

Intel® Server Board S1200SP
Intel® Server System R1000SPO
**Intel® Server Chassis P4304XXSHCN/ P4304XXSFCN/
P4000XXSFDR**
Product Family
Configuration Guide

A Reference document used to assist with ordering parts and accessories available to configure an Intel's server system based on the Intel® Server S1200SP product family.

Revision 2.1

September 2018

Intel® Server Products and Solutions

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Document Revision History

Date Published	Revision	Revision Change Description
November 2015	1.0	First Public Release.
March 2016	1.1	Added R1000SPO product information.
April 2016	1.11	Removed all the references to 4U rack support.
July 2016	1.2	Added R1000SPO product weight information, Rail kit information
September 2016	1.3	Added Intel TPM AXXTPE6 product information
December 2016	1.4	Server Board and L6 System Product Codes updated with "R". Order information updated MM#, UPC, EAM
July 2017	1.5	Added Correct RMS25KB040 and RMS25KB080 images
August 2017	1.6	Correct iPC codes for Rack PSU Correct TPM name from AXXTPE6 to AXXTMSPE6 and product order information
December 2017	1.7	Replace RAID key RKSATA8R5 with RKSATA4R5 in section 5.4 Intel® SAS RAID Add-in Cards, Modules, and Accessories
February 2018	1.8	Note about memory speed reduction added on the section Intel® Server S1200SP Product Family Overview
April 2018	1.9	Note about M.2 SATA connection added on the 2.1 section.
June 2018	2.0	Note added on 2.2 sections about usage of P4000XSFDR + S1200SPSR
September 2018	2.1	Note of EOL dates added on the section 2.2 Intel® Server Chassis Building Block Options on pedestals P4304XXSFCN, P4304XXSHCN and FUP365SNRPS spare.

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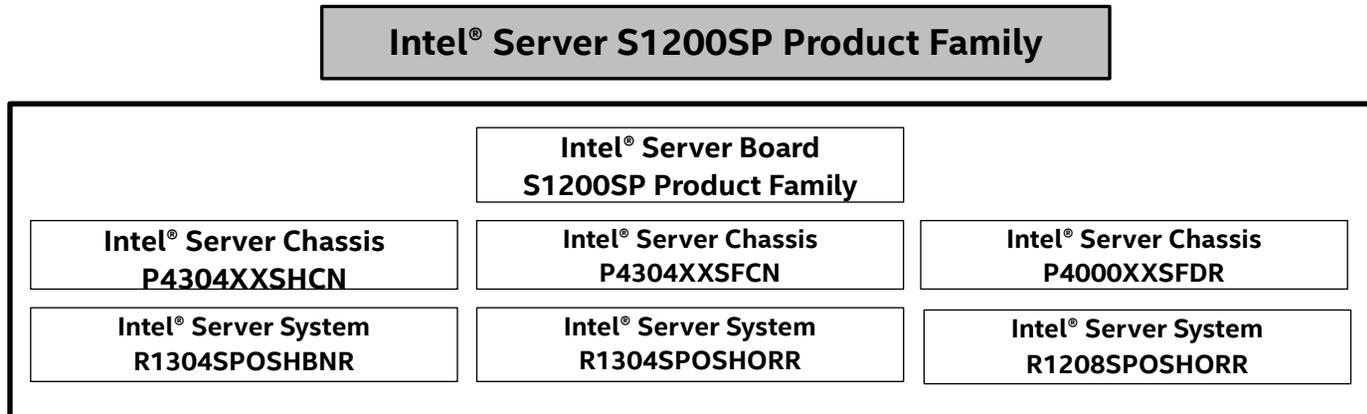
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1 Intel® Server S1200SP Product Family Overview

This document is provided to assist Intel customers with identifying the right Intel server system and available accessories, enabling them to create a unique server platform that meet their unique server requirements.

The Intel® Server S1200SP product family is offered as both building block options and integrated systems. The product family consists of the following: The server systems and boards ending with an “R” support the refreshed Intel® Xeon® Processor E3-1200 v6 Family as well as Intel® Xeon® Processor E3-1200 v5 Family.



Server Building Blocks:

- **Intel® Server Board S1200SP product family** – Server Board only (Building block option and spare FRU)
- **Intel® Server Chassis P4304XXSHCN, P4304XXSFCN, & P4000XXSFDR** – Pedestal Server Chassis only

L6 Integrated Server Systems: **Intel® Server System R1000SPO product family**

- **Intel® Server System R1304SPOSHBNR, R1304SPOSHORR, & R1208SPOSHORR** – 1U Rack Mount Server System integrated with an Intel® Server Board S1200SPOR

The Intel® Server **S1200SP** product family supports the following processors and memory:

- Intel® Xeon® processor E3-1200 v5/v6 series product family
Note: Previous generation Intel® Xeon® processors are not supported.
- Intel® Core® processor i3 series product family
- DDR4 ECC UDIMM
Note: In case of using 2400 MHz memory modules with Intel E3-1200 v5 processor, the speed of the memory will be reduced to 2133 MHz.

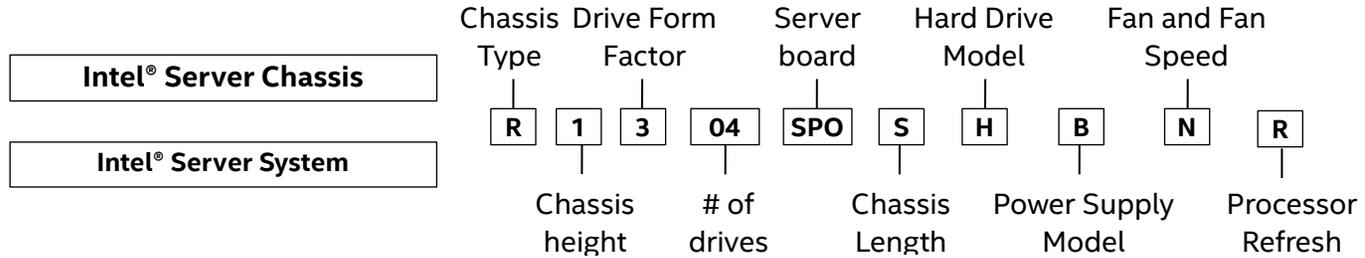
Additional Information and Software

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>.

Table 1. Product Family Reference Collaterals

For this information or software	Use this Document or Software
For in-depth technical information about this product family	<ul style="list-style-type: none"> • Intel® Server Board S1200SP Technical Product Specification • Intel® Server Chassis P4000XSFDR Technical Product Specification • Intel® Server System BIOS Setup Utility Guide • Product Safety and Regulatory Compliance http://www.intel.com/content/www/us/en/support.html
For system integration instructions and service guidance	Intel® Server Chassis P4000XSFDR System Integration and Service Guide http://www.intel.com/content/www/us/en/support/server-products/server-chassis/000007847.html
For server configuration guidance and compatibility	Intel® Server Configurator tool: http://serverconfigurator.intel.com
For system power budget guidance	Intel® Server S1200SP Product Family Power Budget Tool: http://www.intel.com/content/www/us/en/support/server-products/000017502.html?wapkw=s1200sp
For system firmware updates, onboard device drivers, and software to manage your Intel® Server System.	https://downloadcenter.intel.com/search?keyword=S1200SP
For a complete list of supported processors, memory, add-in cards, and peripherals:	http://www.intel.com/content/www/us/en/support/server-products/server-boards/000017642.html?wapkw=s1200sp

1.1 Intel® Server S1200SP Product Family Naming Convention



Chassis Type R = Rack mount P = Pedestal chassis	Server board identifier SPO = Intel® Server Board S1200SPOR
Chassis height 1 = 1U 4 = 4U	Chassis Length S = short
Drive Form Factor 2 = 2.5" 3 = 3.5"	Hard Drive Model F = Fixed H = Hot-swappable
# of drives 04 = 4 08 = 8	Power Supply Model B = Fixed, 350W C = Fixed, 365W D = CRPS, 460W O = Mini ERPS, 450W
	Fan and Fan Speed N = Non-redundant PS (Fixed or 1CRPS with non-redundant fans) R = Redundant PS

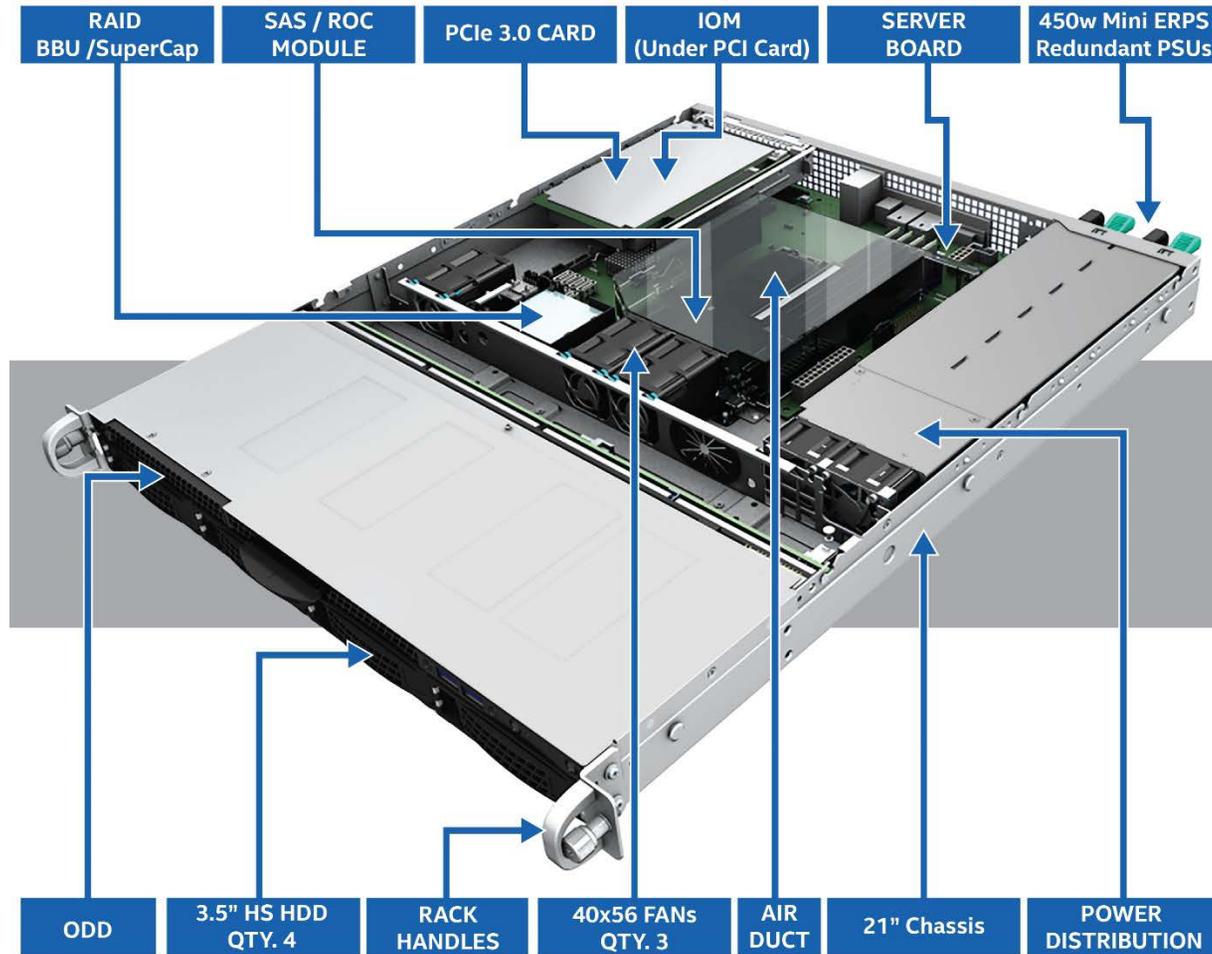


Figure 1. Intel® Server System R1000SPO Feature Set Identification

1.2 Intel® Server Board S1200SP Product Family Overview

The server board product family consists of three server board models: **S1200SPLR**, **S1200SPSR** and **S1200SPOR**.



Intel® Server Board S1200SPLR



Intel® Server Board S1200SPSR



Intel® Server Board S1200SPOR

Figure 2. Intel® Server Board S1200SP product family

The following table provides an overview of available server board options for the Intel® Server Board S1200SP product family. Each line item identifies key features of the specified server board. Order code information and full product descriptions for each option are provided in later sections.

	S1200SPLR	S1200SPSR	S1200SPOR
Board Form Factor	uATX (9.6" x 9.6")	uATX (9.6" x 9.6")	uATX (9.6" x 9.6")
Processor Support	Intel® Xeon® processor E3-1200 v5/v6 series Intel® Core® processor i3 series	Intel® Xeon® processor E3-1200 v5/v6 series without HD Graphic	Intel® Xeon® processor E3-1200 v5/v6 series without HD Graphic
Intel® Chipset	C236	C232	C236
DIMM Slots	4	4	4
DIMM Type	DDR4 UDIMM	DDR4 UDIMM	DDR4 UDIMM
PCIe 3.0 Add-in Card Support	1 – PCIe 3.0 x8 elec, x16 mech 1 – PCIe 3.0 x4 elec, x8 mech 1 – PCIe 3.0 x8 elec, x8 mech	1 – PCIe 3.0 x8 elec, x16 mech 1 – PCIe 3.0 x4 elec, x8 mech 1 – PCIe 3.0 x8 elec, x8 mech	1 – PCIe 3.0 x8 elec, x16 mech with Riser Card support
Riser Card Support	No	No	Yes
Intel® Integrated SAS RAID Module Support	Yes	No	Yes
Intel® I/O Module Support	No	No	Yes
On-Board Storage Options	8 – 6Gb SATA Ports 1 – M2 SATA Connector	6 – 6Gb SATA Ports	8 – 6Gb SATA Ports 1 – M2 SATA Connector
On-Board Network Connectivity	Dual Intel® i210 Gigabit Ethernet	Dual Intel® i210 Gigabit Ethernet	Dual Intel® i210 Gigabit Ethernet

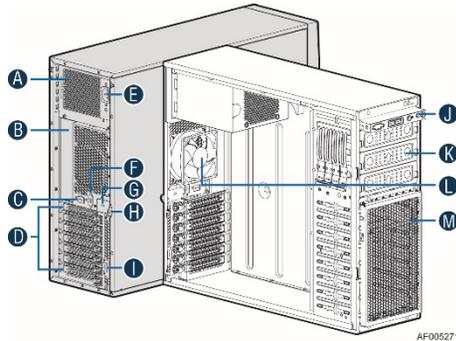
1.3 Supported Intel® Server Chassis Overview

The Intel Server Board S1200SP product family supports the following chassis only server building block options. Note that the chassis P4000XXSFDR is been newly introduced to support S1200SP board family, the chassis P4304XXSFCN and P4304XXSHCN are existing chassis products that are compatible with S1200SP board family.



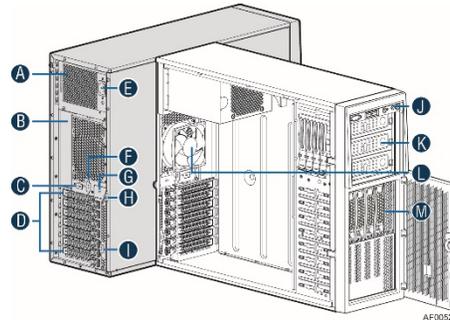
Figure 3. General Purpose Pedestal Intel® Server Chassis

iPC – P4304XXSFCN



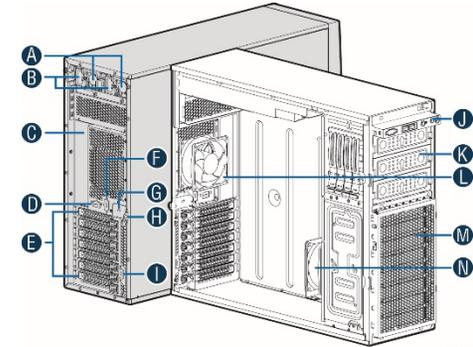
AF005271

iPC – P4304XXSHCN



AF005272

iPC – P4000XXSFDR



AF028603

- A. 365W Fixed Power Supply
- B. I/O Ports
- C. Alternate RMM4 Knockout
- D. PCI Add-in Board Slot Covers
- E. AC Input Power Connector
- F. Serial Port knockout
- G. A Kensington* Cable Lock Mounting Hole
- H. Padlock Loop
- I. Alternate RMM4 Knockout
- J. Front Control Panel
- K. Alternate 5.25" Peripheral Bays
- L. 92x38mm System Rear Fan
- M. Fixed Hard Drive Bays

- A. 365W Fixed Power Supply
- B. I/O Ports
- C. Alternate RMM4 Knockout
- D. PCI Add-in Board Slot Covers
- E. AC Input Power Connector
- F. Serial Port knockout
- G. A Kensington* Cable Lock Mounting Hole
- H. Padlock Loop
- I. Alternate RMM4 Knockout
- J. Front Control Panel
- K. 5.25" Peripheral Bays
- L. 92x38mm System Rear Fan
- M. 4x3.5" Hot-swap HDD cage

- A. 460W Hot Swap Power Supply (Two)
- B. AC Input Power Connector (Two)
- C. I/O Ports
- D. RMM4 Knockout
- E. PCI Add-in Board Slot Covers
- F. Alternate Serial Port Knockout
- G. A Kensington* Cable Lock Mounting Hole
- H. Padlock Loop
- I. Alternate RMM4 Knockout
- J. Front Control Panel
- K. 5.25" Peripheral Bays
- L. 92x38mm System Rear Fan
- M. Fixed Hard Drive Bays
- N. PCI Zone System Fan

1.4 Intel® Server System R1000SPO Overview

The following table provides an overview of available 1U rackable L6 integrated systems preconfigured with an Intel Server Board S1200SP. Each line item identifies key features supported by the specified system. Order code information and full product descriptions for each option are provided in later sections.



Figure 4. Intel® Server System R1000SPO

	iPC – R1304SPOSHBNR	iPC – R1304SPOSHORR	iPC – R1208SPOSHORR
Chassis Form Factor	1U Rackable	1U Rackable	1U Rackable
Server Board Form Factor support	uATX (9.6" x 9.6")	uATX (9.6" x 9.6")	uATX (9.6" x 9.6")
# of Storage Drives	4 hotswappable, 2 internal 2.5" SSDs	4 hotswappable, 2 internal 2.5" SSDs	8 hotswappable
Storage Drive Form Factor	3.5"	3.5"	2.5"
Hot Swap Storage Drive Support	Yes	Yes	Yes
Power Supply	1 – 350W AC Fixed Mount	2 – 450W AC miniERPS	2 – 450W AC miniERPS
Support for Power Redundancy	No	Yes	Yes
# of System Fans	3	3	3

2 Server Building Block Configuration

Server building blocks are offered to give Intel customers the option to configure and assemble a unique server system from the bare chassis up. Each building block component and optional accessory is purchased separately. At a minimum, building up a functional server system using building blocks will require the following:

- Intel Server Chassis: P4304XXSFCN, P4304XXSHCN, or P4000XXSFDR
- Intel® Server Board S1200SP: **S1200SPLR**, **S1200SPSR**
- SAS / SATA Data cables
- Power cord(s)
- Processor
- Memory
- Storage Drives

Server Building Blocks



Chassis



Server Board



Optional Intel® accessories that can be added include the following: See Chapter 0 for available options.

- SAS / SAS RAID support – PCIe* add-in card or module + Appropriate SAS Data cable(s)
- Intel® I/O Module
- Intel® Remote Management Module 4 Lite (not available for S1200SPSR)

2.1 Intel® Server Board S1200SP Product Family SKUs

Intel® Product Code (iPC)	Order Information	Product Description	Product Type
<p>iPC – DBS1200SPLR</p> 	<p>MM# - 951869 UPC - 00735858306386 EAN - 5032037079846 MOQ - 5</p>	<p style="text-align: center;">Intel® Server Board S1200SPLR</p> <ul style="list-style-type: none"> • 1 CPU Socket • 4 DDR4 UDIMM slots (Unbuffered) 2 channels native • 3 PCIe* 3.0 Slots • Dual Gigabit Ethernet ports (Intel® i210) • Intel® Integrated SAS RAID Module Support • 8 SATA 6G ports via chipset • SATADOM support on SATA4 port • SATA M.2 support (2242 form factor), please review note in the end for more information. • USB 3.0 support – 2 External Ports (rear) , 2 ports via onboard cable header • TPM Header • Integrated BMC Graphics • Display port • Base Manageability features based on IPMI 2.0 and dedicated management NIC port onboard • Can be upgraded to support remote KVM & Media redirection <p>Included:</p> <ul style="list-style-type: none"> 1 – Server Board 4 – SATA Data Cables 1 – I/O Shield 1 – Attention Document 1 – Quick Start User's Guide 1 – Quick Configuration Label <ul style="list-style-type: none"> • Note: In order to use M.2 device, a SATA cable need to be connected between any of the SATA connectors (SATA-0 to SATA-7, recommend SATA-7 for better cable routing) and the SATA connector next to the jumpers. 	<p style="text-align: center;">Server Board only</p> <ul style="list-style-type: none"> • Building block option • Spare FRU

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Intel® Product Code (iPC)	Order Information	Product Description	Product Type
<p>iPC – DBS1200SPSR</p> 	<p>MM# - 951870 UPC - 00735858306393 EAN - 5032037079853 MOQ - 5</p>	<p style="text-align: center;"><u>Intel® Server Board S1200SPSR</u></p> <ul style="list-style-type: none"> • 1 CPU Socket • DDR4 UDIMM slots (Unbuffered) 2 channels native • PCIe* 3.0 Slots • Dual Gigabit Ethernet ports (Intel® i210) • USB 3.0 support – 2 External Ports (rear) • SATA 6G ports via chipset • SATADOM support on SATA4 port • Integrated BMC Graphics • Base Manageability features based on IPMI 2.0 <p>Included:</p> <p>1 – Server Board 4 – SATA Data Cables 1 – I/O Shield 1 – Attention Document 1 – Quick Start User's Guide 1 – Quick Configuration Label</p>	<p>Server Board only</p> <ul style="list-style-type: none"> • Building block option • Spare FRU
<p>iPC – DBS1200SPOR</p> 	<p>MM# - 951871 UPC - 00735858306409 EAN - 5032037079860 MOQ - 5</p>	<p style="text-align: center;"><u>Intel® Server Board S1200SPOR</u></p> <ul style="list-style-type: none"> • 1 CPU Socket • 4 DDR4 UDIMM slots (Unbuffered) 2 channels native • 3 PCIe* 3.0 Slots • Dual Gigabit Ethernet ports (Intel® i210) • IO module support • 8 SATA 6G ports via chipset • SATADOM support on SATA4 port • SATA M.2 support (2242 form factor), please review note in the end for more information. • USB 3.0 support – 2 External Ports (rear) , 2 ports via onboard cable header • TPM Header • Integrated BMC Graphics • Base Manageability features based on IPMI 2.0 and dedicated management NIC port onboard • Can be upgraded to support remote KVM & Media redirection <p>Included:</p> <p>1 – Server Board 4 – SATA Data Cables 1 – Attention Document 1 – Quick Start User's Guide 1 – Quick Configuration Label</p> <ul style="list-style-type: none"> • Note: In order to use M.2 device, a SATA cable need to be connected between any of the SATA connectors (SATA-0 to SATA-7, recommend SATA-7 for better cable routing) and the SATA connector next to the jumpers. 	<p>Server Board only</p> <ul style="list-style-type: none"> • Building block option • Spare FRU

2.2 Intel® Server Chassis Building Block Options – General Purpose Pedestal

The product tables found in this section provide order code information and detailed descriptions for each available Intel® server chassis building block option. The lower sections of each table identify:

- The ship along components of the specified chassis product code – (product BOM)
- **Required Items** – Hardware required to be installed to the base system to achieve basic functionality using the default system feature set
- **Optional Accessories** – Some of the available accessories which can be installed to enhance the basic feature set of the server board / chassis. Additional accessories can be found in Chapter 5.

NOTES:

- Each **required item** and **optional accessory** is sold separately from the specified Intel® server building block.
- Items identified as **iPC** (Intel Product Code), are an orderable building block option, accessory or spare FRU.
- In an effort to provide the complete product bill of materials, the ship along components list in each product table will include items identified by description and by **iPN** (Intel® Part Number). The iPN information is provided for reference only. These components are **not** orderable as a spare or accessory.

<p>Intel® Product Code (iPC):</p> <p style="text-align: center;">P4304XXSFCN</p>  <p>Pedestal Chassis – 4 x 3.5" Fixed Mount Drives, 1 x 365W power</p>	<p style="text-align: center;">Order Code Information:</p> <p>MM# - 911754 UPC - 00735858219358 EAN - 5032037016933 MOQ - 1</p> <p>Note: Product Discontinuance has been announced for this SKU. As of July 1st 2018 it is not possible to order this product. See PCN 116128-01 for more details.</p>	<p>Product Type: Chassis Only Chassis Form Factor: Pedestal Chassis dimensions: L=560 mm, W=438 mm, H=173 mm Packaged Gross Weight: 17.8 Kgs, 39.3 Lbs Un-packaged Net Weight: 12.3 Kgs, 27.2 Lbs Outer Box Dimensions: L=698mm, W=553mm, H=375mm</p>
Product Definition and Configuration Requirements		
<p>Intel® product code P4304XXSFCN includes the following components:</p> <ul style="list-style-type: none"> (1) Pedestal Chassis (1) Front Panel assembly with cables (1) 365W Fixed Mount Power (1) System fan assembly 	<p style="text-align: center;">Required Items – Sold Separately:</p> <ul style="list-style-type: none"> • Intel® Server Board S1200SP (choose one) <ul style="list-style-type: none"> ○ S1200SPLR ○ S1200SPSR • Power Cord(s) • 1 Boxed w/Heatsink Intel® processor (choose 	<p style="text-align: center;">Optional Intel® Accessories – Sold Separately:</p> <ul style="list-style-type: none"> • SATA/SAS data cables. See Section 4.2 for more information.

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<ul style="list-style-type: none"> (4) fixed mount drive trays (4) Plastic chassis foot paddle (2) ODD Slide Rail Assemblies (1) 200mm chassis intrusion switch cable (2) 150mm dual SATA Drive power cable (1) Quick Install Users Guide (1 set) Server board mount rubber bumpers (1 set) Server board mounting screws 	<ul style="list-style-type: none"> one) <ul style="list-style-type: none"> o Intel® Xeon® Processor E3-1200 v5/v6 family o Intel® Core® processor i3 family • DDR4 memory (UDIMM) 	<p>See Chapter 5 for all available accessory options.</p>
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<p>Intel® Product Code (iPC):</p> <p style="text-align: center;">P4304XXSHCN</p> <div style="text-align: center;">  </div> <p>Pedestal Chassis – 4 x 3.5" Hot Swap Drives, 1 x 365W power</p>	<p>Order Code Information:</p> <p>MM# - 911765 UPC - 00735858219365 EAN - 5032037016940 MOQ – 1</p> <p>Note: Product Discontinuance has been announced for this SKU. As of July 1st 2018 it is not possible to order this product. See PCN 116128-01 for more details.</p>	<p>Product Type: Chassis Only Chassis Form Factor: Pedestal Chassis dimensions: L=560 mm, W=438 mm, H=173 mm Packaged Gross Weight: 18.9 Kgs, 41.6 Lbs Un-packaged Net Weight: 17.1 Kgs, 37.7 Lbs Outer Box Dimensions: L=698mm, W=553mm, H=375mm</p>
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Product Definition and Configuration Requirements

<p>Intel® product code P4304XXSHCN includes the following components:</p> <ul style="list-style-type: none"> (1) Pedestal Chassis (1) Front Panel assembly with cables (1) 365W Fixed Mount Power Supply (1) System fan assembly (1) 4 x 3.5" drive hot swap (4) 3.5" Hot swap drive carriers (4) Plastic chassis foot paddle (2) ODD Slide Rail Assemblies (1) 450mm SATA data cable (1) 600mm I2C data cable (1) 450mm SGPIO data cable (1) 200mm chassis intrusion switch cable (1) Quick Install Users Guide (1 set) Server board mount rubber bumpers (1 set) Server board mounting screws 	<p><u>Required Items – Sold Separately:</u></p> <ul style="list-style-type: none"> • Intel® Server Board S1200SP (choose one) <ul style="list-style-type: none"> o S1200SPLR o S1200SPSR • Power Cord(s) • 1 Boxed w/Heatsink Intel processor (choose one) <ul style="list-style-type: none"> o Intel® Xeon® Processor E3-1200 v5/v6 product family o Intel® Core® processor i3 product family • DDR4 memory (UDIMM) 	<p><u>Optional Intel® Accessories – Sold Separately:</u></p> <ul style="list-style-type: none"> • SATA/SAS data cables. See Section 4.2 for more information. <p>See Chapter 5 for all available accessory options.</p>
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<p>Intel® Product Code (iPC):</p> <p style="text-align: center;">P4000XSFDR</p>  <p style="text-align: center;">Pedestal Chassis – 4 x 3.5" Fixed Mount Drives, Dual 460W power</p>	<p>Order Code Information:</p> <p>MM - 944468 UPC - 00735858306485 EAN - 5032037079945 MOQ - 1</p>	<p>Product Type: Chassis Only Chassis Form Factor: Pedestal Chassis dimensions: L=560mm, W=438mm, H=173mm Packaged Gross Weight: 17.1 Kgs, 37.7 Lbs Un-packaged Net Weight: 14.6 Kgs, 32.2 Lbs Outer Box Dimensions: L=698mm, W=553mm, H=375mm</p>
<p>Product Definition and Configuration Requirements</p>		
<p>Intel® product code P4000XSFDR includes the following components:</p> <ul style="list-style-type: none"> (1) Pedestal Chassis (1) Front Panel assembly with cables (2) 460W Power Supply Modules (1) System rear fan assembly (1) System PCIe zone fan assembly (4) fixed mount drive trays (4) Plastic chassis foot paddle (2) ODD Slide Rail Assemblies (1) 200mm chassis intrusion switch cable (2) 150mm dual SATA Drive power cable (1) SATA cable for onboard M.2 connector (1) USB 3.0 cable (1 set) Server board mount rubber bumpers (1 set) Server board mounting screws 	<p><u>Required Items – Sold Separately:</u></p> <ul style="list-style-type: none"> • Intel® Server Board S1200SP (choose one) <ul style="list-style-type: none"> ○ S1200SPLR ○ S1200SPSR • Power Cord(s) • 1 Boxed w/Heatsink Intel® processor (choose one) <ul style="list-style-type: none"> ○ Intel® Xeon® Processor E3-1200 v5/v6 product family ○ Intel® Core® processor i3 product family • DDR4 memory (UDIMM) • Note: When use P4000XSFDR chassis + S1200SPSR board, it is required to purchase FUPSESK kit to enable front panel USB ports. 	<p><u>Optional Intel® Accessories – Sold Separately:</u></p> <ul style="list-style-type: none"> • SATA/SAS data cables. See Section 4.2 for more information. <p>See Chapter 5 for all available accessory options.</p>

3 Server System Configuration

Intel offers L6 integrated 1U Rack Mount server systems that include a server board, power supply modules, and hot swap drive bays options. To make an L6 based system operational and allow for installation in to a rack, the following components need to be purchased separately and added to the shipping L6 system configuration:

- Power Cord(s)
- Processor
- Memory
- Storage Drives
- Rack Mount Rail Kit

Intel offers optional accessories to enhance the basic feature set of the L6 system. Some of the available options include:

- SAS / SAS RAID support – PCIe* add-in card or module + Appropriate SAS Data cable(s)
- Intel® I/O Module
- Intel® Remote Management Module Lite

See chapter 5 for a complete list of available options.

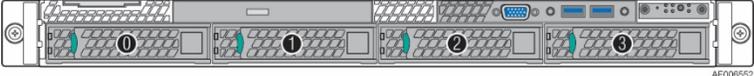
3.1 Intel® Server System R1000SPO Options – 1U Rack Mount System

The product tables found in this section provide order code information and detailed descriptions for the specified L6 integrated 1U Intel server system. The lower sections of each table identify:

- The ship along components of the specified chassis product code – (product BOM)
- **Required Items** – Hardware required to be installed to the base system to achieve basic functionality using the default system feature set
- **Optional Accessories** – Some of the available accessories which can be installed to enhance the basic feature set of the server board / chassis. Additional accessories can be found in Chapter 0

NOTES:

- Each **required item** and **optional accessory** is sold separately from the specified Intel L6 server system
 - Items identified as **iPC** (Intel Product Code), are an orderable building block option, accessory or spare FRU
 - In an effort to provide the complete product bill of materials, the ship along components list in each product table will include items identified by description and by **iPN** (Intel Part Number). The iPN information is provided for reference only. These components are **not** orderable as a spare or accessory.
-

<p>Intel Product Code (iPC): R1304SPOSHBNR</p>  <p>1U – 4 x 3.5" Hot Swap Drives, one 350w fixed power</p>	<p>Order Code Information: MM# - 951872 UPC – 00735858306492 EAN – 5032037079952 MOQ – 1</p>	<p>Product Type: L6 Integrated System Chassis Form Factor: 1U rack mount Chassis dimensions: L= 535mm, W= 428m, H= 43.5mm Outer Box Dimensions: L= 716mm, W= 576mm, H= 195mm Packaged Gross Weight: 11.6 Kgs, 25.6 Lbs Un-packaged Net Weight: 7.77 Kgs, 17.14 Lbs</p>
<p>Product Definition and Configuration Requirements/Options</p>		
<p><u>Intel product code R1304SPOSHBNR includes the following components:</u></p> <ul style="list-style-type: none"> (1) –1U Chassis (1) – Intel® Server Board S1200SPOR –iPC BBS1200SPO (1) – Riser card assembly – iPN H87808-XXX (1) – 350W fixed power supply – iPC FR1000PS350 (1) – 3.5" Hot-swap drive bays with drive carriers and drive blanks. Includes <ul style="list-style-type: none"> (1) 12 Gb SAS backplane – iPC FR1304S3HSBP2 (4) 3.5" hot swap drive trays – iPC FXX35HSCAR (3) – System fans – iPN G63402-00x <ul style="list-style-type: none"> (1) – Heatsink – iPN E49069- 00X (1) – Standard control panel assembly (1) – Front I/O Panel assembly (1 x VGA and 2 x USB) iPN - H91347-XXX (1) – SATA Optical drive bay with filler panel – (optical drive sold separately) (2) – Chassis handle (1 set) installed – iPN H19171-00x (1) – Quick Reference Label, Attention Document <p>Cables: Front Panel cable, USB 3.0 cable, Power cables, SATA cables, SATA to miniSAS HD cables.</p>	<p><u>Required Items – Sold Separately:</u></p> <ul style="list-style-type: none"> • Rack Mount Kit • 1 Intel processor (choose one) <ul style="list-style-type: none"> ◦ Intel® Xeon® Processor E3-1200 v5/v6 product family ◦ Intel® Core® processor i3 product family • DDR4 memory (ECC UDIMM) • Power Cord(s) 	<p><u>Optional Intel Accessories – Sold Separately</u></p> <ul style="list-style-type: none"> • Intel® 12G SAS RAID module + RMFBU • SAS Data cable – Depending on the location of the SAS Data controller, a new data cable may be necessary. See Section 4.3 for more information. • Intel® I/O Module <p>See Chapter 5 for all available accessory options.</p>

<p>Intel Product Code (iPC):</p> <p style="text-align: center;">R1304SPOSHORR</p>  <p style="text-align: center;">1U – 4 x 3.5" Hot Swap Drives, dual 450W hot swap power</p>	<p>Order Code Information:</p> <p>MM# - 951873 UPC – 00735858306508 EAN – 5032037079969 MOQ – 1</p>	<p>Product Type: L6 Integrated System Chassis Form Factor: 1U rack mount Chassis dimensions: L= 535mm, W= 428m, H= 43.5mm Outer Box Dimensions: L= 716mm, W= 576mm, H= 195mm Packaged Gross Weight: 12.8 Kgs, 28.24 Lbs Un-packaged Net Weight: 8.87 Kgs, 19.57 Lbs</p>
<p>Product Definition and Configuration Requirements/Options</p>		
<p>Intel product code R1304SPOSHORR includes the following components:</p> <ul style="list-style-type: none"> (1) –1U Chassis (1) – Intel® Server Board S1200SPOR – iPC BBS1200SPO (1) – Riser card assembly – iPN H87808-XXX (2) – 450W redundant power supply – iPN F1U450WPSU (1) – Power Distribution Board – iPN J11254-XXX (4) – 3.5" Hot-swap drive bays with drive carriers and drive blanks. Includes: <ul style="list-style-type: none"> (1) 12 Gb SAS backplane – iPC FR1304S3HSBP2 (4) 3.5" hot swap drive trays – iPC FXX35HSCAR (3) – System fans – iPN G63402-00x <ul style="list-style-type: none"> (1) – Heatsink – iPN E49069- 00X (1) – Standard control panel assembly (1) – Front I/O Panel assembly (1 x VGA and 2 x USB) iPN - H91347-XXX (1) – SATA Optical drive bay with filler panel – (optical drive sold separately) (2) – Chassis handle (1 set) installed – iPN H19171-00x (1) – Quick Reference Label, Attention Document <p>Cables: Front Panel cable, USB 3.0 cable, Power cables, SATA cables,SATA to miniSAS HD cables.</p>	<p><u>Required Items – Sold Separately:</u></p> <ul style="list-style-type: none"> • Rack Mount Kit • 1 Intel processor (choose one) <ul style="list-style-type: none"> ○ Intel® Xeon® Processor E3-1200 v5/v6 product family ○ Intel® Core® processor i3 product family • DDR4 memory (ECC UDIMM) • Power Cord(s) 	<p><u>Optional Intel Accessories – Sold Separately</u></p> <ul style="list-style-type: none"> • Intel® 12G SAS RAID module + RMFBU • SAS Data cable – Depending on the location of the SAS Data controller, a new data cable may be necessary. See Section 4.3 for more information. • Intel® I/O Module

<p>Intel Product Code (iPC):</p> <p style="text-align: center;">R1208SPOSHORR</p>  <p style="text-align: center;">1U – 8 x 2.5" Hot Swap Drives, dual 450W hot swap power</p>	<p>Order Code Information:</p> <p>MM# - 951874 UPC – 00735858306515 EAN – 5032037079976 MOQ – 1</p>	<p>Product Type: L6 Integrated System Chassis Form Factor: 1U rack mount Chassis dimensions: L= 535mm, W= 428mm, H= 43.5mm Outer Box Dimensions: L= 716mm, W= 576mm, H= 195mm Packaged Gross Weight: 13. Kgs, 28.68 Lbs Un-packaged Net Weight: 9.09 Kgs, 20.06 Lbs</p>
<p>Product Definition and Configuration Requirements/Options</p>		
<p>Intel product code R1208SPOSHORR includes the following components:</p> <ul style="list-style-type: none"> (1) –1U Chassis (1) – Intel® Server Board S1200SPOR –iPC BBS1200SPO (1) – Riser card assembly – iPN H87808-XXX (2) – 450W redundant power supply – iPN F1U450WPSU (1) – Power Distribution Board –iPN J11254-XXX (8) – 2.5" Hot-swap drive bays with drive carriers and drive blanks. <p>Includes</p> <ul style="list-style-type: none"> (1) 12 Gb SAS backplane – iPC F1U8X25S3HSBP (8) 2.5" hot swap drive trays – iPC FXX25HSCAR2 (3) – System fans – iPN G63402-00x (1) – Heatsink – iPN E49069- 00X (1) – Standard control panel assembly (1) – Front I/O Panel assembly (1 x VGA and 2 x USB)) iPN - H91347-XXX (1) – SATA Optical drive bay with filler panel – (optical drive sold separately) (2) – Chassis handle (1 set) installed – iPN H19171-00x (1) – Quick Reference Label, Attention Document <p>Cables: Front Panel cable, USB 3.0 cable, Power cables, SATA cables,SATA to miniSAS HD cables.</p>	<p><u>Required Items – Sold Separately:</u></p> <ul style="list-style-type: none"> • Rack Mount Kit • 1 Intel processor (choose one) <ul style="list-style-type: none"> ○ Intel® Xeon® Processor E3-1200 v5/v6 product family ○ Intel® Core® processor i3 product family • DDR4 memory (ECC UDIMM) • Power Cord(s) 	<p><u>Optional Intel Accessories – Sold Separately</u></p> <ul style="list-style-type: none"> • Intel® 12G SAS RAID module + RMFBU • SAS Data cable – Depending on the location of the SAS Data controller, a new data cable may be necessary. See Section 4.3 for more information. • Intel® I/O Module

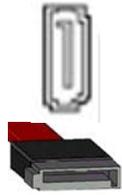
4 SAS / SATA Data Cable Guide

Following SAS / SATA data cables may need to be ordered separately to match the desired system configuration.

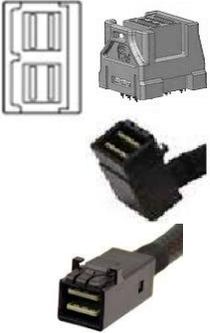
4.1 SAS / SATA Data Cable Connector Types

There are three storage interface connector types used within this product family:

Single Port SATA Connector

Image	Description
	<p>7-pin Single Port SATA Support for up to 6 GB/sec SATA devices</p> <p>Where used:</p> <ul style="list-style-type: none"> • On the server board • 6Gb/sec 4x3.5" Hot-Swap Backplane (IPC FUP4X35HSDK, FUP4X35HSBP) • SATA Optical Drive – CD/DVD • SATA DOM

Multiport MiniSAS HD Connectors

Image	Description
	<p>SFF-8643 Support for up to 12 Gb/Sec SAS and 6 Gb/sec SATA devices</p> <p>Where used:</p> <ul style="list-style-type: none"> • 12Gb/sec 4x3.5" Hot-Swap Backplane (IPC FUP4X35S3HSDK, FUP4X35S3HSBP) • All 12 Gb/sec SAS RAID Controllers • All 12 Gb/sec SAS Expander Cards

Multiport MiniSAS Connector

Image	Description
	<p>SFF-8087 Support for up to 6 Gb/Sec SAS / SATA devices</p> <p>Where used:</p> <ul style="list-style-type: none"> • 6Gb/sec 8x3.5" Hot-Swap Backplane (iPC FUP8X35HSDK, FUP8X35HSBP) • All 6 Gb/sec SAS RAID Controllers • All 6 Gb/sec SAS Expander Cards

When connecting a 6Gb/sec SAS Controller or SAS Expander to a 12 Gb/sec capable hot swap backplane, the data cables used will need a SFF-8643 connector on one end of the cable and a SFF-8087 connector on the other. See Table 2. Storage Data Cable Kit Description and Order Information for appropriate cable kits.

4.2 Intel® Server Chassis P4000XSFR SAS / SATA Cable Guide

The cables included in the Intel® Server Chassis P4000XSFR (iPN G14960-001 for 600mm and G14959-001 for 450mm) can support the connection from onboard SATA ports to the 4x3.5" fixed drives (default in P4000XSFR), or from onboard SATA ports to the 4x3.5" 6Gb/s backplane (iPC FUP4X35HSDK, FUP4X35HSBP).

To \ From	onboard SATA
4x3.5" fixed drive	Default in chassis G14960-001(600mm) G14959-001(450mm)
4x3.5" 6Gb/s backplane iPC FUP4X35HSDK, FUP4X35HSBP	Default in chassis G14960-001(600mm) G14959-001(450mm)

The server chassis P4000XSFR also supports 8x3.5" 6Gb/s hot-swappable drives, or 4x3.5"/8x3.5" 12Gb/s hot-swappable drives. The cables needed to be ordered separately are listed in the table.

To \ From	onboard SATA	6G RAID card	12G RAID card
8x3.5" 6Gb/s backplane iPC FUP8X35HSDK, FUP8X35HSBP	(2) AXXE3PED8DCBL, includes: G14989-003(480mm)	(2) AXXE38DRVCBL, includes: G14989-003(480mm)	(1) AXXCBL570HDMS (1) AXXCBL340HDMS
4x3.5" 12Gb/s backplane iPC FUP4X35S3HSDK, FUP4X35S3HSBP	(1) AXXE3RACK8DCBL, includes: H66180-002(270mm) H66179-002(530mm)	(1) AXXCBL570HDMS	(1) AXXCBL650HDHD
8x3.5" 12Gb/s (Two 4x3.5" 12Gb/s backplanes) iPC FUP4X35S3HSDK, FUP4X35S3HSBP	(1) AXXE3RACK8DCBL, includes: H66180-002(270mm) H66179-002(530mm)	(1) AXXCBL570HDMS (1) AXXCBL340HDMS	(1) AXXCBL380HDHD (1) AXXCBL650HDHD

4.3 Intel® Server System R1000SPO SAS / SATA Cable Guide

The following table lists the cables need to be ordered separately, except the cables connecting to onboard SATA.

To \ From	Onboard SATA	6G RAID module	12G RAID module
R1304SPOSHBNR R1304SPOSHORR	FR130412GCBL H66178-002(550mm) Included in the system	(1) AXXCBL730HDMS	(1) AXXCBL730HDHD
R1208SPOSHORR	(1) AXXE3RACK8DCBL, includes: H66180-002(270mm) H66179-003(530mm) Included in the system	(1) AXXCBL570HDMS (2) AXXCBL340HDMS	(1) AXXCBL380HDHD (2) AXXCBL650HDHD

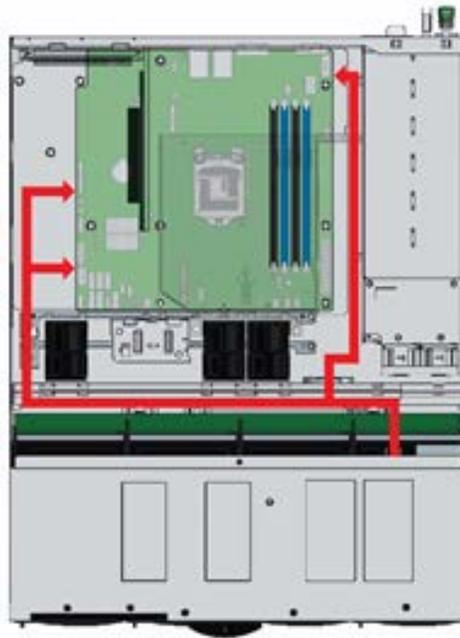
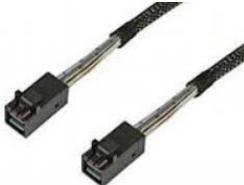


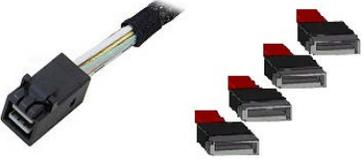
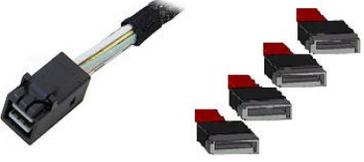
Figure 5. Intel® Server System R1000SPO Cable Routing

4.4 Intel® SAS / SATA Data Cable Kits

Table 2. Storage Data Cable Kit Description and Order Information

Image	Order Information	Description
	iPC - AXXE38DRVCBL MM# - 928729 UPC - 00735858263603 EAN - 5032037052832 MOQ - 1	Cable kit for two, 350mm and 550mm long, miniSAS 8087 to miniSAS 8087. Required in pedestal chassis when connecting from 6Gb raid module to SATA 6Gb backplane miniSAS 8087 (8 drives). See section above for usage.
	iPC - AXXE3PED8DCBL MM# - 943593 UPC - 00735858306584 EAN - 5032037080040 MOQ - 1	480 mm long, cable kit (2 cables included), 7pin SATA to SFF-8087 Required in pedestal chassis when connecting from onboard 7pin SATA ports to SATA 6Gb backplane miniSAS 8087 (8 drives). See section above for usage.
	iPC - AXXCBL570HDMS MM# - 944202 UPC - 00735858306614 EAN - 5032037080071 MOQ - 2	570 mm long, cable kit (2 cables included) straight SFF8643 to straight SFF8087. See section above for usage.
	iPC - AXXCBL340HDMS MM# - 944203 UPC - 00735858306621 EAN - 5032037080088 MOQ - 2	340 mm long, cable kit (2 cables included) straight SFF8643 to straight SFF8087. See section above for usage.
	iPC - AXXCBL650HDHD MM# - 937129 UPC - 00735858284752 EAN - 5032037065047 MOQ - 1	650 mm long, cable kit (2 cables included) straight SFF8643 to straight SFF8643 See section above for usage.

Intel® Server S1200SP Family Configuration Guide

Image	Order Information	Description
	<p>iPC - AXXE3RACK8DCBL MM# - 943592 UPC - 00735858306577 EAN - 5032037080033 MOQ - 1</p>	<p>270 mm and 530 mm long, cable kit (2 cables included), 7pin SATA to SFF-8643 Required to connect onboard 7pin SATA ports to 1U miniSAS HD connectors (SFF-8643) on 8x2.5" backplane. Shipped by default with R1208SPOSHOR. See section above for usage. Used in both pedestal chassis and 1U system.</p>
	<p>iPC - FR130412GCBL MM# - 943591 UPC - 00735858306560 EAN - 5032037080026 MOQ - 2</p>	<p>550 mm long, cable kit (2 cables included), 7pin SATA to SFF-8643 Required to connect onboard 7pin SATA ports to 1U miniSAS HD connectors (SFF-8643) on 4x3.5" backplane. Shipped by default with R1304SPOSHBNR/R1304SPOSHORR. Used in 1U system.</p>
	<p>iPC - AXXCBL380HDHD MM# - 936427 UPC - 00735858284738 EAN - 5032037065023 MOQ - 2</p>	<p>380 mm long, cable kit (2 cables included) straight SFF8643 to straight SFF8643 See section above for usage.</p>
	<p>iPC - AXXCBL730HDHD MM# - 936178 UPC - 00735858284745 EAN - 5032037065030 MOQ - 2</p>	<p>730 mm long, cable kit (2 cables included) straight SFF8643 to straight SFF8643 See section above for usage.</p>

5 Configuration Options

The following sections identify available accessory kits supported within the Intel® S1200SP product family.

5.1 Drive Bay Module Options

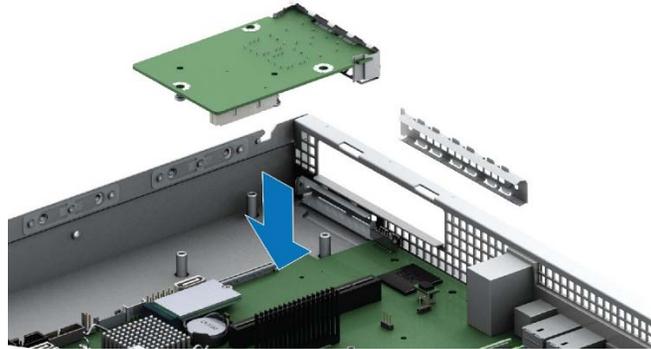
Intel Product Code	Order Information	Product Description	Product Type
iPC - FUP4X35HSDK 	MM# - 911885 UPC - 00735858219440 EAN - 5032037016230 MOQ - 1	3.5" Hot Swap Drive Kit for P4000 server chassis Includes: Drive Cage, Hot Swap Back Plane, 4 Hot Swap Drive carriers, data cables, I ² C cable, and ID filler	<ul style="list-style-type: none"> Pedestal accessory kit
iPC - FUP8X35HSDK 	MM# - 915608 UPC - 00735858235907 EAN - 5032037030663 MOQ - 1	8x3.5" Hot Swap Drive Cage Kit for P4000 server chassis Includes: Drive Cage, Hot Swap Back Plane, 8 Hot Swap Drive Carriers, data cables, I ² C cable, and ID filler panel	<ul style="list-style-type: none"> Pedestal accessory kit
iPC - FUP4X35S3HSDK 	MM# - 936623 UPC - 00735858289993 EAN - 5032037068833 MOQ - 1	3.5" Hot Swap Drive Kit for P4000 server chassis Includes: Drive Cage, Hot Swap Back Plane, 4 Hot Swap Drive carriers, I ² C cable, IMPB cable, 4 SATA cables and ID filler	<ul style="list-style-type: none"> Pedestal accessory kit

5.2 Front Bezel Accessory Kits

Intel Product Code	Order Information	Product Description	Product Type
<p>iPC - FUPBEZELFIX</p> 	<p>MM# - 911886 UPC - 00735858219457 EAN - 5032037016254 MOQ - 1</p>	<p>Pedestal Bezel (Fixed HDD version)</p> <p>Fits P4000 with fixed hard disks</p>	<ul style="list-style-type: none"> • Pedestal accessory kit
<p>iPC - FUPBEZELHSD</p> 	<p>MM# - 911896 UPC - 00735858219464 EAN - 5032037016261 MOQ - 1</p>	<p>Pedestal Bezel (HS HDD version)</p> <p>Fits P4000 with HS drive bays installed, version with door for drive bays)</p>	<ul style="list-style-type: none"> • Pedestal accessory kit
<p>iPC - A1UBEZEL</p> 	<p>MM# - 917983 UPC - 00735858241120 EAN - 5032037035873 MOQ - 1</p>	<p>1U locking Bezel A1UBEZEL for 1U family of rack chassis</p>	<ul style="list-style-type: none"> • 1U accessory kit

5.3 Intel® I/O Module Accessories

Intel® Server Board S1200SPOR and Intel® Server System R1000SPO product family support Intel® I/O Modules in the table below. The illustration shows how the I/O module is installed to the server board.



Intel Product Code	Order Information	Product Description	Product Type
<p>iPC - AXX4P1GBPWL1OM</p> 	<p>MM# - 917911 UPC - 735858241083 EAN - 5032037035835 MOQ - 1</p>	<p>Quad port 1GbE I/O expansion module based on Intel® Ethernet Controller I350 (PCIe 2.0 (5GT/s))</p> <p>Includes three screws, port label sticker</p>	<ul style="list-style-type: none"> • 1U accessory
<p>iPC - AXX10GBNIA1OM</p> 	<p>MM# - 917905 UPC - 735858241090 EAN - 5032037035842 MOQ - 1</p>	<p>Dual SFP+ port 10GbE IO module based on Intel® 82599 10 Gigabit Ethernet Controller</p> <p>Supports direct connect or transceiver.</p> <p>Cables/transceivers not included.</p> <p>Includes three screws, port label sticker.</p>	<ul style="list-style-type: none"> • 1U accessory

Intel Product Code	Order Information	Product Description	Product Type
<p>iPC - AXX10GBTWLIOM3</p> 	<p>MM# - 941869 UPC - 735858296656 EAN - 5032037072472 MOQ - 1</p>	<p>Dual port, RJ-45, 10GbE I/O Expansion module. Intel X540. PCIe 2.0</p>	<ul style="list-style-type: none"> • 1U accessory

5.4 Intel® SAS RAID Add-in Cards, Modules, and Accessories

Intel® Server Board S1200SP product family support Intel® Integrated SAS RAID Modules. The Intel® Server Board S1200SPLR board support modules on both PCIe* slot and Mezzanine slot, the Intel® Server Board S1200SPSR board support modules on PCIe* slot. The illustration below shows how the SAS RAID module is installed to the server board.

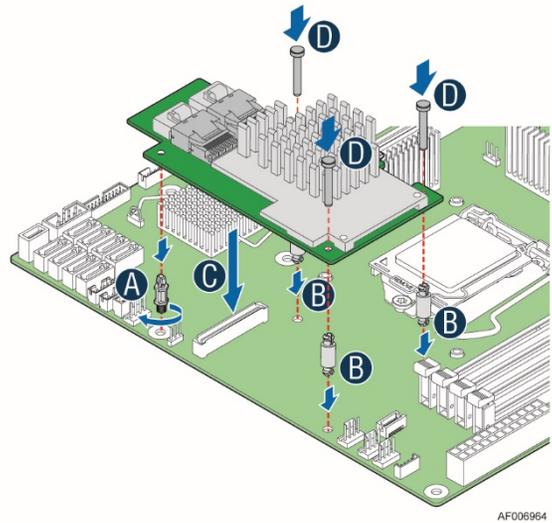


Figure 6. Installing Intel® Integrated SAS RAID Modules

Intel® Server S1200SP Family Configuration Guide

Intel Product Code	Order Information	Product Description	Product Type
<p>iPC - RMS25JB040</p> 	<p>MM# - 917088 UPC - 00735858239011 EAN - 5032037033794 MOQ - 5</p>	<p>Intel® Integrated RAID Module RMS25JB040</p> <p>SAS 6GB, 4 internal ports, LSI2308</p>	<ul style="list-style-type: none"> • Accessory kit
<p>iPC - RMS25JB080</p> 	<p>MM# - 917087 UPC - 00735858239004 EAN - 5032037033787 MOQ - 5</p>	<p>Intel® Integrated RAID Module RMS25JB080</p> <p>SAS 6GB, 8 internal ports, LSI2308</p>	<ul style="list-style-type: none"> • Accessory kit
<p>iPC - RMS25KB040</p> 	<p>MM# - 924453 UPC - 00735858239011 EAN - 50320370337945 MOQ - 5</p>	<p>Intel® Integrated RAID Module RMS25KB040</p> <p>SAS 6GB, 4 internal ports, LSI2308</p>	<ul style="list-style-type: none"> • Accessory kit
<p>iPC - RMS25KB080</p> 	<p>MM# - 924452 UPC - 00735858239004 EAN - 50320370337875 MOQ - 5</p>	<p>Intel® Integrated RAID Module RMS25KB080</p> <p>SAS 6GB, 8 internal ports, LSI2308</p>	<ul style="list-style-type: none"> • Accessory kit
<p>iPC - RMS25PB040</p> 	<p>MM# - 924869 UPC - 00735858238953 MOQ - 5</p>	<p>Intel® Integrated RAID Module RMS25PB040</p> <p>SAS 6GB, 4 internal ports, LSI2208, DDR3 1GB, optional Flash based Cache protection</p>	<ul style="list-style-type: none"> • Accessory kit

Intel® Server S1200SP Family Configuration Guide

Intel Product Code	Order Information	Product Description	Product Type
<p>iPC - RMS25PB080</p> 	<p>MM# - 924868 UPC - 00735858238946 MOQ - 5</p>	<p>Intel® Integrated RAID Module RMS25PB080</p> <p>SAS 6GB, 8 internal ports, LSI2208, DDR3 1GB, optional Flash based Cache protection</p>	<ul style="list-style-type: none"> • Accessory kit
<p>iPC - RMS25PB080N</p> 	<p>MM# - 922597 UPC - 00735858248587 EAN - 5032037043328 MOQ - 5</p>	<p>Intel® Integrated RAID Module RMS25PB080N</p> <p>SAS 6GB, 8 internal ports, LSI2208, DDR3 1GB</p>	<ul style="list-style-type: none"> • Accessory kit
<p>iPC - RMS3CC040</p> 	<p>MM# - 932473 UPC - 00735858276849 EAN - 5032037060455 MOQ - 5</p>	<p>Intel® Integrated RAID Module RMS3CC040</p> <p>SAS 12GB, 4 internal ports, LSI3108, DDR3 1GB</p>	<ul style="list-style-type: none"> • Accessory kit
<p>iPC - RMS3CC080</p> 	<p>MM# - 932474 UPC - 00735858276832 EAN - 5032037060448 MOQ - 5</p>	<p>Intel® Integrated RAID Module RMS3CC080</p> <p>SAS 12GB, 8 internal ports, LSI3108, DDR3 1GB</p>	<ul style="list-style-type: none"> • Accessory kit

Intel® Server S1200SP Family Configuration Guide

Intel Product Code	Order Information	Product Description	Product Type
<p>iPC - RMS3HC080</p> 	<p>MM# - 932469 UPC - 00735858276818 EAN - 5032037060424 MOQ - 5</p>	<p>Intel® Integrated RAID Module RMS3HC080</p> <p>SAS 12GB, 8 internal ports, LSI3008</p>	<ul style="list-style-type: none"> • Accessory kit
<p>iPC - RMT3PB080</p> 	<p>MM# - 924870 UPC - 00735858238960 MOQ - 5</p>	<p>Intel® Integrated RAID Module RMT3PB080</p> <p>SATA 6GB, 8 internal ports, LSI2208, DDR3 1GB, optional Flash based Cache protection</p>	<ul style="list-style-type: none"> • Accessory kit
<p>iPC - RMS3JC080</p> 	<p>MM# - 932472 UPC - 00735858276825 EAM - 5032037060431 MOQ - 5</p>	<p>Intel® Integrated RAID Module RMS3JC080</p> <p>A 12-Gb eight internal port SAS 3.0 mezzanine card with I/O Controller (IOC), entry-level RAID 0,1, JBOD mode, and PCIe Generation 3.</p>	<ul style="list-style-type: none"> • Accessory kit
<p>iPC - RKSATA4R5</p> 	<p>MM# - 916348 UPC - 00735858238885 EAN - 5032037033664 MOQ - 5</p>	<p>Intel® RAID Upgrade Key RKSATA4R5</p> <p>Enables LSI SATA SW RAID 5</p>	<ul style="list-style-type: none"> • Accessory kit

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Intel Product Code	Order Information	Product Description	Product Type
<p>iPC - AXXRSBBU9</p> 	<p>MM# - 919738 UPC - 00735858220286 MOQ - 5</p>	<p>Intel® RAID Smart Battery AXXRSBBU9</p> <p>Provides optional battery backup for mainstream RS25, RMS25, RT3 and RMT3 family RAID products.</p>	<ul style="list-style-type: none"> • Accessory kit
<p>iPC - AXXRMFBU5</p> 	<p>MM# - 933907 UPC - 00735858276801 EAN - 5032037060417 MOQ - 5</p>	<p>Intel® RAID Maintenance Free Backup Unit AXXRMFBU5</p> <p>Super-capacitor module and flash memory card designed to help protect data in dynamic memory during a power failure or system crash event.</p>	<ul style="list-style-type: none"> • Accessory kit
<p>iPC - AXXRMFBU2</p> 	<p>MM# - 926341 UPC - 007358582445415 MOQ - 5</p>	<p>Intel® RAID Maintenance Free Backup Unit</p> <p>Provides optional battery backup for mainstream RMS25, and RMT3 family RAID products.</p>	<ul style="list-style-type: none"> • Accessory kit

5.5 Rack Mount Kits

Intel Product Code	Order Information	Product Description	Product Type
<p>iPC - AXXVPSRAIL</p> 	<p>MM# - 928722 UPL - 00735858265324 EAN - 5032037053280 MOQ - 1</p>	<p>Value Plus Short Rail</p> <ul style="list-style-type: none"> • 424mm max travel length • 129 lbs (59 Kg) max support weight • Front and rear mounting bracket adjustment distance: 609mm to 705mm • Stab-in system install • x8 #10-32 screws to mount rail kit on rack flange (screw kit come with rail kit assembling) • No cable management arm support 	<ul style="list-style-type: none"> • 1U accessory kit

6 Miscellaneous Accessory Options

Intel Product Code	Order Information	Product Description	Product Type
<p>iPC - AXXRMM4LITE2</p> 	<p>MM# - 946514 UPC - 00735858307413 EAN - 5032037080750 MOQ - 1</p>	<p>Intel® Remote Management Module RMM4 LITE - Remote KVM upgrade Key (RoHS free)</p>	<ul style="list-style-type: none"> • Accessory kit
<p>iPC - AXXRMM4LITE</p> 	<p>MM# - 911660 UPC - 00735858219297 EAN - 5032037014946 MOQ - 1</p>	<p>Intel® Remote Management Module RMM4 LITE - Remote KVM upgrade Key</p>	<ul style="list-style-type: none"> • Accessory kit
<p>iPC - AXXT PME3</p> 	<p>MM# - 922115 UPC - 00735858219310 EAN - 5032037015196 MOQ - 1</p>	<p>Intel® TPM Trusted Platform Module for E3 platform</p> <p>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>AXXT PME3 implements TPM as per TPM PC Client specifications revision 1.2 by the Trusted Computing Group (TCG)</p>	<ul style="list-style-type: none"> • Accessory kit

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Intel Product Code	Order Information	Product Description	Product Type
<p>iPC – AXXTPM SPE6</p> 	<p>MM# – 958832 UPC – 00735858339551 EAN – 5032037101462 MOQ – 10</p>	<p>Intel® Trusted Platform Module (TPM)</p> <p>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>AXXTPM SPE6 implements TPM as per TPM PC Client specifications revision 2.0 by the Trusted Computing Group (TCG)</p>	<ul style="list-style-type: none"> • Accessory kit
<p>iPC - AXXSATADVDROM</p> 	<p>MM# - 937569 UPC — 00735858197663 EAN - 5032037015127 MOQ - 1</p>	<p>Slimline SATA DVDROM Drive</p> <ul style="list-style-type: none"> • Includes 880mm SATA cable. • A peripheral power cable is included with the systems that have support for optical drives. • Optical drives are not supported in R2312WT & R2224WT based systems. 	<ul style="list-style-type: none"> • 1U accessory kit
<p>iPC - AXXSATADVDRWROM</p> 	<p>MM# - 937575 UPC - 00735858197670 EAN - 5032037015134 MOQ - 1</p>	<p>Slimline SATA DVD+/-RW ROM Drive</p> <ul style="list-style-type: none"> • Includes 880mm SATA cable. • A peripheral power cable is included with the systems that have support for optical drives. • Optical drives are not supported in R2312WT & R2224WT based systems. 	<ul style="list-style-type: none"> • 1U accessory kit

7 Spare and Replacement Parts (FRUs)

System integrators and distributors may choose to hold additional stock of individual system components. Intel® makes available the following Spare and Replacement Parts (FRUs) compatible with the specified Intel® server family.

Intel Product Code	Order Information	Product Description	Product Type
<p>iPC - FXX35HSCAR</p> 	<p>MM# - 936192 UPC - 00735858289412 EAN - 5032037068390 MOQ - 8</p>	<p>3.5" HDD Hot Swap Carrier Spares</p>	<ul style="list-style-type: none"> Spare FRU
<p>iPC - FPWRCABLENA</p> 	<p>MM# - 879287 UPC - 00735858181129 EAN - 5032037015738 MOQ - 1</p>	<p>North American Power Cord Spare</p>	<ul style="list-style-type: none"> Spare FRU

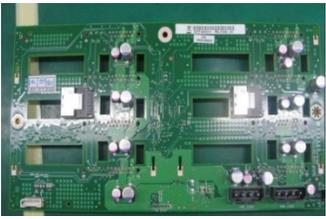
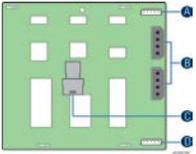
7.1 Tower Server System Spare FRUs

Intel Product Code	Order Information	Product Description	Product Type
iPC - FXXFPANELR 	MM# - 946534 UPC - 00735858307444 EAN - 5032037080781 MOQ - 1	Front Panel Board Spare <ul style="list-style-type: none"> For use on P4000XXSFDR chassis RoHS free Different from FXXFPANEL by 0.6mm offset of reset and power buttons 	<ul style="list-style-type: none"> Pedestal Spare FRU
iPC - AP4000E3V5PDB 	MM# - 943589 UPC - 00735858306546 EAN - 5032037080002 MOQ - 1	P4000 Power Distribution Board Spare For P4000XXSFDR chassis	<ul style="list-style-type: none"> Pedestal Spare FRU
iPC - FUP365SNRPS 	MM# - 911884 UPC - 00735858219433 EAN - 5032037016223 MOQ - 1	365W Pedestal Fixed PSU Spare For P4304XXSFCN/P4304XXSHCN chassis Note: Product Discontinuance has been announced for this SKU. As of July 1st 2018 it is not possible to order this product. See PCN 116128-01 for more details.	<ul style="list-style-type: none"> Pedestal Spare FRU
iPC - FXX460GCRPS 	MM# - 915603 UPC - 00735858235846 EAN - 5032037030595 MOQ - 1	460W Cold Redundant Power Supply Spare 80Plus Gold Efficiency For P4000XXSFDR chassis	<ul style="list-style-type: none"> Pedestal Spare FRU

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Intel Product Code	Order Information	Product Description	Product Type
<p>iPC - FUP4X35NHDK</p> 	<p>MM# - 912770 UPC - 00735858219488 EAN - 5032037016247 MOQ - 4</p>	<p>Fixed Drive Carrier for Fixed Pedestal Chassis</p>	<ul style="list-style-type: none"> • Pedestal Spare FRU
<p>iPC - FUPSESK</p> 	<p>MM# - 912774 UPC - 00735858219525 EAN - 5032037016285 MOQ - 1</p>	<p>Chassis Maintenance Kit for P4000S Chassis (Electrical Spare Kit)</p> <ul style="list-style-type: none"> • These parts in the kit can be used with S1200SP: • 1x intrusion cable, 200mm • 3x SATA power cables, one 4- pin ATX power header to 2 SATA power headers, 150mm • 1x SATA Cable, one right angle header to one vertical header, 600mm (4 cables) • 1xSGPIO Cable, one 5-pin header to one 5-pin header and one 4-pin header • 1x I²C Cable, one 5-pin header to one 3 pin header, 600mm • These parts in the kit cannot be used with S1200SP: • 1x Front Panel Cable, 920mm • 1x USB Cable, one 2x5 pin header to two USB type A female headers, 950mm, USB 2.0 cable • 1xSATA power adaptor extend cable, 24-pin header to 24-pin header, 630mm • Note: FUPSESK kit is required to enable front panel USB ports in P4000XXSFDR + S1200SPSR configuration 	<ul style="list-style-type: none"> • Pedestal Spare FRU
<p>iPC - FUPSNHFANE3</p> 	<p>MM# - 912772 UPC - 00735858219501 EAN - 5032037016308 MOQ - 1</p>	<p>92mm Rear Fan Kit</p> <p>Includes: (1) 92 mm fan (1) rear vent cover Spare for P4000 Pedestal* Chassis</p>	<ul style="list-style-type: none"> • Pedestal Spare FRU

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Intel Product Code	Order Information	Product Description	Product Type
<p>iPC - AS1200SPSIOS</p> 	<p>MM# - 944200 UPC - 00735858306591 EAN - 5032037080057 MOQ - 10</p>	<p>I/O Shield for Intel® Server Board S1200SPSR</p>	<ul style="list-style-type: none"> • Pedestal Spare FRU
<p>iPC - AS1200SPLIOS</p> 	<p>MM# - 944201 UPC - 00735858306607 EAN - 5032037080064 MOQ - 10</p>	<p>I/O Shield for Intel® Server Board S1200SPLR</p>	<ul style="list-style-type: none"> • Pedestal Spare FRU
<p>iPC - FUP4X35HSBP</p> 	<p>MM# - 913595 UPC - 00735858220033 EAN - 5032037019279 MOQ - 1</p>	<p>4x3.5" 6Gb Hard Drive Hot Swap Backplane Spare for P4000 Chassis</p> <p>Includes: (1) 4x3.5" backplane board</p>	<ul style="list-style-type: none"> • Pedestal Spare FRU
<p>iPC - FUP8X35HSBP</p> 	<p>MM# - 916353 UPC - 00735858222792 EAN - 5032037033480 MOQ - 1</p>	<p>8x3.5" 6Gb Hard Drive Hot Swap Backplane Spare for P4000 Chassis</p> <p>Includes: (1) 8x3.5" backplane board</p>	<ul style="list-style-type: none"> • Pedestal Spare FRU
<p>iPC - FUP4X35S3HSBP</p> 	<p>MM# - 936423 UPC - 00735858289979 EAN - 5032037068819 MOQ - 1</p>	<p>Spare 4x3.5" 12Gb Hard Drive Hot Swap Backplane for P4000 Chassis</p> <p>Includes: (1) 4x3.5" backplane board</p>	<ul style="list-style-type: none"> • Pedestal Spare FRU

7.2 1U Rack Server System Spare FRUs

Intel Product Code	Order Information	Product Description	Product Type
<p>iPC - F1UE3PASSHS</p> 	<p>MM# - 928921 UPC - 00735858262538 EAN - 5032037051767 MOQ - 1</p>	<p>Passive Heatsink Spare</p> <p>Includes: (1) passive heatsink and (1) back plate For board used in 1u rack chassis</p>	<ul style="list-style-type: none"> • 1U spare FRU
<p>iPC - FR1304E3V5MSK</p> 	<p>MM# - 943587 UPC - 00735858306522 EAN - 5032037079983 MOQ - 1</p>	<p>Mechanical Spares Kit for R1304SPOSHBNR and R1304SPOSHORR</p>	<ul style="list-style-type: none"> • 1U spare FRU
<p>iPC - FR1304E3V5ESK</p> 	<p>MM# - 943588 UPC - 00735858306539 EAN - 5032037079990 MOQ - 1</p>	<p>Electrical Spares Kit for R1304SPOSHBNR and R1304SPOSHORR</p>	<ul style="list-style-type: none"> • 1U spare FRU
<p>iPC - AXX1UPCIEX16R2</p> 	<p>MM# - 946511 UPC - 00735858307390 EAN - 5032037080736 MOQ - 1</p>	<p>PCI-e riser card for 1U rack system, 1 x16 physical x8 electrical slot (RoHS free)</p>	<ul style="list-style-type: none"> • 1U spare FRU

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Intel Product Code	Order Information	Product Description	Product Type
<p>iPC - FR1000E3FAN</p> 	<p>MM# - 928726 UPC - 00735858266949 EAN - 5032037053624 MOQ -1</p>	<p>Spare fan used in 1U rack system</p>	<ul style="list-style-type: none"> • 1U spare FRU
<p>iPC - F1U450WPSU</p> 	<p>MM# - 921471 UPC - 00735858247962 EAN - 5032037042840 MOQ = 1</p>	<p>450W AC miniERP 80+ Gold efficiency power supply spare</p>	<ul style="list-style-type: none"> • 1U spare FRU
<p>iPC - FR1000PS350</p> 	<p>MM# - 912801 UPC - 00735858219853 EAN - 5032037015769 MOQ = 1</p>	<p>350W Fixed Power Supply FR1000PS350</p>	<ul style="list-style-type: none"> • 1U spare FRU
<p>iPC - F1U450WPDB2</p> 	<p>MM# - 946513 UPC - 00735858307406 EAN -- 5032037080743 MOQ - 1</p>	<p>450W AC miniERP 80+ Gold Efficiency Power Supply PDB and Cage Spare</p>	<ul style="list-style-type: none"> • 1U spare FRU
<p>iPC - FR1304S3HSBP2</p> 	<p>MM# - 947357 UPC - 00735858309264 EAN - 5032037081856 MOQ -1</p>	<p>1u 4x3.5 12G SAS backplane (RoHS free)</p>	<ul style="list-style-type: none"> • 1U spare FRU

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Intel Product Code	Order Information	Product Description	Product Type
<p>iPC - F1U8X25S3HSBP</p> 	<p>MM# - 934888 UPC - 00735858288798 EAN - 5032037068079 MOQ - 1</p>	<p>1u 8x2.5 12G SAS backplane</p>	<ul style="list-style-type: none"> • 1U spare FRU

8 Extended Warranty

Image	Order Information	Description
 <small>Electronics Key: Intel® Server Component Extended Warranty, 30 Day</small> <small>Intel® Server Component Extended Warranty Key: AAAAAAAAAAAAAAAAAA</small>	iPC - SVCEWUPSY MM# - 911293 MOQ - 1	Two years extended warranty for Intel® Server Systems or Intel® Server Knock Down Kits+ Intel® Server Boards that support single processor
 <small>Electronics Key: Intel® Server Component Extended Warranty, 30 Day</small> <small>Intel® Server Component Extended Warranty Key: AAAAAAAAAAAAAAAAAA</small>	iPC - SVCEWUPBD MM# - 911292 MOQ - 1	Two years extended warranty for Intel® Server Boards that support single processor
 <small>Electronics Key: Intel® Server Component Extended Warranty, 30 Day</small> <small>Intel® Server Component Extended Warranty Key: AAAAAAAAAAAAAAAAAA</small>	iPC - SVCEWRAID MM# - 911298 MOQ - 1	Two years extended warranty for Intel® RAID Controllers. Batteries are not included in the Extended Warranty.

Appendix A. Glossary of Terms

A list of Acronyms and Terms used throughout this document

Acronym or Term	Definition	Acronym or Term	Definition
CRPS	Common Redundant Power Supply	QSFP	Quad Small Form factor Pluggable
EAN	International Article Number (Barcode)	RAID	Redundant Array of Independent Drives
FDR Infiniband	Fourteen Data Rate Infiniband	Required Option	Hardware that must be added to the shipping configuration for the system to operate
FRU	Field Replaceable Unit	RMFBU	RAID Maintenance Free Backup Unit
iPC	Intel® Product Code	RMM4 Lite	Intel® Remote Management Module 4 Lite Activation key
iPN	Intel® Part Number	ROC	RAID on Chip
KDK	Knock-Down-Kit – (Chassis only product)	RSTe	Intel® Rapid Storage Technology
KVM	Keyboard / Video / Mouse	SAS	Serial Attached SCSI
MM	Master Material order number	SATA	Serial ATA
MOQ	Minimum Order Quantity	SFP	Small Form factor Pluggable
NVMe	NVM Express – based on Non-Volatile Memory Host Controller Interface Specification (NVMeHCI)	SKU	Stock Keeping Unit
Optional Accessory	Hardware that can be added to the system to enhance the default feature set of the shipping configuration	SSD	Solid State Drive
		UPC	Universal Product Code (Barcode)

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