



# Intel® Server M20NTP Family

Intel® Server Board M20NTP2SB

Intel® Server System M20NTP1UR

## *Configuration Guide*

A reference document used to identify available Intel server building blocks, integrated systems, accessories, and spare parts associated with the Intel® Server M20NTP Family.

**Rev. 1.3**

**August 2022**



# M20NTP

**Delivering Breakthrough Data Center System Innovation – Experience What's Inside!**

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## ***Document Revision History***

Date	Revision	Changes
January 2022	1.0	First production release.
February 2022	1.1	<ul style="list-style-type: none"> <li>• Sections 1.5 and 1.6 – Updated 1U system features tables.</li> <li>• Section 4.5 – updated TPM accessory options support note.</li> </ul>
April 2022	1.2	<ul style="list-style-type: none"> <li>• Section 1.6, Table 8 – Corrected power supply efficiency rating.</li> <li>• Section 3.2 – Added iPC AXSRMFBU7 accessory.</li> <li>• Section 2.1, Tables 11, 12, and 13 – Added packaged and unpackaged weights.</li> <li>• Section 3.1 – Added two new Intel OCP* Networking Options, removed other two.</li> <li>• Section 3.2 – Added two new Intel PCIe Ethernet Networking Adapter Options.</li> </ul>
August 2022	1.3	Minor edits throughout the document for clarity.

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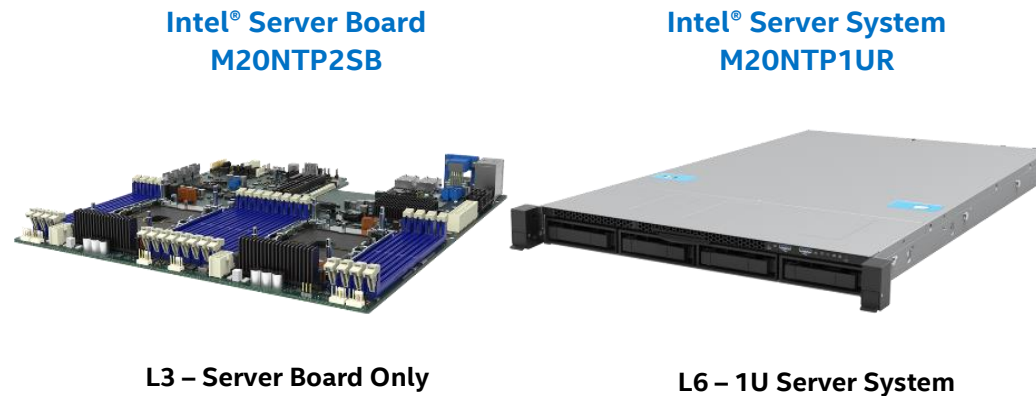
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# 1. Overview

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This document provides a catalog of available Intel server boards, Intel server systems, accessories, and spares that make up the Intel® Server M20NTP Family.

## 1.1 Product Family Overview



**L3** = Building Block Option

**L6** = Semi-integrated system. The base configuration is non-functional out of the box. Additional integration of components required

**Figure 1. Intel® Server M20NTP Family Overview**

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**Important:** Fully configured (operation ready, no operating system) L9 systems are only orderable from Intel using its online Configure-To-Order (CTO) tool at [orderconfigurator.intel.com](https://orderconfigurator.intel.com) (Intel NDA required) or contact your Intel field sales representative.

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The core products that define the Intel Server M20NTP Family include:

- **Intel® Server Board M20NTP2SB** – A board only server product that offers server system developers the option of integrating an Intel developed server board (and other available Intel developed accessory options) within their own custom or 3<sup>rd</sup> party developed server chassis.
- **Intel® Server System M20NTP1UR** – An Intel developed and validated 1U server system integrated with an Intel Server Board M20NTP2SB.

For additional information on each of these server products, go to:

<https://www.intel.com/content/www/us/en/documentation-resources/developer.html> and search for “M20NTP”.



## 1.2 Processor Support

The Intel Server M20NTP Family supports the 3<sup>rd</sup> Gen Intel® Xeon® Scalable processor family. Processor shelves within the product family are identified as shown in the following figure.

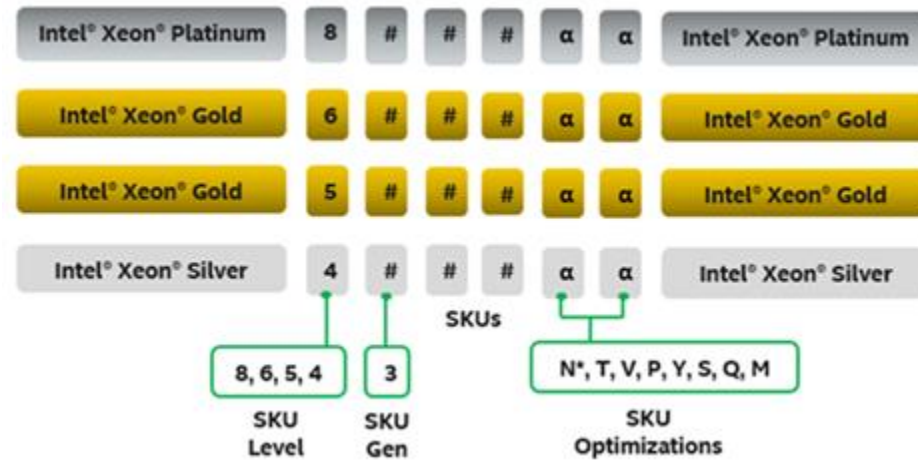


Figure 2. 3<sup>rd</sup> Gen Intel® Xeon® Scalable Processor Shelf Identification

### Notes:

- 3<sup>rd</sup> Gen Intel Xeon Scalable processor family SKUs ending in (H), (L), (U) or (Q) are not supported. Most of other processor SKUs within the processor family are supported.
- On the Intel Server Board M20NTP, the 8351N SKU (1-socket optimized) is not supported.

Table 1. Intel® Server M20NTP Family Processor Support

3 <sup>rd</sup> Gen Intel® Xeon® Scalable Processor Shelf	Intel® Server Board M20NTP2SB Max TDP = 250 W	Intel® Server System M20NTP1UR
Platinum 8300 series processors	✓	✗
Gold 6300 series processors	✓	✗
Gold 5300 series processors	✓	✓ - Max TDP=185 W
Silver 4300 series processors	✓	✓ - Max TDP=150 W

✗ - Not Supported

✓ - Supported

**Table 2. 3<sup>rd</sup> Gen Intel® Xeon® Scalable Processor Shelf Feature Comparison**

Feature	Platinum 8300 series Processors	Gold 6300 series Processors	Gold 5300 series Processors	Silver 4300 series Processors
# of Intel® UPI Links	3	3	3	2
Intel® UPI Speed	11.2 GT/s	11.2 GT/s	11.2 GT/s	10.4 GT/s
Supported Topologies	2S-2UPI 2S-3UPI	2S-2UPI 2S-3UPI	2S-2UPI 2S-3UPI	2S-2UPI
Node Controller Support	No	No	No	No
Processor RAS Capability	Advanced	Advanced	Advanced	Standard
# of DDR4 Integrated Memory Controllers (IMC)	4	4	4	4
# DDR4 Channels	8	8	8	8
Intel® Turbo Boost Technology	Yes	Yes	Yes	Yes
Intel® HT Technology	Yes	Yes	Yes	Yes
Intel® AVX-512 ISA Support	Yes	Yes	Yes	Yes
Intel® AVX-512 - # of 512b FMA Units	2	2	2	2
# of PCIe* Lanes	64	64	64	64
Intel® VMD 2.0	Yes	Yes	Yes	Yes

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**Note to Board-Only Customers:** The maximum supported processor TDP at the system level may be lower than what the server board can support. Design limits of the chosen server chassis / system will determine the maximum processor TDP that can be supported up to the 250 W processor TDP limit of the server board. Reference the chosen server chassis/system documentation for specific processor support information.

**Disclaimer:** Intel server boards include and support several high-density VLSI and power delivery components that need adequate airflow to reliably operate within their thermal specification limits. Intel ensures through its own chassis development and testing that when an Intel server board and Intel chassis are used together, the fully integrated system meets the thermal requirements of these components. It is the responsibility of anyone purchasing the board-only product with intentions to develop their own server system using a non-Intel chassis, to consult all available design guides, specifications, and datasheets to determine the thermal operating limits of installed components and airflow necessary to cool them for all intended system configurations and target workloads. It is also their responsibility to perform adequate environmental validation testing to ensure reliable system operation. Intel cannot be held responsible if components fail or the server board does not operate correctly when published operating and non-operating limits are exceeded.

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## 1.3 Memory Support

The Intel Server Board M20NTP supports DDR4 DIMMs with the following attributes:

- All DDR4 DIMMs must support ECC
- Registered DDR4 (RDIMM), 3DS-RDIMM, Load Reduced DDR4 (LRDIMM), 3DS-LRDIMM  
**Note:** 3DS stands for 3-Dimensional Stacking.
- RDIMMs and LRDIMMs with thermal sensor on-DIMM (TSOD)
- DIMM speeds of up to 3200 MT/s
- DIMM capacities of 8 GB, 16 GB, 32 GB, 64 GB, 128 GB, and 256 GB
- RDIMMs organized as Single Rank (SR), Dual Rank (DR)
- 3DS-RDIMM organized as Quad Rank (QR), or Oct Rank (OR)
- LRDIMMs organized as Quad Rank (QR)
- 3DS-LRDIMM organized as Quad Rank (QR), or Oct Rank (OR)

The following tables list the DDR4 DIMM support guidelines.

**Table 3. Supported DDR4 DIMM Memory**

Type	Ranks per DIMM and Data Width	DIMM Capacity (GB)		Maximum Speed (MT/s) at 1.2 V
		8 Gb DDR4 Density	16 Gb DDR4 Density	1 DPC
RDIMM	SR x8	8	16	3200
	SR x4	16	32	3200
	DR x8	16	32	3200
	DR x4	32	64	3200
3DS-RDIMM	QR/OR x4	64 (2H) 128 (4H)	128 (2H) 256 (4H)	3200
LRDIMM	QR x4	64	128	3200
3DS-LRDIMM	QR/OR x4	128 (4H)	128 (2H) 256 (4H)	3200

**Note:** SR = Single Rank, DR = Dual Rank, QR = Quad Rank, OR = Oct Rank, H = Stack Height, DPC = DIMMs per Channel.

The maximum supported DRAM DIMM speed depends on the processor shelf as shown in the following table.

**Table 4. Maximum Supported DDR4 DIMM Speed by Processor Shelf**

Processor Family	Maximum DIMM Speed (MT/s) by processor Shelf			
	Platinum 8300 Series Processors	Gold 6300 Series Processors	Gold 5300 Series Processors	Silver 4300 Series Processors
3 <sup>rd</sup> Gen Intel® Xeon® Scalable processors	3200	3200	2933	2666

## Intel DDR4 Support Disclaimer

Intel validates and will only provide support for system configurations where all installed DDR4 DIMMs have matching “Identical” or “Like” attributes. See [Table 5](#). A system configured concurrently with DDR4 DIMMs from different vendors will be supported by Intel if all other DDR4 “Like” DIMM attributes match.

Intel does not perform system validation testing nor will it provide support for system configurations where all populated DDR4 DIMMs do not have matching “Like” DIMM attributes as listed in [Table 5](#).

Intel will only provide support for Intel server systems configured with DDR4 DIMMs that have been validated by Intel and are listed on Intel’s Tested Memory list for the given Intel server product family.

Intel configures and ships pre-integrated L9 server systems. All DDR4 DIMMs within a given L9 server system as shipped by Intel will be identical. All installed DIMMs will have matching attributes as those listed in the “*Identical*” *DDR4 DIMM4 Attributes* column. See [Table 5](#).

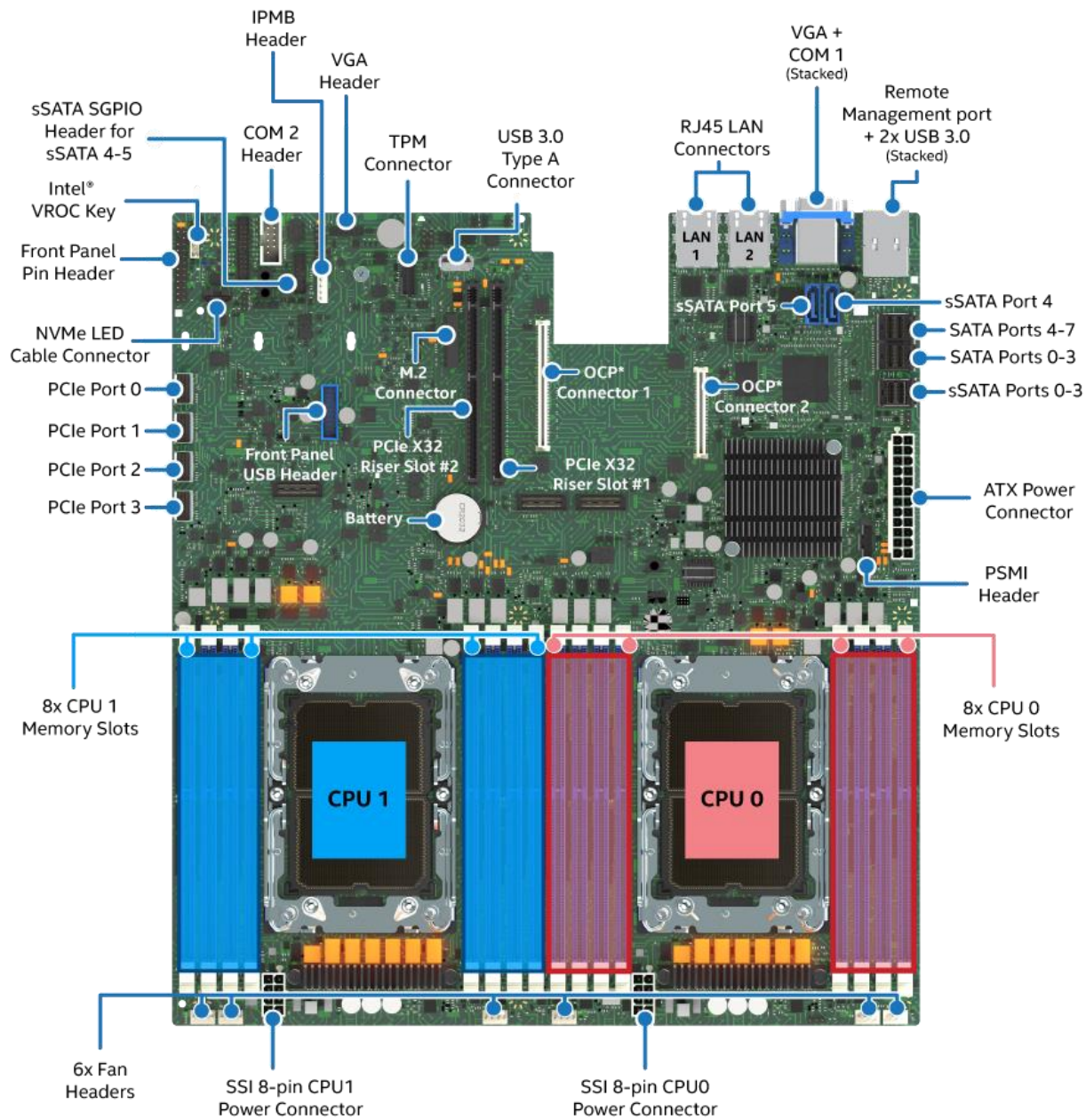
When purchasing more than one integrated L9 server system with the same configuration from Intel, Intel reserves the right to use “Like” DIMMs between server systems. At a minimum, “Like” DIMMS will have matching DIMM attributes as listed in the following table. However, the DIMM model #, revision #, or vendor may be different.

For warranty replacement, Intel will make every effort to ship back an exact match to the one returned. However, Intel may ship back a validated “Like” DIMM. A “Like” DIMM may be from the same vendor but may not be the same revision # or model #, or it may be an Intel validated DIMM from a different vendor. At a minimum, all “Like” DIMMs shipped from Intel will match attributes of the original part according to the definition of “Like” DIMMs in the following table.

**Table 5. DDR4 DIMM Attributes Table for “Identical” and “Like” DIMMs**

<ul style="list-style-type: none"> <li>• DDR4 DIMMs are considered “Identical” when ALL listed attributes between the DIMMs match.</li> <li>• Two or more DDR4 DIMMs are considered “Like” DIMMs when all attributes minus the Vendor, and/or DIMM Part # and/or DIMM Revision#, are the same.</li> </ul>			
Attribute	“Identical” DDR4 DIMM Attributes	“Like” DDR4 DIMM Attributes	Possible DDR4 Attribute Values
Vendor	Match	Maybe Different	Memory Vendor Name
DIMM Part #	Match	Maybe Different	Memory Vendor Part #
DIMM Revision #	Match	Maybe Different	Memory Vendor Part Revision #
SDRAM Type	Match	Match	DDR4
DIMM Type	Match	Match	RDIMM, LRDIMM
Speed (MHz)	Match	Match	2666, 2933, 3200
Voltage	Match	Match	1.2V
DIMM Size (GB)	Match	Match	8 GB, 16 GB, 32 GB, 64 GB, 128 GB, 256 GB
Organization	Match	Match	1Gx72; 2Gx72; 4Gx72; 8Gx72; 16Gx72; 32Gx72
DIMM Rank	Match	Match	1R, 2R, 4R, 8R
DRAM Width	Match	Match	x4, x8
DRAM Density	Match	Match	8 Gb, 16 Gb

## 1.4 Intel® Server Board M20NTP2SB Overview



Ref #: NTP10014

Figure 3. Intel® Server Board M20NTP2SB

**Table 6. Intel® Server Board M20NTP2SB Features**

Feature	Details
<b>Server Board</b>	Intel Server Board M20NTP2SB
<b>Server Board Dimensions</b>	333.2 mm X 306.8 mm (13.1" X 12")
<b>Processor Support</b>  <b>Maximum Supported Processor Thermal Design Power (TDP)</b>	<ul style="list-style-type: none"> <li>• Dual Socket-P4 LGA4189</li> <li>• 3<sup>rd</sup> Gen Intel Xeon Scalable processor family: <ul style="list-style-type: none"> <li>○ Intel® Xeon® Platinum 8300 processor</li> <li>○ Intel® Xeon® Gold 6300 processor</li> <li>○ Intel® Xeon® Gold 5300 processor</li> <li>○ Intel® Xeon® Silver 4300 processor</li> </ul> </li> </ul> <p><b>Note:</b> 3rd Gen Intel Xeon Scalable processor family SKUs ending in (H), (L), (U), or (Q) are not supported.</p> <ul style="list-style-type: none"> <li>• Intel UPI links: up to three (3) at 11.2 GT/s (Platinum and Gold families) or up to two (2) at 10.4 GT/s (Silver family)</li> </ul> <p><b>Note:</b> Previous generations of the Intel Xeon processor families are not supported.</p> <ul style="list-style-type: none"> <li>• 250 W (server board only)</li> </ul> <p><b>Note:</b> The maximum supported processor TDP at the system level may be lower than what the server board can support. Design limits of the chosen server chassis / system determine the maximum processor TDP that can be supported, up to the 250 W processor TDP limit of the server board. Reference the chosen server chassis / system documentation for specific processor support limits.</p>
<b>PCH Chipset</b>	<ul style="list-style-type: none"> <li>• Intel® C621A Platform Controller Hub (PCH) chipset</li> <li>• Embedded features supported on this server board: <ul style="list-style-type: none"> <li>○ SATA support</li> <li>○ USB support</li> <li>○ PCIe* support</li> </ul> </li> </ul>
<b>Server Management Processor (SMP)</b>	<ul style="list-style-type: none"> <li>• Aspeed* AST2500 Advanced PCIe Graphics and Remote Management Processor</li> <li>• Embedded features supported on this server board: <ul style="list-style-type: none"> <li>○ Baseboard Management Controller (BMC)</li> <li>○ 2D Video Graphics Adapter</li> </ul> </li> </ul>
<b>Memory Support</b>	<ul style="list-style-type: none"> <li>• 16 memory slots <ul style="list-style-type: none"> <li>○ Eight (8) DIMM slots per processor (2 processors)</li> <li>○ Eight (8) memory channels per processor</li> <li>○ One (1) slot per memory channel</li> </ul> </li> <li>• Registered DDR4 (RDIMM), 3DS-RDIMM, Load Reduced DDR4 (LRDIMM), 3DS-LRDIMM <p><b>Note:</b> 3DS = 3-Dimensional Stacking</p> <ul style="list-style-type: none"> <li>○ All DDR4 DIMMs must support ECC</li> <li>○ Up to 3200 MT/s (processor SKU dependent)</li> <li>○ Memory voltage = 1.2 V</li> </ul> </li> </ul>
<b>Network Connectivity</b>	<ul style="list-style-type: none"> <li>• Onboard Intel® Ethernet Controller I210-AT <ul style="list-style-type: none"> <li>○ Two (2) RJ45 1000 Base-T ports (Back panel I/O)</li> </ul> </li> <li>• Support for one (1) OCP* 2.0 Mezzanine add-in card</li> </ul>
<b>PCIe* Expansion</b>	<ul style="list-style-type: none"> <li>• Two (2) X32 PCIe 4.0 Riser Card slots</li> </ul>

Feature	Details
<b>Storage Connectivity Options</b>	<p><b>NVMe* Support</b></p> <ul style="list-style-type: none"> <li>• Four (4) onboard SFF-8654 SlimSAS* cable connectors. Each connector supports backplane connectivity for one (1) PCIe NVMe SSD</li> <li>• One (1) onboard 7-pin NVMe LED support cable connector – cable installed together with onboard SlimSAS cables to backplane</li> <li>• One (1) onboard PCIe NVMe M.2 SSD connector. Supports 42 mm, 80 mm, or 110 mm SSD</li> <li>• Embedded support for Intel® Volume Management Device (Intel® VMD) 2.0 for NVMe</li> <li>• Support for Intel® Virtual RAID on CPU (Intel® VROC) for NVMe. Intel® VROC for NVMe upgrade key option required.</li> </ul> <p><b>SATA Support – Up to 14 SATA 6 GB/s drives</b></p> <ul style="list-style-type: none"> <li>• Three (3) onboard quad port SFF-8643 Mini-SAS HD cable connectors. Each connector supports backplane connectivity for 4 SATA devices</li> <li>• Two (2) onboard single port 7-pin cable connectors</li> <li>• Embedded support for Intel® Virtual RAID on CPU (Intel® VROC) for SATA. Supported RAID Levels: 0, 1, 5, 10</li> </ul>
<b>Video Support</b>	<ul style="list-style-type: none"> <li>• Embedded 2D video controller</li> <li>• One (1) VGA DB-15 cable connector (Back panel I/O)</li> <li>• One (1) VGA 14-pin onboard cable header (Front Panel VGA support)</li> <li>• 128 MB of DDR4 video memory</li> <li>• Up to 1920 x 1200 resolution</li> </ul>
<b>USB Support</b>	<ul style="list-style-type: none"> <li>• Two (2) external USB 3.0 connectors (Back panel I/O)</li> <li>• One (1) USB 3.0 internal onboard Type-A connector</li> <li>• One (1) onboard 20-pin cable connector for optional front panel 2x USB 3.0 ports</li> </ul>
<b>Serial Ports</b>	<ul style="list-style-type: none"> <li>• One (1) DB-9 Serial COM1 port cable connector (Back panel I/O)</li> <li>• One (1) onboard DH-10 Serial COM2 port header for optional front or rear serial port support. The port follows DTK pinout specifications.</li> </ul>
<b>Fan Support</b>	<ul style="list-style-type: none"> <li>• Six (6) 4-pin system fan connectors</li> <li>• Managed fan speed control <ul style="list-style-type: none"> <li>○ Enabled (Default) with Intel server systems</li> <li>○ Disabled (Default) for system using Non-Intel chassis. Can be configured using embedded server management features of the BMC. See board TPS for more information.</li> </ul> </li> </ul>
<b>Server Management</b>	<ul style="list-style-type: none"> <li>• Integrated Baseboard Management Controller (BMC)</li> <li>• Dedicated RJ45 1 GbE remote management port (Back panel I/O)</li> <li>• Onboard Light Guided Diagnostics</li> <li>• Integrated BMC Web Console for Intel server systems</li> <li>• Intelligent Platform Management Interface (IPMI) 2.0 compliant</li> <li>• Support for Intel® Data Center Manager (DCM)</li> <li>• Support for Intel® Server Debug and Provisioning Tool (Intel® SDP Tool)</li> <li>• Redfish*-compliant</li> <li>• Customizable BMC management support for server systems using non-Intel server chassis (see board TPS for more information)</li> <li>• Sensor monitoring</li> <li>• Fan speed control</li> </ul>
<b>Security</b>	<ul style="list-style-type: none"> <li>• Intel® Software Guard Extensions (Intel® SGX)</li> <li>• Converged Intel® Boot Guard and Intel® Trusted Execution Technology (Intel® TXT)</li> <li>• Intel® Total Memory Encryption (Intel® TME)</li> <li>• Trusted platform module (TPM 2.0) support <ul style="list-style-type: none"> <li>○ Accessory option: Standard – iPC <b>JNPTPM</b> (Not supported in China)</li> <li>○ Accessory option: China Compatible – iPC <b>JNPTPMCH</b></li> </ul> </li> </ul>

## Intel® Server M20NTP Family Configuration Guide

Feature	Details
<b>Onboard Jumper Blocks and Buttons</b>	<ul style="list-style-type: none"> <li>• System Buzzer Configuration Jumper</li> <li>• Serial Port Configuration Jumpers</li> <li>• Intel® ME Recovery Jumper</li> <li>• Clear CMOS Button</li> <li>• System Reset Button</li> <li>• Power Button</li> </ul>
<b>Environment Limits</b>	<ul style="list-style-type: none"> <li>• Operating Temp: 10–35 °C (50–95 °F)</li> <li>• Non-Operating Temp: -40–70 °C (-40–158 °F)</li> <li>• Non-Operating Humidity: 90%, non-condensing at 35 °C</li> </ul>



## 1.5 Intel® Server System M20NTP1UR Overview

This section gives an overview of the available systems for the Intel Server System M20NTP1UR.

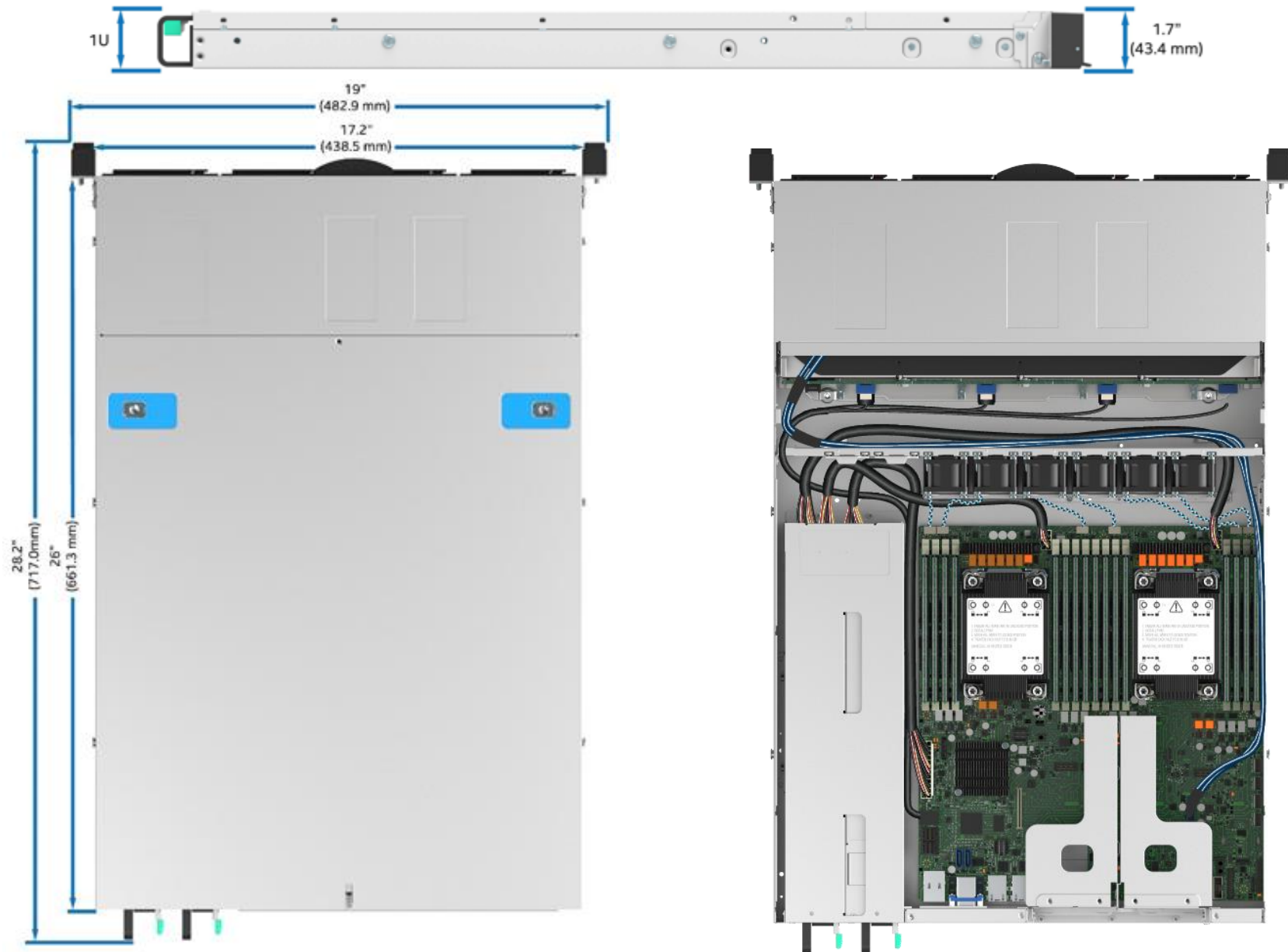
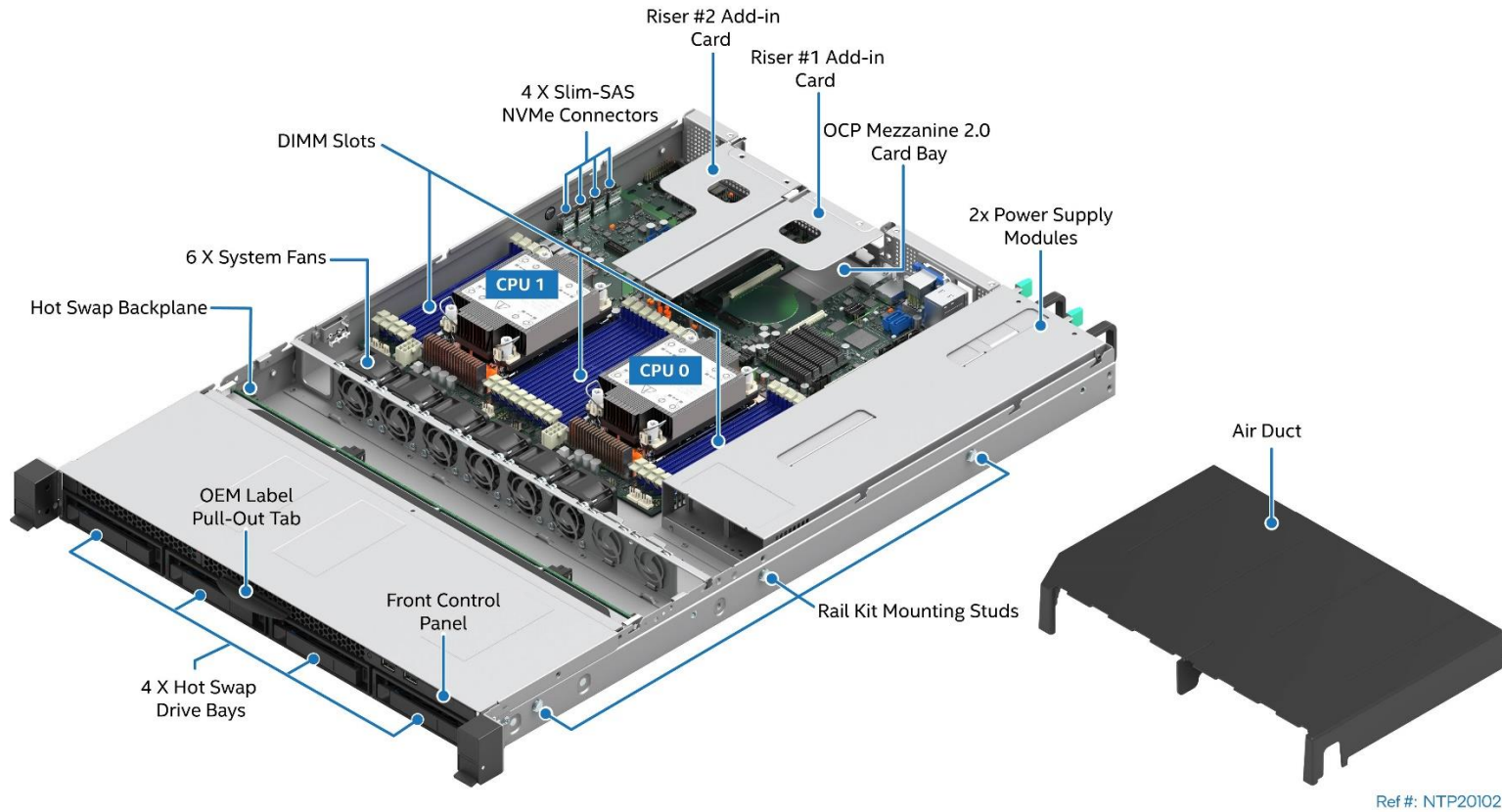
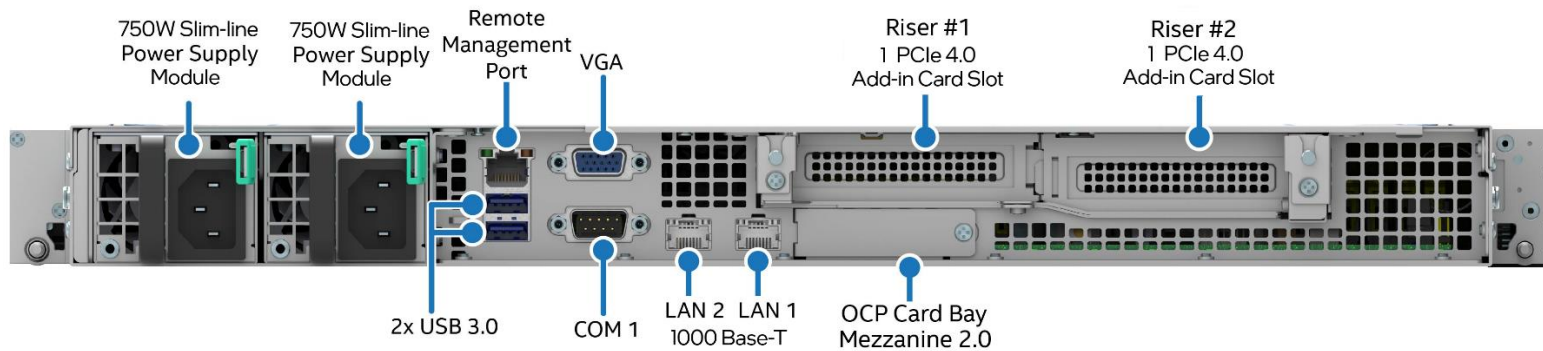


Figure 4. Intel® Server System M20NTP1UR Dimensions and Internal View

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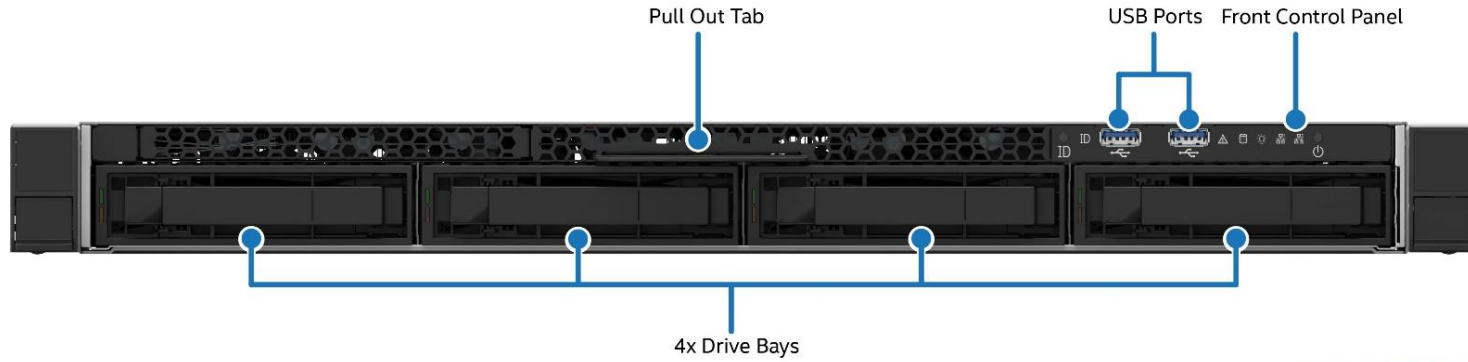


**Figure 5. Intel® Server System M20NTP1UR General Features**



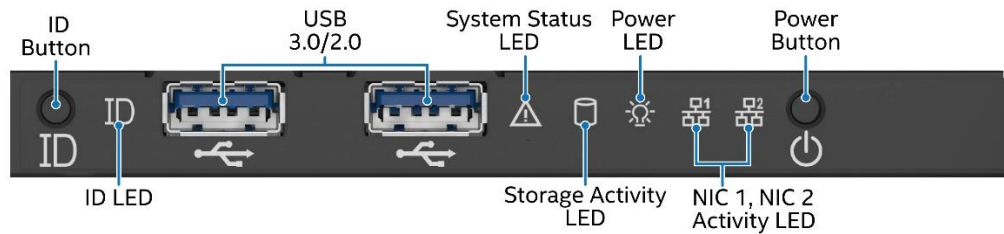
**Figure 6. Intel® Server System M20NTP1UR Back Panel Features**

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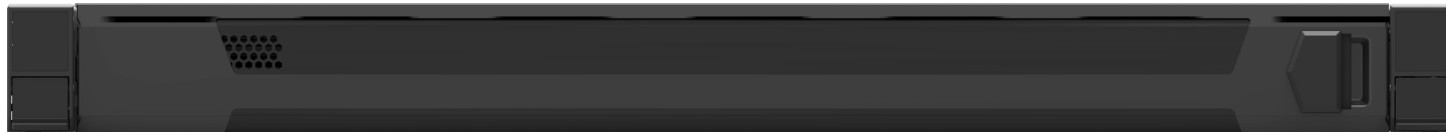
Ref #: NTP20220

**Figure 7. Intel® Server System M20NTP1UR Front Panel Features**



Ref #: NTP20190

**Figure 8. Intel® Server System M20NTP1UR Control Panel Features**



**Figure 9. Intel® Server System M20NTP1UR with Optional Front Bezel**

Table 7. Intel® Server System M20NTP1UR Features

Feature	Details
Chassis form factor	1U rack mount chassis
Chassis Dimensions	26" x 17.2" x 1.7" (661.3 mm x 438.5 mm x 43.4 mm)
Server Board	Intel Server Board M20NTP2SB
Available Integration levels	L6 – Additional components required for basic operation: Processor(s), Memory, Storage
Processor Support	<ul style="list-style-type: none"> <li>• Dual Socket-P4 LGA4189</li> <li>• 3<sup>rd</sup> Gen Intel Xeon Scalable processor family: <ul style="list-style-type: none"> <li>○ Intel® Xeon® Scalable Gold 5300 series processor</li> <li>○ Intel® Xeon® Scalable Silver 4300 series processor</li> </ul> </li> </ul> <p><b>Note:</b> 3<sup>rd</sup> Gen Intel Xeon Scalable processor family SKUs ending in (H), (L), (U), or (Q) are not supported.</p> <ul style="list-style-type: none"> <li>• Intel UPI links: up to three (3) at 11.2 GT/s (Gold 5300 series) or up to two (2) at 10.4 GT/s (Silver 4300 series)</li> </ul> <p><b>Note:</b> Previous generations of the Intel Xeon processor families are not supported.</p>
Supported Processor Thermal Design Power (TDP)	Maximum 185 W
PCH Chipset	<ul style="list-style-type: none"> <li>• Intel® C621A Platform Controller Hub (PCH) chipset</li> <li>• Embedded features supported on this server system: <ul style="list-style-type: none"> <li>○ SATA support</li> <li>○ USB support</li> <li>○ PCIe support</li> </ul> </li> </ul>
Server Management Processor	<ul style="list-style-type: none"> <li>• Aspeed AST2500 Advanced PCIe Graphics and Remote Management Processor</li> <li>• Embedded features supported on this server system: <ul style="list-style-type: none"> <li>○ Baseboard Management Controller (BMC)</li> <li>○ 2D Video Graphics Adapter</li> </ul> </li> </ul>
Memory Support	<ul style="list-style-type: none"> <li>• 16 DIMM slots <ul style="list-style-type: none"> <li>○ Eight (8) DIMM slots per processor (2 CPUs)</li> <li>○ Eight (8) memory channels per processor</li> <li>○ One (1) DIMM per channel</li> </ul> </li> <li>• Registered DDR4 (RDIMM), Load Reduced DDR4 (LRDIMM) <ul style="list-style-type: none"> <li>○ All DDR4 DIMMs must support ECC</li> <li>○ 2933 MT/s – Intel® Xeon® Scalable Gold 5300 series processors</li> <li>○ 2666 MT/s – Intel® Xeon® Scalable Silver 4300 series processors</li> <li>○ Memory voltage = 1.2 V</li> </ul> </li> </ul>
Network Connectivity	<ul style="list-style-type: none"> <li>• Onboard Intel® Ethernet Controller I210-AT <ul style="list-style-type: none"> <li>○ Two (2) RJ45 1000 Base-T ports (Back panel I/O)</li> </ul> </li> <li>• One (1) X16 PCIe OCP Mezzanine 2.0 add-in card slot</li> </ul>
PCIe Add-in Card Support	<ul style="list-style-type: none"> <li>• Two (2) PCIe 4.0 Riser Cards supporting 2 total low profile PCIe add-in slots <ul style="list-style-type: none"> <li>○ One (1) X16 PCIe 4.0 add-in card slot per riser card</li> </ul> </li> </ul>

Feature	Details
<b>Storage Options</b>	<p><b>Front Drive Bay</b></p> <ul style="list-style-type: none"> <li>• Four (4) hot-swap capable drive bays <ul style="list-style-type: none"> <li>○ 3.5" HDD – SAS/SATA</li> <li>○ 2.5" SSD – SAS/SATA and NVMe</li> </ul> </li> </ul> <p><b>Front Drive Bay Connectivity options</b></p> <p><b>NVMe* Support:</b></p> <ul style="list-style-type: none"> <li>• Four (4) onboard SFF-8654 SlimSAS* cable connectors. Each connector supports backplane connectivity for one (1) PCIe NVMe SSD</li> <li>• One (1) onboard 7-pin NVMe LED support cable connector – cable installed together with onboard SlimSAS cables to backplane</li> <li>• Intel® Volume Management Device (Intel® VMD) 2.0 for NVMe</li> <li>• Intel® Virtual RAID on CPU (Intel® VROC for NVMe) with installation of VROC for NVMe upgrade Key.</li> </ul> <p><b>SATA Support:</b></p> <ul style="list-style-type: none"> <li>• Three (3) onboard quad port SFF-8643 Mini-SAS HD cable connectors. Each connector supports backplane connectivity for 4 SATA devices – only one connector used in 1U system</li> <li>• Intel® Virtual RAID on CPU (Intel® VROC for SATA) – RAID 0, 1, 5, and 10</li> </ul> <p><b>M.2 SSD</b></p> <ul style="list-style-type: none"> <li>• Support for one (1) NVMe M.2 SSD</li> <li>• Supported M.2 SSD form factors: 2242 (42 mm), 2280 (80 mm), and 22110 (110 mm)</li> </ul> <p><b>USB 3.0</b></p> <ul style="list-style-type: none"> <li>• Support for one (1) internal mounted USB 3.0 device via onboard Type A USB connector</li> </ul>
<b>Video Support</b>	<ul style="list-style-type: none"> <li>• One (1) VGA DB-15 cable connector (Back panel I/O)</li> <li>• Embedded 2D video controller</li> <li>• 128 MB of DDR4 video memory</li> <li>• Up to 1920 x 1200 resolution</li> </ul>
<b>USB</b>	<ul style="list-style-type: none"> <li>• Two (2) external USB 3.0 connectors (Back panel I/O)</li> <li>• Two (2) external USB 3.0 connectors (Front panel I/O)</li> <li>• One (1) USB 3.0 internal onboard Type-A connector</li> </ul>
<b>Serial Ports</b>	<ul style="list-style-type: none"> <li>• One (1) DB-9 COM1 port cable connector (Back panel I/O)</li> <li>• One (1) internal DH-10 COM2 port header for optional front or rear serial port support. The port follows DTK pinout specifications. (optional COM2 cable kit not available from Intel)</li> </ul>
<b>Fan Support</b>	<ul style="list-style-type: none"> <li>• Six (6) system fans with fan redundancy</li> <li>• Fan speed control is managed by embedded BMC server management</li> </ul>
<b>Power Supply</b>	<ul style="list-style-type: none"> <li>• Support for up to two (2) Slim-line Power Supplies</li> <li>• Available options: <ul style="list-style-type: none"> <li>○ 750 W (80 Plus Platinum power efficiency)</li> </ul> </li> <li>• Supported operating modes: <ul style="list-style-type: none"> <li>○ Single Power Supply (1 + 0) – No Redundancy</li> <li>○ Dual Power Supplies (1 + 1) – Redundant Power – Hot swap support – Supported when system power draw is less than 750 W</li> <li>○ Dual Power Supplies (2 + 0) – Combined Power (No power redundancy) – Enabled when system power draw is greater than 750 W</li> </ul> </li> </ul>

## Intel® Server M20NTP Family Configuration Guide

Feature	Details
<b>Server Management</b>	<ul style="list-style-type: none"> <li>• Integrated Baseboard Management Controller (Integrated BMC)</li> <li>• Dedicated RJ45 1 GbE remote management port (Back panel I/O)</li> <li>• CPU, Memory, and system thermal monitoring</li> <li>• CPU, Memory, Chipset, and Power supply voltage monitoring</li> <li>• Fan speed control</li> <li>• Onboard Light Guided Diagnostics</li> <li>• Integrated BMC Web Console for Intel server systems</li> <li>• Intelligent Platform Management Interface (IPMI) 2.0 compliant</li> <li>• Support for Intel® Data Center Manager (DCM)</li> <li>• Support for Intel® Server Debug and Provisioning Tool (Intel® SDP Tool)</li> <li>• Redfish-compliant</li> </ul>
<b>Security</b>	<ul style="list-style-type: none"> <li>• Intel® Software Guard Extensions (Intel® SGX)</li> <li>• Converged Intel® Boot Guard and Intel® Trusted Execution Technology (Intel® TXT)</li> <li>• Intel® Total Memory Encryption (Intel® TME)</li> <li>• Trusted platform module (TPM 2.0) support                             <ul style="list-style-type: none"> <li>○ Accessory option: Standard – iPC <b>JNPTPM</b> (Not supported in China)</li> <li>○ Accessory option: China compatible – iPC <b>JNPTPMCH</b></li> </ul> </li> </ul> <p><b>Note:</b> Available TPM accessory options are not supported by Microsoft Windows Server 2022*.</p>
<b>Onboard Jumper Blocks and Buttons</b>	<ul style="list-style-type: none"> <li>• System Buzzer Configuration Jumper</li> <li>• Serial Port Configuration Jumpers</li> <li>• Intel® ME Recovery Jumper</li> <li>• Clear CMOS Button</li> <li>• System Reset Button</li> <li>• Power Button</li> </ul>
<b>Rack Mount Kit Accessory Option</b> (Sold Separately)	<ul style="list-style-type: none"> <li>• iPC – AXXFULLEXTRAILK                             <ul style="list-style-type: none"> <li>○ Full extension rails</li> <li>○ Tool-less installation</li> <li>○ 33 Kg (72.2 lbs.) max supported weight</li> </ul> </li> </ul>
<b>Environment Limits</b>	<ul style="list-style-type: none"> <li>• Operating Temp: 10 °C – 35 °C (50 °F – 95 °F)</li> <li>• Non-Operating Temp: -40 °C – 70 °C (-40 °F – 158 °F)</li> </ul>

## 1.6 Additional Information and Software

For additional information about this family of products or any of their supported accessories, refer to the following resources available at <http://www.intel.com/support> and <https://www.intel.com/content/www/us/en/documentation-resources/developer.html>.

**Table 8. Product Family Reference Collaterals**

Topic	Document Title or Support Collateral	Document Classification
Server board-level architectural and features overview	<i>Intel® Server Board M20NTP Technical Product Specification</i>	Public
System-level architectural and features overview	<i>Intel® Server System M20NTP1UR Technical Product Specification</i>	Public
System integration and service instructions	<i>Intel® Server System M20NTP1UR System Integration and Service Guide</i>	Public
Available product family options, spares, accessories.	<i>Intel® Server M20NTP Family Configuration Guide</i>	Public
Tested Hardware and OS List (THOL)	<i>Intel® Server Configurator Tool</i> <a href="https://serverconfigurator.intel.com">https://serverconfigurator.intel.com</a>	Public
Integrated BMC Web Console	<i>Intel® Integrated Baseboard Management Controller Web Console (Integrated BMC Web Console) User Guide</i>	Public
Base specifications for the IPMI architecture and interfaces	<i>Intelligent Platform Management Interface Specification Second Generation v2.0</i>	Intel Confidential
Specifications for the PCIe* 3.0 architecture and interfaces	<i>PCIe Base Specification, Revision 3.0</i> <a href="http://www.pcisig.com/specifications">http://www.pcisig.com/specifications</a>	Public
Specifications for the PCIe* 4.0 architecture and interfaces	<i>PCIe Base Specification, Revision 4.0</i> <a href="http://www.pcisig.com/specifications">http://www.pcisig.com/specifications</a>	Public
Specification for OCP*	<i>Open Compute Project (OCP) Specification</i>	Intel Confidential
TPM for PC Client specifications	<i>TPM PC Client Specifications, Revision 2.0</i>	Intel Confidential
Functional specifications of 3 <sup>rd</sup> Gen Intel® Xeon® Scalable processor family	<i>3<sup>rd</sup> Generation Intel® Xeon® Scalable Processors, Codename Ice Lake-SP External Design Specification (EDS): Document IDs: 574451, 574942, 575291.</i>	Intel Confidential
Processor thermal design specifications and recommendations	<i>3<sup>rd</sup> Generation Intel® Xeon® Scalable Processor, Codename Ice Lake-SP and Cooper Lake-SP - Thermal and Mechanical Specifications and Design Guide (TMSDG): Document ID 574080</i>	Intel Confidential
Intel® Virtual RAID on CPU (Intel® VROC)	<i>Intel® Virtual RAID on CPU (VROC) Technical Product Specification (TPS)</i>	Intel Confidential
	<i>Intel® Virtual RAID on CPU (VROC) User Guide</i>	Public
BIOS and BMC Security Best Practices	<i>Intel® Server Systems Baseboard Management Controller (BMC) and BIOS Security Best Practices White Paper</i> <a href="https://www.intel.com/content/www/us/en/support/articles/000055785/server-products.html">https://www.intel.com/content/www/us/en/support/articles/000055785/server-products.html</a>	Public
Managing an Intel Server Overview	<i>Managing an Intel Server System 2020</i> <a href="https://www.intel.com/content/www/us/en/support/articles/000057741/server-products.html">https://www.intel.com/content/www/us/en/support/articles/000057741/server-products.html</a>	Public
Latest system software updates: BIOS and Firmware	<i>Intel® Server Update Package (SUP) for Intel® Server M20NTP Family</i>	Public
	<i>Intel® Server Firmware Update Utility (SYSPWUPDT) - Various operating system support</i>	
	<i>Intel® Server Firmware Update Utility User Guide</i>	

Intel® Server M20NTP Family Configuration Guide

Topic	Document Title or Support Collateral	Document Classification
To obtain full system information	<i>Intel® Server Information Retrieval Utility</i>	Public
	<i>Intel® Server Information Retrieval Utility User Guide</i>	
To configure, save, and restore various system options	<i>Intel® Server Configuration Utility – Various operating system support</i>	Public
	<i>Intel® Server Configuration Utility User Guide</i>	
Product Warranty Information	<i>Warranty Terms and Conditions</i> <a href="https://www.intel.com/content/www/us/en/support/services/000005886.html">https://www.intel.com/content/www/us/en/support/services/000005886.html</a>	Public
Intel® Data Center Manager (Intel® DCM) information	<i>Intel® Data Center Manager (Intel® DCM) Product Brief</i> <a href="https://software.intel.com/content/www/us/en/develop/download/dcm-product-brief.html">https://software.intel.com/content/www/us/en/develop/download/dcm-product-brief.html</a>	Public
	<i>Intel® Data Center Manager (Intel® DCM) Console User Guide</i> <a href="https://software.intel.com/content/www/us/en/develop/download/dcm-user-guide.html">https://software.intel.com/content/www/us/en/develop/download/dcm-user-guide.html</a>	Public




## 2. Server Board and Systems

### 2.1 Intel® Server Board M20NTP2SB Options

The Intel Server Board M20NTP2SB is offered as a board only option that allows system developers to integrate an Intel developed server board and other compatible Intel developed accessories (see [Chapter 3](#)) into a custom or 3<sup>rd</sup> party developed server chassis.

**Table 9. Intel® Server Board M20NTP2SB Product Information**

Product Image	Details	Description																
	<p><b>Intel® Server Board M20NTP2SB, 5 pack</b></p> <table border="1"> <thead> <tr> <th>iPC</th> <th>M20NTP2SB</th> </tr> </thead> <tbody> <tr> <td>MM#</td> <td>99AL7K</td> </tr> <tr> <td>UPC</td> <td>00735858502399</td> </tr> <tr> <td>EAN</td> <td>5032037237253</td> </tr> <tr> <td>MOQ</td> <td>1</td> </tr> <tr> <td>Product type</td> <td>Multi-pack, Server board only Building block / Spare FRU</td> </tr> <tr> <td>Packaged gross wt.</td> <td>2.6 kg (4.8 lb.)</td> </tr> <tr> <td>Unpackaged net wt.</td> <td>2.2 kg (5.7 lb.)</td> </tr> </tbody> </table>	iPC	M20NTP2SB	MM#	99AL7K	UPC	00735858502399	EAN	5032037237253	MOQ	1	Product type	Multi-pack, Server board only Building block / Spare FRU	Packaged gross wt.	2.6 kg (4.8 lb.)	Unpackaged net wt.	2.2 kg (5.7 lb.)	<p><b>Key Server Board Features:</b></p> <ul style="list-style-type: none"> <li>• Two (2) CPU Sockets – P4 LGA4189</li> <li>• 16 Memory Slots – DDR4</li> <li>• Intel® C621A chipset</li> <li>• Intel® Ethernet Controller I210-AT supporting two (2) RJ45 1000 Base-T ports</li> <li>• Support for One (1) onboard OCP Mezzanine 2.0 add-in card</li> <li>• Two (2) X32 PCIe 4.0 riser card slots</li> <li>• Four (4) PCIe SFF-8654 SlimSAS cable connectors for NVMe support</li> <li>• One (1) onboard PCIe NVMe M.2 SSD interface connector</li> <li>• Fourteen (14) – SATA 6 Gbps ports</li> <li>• Aspeed AST2500 Baseboard Management Controller (BMC)</li> <li>• Six (6) managed system fan connectors</li> </ul> <p>See <a href="#">Table 6</a> for the complete feature set.</p> <p><b>Contents:</b> 5 Individually boxed server boards. Each server board box includes: (1) Server Board, (2) Processor socket covers, (2) CPU Carrier Clips, (1) I/O Shield, (1) M.2 SSD retention clip, (4) Mounting Screws for OCP Add-in option (1) Attention Document</p> <p><b>Note:</b> All necessary mounting hardware, cabling, and shielding ship with the chassis and optional accessory kits.</p>
iPC	M20NTP2SB																	
MM#	99AL7K																	
UPC	00735858502399																	
EAN	5032037237253																	
MOQ	1																	
Product type	Multi-pack, Server board only Building block / Spare FRU																	
Packaged gross wt.	2.6 kg (4.8 lb.)																	
Unpackaged net wt.	2.2 kg (5.7 lb.)																	

Optional Intel accessories supported by the server board include:

- Intel Riser Card options
- Processor Heat Sink options
- Intel® Virtual RAID on CPU (Intel® VROC for NVMe) activation key
- Trusted platform modules (TPM)
- Intel NVMe Cable Kits **NTPCBLSL104K** and **NTPCBLSL204K** for use with onboard NVMe SlimSAS\* cable connectors

See [Chapter 3](#) for all available accessory options.

## 2.2 Intel® Server Systems M20NTP1UR Options

The Intel Server M20NTP Family includes two base server system options. Out of the box, these systems are not functional without integrating additional components that are purchased separately from the server. At a minimum, making each system power-on ready and installable within a 4-post rack or cabinet, will require separate purchase and integration of the following:

- Rack Mount Kit
- AC Power Cord
- Processor(s)
- Memory

Optional Intel accessories that can be added to enhance the base feature set include:

- Second power supply module to add power redundancy
- Storage Devices
- Intel® RAID support – PCIe add-in card and appropriate data cable(s)
- Intel® Ethernet Network Adapter for OCP module

For additional options and accessories, see [Chapter 3](#).

The product tables found in this section are each divided into sections, each providing useful information as outlined in this list:


- **Product Image.**
- **Order Information** – Product identifiers used to order the product.
- **Product Information** – Type of product, product weights, product dimensions.
- **Included** – Components included with the product (product BOM).
- **Addition Required Hardware** – Required hardware (sold separately) to be integrated into the base system to achieve basic functionality.
- **Elective Configuration Options** – Elective configuration options and accessories that can be installed to enhance the basic feature set of the server board/chassis. Elective configuration options and accessories are sold separately.

---

**Note:** Components listed within the “Included” section may have additional product identification numbers listed beside them. Items identified with an iPC (Intel Product Code) are orderable options, accessories, or spare Field Replaceable Units (FRUs). For order information for these components, see [Chapter 3](#). Items identified with an iPN (Intel Part Number) are not orderable and are provided for reference purposes only.

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**Table 10. Intel® Server System M20NTP1UR304 Product Information**

Intel® Server System M20NTP1UR304																								
1U Intel® Server Chassis, Intel® Server Board M20NTP2SB, Air cooled, 2 x PCIe* 4.0 Riser Cards, four 3.5" HDDs or 2.5" SSD Hot-swap drive bays, OCP* Mezzanine 2.0 card bay																								
	<p style="text-align: center;"><b>Order Information</b></p> <table border="1"> <tr> <td><b>iPC</b></td> <td><b>M20NTP1UR304</b></td> </tr> <tr> <td><b>MM#</b></td> <td>99AL6R</td> </tr> <tr> <td><b>UPC</b></td> <td>735858510387</td> </tr> <tr> <td><b>EAN</b></td> <td>5032037244169</td> </tr> <tr> <td><b>MOQ</b></td> <td>1</td> </tr> </table>	<b>iPC</b>	<b>M20NTP1UR304</b>	<b>MM#</b>	99AL6R	<b>UPC</b>	735858510387	<b>EAN</b>	5032037244169	<b>MOQ</b>	1	<p style="text-align: center;"><b>Product Information</b></p> <table border="1"> <tr> <td><b>Product type</b></td> <td>L6 Integrated System</td> </tr> <tr> <td><b>Chassis form factor</b></td> <td>1U rack mount</td> </tr> <tr> <td><b>Packaged gross wt.</b></td> <td>19.5 kg (42.9 lb.)</td> </tr> <tr> <td><b>Unboxed system wt.</b></td> <td>12.9 kg (28.4 lb.)</td> </tr> <tr> <td><b>Chassis dimensions</b></td> <td>661.3 x 438.5 x 43.4 mm (L x W x H)</td> </tr> <tr> <td><b>Box dimensions</b></td> <td>993 x 591 x 258 mm (L x W x H)</td> </tr> </table>	<b>Product type</b>	L6 Integrated System	<b>Chassis form factor</b>	1U rack mount	<b>Packaged gross wt.</b>	19.5 kg (42.9 lb.)	<b>Unboxed system wt.</b>	12.9 kg (28.4 lb.)	<b>Chassis dimensions</b>	661.3 x 438.5 x 43.4 mm (L x W x H)	<b>Box dimensions</b>	993 x 591 x 258 mm (L x W x H)
<b>iPC</b>	<b>M20NTP1UR304</b>																							
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<b>Box dimensions</b>	993 x 591 x 258 mm (L x W x H)																							
<p style="text-align: center;"><b>Included</b></p> <p><b>Note:</b> Some items may be integrated within the chassis.</p>	<p style="text-align: center;"><b>Additional Required Hardware (sold separately)</b></p>	<p style="text-align: center;"><b>Elective Configuration Options (sold separately)</b></p>																						
<ul style="list-style-type: none"> <li>(1) – 1U Chassis</li> <li>(1) – Intel Server Board M20NTP2SB – iPC <b>M20NTP2SB</b></li> <li>(1) – 750 W Power supply – iPC <b>AXXBFP750SLPS</b></li> <li>(1) – Power distribution board</li> <li>(1) – PCIe riser card (Riser Slot 1) – iPC <b>M20NTP1URISER1</b></li> <li>(1) – PCIe riser card (Riser Slot 2) – iPC <b>M20NTP1URISER2</b></li> <li>(6) – System fans – iPC <b>MYP1UFAN</b></li> <li>(1) – Air duct</li> <li>(4) – 3.5" Drive carrier assemblies: Drive Tray + Drive Blank – iPC <b>FXX35HSCAR3</b></li> <li>(1) – 4x3.5" drive SATA/SAS/NVMe backplane – iPC <b>AXXH5BP1304</b></li> <li>(1) – Multiport MiniSAS HD to 7-pin (x4 leads) SATA cable</li> <li>(1) – 570 mm I<sup>2</sup>C backplane communication cable</li> <li>(1) – Front USB cable</li> <li>(1) – Front control panel cable</li> <li>(2) – Processor socket covers</li> <li>(2) – 1U processor heat sinks – iPC <b>CYP1UHSSTD</b></li> <li>(2) – Processor carrier clips – iPC <b>ICXPHMMOQ2</b></li> <li>(14) – Memory slot DIMM blanks - iPC <b>TNPDMMBLNK</b></li> <li>(1) – M.2 SSD retention clip</li> <li>(4) – Mounting screws for OCP add-in option</li> <li>(1) – Attention document</li> </ul>	<ul style="list-style-type: none"> <li>• Chassis rail kit for 4-post rack or server cabinet – iPC <b>AXXFULLEXTRAILK</b></li> <li>• AC power cable</li> <li>• 3<sup>rd</sup> Gen Intel Xeon Scalable processor(s) (see <a href="#">Table 1</a>)</li> <li>• DDR4 DIMMs (see <a href="#">Section 1.3</a>)</li> </ul>	<ul style="list-style-type: none"> <li>• 750 W Power Supply Accessory kit + AC power cable</li> <li>• Up to four (4) 3.5" HDD (SAS/SATA) or 2.5" SSD (NVMe/SAS/SATA)</li> <li>• Cables for NVMe support (Server board to Backplane)</li> <li>• Intel VROC for NVMe upgrade key</li> <li>• Intel SAS / SAS RAID add-in card option</li> <li>• Cables for SAS support (RAID Card to Backplane)</li> <li>• Intel OCP Mezzanine Networking add-in card option</li> </ul> <p>See <a href="#">Chapter 3</a> for additional information.</p>																						

## 2.3 1U System Storage Option Cabling

The backplanes mounted within the front drive bay of the Intel® Server Systems M20NTP1UR304 can support SATA, SAS, and NVMe SSDs. The base system configurations (as shipped by Intel) will include appropriate cabling to support the SATA interface from the server board or SAS / SAS RAID from an add-in card to the factory installed backplane.

To support NVMe SSDs in 1U base system configurations, additional cable kits must be purchased separately. The following tables identify the appropriate cable or cable accessory kit(s) necessary to support the various drive configurations. See [Section 4.3](#) for additional Intel cable kit information.

**Table 11. 1U Intel® Server System M20NTP1UR304 Storage Option Cabling**

Storage Interface Type	Storage Interface Source	Cable Routing	Intel Cable Kit (iPC)	Notes
SATA	Server Board	Server Board to Backplane	N/A	860 mm SATA/SAS cable included in Base System
SAS / SAS RAID	PCIe SAS RAID Add-in Card	Riser 1 to Backplane	N/A	Reuse supplied SATA/SAS Cable
SAS / SAS RAID	PCIe SAS RAID Add-in Card	Riser 2 to Backplane	N/A	<b>Configuration not supported.</b>
NVMe*	Server Board	Server Board to Backplane	<b>NTPCBLSL104K</b>	Cable kit supports up to 4 NVMe drives
NVMe*	PCIe Tri-Mode RAID Add-in Card	Riser 1 to Backplane	N/A	<b>Configuration not supported.</b>
NVMe*	PCIe Tri-Mode RAID Add-in Card	Riser 2 to Backplane	N/A	<b>Configuration not supported.</b>



### 3. Intel Add-in Card Options

The following sections identify Intel add-in card options supported by the Intel Server Board M20NTP.



The product tables found in this section are each divided into sections, each providing useful information as outlined in this list:

- **Product Description / Image**
- **Order Information** – Product identifiers used to order the product
- **Product Information** – Product overview, Kit Contents


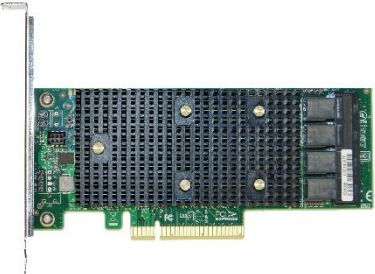

#### 3.1 Intel OCP\* Networking Options

Description / Image	Order Information	Product Information										
<p><b>Intel® Ethernet Network Adapter XXV710-DA2 for OCP*</b></p> 	<table border="1"> <tr> <td>iPC</td> <td>XXV710DA2OCP1</td> </tr> <tr> <td>MM#</td> <td>959797</td> </tr> <tr> <td>UPC</td> <td>00735858359290</td> </tr> <tr> <td>EAN</td> <td>5032037115889</td> </tr> <tr> <td>MOQ</td> <td>1</td> </tr> </table>	iPC	XXV710DA2OCP1	MM#	959797	UPC	00735858359290	EAN	5032037115889	MOQ	1	<p><b>Product Type:</b> Accessory</p> <p><b>Where Used:</b></p> <ul style="list-style-type: none"> <li>• Intel Server Board M20NTP2SB</li> <li>• Intel Server System M20NTP1UR304</li> </ul> <p><b>Product Overview:</b> 2 port 25/10/1 Gb SFP28, PCIe 3.0 x8 OCP Mezz. 2.0 Type 1 SFP28 Direct Attach twin axial cabling up to 5m / SFP28 SR Optics also supported (extended temp ONLY)</p> <p><b>Kit Includes:</b> (1) OCP Add-in card</p>
iPC	XXV710DA2OCP1											
MM#	959797											
UPC	00735858359290											
EAN	5032037115889											
MOQ	1											
<p><b>Intel® Ethernet Server Adapter XL710-QDA2 for OCP*</b></p> 	<table border="1"> <tr> <td>iPC</td> <td>XL710QDA2OCP</td> </tr> <tr> <td>MM#</td> <td>942752</td> </tr> <tr> <td>UPC</td> <td>00735858319089</td> </tr> <tr> <td>EAN</td> <td>5032037088053</td> </tr> <tr> <td>MOQ</td> <td>1</td> </tr> </table>	iPC	XL710QDA2OCP	MM#	942752	UPC	00735858319089	EAN	5032037088053	MOQ	1	<p><b>Product Type:</b> Accessory</p> <p><b>Where Used:</b></p> <ul style="list-style-type: none"> <li>• Intel Server Board M20NTP2SB</li> <li>• Intel Server System M20NTP1UR304</li> </ul> <p><b>Product Overview:</b> 2 port, 40/10 Gb QSFP+, PCIe 3.0 x8, VEB, EVB, OCP Mezzanine 2.0 Type 1 QSFP+ Direct Attach Copper Cable (Twinaxial)(1-7m) / 40 GBASE-SR4 Optics also supported</p> <p><b>Kit Includes:</b> (1) OCP Add-in card</p>
iPC	XL710QDA2OCP											
MM#	942752											
UPC	00735858319089											
EAN	5032037088053											
MOQ	1											

### 3.2 Intel® Ethernet Network Adapter Options for PCIe\*

Description / Image	Order Information	Product Information										
<p><b>Intel® Ethernet Network Adapter E810-XXVDA4</b></p> 	<table border="1"> <tr> <td><b>iPC</b></td> <td><b>E810XXVDA4</b></td> </tr> <tr> <td><b>MM#</b></td> <td>978334</td> </tr> <tr> <td><b>UPC</b></td> <td>00735858430326</td> </tr> <tr> <td><b>EAN</b></td> <td>5032037172301</td> </tr> <tr> <td><b>MOQ</b></td> <td>1</td> </tr> </table>	<b>iPC</b>	<b>E810XXVDA4</b>	<b>MM#</b>	978334	<b>UPC</b>	00735858430326	<b>EAN</b>	5032037172301	<b>MOQ</b>	1	<p><b>Product Type:</b> Accessory</p> <p><b>Where Used:</b></p> <ul style="list-style-type: none"> <li>• Intel Server Board M20NTP2SB</li> <li>• Intel Server System M20NTP1UR304</li> </ul> <p><b>Product Overview:</b> 4 port, SFP28 25/10 GbE, PCIe 4.0x16, RDMA (iWARP and RoCEv2). Allow performance optimizations and port density for cloud and storage, also PCIe slot savings for communication workloads. Intel Ethernet optics and active optic cables (AOCs) are fully compatible.</p> <p><b>Kit Includes:</b> (1) PCIe Ethernet Adapter add-in card</p>
<b>iPC</b>	<b>E810XXVDA4</b>											
<b>MM#</b>	978334											
<b>UPC</b>	00735858430326											
<b>EAN</b>	5032037172301											
<b>MOQ</b>	1											
<p><b>Intel Ethernet Network Adapter E810-CQDA2</b></p> 	<table border="1"> <tr> <td><b>iPC</b></td> <td><b>E810CQDA2</b></td> </tr> <tr> <td><b>MM#</b></td> <td>978322</td> </tr> <tr> <td><b>UPC</b></td> <td>00735858430142</td> </tr> <tr> <td><b>EAN</b></td> <td>5032037172141</td> </tr> <tr> <td><b>MOQ</b></td> <td>1</td> </tr> </table>	<b>iPC</b>	<b>E810CQDA2</b>	<b>MM#</b>	978322	<b>UPC</b>	00735858430142	<b>EAN</b>	5032037172141	<b>MOQ</b>	1	<p><b>Product Type:</b> Accessory</p> <p><b>Where Used:</b></p> <ul style="list-style-type: none"> <li>• Intel Server Board M20NTP2SB</li> <li>• Intel Server System M20NTP1UR304</li> </ul> <p><b>Product Overview:</b> 2 port, QSFP28 100/50/25/10 GbE, PCIe 4.0x16, RDMA (iWARP and RoCEv2). Provides efficient workload-optimized performance at Ethernet speeds of 1 to 100 Gbps. Versatile port configurations with EPCT.</p> <p><b>Kit Includes:</b> (1) PCIe Ethernet Adapter add-in card</p>
<b>iPC</b>	<b>E810CQDA2</b>											
<b>MM#</b>	978322											
<b>UPC</b>	00735858430142											
<b>EAN</b>	5032037172141											
<b>MOQ</b>	1											

### 3.3 Intel® RAID Card Options

Description / Image	Order Information	Product Information										
<p><b>Intel® Storage Adapter RS3P4QF160J</b></p> 	<table border="1"> <tr> <td>iPC</td> <td>RS3P4QF160J</td> </tr> <tr> <td>MM#</td> <td>999RKM</td> </tr> <tr> <td>UPC</td> <td>00735858452830</td> </tr> <tr> <td>EAN</td> <td>5032037193115</td> </tr> <tr> <td>MOQ</td> <td>5</td> </tr> </table>	iPC	RS3P4QF160J	MM#	999RKM	UPC	00735858452830	EAN	5032037193115	MOQ	5	<p><b>Product Type:</b> Accessory</p> <p><b>Where Used:</b></p> <ul style="list-style-type: none"> <li>Intel Server Board M20NTP2SB</li> </ul> <p><b>Product Overview:</b>                      SAS 12 GB + PCIe, 16 Internal ports, SAS3816                      Low-Profile MD2 PCIe AIC                      X8 PCIe 4.0                      PCIe/SAS/SATA                      JBOD only, no RAID</p> <p><b>Kit Contents:</b>                      (1) Intel Storage Adapter                      (1) low-profile mounting bracket</p>
iPC	RS3P4QF160J											
MM#	999RKM											
UPC	00735858452830											
EAN	5032037193115											
MOQ	5											
<p><b>Intel® Storage Adapter RSP3QD160J</b></p> 	<table border="1"> <tr> <td>iPC</td> <td>RSP3QD160J</td> </tr> <tr> <td>MM#</td> <td>954491</td> </tr> <tr> <td>UPC</td> <td>00735858329101</td> </tr> <tr> <td>EAN</td> <td>5032037095228</td> </tr> <tr> <td>MOQ</td> <td>5</td> </tr> </table>	iPC	RSP3QD160J	MM#	954491	UPC	00735858329101	EAN	5032037095228	MOQ	5	<p><b>Product Type:</b> Accessory</p> <p><b>Where Used:</b></p> <ul style="list-style-type: none"> <li>Intel Server Board M20NTP2SB</li> </ul> <p><b>Product Overview:</b>                      SAS 12 GB + PCIe, 16 Internal ports, SAS3416                      Low-Profile MD2 PCIe AIC                      X8 PCIe x8 3.0                      PCIe/SAS/SATA                      JBOD only, no RAID</p> <p><b>Kit Includes:</b>                      (1) Intel Storage Adapter                      (1) low-profile mounting bracket</p>
iPC	RSP3QD160J											
MM#	954491											
UPC	00735858329101											
EAN	5032037095228											
MOQ	5											
<p><b>Intel® RAID Adapter RSP3MD088F</b></p> 	<table border="1"> <tr> <td>iPC</td> <td>RSP3MD088F</td> </tr> <tr> <td>MM#</td> <td>954551</td> </tr> <tr> <td>UPC</td> <td>00735858329194</td> </tr> <tr> <td>EAN</td> <td>5032037095310</td> </tr> <tr> <td>MOQ</td> <td>5</td> </tr> </table>	iPC	RSP3MD088F	MM#	954551	UPC	00735858329194	EAN	5032037095310	MOQ	5	<p><b>Product Type:</b> Accessory</p> <p><b>Where Used:</b></p> <ul style="list-style-type: none"> <li>Intel Server Board M20NTP2SB</li> </ul> <p><b>Product Overview:</b>                      SAS 12 GB + PCIe, 8 Int / 8 Ext. ports, SAS3516, Supports optional                      AXRPFKDE2 Premium Feature Key                      Low-Profile MD2 PCIe AIC                      X8 PCIe 3.0                      PCIe/SAS/SATA                      RAID Levels: 0, 1, 10, 5, 50, 6, 60</p> <p><b>Kit Includes:</b>                      (1) Intel Storage Adapter                      (1) low-profile mounting bracket</p>
iPC	RSP3MD088F											
MM#	954551											
UPC	00735858329194											
EAN	5032037095310											
MOQ	5											

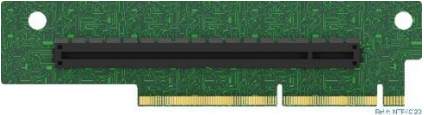
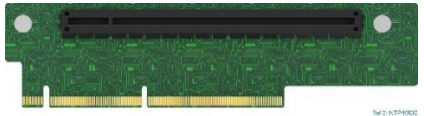
## 4. Accessories and Spare FRUs

The following sections identify available accessory kits and spare parts (FRUs) for all field replaceable components supported by the Intel Server Board M20NTP.

The product tables found in this section are each divided into sections, each providing useful information as outlined in this list:


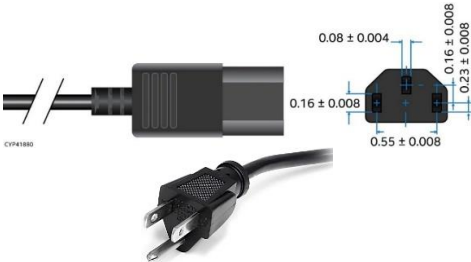
- **Product Description / Image**
- **Order Information** – Product identifiers used to order the product
- **Product Information** – Product overview, Kit Contents

### 4.1 Riser Card Accessories and Spares




Description / Image	Order Information	Product Information										
<p><b>1U Riser Card – M20NTP1URISER1</b> For Riser Slot #1</p> 	<table border="1"> <tr> <td>iPC</td> <td>M20NTP1URISER1</td> </tr> <tr> <td>MM#</td> <td>99AL6W</td> </tr> <tr> <td>UPC</td> <td>00735858502405</td> </tr> <tr> <td>EAN</td> <td>5032037237260</td> </tr> <tr> <td>MOQ</td> <td>1</td> </tr> </table>	iPC	M20NTP1URISER1	MM#	99AL6W	UPC	00735858502405	EAN	5032037237260	MOQ	1	<p><b>Product Type:</b> Accessory / Spare FRU</p> <p><b>Where Used:</b></p> <ul style="list-style-type: none"> <li>• Intel Server Board M20NTP2SB</li> <li>• Intel Server System M20NTP1UR</li> </ul> <p><b>Product Overview:</b> 1-Slot PCIe Riser Card (x16 PCIe add-in slot) Can only be used in Riser Slot #1 on the server board</p> <p><b>Kit Includes:</b> (1) Riser Card</p>
iPC	M20NTP1URISER1											
MM#	99AL6W											
UPC	00735858502405											
EAN	5032037237260											
MOQ	1											
<p><b>1U Riser Card – M20NTP1URISER2</b> For Riser Slot #2</p> 	<table border="1"> <tr> <td>iPC</td> <td>M20NTP1URISER2</td> </tr> <tr> <td>MM#</td> <td>99AL1C</td> </tr> <tr> <td>UPC</td> <td>00735858502412</td> </tr> <tr> <td>EAN</td> <td>5032037237277</td> </tr> <tr> <td>MOQ</td> <td>1</td> </tr> </table>	iPC	M20NTP1URISER2	MM#	99AL1C	UPC	00735858502412	EAN	5032037237277	MOQ	1	<p><b>Product Type:</b> Accessory / Spare FRU</p> <p><b>Where Used:</b></p> <ul style="list-style-type: none"> <li>• Intel Server Board M20NTP2SB</li> <li>• Intel Server System M20NTP1UR</li> </ul> <p><b>Product Overview:</b> 1-Slot PCIe Riser Card (x16 PCIe add-in slot) Can only be used in Riser Slot #2 on the server board</p> <p><b>Kit Includes:</b> (1) Riser Card</p>
iPC	M20NTP1URISER2											
MM#	99AL1C											
UPC	00735858502412											
EAN	5032037237277											
MOQ	1											

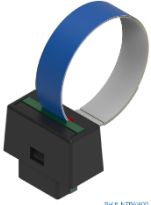
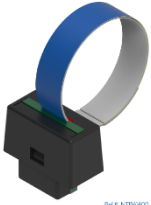


## 4.2 System Power Accessories and Spares




Description / Image	Order Information	Product Information										
<p><b>Power Supply – AXXBFP750SLPS 750 W Slim-line</b></p> 	<table border="1"> <tr> <td><b>iPC</b></td> <td><b>AXXBFP750SLPS</b></td> </tr> <tr> <td><b>MM#</b></td> <td>99AMPT</td> </tr> <tr> <td><b>UPC</b></td> <td>00735858507035</td> </tr> <tr> <td><b>EAN</b></td> <td>5032037241175</td> </tr> <tr> <td><b>MOQ</b></td> <td>1</td> </tr> </table>	<b>iPC</b>	<b>AXXBFP750SLPS</b>	<b>MM#</b>	99AMPT	<b>UPC</b>	00735858507035	<b>EAN</b>	5032037241175	<b>MOQ</b>	1	<p><b>Product Type:</b> Accessory / Spare FRU</p> <p><b>Where Used:</b></p> <ul style="list-style-type: none"> <li>Intel Server System M20NTP1UR</li> </ul> <p><b>Product Overview:</b> 750 W AC slimline 80+ Platinum efficiency power supply module Power cord sold separately</p> <p><b>Kit Includes:</b> (1) Power supply module</p>
<b>iPC</b>	<b>AXXBFP750SLPS</b>											
<b>MM#</b>	99AMPT											
<b>UPC</b>	00735858507035											
<b>EAN</b>	5032037241175											
<b>MOQ</b>	1											
<p><b>Power Cable – FPWRCABLENA North America</b></p> 	<table border="1"> <tr> <td><b>iPC</b></td> <td><b>FPWRCABLENA</b></td> </tr> <tr> <td><b>MM#</b></td> <td>879287</td> </tr> <tr> <td><b>UPC</b></td> <td>00735858181129</td> </tr> <tr> <td><b>EAN</b></td> <td>503203702015738</td> </tr> <tr> <td><b>MOQ</b></td> <td>1</td> </tr> </table>	<b>iPC</b>	<b>FPWRCABLENA</b>	<b>MM#</b>	879287	<b>UPC</b>	00735858181129	<b>EAN</b>	503203702015738	<b>MOQ</b>	1	<p><b>Product Type:</b> Accessory / Spare FRU</p> <p><b>Where Used:</b></p> <ul style="list-style-type: none"> <li>Intel Server System M20NTP1UR</li> </ul> <p><b>Product Overview:</b> North America power cord</p> <p><b>Kit Includes:</b> (1) Power Cable</p>
<b>iPC</b>	<b>FPWRCABLENA</b>											
<b>MM#</b>	879287											
<b>UPC</b>	00735858181129											
<b>EAN</b>	503203702015738											
<b>MOQ</b>	1											


### 4.3 Storage Option Accessories and Spares

Description / Image	Order Information	Product Information										
<p><b>2.5" / 3.5" x 4 Drive Backplane – AXXHSBP1304</b></p> <p>1U System Backplane</p> 	<table border="1"> <tr> <td>iPC</td> <td>AXXHSBP1304</td> </tr> <tr> <td>MM#</td> <td>99AN3D</td> </tr> <tr> <td>UPC</td> <td>00735858502443</td> </tr> <tr> <td>EAN</td> <td>5032037237307</td> </tr> <tr> <td>MOQ</td> <td>1</td> </tr> </table>	iPC	AXXHSBP1304	MM#	99AN3D	UPC	00735858502443	EAN	5032037237307	MOQ	1	<p><b>Product Type:</b> Spare FRU</p> <p><b>Where Used:</b></p> <ul style="list-style-type: none"> <li>Intel Server System M20NTP1UR</li> </ul> <p><b>Product Overview:</b> 1U backplane with support for up to four (4) 3.5" or 2.5" drives. Each drive connector is hot swap capable and supports SATA, SAS, or NVMe drive interfaces. See the <i>Intel® Server System M20NTP1UR TPS</i> for additional information.</p> <p><b>Kit Includes:</b> (1) Backplane</p> <p><b>Note:</b> Mounting hardware included with the system.</p>
iPC	AXXHSBP1304											
MM#	99AN3D											
UPC	00735858502443											
EAN	5032037237307											
MOQ	1											
<p><b>3.5" Drive Carrier – FXX35HSCAR3 (8-pack)</b></p> 	<table border="1"> <tr> <td>iPC</td> <td>FXX35HSCAR3</td> </tr> <tr> <td>MM#</td> <td>99C01J</td> </tr> <tr> <td>UPC</td> <td>735858513425</td> </tr> <tr> <td>EAN</td> <td>5032037247153</td> </tr> <tr> <td>MOQ</td> <td>1</td> </tr> </table>	iPC	FXX35HSCAR3	MM#	99C01J	UPC	735858513425	EAN	5032037247153	MOQ	1	<p><b>Product Type:</b> Spare FRU</p> <p><b>Where Used:</b></p> <ul style="list-style-type: none"> <li>Intel Server System M20NTP1UR</li> </ul> <p><b>Product Overview:</b> A drive carrier is used to install a drive into the drive bay of the Intel Server System M20NTP1U304. This drive carrier is designed to support 3.5" hard disk drives (HDDs) or 2.5" Solid State Drives (SSDs) when mounted within the included drive blank. With no drive installed, the carrier must be populated with the drive blank to meet the airflow specifications of the system.</p> <p><b>Kit Includes:</b> (8) 3.5" Drive Carrier (8) Drive blank (2.5" SSD mount w/ mounting screws)</p>
iPC	FXX35HSCAR3											
MM#	99C01J											
UPC	735858513425											
EAN	5032037247153											
MOQ	1											
<p><b>NVMe* Cable Kit – NTPCBLSL104K</b></p> <p>SlimSAS* PCIe* x4 to SlimSAS* PCIe* x4</p> 	<table border="1"> <tr> <td>iPC</td> <td>NTPCBLSL104K</td> </tr> <tr> <td>MM#</td> <td>99AMT2</td> </tr> <tr> <td>UPC</td> <td>00735858507141</td> </tr> <tr> <td>EAN</td> <td>5032037241281</td> </tr> <tr> <td>MOQ</td> <td>1</td> </tr> </table>	iPC	NTPCBLSL104K	MM#	99AMT2	UPC	00735858507141	EAN	5032037241281	MOQ	1	<p><b>Product Type:</b> Accessory / Spare</p> <p><b>Where Used:</b></p> <ul style="list-style-type: none"> <li>Intel Server System M20NTP1UR</li> </ul> <p><b>Product Overview:</b> Each NVMe cable is used to route PCIe signals from one (1) PCIe x4 SlimSAS connector on the server board to one (1) PCIe x4 SlimSAS connector on the backplane.</p> <p><b>Kit Includes:</b> (1) 450 mm NVMe cable (1) 550 mm NVMe cable (1) 650 mm NVMe cable (1) 750 mm NVMe cable (1) 850 mm VPP SMBUS communication cable (NVMe LED support cable)</p>
iPC	NTPCBLSL104K											
MM#	99AMT2											
UPC	00735858507141											
EAN	5032037241281											
MOQ	1											


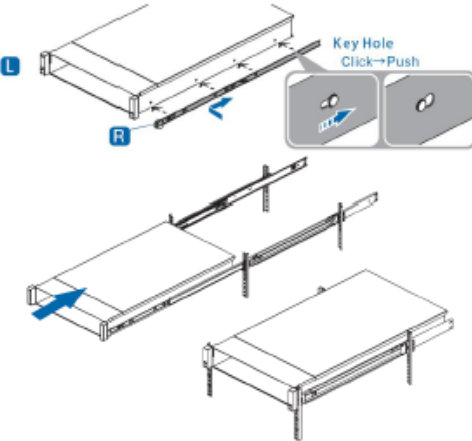
Description / Image	Order Information	Product Information										
<p><b>Intel® VROC for NVMe* Key – VROCSTANMOD</b> Intel® Virtual RAID on CPU – Standard</p> 	<table border="1"> <tr> <td><b>iPC</b></td> <td><b>VROCSTANMOD</b></td> </tr> <tr> <td><b>MM#</b></td> <td>951605</td> </tr> <tr> <td><b>UPC</b></td> <td>00735858337243</td> </tr> <tr> <td><b>EAN</b></td> <td>5032037100007</td> </tr> <tr> <td><b>MOQ</b></td> <td>5</td> </tr> </table>	<b>iPC</b>	<b>VROCSTANMOD</b>	<b>MM#</b>	951605	<b>UPC</b>	00735858337243	<b>EAN</b>	5032037100007	<b>MOQ</b>	5	<p><b>Product Type:</b> Accessory kit</p> <p><b>Where Used:</b></p> <ul style="list-style-type: none"> <li>• Intel Server Board M20NTP2SB</li> <li>• Intel Server System M20NTP1UR</li> </ul> <p><b>Product Overview:</b> Activation key to support Intel and non-Intel NVMe SSDs and enable RAID (0, 1, 10) functionality.</p> <p><b>Kit Includes:</b> (1) Activation Key</p>
<b>iPC</b>	<b>VROCSTANMOD</b>											
<b>MM#</b>	951605											
<b>UPC</b>	00735858337243											
<b>EAN</b>	5032037100007											
<b>MOQ</b>	5											
<p><b>Intel® VROC for NVMe* Key – VROCPREMMOD</b> Intel® Virtual RAID on CPU – Premium</p> 	<table border="1"> <tr> <td><b>iPC</b></td> <td><b>VROCPREMMOD</b></td> </tr> <tr> <td><b>MM#</b></td> <td>951606</td> </tr> <tr> <td><b>UPC</b></td> <td>00735858337267</td> </tr> <tr> <td><b>EAN</b></td> <td>5032037100014</td> </tr> <tr> <td><b>MOQ</b></td> <td>5</td> </tr> </table>	<b>iPC</b>	<b>VROCPREMMOD</b>	<b>MM#</b>	951606	<b>UPC</b>	00735858337267	<b>EAN</b>	5032037100014	<b>MOQ</b>	5	<p><b>Product Type:</b> Accessory kit</p> <p><b>Where Used:</b></p> <ul style="list-style-type: none"> <li>• Intel Server Board M20NTP2SB</li> <li>• Intel Server System M20NTP1UR</li> </ul> <p><b>Product Overview:</b> Activation key to support Intel and non-Intel NVMe SSDs and enable RAID (0, 1, 5, 10) functionality.</p> <p><b>Kit Includes:</b> (1) Activation Key</p>
<b>iPC</b>	<b>VROCPREMMOD</b>											
<b>MM#</b>	951606											
<b>UPC</b>	00735858337267											
<b>EAN</b>	5032037100014											
<b>MOQ</b>	5											



## 4.4 System Thermal Accessories and Spares

Description / Image	Order Information	Product Information										
<p><b>1U System Fan – MYP1UFAN</b></p> 	<table border="1"> <tr> <td>iPC</td> <td>MYP1UFAN</td> </tr> <tr> <td>MM#</td> <td>99A2H4</td> </tr> <tr> <td>UPC</td> <td>00735858454889</td> </tr> <tr> <td>EAN</td> <td>5032037194815</td> </tr> <tr> <td>MOQ</td> <td>1</td> </tr> </table>	iPC	MYP1UFAN	MM#	99A2H4	UPC	00735858454889	EAN	5032037194815	MOQ	1	<p><b>Product Type:</b> Spare FRU</p> <p><b>Where Used:</b></p> <ul style="list-style-type: none"> <li>Intel Server System M20NTP1UR</li> </ul> <p><b>Product Overview:</b></p> <ul style="list-style-type: none"> <li>40x28 mm system fan</li> <li>12VDC</li> </ul> <p><b>Kit Includes:</b></p> <p>(1) System fan</p>
iPC	MYP1UFAN											
MM#	99A2H4											
UPC	00735858454889											
EAN	5032037194815											
MOQ	1											
<p><b>DIMM Blank – TNPDMMLNK</b> (8 pack) (for all systems)</p> 	<table border="1"> <tr> <td>iPC</td> <td>TNPDMMLNK</td> </tr> <tr> <td>MM#</td> <td>99A5ZC</td> </tr> <tr> <td>UPC</td> <td>00735858469593</td> </tr> <tr> <td>EAN</td> <td>5032037208161</td> </tr> <tr> <td>MOQ</td> <td>1</td> </tr> </table>	iPC	TNPDMMLNK	MM#	99A5ZC	UPC	00735858469593	EAN	5032037208161	MOQ	1	<p><b>Product Type:</b> Spare</p> <p><b>Where Used:</b></p> <ul style="list-style-type: none"> <li>Intel Server System M20NTP1UR</li> </ul> <p><b>Product Overview:</b></p> <p>In systems that have defined airflow pattern requirements, it may be necessary to install a DIMM blank when no DIMM is desired within a memory slot that must be populated.</p> <p><b>Kit Includes:</b></p> <p>(8) DIMM Blanks</p>
iPC	TNPDMMLNK											
MM#	99A5ZC											
UPC	00735858469593											
EAN	5032037208161											
MOQ	1											
<p><b>1U Processor Heat Sink – CYP1UHSSTD</b></p> 	<table border="1"> <tr> <td>iPC</td> <td>CYP1UHSSTD</td> </tr> <tr> <td>MM#</td> <td>99A3NP</td> </tr> <tr> <td>UPC</td> <td>00735858454735</td> </tr> <tr> <td>EAN</td> <td>5032037194679</td> </tr> <tr> <td>MOQ</td> <td>1</td> </tr> </table>	iPC	CYP1UHSSTD	MM#	99A3NP	UPC	00735858454735	EAN	5032037194679	MOQ	1	<p><b>Product Type:</b> Accessory / Spare</p> <p><b>Where Used:</b></p> <ul style="list-style-type: none"> <li>Intel Server Board M20NTP2SB</li> <li>Intel Server System M20NTP1UR</li> </ul> <p><b>Product Overview:</b></p> <ul style="list-style-type: none"> <li>1U Aluminum Extrusion + Heat Pipe heat sink with anti-tilt clips</li> <li>72x50 mm thermal pad applied to bottom side of heat sink</li> </ul> <p><b>Kit Includes:</b></p> <p>(1) Heat sink</p>
iPC	CYP1UHSSTD											
MM#	99A3NP											
UPC	00735858454735											
EAN	5032037194679											
MOQ	1											

Description / Image	Order Information	Product Information										
<p data-bbox="138 164 552 188"><b>Processor Carrier Clip ICXPHMMOQ2</b></p> 	<table border="1" data-bbox="701 224 1014 423"> <tr> <td data-bbox="701 224 785 261">iPC</td> <td data-bbox="785 224 1014 261">ICXPHMMOQ2</td> </tr> <tr> <td data-bbox="701 261 785 298">MM#</td> <td data-bbox="785 261 1014 298">99A3PL</td> </tr> <tr> <td data-bbox="701 298 785 336">UPC</td> <td data-bbox="785 298 1014 336">00735858475273</td> </tr> <tr> <td data-bbox="701 336 785 373">EAN</td> <td data-bbox="785 336 1014 373">5032037213226</td> </tr> <tr> <td data-bbox="701 373 785 423">MOQ</td> <td data-bbox="785 373 1014 423">2</td> </tr> </table>	iPC	ICXPHMMOQ2	MM#	99A3PL	UPC	00735858475273	EAN	5032037213226	MOQ	2	<p data-bbox="1136 164 1493 188"><b>Product Type:</b> Accessory / Spare</p> <p data-bbox="1136 201 1283 225"><b>Where Used:</b></p> <ul data-bbox="1136 233 1520 289" style="list-style-type: none"> <li>• Intel Server Board M20NTP2SB</li> <li>• Intel Server System M20NTP1UR</li> </ul> <p data-bbox="1136 302 1346 326"><b>Product Overview:</b></p> <p data-bbox="1136 334 1986 451">The processor carrier clip is a component within the Processor Heat Sink Module (PHM). It is used to attach the processor to the heat sink before the PHM is installed onto the processor socket on the server board. This processor carrier clip is compatible with all 3<sup>rd</sup> Gen Intel Xeon Scalable processors.</p> <p data-bbox="1136 464 1276 488"><b>Kit Includes:</b></p> <p data-bbox="1136 496 1404 521">(1) Processor Carrier Clip</p>
iPC	ICXPHMMOQ2											
MM#	99A3PL											
UPC	00735858475273											
EAN	5032037213226											
MOQ	2											

## 4.5 Miscellaneous Product Family Accessories and Spares

Description / Image	Order Information	Product Information										
<p><b>1U Front Bezel – MYP1UBEZEL</b></p> 	<table border="1"> <tr> <td>iPC</td> <td>MYP1UBEZEL</td> </tr> <tr> <td>MM#</td> <td>99A2D7</td> </tr> <tr> <td>UPC</td> <td>00735858455244</td> </tr> <tr> <td>EAN</td> <td>5032037195164</td> </tr> <tr> <td>MOQ</td> <td>1</td> </tr> </table>	iPC	MYP1UBEZEL	MM#	99A2D7	UPC	00735858455244	EAN	5032037195164	MOQ	1	<p><b>Product Type:</b> Accessory</p> <p><b>Where Used:</b></p> <ul style="list-style-type: none"> <li>Intel Server System M20NTP1UR</li> </ul> <p><b>Product Overview:</b> Non-locking plastic front panel bezel that latches between the two (2) chassis rack handles of a 1U chassis (see <a href="#">Figure 9</a>)</p> <p><b>Kit Includes:</b> (1) Bezel</p>
iPC	MYP1UBEZEL											
MM#	99A2D7											
UPC	00735858455244											
EAN	5032037195164											
MOQ	1											
<p><b>Rail Kit – AXXFULLEXTRAILK</b></p> <p>1U System Mounting Rails</p> 	<table border="1"> <tr> <td>iPC</td> <td>AXXFULLEXTRAILK</td> </tr> <tr> <td>MM#</td> <td>99ANFL</td> </tr> <tr> <td>UPC</td> <td>735858507073</td> </tr> <tr> <td>EAN</td> <td>5032037241212</td> </tr> <tr> <td>MOQ</td> <td>1</td> </tr> </table>	iPC	AXXFULLEXTRAILK	MM#	99ANFL	UPC	735858507073	EAN	5032037241212	MOQ	1	<p><b>Product Type:</b> Accessory / Spare</p> <p><b>Where Used:</b></p> <ul style="list-style-type: none"> <li>Intel Server System M20NTP1UR</li> </ul> <p><b>Product Overview:</b></p> <ul style="list-style-type: none"> <li>Chassis rail kit supporting 4-Post Racks or Server cabinets</li> <li>1U compatible</li> <li>Tool-less chassis attachment</li> <li>Tool-less installation to rack</li> <li>Rack installation front and rear post distance adjustment from 547 mm to 850 mm</li> <li>704 mm travel distance</li> <li>Full extension from rack</li> <li>33 kg (72.7 lbs.) maximum support weight</li> <li>No support for Cable Management Arm</li> </ul> <p><b>Kit Includes:</b></p> <ul style="list-style-type: none"> <li>Left and Right rail assemblies</li> <li>Installation guide</li> </ul> <p><b>Note:</b> See advisory and caution statements documented in the server product family technical product specifications (TPS).</p>
iPC	AXXFULLEXTRAILK											
MM#	99ANFL											
UPC	735858507073											
EAN	5032037241212											
MOQ	1											

Description / Image	Order Information	Product Information										
<p><b>TPM 2.0 – JNPTPM</b></p> <p>Trusted Platform Module – Standard (Not supported in China)</p>  <p><b>Note:</b> Does not meet Microsoft* Win2K22 certification requirements.</p>	<table border="1"> <tr> <td><b>iPC</b></td> <td><b>JNPTPM</b></td> </tr> <tr> <td><b>MM#</b></td> <td>999PLH</td> </tr> <tr> <td><b>UPC</b></td> <td>00735858433884</td> </tr> <tr> <td><b>EAN</b></td> <td>5032037175821</td> </tr> <tr> <td><b>MOQ</b></td> <td>40</td> </tr> </table>	<b>iPC</b>	<b>JNPTPM</b>	<b>MM#</b>	999PLH	<b>UPC</b>	00735858433884	<b>EAN</b>	5032037175821	<b>MOQ</b>	40	<p><b>Product Type:</b> Accessory</p> <p><b>Where Used:</b></p> <ul style="list-style-type: none"> <li>• Intel Server Board M20NTP2SB</li> <li>• Intel Server System M20NTP1UR</li> </ul> <p><b>Product Overview:</b> A TPM is a hardware-based security device that addresses the growing concern on boot process integrity and offers better data protection. TPM protects the system start-up process by ensuring it is tamper-free before releasing system control to the operating system. A TPM device provides secured storage to store data, such as security keys and passwords. In addition, a TPM device has encryption and hash functions.</p> <p><b>JNPTPM</b> implements TPM as per TPM PC Client specifications revision 2.0 by the Trusted Computing Group (TCG)</p> <p><b>Kit Includes:</b> (1) TPM 2.0 - Standard</p>
<b>iPC</b>	<b>JNPTPM</b>											
<b>MM#</b>	999PLH											
<b>UPC</b>	00735858433884											
<b>EAN</b>	5032037175821											
<b>MOQ</b>	40											
<p><b>TPM 2.0 – JNPTPMCH</b></p> <p>Trusted Platform Module – China compatible</p>  <p><b>Note:</b> Does not meet Microsoft* Win2K22 certification requirements.</p>	<table border="1"> <tr> <td><b>iPC</b></td> <td><b>JNPTPMCH</b></td> </tr> <tr> <td><b>MM#</b></td> <td>999PM2</td> </tr> <tr> <td><b>UPC</b></td> <td>00735858433891</td> </tr> <tr> <td><b>EAN</b></td> <td>5032037175838</td> </tr> <tr> <td><b>MOQ</b></td> <td>40</td> </tr> </table>	<b>iPC</b>	<b>JNPTPMCH</b>	<b>MM#</b>	999PM2	<b>UPC</b>	00735858433891	<b>EAN</b>	5032037175838	<b>MOQ</b>	40	<p><b>Product Type:</b> Accessory</p> <p><b>Where Used:</b></p> <ul style="list-style-type: none"> <li>• Intel Server Board M20NTP2SB</li> <li>• Intel Server System M20NTP1UR</li> </ul> <p><b>Product Overview:</b> A TPM is a hardware-based security device that addresses the growing concern on boot process integrity and offers better data protection. TPM protects the system start-up process by ensuring it is tamper-free before releasing system control to the operating system. A TPM device provides secured storage to store data, such as security keys and passwords. In addition, a TPM device has encryption and hash functions.</p> <p><b>JNPTPMCH</b> implements TPM as per TPM PC Client specifications revision 2.0 by the Trusted Computing Group (TCG)</p> <p><b>Kit Includes:</b> (1) TPM 2.0 – China compatible</p>
<b>iPC</b>	<b>JNPTPMCH</b>											
<b>MM#</b>	999PM2											
<b>UPC</b>	00735858433891											
<b>EAN</b>	5032037175838											
<b>MOQ</b>	40											

Description / Image	Order Information	Product Information										
<p>Advanced System Management Key for Intel® products ADVSYSMGMTKEY</p> <p><b>No Image</b></p>	<table border="1"> <tr> <td>iPC</td> <td>ADVSYSMGMTKEY</td> </tr> <tr> <td>MM#</td> <td>99AJX5</td> </tr> <tr> <td>UPC</td> <td>N/A</td> </tr> <tr> <td>EAN</td> <td>N/A</td> </tr> <tr> <td>MOQ</td> <td>1</td> </tr> </table>	iPC	ADVSYSMGMTKEY	MM#	99AJX5	UPC	N/A	EAN	N/A	MOQ	1	<p><b>Product Type:</b> Accessory</p> <p><b>Where Used:</b></p> <ul style="list-style-type: none"> <li>• Intel Server Board M20NTP2SB</li> <li>• Intel Server System M20NTP1UR</li> </ul> <p><b>Product Overview:</b> Software key to be uploaded to the BMC</p> <p><b>Note:</b> Needed to enable advance system management features on the Integrated BMC Web Console. For more information, see the <i>Intel® Server Board M20NTP2SB Technical Product Specification</i>.</p>
iPC	ADVSYSMGMTKEY											
MM#	99AJX5											
UPC	N/A											
EAN	N/A											
MOQ	1											



## Appendix A. Glossary

Term	Definition
<b>Intel® AVX-512</b>	Intel® Advanced Vector Extensions 512
<b>BOM</b>	Bill of Materials
<b>CRPS</b>	Common Redundant Power Supply
<b>DDR4</b>	Double-Data Rate 4
<b>DIMM</b>	Dual Inline Memory Module
<b>DPC</b>	DIMM per Channel
<b>DR</b>	Double Rank
<b>EAN</b>	International Article Number (Barcode)
<b>ECC</b>	Error Correcting Code
<b>FRU</b>	Field Replaceable Unit
<b>Intel® HT Technology</b>	Intel® Hyper-Threading Technology
<b>iPC</b>	Intel Product Code – used to identify an orderable Intel product
<b>iPN</b>	Intel Part Number – internal part number issued to a component within a product bill of material (BOM). Individual Intel part numbers are not orderable unless it is included within an orderable Intel product code (iPC)
<b>LRDIMM</b>	Load-Reduced DIMM
<b>MM#</b>	Main material order number - used to identify an orderable Intel product
<b>MOQ</b>	Minimum Order Quantity
<b>NVMe*</b>	NVM Express* – based on Non-Volatile Memory Host Controller Interface Specification (NVMHCI)
<b>OR</b>	Oct Rank
<b>PCIe*</b>	PCI Express*
<b>PMem</b>	Persistent Memory
<b>QR</b>	Quad Rank
<b>RDIMM</b>	Registered DIMM
<b>SSD</b>	Solid State Drive
<b>SR</b>	Single Rank
<b>Intel® UPI</b>	Intel® Ultra Path Interconnect
<b>UPC</b>	Universal Product Code (Barcode)
<b>Intel® VROC</b>	Intel® Virtual RAID on CPU