



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 HClAF220C M7 All-NVMe/All-Flash Servers harnesses the power of the latest Intel® Xeon® Scalable Processors and offers the following:

CPU:

- Up to 2x 5th Generation Intel® Xeon® Scalable Processors with up to 60 cores per processor **or**
- Up to 2x 4th Generation Intel® Xeon® Scalable Processors with up to 52 cores per processor.

Memory:

- Up to 4TB with 32 x 128GB DDR5-5600 DIMMs, in a 2-socket configuration with 5th Gen. Intel® Xeon® Scalable Processors **or**
- Up to 4TB with 32 x 128GB DDR5-4800 DIMMs, in a 2-socket configuration with 4th Gen. Intel® Xeon® Scalable Processors.

Drives:

- **HClAF220C-M7SN (All-NVMe)** (see [Figure 1 on page 4](#)):
 - 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
- **HClAF220C-M7S (All-Flash)** (see [Figure 1 on page 4](#)):
 - 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 4](#) 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 - HClAF220C-M7SN (All-NVMe)

10 front drives are All-NVMe (only) drives



Front View - HClAF220C-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)

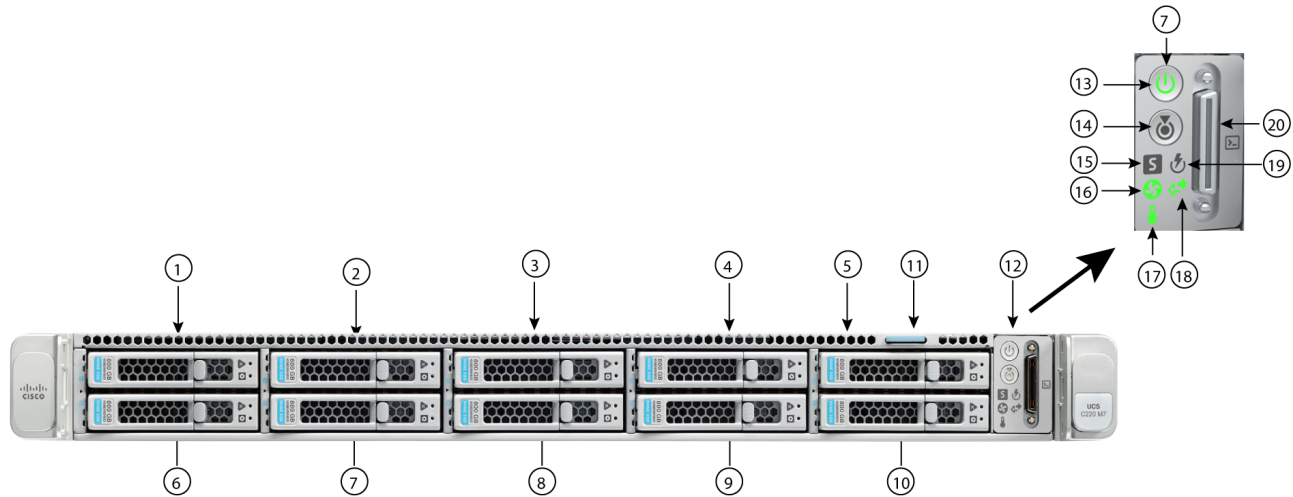


DETAILED VIEWS

Detailed Chassis Front View

Figure 2 shows the detailed front view of the Cisco Compute Hyperconverged HClAF220C M7 All-NVMe/All-Flash Servers

Figure 2 Detailed Chassis Front View



1 - 10	<ul style="list-style-type: none"> ■ HClAF220C-M7SN (All-NVMe): <ul style="list-style-type: none"> • Drive bays 1 - 10 support direct-attach NVMe SSDs with 2 CPUs. ■ HClAF220C-M7S (All-Flash): <ul style="list-style-type: none"> • 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 HClAF220C 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 HClAF220C M7 All-NVMe/All-Flash Servers with three rear half-height PCIe risers.

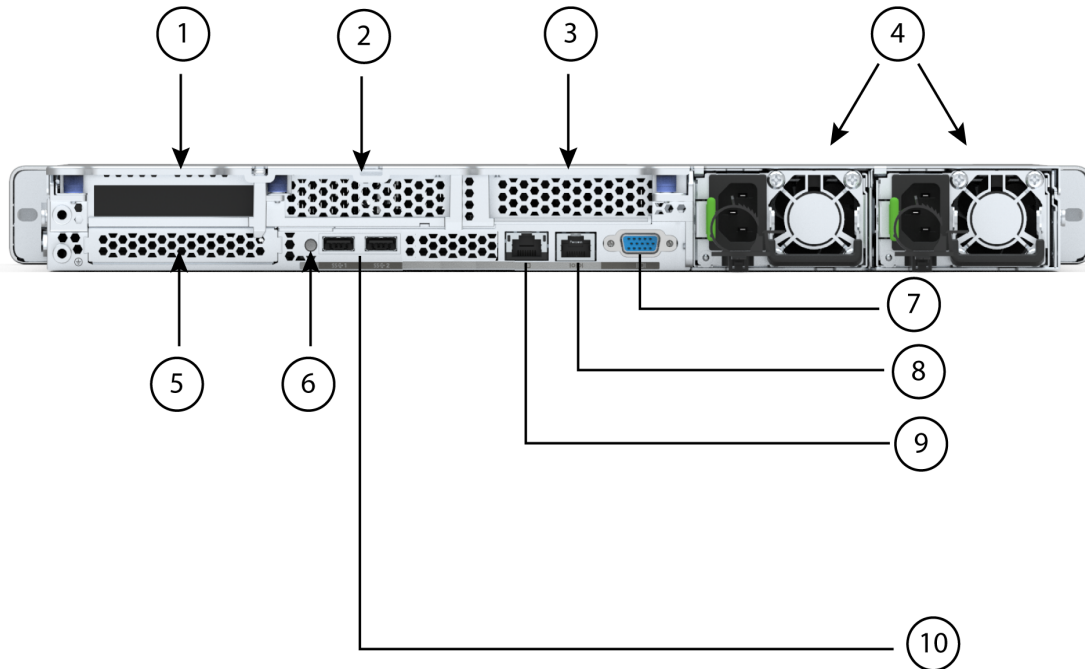
Figure 5 shows the details of the rear panel for the Cisco Compute Hyperconverged HClAF220C M7 All-NVMe/All-Flash Servers with two rear full-height PCIe risers.

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	<p>There are two half height riser 1 options:</p> <p>Riser 1A PCIe Gen4 (CPU1 control)</p> <ul style="list-style-type: none"> ■ Supports one PCIe slot (slot 1) ■ Slot 1 is half-height, 3/4 length, x16, NCSI, Single Wide GPU <p>Riser 1B PCIe Gen5 (CPU1 control)</p> <ul style="list-style-type: none"> ■ 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	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)

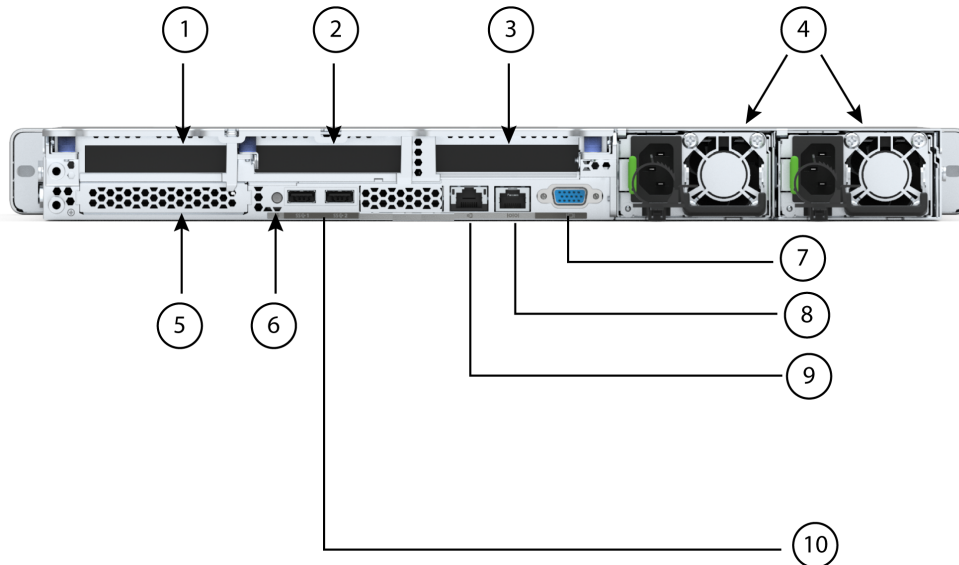
Three Half-Height Risers



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)



<p>1</p>	<p>There are two half height riser 1 options:</p> <p>Riser 1A PCIe Gen4 (CPU1 control)</p> <ul style="list-style-type: none"> ■ Supports one PCIe slot (slot 1) ■ Slot 1 is half-height, 3/4 length, x16, NCSI, Single Wide GPU <p>Riser 1B PCIe Gen5 (CPU1 control)</p> <ul style="list-style-type: none"> ■ Supports one PCIe slot (slot 1) ■ Slot 1 is half-height, 3/4 length, x16, NCSI, Single Wide GPU 	<p>6</p>	<p>System ID pushbutton/LED</p>
<p>2</p>	<p>There are two half height riser 2 options:</p> <p>Riser 2A PCIe Gen4 x16 (CPU1 control)</p> <ul style="list-style-type: none"> ■ Supports one PCIe slot (slot 2) ■ Slot 2 is half-height, 3/4 length, x16, Single Wide GPU <p>Riser 2B PCIe Gen5 x16 (CPU1 control)</p> <ul style="list-style-type: none"> ■ Supports one PCIe slot (slot 2) ■ Slot 2 is half-height, 3/4 length, x16, Single Wide GPU 	<p>7</p>	<p>VGA display port (DB15 connector)</p>

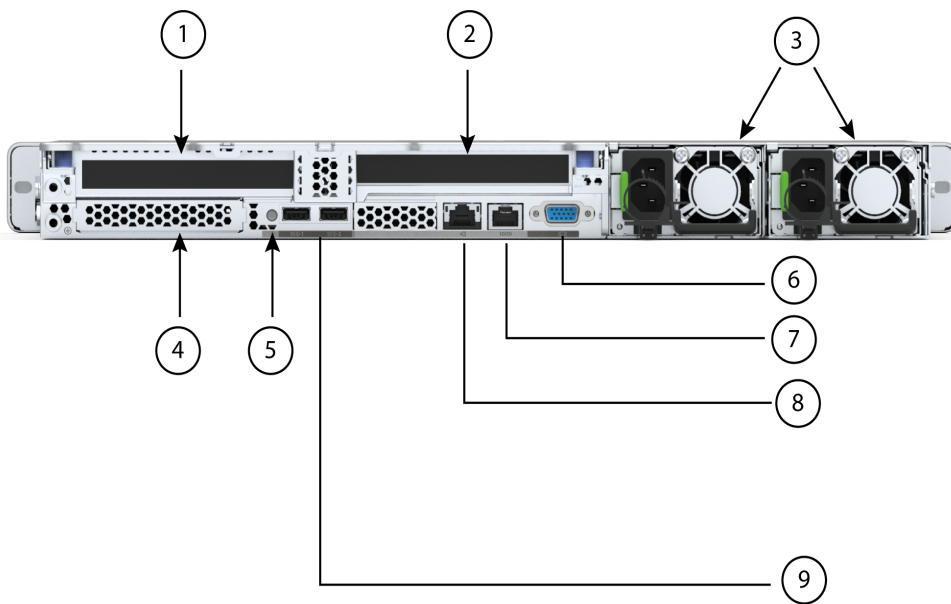
3	There is one half height riser 3 option: Riser 3A PCIe Gen4 x16 (CPU2 control) <ul style="list-style-type: none"> ■ Supports one PCIe slot (slot 3) ■ Slot 3 is half-height, 3/4 length, x16, NCSI, Single Wide GPU 	8	COM port (RJ45 connector)
4	Power supplies (two, redundant as 1+1)	9	1GBE dedicated 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) <ul style="list-style-type: none"> ■ 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) <ul style="list-style-type: none"> ■ 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 14*.

Table 1 Capabilities and Features

Capability/Feature	Description
Chassis	One rack unit (1RU) chassis
CPU	<ul style="list-style-type: none"> ■ One or two 5th Gen. Intel® Xeon® Scalable Processors or One or two 4th Gen. Intel® Xeon® Scalable Processors. ■ 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 20GT/s
Chipset	Intel® C741 series chipset
Memory	<ul style="list-style-type: none"> ■ 32 total DDR5-5600 MT/s DIMM slots with 5th Gen. Intel® Xeon® Scalable Processors (16 per CPU) or 32 total DDR5-4800 MT/s DIMM slots with 4th Gen. Intel® Xeon® Scalable Processors ■ Up to 4TB DDR5-5600 DIMM memory capacity (32x 128GB DIMMs) with 5th Gen. Intel® Xeon® Scalable Processors or Up to 4TB DDR5-4800 DIMM memory capacity (32x 128GB DIMMs) with 4th Gen. Intel® Xeon® Scalable Processors ■ Up to 75% peak bandwidth increase over DDR4-3200, with on-die ECC; all densities are Registered DIMMs (RDIMMs)
Video	<p>The Cisco Integrated Management Controller (CIMC) provides video using the Matrox G200e video/graphics controller:</p> <ul style="list-style-type: none"> ■ 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	<p>Up to two of the following hot-swappable power supplies:</p> <ul style="list-style-type: none"> ■ 770 W (AC) ■ 1200W (AC) ■ 1050W (DC) ■ 1600 W (AC) ■ 2300 W (AC) <p>One power supply is mandatory; one more can be added for 1 + 1 redundancy.</p>
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	<ul style="list-style-type: none"> ■ Half-height riser slots (select up to three) <ul style="list-style-type: none"> • 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) <ul style="list-style-type: none"> • Riser 1C PCIe Gen5 x16 FH • Riser 3C PCIe Gen5 x16 FH (CPU2 Control)
Interfaces	<ul style="list-style-type: none"> ■ Rear panel <ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • 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	<p>Baseboard Management Controller (BMC) running Cisco Integrated Management Controller (CIMC) firmware.</p> <p>Depending on your CIMC settings, the CIMC can be accessed through the 1GE dedicated management port, or Cisco virtual interface card (VIC).</p> <p>CIMC manages certain components within the server, such as the Cisco 12G SAS HBA.</p>
Internal storage devices	<p><u>Drive storage:</u></p> <p>Two different storage configurations are orderable:</p> <p>HCIAF220C-M7SN (All-NVMe):</p> <ul style="list-style-type: none"> ■ Two to ten 2.5-inch direct-attach NVMe SSDs with 2 CPUs. <p>HCIAF220C-M7S (All-Flash):</p> <ul style="list-style-type: none"> ■ Two to ten SAS/SATA SSD or two to ten SED SAS/SATA SSD <p><u>Other storage:</u></p> <ul style="list-style-type: none"> ■ 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	<p>Cisco 12G SAS HBA:</p> <ul style="list-style-type: none"> ■ 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 HClAF220C M7 All-NVMe/All-Flash Servers:

- [STEP 1 SELECT SERVER SKU, page 15](#)
- [STEP 2 SELECT MANAGEMENT MODE \(REQUIRED\), page 16](#)
- [STEP 3 SELECT RISERS \(REQUIRED\), page 17](#)
- [STEP 4 SELECT CPU\(s\) \(REQUIRED\), page 19](#)
- [STEP 5 SELECT MEMORY \(REQUIRED\), page 24](#)
- [STEP 6 SELECT DRIVE CONTROLLERS \(REQUIRED\), page 31](#)
- [STEP 7 SELECT DRIVES \(REQUIRED\), page 32](#)
- [STEP 8 SELECT CISCO COMPUTE HYPERCONVERGED CONNECTIVITY \(REQUIRED\), page 35](#)
- [STEP 9 SELECT PCIe CARDS \(OPTIONAL FOR FI MANAGED MODE\), page 37](#)
- [STEP 10 ORDER GPU CARDS \(OPTIONAL\), page 41](#)
- [STEP 11 ORDER POWER SUPPLY \(REQUIRED\), page 42](#)
- [STEP 12 SELECT INPUT POWER CORD\(s\) \(REQUIRED\), page 43](#)
- [STEP 13 ORDER TOOL-LESS RAIL KIT \(REQUIRED\) AND REVERSIBLE CABLE MANAGEMENT ARM \(OPTIONAL\), page 47](#)
- [STEP 14 ORDER SECURITY DEVICES \(REQUIRED\), page 48](#)
- [STEP 15 SELECT HYPERVISOR, page 49](#)
- [STEP 16 SELECT NUTANIX SOFTWARE AND NUTANIX PROFESSIONAL SERVICES, page 50](#)
- [STEP 17 CISCO INTERSIGHT, page 101](#)

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 MANAGEMENT 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 35](#) and additional cards should be selected from [STEP 9 SELECT PCIe CARDS \(OPTIONAL FOR FI MANAGED MODE\), page 37](#).

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 35](#)

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 with the exception of riser 3.

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 <ul style="list-style-type: none"> ■ 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 <ul style="list-style-type: none"> ■ 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 <ul style="list-style-type: none"> ■ 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 <ul style="list-style-type: none"> ■ 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 <ul style="list-style-type: none"> ■ 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) <ul style="list-style-type: none"> ■ 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) <ul style="list-style-type: none"> ■ 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:	
<ul style="list-style-type: none"> ■ 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 5th Gen. Intel® Xeon® Scalable Processors are paired with Intel® C741 series chipset:
 - Up to 60 cores
 - Cache size of up to 300 MB
 - Power: Up to 300Watts
 - UPI Links: Up to 3 at 20GT/s

With 5th Gen Intel® Xeon® Processors, improve performance and efficiency while reducing costs. See [5TH GEN INTEL XEON BENEFIT PILLARS](#)

- The 4th Gen. Intel® Xeon® Scalable Processors 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

With 4th Gen Intel® Xeon® processors, improve performance efficiency for critical workloads with the most built-in accelerators. See 4th gen intel xeon benefit pillars in [LEADERSHIP PERFORMANCE WITH 4TH GEN INTEL® XEON® PROCESSORS](#).

Select CPUs



NOTE: If you try to upgrade an existing 220M7 Server from 4th Gen CPUs to 5th Gen CPUs, a new air duct (UCSC-AD-C220M7=) may be required. Please refer to the [installation guide](#) for more details.

- The available 5th Gen. Intel® Xeon® Scalable CPUs are listed in [Table 6](#). See [Table 8 on page 22](#) for CPU suffix notations.
- The available 4th Gen. Intel® Xeon® Scalable CPUs are listed in [Table 7](#). See [Table 8 on page 22](#) for CPU suffix notations.



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

Table 6 Available 5th Gen. Intel® Xeon® Scalable 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)	Supported Server
8000 Series Processors								
HCI-CPU-I8581V ¹	1-S Cloud/SaaS	1S	60	2.00	270	300.00	4800	All Flash
HCI-CPU-I8571N ¹	1-S Networking	1S	52	2.40	300	300.00	4800	All Flash
HCI-CPU-I8562Y+	2S Performance	2S	32	2.80	300	60.00	5600	All Flash/All NVMe
HCI-CPU-I8558U ¹	1-Socket Optimized	1S	48	2.00	300	260.00	4800	All Flash
6000 Series Processors								
HCI-CPU-I6554S	Storage	2S	36	2.20	270	180.00	5200	All Flash/All NVMe
HCI-CPU-I6548Y+	2S Performance	2S	32	2.50	250	60.00	5200	All Flash/All NVMe
HCI-CPU-I6548N	Networking	2S	32	2.80	250	60.00	5200	All Flash/All NVMe
HCI-CPU-I6544Y	2S Performance	2S	16	3.60	270	45.00	5200	All Flash/All NVMe
HCI-CPU-I6542Y	2S Performance	2S	24	2.90	250	60.00	5200	All Flash/All NVMe
HCI-CPU-I6538Y+	2S Mainline	2S	32	2.20	225	60.00	5200	All Flash/All NVMe
HCI-CPU-I6538N	Networking	2S	32	2.10	205	60.00	5200	All Flash/All NVMe
HCI-CPU-I6534	2S Performance	2S	8	3.90	195	22.50	4800	All Flash/All NVMe
HCI-CPU-I6530	2S Mainline	2S	32	2.10	270	160.00	4800	All Flash/All NVMe
HCI-CPU-I6526Y	2S Performance	2S	16	2.80	195	37.50	5200	All Flash/All NVMe
5000 Series Processors								
HCI-CPU-I5520+	2S Mainline	2S	28	2.20	205	52.50	4800	All Flash/All NVMe
HCI-CPU-I5515+	2S Performance	2S	8	3.20	165	22.50	4800	All Flash/All NVMe
HCI-CPU-I5512U ¹	1-Socket Optimized	1S	28	2.10	185	52.50	4800	All Flash
4000 Series Processors								
HCI-CPU-I4516Y+	2S Mainline	2S	24	2.20	185	45.00	4400	All Flash/All NVMe
HCI-CPU-I4514Y	2S Mainline	2S	16	2.00	150	30.00	4400	All Flash/All NVMe
HCI-CPU-I4510T ²	EDGE (IOT)	2S	12	2.00	115	30.00	4400	All Flash/All NVMe
HCI-CPU-I4510 ²	2S Mainline	2S	12	2.40	150	30.00	4400	All Flash/All NVMe
HCI-CPU-I4509Y ²	2S Mainline	2S	8	2.60	125	22.50	4400	All Flash/All NVMe
Accessories/spare included with CPU configuration:								
<ul style="list-style-type: none"> ■ UCSC-HSLP-C220M7 								
NOTE: if you are adding a second CPU later, you may need to order accessories spares with it.								

Notes:

1. You cannot have two of these CPUs in a two-CPU configuration and you cannot later upgrade to a 2-CPU system with two of these CPUs.
2. 48GB and 96GB memory DIMMs not supported on HCI-CPU-I3508U, HCI-CPU-I4509Y, HCI-CPU-I4510, HCI-CPU-I4510T

Table 7 Available 4th Gen. Intel® Xeon® Scalable 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 ¹	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 ¹	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
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 ¹	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

Table 7 Available 4th Gen. Intel® Xeon® Scalable 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-I6414U ¹	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 ¹	1S gen. purpose	1S	24	2.10	185	45.00	4400
HCI-CPU-I5411N ¹	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:							
<ul style="list-style-type: none"> ■ UCSC-HSLP-C220M7 							
Please note, if you are adding a second CPU later, you may need to order accessories with it.							

Notes:

1. You cannot have two of these CPUs in a two-CPU configuration and you cannot later upgrade to a 2-CPU system with two of these CPUs.

Table 8 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

Table 8 CPU Suffixes

CPU Suffix	Description	Features
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

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,

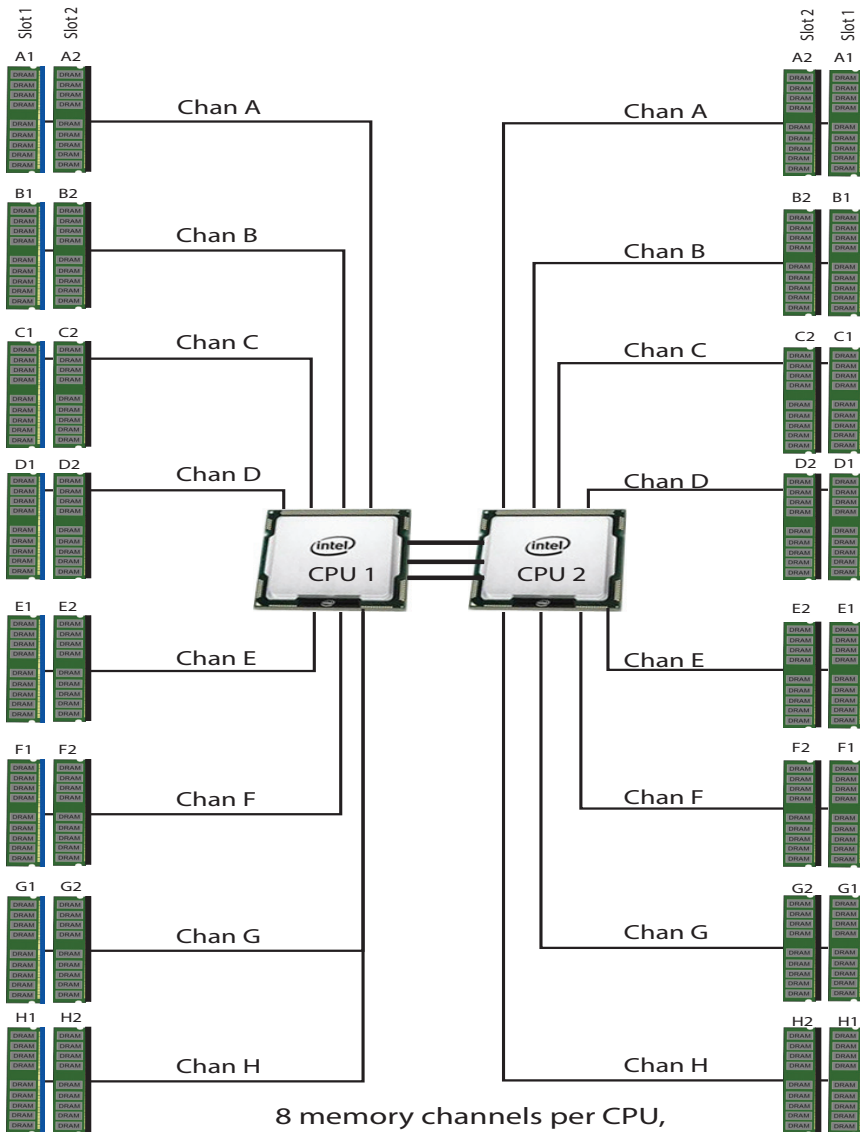
STEP 5 SELECT MEMORY (REQUIRED)

The [Table 9](#) below describes the main memory DIMM features supported on Cisco Compute Hyperconverged HClAF220C M7 All-NVMe/All-Flash Servers Memory Organization.

Table 9 Main Memory Features

Memory DIMM server technologies	Description
DDR5 memory clock speed	4th Gen. CPU: Up to 4800MT/s 1DPC; Up to 4400MT/s 2DPC
	5th Gen. CPU: Up to 5600MT/s 1DPC; Up to 4400MT/s 2DPC
Operational voltage	1.1 Volts
DRAM fab density	16Gb and 24Gb
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
	48GB 1Rx4, 96GB 2Rx4 - 5th Gen. only
Maximum system capacity (DRAM DIMMs only)	4TB (32x 128GB)

Figure 6 Cisco Compute Hyperconverged HClAF220C 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

Table 10 Available DDR5 DIMMs

Product ID (PID)	PID Description
DDR5-4800MT/s PID list	
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)
DDR5-5600MT/s PID list¹	
HCI-MRX16G1RE3	16GB DDR5-5600 RDIMM 1Rx8 (16Gb)
HCI-MRX32G1RE3	32GB DDR5-5600 RDIMM 1Rx4 (16Gb)
HCI-MRX48G1RF3 ²	48GB DDR5-5600 RDIMM 1Rx4 (24Gb)
HCI-MRX64G2RE3	64GB DDR5-5600 RDIMM 2Rx4 (16Gb)
HCI-MRX96G2RF3 ²	96GB DDR5-5600 RDIMM 2Rx4 (24Gb)
HCI-MR128G4RE3	128GB DDR5-5600 RDIMM 4Rx4 (16Gb)
Accessories/spare included with Memory configuration:	
<ul style="list-style-type: none"> ■ UCS-DDR5-BLK³ is auto included for the unselected DIMMs slots 	

Notes:

1. DDR5-5600 supported on Intel Xeon 5th gen. CPUs only.
2. 48Gb and 96GB memory DIMMs not supported on HCI-CPU-I3508U, HCI-CPU-I4509Y, HCI-CPU-I4510, HCI-CPU-I4510T
3. Any empty DIMM slot must be populated with a DIMM blank to maintain proper cooling airflow.

Memory configurations and mixing rules

- **Golden Rule:** Memory on every CPU socket shall be configured identically.
- System speed is dependent on the CPU DIMM speed support. Refer to [Available 4th Gen. Intel® Xeon® Scalable CPUs, page 21](#) and [Available 5th Gen. Intel® Xeon® Scalable CPUs, page 20](#) for DIMM speeds.
- For full details on supported memory configurations see the [M7 Memory Guide](#).
- DIMM Count Rules:

Table 11 Allowed DIMM Count for 1-CPU and 2-CPU

Allowed DIMM Count rules	Minimum Count	Maximum Count	Allowed Count	Not Allowed Count
16GB, 32GB, 64GB, 128GB, (4th and 5th Gen. CPUs)				
DIMM count for 1 CPU	1	16	1,2,4,6,8,12,16	3,5,7,9,10,11,13,14,15
DIMM count for 2-CPU	2	32	2,4,8,12,16,24,32	6,10,14,18,20,22,26,28,30
48GB (5th Gen. CPUs Only)				
DIMM count for 1 CPU	1	8	1,6,8	2,3,4,5,7,9,10,11,12,13,14,15,16
DIMM count for 2-CPU	2	16	2,12,16	4,6,8,10,14,18,20,22,24,26,28,30,32
96GB (5th Gen. CPUs Only)				
DIMM count for 1 CPU	1	16	1,6,8,12,16	2,3,4,5,7,9, 10,11,13,14,15
DIMM count for 2-CPU	2	32	2,12,16,24,32	4,6,8,10,14,18,20,22,26,28,30

NOTE(1): 12 DIMMs count for 1-CPU, 24 DIMMs count and 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). See [golden rule](#) above.
 - 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 12.0](#), [Table 12.1](#) and [Table 12.2](#).

Table 12.0 M7 DIMM population order for 16GB, 32GB, 64GB, and 128GB

#DIMMs per CPU	DIMM Population - 16GB, 32GB, 64GB, 128GB(4th and 5th Gen. CPUs) 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.

Table 12.1 M7 DIMM population order for 48GB

#DIMMs per CPU	DIMM Population - 48GB (5th Gen. CPUs only) ^{1,2}	
	Slot 1 (Blue)	Slot 2 (Black)
1	A1	-
6	A1, C1, D1, E1, F1, G1	-
8	A1, B1, C1, D1, E1, F1, G1, H1	-

Notes:

1. 48GB DIMMs cannot be mixed with other DIMM capacities.
2. Only 1 DPC supported by 48GB.

Table 12.2 M7 DIMM population order for 96GB

#DIMMs per CPU	DIMM Population - 96GB (5th Gen. CPUs only) ¹	
	Slot 1 (Blue)	Slot 2 (Black)
1	A1	-
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 ²	A1, B1, C1, D1, E1, F1, G1, H1	A2, B2, C2, D2, E2, F2, G2, H2

Notes:

1. 96GB DIMMs cannot be mixed with other DIMM capacities.
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.
- Mixing X4 and X8 DIMMs is not allowed
- Mixing 16Gb DRAM based and 24Gb DRAM based DIMMs is not allowed. Therefore, 48GB and 96GB cannot be mixed with any other memory DIMMs
- 48GB supports 1 DIMM Per Channel (1DPC) only
- The DIMM mixing rules matrix is described in the [Table 13](#) and [Table 14](#), below

Table 13 Supported DIMM mixing and population across 2 slots in each channel - 16GB, 32GB, 64GB, and 128GB

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. For 2,4,6, 8 DIMMs count, only populate slot 1 (Blue slot). see [Table 12.0](#) for details
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.

Table 14 Supported DIMM mixing and population across 2 slots in each channel - 48GB and 96GB DIMMs

Channel Mixing		DIMM Slot 2 (Black)	
DIMM Slot 1 (Blue)		48GB	96GB
		1Rx4	2Rx4
48GB	1Rx4	No	No
96GB	2Rx4	No	Yes ¹

Notes:

1. For 6, 8 DIMMs count, only populate slot 1 (Blue slot). see [Table 12.2](#) for details

- Memory Limitations:
 - Memory on every CPU socket shall be configured identically.
 - Refer to [Table 12.0](#), [Table 12.1](#) and [Table 12.2](#). and [Table 13](#) and [Table 14](#), for DIMM population and DIMM mixing rules.
 - Cisco memory from previous generation servers (DDR3 and DDR4) is not supported with the M7 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 15.0](#) and [Table 15.1](#) for the details.

Table 15.0 DDR5-4800 DIMM 1DPC and 2DPC max speed matrix - 4th Gen. CPU

4th Gen. CPU Shelves and Memory Speed	1DPC	2DPC
	All RDIMMs	All RDIMMs
Platinum Series 8	4800 MT/s	4400 MT/s
Gold Series 6	4800 MT/s	4400 MT/s
Gold Series 5	4400 MT/s	4400 MT/s
Silver Series 4	4000 MT/s	4000 MT/s
Bronze Series 3	4000 MT/s	4000 MT/s

Table 15.1 DDR5-5600 DIMM 1DPC and 2DPC max speed matrix - 5th Gen. CPU

5th Gen. CPU Shelves and Memory Speed	1DPC	2DPC
	All RDIMMs	All RDIMMs
Platinum Series 8	5600 MT/s	4400 MT/s
Gold Series 6	5200 MT/s	4400 MT/s
Gold Series 5	4800 MT/s	4400 MT/s
Silver Series 4	4400 MT/s	4400 MT/s
Bronze Series 3	4400 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 16](#).

- One Cisco 12G SAS HBA



NOTE: All RAID controllers are only supported on HClAF220C-M7S. For HClAF220C-M7SN, drives are controlled directly from the CPU.

Table 16 Hardware Controller Options

Product ID (PID)	PID Description
Controllers for Internal Drives	
HCI-SAS-M7T	Cisco M7 12G SAS HBA for (16 Drives) <ul style="list-style-type: none"> ■ 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 HClAF220C-M7S):	
<ul style="list-style-type: none"> ■ 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 - HClAF220C-M7SN (All-NVMe)

The available drives are listed in [Table 17](#).



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

Table 17 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
HCI-NVMEG4-M1920	1.9TB 2.5in U.3 15mm P7450 Hg Perf Med End NVMe	NVMe	1.9TB
HCI-NVMEG4-M3840	3.8TB 2.5in U.3 15mm P7450 Hg Perf Med End NVMe	NVMe	3.8TB
HCI-NVMEG4-M7680	7.6TB 2.5in U.3 15mm P7450 Hg Perf Med End NVMe	NVMe	7.6TB
HCI-NVMEG4-M1536	15.3TB 2.5in U.3 15mm P7450 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 18](#)



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 18 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 24G SAS Kioxia PM7 SSD (1x DWPD)	SAS	1.9TB
HCI-SD38TKA1X-EV	3.8TB 2.5in Enter Value 24G SAS Kioxia PM7 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 24G SAS Kioxia PM7 SSD (1x DWPD)	SAS	7.6TB
HCI-SD15TKA1X-EV	15.3TB 2.5in Enter Value 24G SAS Kioxia PM7 SSD (1x DWPD)	SAS	15.3TB
Front SED Capacity Drive			
HCI-SD38TBKANK9	3.8TB 2.5in Enter Value 24G SAS Kioxia PM7 SSD (SED-FIPS) (1 DWPD)	SAS	3.8TB
HCI-SD76TBKANK9	7.6TB 2.5in Enter Value 24G SAS Kioxia PM7 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 105](#) 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.

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 MANAGEMENT MODE \(REQUIRED\)](#).

Select Connectivity

The available connectivity are listed in [Table 19](#).



NOTE:

- HCI MLOM Connectivity (HCI-MLOM) is mandatory for this solution.
- Minimum and maximum one MLOM card is available from the [Table 20](#).
- Supported configuration maximum is Single MLOM + Single VIC (select VIC under the riser PCIe VIC card option from [Table 23](#)).
- 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 23](#).

Table 19 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 20)

The available cards for the Cisco Compute Hyperconverged MLOM are listed in [Table 20](#)

Table 20 Available Cards for the Cisco Compute Hyperconverged MLOM Connectivity

Product ID (PID)	Description	Location	Card Size ¹
MLOM Cards			
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 MANAGEMENT MODE (REQUIRED)**.

Select Connectivity

The available connectivity are listed in [Table 21](#).



NOTE:

- Either Cisco VIC Connectivity (HCI-MLOM) or Third Party NIC 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 22](#).
- When HCI-MLOM is selected up to two additional VIC can be selected from the [Table 23](#).
- When HCI-PCIE is selected up to two additional NIC can be selected from the [Table 23](#).

Table 21 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 22 and additional VIC in the riser slot from the Table 23
HCI-PCIE	Third Party NIC Connectivity	3 dual port or 2 quad port in PCIe riser slot	Select NIC cards under riser from Table 23

The available cards for the MLOM connectivity are listed in [Table 22](#).

Table 22 Available Cards for the Cisco Compute Hyperconverged MLOM Connectivity

Product ID (PID)	Description	Location	Card Size ¹
MLOM Cards			
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 23](#)

Table 23 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	IS Managed Mode
HCI-P-IQ10GC	Cisco-Intel X710T4LG 4x10GBE RJ45 PCIe NIC	Riser 1, 2, or 3	HHHL, SS	IS Managed Mode
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. HHL = 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 23](#) 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 23](#) 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 (Risiers 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 24](#).



CAUTION:

- Gen4 and Gen5 risers cannot be mixed with the exception of riser 3, 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 24 Available PCIe GPU Cards¹

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 [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 25 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 116* section for the full details on the each power supply.

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

Using [Table 26](#) and [Table 27](#), 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.

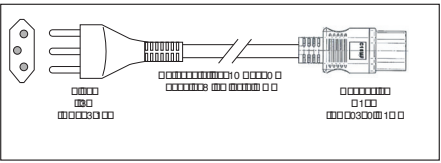
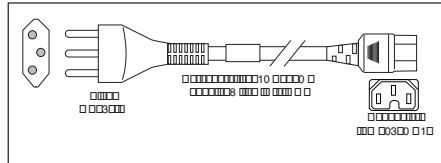
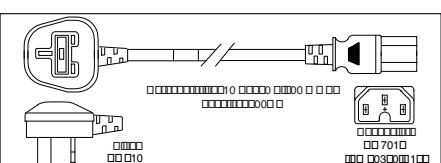
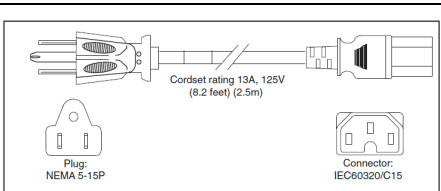
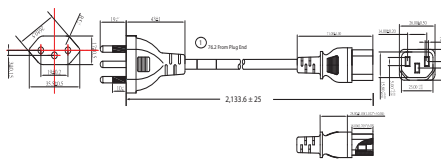


NOTE: [Table 26](#) lists the power cords for servers that use power supplies less than 2300 W. [Table 27](#) lists the power cords for servers that use 2300 W power supplies. Note that the power cords for 2300 W power supplies use a C19 connector so they only fit the 2300 W power supply connector.

Table 26 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	<p>Figure 1-3 CAB-48DC-40A-8AWG, DC Power Cord (3.5 m)</p>
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 26 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 27 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

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 28](#).



NOTE:

- Cisco recommends a minimum quantity of 1 Rail Kit
- If you plan to rackmount your Cisco Compute Hyperconverged HClAF220C M7 All-NVMe/All-Flash Servers, you must order a tool-less rail kit.

Table 28 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 29](#).



NOTE: If you plan to rackmount your Cisco Compute Hyperconverged HClAF220C 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 29 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 HClAF220C 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 30](#)



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 30 Security Devices

Product ID (PID)	PID Description
HCI-TPM-002C	TPM 2.0, TCG, FIPS140-2, CC EAL4+ Certified, for 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 31](#).

Table 31 Hypervisor

Product ID (PID)	PID Description
HCI-AOSAHV-67-SWK9	Cisco Compute Hyperconverged Acropolis Operating System (AOS) Acropolis Hypervisor (AHV) 6.7 Software
HCI-AOSAHV-68-SWK9	Cisco Compute Hyperconverged Acropolis Operating System (AOS) Acropolis Hypervisor (AHV) 6.8 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

- *Top Level Nutanix Software And Professional Services PIDs, page 52*
 - *Table 32, Top Level Nutanix Software And Professional Services PIDs*
- *Nutanix Software And Professional Services PID Decoder, page 54*
 - *Table 33.0, Nutanix Software PID Decoder (WW-XX-YY-ZZ)*
 - *Table 33.1, Nutanix Professional Services PID Decoder (WW-XX-YY-ZZ)*
- *Nutanix Software PIDs and Description, page 55*
 - *Table 36.0, Nutanix Cloud Infrastructure (NCI)*
 - *Table 36.1, Nutanix Cloud Infrastructure Data (NCI-D)*
 - *Table 36.2, Nutanix Cloud Infrastructure Edge (NCI-E)*
 - *Table 36.3, End User Computing (EUC)*
 - *Table 36.4, Nutanix Cloud Manager (NCM)*
 - *Table 36.5, Nutanix Cloud Manager Edge (NME)*
 - *Table 36.6, Nutanix Cloud Manager EUC (NCM-U)*
 - *Table 36.7, Nutanix Cloud Platform (NCP)*
 - *Table 36.8, Nutanix Unified Storage™ (NUS)*
 - *Table 36.9, Nutanix Data Lens (NDL)*
- *Professional Services PIDs and Description, page 81*
 - *Table 37.0, NCI Design Workshop*
 - *Table 37.1, NCI Cluster Deployment or Expansion*
 - *Table 37.2, Virtual Machine Migration Workshop*
 - *Table 37.3, Virtual Machine Migration*
 - *Table 37.4, NCM Self-Service Design Workshop*
 - *Table 37.5, NCM Intelligent Operations Design Workshop*
 - *Table 37.6, NCM Intelligent Operations Deployment*
 - *Table 37.7, FastTrack for NCM Self-Service*
 - *Table 37.8, FastTrack for NCM Cost Governance*
 - *Table 37.9, Nutanix Flexible Credits*
- *Nutanix Support:, page 92*
- *Software With Professional Services PID Mapping, page 93*
 - *Table 39.0, Nutanix Software NCI, NCI-D, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 1 YEAR SUBSCRIPTION with professional services PID Mapping*
 - *Table 39.1, Nutanix Software NCI, NCI-D, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 3 YEAR SUBSCRIPTION with professional services PID Mapping*
 - *Table 40.0, Nutanix Software NCM and NCM-U STR 1 YEAR SUBSCRIPTION with professional services PID Mapping*
 - *Table 40.1, Nutanix Software NCM and NCM-U STR 3 YEAR AND ABOVE SUBSCRIPTION with Professional Services PID Mapping*

- *Table 41, Nutanix Software NCM PRO, NCM ULT, NCM-U PRO, NCM-U ULT, NCP (NCM-PRO), NCP (NCM-ULT) 1 YEAR AND 3 YEAR & ABOVE SUBSCRIPTION with Professional services*

Top Level Nutanix Software And Professional Services PIDs

Table 32 Top Level Nutanix Software And Professional Services PIDs

ATO Product ID (PID)	Description
NTX-SW	<p>Nutanix Software 3Y and above</p> <hr/>  NOTE: Please refer to the complete list of Nutanix Software PIDs and Description, page 55
NTX-SW-1Y	<p>Nutanix Software 1Y</p> <hr/>  NOTE: Please refer to the complete list of Nutanix Software PIDs and Description, page 55
NTX-SW-PS	<p>Nutanix Professional Service</p> <hr/>  NOTE: Please refer to the complete list of Professional Services PIDs and Description, page 81

**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.

Nutanix Software PIDs and Description

Table 34 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 Manager Edge (NCM-E)	Provides NCM capabilities for Edge deployments	Per VM
Nutanix Cloud Manager EUC (NCM-U)	Provides NCM capabilities in VDI use cases	Per User
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 35 Nutanix Software License Tiers

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



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://compute.kb.cisco.com/article/nutanix-support-for-federal-customers.html>

Table 36.0 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 36.0 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 36.0 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 39.0, Nutanix Software NCI, NCI-D, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 1 YEAR SUBSCRIPTION with professional services PID Mapping

Table 39.1, Nutanix Software NCI, NCI-D, 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://compute.kb.cisco.com/article/nutanix-support-for-federal-customers.html>

Table 36.1 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 36.1 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 39.0, Nutanix Software NCI, NCI-D, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 1 YEAR SUBSCRIPTION with professional services PID Mapping

Table 39.1, Nutanix Software NCI, NCI-D, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 3 YEAR SUBSCRIPTION with professional services PID Mapping

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

Nutanix Cloud Infrastructure - Edge (NCI-E) 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 36.2 Nutanix Cloud Infrastructure Edge (NCI-E)

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 36.2 Nutanix Cloud Infrastructure Edge (NCI-E)

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 as Controller VM or Prism Central VM are not counted.

Table 39.0, Nutanix Software NCI, NCI-D, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 1 YEAR SUBSCRIPTION with professional services PID Mapping

Table 39.1, Nutanix Software NCI, NCI-D, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 3 YEAR SUBSCRIPTION with professional services PID Mapping

(4) 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://compute.kb.cisco.com/article/nutanix-support-for-federal-customers.html>

Table 36.3 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 39.0, Nutanix Software NCI, NCI-D, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 1 YEAR SUBSCRIPTION with professional services PID Mapping

Table 39.1, Nutanix Software NCI, NCI-D, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 3 YEAR SUBSCRIPTION with professional services PID Mapping

(5) 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://compute.kb.cisco.com/article/nutanix-support-for-federal-customers.html>

Table 36.4 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 36.4 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 40.0, Nutanix Software NCM and NCM-U STR 1 YEAR SUBSCRIPTION with professional services PID Mapping

Table 40.1, Nutanix Software NCM and NCM-U STR 3 YEAR AND ABOVE SUBSCRIPTION with Professional Services PID Mapping

Table 41, Nutanix Software NCM PRO, NCM ULT, NCM-U PRO, NCM-U ULT, NCP (NCM-PRO), NCP (NCM-ULT) 1 YEAR AND 3 YEAR & ABOVE SUBSCRIPTION with Professional services

(6) Nutanix Cloud Manager Edge (NME):

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://compute.kb.cisco.com/article/nutanix-support-for-federal-customers.html>
- PC 2024.2 is the minimum requirement for these licenses to be applied. Check and confirm the release schedule of PC before ordering these licenses.

Table 36.5 Nutanix Cloud Manager Edge (NME)

Product ID (PID)	PID Description
STR - STARTER	
NT-NME-STR-PR	Subscription, Nutanix Cloud Manager (NCM) Starter Software License for Edge Sites & Production Software Support Service per VM
NT-NME-STR-MC	Subscription, Nutanix Cloud Manager (NCM) Starter Software License for Edge Sites & Mission Critical Software Support Service per VM
NT-NME-STR-FP	Subscription, Nutanix Cloud Manager (NCM) Starter Software License for Edge Sites & FED Production Software Support Service per VM
NT-NME-STR-FM	Subscription, Nutanix Cloud Manager (NCM) Starter Software License for Edge Sites & FED Mission Critical Software Support Service per VM
PRO- PROFESSIONAL	
NT-NME-PRO-PR	Subscription, Nutanix Cloud Manager (NCM) Professional Software License for Edge Sites & Production Software Support Service per VM

Table 36.5 Nutanix Cloud Manager Edge (NME)

NT-NME-PRO-MC	Subscription, Nutanix Cloud Manager (NCM) Professional Software License for Edge Sites & Mission Critical Software Support Service per VM
NT-NME-PRO-FP	Subscription, Nutanix Cloud Manager (NCM) Professional Software License for Edge Sites & FED Production Software Support Service per VM
NT-NME-PRO-FM	Subscription, Nutanix Cloud Manager (NCM) Professional Software License for Edge Sites & FED Mission Critical Software Support Service per VM
ULT - ULTIMATE	
NT-NME-ULT-PR	Subscription, Nutanix Cloud Manager (NCM) Ultimate Software License for Edge Sites & Production Software Support Service per VM
NT-NME-ULT-MC	Subscription, Nutanix Cloud Manager (NCM) Ultimate Software License for Edge Sites & Mission Critical Software Support Service per VM
NT-NME-ULT-FP	Subscription, Nutanix Cloud Manager (NCM) Ultimate Software License for Edge Sites & FED Production Software Support Service per VM
NT-NME-ULT-FM	Subscription, Nutanix Cloud Manager (NCM) Ultimate Software License for Edge Sites & FED Mission Critical Software Support Service per VM

Table 40.0, Nutanix Software NCM and NCM-U STR 1 YEAR SUBSCRIPTION with professional services PID Mapping

Table 40.1, Nutanix Software NCM and NCM-U STR 3 YEAR AND ABOVE SUBSCRIPTION with Professional Services PID Mapping

Table 41, Nutanix Software NCM PRO, NCM ULT, NCM-U PRO, NCM-U ULT, NCP (NCM-PRO), NCP (NCM-ULT) 1 YEAR AND 3 YEAR & ABOVE SUBSCRIPTION with Professional services

(7) Nutanix Cloud Manager EUC (NCM-U):

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://compute.kb.cisco.com/article/nutanix-support-for-federal-customers.html>
- PC 2024.2 is the minimum requirement for these licenses to be applied. Check and confirm the release schedule of PC before ordering these licenses.

Table 36.6 Nutanix Cloud Manager EUC (NCM-U)

Product ID (PID)	PID Description
STR - STARTER	
NT-NCM-U-STR-PR	Subscription, Nutanix Cloud Manager (NCM) Starter Software License for EUC & Production Software Support Service per User
NT-NCM-U-STR-MC	Subscription, Nutanix Cloud Manager (NCM) Starter Software License for EUC & Mission Critical Software Support Service per User
NT-NCM-U-STR-FP	Subscription, Nutanix Cloud Manager (NCM) Starter Software License for EUC & FED Production Software Support Service per User
NT-NCM-U-STR-FM	Subscription, Nutanix Cloud Manager (NCM) Starter Software License for EUC & FED Mission Critical Software Support Service per User
PRO - PROFESSIONAL	
NT-NCM-U-PRO-PR	Subscription, Nutanix Cloud Manager (NCM) Professional Software License for EUC & Production Software Support Service per User

Table 36.6 Nutanix Cloud Manager EUC (NCM-U)

NT-NCM-U-PRO-MC	Subscription, Nutanix Cloud Manager (NCM) Professional Software License for EUC & Mission Critical Software Support Service per User
NT-NCM-U-PRO-FP	Subscription, Nutanix Cloud Manager (NCM) Professional Software License for EUC & FED Production Software Support Service per User
NT-NCM-U-PRO-FM	Subscription, Nutanix Cloud Manager (NCM) Professional Software License for EUC & FED Mission Critical Software Support Service per User
ULT - ULTIMATE	
NT-NCM-U-ULT-PR	Subscription, Nutanix Cloud Manager (NCM) Ultimate Software License for EUC & Production Software Support Service per User
NT-NCM-U-ULT-MC	Subscription, Nutanix Cloud Manager (NCM) Ultimate Software License for EUC & Mission Critical Software Support Service per User
NT-NCM-U-ULT-FP	Subscription, Nutanix Cloud Manager (NCM) Ultimate Software License for EUC & FED Production Software Support Service per User
NT-NCM-U-ULT-FM	Subscription, Nutanix Cloud Manager (NCM) Ultimate Software License for EUC & FED Mission Critical Software Support Service per User

Table 40.0, Nutanix Software NCM and NCM-U STR 1 YEAR SUBSCRIPTION with professional services PID Mapping

Table 40.1, Nutanix Software NCM and NCM-U STR 3 YEAR AND ABOVE SUBSCRIPTION with Professional Services PID Mapping

Table 41, Nutanix Software NCM PRO, NCM ULT, NCM-U PRO, NCM-U ULT, NCP (NCM-PRO), NCP (NCM-ULT) 1 YEAR AND 3 YEAR & ABOVE SUBSCRIPTION with Professional services

(8) 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://compute.kb.cisco.com/article/nutanix-support-for-federal-customers.html>

Table 36.7 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 36.7 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 36.7 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 40.0, Nutanix Software NCM and NCM-U STR 1 YEAR SUBSCRIPTION with professional services PID Mapping

Table 40.1, Nutanix Software NCM and NCM-U STR 3 YEAR AND ABOVE SUBSCRIPTION with Professional Services PID Mapping

Table 41, Nutanix Software NCM PRO, NCM ULT, NCM-U PRO, NCM-U ULT, NCP (NCM-PRO), NCP (NCM-ULT) 1 YEAR AND 3 YEAR & ABOVE SUBSCRIPTION with Professional services

(9) 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://compute.kb.cisco.com/article/nutanix-support-for-federal-customers.html>
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Table 36.8 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 36.8.a Nutanix Unified Storage Allowed Capacity

Nutanix Unified Storage	Nutanix Unified Storage Support Tier	Storage Capacity Allowed (TiB)
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Table 36.8.a Nutanix Unified Storage Allowed Capacity

		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
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	

(10) 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://compute.kb.cisco.com/article/nutanix-support-for-federal-customers.html>

Table 36.9 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 36.9.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		

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 37.0 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 39.0, Nutanix Software NCI, NCI-D, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 1 YEAR SUBSCRIPTION with professional services PID Mapping

Table 39.1, Nutanix Software NCI, NCI-D, 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 37.1 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 37.1 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 39.0, Nutanix Software NCI, NCI-D, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 1 YEAR SUBSCRIPTION with professional services PID Mapping

Table 39.1, Nutanix Software NCI, NCI-D, 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 37.2 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 39.0, Nutanix Software NCI, NCI-D, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 1 YEAR SUBSCRIPTION with professional services PID Mapping

Table 39.1, Nutanix Software NCI, NCI-D, 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 37.3 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 39.0, Nutanix Software NCI, NCI-D, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 1 YEAR SUBSCRIPTION with professional services PID Mapping

Table 39.1, Nutanix Software NCI, NCI-D, 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 workshop 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>

Table 37.4 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 40.0, Nutanix Software NCM and NCM-U STR 1 YEAR SUBSCRIPTION with professional services PID Mapping

Table 40.1, Nutanix Software NCM and NCM-U STR 3 YEAR AND ABOVE SUBSCRIPTION with Professional Services PID Mapping

Table 41, Nutanix Software NCM PRO, NCM ULT, NCM-U PRO, NCM-U 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 37.5 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 40.0, Nutanix Software NCM and NCM-U STR 1 YEAR SUBSCRIPTION with professional services PID Mapping

Table 40.1, Nutanix Software NCM and NCM-U STR 3 YEAR AND ABOVE SUBSCRIPTION with Professional Services PID Mapping

Table 41, Nutanix Software NCM PRO, NCM ULT, NCM-U PRO, NCM-U 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 37.6 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 40.0, Nutanix Software NCM and NCM-U STR 1 YEAR SUBSCRIPTION with professional services PID Mapping

Table 40.1, Nutanix Software NCM and NCM-U STR 3 YEAR AND ABOVE SUBSCRIPTION with Professional Services PID Mapping

Table 41, Nutanix Software NCM PRO, NCM ULT, NCM-U PRO, NCM-U 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>

Table 37.7 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 40.0, Nutanix Software NCM and NCM-U STR 1 YEAR SUBSCRIPTION with professional services PID Mapping

Table 40.1, Nutanix Software NCM and NCM-U STR 3 YEAR AND ABOVE SUBSCRIPTION with Professional Services PID Mapping

Table 41, Nutanix Software NCM PRO, NCM ULT, NCM-U PRO, NCM-U 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>

Table 37.8 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 40.0, Nutanix Software NCM and NCM-U STR 1 YEAR SUBSCRIPTION with professional services PID Mapping

Table 40.1, Nutanix Software NCM and NCM-U STR 3 YEAR AND ABOVE SUBSCRIPTION with Professional Services PID Mapping

Table 41, Nutanix Software NCM PRO, NCM ULT, NCM-U PRO, NCM-U 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 37.9 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

Table 40.0, Nutanix Software NCM and NCM-U STR 1 YEAR SUBSCRIPTION with professional services PID Mapping

Table 40.1, Nutanix Software NCM and NCM-U STR 3 YEAR AND ABOVE SUBSCRIPTION with Professional Services PID Mapping

Table 41, Nutanix Software NCM PRO, NCM ULT, NCM-U PRO, NCM-U ULT, NCP (NCM-PRO), NCP (NCM-ULT) 1 YEAR AND 3 YEAR & ABOVE SUBSCRIPTION with Professional services

Nutanix Support:

Table 38 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 39.0 Nutanix Software NCI, NCI-D, 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)
<p>STR:</p> <p>A) NCI NT-NCI-STR-PR NT-NCI-STR-MC NT-NCI-STR-FP NT-NCI-STR-FM</p> <p>B) NCI-D NT-NCI-D-STR-PR NT-NCI-D-STR-MC NT-NCI-D-STR-FP NT-NCI-D-STR-FM</p> <p>C) EUC NT-EUC-STR-PR NT-EUC-STR-MC NT-EUC-STR-FP NT-EUC-STR-FM</p> <p>PRO:</p> <p>A) NCI NT-NCI-PRO-PR NT-NCI-PRO-MC NT-NCI-PRO-FP NT-NCI-PRO-FM</p>	<p>STR: NT-W-DS-STR NT-W-DS-STR-SD NT-W-DS-STR-ED</p> <p>PRO: NT-W-DS-PRO NT-W-DS-PRO-SD NT-W-DS-PRO-ED</p> <p>ULT: NT-W-DS-ULT-SD NT-W-DS-ULT-ED</p>	<p>STR: NT-S-DP-STR-AVB and NT-S-DP-STR-AVV or NT-S-DP-STR-EXB and NT-S-DP-STR-EXV</p> <p>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</p> <p>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</p>

Table 39.0 Nutanix Software NCI, NCI-D, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 1 YEAR SUBSCRIPTION with professional services PID Mapping

<p>B) NCI-D NT-NCI-D-PRO-PR NT-NCI-D-PRO-MC NT-NCI-D-PRO-FP NT-NCI-D-PRO-FM</p> <p>C) EUC NT-EUC-PRO-PR NT-EUC-PRO-MC NT-EUC-PRO-FP NT-EUC-PRO-FM</p> <p>E) NCP (NCI-PRO) NT-NCP-NCI-PRO-PR NT-NCP-NCI-PRO-MC NT-NCP-NCI-PRO-FP NT-NCP-NCI-PRO-FM</p> <p>ULT: A) NCI NT-NCI-ULT-PR NT-NCI-ULT-MC NT-NCI-ULT-FP NT-NCI-ULT-FM</p> <p>B) NCI-D NT-NCI-D-ULT-PR NT-NCI-D-ULT-MC NT-NCI-D-ULT-FP NT-NCI-D-ULT-FM</p> <p>C) EUC NT-EUC-ULT-PR NT-EUC-ULT-MC NT-EUC-ULT-FP NT-EUC-ULT-FM</p> <p>D) NCP (NCI-ULT) NT-NCP-NCI-ULT-PR NT-NCP-NCI-ULT-MC NT-NCP-NCI-ULT-FP NT-NCP-NCI-ULT-FM</p>		
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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 39.1 Nutanix Software NCI, NCI-D, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 3 YEAR SUBSCRIPTION 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)
<p>STR:</p> <p>A) NCI NT-NCI-STR-PR NT-NCI-STR-MC NT-NCI-STR-FP NT-NCI-STR-FM</p> <p>B) NCI-D NT-NCI-D-STR-PR NT-NCI-D-STR-MC NT-NCI-D-STR-FP NT-NCI-D-STR-FM</p> <p>C) EUC NT-EUC-STR-PR NT-EUC-STR-MC NT-EUC-STR-FP NT-EUC-STR-FM</p> <p>PRO:</p> <p>A) NCI NT-NCI-PRO-PR NT-NCI-PRO-MC NT-NCI-PRO-FP NT-NCI-PRO-FM</p> <p>B) NCI-D NT-NCI-D-PRO-PR NT-NCI-D-PRO-MC NT-NCI-D-PRO-FP NT-NCI-D-PRO-FM</p>	<p>STR: NT-W-DS-STR NT-W-DS-STR-SD NT-W-DS-STR-ED</p> <p>PRO: NT-W-DS-PRO NT-W-DS-PRO-SD NT-W-DS-PRO-ED</p> <p>ULT: NT-W-DS-ULT-SD NT-W-DS-ULT-ED</p>	<p>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</p> <p>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</p> <p>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</p>

Table 39.1 Nutanix Software NCI, NCI-D, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 3 YEAR SUBSCRIPTION with professional services PID Mapping

<p>C) EUC NT-EUC-PRO-PR NT-EUC-PRO-MC NT-EUC-PRO-FP NT-EUC-PRO-FM</p> <p>D) NCP (NCI-PRO) NT-NCP-NCI-PRO-PR NT-NCP-NCI-PRO-MC NT-NCP-NCI-PRO-FP NT-NCP-NCI-PRO-FM</p> <p>ULT:</p> <p>A) NCI NT-NCI-ULT-PR NT-NCI-ULT-MC NT-NCI-ULT-FP NT-NCI-ULT-FM</p> <p>B) NCI-D NT-NCI-D-ULT-PR NT-NCI-D-ULT-MC NT-NCI-D-ULT-FP NT-NCI-D-ULT-FM</p> <p>C) EUC NT-EUC-ULT-PR NT-EUC-ULT-MC NT-EUC-ULT-FP NT-EUC-ULT-FM</p> <p>D) NCP (NCI-ULT) NT-NCP-NCI-ULT-PR NT-NCP-NCI-ULT-MC NT-NCP-NCI-ULT-FP NT-NCP-NCI-ULT-FM</p>		
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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 40.0 Nutanix Software NCM and NCM-U 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:	STR:	STR:
A) NCM	NT-W-OD-STR-SD	NT-S-OP-STR
NT-NCM-STR-PR	NT-W-OD-STR-ED	
NT-NCM-STR-MC		PRO:
NT-NCM-STR-FP	PRO:	NT-S-OP-PRO
NT-NCM-STR-FM	NT-W-OD-PRO-SD	
	NT-W-OD-PRO-ED	ULT:
B) NCM-U		NT-S-OP-ULT
NT-NCM-U-STR-PR	ULT:	
NT-NCM-U-STR-MC	NT-W-OD-ULT-SD	
NT-NCM-U-STR-FP	NT-W-OD-ULT-ED	
NT-NCM-U-STR-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 40.1 Nutanix Software NCM and NCM-U 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 B) NCM-U NT-NCM-U-STR-PR NT-NCM-U-STR-MC NT-NCM-U-STR-FP NT-NCM-U-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 41 Nutanix Software NCM PRO, NCM ULT, NCM-U PRO, NCM-U ULT, NCP (NCM-PRO), NCP (NCM-ULT) 1 YEAR AND 3 YEAR & ABOVE SUBSCRIPTION with Professional services

Software PIDs	Mandatory Professional Services PIDs				
	NCM Self-Service DesignWorkshop (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) NCM-U NT-NCM-U-PRO-PR NT-NCM-U-PRO-MC NT-NCM-U-PRO-FP NT-NCM-U-PRO-FM C) 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	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

Table 41 Nutanix Software NCM PRO, NCM ULT, NCM-U PRO, NCM-U ULT, NCP (NCM-PRO), NCP (NCM-ULT) 1 YEAR AND 3 YEAR & ABOVE SUBSCRIPTION with Professional services

<p>B) NCM-U NT-NCM-U-ULT-PR NT-NCM-U-ULT-MC NT-NCM-U-ULT-FP NT-NCM-U-ULT-FM</p> <p>C) NCP (NCM-ULT) NT-NCP-NCM-ULT-PR NT-NCP-NCM-ULT-MC NT-NCP-NCM-ULT-FP NT-NCP-NCM-ULT-FM</p>					
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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 42](#)

Table 42 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 43](#)

Table 43 Cisco Intersight Support

Product ID (PID)	PID Description
Cisco Intersight Support	
SVS-SSTCS-DCMGMT ¹	Solution Support for DC Mgmt
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.

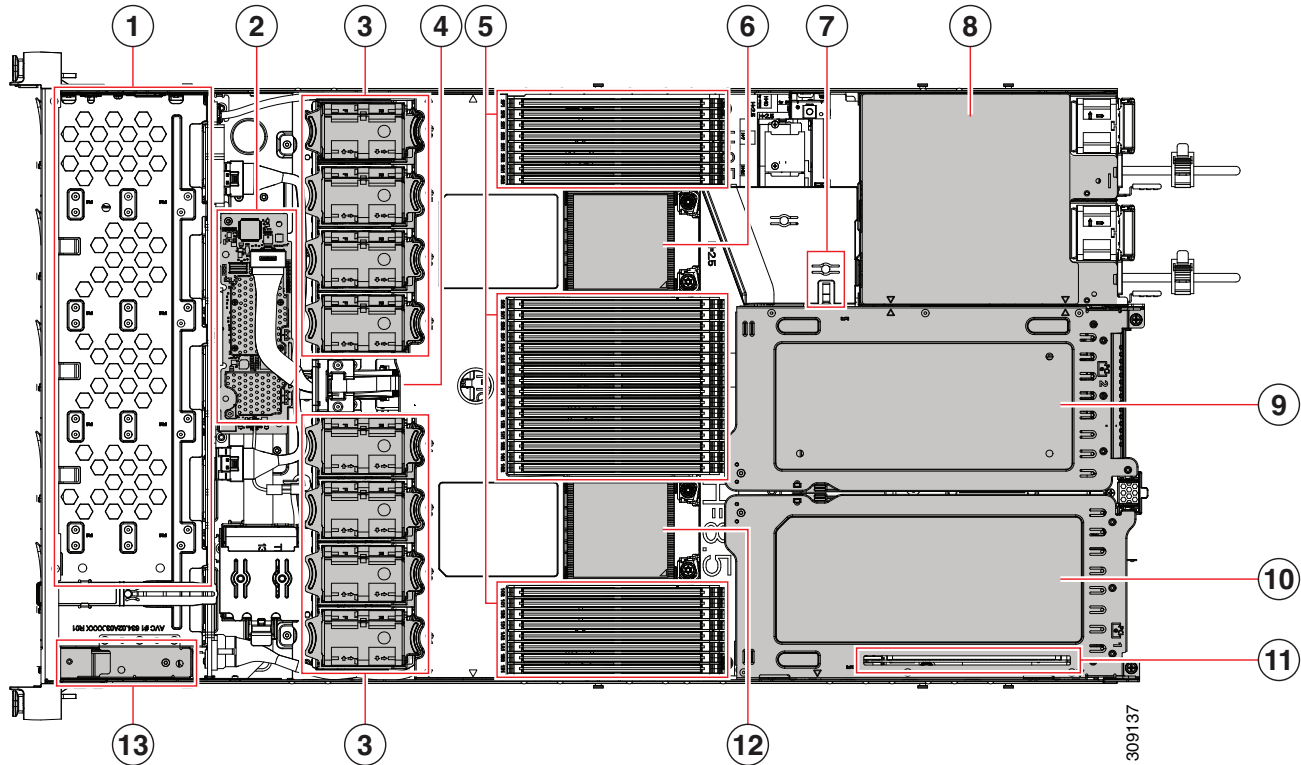
For the C240 M7 All-Flash specifically, riser 1B and 3B can be physically installed as long as the drive bays remain unpopulated. Only the 24 front facing drive slots can be populated with SSDs.

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

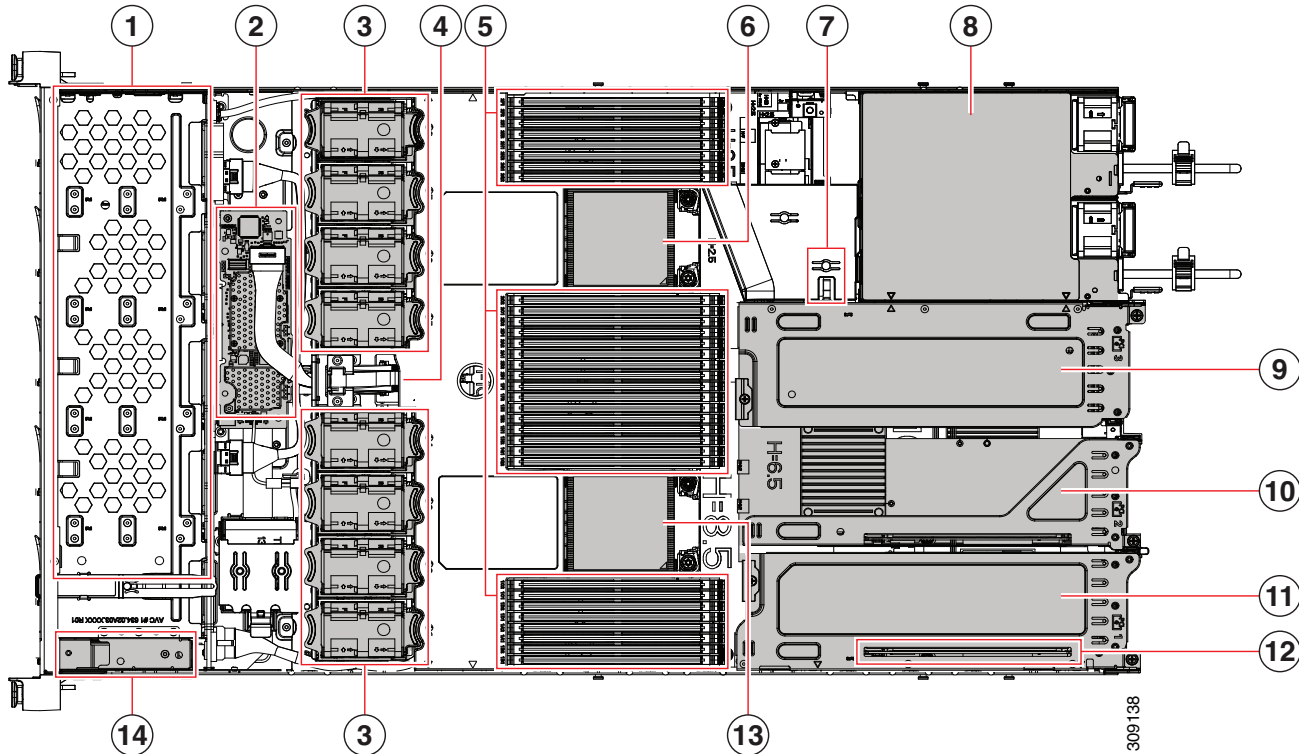
Figure 7 and Figure 8 shows the Internal views of the 220 M7 chassis with the top cover removed.

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 HClAF220C 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 HClAF220C 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 HClAF220C M7 All-NVMe/All-Flash Servers Riser Connector Locations

HClAF220C-M7S Motherboard

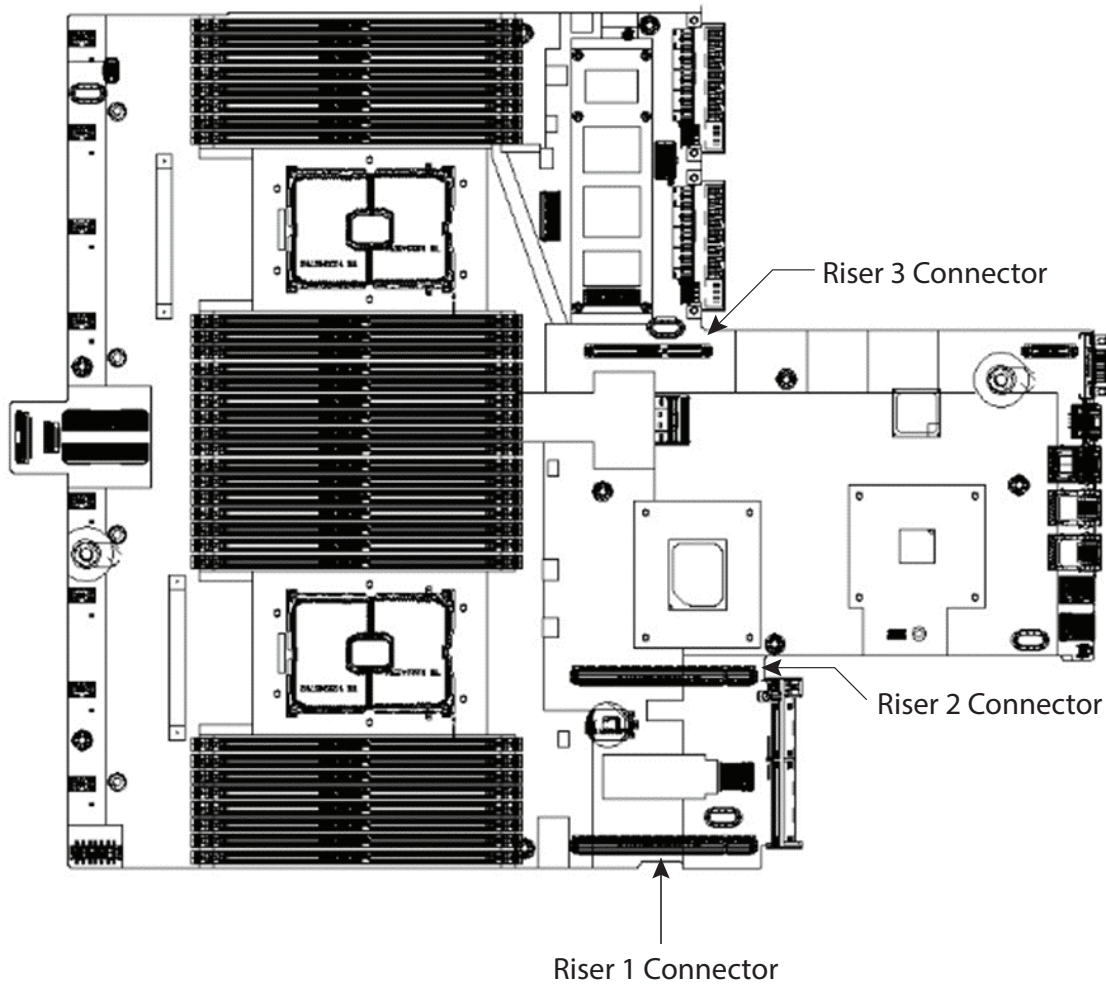


Figure 10 shows three half-height risers plugged into their respective connectors.

Figure 10 Cisco Compute Hyperconverged HClAF220C M7 All-NVMe/All-Flash Servers With Three Half-Height Risers Plugged In
HClAF220C-M7S Motherboard

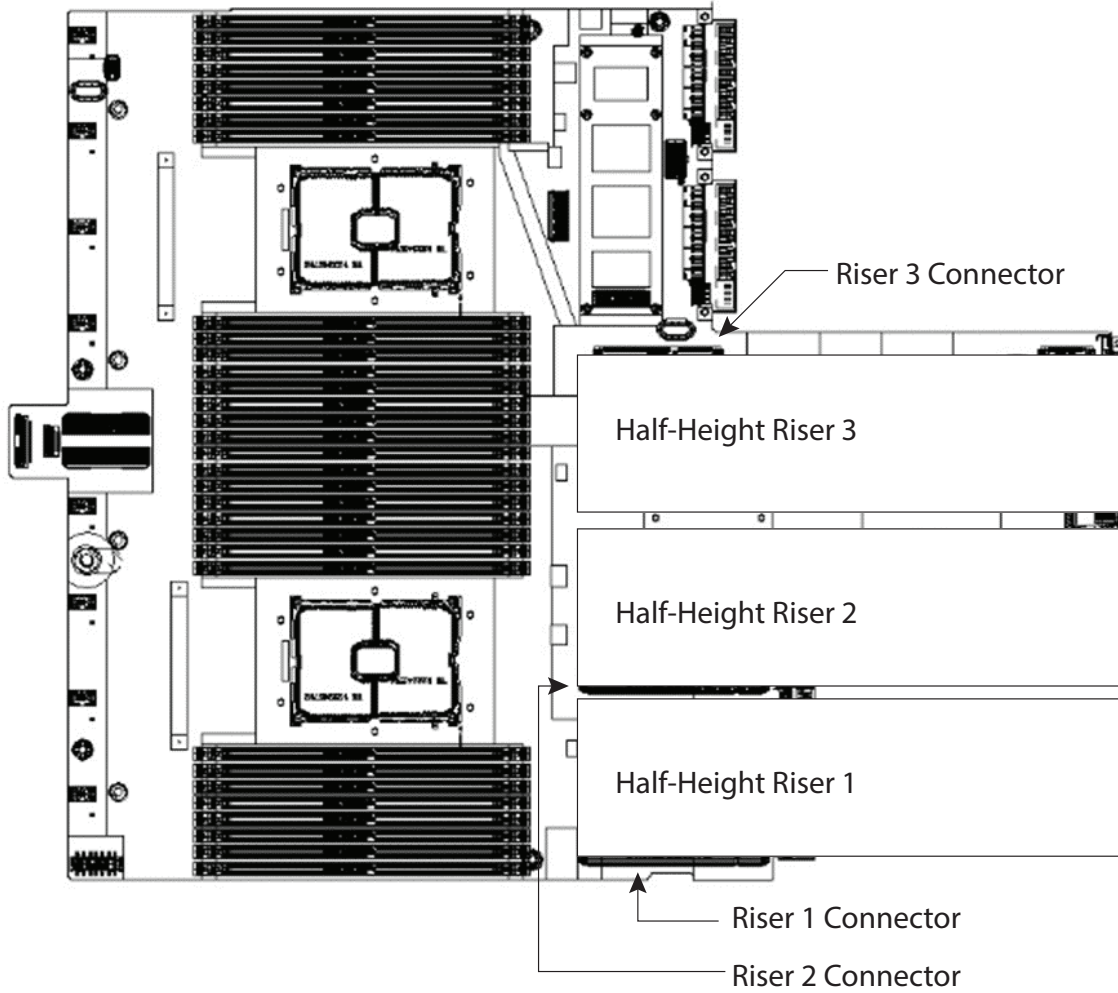
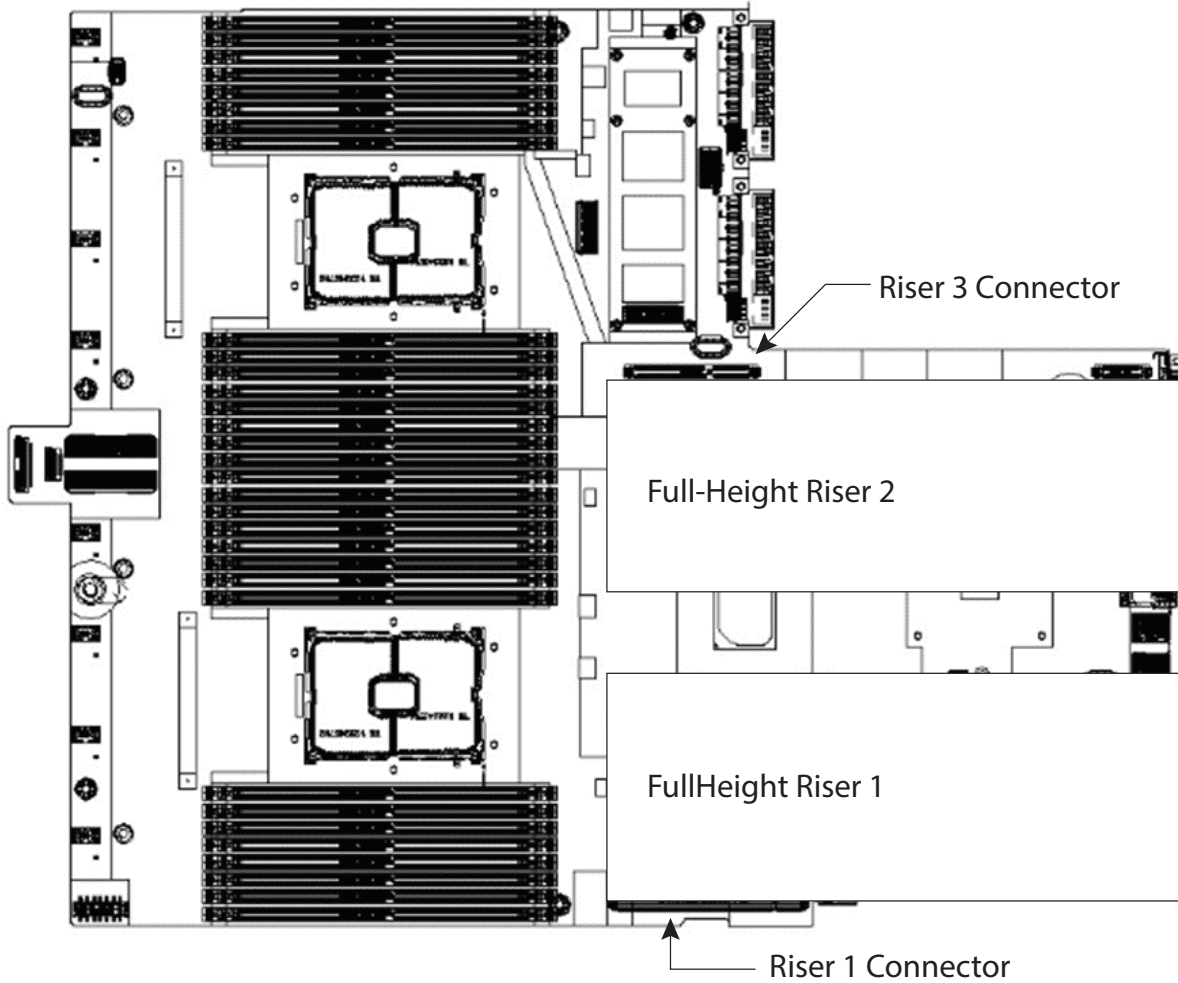


Figure 11 shows two full-height risers plugged in. Note that riser 1 is plugged into the riser 1 connector and riser 2 is plugged into the riser 3 connector. Riser 2 connector is not used.

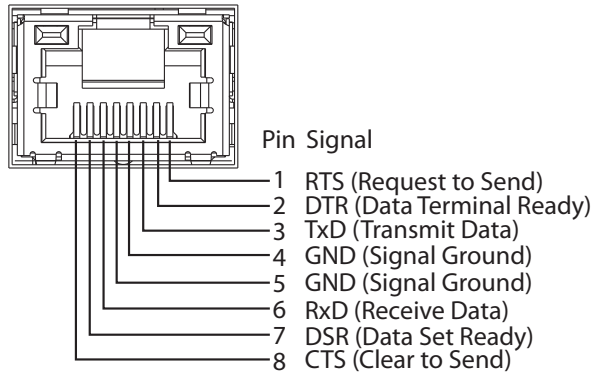
Figure 11 Cisco Compute Hyperconverged HClAF220C M7 All-NVMe/All-Flash Servers With Two Full-Height Risers Plugged In
HClAF220C-M7S Motherboard



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)



KVM Cable

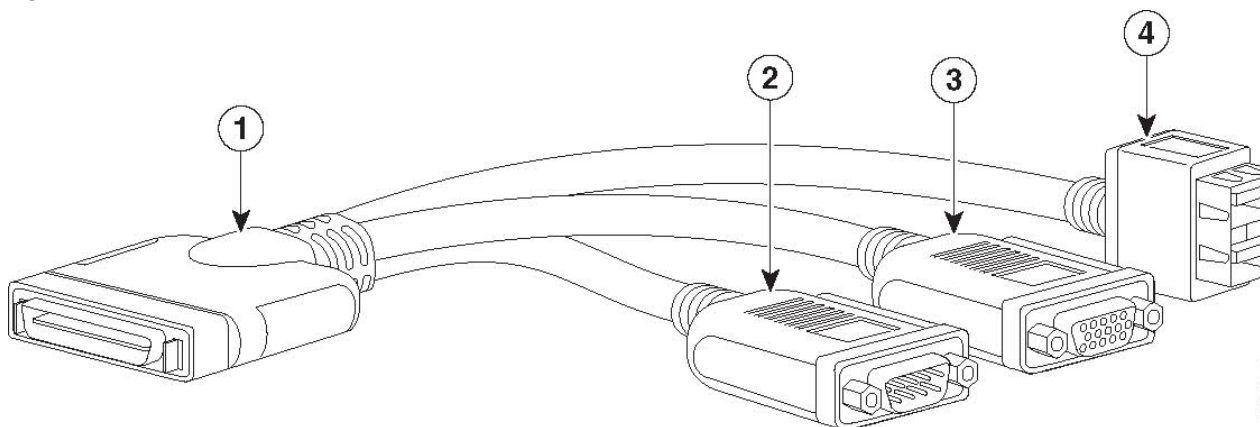
The KVM cable provides a connection into the server, providing a DB9 serial connector, a VGA connector for a monitor, and dual USB ports for a keyboard and mouse. With this cable, you can create a direct connection to the operating system and the BIOS running on the server.

The KVM cable ordering information is listed in [Table 44](#).

Table 44 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 HClAF220C M7 All-NVMe/All-Flash Servers Installation and Service Guide](#) to upgrading or replacing the CPUs
- Refer to [Cisco Compute Hyperconverged HClAF220C M7 All-NVMe/All-Flash Servers Installation and Service Guide](#) to upgrading or replacing the Memory

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Availability of accelerators varies depending on SKU. Visit the [5th Gen Intel Product Information page](#) for additional product details.

See [Intel® Xeon® Processors Notices and Disclaimers](#) in next page.

Notes:

1. Average performance gain as measured by the geomean of SPEC CPU rate, STREAM Triad, and LINPACK compared to 4th Gen Intel® Xeon® processor. See G1 at intel.com/processorclaims: 5th Gen Intel Xeon Scalable processors. Results may vary.


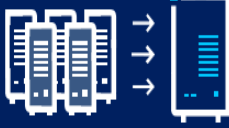


2. As measured by performance per watt on a range of AI, database, networking, and HPC workloads compared to 4th Gen Intel® Xeon® processor. See A2, A19-A25, D1, D2, D5, H1, N16 at [intel.com/processorclaims](https://www.intel.com/processorclaims): 5th Gen Intel Xeon Scalable processors. Results may vary.
3. See G12 at [intel.com/processorclaims](https://www.intel.com/processorclaims): 5th Gen Intel Xeon Scalable processors. Results may vary.
4. See G11 at [intel.com/processorclaims](https://www.intel.com/processorclaims): 5th Gen Intel Xeon Scalable processors. Results may vary.
5. Average performance gain as measured by the geomean of SPEC CPU rate, STREAM Triad, and LINPACK compared to 3rd Gen Intel® Xeon® processor. See G3 at [intel.com/processorclaims](https://www.intel.com/processorclaims): 5th Gen Intel Xeon Scalable processors. Results may vary.
6. Based on Intel internal modelling as of December 2023.
7. Based on performance gains of 1.19x to 2.69x with Intel® Advanced Matrix Extensions (Intel® AMX) for inference on GPT-J, LLaMA-2 13B, DLRM, DistilBERT, BERT-Large, and ResNet50v1.5 compared to AMD EYPC 9654 and 9754. See A201, A202, A208-A211 at [intel.com/processorclaims](https://www.intel.com/processorclaims): 5th Gen Intel Xeon Scalable processors. Results may vary.
8. Based on performance gains of 4.4x to 14.2x for training (ResNet50v1.5, BERT-Large, SSD-ResNet34, RNN-T, MaskRCNN, and DLRM) and 2.9x to 14x for inference (ResNet50v1.5, BERT-Large, SSD-ResNet34, RNN-T (BF16 only), Resnext101 32x16d, MaskRCNN (BF16 only), DistilBERT) compared to 3rd Gen Intel® Xeon® processor. See A15-A16 at [intel.com/processorclaims](https://www.intel.com/processorclaims): 5th Gen Intel Xeon Scalable processors. Results may vary.
9. Based on performance per watt gains of 1.46x to 10.6x with built-in accelerators on a range of AI, database, and networking workloads. See A19-A25, D1, D2, D5, N16 at [intel.com/processorclaims](https://www.intel.com/processorclaims): 5th Gen Intel Xeon Scalable processors. Results may vary.
10. Based on performance per watt gains of 1.11x to 2.96x with built-in accelerators on a range of AI, database, networking, and HPC workloads compared to AMD EYPC 9554, 9654, and 9754. See A208-A211, D201-D204, H201, N201 at [intel.com/processorclaims](https://www.intel.com/processorclaims): 5th Gen Intel Xeon Scalable processors. Results may vary.

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Notes:

1. Compared to prior generation Intel® Xeon® processor. See [G1] at intel.com/processorclaims: 4th Gen Intel® Xeon® Scalable processors. Results may vary.
2. Compared to prior generation Intel® Xeon® processor. See [A16] and [A17] at intel.com/processorclaims: 4th Gen Intel® Xeon® Scalable processors. Results may vary.
3. Comparing benefits transitioning from Intel® Xeon® 4110 to Intel® Xeon® 5420+. See [E11] at intel.com/processorclaims: 4th Gen Intel® Xeon® Scalable processors. Results may vary.
4. Compared to prior generation Intel® Xeon® processor. See [E1] at intel.com/processorclaims: 4th Gen Intel® Xeon® Scalable processors. Results may vary.

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TECHNICAL SPECIFICATIONS

Dimensions and Weight

Table 45 Cisco Compute Hyperconverged HClAF220C 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 riser 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 46](#))
- 1050W DC power supply (see [Table 47](#))
- 1200 W (AC) power supply (see [Table 48](#))
- 1600 W (AC) power supply (see [Table 49](#))
- 2300 W (AC) power supply (see [Table 50](#))

Table 46 Cisco Compute Hyperconverged HClAF220C 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 47 Cisco Compute Hyperconverged HClAF220C 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

Table 48 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 49 Cisco Compute Hyperconverged HClAF220C 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 50 Cisco Compute Hyperconverged HClAF220C 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 51](#).

Table 51 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 52 Cisco Compute Hyperconverged HCIAF220C M7 All-NVMe/All-Flash Servers Extended Operating Temperature Hardware Configuration Limits

Platform ¹	ASHRAE A3 (5°C to 40°C) ²	ASHRAE A4 (5°C to 45°C) 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 53](#).

Table 53 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. 60950-1/62368-1 IEC/EN 60950-1/62368-1 AS/NZS 62368.1 GB 4943.1-2022 CNS 15598-1:2020
EMC - Emissions	47CFR Part 15 (CFR 47) Class A AS/NZS CISPR32 Class A CISPR32 Class A EN55032 Class A ICES003 Class A VCCI-CISPR32 Class A EN61000-3-2 EN61000-3-3 KS C 9832 Class A EN 300386 Class A
EMC - Immunity	EN55035 EN55024 CISPR24/35 EN300386 KS C 9835 IEC/EN61000-6-1



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