM	Subscription, End User Computing (EUC) Pro Software License & Federal Mission Critical Software Support Service for 1 User
ULT - ULTIMATE	
NT-EUC-ULT-PR	Subscription, End User Computing (EUC) Ultimate Software License & Production Software Support Service for 1 User
NT-EUC-ULT-MC	Subscription, End User Computing (EUC) Ultimate Software License & Mission Critical Software Support Service for 1 User
NT-EUC-ULT-FP	Subscription, End User Computing (EUC) Ultimate Software License & Federal Production Software Support Service for 1 User
NT-EUC-ULT-FM	Subscription, End User Computing (EUC) Ultimate Software License & Federal Mission Critical Software Support Service for 1 User

Table 36.0, Nutanix Software NCI, NCI-D, NCI-Edge, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 1 YEAR SUBSCRIPTION with professional services PID Mapping

Table 36.1, Nutanix Software NCI, NCI-D, NCI-Edge, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 3 YEAR SUBSCRIPTION with professional services PID Mapping

Professional Services PIDs and Description

(1) NCI Design Workshop:

The Nutanix Cloud Infrastructure (NCI) Design Workshop offers IT teams in-depth and practical guidance to create a comprehensive design for on-premises NCI clusters. It covers various aspects such as scalability, functionality, integration, and operational needs. This workshop is beneficial during the Design stage of a Hybrid Multicloud journey, especially for complex solutions that involve third-party applications and automation.

> **NOTE:**
> - For more information on NCI Design workshop, please visit - https://www.nutanix.com/content/dam/nutanix/resources/service-descriptions/sd-nci-design-workshop.pdf
> - For more information on Cisco version of Nutanix Professional services, please visit - https://www.nutanix.com/content/dam/nutanix/resources/service-descriptions/professional-services-service-descriptions-cisco.pdf

Table 34.0 NCI Design Workshop

Nutanix Software Product/Edition	Cisco Product PID	Cisco PID Description PS Offer Name - PS Offer Edition - PS Offer Option - Base/Variable	Nutanix PS Edition	Nutanix PS Option
NCI Starter	NT-W-DS-STR	NCI Design Workshop - Starter - Workshop Only	Starter	Workshop Only
NCI Starter	NT-W-DS-STR-ED	NCI Design Workshop - Starter - Enhanced Doc	Starter	Enhanced Documentation
NCI Starter	NT-W-DS-STR-SD	NCI Design Workshop - Starter - Standard Doc	Starter	Standard Documentation
NCI Pro	NT-W-DS-PRO	NCI Design Workshop - Pro - Workshop Only	Pro	Workshop Only
NCI Pro	NT-W-DS-PRO-ED	NCI Design Workshop - Pro - Standard Doc	Pro	Standard Documentation
NCI Pro	NT-W-DS-PRO-SD	NCI Design Workshop - Pro - Enhanced Doc	Pro	Enhanced Documentation
NCI Ultimate	NT-W-DS-ULT-ED	NCI Design Workshop - Ultimate - Enhanced Doc	Ultimate	Enhanced Documentation
NCI Ultimate	NT-W-DS-ULT-SD	NCI Design Workshop - Ultimate - Standard Doc	Ultimate	Standard Documentation

Table 36.0, Nutanix Software NCI, NCI-D, NCI-Edge, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 1 YEAR SUBSCRIPTION with professional services PID Mapping

Table 36.1, Nutanix Software NCI, NCI-D, NCI-Edge, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 3 YEAR SUBSCRIPTION with professional services PID Mapping

(2) NCI Cluster Deployment or Expansion:

The Nutanix Cloud Infrastructure (NCI) Cluster Deployment or Expansion accelerates the deployment of hybrid cloud infrastructure to support any application and workload. Highly skilled consultants can deploy on-premises NCI clusters or dedicated Nutanix Unified Storage (NUS) clusters. The clusters can be deployed to various supported hardware platforms, regardless of whether it's Nutanix, our OEM partners, or other platform providers. This offer is ideal for the Deploy stage of the Hybrid Multicloud journey.

NOTE:

- For more information on NCI Cluster deployment and expansion workshop, please visit -
https://www.nutanix.com/content/dam/nutanix/resources/service-descriptions/sd-nci-cluster-deployment-or-expansion.pdf

- For more information on Cisco version of Nutanix Professional services, please visit -
https://www.nutanix.com/content/dam/nutanix/resources/service-descriptions/professional-services-service-descriptions-cisco.pdf

Table 34.1 NCI Cluster Deployment or Expansion

Nutanix Software Product/Edition	Cisco Product PID	Cisco PID Description PS Offer Name - PS Offer Edition - PS Offer Option - Base/Variable	Nutanix PS Edition	Nutanix PS Option
NCI Starter	NT-S-DP-STR-AVB	NCI Cluster Deployment or Expansion - Starter - AHV - Base	Starter	AHV Nodes
NCI Starter	NT-S-DP-STR-AVV	NCI Cluster Deployment or Expansion - Starter - AHV - Var	Starter	AHV Nodes
NCI Starter	NT-S-DP-STR-EXB	NCI Cluster Deployment or Expansion - Starter - ESX - Base	Starter	ESX Nodes
NCI Starter	NT-S-DP-STR-EXV	NCI Cluster Deployment or Expansion - Starter - ESX - Var	Starter	ESX Nodes
NCI Pro	NT-S-DP-PRO-AV-SB	NCI Cluster Deployment or Expansion - Starter - AHV - Base	Starter	AHV Nodes
NCI Pro	NT-S-DP-PRO-AV-SV	NCI Cluster Deployment or Expansion - Starter - AHV - Var	Starter	AHV Nodes
NCI Pro	NT-S-DP-PRO-EX-SV	NCI Cluster Deployment or Expansion - Starter - ESX - Var	Starter	ESX Nodes
NCI Pro	NT-S-DP-PRO-EX-SB	NCI Cluster Deployment or Expansion - Starter - ESX - Base	Starter	ESX Nodes
NCI Pro	NT-S-DP-PRO-AV-PB	NCI Cluster Deployment or Expansion - Pro - AHV - Base	Pro	AHV Nodes
NCI Pro	NT-S-DP-PRO-AV-PV	NCI Cluster Deployment or Expansion - Pro - AHV - Var	Pro	AHV Nodes
NCI Pro	NT-S-DP-PRO-EX-PB	NCI Cluster Deployment or Expansion - Pro - ESX - Base	Pro	ESX Nodes
NCI Pro	NT-S-DP-PRO-EX-PV	NCI Cluster Deployment or Expansion - Pro - ESX - Var	Pro	ESX Nodes

Table 34.1 NCI Cluster Deployment or Expansion

NCI Ultimate	NT-S-DP-ULT-AV-SB	NCI Cluster Deployment or Expansion - Starter - AHV - Base	Starter	AHV Nodes
NCI Ultimate	NT-S-DP-ULT-AV-SV	NCI Cluster Deployment or Expansion - Starter - AHV - Var	Starter	AHV Nodes
NCI Ultimate	NT-S-DP-ULT-EX-SB	NCI Cluster Deployment or Expansion - Starter - ESX - Base	Starter	ESX Nodes
NCI Ultimate	NT-S-DP-ULT-EX-SV	NCI Cluster Deployment or Expansion - Starter - ESX - Var	Starter	ESX Nodes
NCI Ultimate	NT-S-DP-ULT-AV-PB	NCI Cluster Deployment or Expansion - Pro - AHV - Base	Pro	AHV Nodes
NCI Ultimate	NT-S-DP-ULT-AV-PV	NCI Cluster Deployment or Expansion - Pro - AHV - Var	Pro	AHV Nodes
NCI Ultimate	NT-S-DP-ULT-EX-PB	NCI Cluster Deployment or Expansion - Pro - ESX - Base	Pro	ESX Nodes
NCI Ultimate	NT-S-DP-ULT-EX-PV	NCI Cluster Deployment or Expansion - Pro - ESX - Var	Pro	ESX Nodes
NCI Ultimate	NT-S-DP-ULT-AV-UB	NCI Cluster Deployment or Expansion- Ultimate - AHV - Base	Ultimate	AHV Nodes
NCI Ultimate	NT-S-DP-ULT-AV-UV	NCI Cluster Deployment or Expansion- Ultimate - AHV - Var	Ultimate	AHV Nodes
NCI Ultimate	NT-S-DP-ULT-EX-UB	NCI Cluster Deployment or Expansion- Ultimate - ESX - Base	Ultimate	ESX Nodes
NCI Ultimate	NT-S-DP-ULT-EX-UV	NCI Cluster Deployment or Expansion- Ultimate - ESX - Var	Ultimate	ESX Nodes

Table 36.0, Nutanix Software NCI, NCI-D, NCI-Edge, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 1 YEAR SUBSCRIPTION with professional services PID Mapping

Table 36.1, Nutanix Software NCI, NCI-D, NCI-Edge, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 3 YEAR SUBSCRIPTION with professional services PID Mapping

(3) Virtual Machine Migration Workshop:

The Virtual Machine Migration Workshop offers IT teams in-depth and practical guidance to create a comprehensive virtual machine migration plan for migrating virtual machines to Nutanix Cloud Infrastructure (NCI). This offer is ideal for the Migrate state of a Hybrid Multicloud journey.

> **NOTE:**
> - For more information on Virtual Machine Migration Workshop, please visit - https://www.nutanix.com/content/dam/nutanix/resources/service-descriptions/sd-virtual-machine-migration-workshop.pdf
> - For more information on Cisco version of Nutanix Professional services, please visit - https://www.nutanix.com/content/dam/nutanix/resources/service-descriptions/professional-services-service-descriptions-cisco.pdf

Table 34.2 Virtual Machine Migration Workshop

Nutanix Software Product/Edition	Cisco Product PID	Cisco PID Description PS Offer Name - PS Offer Edition - PS Offer Option - Base/Variable	Nutanix PS Edition	Nutanix PS Option
NCI Starter	NT-W-MG-STR-SD	Virtual Machine Migration Workshop - Standard Doc	None	Standard Documentation
NCI Starter	NT-W-MG-STR-ED	Virtual Machine Migration Workshop - Enhanced Doc	None	Enhanced Documentation
NCI Pro	NT-W-MG-PRO-SD	Virtual Machine Migration Workshop - Standard Doc	None	Standard Documentation
NCI Pro	NT-W-MG-PRO-ED	Virtual Machine Migration Workshop - Enhanced Doc	None	Enhanced Documentation
NCI Ultimate	NT-W-MG-ULT-SD	Virtual Machine Migration Workshop - Standard Doc	None	Standard Documentation
NCI Ultimate	NT-W-MG-ULT-ED	Virtual Machine Migration Workshop - Enhanced Doc	None	Enhanced Documentation

Table 36.0, Nutanix Software NCI, NCI-D, NCI-Edge, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 1 YEAR SUBSCRIPTION with professional services PID Mapping

Table 36.1, Nutanix Software NCI, NCI-D, NCI-Edge, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 3 YEAR SUBSCRIPTION with professional services PID Mapping

(4) Virtual Machine Migration:

Virtual machine (VM) Migration offers IT teams strong domain expertise to migrate virtual machines to Nutanix Cloud Infrastructure (NCI) per the customer-provided migration plan. This offer is ideal for the Migrate stage of a Hybrid Multicloud journey

> **NOTE:**
>
> ■ For more information on Virtual Machine Migration, please visit -
> https://www.nutanix.com/content/dam/nutanix/resources/service-descriptions/sd-virtual-machine-migration.pdf
>
> ■ For more information on Cisco version of Nutanix Professional services, please visit -
> https://www.nutanix.com/content/dam/nutanix/resources/service-descriptions/professional-services-service-descriptions-cisco.pdf

Table 34.3 Virtual Machine Migration

Nutanix Software Product/Edition	Cisco Product PID	Cisco PID Description PS Offer Name - PS Offer Edition - PS Offer Option - Base/Variable	Nutanix PS Edition	Nutanix PS Option
NCI Starter	NT-S-MG-VM-STR-AVB	Virtual Machine Migration - From AHV - Base	None	From AHV
NCI Starter	NT-S-MG-VM-STR-AVV	Virtual Machine Migration - From AHV - Var	None	From AHV
NCI Starter	NT-S-MG-VM-STR-EXB	Virtual Machine Migration - From ESX - Base	None	From ESX
NCI Starter	NT-S-MG-VM-STR-EXV	Virtual Machine Migration - From ESX - Var	None	From ESX
NCI Pro	NT-S-MG-VM-PRO-AVB	Virtual Machine Migration - From AHV - Base	None	From AHV
NCI Pro	NT-S-MG-VM-PRO-AVV	Virtual Machine Migration - From AHV - Var	None	From AHV
NCI Pro	NT-S-MG-VM-PRO-EXB	Virtual Machine Migration - From ESX - Base	None	From ESX
NCI Pro	NT-S-MG-VM-PRO-EXV	Virtual Machine Migration - From ESX - Var	None	From ESX
NCI Ultimate	NT-S-MG-VM-ULT-AVB	Virtual Machine Migration - From AHV - Base	None	From AHV
NCI Ultimate	NT-S-MG-VM-ULT-AVV	Virtual Machine Migration - From AHV - Var	None	From AHV
NCI Ultimate	NT-S-MG-VM-ULT-EXB	Virtual Machine Migration - From ESX - Base	None	From ESX
NCI Ultimate	NT-S-MG-VM-ULT-EXV	Virtual Machine Migration - From ESX - Var	None	From ESX

Table 36.0, Nutanix Software NCI, NCI-D, NCI-Edge, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 1 YEAR SUBSCRIPTION with professional services PID Mapping
Table 36.1, Nutanix Software NCI, NCI-D, NCI-Edge, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 3 YEAR SUBSCRIPTION with professional services PID Mapping

(5) NCM Self-Service Design Workshop:

The Nutanix Cloud Management (NCM) Self-Service Design Workshop offers automation teams in-depth and practical guidance to create a comprehensive design for application-centric infrastructure automation and lifecycle management (LCM) platforms to streamline and accelerate application development. This work-shop is beneficial during the Design stage of a Hybrid Multicloud journey.

NOTE:

■ For more information on Nutanix Cloud Management (NCM) Self-Service Design Workshop, please visit-
https://www.nutanix.com/content/dam/nutanix/resources/datasheets/professional-services-service-descriptions.pdf

■ For more information on Cisco version of Nutanix Professional services, please visit -
https://www.nutanix.com/content/dam/nutanix/resources/service-descriptions/professional-services-service-descriptions-cisco.pdf

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Table 34.4 NCM Self-Service Design Workshop

Nutanix Software Product/Edition	Cisco Product PID	Cisco PID Description PS Offer Name - PS Offer Edition - PS Offer Option - Base/Variable	Nutanix PS Edition	Nutanix PS Option
NCM Pro	NT-W-SSD-PRO-SD-S	NCM Self-Service Design Workshop - Starter - Standard Doc	Starter	Standard Documentation
NCM Pro	NT-W-SSD-PRO-ED-S	NCM Self-Service Design Workshop - Starter - Enhanced Doc	Starter	Enhanced Documentation
NCM Pro	NT-W-SSD-PRO-SD-P	NCM Self-Service Design Workshop - Pro - Standard Doc	Pro	Standard Documentation
NCM Pro	NT-W-SSD-PRO-ED-P	NCM Self-Service Design Workshop - Pro - Enhanced Doc	Pro	Enhanced Documentation
NCM Ultimate	NT-W-SSD-ULT-SD-S	NCM Self-Service Design Workshop - Starter - Standard Doc	Starter	Standard Documentation
NCM Ultimate	NT-W-SSD-ULT-ED-S	NCM Self-Service Design Workshop - Starter - Enhanced Doc	Starter	Enhanced Documentation
NCM Ultimate	NT-W-SSD-ULT-SD-P	NCM Self-Service Design Workshop - Pro - Standard Doc	Pro	Standard Documentation
NCM Ultimate	NT-W-SSD-ULT-ED-P	NCM Self-Service Design Workshop - Pro - Enhanced Doc	Pro	Enhanced Documentation

Table 37.0, *Nutanix Software NCM STR 1 YEAR SUBSCRIPTION with professional services PID Mapping*

Table 37.1, *Nutanix Software NCM STR 3 YEAR AND ABOVE SUBSCRIPTION with Professional Services PID Mapping*

Table 38, *Nutanix Software NCM PRO, NCM ULT, NCP (NCM-PRO), NCP (NCM-ULT) 1 YEAR AND 3 YEAR & ABOVE SUBSCRIPTION with Professional services*

(6) NCM Intelligent Operations Design:

The Nutanix Cloud Management (NCM) Intelligent Operations Design Workshop offers IT teams in-depth and practical guidance to create a comprehensive design for Nutanix X-Play automation and playbooks to automate common tasks.

NOTE:

- For more information on NCM Intelligent Operations Design Workshop, please visit - https://www.nutanix.com/content/dam/nutanix/resources/service-descriptions/sd-ncm-intelligent-operations-design.pdf
- For more information on Cisco version of Nutanix Professional services, please visit - https://www.nutanix.com/content/dam/nutanix/resources/service-descriptions/professional-services-service-descriptions-cisco.pdf

Table 34.5 NCM Intelligent Operations Design Workshop

Nutanix Software Product/Edition	Cisco Product PID	Cisco PID Description PS Offer Name - PS Offer Edition - PS Offer Option - Base/Variable	Nutanix PS Edition	Nutanix PS Option
NCM Starter	NT-W-OD-STR-SD	NCM Intelligent Operations Design Workshop - Standard Doc	None	Standard Documentation
NCM Starter	NT-W-OD-STR-ED	NCM Intelligent Operations Design Workshop - Enhanced Doc	None	Enhanced Documentation
NCM Pro	NT-W-OD-PRO-SD	NCM Intelligent Operations Design Workshop - Standard Doc	None	Standard Documentation
NCM Pro	NT-W-OD-PRO-ED	NCM Intelligent Operations Design Workshop - Enhanced Doc	None	Enhanced Documentation
NCM Ultimate	NT-W-OD-ULT-SD	NCM Intelligent Operations Design Workshop - Standard Doc	None	Standard Documentation
NCM Ultimate	NT-W-OD-ULT-ED	NCM Intelligent Operations Design Workshop - Enhanced Doc	None	Enhanced Documentation

Table 37.0, Nutanix Software NCM STR 1 YEAR SUBSCRIPTION with professional services PID Mapping

Table 37.1, Nutanix Software NCM STR 3 YEAR AND ABOVE SUBSCRIPTION with Professional Services PID Mapping

Table 38, Nutanix Software NCM PRO, NCM ULT, NCP (NCM-PRO), NCP (NCM-ULT) 1 YEAR AND 3 YEAR & ABOVE SUBSCRIPTION with Professional services

(7) NCM Intelligent Operations Deployment:

The Nutanix Cloud Management (NCM) Intelligent Operations Deployment accelerates the deployment of Nutanix X-Play automation and playbooks to automate common tasks with in-depth expertise from highly skilled consultants.

NOTE:

- For more information on NCM Intelligent Operations Deployment Workshop, please visit - https://www.nutanix.com/content/dam/nutanix/resources/service-descriptions/sd-ncm-intelligent-operations-deployment.pdf
- For more information on Cisco version of Nutanix Professional services, please visit - https://www.nutanix.com/content/dam/nutanix/resources/service-descriptions/professional-services-service-descriptions-cisco.pdf

Table 34.6 NCM Intelligent Operations Deployment

Nutanix Software Product/Edition	Cisco Product PID	Cisco PID Description PS Offer Name - PS Offer Edition - PS Offer Option - Base/Variable	Nutanix PS Edition	Nutanix PS Option
NCM Starter	NT-S-OP-STR	NCM Intelligent Operations Deployment	None	None
NCM Pro	NT-S-OP-PRO	NCM Intelligent Operations Deployment	None	None
NCM Ultimate	NT-S-OP-ULT	NCM Intelligent Operations Deployment	None	None

Table 37.0, *Nutanix Software NCM STR 1 YEAR SUBSCRIPTION with professional services PID Mapping*

Table 37.1, *Nutanix Software NCM STR 3 YEAR AND ABOVE SUBSCRIPTION with Professional Services PID Mapping*

Table 38, Nutanix Software NCM PRO, NCM ULT, NCP (NCM-PRO), NCP (NCM-ULT) 1 YEAR AND 3 YEAR & ABOVE SUBSCRIPTION with Professional services

(8) FastTrack for NCM Self-Service:

FastTrack for Nutanix Cloud Manager (NCM) Self-Service accelerates the deployment and configuration of NCM Self-Service, which streamlines how teams manage, deploy, and scale applications across hybrid clouds with self-service, automation, and centralized role-based governance, with expertise from highly skilled automation consultants.

NOTE:

- For more information on Fast Track for NCM Self-Service, please visit - https://www.nutanix.com/content/dam/nutanix/resources/service-descriptions/sd-ncm-intelligent-operations-deployment.pdf

- For more information on Cisco version of Nutanix Professional services, please visit - https://www.nutanix.com/content/dam/nutanix/resources/service-descriptions/professional-services-service-descriptions-cisco.pdf

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Table 34.7   FastTrack for NCM Self-Service

Nutanix Software Product/Edition	Cisco Product PID	Cisco PID Description PS Offer Name - PS Offer Edition - PS Offer Option - Base/Variable	Nutanix PS Edition	Nutanix PS Option
NCM Pro	NT-F-PRO-SS	FastTrack for NCM Self-Service	None	None
NCM Ultimate	NT-F-ULT-SS	FastTrack for NCM Self-Service	None	None

Table 37.0, Nutanix Software NCM STR 1 YEAR SUBSCRIPTION with professional services PID Mapping

Table 37.1, Nutanix Software NCM STR 3 YEAR AND ABOVE SUBSCRIPTION with Professional Services PID Mapping

Table 38, Nutanix Software NCM PRO, NCM ULT, NCP (NCM-PRO), NCP (NCM-ULT) 1 YEAR AND 3 YEAR & ABOVE SUBSCRIPTION with Professional services

(9) FastTrack for NCM Cost Governance:

The FastTrack for Nutanix Cloud Management (NCM) Cost Governance accelerates the onboarding of deep visibility and rich analytics detailing cloud consumption patterns along with one-click cost optimization across cloud environments with expertise from highly skilled consultants. IT teams can choose to onboard on-premises Nutanix Cloud Infrastructure (NCI) clusters or a public cloud platform.

NOTE:

■ For more information on Fast Track for NCM Cost Governance, please visit - https://www.nutanix.com/content/dam/nutanix/resources/service-descriptions/sd-ncm-intelligent-operations-deployment.pdf

■ For more information on Cisco version of Nutanix Professional services, please visit - https://www.nutanix.com/content/dam/nutanix/resources/service-descriptions/professional-services-service-descriptions-cisco.pdf

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Table 34.8 FastTrack for NCM Cost Governance

Nutanix Software Product/Edition	Cisco Product PID	Cisco PID Description PS Offer Name - PS Offer Edition - PS Offer Option - Base/Variable	Nutanix PS Edition	Nutanix PS Option
NCM Pro	NT-F-PRO-CG	FastTrack for NCM Cost Governance	None	None
NCM Ultimate	NT-F-ULT-CG	FastTrack for NCM Cost Governance	None	None

Table 37.0, *Nutanix Software NCM STR 1 YEAR SUBSCRIPTION with professional services PID Mapping*

Table 37.1, *Nutanix Software NCM STR 3 YEAR AND ABOVE SUBSCRIPTION with Professional Services PID Mapping*

Table 38, *Nutanix Software NCM PRO, NCM ULT, NCP (NCM-PRO), NCP (NCM-ULT) 1 YEAR AND 3 YEAR & ABOVE SUBSCRIPTION with Professional services*

(10) Nutanix Services Flexible Credits:

Nutanix Flex Credits provide a credits program for purchasing Nutanix Professional Services. This program provides the flexibility to utilize your budget cycles to pre-buy credits for future use of Nutanix Professional Services and training via redemption of credits. Within the terms of validity of your Flex Credits, use the credits for the portfolio of Nutanix Professional Services including Consulting, Resident, Technical Account Manager, and Education.

NOTE:

- For more information on Nutanix Services Flexible Credits, please visit - https://www.nutanix.com/content/dam/nutanix/resources/service-descriptions/sd-ncm-intelligent-operations-deployment.pdf
- For more information on Cisco version of Nutanix Professional services, please visit - https://www.nutanix.com/content/dam/nutanix/resources/service-descriptions/professional-services-service-descriptions-cisco.pdf

Table 34.9 Nutanix Flexible Credits

Nutanix Software Product/Edition	Cisco Product PID	Cisco PID Description PS Offer Name - PS Offer Edition - PS Offer Option - Base/Variable	Nutanix PS Edition	Nutanix PS Option
All	NT-FLEX-CST-CR	Nutanix Services Flexible Credits	None	None

Nutanix Support:

Table 35 Nutanix Support

Product ID (PID)	PID Description
Nutanix Support	
SVS-NT-SUP	Entitlement ONLY for Nutanix Cloud Infrastructure SW

Software With Professional Services PID Mapping

> **NOTE:** Recommended to select the matching/higher level of service options for the subscribed software. For example: If ULT (Ultimate) software is selected, recommended to choose the ULT services from the below columns. However, it is allowed to select the lower version of the services.

Table 36.0 Nutanix Software NCI, NCI-D, NCI-Edge, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 1 YEAR SUBSCRIPTION with professional services PID Mapping

Software PIDs	Mandatory Professional Services PIDs	
	NCI Design Workshop (select one service)	NCI Cluster Deployment or Expansion (select a Pair of service)
STR: **A) NCI** NT-NCI-STR-PR NT-NCI-STR-MC NT-NCI-STR-FP NT-NCI-STR-FM **B) NCI-D** NT-NCI-D-STR-PR NT-NCI-D-STR-MC NT-NCI-D-STR-FP NT-NCI-D-STR-FM **C) NCI-Edge** NT-NCI-E-STR-PR NT-NCI-E-STR-MC NT-NCI-E-STR-FP NT-NCI-E-STR-FM **D) EUC** NT-EUC-STR-PR NT-EUC-STR-MC NT-EUC-STR-FP NT-EUC-STR-FM **PRO:** **A) NCI** NT-NCI-PRO-PR NT-NCI-PRO-MC NT-NCI-PRO-FP NT-NCI-PRO-FM	**STR:** NT-W-DS-STR NT-W-DS-STR-SD NT-W-DS-STR-ED **PRO:** NT-W-DS-PRO NT-W-DS-PRO-SD NT-W-DS-PRO-ED **ULT:** NT-W-DS-ULT-SD NT-W-DS-ULT-ED	**STR:** NT-S-DP-STR-AVB **and** NT-S-DP-STR-AVV **or** NT-S-DP-STR-EXB **and** N T-S-DP-STR-EXV **PRO:** NT-S-DP-PRO-AV-SB **and** NT-S-DP-PRO-AV-SV **or** NT-S-DP-PRO-EX-SB **and** NT-S-DP-PRO-EX-SV **or** NT-S-DP-PRO-AV-PB and NT-S-DP-PRO-AV-PV **or** NT-S-DP-PRO-EX-PB and NT-S-DP-PRO-EX-PV **ULT:** NT-S-DP-ULT-AV-SB **and** NT-S-DP-ULT-AV-SV **or** NT-S-DP-ULT-EX-SB **and** NT-S-DP-ULT-EX-SV **or** NT-S-DP-ULT-AV-PB **and** NT-S-DP-ULT-AV-PV **or** NT-S-DP-ULT-EX-PB **and** NT-S-DP-ULT-EX-PV **or** NT-S-DP-ULT-AV-UB **and** NT-S-DP-ULT-AV-UV **or** NT-S-DP-ULT-EX-UB **and** NT-S-DP-ULT-EX-UV

Table 36.0 Nutanix Software NCI, NCI-D, NCI-Edge, EUC, NCP (NCI-PRO), NCP (NCI-ULT) <u>1 YEAR SUBSCRIPTION</u> with professional services PID Mapping

B) NCI-D
NT-NCI-D-PRO-PR
NT-NCI-D-PRO-MC
NT-NCI-D-PRO-FP
NT-NCI-D-PRO-FM

C) NCI-Edge
NT-NCI-E-PRO-PR
NT-NCI-E-PRO-MC
NT-NCI-E-PRO-FP
NT-NCI-E-PRO-FM

D) EUC
NT-EUC-PRO-PR
NT-EUC-PRO-MC
NT-EUC-PRO-FP
NT-EUC-PRO-FM

E) NCP (NCI-PRO)
NT-NCP-NCI-PRO-PR
NT-NCP-NCI-PRO-MC
NT-NCP-NCI-PRO-FP
NT-NCP-NCI-PRO-FM

ULT:
A) NCI
NT-NCI-ULT-PR
NT-NCI-ULT-MC
NT-NCI-ULT-FP
NT-NCI-ULT-FM

B) NCI-D
NT-NCI-D-ULT-PR
NT-NCI-D-ULT-MC
NT-NCI-D-ULT-FP
NT-NCI-D-ULT-FM

C) NCI-Edge
NT-NCI-E-ULT-PR
NT-NCI-E-ULT-MC
NT-NCI-E-ULT-FP
NT-NCI-E-ULT-FM

Cisco Compute Hyperconverged with Nutanix

Table 36.0 Nutanix Software NCI, NCI-D, NCI-Edge, EUC, NCP (NCI-PRO), NCP (NCI-ULT) <u>1 YEAR SUBSCRIPTION</u> with professional services PID Mapping

D) EUC NT-EUC-ULT-PR NT-EUC-ULT-MC NT-EUC-ULT-FP NT-EUC-ULT-FM **E) NCP (NCI-ULT)** NT-NCP-NCI-ULT-PR NT-NCP-NCI-ULT-MC NT-NCP-NCI-ULT-FP NT-NCP-NCI-ULT-FM		

> **NOTE:** Recommended to select the matching/higher level of service options for the subscribed software. For example: If ULT (Ultimate) software is selected, recommended to choose the ULT services from the below columns. However, it is allowed to select the lower version of the services.

Table 36.1 Nutanix Software NCI, NCI-D, NCI-Edge, EUC, NCP (NCI-PRO), NCP (NCI-ULT) <u>3 YEAR SUBSCRIPTION</u> with professional services PID Mapping

Software PIDs	Recommended Professional Services PIDs	
	NCI Design Workshop (select one service)	NCI Cluster Deployment or Expansion (select a Pair of service)
STR: **A) NCI** NT-NCI-STR-PR NT-NCI-STR-MC NT-NCI-STR-FP NT-NCI-STR-FM **B) NCI-D** NT-NCI-D-STR-PR NT-NCI-D-STR-MC NT-NCI-D-STR-FP NT-NCI-D-STR-FM **C) NCI-Edge** NT-NCI-E-STR-PR NT-NCI-E-STR-MC NT-NCI-E-STR-FP NT-NCI-E-STR-FM **D) EUC** NT-EUC-STR-PR NT-EUC-STR-MC NT-EUC-STR-FP NT-EUC-STR-FM **PRO:** **A) NCI** NT-NCI-PRO-PR NT-NCI-PRO-MC NT-NCI-PRO-FP NT-NCI-PRO-FM	**STR:** NT-W-DS-STR NT-W-DS-STR-SD NT-W-DS-STR-ED **PRO:** NT-W-DS-PRO NT-W-DS-PRO-SD NT-W-DS-PRO-ED **ULT:** NT-W-DS-ULT-SD NT-W-DS-ULT-ED	**STR:** NT-S-DP-STR-AVB **and** NT-S-DP-STR-AVV **or** NT-S-DP-STR-EXB **and** N T-S-DP-STR-EXV **PRO:** NT-S-DP-PRO-AV-SB **and** NT-S-DP-PRO-AV-SV **or** NT-S-DP-PRO-EX-SB **and** NT-S-DP-PRO-EX-SV **or** NT-S-DP-PRO-AV-PB and NT-S-DP-PRO-AV-PV **or** NT-S-DP-PRO-EX-PB and NT-S-DP-PRO-EX-PV **ULT:** NT-S-DP-ULT-AV-SB **and** NT-S-DP-ULT-AV-SV **or** NT-S-DP-ULT-EX-SB **and** NT-S-DP-ULT-EX-SV **or** NT-S-DP-ULT-AV-PB **and** NT-S-DP-ULT-AV-PV **or** NT-S-DP-ULT-EX-PB **and** NT-S-DP-ULT-EX-PV **or** NT-S-DP-ULT-AV-UB **and** NT-S-DP-ULT-AV-UV **or** NT-S-DP-ULT-EX-UB **and** NT-S-DP-ULT-EX-UV

Table 36.1 Nutanix Software NCI, NCI-D, NCI-Edge, EUC, NCP (NCI-PRO), NCP (NCI-ULT) <u>3 YEAR SUBSCRIPTION</u> with professional services PID Mapping

B) NCI-D
NT-NCI-D-PRO-PR
NT-NCI-D-PRO-MC
NT-NCI-D-PRO-FP
NT-NCI-D-PRO-FM

C) NCI-Edge
NT-NCI-E-PRO-PR
NT-NCI-E-PRO-MC
NT-NCI-E-PRO-FP
NT-NCI-E-PRO-FM

D) EUC
NT-EUC-PRO-PR
NT-EUC-PRO-MC
NT-EUC-PRO-FP
NT-EUC-PRO-FM

E) NCP (NCI-PRO)
NT-NCP-NCI-PRO-PR
NT-NCP-NCI-PRO-MC
NT-NCP-NCI-PRO-FP
NT-NCP-NCI-PRO-FM

ULT:
A) NCI
NT-NCI-ULT-PR
NT-NCI-ULT-MC
NT-NCI-ULT-FP
NT-NCI-ULT-FM

B) NCI-D
NT-NCI-D-ULT-PR
NT-NCI-D-ULT-MC
NT-NCI-D-ULT-FP
NT-NCI-D-ULT-FM

C) NCI-Edge
NT-NCI-E-ULT-PR
NT-NCI-E-ULT-MC
NT-NCI-E-ULT-FP
NT-NCI-E-ULT-FM

Table 36.1 Nutanix Software NCI, NCI-D, NCI-Edge, EUC, NCP (NCI-PRO), NCP (NCI-ULT) <u>3 YEAR SUBSCRIPTION</u> with professional services PID Mapping

D) EUC NT-EUC-ULT-PR NT-EUC-ULT-MC NT-EUC-ULT-FP NT-EUC-ULT-FM **E) NCP (NCI-ULT)** NT-NCP-NCI-ULT-PR NT-NCP-NCI-ULT-MC NT-NCP-NCI-ULT-FP NT-NCP-NCI-ULT-FM		

NOTE: Recommended to select the matching/higher level of service options for the subscribed software. For example: If ULT (Ultimate) software is selected, recommended to choose the ULT services from the below columns. However, it is allowed to select the lower version of the services.

Table 37.0 Nutanix Software NCM STR 1 YEAR SUBSCRIPTION with professional services PID Mapping

Software PIDs	Mandatory Professional Services PIDs	
	NCM Intelligent Operations Design (select one service)	NCM Intelligent Operations Deployment (select one service)
STR: A) NCM NT-NCM-STR-PR NT-NCM-STR-MC NT-NCM-STR-FP NT-NCM-STR-FM	STR: NT-W-OD-STR-SD NT-W-OD-STR-ED PRO: NT-W-OD-PRO-SD NT-W-OD-PRO-ED ULT: NT-W-OD-ULT-SD NT-W-OD-ULT-ED	STR: NT-S-OP-STR PRO: NT-S-OP-PRO ULT: NT-S-OP-ULT

> **NOTE:** Recommended to select the matching/higher level of service options for the subscribed software. For example: If ULT (Ultimate) software is selected, recommended to choose the ULT services from the below columns. However, it is allowed to select the lower version of the services.

Table 37.1 Nutanix Software NCM STR 3 YEAR AND ABOVE SUBSCRIPTION with Professional Services PID Mapping

Software PIDs	Recommended Professional Services PIDs	
	NCM Intelligent Operations Design (select one service)	NCM Intelligent Operations Deployment (select one service)
STR: A) NCM NT-NCM-STR-PR NT-NCM-STR-MC NT-NCM-STR-FP NT-NCM-STR-FM	STR: NT-W-OD-STR-SD NT-W-OD-STR-ED PRO: NT-W-OD-PRO-SD NT-W-OD-PRO-ED ULT: NT-W-OD-ULT-SD NT-W-OD-ULT-ED	STR: NT-S-OP-STR PRO: NT-S-OP-PRO ULT: NT-S-OP-ULT

> **NOTE:** Recommended to select the matching/higher level of service options for the subscribed software. For example: If ULT (Ultimate) software is selected, recommended to choose the ULT services from the below columns. However, it is allowed to select the lower version of the services.

Table 38 Nutanix Software NCM PRO, NCM ULT, NCP (NCM-PRO), NCP (NCM-ULT) <u>1 YEAR AND 3 YEAR &</u> <u>ABOVE SUBSCRIPTION</u> with Professional services

Software PIDs	Mandatory Professional Services PIDs				
	NCM Self-Service Design Workshop (select one service)	NCM Intelligent Operations Design (select one service)	NCM Intelligent Operations Deployment (select one service)	FastTrack for NCM Self-Service (select one service)	FastTrack for NCM Cost Governance (select one service)
PRO: **A) NCM** NT-NCM-PRO-PR NT-NCM-PRO-MC NT-NCM-PRO-FP NT-NCM-PRO-FM **B) NCP (NCM-PRO)** NT-NCP-NCM-PRO-PR NT-NCP-NCM-PRO-MC NT-NCP-NCM-PRO-FP NT-NCP-NCM-PRO-FM **ULT:** **A) NCM** NT-NCM-ULT-PR NT-NCM-ULT-MC NT-NCM-ULT-FP NT-NCM-ULT-FM **B) NCP (NCM-ULT)** NT-NCP-NCM-ULT-PR NT-NCP-NCM-ULT-MC NT-NCP-NCM-ULT-FP NT-NCP-NCM-ULT-FM	**PRO:** NT-W-SSD-PRO-SD-S NT-W-SSD-PRO-ED-S NT-W-SSD-PRO-SD-P NT-W-SSD-PRO-ED-P **ULT:** NT-W-SSD-ULT-SD-S NT-W-SSD-ULT-ED-S NT-W-SSD-ULT-SD-P NT-W-SSD-ULT-ED-P	**STR:** NT-W-OD-STR-SD NT-W-OD-STR-ED **PRO:** NT-W-OD-PRO-SD NT-W-OD-PRO-ED **ULT:** NT-W-OD-ULT-SD NT-W-OD-ULT-ED	**STR:** NT-S-OP-STR **PRO:** NT-S-OP-PRO **ULT:** NT-S-OP-ULT	**PRO:** NT-F-PRO-SS **ULT:** NT-F-ULT-SS	**PRO:** NT-F-PRO-CG **ULT:** NT-F-ULT-CG

■

STEP 17 CISCO INTERSIGHT

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

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

Select Cisco Intersight subscription option as desired from *Table 39*

Table 39 Cisco Intersight

Product ID (PID)	PID Description
Cisco Intersight 2.0 Infrastructure Services	
DC-MGT-IS-SAAS-ES[1]	Infrastructure Services SaaS/CVA - Essentials
DC-MGT-IS-SAAS-AD[1]	Infrastructure Services SaaS/CVA - Advantage
DC-MGT-IS-PVAPP-ES[1]	Infrastructure Services PVA - Essentials
DC-MGT-IS-PVAPP-AD[1]	Infrastructure Services PVA - Advantage
Add-Ons	
DC-MGT-IS-UCSD	UCS Director - 1 Server License (includes Network, Storage)
Cisco Intersight Workload Optimizer (IWO) - SaaS	
VM Instance	
DC-MGT-WO-SAAS-ES[1]	Cisco Intersight Workload Optimizer SaaS - Essentials
DC-MGT-WO-SAAS-AD[1]	Cisco Intersight Workload Optimizer SaaS - Advantage
DC-MGT-WO-SAAS-PR[1]	Cisco Intersight Workload Optimizer SaaS - Premier
VDI Instance	
DC-MGT-WOD-SAAS-ES[1]	Cisco Intersight Workload Optimizer SaaS VDI - Essentials
DC-MGT-WOD-SAAS-AD[1]	Cisco Intersight Workload Optimizer SaaS VDI - Advantage
DC-MGT-WOD-SAAS-PR[1]	Cisco Intersight Workload Optimizer SaaS VDI - Premier

Notes:

1. Smart account (SA) required

Select Cisco Intersight support option as desired from *Table 40*

Table 40 Cisco Intersight Support

Product ID (PID)	PID Description
Cisco Intersight Support	
SVS-SSTCS-DCMGMT[1]	Solution Support for DC Mgmnt
SVS-L1DCS-INTER[1]	CXL1 for INTERSIGHT
SVS-L2DCS-INTER[1]	CXL2 for INTERSIGHT
SVS-DCM-SUPT-BAS	Basic Support for DCM

Notes:

1. Smart account (SA) required

NOTE: An Intersight license is required for every server.

SUPPLEMENTAL MATERIAL

Retrofit of Existing UCS Servers

Existing UCS servers that match the base HCI platform (C220 M7 All-Flash/C240 M7 All NVMe/ C240 M7 All-Flash) can be retrofitted to support Nutanix software. UCS servers contain a software feature known as a software defined personality, enabling easy and automatic conversion between a base UCS platform and an HCI appliance supported under the Nutanix OEM program.

To prepare a server for retrofitting, confirm all installed components match all required sections of this document (e.g CPU, Memory, Drive Controller, Drives, Network Adapters, etc.). Special care should be taken to ensure compatible boot media, storage controllers, drives, and networking adapters are selected in line with this document.

For the C240 M7 All-Flash specifically, riser 1B and 3B can be physically installed as long as the drive bays remain unpopulated. Only the 24 front facing drive slots can be populated with SSDs.
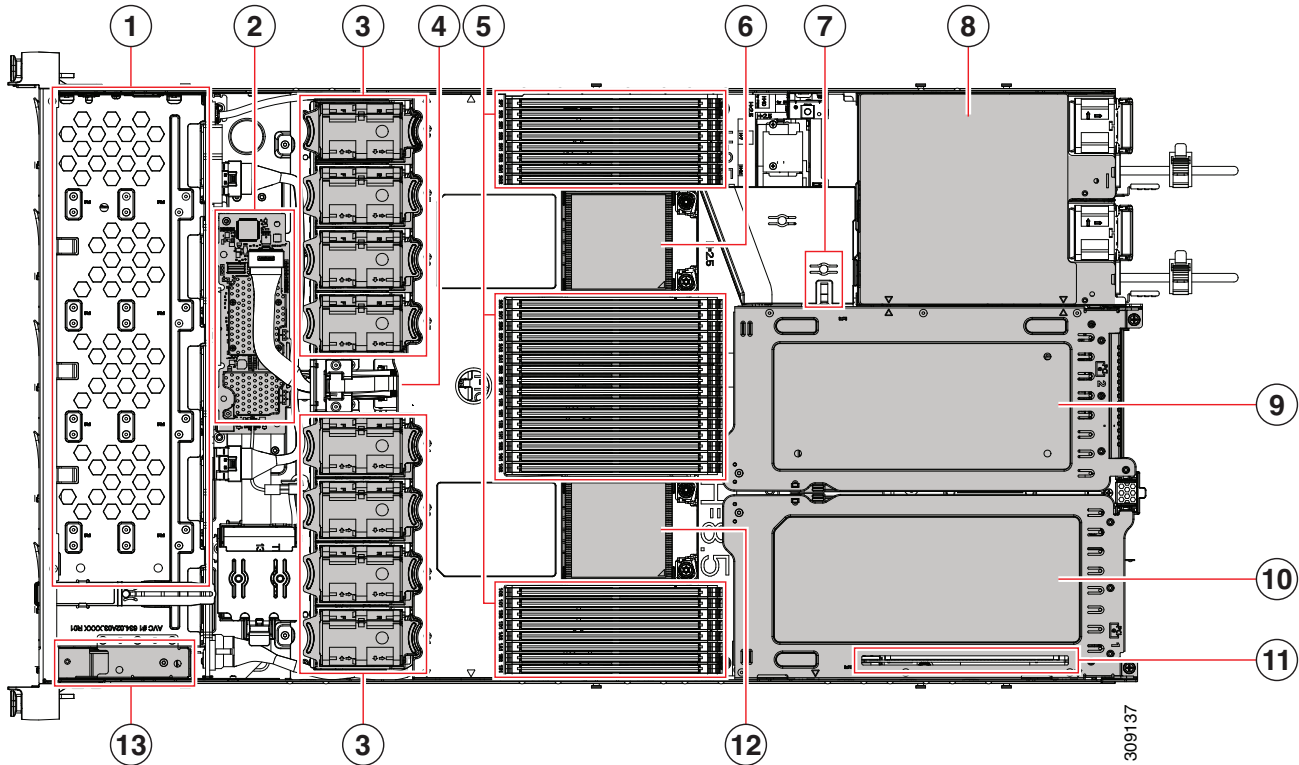
Once the server hardware is confirmed to be compatible with this spec sheet, be sure to purchase the appropriate Nutanix software licenses, Intersight licenses, and professional services, as required.
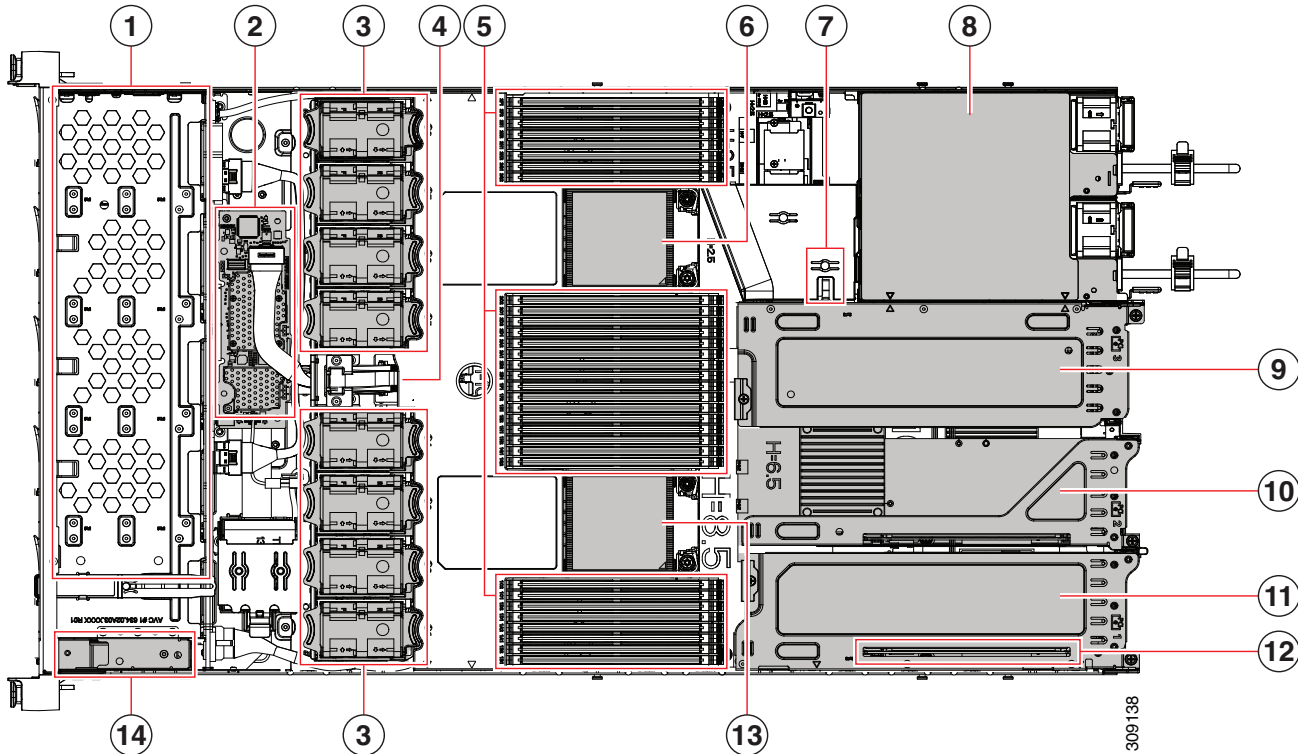
Chassis

Figure 7 and *Figure 8* shows the Internal views of the C220 M7 chassis with the top cover removed.

Figure 7 Cisco Compute Hyperconverged HCIAF220C M7 All-NVMe/All-Flash Servers With Top Cover Off (full-height, full-width PCIe cards)

1	Front-loading drive bays	2	M7 modular RAID card (or SATA Interposer)
3	Cooling fan modules (eight) Each fan is hot-swappable	4	Supercap module mounting bracket
5	DIMM sockets on motherboard, 32 total, 16 per CPU CPUs are arranged in groups of eight sockets above the top CPU and below the bottom CPU, and 16 sockets between the CPUs.	6	Motherboard CPU2 socket
7	M.2 module connector, supporting a boot-optimized RAID controller with connectors for up to two SATA M.2 SSDs.	8	Two power supplies
9	PCIe riser 3 Accepts 1 full height, full width PCIe riser card	10	PCIe riser 1 Accepts 1 full height, full width PCIe riser card
11	Modular LOM (mLOM) card bay on chassis floor(x16 PCIe lane) Connector shown, but the card bay sits below PCIe riser 1.	12	Motherboard CPU1 socket
13	Front Panel Controller board	-	

Figure 8   Cisco Compute Hyperconverged HCIAF220C M7 All-NVMe/All-Flash Servers With Top Cover Off (full-height, half-width PCIe cards)

1	Front-loading drive bays	2	M7 modular RAID card (or SATA Interposer)
3	Cooling fan modules (eight) Each fan is hot-swappable	4	Supercap module mounting bracket
5	DIMM sockets on motherboard, 32 total, 16 per CPU CPUs are arranged in groups of eight sockets above the top CPU and below the bottom CPU, and 16 sockets between the CPUs.	6	Motherboard CPU2 socket
7	M.2 module connector, supporting a boot-optimized RAID controller with connectors for up to two SATA M.2 SSDs.	8	Two power supplies
9	PCIe riser 3 Accepts 1 half height, half width PCIe riser card	10	PCIe riser 2 Accepts 1 half height, half width PCIe riser card
11	PCIe riser 1 Accepts 1 half height, half width PCIe riser card	12	Modular LOM (mLOM)/OCP 3.0 card bay on chassis floor (x16 PCIe lane) Connector shown, but the card bay sits below PCIe riser slot 1.
13	Motherboard CPU1 socket	14	Front Panel Controller board

Risers

Figure 9 shows the locations of the PCIe riser connectors on the Cisco Compute Hyperconverged HCIAF220C M7 All-NVMe/All-Flash Servers motherboard. The allowed configurations are:

- Half-height risers in riser 1 connector, riser 2 connector, and riser 3 connector, or
- Full-height risers in riser 1 connector and riser 3 connector.

See *Figure 10* and *Figure 11* for more details.

Figure 9   Cisco Compute Hyperconverged HCIAF220C M7 All-NVMe/All-Flash Servers Riser Connector Locations
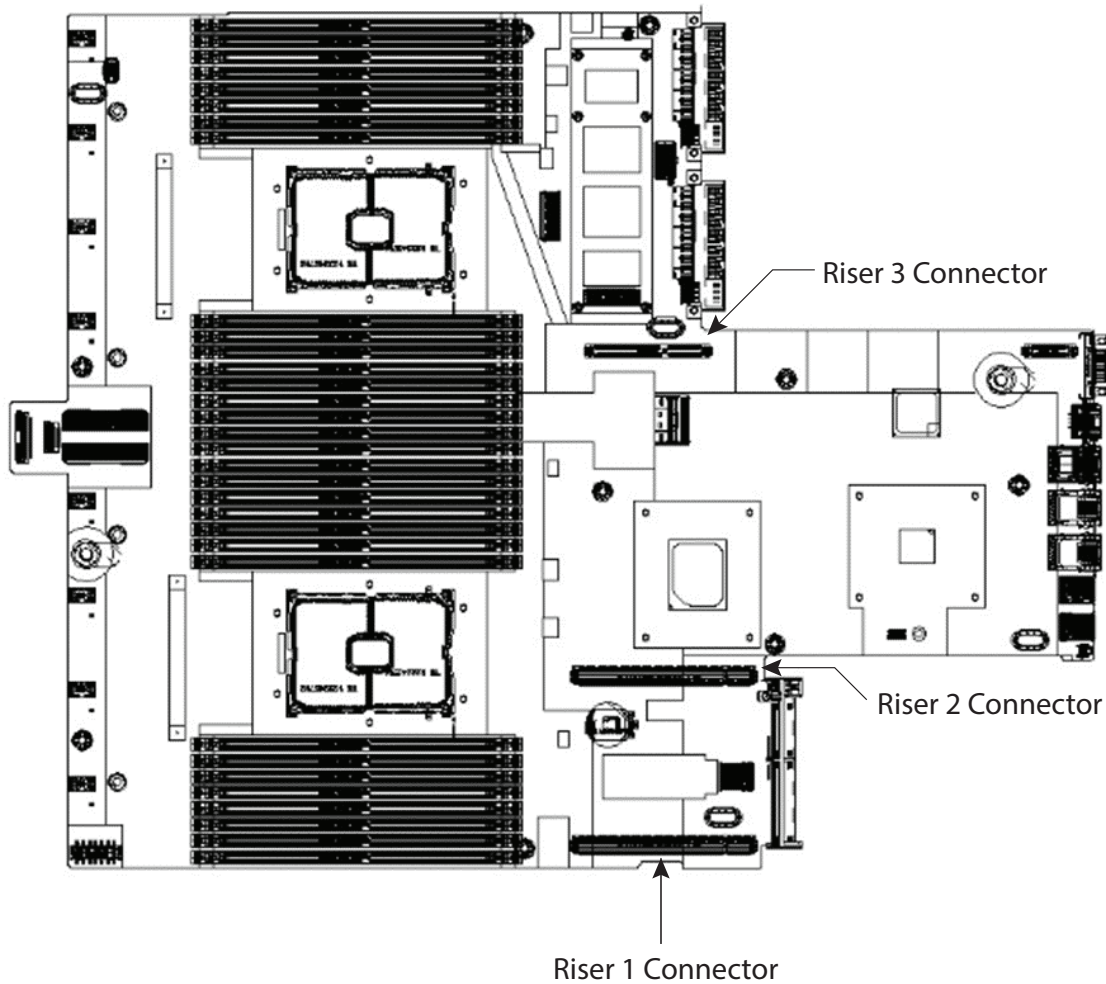
HCIAF220C-M7S Motherboard

Figure 10 shows three half-height risers plugged into their respective connectors.

Figure 10   Cisco Compute Hyperconverged HCIAF220C M7 All-NVMe/All-Flash Servers With Three Half-Height Risers Plugged In

HCIAF220C-M7S Motherboard

Riser 3 Connector

Half-Height Riser 3

Half-Height Riser 2

Half-Height Riser 1
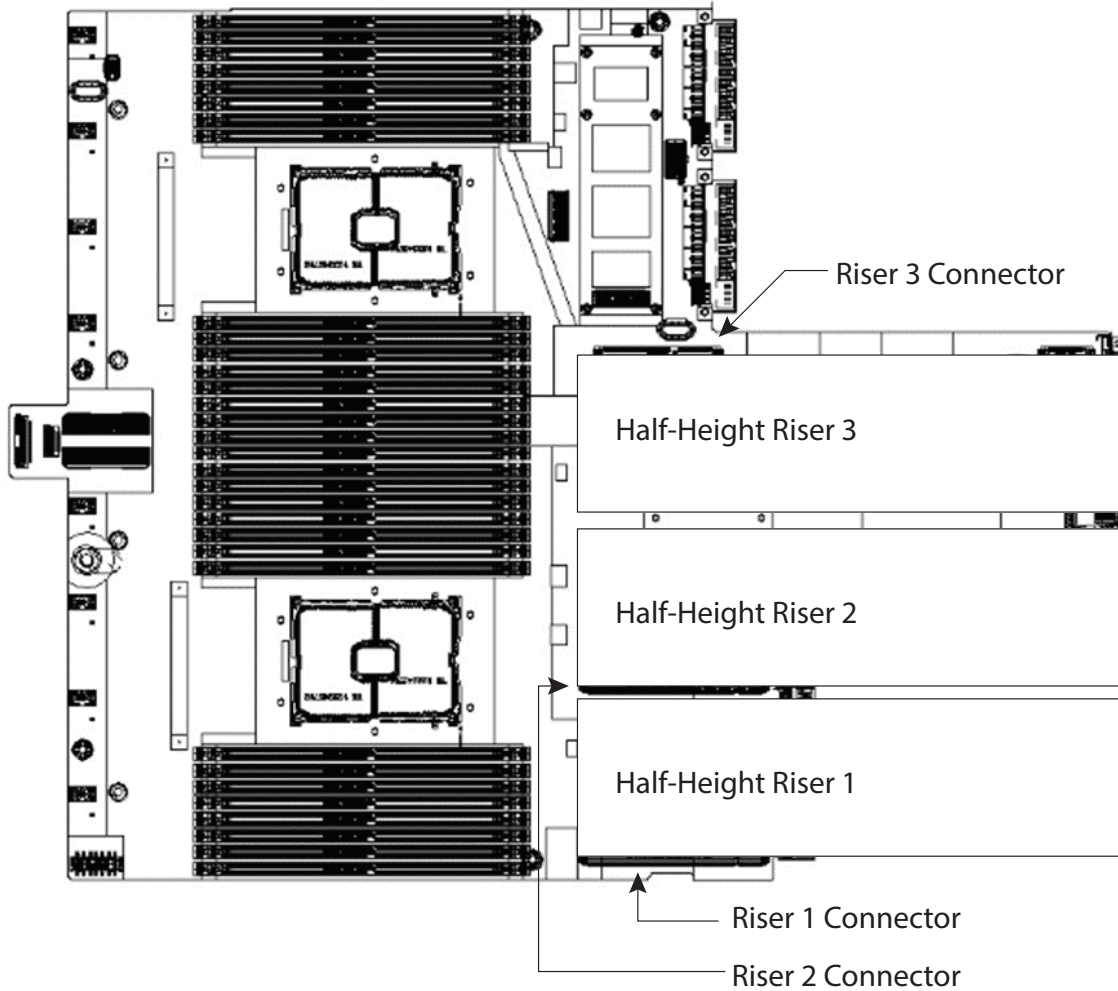
Riser 1 Connector

Riser 2 Connector

Figure 11 shows two full-height risers plugged in. Note that riser 1 is plugged into the riser 1 connector and riser 2 is plugged into the riser 3 connector. Riser 2 connector is not used.

Figure 11   Cisco Compute Hyperconverged HCIAF220C M7 All-NVMe/All-Flash Servers With Two Full-Height Risers Plugged In
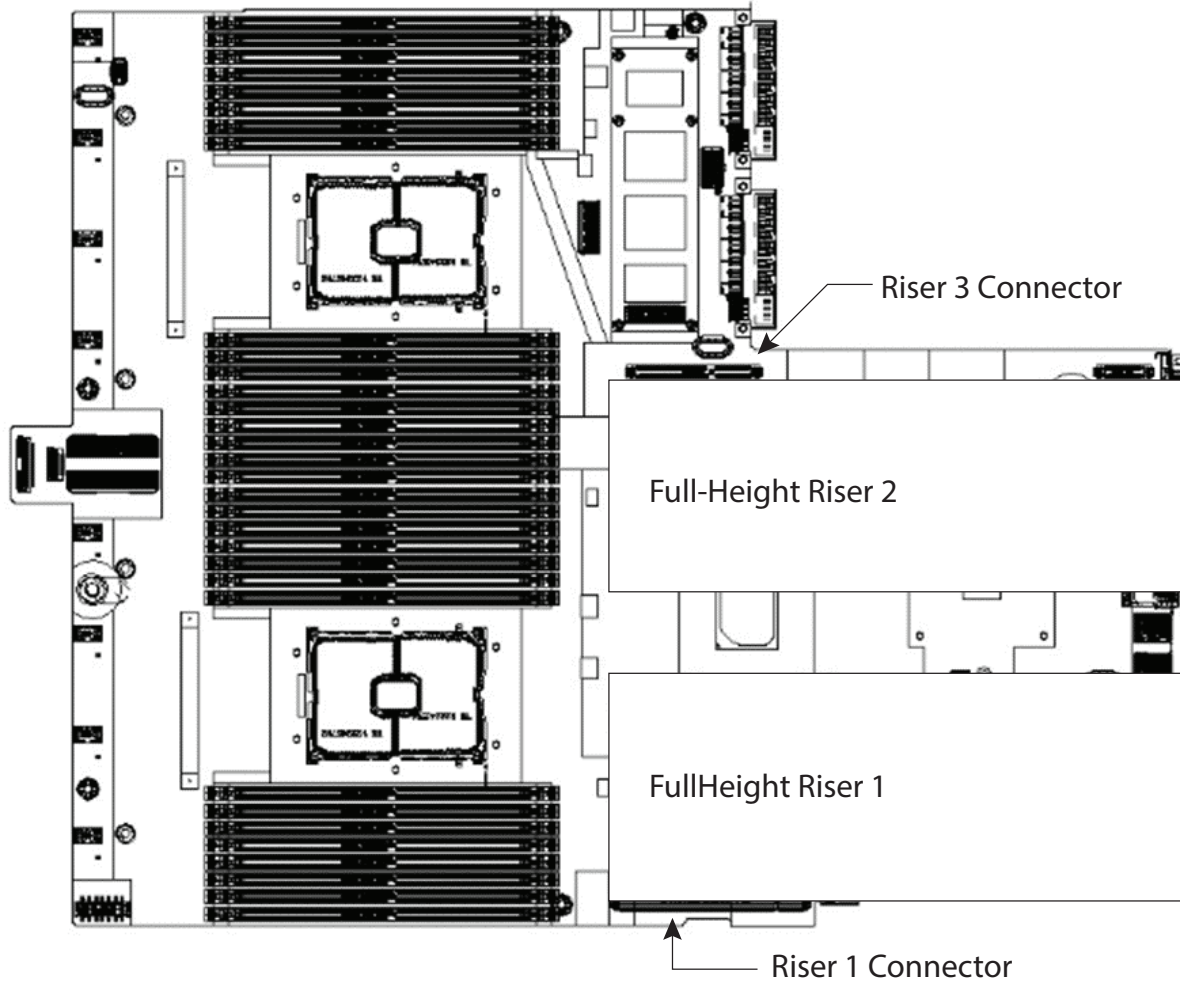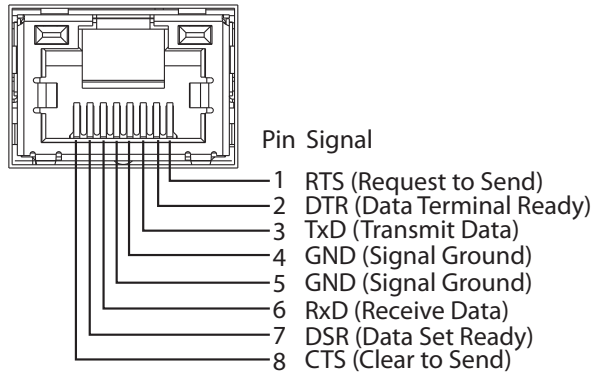
HCIAF220C-M7S Motherboard

Riser 3 Connector

Full-Height Riser 2

FullHeight Riser 1

Riser 1 Connector

Serial Port Details

The pinout details of the rear RJ-45 serial port connector are shown in *Figure 12*.

Figure 12   Serial Port (Female RJ-45 Connector) Pinout

Serial Port (RJ-45 Female Connector)

Pin Signal
1 RTS (Request to Send)
2 DTR (Data Terminal Ready)
3 TxD (Transmit Data)
4 GND (Signal Ground)
5 GND (Signal Ground)
6 RxD (Receive Data)
7 DSR (Data Set Ready)
8 CTS (Clear to Send)

KVM Cable

The KVM cable provides a connection into the server, providing a DB9 serial connector, a VGA connector for a monitor, and dual USB ports for a keyboard and mouse. With this cable, you can create a direct connection to the operating system and the BIOS running on the server.

The KVM cable ordering information is listed in *Table 41*.

Table 41 KVM Cable

Product ID (PID)	PID Description
N20-BKVM	KVM cable for UCS Server console port

Figure 13   KVM Cable
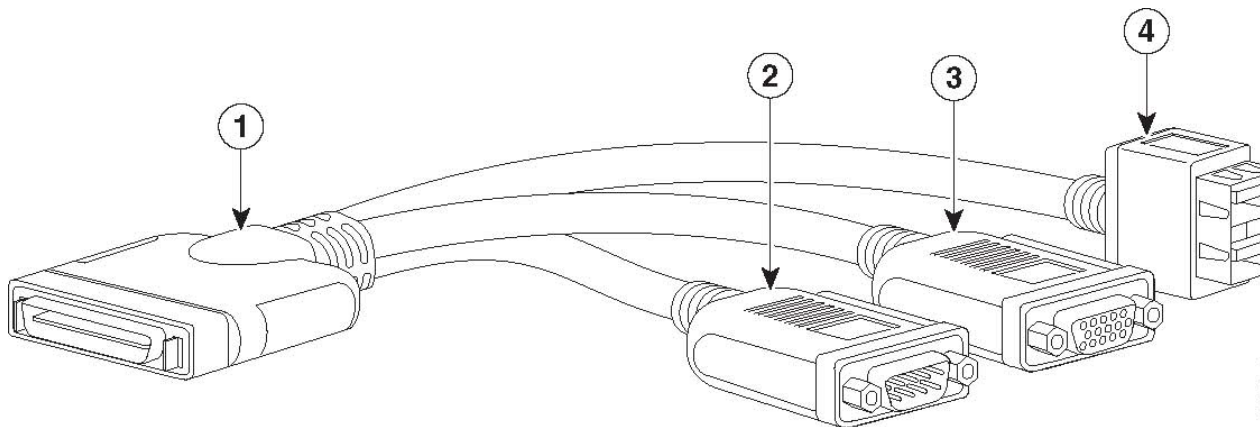
1	Connector (to server front panel)	3	VGA connector (for a monitor)
2	DB-9 serial connector	4	Two-port USB connector (for a mouse and keyboard)

UPGRADING or REPLACING CPUs and Memory

- Refer to Cisco Compute Hyperconverged HCIAF220C M7 All-NVMe/All-Flash Servers Installation and Service Guide to upgrading or replacing the CPUs
- Refer to Cisco Compute Hyperconverged HCIAF220C M7 All-NVMe/All-Flash Servers Installation and Service Guide to upgrading or replacing the Memory

TECHNICAL SPECIFICATIONS

Dimensions and Weight

Table 42 Cisco Compute Hyperconverged HCIAF220C M7 All-NVMe/All-Flash Servers Dimensions and Weight

Parameter	Value
Height	1.70 in. (4.3 cm)
Width (including slam latches)	16.9 in.(42.9 cm)
Depth	30 in. (76.2 cm)
Weight	
Weight with following options and no rail kit: 1*HDD, 1*CPU(with Heat Sink), 1*DIMM, 1*1600W PSU, mLOM card, 3HH rear wall, 3HH riser cage1, 3HH riser cage2, 3HH riser cage3, Raid tray, BBU module (with holder)	15.05 kgs = 33.18 lbs (3HH SKU)
Weight with following options and no rail kit: 1*HDD, 1*CPU(with Heat Sink), 1*DIMM, 1*1600W PSU, mLOM card, 2FH rear wall, 2FH riser cage1, 2FH riser cage2, Raid tray, BBU module (with holder)	15.1 kgs = 33.29 lbs (2FH SKU)
Weight with following options and including rail kit: 1*HDD, 1*CPU(with Heat Sink), 1*DIMM, 1*1600W PSU, mLOM card, 3HH rear wall, 3HH riser cage1, 3HH riser cage2, 3HH riser cage3, Raid tray, BBU module (with holder)	18.8 kgs = 41.45 lbs (3HH SKU)
Weight with following options and including rail kit: 1*HDD, 1*CPU(with Heat Sink), 1*DIMM, 1*1600W PSU, mLOM card, 2FH rear wall, 2FH riser cage1, 2FH riser cage2, Raid tray, BBU module (with holder),	18.85 kgs = 41.56 lbs (2FH SKU)
Weight with following options and no rail kit: 10*HDDs, 2*CPUs(with Heat Sink), 32*DIMMs, 2*1600W PSUs, mLOM card, 3HH rear wall, 3HH riser cage1, 3HH riser cage2, 3HH riser cage3, Raid tray, BBU module (with holder)	19.73 kgs = 43.5 lbs (3HH SKU)
Weight with following options and no rail kit: 10*HDDs, 2*CPUs(with Heat Sink), 32*DIMMs, 2*1600W PSUs, mLOM card, 2FH rear wall, 2FH riser cage1, 2FH ris-er cage2, Raid tray, BBU module (with holder)	19.78 kgs = 43.61 lbs (2FH SKU)
Weight with following options and including rail kit: 10*HDDs, 2*CPUs(with Heat Sink), 32*DIMMs, 2*1600W PSUs, mLOM card, 3HH rear wall, 3HH riser cage1, 3HH riser cage2, 3HH riser cage3, Raid tray, BBU module (with holder)	23.49 kgs = 51.79 lbs (3HH SKU)
Weight with following options and including rail kit: 10*HDDs, 2*CPUs(with Heat Sink), 32*DIMMs, 2*1600W PSUs, mLOM card, 2FH rear wall, 2FH riser cage1, 2FH riser cage2, Raid tray, BBU module (with holder)	23.54 kgs = 51.9 lbs (2FH SKU)

Power Specifications

The server is available with the following types of power supplies:

- 770 W (AC) power supply (see *Table 43*)

- 1050W DC power supply (see *Table 44*)

- 1200 W (AC) power supply (see *Table 45*)

- 1600 W (AC) power supply (see *Table 46*)

- 2300 W (AC) power supply (see *Table 47*)

Table 43 Cisco Compute Hyperconverged HCIAF220C M7 All-NVMe/All-Flash Servers 770 W (AC) Power Supply Specifications

Parameter	Specification			
Input Connector	IEC320 C14			
Input Voltage Range (Vrms)	100 to 240			
Maximum Allowable Input Voltage Range (Vrms)	90 to 264			
Frequency Range (Hz)	50 to 60			
Maximum Allowable Frequency Range (Hz)	47 to 63			
Maximum Rated Output (W)	770			
Maximum Rated Standby Output (W)	36			
Nominal Input Voltage (Vrms)	100	120	208	230
Nominal Input Current (Arms)	8.8	7.4	4.2	3.8
Maximum Input at Nominal Input Voltage (W)	855	855	855	846
Maximum Input at Nominal Input Voltage (VA)	882	882	882	872
Minimum Rated Efficiency (%)[1]	90	90	90	91
Minimum Rated Power Factor[1]	0.97	0.97	0.97	0.97
Maximum Inrush Current (A peak)	15			
Maximum Inrush Current (ms)	0.2			
Minimum Ride-Through Time (ms)[2]	12			

Notes:

1. This is the minimum rating required to achieve 80 PLUS Platinum certification, see test reports published at http://www.80plus.org/ for certified values
2. Time output voltage remains within regulation limits at 100% load, during input voltage dropout

Table 44 Cisco Compute Hyperconverged HCIAF220C M7 All-NVMe/All-Flash Servers Power Specifications (1050 W V2 DC power supply)

Parameter	Specification
Input Connector	Molex 42820
Input Voltage Range (V rms)	-48
Maximum Allowable Input Voltage Range (V rms)	-40 to -72
Frequency Range (Hz)	NA
Maximum Allowable Frequency Range (Hz)	NA
Maximum Rated Output (W)	1050
Maximum Rated Standby Output (W)	36
Nominal Input Voltage (V rms)	-48
Nominal Input Current (A rms)	24
Maximum Input at Nominal Input Voltage (W)	1154
Maximum Input at Nominal Input Voltage (VA)	1154
Minimum Rated Efficiency (%)[1]	91
Minimum Rated Power Factor[1]	NA
Maximum Inrush Current (A peak)	15
Maximum Inrush Current (ms)	0.2
Minimum Ride-Through Time (ms)[2]	5

Notes:

1. This is the minimum rating required to achieve 80 PLUS Platinum certification, see test reports published at http://www.80plus.org/ for certified values
2. Time output voltage remains within regulation limits at 100% load, during input voltage dropout

Cisco Compute Hyperconverged with Nutanix

Table 45 Cisco Compute Hyperconverged HCIAF220C M7 All-NVMe/All-Flash Servers 1200 W (AC) Power Supply Specifications

Parameter	Specification			
Input Connector	IEC320 C14			
Input Voltage Range (Vrms)	100 to 240			
Maximum Allowable Input Voltage Range (Vrms)	90 to 264			
Frequency Range (Hz)	50 to 60			
Maximum Allowable Frequency Range (Hz)	47 to 63			
Maximum Rated Output (W)[1]	1100		1200	
Maximum Rated Standby Output (W)	48			
Nominal Input Voltage (Vrms)	100	120	208	230
Nominal Input Current (Arms)	12.97	10.62	6.47	5.84
Maximum Input at Nominal Input Voltage (W)	1300	1264	1343	1340
Maximum Input at Nominal Input Voltage (VA)	1300	1266	1345	1342
Minimum Rated Efficiency (%)[2]	90	90	91	91
Minimum Rated Power Factor[2]	0.97	0.97	0.97	0.97
Maximum Inrush Current (A peak)	20			
Maximum Inrush Current (ms)	0.2			
Minimum Ride-Through Time (ms)[3]	12			

Notes:

1. Maximum rated output is limited to 1100W when operating at low-line input voltage (100-127V)
2. This is the minimum rating required to achieve 80 PLUS Titanium certification, see test reports published at http://www.80plus.org/ for certified values
3. Time output voltage remains within regulation limits at 100% load, during input voltage dropout

Table 46 Cisco Compute Hyperconverged HCIAF220C M7 All-NVMe/All-Flash Servers 1600 W (AC) Power Supply Specifications

Parameter	Specification			
Input Connector	IEC320 C14			
Input Voltage Range (V rms)	200 to 240			
Maximum Allowable Input Voltage Range (V rms)	180 to 264			
Frequency Range (Hz)	50 to 60			
Maximum Allowable Frequency Range (Hz)	47 to 63			
Maximum Rated Output (W)	1600			
Maximum Rated Standby Output (W)	36			
Nominal Input Voltage (V rms)	100	120	208	230
Nominal Input Current (A rms)	NA	NA	8.8	7.9
Maximum Input at Nominal Input Voltage (W)	NA	NA	1778	1758
Maximum Input at Nominal Input Voltage (VA)	NA	NA	1833	1813
Minimum Rated Efficiency (%)[1]	NA	NA	90	91
Minimum Rated Power Factor[2]	NA	NA	0.97	0.97
Maximum Inrush Current (A peak)	30			
Maximum Inrush Current (ms)	0.2			
Minimum Ride-Through Time (ms)[2]	12			

Notes:

1. This is the minimum rating required to achieve 80 PLUS Platinum certification, see test reports published at http://www.80plus.org/ for certified values
2. Time output voltage remains within regulation limits at 100% load, during input voltage dropout

Table 47 Cisco Compute Hyperconverged HCIAF220C M7 All-NVMe/All-Flash Servers 2300 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)	50 to 60			
Maximum Allowable Frequency Range (Hz)	47 to 63			
Maximum Rated Output (W)[1]	2300			
Maximum Rated Standby Output (W)	36			
Nominal Input Voltage (Vrms)	100	120	208	230
Nominal Input Current (Arms)	13	11	12	10.8
Maximum Input at Nominal Input Voltage (W)	1338	1330	2490	2480
Maximum Input at Nominal Input Voltage (VA)	1351	1343	2515	2505
Minimum Rated Efficiency (%)[2]	92	92	93	93
Minimum Rated Power Factor[2]	0.99	0.99	0.97	0.97
Maximum Inrush Current (A peak)	30			
Maximum Inrush Current (ms)	0.2			
Minimum Ride-Through Time (ms)[3]	12			

Notes:

1. Maximum rated output is limited to 1200W when operating at low-line input voltage (100-127V)
2. This is the minimum rating required to achieve 80 PLUS Titanium certification, see test reports published at http://www.80plus.org/ for certified values
3. Time output voltage remains within regulation limits at 100% load, during input voltage dropout

NOTE: For configuration-specific power specifications, use the Cisco UCS Power Calculator at this URL: http://ucspowercalc.cisco.com

Environmental Specifications

The environmental specifications for Cisco Compute Hyperconverged HCIAF220C M7 All-NVMe/All-Flash Servers are listed in *Table 48*.

Table 48   Cisco Compute Hyperconverged HCIAF220C M7 All-NVMe/All-Flash Servers Environmental Specifications

Parameter	Minimum
Operating Temperature	5°C to 45°C (supports ASHRAE Class A4 and/or Class A3 and/or Class A2)
	ASHRAE Class A3 will be generic test profile unless otherwise specified by product engineering.
	System shall continue to operate with a single fan failure (one failed impeller in dual impeller housings) across the ASHRAE recommended operating range of 18 °C to 27 °C. While undesired, increased power consumption and/or acoustic noise is permitted during a fan fail event.
Extended Operating Temperature	5°C to 40°C (41°F to 104°F) with no direct sunlight
	Humidity condition: Uncontrolled, not to exceed 50% RH starting condition
	Derate the maximum temperature by 1°C (33.8°F) per every 305 meters of altitude above 900m
Non-Operating Temperature	Dry bulb temperature of -40°C to 65°C (-40°F to 149°F)
Operating Relative Humidity	8% to 90% relative humidity, non-condensing, with maximum wet bulb 28°C (82.4°F) within operational temperature range of 5°C to 50°C (41°F to 122°F)
Non-Operating Relative Humidity	5% to 93% relative humidity, non-condensing, with a maximum wet bulb temperature of 28°C across the 20°C to 40°C dry bulb range.
Maximum Operating Duration	Unlimited
Operating Altitude	A maximum elevation of 3050 meters (10,006 ft)
Non-Operating Altitude	An elevation of 0 to 12,000 meters (39,370 ft)
Sound Power level, Measure A-weighted per ISO7779 LWAd (Bels) Operation at 23°C (73°F)	1RU: 5.5B
	2RU: 5.8B
	Racked product: 6.8B
Sound Pressure level, Measure A-weighted per ISO7779 LpAm (dBA) Operation at 23°C (73°F)	1RU: 40dB
	2RU: 43dB
	Racked product: 55dB

.

Extended Operating Temperature Hardware Configuration Limits

Table 49   Cisco Compute Hyperconverged HCIAF220C M7 All-NVMe/All-Flash Servers Extended Operating Temperature Hardware Configuration Limits

Platform[1]	ASHRAE A3 (5ºC to 40ºC)[2]	ASHRAE A4 (5ºC to 45ºC)[3]
Processors:	155W+	155W+ and 105W+ (4 or 6 Cores)
Memory:	LRDIMMs	LRDIMMs
Storage:	M.2 SATA SSDs NVMe SSDs	M.2 SATA SSDs NVMe SSDs
Peripherals:	PCIe NVMe SSDs GPUs	MRAID PCIe NVMe SSDs GPUs mLOMs/OCP NICs HBAs

Notes:

1. Two PSUs are required and PSU failure is not supported
2. Non-Cisco UCS qualified peripherals and/or peripherals that consume more than 25W are not supported
3. High power or maximum power fan control policy must be applied

Compliance Requirements

The regulatory compliance requirements for servers are listed in *Table 50*.

Table 50   Regulatory Compliance Requirements

Parameter	Description
Regulatory Compliance	Products should comply with CE Markings per directives 2014/30/EU and 2014/35/EU
Safety	UL 60950-1 / 62368-1 CAN/CSA-C22.2 No. 60950-1, CAN/CSA-C22.2 No. 62368-1 EN 60950-1 / EN 62368-1 IEC 60950-1 / IEC 62368-1 AS/NZS 60950-1/62368.1 GB4943
EMC - Emissions	47CFR Part 15 (CFR 47) Class A AS/NZS CISPR32 Class A CISPR32 Class A EN55032 Class A ICES003 Class A VCCI Class A EN61000-3-2 EN61000-3-3 KN32 Class A CNS13438 Class A
EMC - Immunity	EN55024 CISPR24 EN300386 KN35

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