

Intel[®] Server Board S2600WT Family Intel[®] Server Chassis R1000WT & R2000WT Family Intel[®] Server System R1000WT & R2000WT Family

Product Family Configuration Guide

A *Reference document* used to assist with ordering parts and accessories available to configure an Intel server system based on the Intel[®] Server S2600WT product family.

Revision 2.02 July 2015

Intel[®] Server Boards and Systems

Document Revision History

Date Published	Revision	Revision Change Description
September 2014	1.0	First Public Release
November 2014	1.16	Updates to product illustrations and MM# for Intel®RAID Modules
March 2015	1.17	 Content updates: DC Power Supply option target availability date New Rail kit options target availability date Removed I/O Module AXX10GBTWLIOM – Not supported Added I/O Module AXX10GBTWLIOM3 with target availability date
April 2015	2.0	Document Upgrade • New document format • New product definition/data tables • New graphics • Improved guidance for configuration requirements • Improved descriptions for product family definition • Updated SAS/SATA data cable guide • Updated Disclaimer Statements
May 2015	2.01	 Document changes: Added "Server" reference to product family naming Corrected 1U riser part number in 1U L6 BOM Lists Updated Server Board, Chassis only and L6 product weight information
July 2015	2.02	Document Upgrade • Updated AXX750DCCRPS target availability date • Updated A1USHRTRAIL Order Information • Updated A1UFULLRAIL Order Information • Updated AXXFULLRAIL Order Information • Updated AXXFULLRAIL Order Information • Updated AXXCMA2 Order Information

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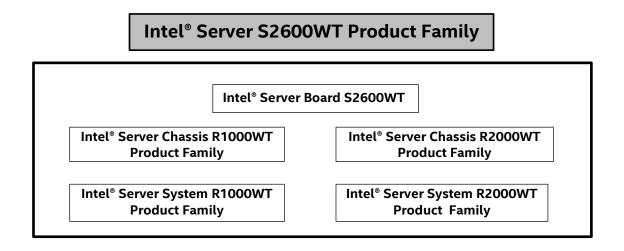
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1. Intel Server Family Overview

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

The Intel® S2600WT product family is offered as both building block options and integrated systems. The product family consists of the following:



Server Building Blocks:

- Intel[®] Server Board S2600WT Server Board only (Building block option and spare FRU)
- Intel[®] Server Chassis R1000WT product family 1U Rack Mount Server Chassis only
- Intel® Server Chassis R2000WT product family 2U Rack Mount Server Chassis only

Integrated Server Systems:

- Intel[®] Server System R1000WT product family 1U Rack Mount Server System integrated with an Intel[®] Server Board S2600WT
- Intel[®] Server System R2000WT product family 2U Rack Mount Server System integrated with an Intel[®] Server Board S2600WT

The Intel® S2600WT product family supports the following processors and memory:

- Intel[®] Xeon[®] processor E5-2600 v3 product family
 - Note: Previous generation Intel® Xeon® processors are not supported.
- DDR4 ECC RDIMM 1600, 1866, 2133
- DDR4 ECC LRDIMM 1600, 1866, 2133

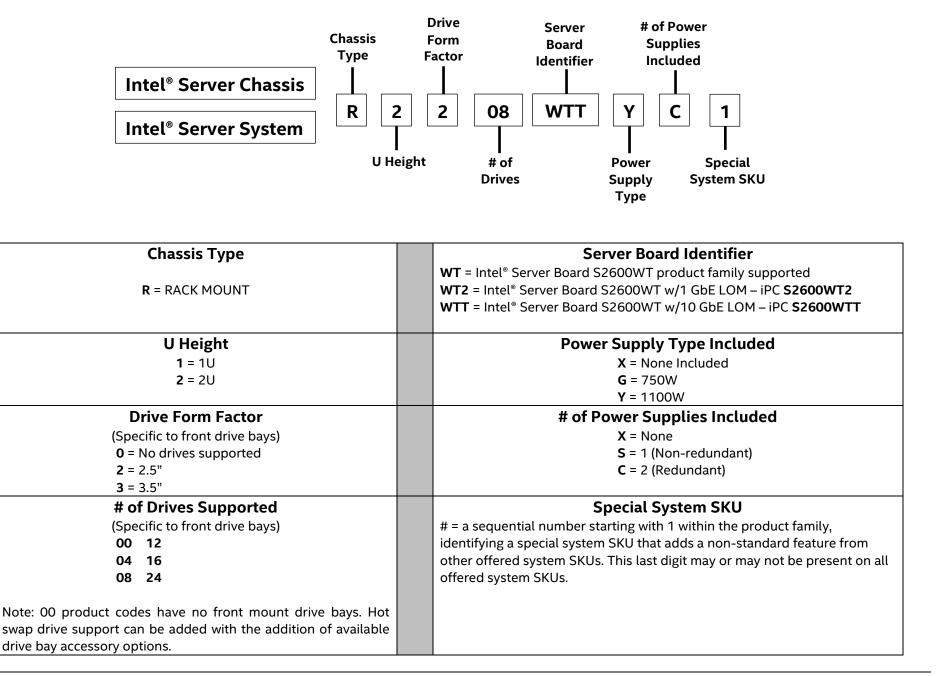
Additional Information and Software

For additional information about this family of products or any of their supported accessories, refer to the following resources available at <u>http://www.intel.com/support</u>.

Table 1. Product Family Reference Collaterals

For this information or software	Use this Document or Software					
	Intel [®] Server Board S2600WT Technical Product Specification					
	Intel [®] Server System R1000WT Product Family Technical Product Specification					
	Intel [®] Server System R2000WT Product Family Technical Product Specification					
	Intel® Remote Management Module 4 (Intel® RMM4) and Integrated BMC User Guide					
For in-depth technical information about this product	Intel® Remote Management Module 4 Technical Product Specification					
family	Intel® I/O Expansion Modules Hardware Specification					
	Intel [®] Server System BIOS Setup Utility Guide					
	Intel® Server Platform Firmware Specification Update					
	 Product Safety and Regulatory Compliance - Intel[®] Xeon[®] Processor E5-2600 v3 					
	http://www.intel.com/p/en_US/support/highlights/server/s2600wt?wapkw=s2600wt+family					
	Intel® Server System R1000WT product family System Integration and Service Guide					
For system integration instructions and service guidance	Intel® Server System R2000WT product family System Integration and Service Guide					
	http://www.intel.com/p/en_US/support/highlights/server/s2600wt?wapkw=s2600wt+family					
For conver configuration guidance and compatibility	Intel [®] Server Configurator tool					
For server configuration guidance and compatibility	http://serverconfigurator.intel.com					
	Intel [®] Server Board S2600WT Product Family Power Budget Tool and Thermal Configuration Guide					
For system power budget guidance	https://downloadcenter.intel.com/product/78562/Intel-Server-Board-S2600WT-Family					
For system firmware updates, onboard device drivers, and software to manage your Intel [®] Server System.	https://downloadcenter.intel.com/product/78562/Intel-Server-Board-S2600WT-Family					
For a complete list of supported processors, memory, add- in cards, and peripherals:	http://www.intel.com/p/en_US/support/category/server/s2600wt/doc_guide#					

1.1 Intel[®] Server S2600WT Product Family Naming Convention



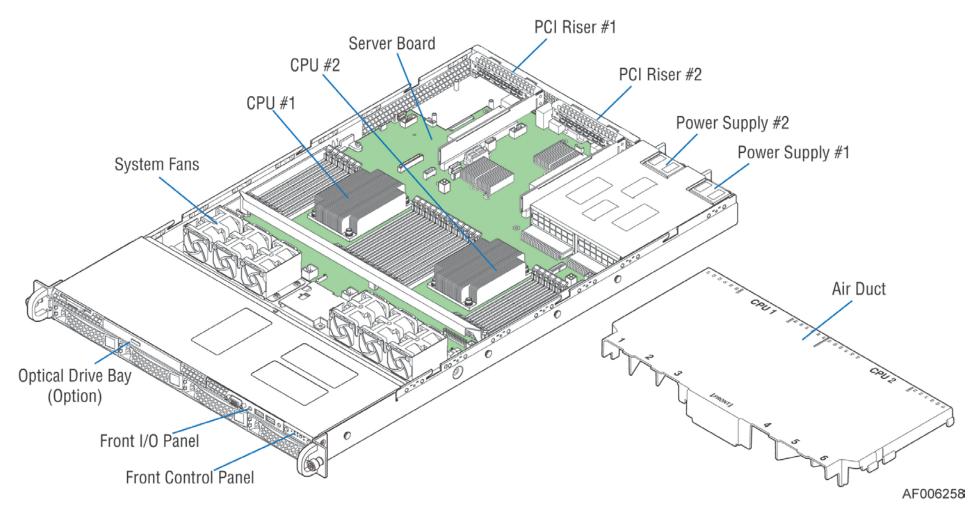


Figure 1. Intel[®] Server System R1000WT Feature Set Identification

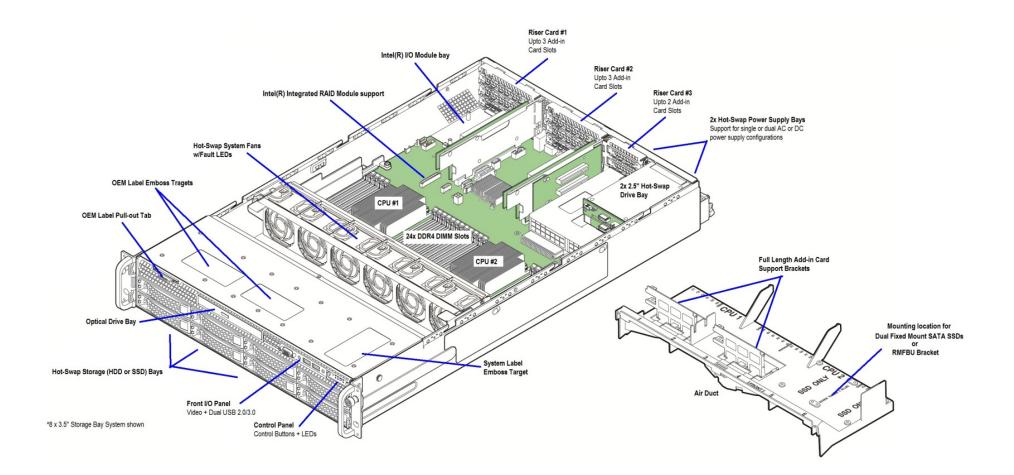


Figure 2. Intel® Server System R2000WT Feature Set Identification

1.2 Product Family Summary Chart

The Intel[®] S2600WT product family is built around either of two Intel[®] Server Board S2600WT options: S2600WTT and S2600WT2. The feature set of each server board option is identical except for the onboard LAN controller.

The **S2600WTT** SKU offers a LAN on Motherboard (LOM) option supporting dual RJ45 10Gb Base-T LAN ports. The **S2600WT2** SKU offers a LAN on Motherboard (LOM) option supporting dual RJ45 1Gb Base-T LAN ports.

The following tables provides an overview of available Intel product codes for building blocks and systems within the Intel[®] S2600WT product family. Each line item identifies key features supported in the shipping Intel SKU. Additional order code information and full product descriptions for each option are provided in later sections.

Table 2. Server Board Product Family Summary

Intel Product Code	# of CPU sockets	# of DIMM Slots	# of Riser Slots	Onboard RJ45 LAN ports	# of SATA ports (6 Gb)	SATA SW RAID Support	Intel® I/O Module Support	Intel® SAS RAID Module support
Server Board only								
S2600WT2	2	24	3	2 (1 Gb)	10	Yes	Yes	Yes
S2600WTT	2	24	3	2 (10 Gb)	10	Yes	Yes	Yes

Table 3. Server Chassis & Server System Product Family Summary

Intel Product Code	Chassis Form Factor	Drive Form Factor	# of Drives (front) ¹	# of Drives (rear)	# of PCIe* Add-in Card Slots	3 rd Riser	Power Supply Modules	Rails	SAS RAID	SAS Expander
Chassis Only (KDK)										
R1304WTXXX	1U	3.5"	4	na	opt	na	opt	opt	opt	na
R1208WTXXX	1U	2.5"	8	na	opt	na	opt	opt	opt	na
R2312WTXXX	2U	3.5"	12	opt	opt	opt	opt	opt	opt	opt
R2000WTXXX ²	2U	opt	opt	opt	opt	opt	opt	opt	opt	opt
2x 10G LOM System (L6 BIK)										
R1304WTTGS	1U	3.5"	4	na	2	na	1x 750W AC	opt	opt	na
R1208WTTGS	1U	2.5"	8	na	2	na	1x 750W AC	opt	opt	na
R2208WTTYS	2U	2.5"	8	opt	8	yes	1x 1100W AC	opt	opt	na
R2308WTTYS	2U	3.5"	8	opt	8	yes	1x 1100W AC	opt	opt	na
R2312WTTYS	2U	3.5"	12	2	6	opt	1x 1100W AC	opt	opt	opt
R2224WTTYS	2U	2.5"	24	2	6	opt	1x 1100W AC	opt	opt	opt
R2208WTTYC1 ³	2U	2.5"	8	opt	6	yes	2x 1100W AC	opt	opt	na

Intel® Server S2600WT Product Family Configuration Guide and Spares/Accessories List

Intel Product Code	Chassis Form Factor	Drive Form Factor	# of Drives (front) ¹	# of Drives (rear)	# of PCIe* Add-in Card Slots	3 rd Riser	Power Supply Modules	Rails	SAS RAID	SAS Expander
2x 1G LOM System (L6 BIK)										
R1304WT2GS	1U	3.5"	4	na	2	na	1x 750W AC	opt	opt	na
R1208WT2GS	1U	2.5"	8	na	2	na	1x 750W AC	opt	opt	na
R2208WT2YS	2U	2.5"	8	opt	8	yes	1x 1100W AC	opt	opt	na

Table Notes:

1 – All front drive bays are 12Gb SAS capable

2 – R2000WTXXX Chassis can support all 8x2.5" drive bay accessory options or 8x3.5" drive bay accessory option

3 – System SKU with included system features to support Intel[®] Xeon Phi[™] Coprocesser cards with **passive** (no fan) heat sink solutions. High power addin cards with **active** cooling solutions are NOT supported in this SKU.

Terms used in the table:

na – Not Applicable

opt – Accessory option sold separately

yes – Option included

KDK – Knock Down Kit – Intel PCSD term for chassis only product

BIK – Server Board in KDK – Intel PCSD term for integrated (L6) system product

 $\ensuremath{\text{L6}}$ – Integrated system with no processors, memory, or storage devices

1.3 Intel[®] S2600GZ/GL Product Family to Intel[®] Server S2600WT Product Family Transition Guide

If transitioning from the previous generation Intel[®] S2600GZ/GL product family, the following table can be used to identify an equivalent system within the Intel[®] S2600WT product family.

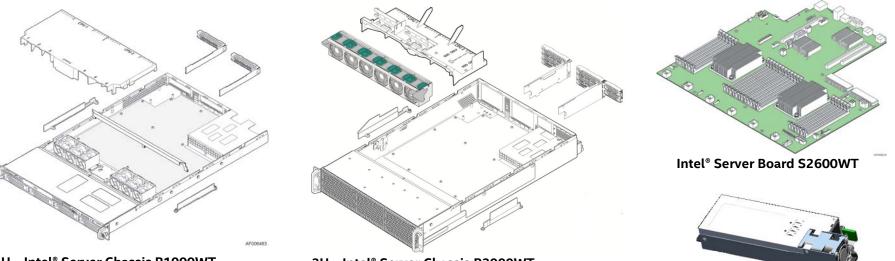
Prior Generation Product Code	New Generation 1G LOM SKU Product Code	New Generation 10G LOM SKU Product Code	Required accessories to match configuration		h configuration	Advantages included in current generation
R1208GL4DS	R1208WT2GS	R1208WTTGS	AXXELVRAIL	AXXRMM4LITE		750 vs460 PSU, 24 vs16DIMM
R1208GZ4GC	R1208WT2GS	R1208WTTGS	AXXELVRAIL	AXXRMM4LITE	FXX750PCRPS	
R1208GZ4GS9	R1208WT2GS	R1208WTTGS				
R1304GL4DS9	R1304WT2GS	R1304WTTGS				750 vs460 PSU, 24vs16DIMM
R1304GZ4GC	R1304WT2GS	R1304WTTGS	AXXELVRAIL	AXXRMM4LITE	FXX750PCRPS	
R1304GZ4GS9	R1304WT2GS	R1304WTTGS				
R2208GL4DS9	R2208WT2YS	R2208WTTYS				Rear drives option, 1100W vs 460W PSU, 3rd riser, 24vs16 dimms
R2208GL4GS	R2208WT2YS	R2208WTTYS	AXXELVRAIL	AXXRMM4LITE		Rear drives option, 1100W vs 750W PSU, 3rd riser, 24vs16 dimms
R2208GZ4GC	R2208WT2YS	R2208WTTYS	AXXELVRAIL	AXXRMM4LITE	AXX1100PCRPS	Rear drives option, 1100W vs 750W PSU, 3rd riser
R2208GZ4GS9	R2208WT2YS	R2208WTTYS				Rear drives option, 1100W vs 750W PSU, 3rd riser
R2224GZ4GC4		R2224WTTYS	AXXELVRAIL	AXXRMM4LITE		Rear drives included, 1100W vs 750W PSU, 3rd riser optional
R2308GL4GS		R2308WTTYS	AXXELVRAIL	AXXRMM4LITE		Rear drives option, 1100W vs 750W PSU, 3rd riser, 24vs16 dimms
R2308GZ4GC		R2308WTTYS	AXXELVRAIL	AXXRMM4LITE	AXX1100PCRPS	Rear drives option, 1100W vs 750W PSU, 3rd riser
R2308GZ4GS9		R2308WTTYS				Rear drives option, 1100W vs 750W PSU, 3rd riser
R2312GL4GS		R2312WTTYS	AXXELVRAIL	AXXRMM4LITE		Rear drives included, 1100W vs 750W PSU, 3rd riser optional, 24vs16 dimms
R2312GZ4GC4		R2312WTTYS	AXXELVRAIL	AXXRMM4LITE	AXX1100PCRPS	Rear drives included, 1100W vs 750W PSU, 3rd riser optional
R2312GZ4GS9		R2312WTTYS				Rear drives included, 1100W vs 750W PSU, 3rd riser optional

Table 4. 1U / 2U Server System Product Family Generation to Generation Transition Guide

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 seperately. At a minimum, building up a functional server system using building blocks will require the following:

- 1U or 2U Intel Server Chassis Intel® Server Chassis R1000WT or R2000WT
- Intel® Server Board S2600WT- S2600WT2 or S2600WTT
- SAS / SATA Data cables
- Power Supply module(s)
- Power cord(s)
- Rack mount kit Rails or fixed mount
- Processor
- Memory
- Storage Drives



1U – Intel[®] Server Chassis R1000WT

2U – Intel[®] Server Chassis R2000WT

750W or 1100W Power Supply Module

Optional Intel accessories that can be added include the following: See chapter 5 for available options.

- Riser cards 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

2.1 Building Block Recipe Summary

The following table is used to identify the building block options required to assemble an equivalent server system SKU offered within the Intel[®] Server System R1000WT or R2000WT product families.

The first column in the table identifies the available integrated system SKUs. The columns to the right of a specified system SKU identify the Intel building block kits required to assemble the equivalent system.

Intel L6 System Product Code	Building blocks needed to assemble an equivalent system									
	Intel Chassis Product Code	Server Board	Front Drive Bay assembly	Power Supply Modules	Riser Slot 1 and 2 Riser Cards	Riser Slot 3 Riser Card	Rear Drive Bay Assembly	SAS cables for 12Gb		
R1304WTTGS	R1304WTXXX	S2600WTT	included	(1x) FXX750PCRPS	(2x) F1UL16RISER2	NA	NA	800mm cable AXXCBL1UHRHD		
R1304WT2GS	R1304WTXXX	S2600WT2	included	(1x) FXX750PCRPS	(2x) F1UL16RISER2	NA	NA	800mm cable AXXCBL1UHRHD		
R1208WTTGS	R1208WTXXX	S2600WTT	included	(1x) FXX750PCRPS	(2x) F1UL16RISER2	NA	NA	AXXCBL1UHRHD		
R1208WT2GS	R1208WTXXX	S2600WT2	included	(1x) FXX750PCRPS	(2x) F1UL16RISER2	NA	NA	AXXCBL1UHRHD		
R2208WTTYS	R2000WTXXX	S2600WTT	A2U8X25S3HSDK	(1x) AXX1100PCRPS	(2x) A2UL8RISER2	A2UX8X4RISER	optional	AXXCBL730HDHD		
R2208WTTYC1	R2000WTXXX + AWTCOPRODUCT	S2600WTT	A2U8X25S3HSDK	(2x) AXX1100PCRPS	(2x) A2UL16RISER2	A2UX8X4RISER	optional	AXXCBL730HDHD		
R2208WT2YS	R2000WTXXX	S2600WT2	A2U8X25S3HSDK	(1x) AXX1100PCRPS	(2x) A2UL8RISER2	A2UX8X4RISER	optional	AXXCBL730HDHD		
R2224WTTYS	R2000WTXXX + A2UHANDLKIT	S2600WTT	(3x) A2U8X25S3HSDK	(1x) AXX1100PCRPS	(2x) A2UL8RISER2	optional	A2UREARHSDK	AXXCBL730HDHD + (2) AXXCBL875HDHD		
R2308WTTYS	R2000WTXXX	S2600WTT	A2U8X35S3HSDK	(1x) AXX1100PCRPS	(2x) A2UL8RISER2	A2UX8X4RISER	optional	1/2 kit of: AXXCBL800HDHD & AXXCBL950HDHD		
R2312WTTYS	R2312WTXXX	S2600WTT	included	(1x) AXX1100PCRPS	(2x) A2UL8RISER2	optional	A2UREARHSDK	AXXCBL800HDHD AXXCBL875HDHD AXXCBL950HDHD		

Table 5. 1U / 2U Building Block to Integrated System Recipe Guide

2.2 Intel[®] Server Board S2600WT Product Family SKUs

Intel Product Code (iPC)	Order Information	Product Description	Product Type
iPC – S2600WT2	MM# - 934880 UPC - 00735858288859 EAN - 5032037068130 MOQ - 1 Packaged Gross Weight 3.1 Kgs, 6.8 Lbs Un-packaged Net Weight 1.7 Kgs, 3.8 Lbs	 Intel[®] Server Board S2600WT2 Support for dual Intel[®] Xeon E5-2600 v3 processor family Maximum supported TDP for board 145W (not available in all chassis configurations) Intel[®] C612 chipset 24 DDR4 DIMM Slots 8 AHCI SATA 6Gb ports thru two 4-port SFF-8643 connectors 2 AHCI SATA 6Gb ports for ODD, DOM, SSD thru two 7-pin SATA connectors 2 Integrated 1Gb ports (Intel[®] Ethernet Controller 1350) Integrated Baseboard Management controller with IPMI 2.0 support Optional advanced management features activated by AXXRMM4LITE key Dedicated 1Gb management port onboard Support for up to 3 riser cards with multiple Intel riser card options NOTE - 2 CPUs required for riser #2 and riser #3 support Support for Intel[®] I/O expansion module option Support for Intel[®] SAS module option 	 Server Board only Building block option Spare FRU
		Box includes: one server board Note: All necessary mounting hardware, cabling, and shielding will ship with the Intel chassis and optional accessory kits.	
iPC – S2600WTT	MM# - 934882 UPC - 00735858288842 EAN - 5032037068123 MOQ - 1 Packaged Gross Weight 3.1 Kgs, 6.8 Lbs Un-packaged Net Weight 1.7 Kgs, 3.8 Lbs	 Intel[®] Server Board S2600WTT Support for dual Intel[®] Xeon E5-2600 v3 processor family Maximum supported TDP for board 145W (not available in all chassis configurations) Intel[®] C612 chipset 24 DDR4 DIMM Slots 8 AHCI SATA 6Gb ports thru two 4-port SFF-8643 connectors 2 AHCI SATA 6Gb ports for ODD, DOM, SSD thru two 7-pin SATA connectors 2 Integrated 10Gb ports (Intel[®] Ethernet Controller X-540) Integrated Baseboard Management controller with IPMI 2.0 support Optional advanced management features activated by AXXRMM4LITE key Dedicated 1Gb management port Support for up to 3 riser cards with multiple Intel riser card options NOTE - 2 CPUs required for riser #2 and riser #3 support Support for Intel[®] I/O expansion module option Support for Intel[®] SAS module option 	 Server Board Only Building block option Spare FRU
		Note: All necessary mounting hardware, cabling, and shielding will ship with the Intel chassis and optional accessory kits.	

2.3 Intel[®] Server Chassis R1000WT Product Family SKUs – (1U Rack Mount Chassis)

The product tables found in this section provide order code information and detailed descriptions for each available 1U 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 seperately from the specified Intel server building block
- Items identifed 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.

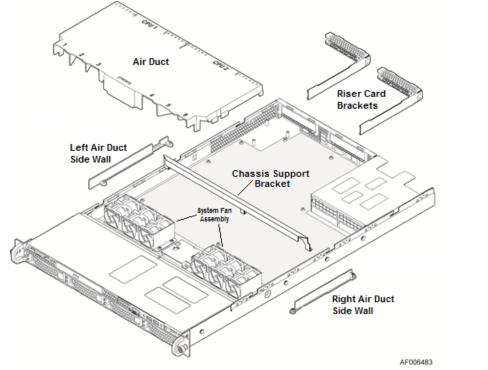


Figure 3. Intel® Server Chassis R1000WT – 1U Chassis only Building Block (KDK)

Intel Product Code (iPC): R1304WTXXX Image: Comparison of the second s	Order Code Information: MM# - 936121 UPC - 00735858287944 EAN - 5032037067492 MOQ - 1 ct Definition and Configura	Packaged Gross Weig Un-packaged Net Wei Outer Box Dimensions	IU rack mount =712mm, W=439mm, H=43.2mm
 Intel product code R1304WTXXX includes the following components: (1) – 1U Chassis with Quick Reference Label affixed to top cover (1) – Air duct (6) – Dual rotor system fans – iPC FR1UFAN10PW (1) – Pre-installed Standard Control Panel assembly (board only – iPC FXXFPANEL) (1) – Pre-installed Front I/O Panel assembly (1 x VGA and 2 x USB) (w/internal attach cables) (1) – SATA Optical drive bay with filler panel Includes optical drive power cable – iPN H19168-00x (4) – 3.5" Hot-swap drive bays with drive carriers and drive blanks includes (1) 12 Gb SAS backplane – iPC FR1304S3HSBP includes (1) 12 Gb SAS backplane – iPC FR1304S3HSBP includes (1) 3.5" hot swap drive carriers – iPC FXX35HSCAR (1) – Server board to backplane power cable – iPN H38458-00x (1) – Server board to backplane I2C cable – iPN H38458-00x (2) – CPU heat sink Mylar Spacer inserts – iPN H28618-00x (2) – CPU heat sink Mylar Spacer inserts – iPN H28618-00x (2) – Riser card mounting brackets – (riser cards sold separately. Sechapter 5.7.1) (1) – Power Supply Bay blank insert (8) – DIMM slot blanks – iPN H43597-00x (2) – CAssis handles (1 set) installed – iPN H19171-00x (2) – AC Power Cord retention strap assembly – iPN H23961-00x Server board and riser card mounting screws Spares for each screw type included 	Required Items - • Intel® Server Board S. • iPC S2600WT2 • iPC FXX750PC Supply Module • iPC AXX750DC Supply Module • iPC AXX750DC Supply Module • Power Cord(s) – See of • Rack Mount Kit – See • 1 or 2 Intel® Xeon® Pr product family • ECC DDR4 memory (F	Sold Separately: 2600WT (choose one) 2 – with 1G LOM 5 – with 10G LOM 6(s) – (Choose one type) 4s required for RPS – 750 W AC Power 2 CRPS – 750 W DC Power 4 (Available Late Q2 2015) chapter 5.10 chapter 5.11 ocessor E5-2600 v3	 Optional Intel Accessories – Sold Separately: iPC F1UL16RISER2 – One x16 PCIe* 3.0 slot Riser Card – (1 for each riser slot) Intel® I/O Module – See chapter 5.8 for options Intel® SAS RAID Card / Module – See section 5.9 for options SAS/SATA Data cables – Cable selection is dependant on desired storage option. See Chapter 4.2.1 for available cable options iPC A1UBEZEL – Lockable front system bezel iPC AXXRMM4LITE – Intel® Remote Management Module Lite key. For advanced management features Storage Drives

Intel Product Code (iPC):	Order Code Information: MM# - 936187		Product Type: Chassis Only Chassis Form Factor: 1U rack mount Chassis dimensions: L=712mm, W=439mm, H=43.2mm		
R1208WTXXX					
	UPC - 00735858287951				
	EAN - 50320	37067508	Packaged Gross Weight: 19 Kgs, 41.9 Lbs		
AF00504	MOQ - 1		Un-packaged Net Weight: 10.3 Kgs, 22.7 Lbs		
1U – 8 x 2.5" front mount drives	MOQ - 1		Outer Box Dimensions: L=983mm, W=577mm, H=260mm		
Prod	uct Definition	and Configurat	ion Requirements		
Product code R1208WTXXX includes the following components: (1) – 1U Chassis with Quick Reference Label affixed to top cover (1) – Air duct (6) – Dual rotor system fans – iPC FR1UFAN10PW (1) – Pre-installed Standard control panel assembly (board only if FXXFPANEL) (1) – Pre-installed Front I/O Panel assembly (1 x VGA and 2 x USB (w/internal attach cables) If removed, can be used as an optical drive bay. Includes optical drive mounting latch kit – iPN H19168-C Includes optical drive power cable – iPN H23851-00x (8) – 2.5" Hot-swap drive bays with drive carriers and drive blanks Includes (1) 12 Gb SAS backplane – iPC F108X25S3HSB Includes (8) 2.5" hot swap drive carriers – iPC FXX25HSCAR2 (1) – Server board to backplane power cable – iPN H38457-00x (1) – Server board to backplane power cable – iPN H38457-00x (2) – CPU heat sink Mylar Spacer inserts – iPN H28618-00x (2) – CPU heat sink Mylar Spacer inserts – iPN H28618-00x (2) – Riser card mounting brackets – (riser cards sold separately. Schapter 5.7.1) (1) – Power Supply Bay blank insert (8) – DIMM slot blanks – iPN H43597-00x (2) – Chassis handles (1 set) installed – iPN H19171-00x (2) – AC Power Cord retention strap assembly – iPN H23961-00x	PC PC PO PO PO PO PO PO PO PO PO PO	P Server Board S2 iPC S2600WT2 iPC S2600WT7 iPC S2600WT7 iPC S2600WT7 iPC S2600WT7 iPC S2600WT7 iPC S2600WT7 iPC S2600WT7 Supply Module iPC SUPPLY Module iPC AXX750PCF Supply Module	Sold Separately: 600WT (choose one) – with 1G LOM – with 10G LOM (s) – (Choose one type) s required for RPS – 750 W AC Power (RPS – 750 W DC Power (Available Late Q2 2015) hapter 5.10	 Optional Intel Accessories – Sold Separately: iPC F1UL16RISER2 – One x16 PCle* 3.0 slot Riser Card – (1 for each riser slot) Intel® I/O Module – See chapter 5.8 for options Intel® SAS RAID Card / Module – See section 5.9 for options SAS/SATA Data cables – Cable selection is dependant on desired storage option. See Chapter 4.2.2 for available cable options iPC A1UBEZEL – Lockable front system bezel iPC AXXRMM4LITE – Intel® Remote Management Module Lite key. For advanced management features iPC A1U44X25NVMEDK – (4) PCle* SSD SFF (NVMe*) + (4) SAS support – replaces exising backplane and requires use of one PCle* slot. See system accessories table or System TPS for details Storage Drives 	
Server board and riser card mounting screws Spares for each screw type included					

2.4 Intel[®] Server Chassis R2000WT Product Family SKUs – (2U Rack Mount Chassis)

The product tables found in this section provide order code information and detailed descriptions for each available 2U 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 seperately from the specified Intel server building block
- Items identifed 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.

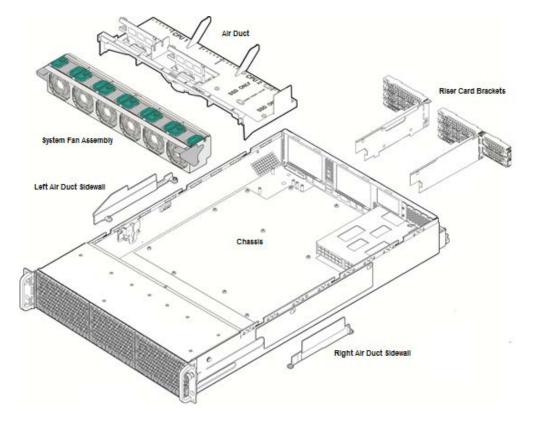


Figure 4. Intel[®] Server Chassis R2000WT – 2U Chassis only Building Block (KDK)

Intel Product Code (iPC): R2312WTXXX	Order Code Information: MM# - 936022 UPC - 00735858288729 EAN - 5032037068000		
2U – 12 x 3.5" HDD or 12 x 2.5" SSD front mount drives Product Intel product code R2312WTXXX includes the following components: (1) – 2U Chassis with Quick Reference Label affixed to top cover (1) – Air duct (6) – Hot swap system fans – iPC FR2UFAN60HSW (2) – Chassis Handles (1 set) installed, with Integrated control panel	MOQ - 1 t Definition and Configuration Required Items - So Intel [®] Server Board S26 o iPC S2600WT2 - o iPC S2600WTT - Power supply module(stype) two common mo	Outer Box Dimensi tion Requirements old Separately: 500WT (choose one) - with 1G LOM - with 10G LOM s) – (Choose one	 Weight: 14.4 Kgs, 32.0 Lbs ions: L=983mm, W=577mm, H=260mm Optional Intel Accessories – Sold Separately: Riser Cards – Up to three riser cards can be installed concurrently – See chapter 5.7 Risers Slots #1 and #2 – Available riser cards include:
 & USB Port - iPC A2UHANDLKIT (12) - 3.5" Hot-swap drive bays with drive carriers and drive blanks Includes (1) 12 Gb SAS backplane – iPC F2U12X35S3HSBP – (SAS Data cables sold seperately) Includes (12) 3.5" hot swap drive carriers – iPC FXX35HSCAR (1) - Backplane I2C cable – iPN G92510-00x (1) - Backplane power cable – iPN G92685-00x (1) - Internal fixed mount SSD power cable – iPN H23901-00x (2) - CPU heatsinks – iPC FXXCA84X106HS (2) - CPU heat sink Mylar Spacer inserts – iPN H28618-00x (2) - Riser Card mouting brackets supporting up to 3 riser cards – (risers cards sold seperately – See chapter 5.7.2) (1) - Power Supply Bay blank insert (16) - DIMM slot blanks - iPN H43597-00x (1) - 3x RMFBU Mounting Bracket – iPN H18238-00x (2) - AC Power Cord retention strap assembly – iPN H23961-00x Server Board and Riser Card mounting screws Spares for each screw type included 	 Power Supply M iPC FXX750PCR Power Supply M iPC AXX750DCC 	odule PS – 750 W AC odule RPS – 750 W DC odule (Available Late apter 5.10 hapter 5.11 cessor E5-2600 v3	 iPC A2UL8RISER2 – (3) x8 PCle* 3.0 slots iPC A2UL16RISER2 – (1) x16 PCle* 3.0 slot + (1) x8 PCle* 3.0 slot Riser Slot #3 – Available riser cards include: iPC A2UX8X4RISER – (1) Low profile x8 PCle* 3.0 slot + (1) LP x8 PCle* 2.0 slot Rear Storage Bay Option – See chapter 5.3 iPC A2UREARHSDK – Up to (2) hot swap SATA SSDs Intel® I/O Module – See chapter 5.8 for options Intel® SAS RAID Card / Module – See section 5.9 for options SAS/SATA Data cables – Cable selection is dependant on desired storage option. See Chapter 4.2.4 for available cable options iPC A2UBEZEL – Lockable front system bezel iPC AXXRMM4LITE – Intel® Remote Management Module Lite key. For advanced management features Storage Drives

R2000WTXXX MM# - 936021 Product Type: Chassis only UPC - 00735858287968 Chassis Form Factor: 2U rack mount 2U - No front mount drives Product Type: Chassis only UP - No front mount drives Product Type: Chassis only Product Type: Chassis only Chassis form Factor: 2U rack mount 10 - 2U - No front mount drives Product Definition and Configuration Requirements Intel product code R2000WTXXX includes the following components: Product Tefnition and Configuration Requirements (1) - 2U Chassis with Quick Reference Label affixed to top cover Intel* Server Board S2600WT (chose one) (1) - Air duct Intel* Server Board S2600WT (chose one) (1) - Pre-installed Standard control panel assembly - (board only iPC FXXFPAREL Intel* Server Board S2600WT (chose one) (1) - Pre-installed Front I/O Panel assembly (1 x VGA and 2 x USB) (w/internal attach cables) IPC A2U8X25S3HSDK - SAS/SATA (1) - Pre-installed Front I/O Panel assembly (1 x VGA and 2 x USB) (w/internal attach cables) IPC AXX1100PCRPS - 1100W AC Power Supply Module (Avaitable required for redundancy (1) - IPC cable - server board to backplane - iPN G41809- 00X (backplane sold separately) IPC AXX750DCCRPS - 750 WAC Power Supply Module (Avaitable Lae Q2 2015) IPC A2U8X3SSHSDK - 8 x 3.5" drive + Optical drive bay SATA SSDs (1) - IPC cable - server board to backplane - iPN G41809- 00X (backpla	Intel Breduct Code (iBC):	Order Code Information:	[]		
Intel product code R2000WTXXX includes the following components: Required Items – Sold Separately: Optional Intel Accessories – Sold Separately (1) – 2U Chassis with Quick Reference Label affixed to top cover • Intel® Server Board S2600WT (choose one) • IPC S2600WT2 – with 1G LOM • IPC S2600WT2 – with 1G LOM • IPC S2600WT1 – with 10G LOM (1) – Air duct • iPC S2600WT1 – with 10G LOM • iPC S2600WT1 – with 10G LOM • iPC A2U8X25S3BDFK – SAS/SATA (1) – Pre-installed Standard control panel assembly – (board only iPC FXXFPANEL • iPC AXX1100PCRPS – 1100W AC • iPC AXX1100PCRPS – 1100W AC (1) – Pre-installed Front I/O Panel assembly (1 x VGA and 2 x USB) (w/internal attach cables) • iPC AXX750PCRPS – 750 W AC • iPC AXX750PCCRPS – 750 W AC (1) – 12C cable - server board to backplane – iPN G41809- 00X (backplane sold separately) • iPC CAXX750PCCRPS – 750 W AC • iPC CAXX750PCCRPS – 750 W AC (1) – Itermal fixed mount SSD / optical drive power cable • iPC CAXX750PCCRPS – 750 W DC • iPC CAXX750PCCRPS – 750 W DC (2) – Riser Card mouting brackets supporting up to 3 riser cards (riser cards sold separately) • Power Cord(s) – See chapter 5.11 • iPC CAUBRARHSDK – Up to (2) hot swap SATA SSDs (2) – CPU heatsinks – iPC FXXC84X106HS • ind r2 Intel® Xeon® Processor E5-2600 • iser Cards – Up to three riser cards can be installed concurrently (2) – CPU heatsinks – iPC FXXC84X106HS •	Image: Construction of the second	MM# - 936021 UPC - 00735858287968 EAN - 5032037067515 MOQ - 1	hassis Form Factor: 2U rack mount hassis dimensions: L=712mm, W=439mm, H=89mm ackaged Gross Weight: 19 Kgs, 41.9 Lbs In-packaged Net Weight: 13.3 Kgs, 29.3 Lbs Duter Box Dimensions: L=983mm, W=577mm, H=260mm		
 (1) - Power supply bay blank insert (16) - DIMM slot blanks - iPN H43597-00x (2) - Rack chassis handles (1 set) installed - iPN H18229-xxx (1) - 3x RMFBU Mounting Bracket - iPN H18238-00x (2) - AC Power Cord retention strap assembly - iPN H23961-00x Server Board and Riser Card mounting screws Spares for each screw type included Intel® SAS RAID Card / Module - See section 5.9 for options Intel® I/O Module - See chapter 5.8 for options Intel® I/O Module - See chapter 5.8 for options Intel® I/O Module - See chapter 5.8 for options 	 Intel product code R2000WTXXX includes the following components: (1) – 2U Chassis with Quick Reference Label affixed to top cover (1) – Air duct (6) – Hot swap system fans – iPC FR2UFAN60HSW (1) – Pre-installed Standard control panel assembly – (board only iPC FXXFPANEL (1) – Pre-installed Front I/O Panel assembly (1 x VGA and 2 x USB) (w/internal attach cables) (1) – SATA Optical drive bay with filler panel and optical drive mounting latch (1) – I2C cable - server board to backplane – iPN G41809-00x (backplane sold separately) (1) – Internal fixed mount SSD / optical drive power cable - iPN H23901-xxx (2) – Riser Card mouting brackets supporting up to 3 riser cards (riser cards sold seperately – see chapter 5.7.2) (2) – CPU heat sink Mylar Spacer inserts – iPN H28618-00x (1) – DIMM slot blanks – iPN H43597-00x (2) – Rack chassis handles (1 set) installed – iPN H18229-xxx (1) – 3x RMFBU Mounting Bracket – iPN H18238-00x (2) – AC Power Cord retention strap assembly – iPN H23961-00x Server Board and Riser Card mounting screws 	Required Items – Sold Separ Intel® Server Board S2600WT (cone) o iPC S2600WT2 – with 100 o iPC S2600WT7 – with 100 o iPC S2600WT7 – with 100 Power supply module(s) – (Chootype) two common modules redundancy o iPC AXX1100PCRPS – 110 Power Supply Module o o iPC FXX750PCRPS – 750 Power Supply Module o o iPC AXX750PCRPS – 750 Power Supply Module o o iPC AXX750PCRPS – 750 Power Supply Module o o iPC AXX750DCCRPS – 750 Power Supply Module o o iPC AXX750DCCRPS – 750 Power Supply Module o o iPC AXX750DCCRPS – 750 Power Supply Module o iPC AXX750DCCRPS – 750 Power Cord(s) – See chapter 5.7 Rack Mount Kit – See chapter 5.7 Rack Mount Kit – See chapter 5.7 1 or 2 Intel® Xeon® Processor E v3 product family	rately:Optional Intel Accessories – Sold SeparatelychooseFront storage bay option0Upto (3) 8 x 2.5" drive bay modules can be installed:iPC A2U8X25S3HSDK – SAS/SATA0G LOMiPC A2U8X25S3DPDK – Dual port SASobse oneiPC A2U44X25NVMEDK – PCle* SSD SFF (NVMe) + SASquired for(Note) for a 24 x 2.5" drive configuration, system will lose front video and optical drive support, and system must include the 2U storage front panel in Storage handle kit iPC A2U8X35S3HSDK – 8 x 3.5" drive + Optical drive bay0 W ACiPC A2U8X35S3HSDK – 8 x 3.5" drive + Optical drive bay0 W ACiPC A2U8X35S3HSDK – 8 x 3.5" drive + Optical drive bay0 W ACiPC A2U8X35S3HSDK – 0 panel in Storage handle kit iPC A2UHANDLKIT0 W ACiPC A2U8X35S3HSDK – 0 panel in Storage handle kit iPC A2UBX35S3HSDK – 0 panel in Storage badde the 2U storage front panel in Storage badde the 2U storage panel in Storage badde the 2U storage front panel in Storage badde the 2U storage front panel in Storage badde the 2U storage front storage badde the 2		

3. Server System Configuration

Intel makes available L6 integrated server systems that include a specific server board, power supply module, and hot swap drive bays options. At a minimum, building up a functional L6 server system will require the following:

- Rack mount kit option Rails or fixed mount
- Power Cord(s)
- Processor(s)
- Memory
- Storage Drives



Intel[®]Server System R1000WT Product Family

*R1208WT configuration shown

*R2312WT configuration shown

Intel[®] Server System

R2000WT Product Family

Optional Intel accessories that can be added include the following: See chapter 5 for available options.

- 2nd power supply module to add power redundancy
- SAS / SAS RAID support PCIe* add-in card or module + Appropriate SAS Data cable(s)
- Intel[®] I/O Module
- Intel[®] Remote Management Module Lite

3.1 Intel[®] Server System R1000WT Product Family SKUs – (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 5

NOTES:

- Each required item and optional accessory is sold seperately from the specified Intel L6 server system
- Items identifed 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.



Figure 5. Intel® Server System R1000WT – L6 Integrated 1U System *R1208WTxxx shown

Intel Product Code (iPC): R1304WTTGS COMPANY COMPANY COMPANY IU – 4 x 3.5" HDD or 4 x 2.5" SSD front mount drives Product Defi	Order Code Information: MM# - 934967 UPC - 00735858288736 EAN - 5032037068017 MOQ - 1		Product Type: L6 Integrated System Chassis Form Factor: 1U rack mount Chassis dimensions: L=712mm, W=439mm, H=43.2mm Packaged Gross Weight: 21.3 Kgs, 47.0 Lbs Un-packaged Net Weight: 12.3 Kgs, 27.1 Lbs Outer Box Dimensions: L=983mm, W=577mm, H=260mm	
Intel product code R1304WTTGS includes the following components: (1) -1U Chassis with Quick Reference Label affixed to top cover (1) - Intel® Server Board S2600WT w/ Dual 10GbE - iPC S2600WTT (2) - Riser card assembly with single x16 PCle* slot riser card - iPC F1UL16RISER2 (1) - 750W power supply module - iPC FXX750PCRPS (1) - Power supply bay blank insert (2) - AC Power Cord retention strap assembly - iPN H23961-00x (4) - 3.5" Hot-swap drive bays with drive carriers and drive blanks • Includes (1) 12 Gb SAS backplane - iPC FR1304S3HSBP • Includes (1) 12 Gb SAS backplane - iPC FR1304S3HSBP • Includes (4) 3.5" hot swap drive trays - iPC FXX35HSCAR (1) - 800mm SAS/SATA Multiport data cable - iPC AXXCBL1UHRHD (1) - 350mm Backplane power cable - iPN H38458-00x (1) - 150mm Backplane I2C cable - iPN H39941-00x (1) - Air duct (6) - Dual rotor system fans - iPC FR1UFAN10PW (1) - Standard control panel assembly (board only - iPC FXXFPANEL) (1) - Front I/O Panel assembly (1 x VGA and 2 x USB) (1) - SATA Optical drive bay with filler panel - (optical drive sold sepera • Includes optical drive mounting latch kit - iPN H19168-00x • Includes 550mm optical drive power cable - iPN G95880-00x (2) - CPU heat sink Mylar Spacer inserts - iPN H28618-00x (3) - DIMM slot blanks - iPN G75158-00x (2) - CPU heat sink Mylar Spacer inserts - iPN H19171-00x Spares for each screw type included		 Required Items – Second Separately: Rack Mount Kit – See chasting Separately: Rack Mount Kit – See chasting Second Processing Product family 1 or 2 Intel® Xeon® Processing Product family ECC DDR4 memory (RDILRDIMM) Power Cord(s) – See chasting for the North America will include power cord 	old apter is essor E5- MM or pter 5.10 from Intel	 Optional Intel Accessories – Sold Separately iPC FXX750PCRPS – 2nd 750W AC Power supply module – to support power redundancy Intel® 12G SAS RAID module + RMFBU - See chapter 5.9 for available options SAS Data cable – Depending on the location of the SAS Data controller, a new data cable may be necessary. See chapter 4.2.1 Intel® I/O Module - See chapter 5.8 for available options iPC A1UBEZEL – Lockable front system bezel iPC AXXRMM4LITE - Intel® Remote Management Module 4 Lite key – For advanced management features iPC RKSATA4R5 – Embedded SATA ESRT2 SW RAID 5 support key Storage Drives See Chapter 5 for all available accessory options.

Product Code (iPC): R1304WT2GS C IU – 4 x 3.5" HDD or 4 x 2.5" SSD front mount drives	Order Code Information: MM# – 935059 UPC – 00735858288743 EAN – 5032037068024 MOQ – 1	Product Type: L6 Integrated System Chassis Form Factor: 1U rack mount Chassis dimensions: L=712mm, W=439mm, H=43.2mm Packaged Gross Weight: 21.3 Kgs, 47.0 Lbs Un-packaged Net Weight: 12.3 Kgs, 27.1 Lbs Outer Box Dimensions: L=983mm, W=577mm, H=260mm	
Product Defin Intel product code R1304WT2GS includes the following components: (1) –1U Chassis with Quick Reference Label affixed to top cover (1) – Intel® Server Board S2600WT w/ Dual 1GbE – iPC S2600WT2 (2) – Riser card assembly with single x16 PCle* slot riser card – iPC F1UL16RISER2 (1) – 750W power supply module – iPC FXX750PCRPS (1) – Power supply bay blank insert (2) – AC Power Cord retention strap assembly – iPN H23961-00x (4) – 3.5" Hot-swap drive bays with drive carriers and drive blanks • Includes (1) 12 Gb SAS backplane – iPC FR1304S3HSBP • Includes (1) 12 Gb SAS backplane – iPC FR304S3HSBP • Includes (4) 3.5" hot swap drive trays – iPC FXX35HSCAR (1) – 800mm SAS/SATA Multiport data cable – iPC AXXCBL1UHRHD (1) – 350mm Backplane power cable – iPN H38458-00x (1) – 150mm Backplane I2C cable – iPN H3941-00x (1) – Air duct (6) – Dual rotor system fans – iPC FR1UFAN10PW (1) – Standard control panel assembly (board only – iPC FXXFPANEL) (1) – Front I/O Panel assembly (1 x VGA and 2 x USB) (1) – SATA Optical drive bay with filler panel – (optical drive sold seperat • Includes optical drive mounting latch kit – iPN H19168-00x • Includes 550mm optical drive power cable – iPN G95880-00x (2) – CPU heatsinks – iPC FXXCA84X106HS (2) – CPU heat sink Mylar Spacer inserts – iPN H28618-00x (8) – DIMM slot blanks – iPN G75158-00x (2) – Chassis handle installed (1 set) – iPN H19171-00x Spares for each screw type included	v3 product family • ECC DDR4 memory LRDIMM) • Power Cord(s) – Se NOTE: L6 Systems ship North America will inclu cord	ee chapter 5.11 for Processor E5-2600 (RDIMM or e chapter 5.10 ping from Intel to	 Optional Intel Accessories – Sold Separately iPC FXX750PCRPS – 2nd 750W AC Power supply module – to support power redundancy Intel® 12G SAS RAID module + RMFBU - See chapter 5.9 for available options SAS Data cable – Depending on the location of the SAS Data controller, a new data cable may be necessary. See chapter 4.2.1 Intel® I/O Module - See chapter 5.8 for available options iPC A1UBEZEL – Lockable front system bezel iPC AXXRMM4LITE - Intel® Remote Management Module 4 Lite key – For advanced management features iPC RKSATA4R5 – Embedded SATA ESRT2 SW RAID 5 support key Storage Drives

Product Code (iPC):	Order Code Information:	n: Product Type: L6 Integrated System	
R1208WTTGS	MM# – 934968	Chassis Form Factor: 1U rack mount	
	UPC - 00735858289429	9 Chassis dimensions: L=712mm, W=439mm, H=43.2mm	
	EAN – 5032037068406	Packaged Gross Weight: 21.1 Kgs, 46.5 Lbs	
		Un-packaged Net Weight: 12.9 Kgs, 28.4 Lbs	
1U – 8 x 2.5" front mount drives	MOQ – 1	Outer Box Dimensions: L=983mm, W=577mm, H=260m	m
Product Defi	Requirements/Options		
Intel product code R1208WTTGS includes the following compo	nents: Required Items – S	s - Sold Separately: Optional Intel Accessories - Sold	<u>Separately</u>
 (1) -1U Chassis with Quick Reference Label affixed to top cover (1) - Intel® Server Board S2600WT w/ Dual 10GbE - iPC S2600WTT (2) - Riser card assembly with single x16 PCle* 3.0 slot riser card - F1UL16RISER2 (1) - 750W power supply module - iPC FXX750PCRPS (1) - Power supply bay blank insert (2) - AC Power Cord retention strap assembly - iPN H23961-00x (1) - Air duct (6) - Dual rotor system fans - iPC FR1UFAN10PW (1) - Standard control panel assembly (board only - iPC FXXFPANEL) (1) - Front I/O Panel assembly (1 x VGA and 2 x USB) If removed, can be used as an optical drive bay. Includes optical drive mounting latch kit - iPN H19168-00x Includes optical drive power cable - iPN H23851-00x (8) - 2.5" Hot-swap drive bays with drive carriers and drive blanks Includes (1) 12 Gb SAS backplane - iPC F1U8X25S3HSBP Includes (8) 2.5" hot swap drive trays - iPC FXX25HSCAR2 (1) - 730mm SAS/SATA Multiport data cable - iPC AXXCBL730HRHD (1) - Backplane power cable - iPN H238458-00x (1) - 200mm Backplane I2C cable - iPN H23846-00x (2) - CPU heatsink - iPC FXXCA84X106HS (3) - DIMM slot blanks - iPN G75158-00x (2) - Chassis handle (1 set) installed - iPN H19171-00x 	available options 1 or 2 Intel® Xeon® 2600 v3 product fa ECC DDR4 memory LRDIMM)	 eon[®] Processor E5- uct family mory (RDIMM or See chapter 5.10 shipping from Intel to module – to support power redundar Intel[®] 12G SAS RAID module + RMFB 5.9 for available options SAS Data cables – Depending on the SAS Data controller, new data cables necessary. See chapter 4.2.2 	ncy U - See chapter location of the may be or available SD SFF (NVMe*) backplane and hapter 5.1 tem bezel fanagement agement ESRT2 SW RAID

Product Code (iPC): R1208WT2GS C IU – 8 x 2.5" front mount drives Product Defi	Order Code Information: MM# - 935060 UPC - 00735858288897 EAN - 5032037068178 MOQ - 1 inition and Configuration Rec		Product Type: L6 Integrated System Chassis Form Factor: 1U rack mount Chassis dimensions: L=712mm, W=439mm, H=43.2mm Packaged Gross Weight: 21.1 Kgs, 46.5 Lbs Un-packaged Net Weight: 12.9 Kgs, 28.4 Lbs Outer Box Dimensions: L=983mm, W=577mm, H=260	
 Intel product code R1208WT2GS includes the following comport (1) – 1U Chassis with Quick Reference Label affixed to top cover (1) – Intel® Server Board S2600WT w/ Dual 1GbE – iPC S2600WT2 (2) – Riser card assembly with single x16 PCle* 3.0 slot riser card - F1UL16RISER2 (1) – 750W power supply module - iPC FXX750PCRPS (1) – Power supply bay blank insert (2) – AC Power Cord retention strap assembly – iPN H23961-00x (1) – Air duct (6) – Dual rotor system fan – iPC FR1UFAN10PW (1) – Standard control panel assembly (board only – iPC FXXFPANEL) (1) – Front I/O Panel assembly (1 x VGA and 2 x USB) If removed, can be used as an optical drive bay. Includes optical drive power cable – iPN H23851-00x (8) – 2.5" Hot-swap drive bays with drive carriers and drive blanks Includes (1) 12 Gb SAS backplane – iPC F108X25S3HSBP Includes (8) 2.5" hot swap drive trays – iPC FXX25HSCAR2 (1) – Server board to backplane power cable – iPN H38458-00x (1) – Server board to backplane power cable – iPN H38458-00x (1) – Server board to backplane I2C cable – iPN H39941-00x (2) – CPU heatsink – iPC FXXCA84X106HS (8) – DIMM slot blanks – iPN G75158-00x (2) – Chassis handle (1 set) installed – iPN H19171-00x Spares for each screw type included 		Required Items – S	Sold Separately: See chapter 5.11 for Processor E5- amily y (RDIMM or ee chapter 5.10 oping from Intel to	 Optional Intel Accessories – Sold Separately iPC FXX750PCRPS – 2nd 750W AC Power supply module – to support power redundancy Intel® 12G SAS RAID module + RMFBU - See chapter 5.9 for available options SAS Data cables – Depending on the location of the SAS Data controller, new data cables may be necessary. See chapter 4.2.2 Intel® I/O Module - See chapter 5.8 for available options iPC A1U44X25NVMEDK – (4) PCIe* SSD SFF (NVMe*) + (4) SAS support – replaces exising backplane and requires use of one PCIe* slot. See chapter 5.1 and/or System TPS for details iPC A1UBEZEL – Lockable front system bezel iPC AXXRMM4LITE - Intel® Remote Management Module Lite key – For advanced management features iPC RKSATA4R5 – Embedded SATA ESRT2 SW RAID 5 support key Storage Drives

3.2 Intel[®] Server System R2000WT Product Family SKUs – (2U Rack Mount System)

The product tables found in this section provide order code information and detailed descriptions for the specified L6 integrated 2U Intel server system. The lower sections of each table identify:

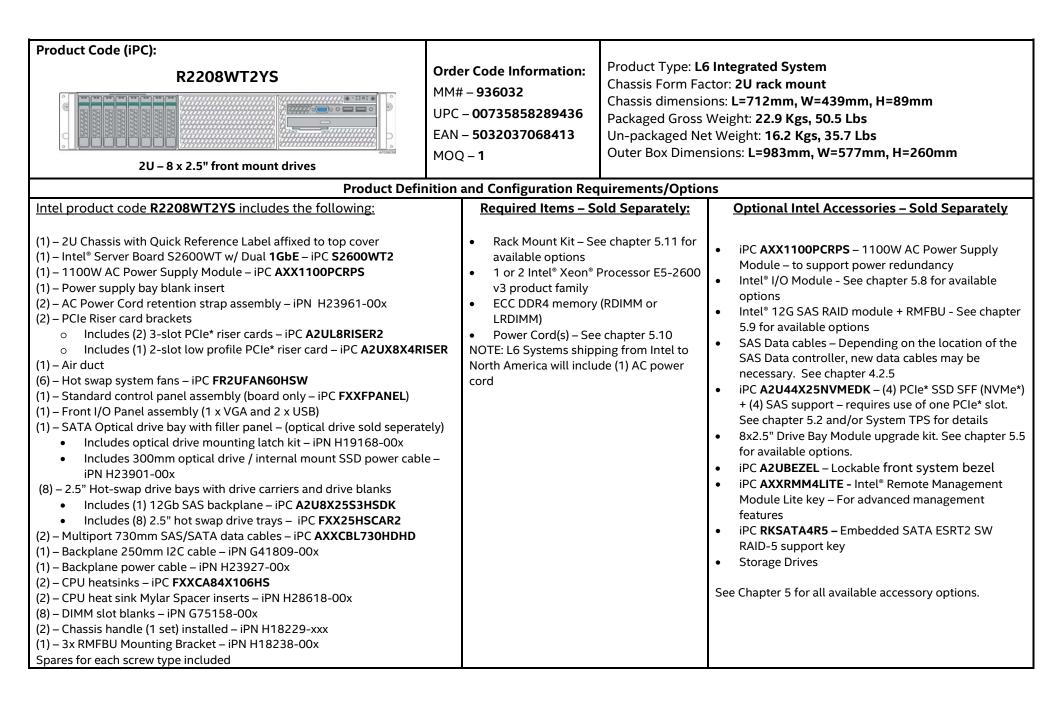
- The ship along components of the specified chassis product code (product BOM)
- Required Items The options required to be installed to the base system to achieve basic functionality using the default system feature set
- **Optional Accessories** Some of the available accessories which can be installed 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 seperately from the specified Intel L6 server system
- Items identifed 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.



Figure 6. Intel[®] Server System R2000WT – L6 Integrated 2U System *R2312WTxxx shown



Product Code (iPC):				
R2208WTTYS	Order Code Information: MM# – 936023 UPC – 00735858289450 EAN – 5032037068437 MOQ – 1		Product Type: L6 Integrated System Chassis Form Factor: 2U rack mount Chassis dimensions: L=712mm, W=439mm, H=89mm Packaged Gross Weight: 22.9 Kgs, 50.5 Lbs Un-packaged Net Weight: 16.2 Kgs, 35.7 Lbs Outer Box Dimensions: L=983mm, W=577mm, H=260mm	
Product Defir	nition	and Configuration Re	quirements/Option	IS
Intel product code R2208WTTYS includes the following: (1) – 2U Chassis with Quick Reference Label affixed to top cover (1) – Intel® Server Board S2600WT w/ Dual 10GbE – iPC S2600WTT (1) – 1100W AC Power Supply Module – iPC AXX1100PCRPS (1) – Power supply bay blank insert (2) – AC Power Cord retention strap assembly – iPN H23961-00x (2) – PCle Riser card brackets o Includes (2) 3-slot PCle* riser cards – iPC A2UL8RISER2 o Includes (1) 2-slot low profile PCle* riser card – iPC A2UX8X4RI (1) – Air duct (6) – Hot swap system fans – iPC FR2UFAN60HSW (1) – Standard control panel assembly (board only – iPC FXXFPANEL) (1) – Front I/O Panel assembly (1 x VGA and 2 x USB) (1) – SATA Optical drive bay with filler panel – (optical drive sold seperat • Includes optical drive mounting latch kit – iPN H19168-00x • Includes 300mm optical drive / internal mount SSD power cabl iPN H23901-00x (8) – 2.5" Hot-swap drive bays with drive carriers and drive blanks • Includes (8) 2.5" hot swap drive trays – iPC FXX25HSCAR2 (2) – Multiport 730mm SAS/SATA data cables – iPC AXXCBL730HDHD (1) – Backplane 250mm I2C cable – iPN H23927-00x (2) – CPU heatsinks – iPC FXXCA84X106HS (2) – CPU heatsinks – iPC FXXCA84X106HS (2) – CPU heatsinks – iPC FXXCA84X106HS (2) – CPU heatsinks – iPN G75158-00x (2) – Chassis handle (1 set) installed – iPN H18229-xxx (1) – 3x RMFBU Mounting Bracket – iPN H18238-00x	ISER tely)	Required Items – S Rack Mount Kit – S available options	Sold Separately: ee chapter 5.11 for Processor E5-2600 y (RDIMM or ee chapter 5.10 pping from Intel to	 Optional Intel Accessories – Sold Separate iPC AXX1100PCRPS – 1100W AC Power Supply Module – to support power redundancy Intel® I/O Module - See chapter 5.8 for available options Intel® 12G SAS RAID module + RMFBU - See cha 5.9 for available options SAS Data cables – Depending on the location of SAS Data controller, new data cables may be necessary. See chapter 4.2.5 iPC A2U44X25NVMEDK – (4) PCIe* SSD SFF (NV + (4) SAS support – requires use of one PCIe* sla See chapter 5.2 and/or System TPS for details 8x2.5" Drive Bay Module upgrade kit. See chapter for available options. iPC A2UBEZEL – Lockable front system bezel iPC AXXRMM4LITE - Intel® Remote Management features iPC RKSATA4R5 – Embedded SATA ESRT2 SW RAID-5 support key Storage Drives

Product Code (iPC):			Product Type: Le	5 Integrated System
R2208WTTYC1 Image: Colspan="2">Image: Colspan="2">Image: Colspan="2">Image: Colspan="2" Image: Colspan="2" Image: Colspan="2" Image: Colspan="2" Image: Colspan="2" Image: Colspan="2" Image: Colsp	MM# UPC	er Code Information: - 936033 - 00735858289443 - 5032037068420 - 1	NOTE: Int supported Chassis Form Fac Chassis dimensic Packaged Gross Un-packaged Ne	es to support passive Intel® Xeon Phi [™] coprocessor tel® Xeon Phi [™] cards with Active heat sinks are NOT d in this SKU. ctor: 2U ons: L=712mm, W=439mm, H=89mm Weight: 22.9 Kgs, 50.5 Lbs et Weight: 16.2 Kgs, 35.7 Lbs nsions: L=983mm, W=577mm, H=260mm
Product Defi	nition	and Configuration Req		
Intel product code R2208WTTYC1 includes the following:		Required Items – So		Optional Intel Accessories - Sold Separately
 (1) - 2U Chassis with Quick Reference Label affixed to top cover (1) - Intel® Server Board S2600WT w/ Dual 10GbE - iPC S2600WTT (2) - 1100W AC Power Supply Module - iPC AXX1100PCRPS (2) - AC Power Cord retention strap assembly - iPN H23961-00x (2) - PCle Riser card brackets Includes (2) 2-slot PCle* riser cards - iPC A2UL16RISER2 Includes (1) 2-slot low profile PCle* riser card - iPC A2UX8X4R (1) - High air flow air duct (iPC AWTCOPRODUCT) (1) - Intel® Xeon Phi™ / GPGPU Secure Mount Adapter Bracket kit (2) - 12V-Auxiliary Power Cables - iPC AXXGPGPUCABLE (6) - Hot swap system fans - iPC FR2UFAN60HSW (1) - Standard control panel assembly (board only - iPC FXXFPANEL) (1) - Front I/O Panel assembly (1 x VGA and 2 x USB) (1) - SATA Optical drive bay with filler panel - (optical drive sold seperate Includes optical drive mounting latch kit - iPN H19168-00x Includes 300mm optical drive / internal mount SSD power cable iPN H23901-00x (8) - 2.5" Hot-swap drive bays with drive carriers and drive blanks Includes (1) 12 Gb SAS backplane - iPC A2U8X25S3HSDK Includes (8) 2.5" hot swap drive trays - iPC FXX25HSCAR2 (2) - Multiport 730mm SAS/SATA data cables - iPC AXXCBL730HDHD (1) - Backplane 250mm I2C cable - iPN 41809-00x (1) - Backplane power cable - iPN H23927-00x (2) - CPU heat sink Mylar Spacer inserts - iPN H28618-00x (3) - DIMM slot blanks - iPO FXXC84X106HS (2) - CPU heat sink Mylar Spacer inserts - iPN H18229-xxx (1) - 3x RMFBU Mounting Bracket - iPN H18238-00x 	tely)	 Rack Mount Kit – Se available options 1 or 2 Intel® Xeon® F v3 product family ECC DDR4 memory LRDIMM) Power Cord(s) – See NOTE: L6 Systems shipp North America will inclusion cords 	Processor E5-2600 (RDIMM or e chapter 5.10 ping from Intel to	 Intel® I/O Module - See chapter 5.8 for available options Intel® 12G SAS RAID module + RMFBU - See chapter 5.9 for available options SAS Data cables - Depending on the location of the SAS Data controller, new data cables may be necessary. See chapter 4.2.5 iPC A2U44X25NVMEDK – (4) PCIe* SSD SFF (NVMe*) + (4) SAS support – requires use of one PCIe* slot. See chapter 5.2 and/or System TPS for details 8x2.5" Drive Bay Module upgrade kit. See chapter 5.5 for available options. iPC A2UBEZEL – Lockable front system bezel iPC AXRMM4LITE - Intel® Remote Management Module Lite key – For advanced management features iPC RKSATA4R5 – Embedded SATA ESRT2 SW RAID-5 support key Storage Drives

Product Code (iPC):				
R2308WTTYS	MM# UPC EAN MOQ		Chassis Form Fac Chassis dimensio Packaged Gross V Un-packaged Net Outer Box Dimens	Integrated System tor: 2U rack mount ns: L=712mm, W=439mm, H=89mm Veight: 23.5 Kgs, 51.8 Lbs : Weight: 16.1 Kgs, 35.5 Lbs sions: L=983mm, W=577mm, H=260mm
	nition	and Configuration Re		
 Intel product code R2308WTTYS includes the following: (1) - 2U Chassis with Quick Reference Label affixed to top cover (1) - Intel[®] Server Board S2600WT w/ Dual 10GbE - iPC S2600WTT (1) - 1100W AC Power Supply Module - iPC AXX1100PCRPS (1) - Power supply bay blank insert (2) - AC Power Cord retention strap assembly - iPN H23961-00x (2) - PCle Riser card brackets Includes (2) 3-slot PCle* riser cards - iPC A2UL8RISER2 Includes (1) 2-slot low profile PCle* riser card - iPC A2UX8X4RI (1) - Air duct (6) - Hot swap system fans - iPC FR2UFAN60HSW (1) - Standard control panel assembly (board only - iPC FXXFPANEL) (1) - Standard control panel assembly (board only - iPC FXXFPANEL) (1) - SATA Optical drive bay with filler panel - (optical drive sold seperate Includes optical drive mounting latch kit - iPN H19168-00x Includes 500mm optical drive / internal mount SSD power cable iPN G95878-00x (8) - 3.5" Hot-swap drive bays with drive carriers and drive blanks Includes (1) 12 Gb SAS backplane - iPC F2U8X35S3HSBP Includes (3) 3.5" hot swap drive carriers - iPC FXX5FHSCAR (1) - Backplane power cable - iPN H38457-00x (1) - Multiport 950mm SAS/SATA data cables - iPC AXXCBL950HDHD (1) - Backplane I2C cable - iPN G92510-00x (2) - CPU heats ink Mylar Spacer inserts - iPN H28618-00x (3) - CPU heat sink Mylar Spacer inserts - iPN H28618-00x (3) - CPU heat sink Mylar Spacer inserts - iPN H18229-xxx (1) - 3x RMFBU Mounting Bracket - iPN H18238-00x 	tely)	available options	ee chapter 5.11 for Processor E5-2600 y (RDIMM or ee chapter 5.10 ping from Intel to	 Optional Intel Accessories – Sold Separately iPC AXX1100PCRPS – 1100W AC Power Supply Module – to support power redundancy Intel® I/O Module - See chapter 5.8 for available options Intel® 12G SAS RAID module + RMFBU - See chapter 5.9 for available options SAS Data cables – Depending on the location of the SAS Data controller, new data cables may be necessary. See chapter 4.2.3 iPC A2UBEZEL – Lockable front system bezel iPC AXXRMM4LITE - Intel® Remote Management Module Lite key – For advanced management features iPC RKSATA4R5 – Embedded SATA ESRT2 SW RAID-5 support key Storage Drives

Product Code (iPC):				
R2312WTTYS	MM UPC EAN MOC		Chassis Form Fac Chassis dimensio Packaged Gross V Un-packaged Net Outer Box Dimen	to Integrated System Stor: 2U rack mount Stor: L=712mm, W=439mm, H=89mm Weight: 24.4 Kgs, 53.8 Lbs t Weight: 17.0 Kgs, 37.5 Lbs Isions: L=983mm, W=577mm, H=260mm
Product Defin	nition	and Configuration Re	quirements/Optio	ns
Intel product code R2312WTTYS includes the following: (1) – 2U Chassis with Quick Reference Label affixed to top cover (1) – Intel* Server Board S2600WT w/ Dual 10GbE – iPC S2600WTT (1) – Intel* Server Board S2600WT w/ Dual 10GbE – iPC S2600WTT (1) – 1100W AC Power Supply Module – iPC AXX1100PCRPS (1) – Power supply bay blank insert (2) – AC Power Cord retention strap assembly – iPN H23961-00x (2) – PCIe Riser card brackets o Includes (2) 3-slot PCIe* riser cards – iPC A2UL8RISER2 (1) – Air duct (6) – Hot swap system fans – iPC FR2UFAN60HSW (2) – Chassis Handles (1 set) installed – includes Integrated control panel USB Port - iPC A2UHANDLKIT (1) – 500mm internal mount SSD power cable – iPN G95878-00x (12) – 3.5" Hot-swap drive bays with drive carriers and drive blanks • Includes (1) 12 Gb SAS backplane – iPC F2U12X35S3HSBP • Includes (12) 3.5" hot swap drive carriers – iPC FXX35HSCAR (1) – Multiport 800mm SAS/SATA data cable – iPC AXXCBL800HDHD (1) – Multiport 950mm SAS/SATA data cable – iPC AXXCBL80HDHD (1) – Backplane power cable – iPN G92685-00x (2) – 2.5" Rear Mount Hot Swap Drive Bays with drive carriers, drive bland SATA data/SGPIO cable harness, and I2C cable (Intel Accessory Kit - A2UREARHSDK) (2) – CPU heat sink Mylar Spacer inserts – iPN H28618-00x </td <td>ks,</td> <td>available options</td> <td>ee chapter 5.11 for Processor E5-2600 y (RDIMM or ee chapter 5.10 pping from Intel to</td> <td> Optional Intel Accessories – Sold Separately iPC AXX1100PCRPS – 1100W AC Power Supply Module – to support power redundancy Intel® I/O Module - See chapter 5.8 for available options Intel® 12G SAS RAID module + RMFBU - See chapter 5.9 for available options Intel® SAS Expander – See Chapter 4.6.2 for available options SAS Data cables – Depending on the location of the SAS Data controller, new data cables may be necessary. See chapter 4.2.4 iPC A2UBEZEL – Lockable front system bezel iPC AXXRMM4LITE - Intel® Remote Management Module Lite key – For advanced management features Storage Drives See Chapter 5 for all available accessory options. </td>	ks,	available options	ee chapter 5.11 for Processor E5-2600 y (RDIMM or ee chapter 5.10 pping from Intel to	 Optional Intel Accessories – Sold Separately iPC AXX1100PCRPS – 1100W AC Power Supply Module – to support power redundancy Intel® I/O Module - See chapter 5.8 for available options Intel® 12G SAS RAID module + RMFBU - See chapter 5.9 for available options Intel® SAS Expander – See Chapter 4.6.2 for available options SAS Data cables – Depending on the location of the SAS Data controller, new data cables may be necessary. See chapter 4.2.4 iPC A2UBEZEL – Lockable front system bezel iPC AXXRMM4LITE - Intel® Remote Management Module Lite key – For advanced management features Storage Drives See Chapter 5 for all available accessory options.

Product Code (iPC):				
R224WTTYS	Order Code Information: MM# – 936037 UPC – 00735858289467 EAN – 5032037068444 MOQ – 1		Product Type: L6 Integrated System Chassis Form Factor: 2U Chassis dimensions: L=712mm, W=439mm, H=89mm Packaged Gross Weight: 25.0 Kgs, 55.1 Lbs Un-packaged Net Weight: 18.3 Kgs, 40.3 Lbs Outer Box Dimensions: L=983mm, W=577mm, H=260mm	
	nition	and Configuration Re		
 Intel product code R2224WTTYS includes the following: (1) – 2U Chassis with Quick Reference Label affixed to top cover (1) – Intel® Server Board S2600WT w/ Dual 10GbE – iPC S2600WTT (1) – Intel® Server Board S2600WT w/ Dual 10GbE – iPC S2600WTT (1) – 1100W AC Power Supply Module – iPC AXX1100PCRPS (1) – Power supply bay blank insert (2) – AC Power Cord retention strap assembly – iPN H23961-00x (2) – PCIe Riser card brackets o Includes (2) 3-slot PCIe* riser cards – iPC A2UL8RISER2 (1) – Air duct (6) – Hot swap system fans – iPC FR2UFAN60HSW (2) – Chassis Handles (1 set) installed – includes Integrated control pane USB Port - iPC A2UHANDLKIT (24) – 2.5" Hot-swap drive bays with drive carriers and drive blanks Includes (3) 12 Gb SAS backplanes – iPC A2U8X25S3HSDK Includes (24) 2.5" hot swap drive trays – iPC FXX25HSCAR2 Includes (2) backplane to backplane I2C jumper cables – iPN G17347-00x (1) – Backplane power cable – iPN H23927-00x (2) – 2.5" Rear Mount Hot Swap Drive Bays with drive carriers, drive blank SATA data/SGPIO cable harness, and I2C cable (Intel Accessory Kit A2UREARHSDK) (2) – Multiport 730mm SAS/SATA data cables – iPC AXXCBL730HDHD (4) – Multiport 875mm SAS/SATA data cables – iPC AXXCBL730HDHD (4) – Multiport 875mm SAS/SATA data cables – iPC AXXCBL875HDHD (1) – Backplane power cable – iPN H24615-00x (2) – CPU heat sink Mylar Spacer inserts – iPN H28618-00x 	۱&	Required Items – S Rack Mount Kit – S available options	ee chapter 5.11 for Processor E5-2600 / (RDIMM or e chapter 5.10 ping from Intel to	 Optional Intel Accessories – Sold Separately iPC AXX1100PCRPS – 1100W AC Power Supply Module – to support power redundancy Intel® I/O Module - See chapter 5.8 for available options Intel® 12G SAS RAID module + RMFBU - See chapter 5.9 for available options Intel® SAS Expander – See Chapter 4.7.4 for available options SAS Data cables – Depending on the location of the SAS Data controller, new data cables may be necessary. See chapter 4.2.5 iPC A2UBEZEL – Lockable front system bezel iPC AXXRMM4LITE - Intel® Remote Management Module Lite key – For advanced management features Storage Drives
 (16) – DIMM slot blanks – iPN G75158-00x (2) – Chassis handle (1 set) – iPN H18229-xxx (1) – 3x RMFBU Mounting Bracket – iPN H18238-00x Spares for each screw type included 				

4. SAS / SATA Data Cable Guide

By default, all L6 integrated system will include SAS / SATA data cables routed from the front hot swap backplane to the on-board SATA controller connectors. SAS data cables may need to be ordered seperately when adding a SAS RAID module or SAS RAID PCIe* add-in card to an integrated system SKU.

SAS / SATA data cables are NOT included with any of the chassis only building block SKUs. They must be ordered seperately 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
-	7-pin Single Port SATA
	Support for up to 6 GB/sec SATA devices
لاس	Where used:
	 On the server board – (2) single port SATA connectors (SATA 4, SATA 5)
	- 2U Rear Mount Hot-Swap Backplane (iPC A2UREARHSDK)
	- SATA Optical Drive – CD/DVD
	- SATA DOM

Multiport MiniSAS HD Connectors

Image	Description
	 SFF-8643 Support for up to 12 Gb/Sec SAS and 6 Gb/sec SATA devices PCIe* (NVMe) SFF support associated with Intel Accessory Kits A1U44X25NVMEDK & A2U44X25NVMEDK
	 Where used: On the server board – (2) 4-port SATA connectors (SATA 0-3, sSATA 0-3) All 12 Gb/sec SAS capable hot swap backplanes All 12 Gb/sec SAS RAID Controllers All 12 Gb/sec SAS Expander Cards

Multiport MiniSAS Connector

Image	Description
1	SFF-8087 Support for up to 6 Gb/Sec SAS / SATA devices
	Where used: - 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 11. Storage Data Cable Kit Description and Order Information for appropriate cable kits.

4.2 1U / 2U Server System SAS / SATA Cable Guide

Product tables in this section will reference SAS/SATA cables using different connector types to meet the connection and routing requirements for the specified system configuration. Each cable reference and product code will identify the connector type at each end of the cable using the following identifiers: **HR**, **HD**, and **MS**. The following table identifies the three cable connector types and their identifiers.

*	HR = Right Angle SFF-8643 Mini SAS HD Connector
	HD = Straight SFF-8643 Mini SAS HD Connector
	MS = Straight SFF-8087 Mini SAS Connector (compatible with 6Gb/sec SAS controllers and expanders)

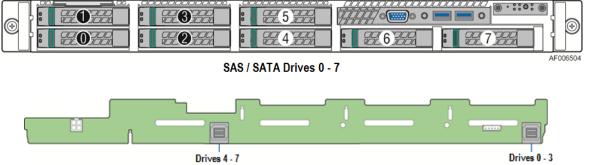
Cable Kit Product Code Example - AXXCBL950HDMS

AXXCBL - Identifies an accessory cable kit

950 – identifies the length of the cable

HD - identifies that one end of cable connector supports SFF-8643 connector

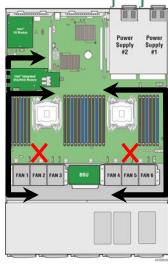
System illustrations in each of the following sections will denote drive numbering as shown below:



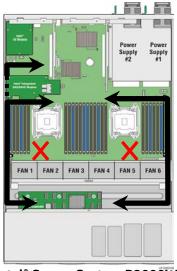
Drive numbering in the system illustrations is for general reference only. Actual drive numbering will be dependent on SAS / SATA controller configuration and how they are cabled to the backplane. Each installed backplane will include a multi-port data connector for each set of four drives. Example) for an 8 drive configuration (as shown above), the backplane will include 2 four port data connectors. In the illustration, drives showing a common color for the Drive ID label will share a common data connector on the backside of the backplane.

Each table in the following sections identify the cable connections and recommended cable lengths for each supported storage controller option in the specified system. Each "recommended" cable length for a given connector pair provides enough cable to attach the two devices and provides the least amount of access cable, providing the cleanest cable routing.

In the given server system, no cables should be routed in front of the system fans or in between the processors and memory slots. All cables that require routing from the front of the system to the back, are routed within the cable channels along the chassis sidewalls.

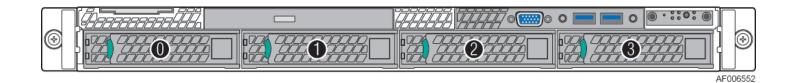


Intel[®] Server System R1000WT product family cable routing



Intel[®] Server System R2000WT product family cable routing

4.2.1 1U 4 x 3.5" – R1304WTxxx SAS / SATA Data Cable Guide



System Configuration	Drive Support	Cables for On-board Multi-port SATA Ports to Baclpane	Cables for Mezzanine 12 Gb SAS ROC Module to Backplane	Cables for Mezzanine 6 Gb SAS RAID module to Backplane	Cables for 12 Gb SAS RAID PCIe* add-in card to Backplane	Cables for 6 Gb SAS RAID PCIe* add-in card to Backplane
R1304WTxxx R1304WTTGS R1304WT2GS	4 x 3.5" 12 Gb SAS capable	Cable Connections: SATA -> BP 0-3 800 mm HR HD From data above, select appropriate cable kit from list below: AXXCBL1UHRHD Cable included with L6 Integrated systems	Cable Connections: SAS Mezz -> BP 0-3 800 mm HD HD From data above, select appropriate cable kit from list below: AXXCBL800HDHD	Cable Connections: SAS Mezz -> BP 0-3 800 mm HD MS From data above, select appropriate cable kit from list below: AXXCBL800HDMS	From Riser #1 Cable Connections: SAS PCIe -> BP 0-3 ** 875 or 950 mm HD HD <u>From Riser #2</u> Cable Connections: SAS PCIe -> BP 0-3 ** 730 or 875 mm HD HD From data above, select appropriate cable kits from list below: See ** note below AXXCBL730HDHD AXXCBL950HDHD	From Riser #1 Cable Connections: SAS PCIe -> BP 0-3 ** 875 or 950 mm HD MS From Riser #2 Cable Connections: SAS PCIe -> BP 0-3 ** 730 or 875 mm HD MS From data above, select appropriate cable kits from list below: See ** note below AXXCBL730HDMS AXXCBL950HDMS

4.2.2 1U 8 x 2.5" – R1208WTxxx SAS / SATA Data Cable Guide



SAS / SATA Drives 0 - 7

Note: For data cable information associated with Intel® Accessory Kit A2U44X25NVMEDK, see section 5.1.1

System Configuration	Drive Support	Cables for On-board Multi-port SATA Ports to Backplane	Cables for Mezzanine 12 Gb SAS ROC Module to Backplane	Cables for Mezzanine 6 Gb SAS RAID module to Backplane	Cables for 12 Gb SAS RAID PCIe* add-in card to Backplane	Cables for 6 Gb SAS RAID PCIe* add-in card to Backplane
R1208WTxxx R1208WTTGS R1208WT2GS	8 x 2.5" 12 Gb SAS capable	Cable Connections: SATA -> BP 0-3 730 mm HR HD SSATA -> BP 4-7 800 mm HR HD From data above, select appropriate cable kits from list below: AXXCBL1UHRHD 1 of each cable included with L6 Integrated systems	Cable Connections: SAS Mezz -> BP 0-3 650 mm HD HD SAS Mezz -> BP 4-7 800 mm HD HD From data above, select appropriate cable kits from list below: AXXCBL650HDHD AXXCBL800HDHD	Cable Connections: SAS Mezz -> BP 0-3 650 mm HD MS SAS Mezz -> BP 4-7 800 mm HD MS From data above, select appropriate cable kits from list below: AXXCBL650HDMS AXXCBL800HDMS	From Riser #1 Cable Connections: SAS PCIe -> BP 0-3 650 mm HD HD SAS PCIe -> BP 4-7 ** 730 or 800 mm HD HD <u>From Riser #2</u> Cable Connections: SAS PCIe -> BP 0-3 ** 650 or 730mm HD HD SAS PCIe - BP 4-7 ** 800 or 875 mm HD HD From data above, select appropriate cable kits from list below: See ** notes below AXXCBL650HDHD AXXCBL650HDHD AXXCBL730HDHD AXXCBL875HDHD	From Riser #1 Cable Connections: SAS PCIe -> BP 0-3 650 mm HD MS SAS PCIe -> BP 4-7 ** 730 or 800 mm HD MS <u>From Riser #2</u> Cable Connections: SAS PCIe -> BP 0-3 ** 650 or 730mm HD MS SAS PCIe - BP 4-7 ** 800 or 875 mm HD MS From data above, select appropriate cable kits from list below: See ** notes below AXXCBL650HDMS AXXCBL650HDMS AXXCBL730HDMS AXXCBL875HDMS

4.2.3 2U 8 x 3.5" – R2308WTxxx Cable Guide

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System Configuration	Drive Support	Cables for On- board Multi-port SATA Ports to Backplane	Cables for Mezzanine 12 Gb SAS ROC Module to Backplane	Cables for Mezzanine 6 Gb SAS RAID module to Backplane	Cables for 12 Gb SAS RAID PCIe* add-in card to Backplane	Cables for 6 Gb SAS RAID PCIe* add-in card to Backplane
R2308WTTYS	8 x 3.5" 12 Gb SAS Capable	Cable Connections: SATA -> BP 0-3 800 mm HD HD sSATA -> BP 4-7 950 mm HD HD From data above, select appropriate cable kits from list below: AXXCBL800HDHD AXXCBL950HDHD 1 of each cable included with L6 Integrated systems	Cable Connections: SAS Mezz -> BP 0-3 800 mm HD HD SAS Mezz -> BP 4-7 950 mm HD HD From data above, select appropriate cable kits from list below: AXXCBL800HDHD AXXCBL950HDHD 1 of each cable included with L6 Integrated systems	Cable Connections: SAS Mezz -> BP 0-3 800 mm HD MS SAS Mezz -> BP 4-7 950 mm HD MS From data above, select appropriate cable kits from list below: AXXCBL800HDMS AXXCBL950HDMS	From Riser #1: Cable Connections: SAS PCIe -> BP 0-3 ** 650 or 730 mm HD HD SAS PCIe -> BP 4-7 ** 800 or 950 mm HD HD <u>From Riser #2:</u> Cable Connections: SAS PCIe -> BP 0-3 ** 730 or 800 mm HD HD SAS PCIe -> BP 4-7 ** 730 or 800 mm HD HD SAS PCIe -> BP 4-7 ** 730 or 800 mm HD HD SAS PCIe -> BP 4-7 ** 730 or 800 mm HD HD SAS PCIe -> BP 4-7 ** 730 or 800 mm HD HD SAS PCIe -> BP 4-7 ** 730 or 800 mm HD HD SAS PCIe -> BP 4-7 ** 730 or 800 mm HD HD SAS PCIe -> BP 4-7 ** 730 or 800 mm HD HD SAS PCIE -> BP 4-7 ** 730 or 800 mm HD HD SAS PCIE -> BP 4-7 ** 730 or 800 mm HD HD SAS PCIE -> BP 4-7 ** 730 or 800 mm HD HD SAS PCIE -> BP 4-7 ** 730 or 800 mm HD HD SAS PCIE -> BP 4-7 ** 730 or 800 mm HD HD SAS PCIE -> BP 4-7 ** 730 or 800 mm HD HD SAS PCIE -> BP 4-7 ** 730 or 800 mm HD HD SAS PCIE -> BP 4-7 ** 730 or 800 mm HD HD SAS PCIE -> BP 4-7 ** 730 or 800 mm HD HD SAS PCIE -> BP 4-7 ** 730 or 800 mm HD HD SAS PCIE -> BP 4-7 ** 730 or 800 mm HD HD	From Riser #1 Cable Connections: SAS PCIe -> BP 0-3 ** 650 or 730 mm HD MS SAS PCIe -> BP 4-7 ** 800 or 950 mm HD MS <u>From Riser #2:</u> Cable Connections: SAS PCIe -> BP 0-3 ** 730 or 800 mm HD MS SAS PCIe -> BP 4-7 ** 730 or 800 mm HD MS From data above, select appropriate cable kits from list below: See ** Notes below AXXCBL650HDMS AXXCBL730HDMS AXXCBL950HDMS
					AXXCBL950HDHD (1) 950mm Included in L6	

4.2.4 2U 12 x 3.5 – R2312WTxxx Cable Guide

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R2312WTxxx SAS / SATA Data Cable Guide (with No SAS Expander)

System Configuration	Drive Support	Cables for On-board Multi-port SATA Ports to Backplane	Cables for Onboard SATA controller + Mezzanine 12 Gb SAS ROC Module to Backplane	Cables for Onboard SATA Controller + Mezzanine 6 Gb SAS RAID module to Backplane	Cables for Onboard SATA controller + 12 Gb SAS RAID PCIe* add-in card to Backplane	Cables for Onboard SATA controller + 6 Gb SAS RAID PCIe* add-in card to Backplane
R2312WTxxx R2312WTTYS With no SAS Expander installed	12 x 3.5" 12 Gb SAS Capable	Cable Connections: SATA -> BP 0-3 800mm HD HD SSATA Cntrl -> BP 4-7 875 mm HD HD From data above, select appropriate cable kits from list below: AXXCBL800HDHD AXXCBL875HDHD 1 of each cable included with L6 Integrated systems	Cable Connections: SATA -> BP 0-3 800mm HD HD SAS Mezz -> BP 4-7 875 mm HD HD SAS Mezz -> BP 8-11 950 mm HD HD From data above, select appropriate cable kits from list below: AXXCBL800HDHD AXXCBL875HDHD AXXCBL950HDHD 1 of each cable included with L6 Integrated systems	Cable Connections: SATA -> BP 0-3 800mm HD HD SAS Mezz -> BP 4-7 875 mm HD MS SAS Mezz -> BP 8-11 950 mm HDMS From data above, select appropriate cable kits from list below: AXXCBL800HDHD (1) 800mm Included in L6 AXXCBL875HDMS AXXCBL950HDMS	Cable Connections: SATA -> BP 0-3 800mm HD HD From Riser #1 SAS PCIe -> BP 4-7 ** 800 or 875 mm HD HD SAS PCIe -> BP 8-11 875 mm HD HD SAS PCIe -> BP 4-7 ** 730 or 875 mm HD HD SAS PCIe -> BP 4-7 ** 730 or 875 mm HD HD SAS PCIe -> BP 8-11 ** 650 or 800 mm HD HD SAS PCIe -> BP 8-11 ** 650 or 800 mm HD HD From data above, select appropriate cable kits: See ** Notes below AXXCBL650HDHD AXXCBL650HDHD AXXCBL730HDHD AXXCBL800HDHD (1) 800mm Included in L6 AXXCBL950HDHD (1) 950mm included in L6)	Cable Connections: SATA -> BP 0-3 800mm HD HD <u>From Riser #1</u> SAS PCIe -> BP 4-7 ** 800 or 875 mm HD HD SAS PCIe -> BP 8-11 875 mm HD HD <u>From Riser #2</u> SAS PCIe -> BP 4-7 ** 730 or 875 mm HD HD SAS PCIe -> BP 8-11 ** 650 or 800 mm HD HD From data above, select appropriate cable kits from list below: See ** Notes below AXXCBL650HDMS AXXCBL730HDMS AXXCBL950HDMS

2U 12 x 3.5" – R2312WTxxx SAS / SATA Data Cable Guide (with SAS Expander)

SAS drive configurations consisting of more than 8 drives may require the addition of a SAS Expander card. In the 2U 12x3.5" system configuration, the SAS expander must be installed in any available PCIe add-in slot. Intel provides two SAS expander options to support this drive configuration:

Intel Product Code	Order Information	Product Description	Product Type
iPC – RES3FV288	MM# – 932895 UPC – 00735858287548 EAN – 5032037067287 MOQ = 5	 SAS 3.0 12 Gb/s expander Featuring 6Gbps data aggregation for 12Gbps data transfer with 6Gb/s devices Low Profile MD2 PCIe* add-in card form factor 28 internal ports and 8 external ports Redundant dual-port capable for HA and high performance systems Power from PCIe x1 HD Mini-SAS 8643 Connectors Kit includes: (1) SAS Expander card, (2) HD-HD 250mm Expander-to-RAID card cables, PCI brackets for Low profile and Full height Required (sold separately): HD-HD SAS DATA Cables – Expander to backplane – See Table 6 	• 2U Accessory Kit
iPC – RES2SV240	MM# – 908137 UPC – 00735858216289 EAN – 5032037017053 MOQ - 5	 SAS 2.0 6 Gb/s expander Low Profile MD2 PCIe* add-in card form factor 24 Port 6Gb expander card with ports configurable for input or output Power from PCIe x1 or 4-pin connector Mini-SAS 8087 connectors Kit includes: (1) 6 Gb/s SAS Expander card, (2) MS-MS 300mm Expander-to-6Gb/s RAID card cables, PCI brackets for Low profile and Full height, (4) MS-MS 650mm Expander-to-Backplane cables (cables not compatible in R2312WTxxx system) Required (sold separately): MS-HD SAS Data Cables – See Table 6 	• 2U Accessory Kit
iPC – RES2SV240NC	MM# – 915431 UPC – 00735858221375 MOQ - 5	 SAS 2.0 6 Gb/s expander Low Profile MD2 PCIe* add-in card form factor 24 Port 6Gb expander card with ports configurable for input or output Power from PCIe x1 or 4-pin connector Mini-SAS 8087 connectors Kit includes: (1) 6 Gb/s SAS Expander card (with no cables), PCI brackets for Low profile and Full height Required (sold separately): MS-HD SAS Data Cables – See Table 6 	• 2U Accessory Kit

Note: The onboard SATA ports are not compatible with SAS Expander cards. The onboard SATA ports can only be cabled directly to a specified backplane.

				-	-	-
			Mezzanine 12Gb	Mezzanine 6 Gb SAS	12Gb SAS RAID PCIe*	6Gb SAS RAID PCIe*
System	Drive Support	On-board Multi-	SAS ROC Module +	ROC module + 6 Gb	add-in card + 12 Gb	add-in card + 6 Gb
Configuration	Drive Support	port SATA Ports	12 Gb SAS Expander	SAS Expander to	SAS Expander to	SAS Expander to
			to Backplane	Backplane	Backplane	Backplane
R2312WTxxx R2312WTTYS With SAS Expander installed	12 x 3.5" 12 Gb SAS Capable	Onboard SATA controllers do not support SAS expanders. If attaching the onboard SATA controller to the Backplane, then use cables that are included in the System SKUs. For building block integration use cable kits: AXXCBL800HDHD AXXCBL875HDHD	to BackplaneWith 12 Gb SASExpander RES3FV288installed in Riser #1:- Use cables in Expander Kit to attach SAS ROC to Expander Card- Use the following cables to attach Expander to Backplane:Expander -> BP 0-3 800 mm HD HDExpander -> BP 4-7 875 mm HD HDExpander -> BP 8-11 950 mm HD HD1 of each cable included with L6 Integrated systemsFrom data above, select appropriate cable kits from list below:AXXCBL800HDHD AXXCBL875HDHD	BackplaneWith 6 Gb SASExpander RES2SV240installed in Riser #1:- Use cables in Expander Kit to attach SAS ROC to Expander Card- Use the following cables to attach Expander to Backplane:Expander -> BP 0-3 800 mm HD MSExpander -> BP 4-7 875 mm HD MSExpander -> BP 8-11 950 mm HD MSFrom data above, select appropriate cable kits from list below:AXXCBL800HDMS AXXCBL950HDMS	BackplaneWith 12 Gb PCIe RAIDand 12 Gb SAS ExpanderRES3FV288 installed inriser #1:- Use cables in ExpanderKit to attach PCIe SAScard to Expander Card- Use the followingcables to attachExpander -> BP 0-3800 mm HD HDExpander -> BP 4-7875 mm HD HDExpander -> BP 8-11950 mm HD HDFrom data above, selectappropriate cable kitsfrom list below:AXXCBL800HDHDAXXCBL950HDHD	BackplaneWith 6 Gb PCle RAID and6 Gb SAS ExpanderRES2SV240 installed inriser #1:- Use cables inExpander Kit to attachPCle SAS card toExpander Card- Use the followingcables to attachExpander toBackplane:Expander -> BP 0-3800 mm HD MSExpander -> BP 4-7875 mm HD MSExpander -> BP 8-11950 mm HD MSFrom data above, selectappropriate cable kitsfrom list below:AXXCBL800HDMSAXXCBL950HDMS
			AXXCBL950HDHD			

Table 6. 2U 12 x 3.5" - R2312WTxxx SAS / SATA Data Cable Guide (with SAS Expander)

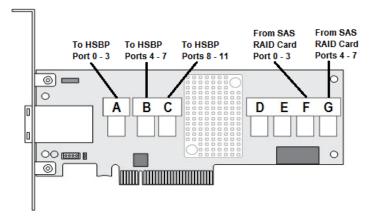


Figure 7. Intel[®] RAID Expander RES3FV288 Connector Identification

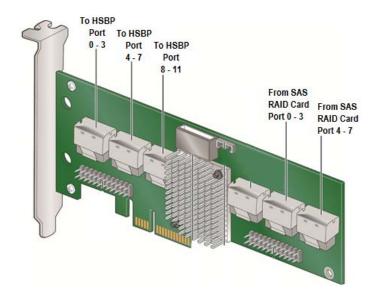
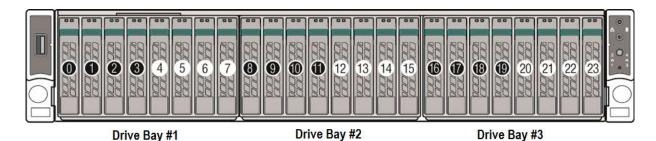


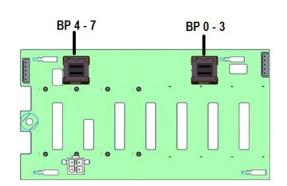
Figure 8. Intel[®] RAID Expander RES2SV240 Connector Identification

4.2.5 2U 2.5" Front Mount Drive Bay Cable Guide

The front drive bay of the 2U system can support up to three 8x2.5" drive bay modules capable of supporting system configurations of 8 (R2208), 16 (R2216), or 24 (R2224) drives. Each 8x2.5" drive bay is numbered in sequence from 1 to 3, as shown below. Each installed 8x2.5" backplane will include at least two multi-port 8643 data connectors, each supporting a set of four drives. Note that some 8x2.5" backplane options include more than two 8643 connectors in order to support features available to the specific backplane.







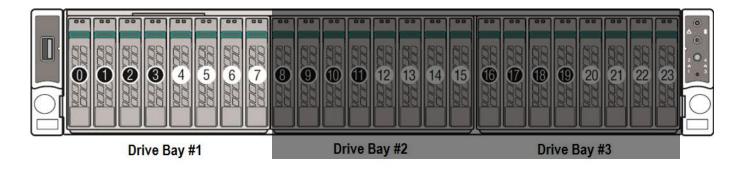
Intel makes available several different 8x2.5" drive bay module options, each supporting a different feature set (see chapter 5). The system tables in this section define the SAS/SATA data cables required to support the specified drive bay location regardless of the backplane option installed.

Reference each table as appropriate to determine the cable requirements relevent to your specific drive bay configuration.

Note: For data cable information associated with Intel® Accessory Kit A2U44X25NVMEDK, see sections 5.2.1 and 5.2.2

2U 2.5" Front Mount Drive Configurations – SAS Data Cable Guide (with no SAS Expander)

Table 7. 2U 8 x 2.5" (Drive Bay #1) - SAS/SATA Data Cable Guid (with no SAS Expander)



System Configuration	Drive Support	Cables for On-board Multi-port SATA Ports to Drive Bay #1	Cables for Mezzanine 12 Gb SAS ROC Module to Drive Bay #1	Cables for Mezzanine 6 Gb SAS RAID module to Drive Bay #1	Cables for 12 Gb SAS RAID PCIe* add-in card to Drive Bay #1	Cables for 6 Gb SAS RAID PCIe* add-in card to Drive Bay #1
		Cable Connections: SATA Cntlr -> BP 0-3 730mm HD HD	Cable Connections: SAS Mezz -> BP 0-3 730 mm HD HD	Cable Connections: SAS Mezz -> BP 0-3 730 mm HD MS	From Riser #1: Cable Connections:	From Riser #1: Cable Connections:
		sSATA Cntrl -> BP 4-7 730 mm HD HD From data above, select	SAS Mezz -> BP 4-7 730 mm HD HD From data above, select	SAS Mezz -> BP 4-7 730 mm HD MS From data above, select	SAS PCIe -> BP 0-3 730 mm HD HD SAS PCIe -> BP 4-7 730 mm HD HD	SAS PCIe -> BP 0-3 730 mm HD MS SAS PCIe -> BP 4-7 730 mm HD MS
Drive Bay #1		appropriate cable kits from list below:	appropriate cable kits from list below:	appropriate cable kits from list below:	<u>From Riser #2</u> SAS PCle -> BP 0-3	<u>From Riser #2</u> SAS PCle -> BP 0-3
R2208	8 x 2.5"	AXXCBL730HDHD	AXXCBL730HDHD	AXXCBL730HDMS	730 mm HD HD SAS PCle -> BP 4-7	730 mm HD MS SAS PCIe -> BP 4-7
R2216 R2224		(2) 730mm Cables included with all 2.5" L6 Integrated systems	(2) 730mm Cables included with all 2.5" L6 Integrated systems		730 mm HD HD From data above, select appropriate cable kits from list below:	730 mm HD MS From data above, select appropriate cable kits from list below:
					AXXCBL730HDHD	AXXCBL730HDMS
					(2) 730mm Cables included with all 2.5" L6 Integrated systems	

For R2216WTxxx System configurations with no SAS Expander, reference Tables 7 and 8 for cabling guidance



		000 000 000 000 000 000 000 000 000 00	The second secon		re Bay #3	
System Configuration	Drive Support	Cables for On-board Multi-port SATA Ports to Drive Bay #2	Cables for Mezzanine 12 Gb SAS ROC Module to Drive Bay #2	Cables for Mezzanine 6 Gb SAS ROC module to Drive Bay #2	Cables for 12 Gb SAS RAID PCIe* add-in card to Drive Bay #2	Cables for 6 Gb SAS RAID PCIe* add-in card to Drive Bay #2
Drive Bay #2 (no SAS Expander) R2216 R2224	8 x 2.5"	Cable Connections: SATA Cntlr -> BP 0-3 730mm HD HD SSATA Cntrl -> BP 4-7 875mm HD HD From data above, select appropriate cable kits from <u>list below:</u> AXXCBL730HDHD (730mm Included in all 2.5" L6) AXXCBL875HDHD (875mm Included in R2224 L6)	Cable Connections: SAS Mezz -> BP 0-3 730mm HD HD SAS Mezz -> BP 4-7 875mm HD HD From data above, select appropriate cable kits from list below: AXXCBL730HDHD (730mm Included in all 2.5" L6) AXXCBL875HDHD (875mm Included in R2224 L6)	Cable Connections: SAS Mezz -> BP 0-3 730mm HD MS SAS Mezz -> BP 4-7 875mm HD MS From data above, select appropriate cable kits from <u>list below:</u> AXXCBL730HDMS AXXCBL875HDMS	From Riser #1: SAS PCIe -> BP 0-3 ** 650 or 730mm HD HD SAS PCIe -> BP 4-7 ** 730 or 800mm HD HD From Riser #2: SAS PCIe -> BP 0-3 ** 800 or 875mm HD HD SAS PCIe -> BP 4-7 ** 730 or 875mm HD HD From data above, select appropriate cable kits from list below: AXXCBL650HDHD AXXCBL730HDHD (2) 730mm Included in all 2.5" L6 AXXCBL875HDHD (4) 875mm Included in R2224 L6)	From Riser #1: SAS PCIe -> BP 0-3 ** 650 or 730mm HD MS SAS PCIe -> BP 4-7 ** 730 or 800mm HD MS From Riser #2: SAS PCIe -> BP 0-3 ** 800 or 875mm HD MS SAS PCIe -> BP 4-7 ** 730 or 875mm HD MS From data above, select appropriate cable kits from list below: AXXCBL650HDMS AXXCBL730HDMS AXXCBL800HDMS AXXCBL875HDMS

For R2224WTxxx System configurations with no SAS Expander, reference Tables 7, 8, and 9 for cable guidance for all three drive bay modules.

Table 9. 2U 8 x 2.5" (Drive Bay #3) – SAS / SATA Data Cable Guide (with no SAS Expander)



System	System Drive	Cables for On-board	Cables for Mezzanine	Cables for Mezzanine	Cables for 12 Gb SAS	Cables for 6 Gb SAS
Configuration Support		Multi-port SATA Ports	12 Gb SAS ROC Module	6 Gb SAS ROC module	RAID PCIe* add-in	RAID PCIe* add-in
conngulation	Support	to Drive Bay #3	to Drive Bay #3	to Drive Bay #3	card to Drive Bay #3	card to Drive Bay #3
		Cable Connections:	Cable Connections:	Cable Connections:	From Riser #1:	From Riser #1:
Drive Bay #3 (no SAS Expander) R2224	8 x 2.5"	SATA Cntlr -> BP 0-3 800mm HD HD SSATA Cntrl -> BP 4-7 730mm HD HD From data above, select appropriate cable kits from <u>list below:</u> AXXCBL730HDHD (2) 730mm cables Included in all 2.5" L6) AXXCBL800HDHD	SAS Mezz -> BP 0-3 730mm HD HD SAS Mezz -> BP 4-7 730mm HD HD From data above, select appropriate cable kits from list below: AXXCBL730HDHD (2) 730mm cables Included in all 2.5" L6)	SAS Mezz -> BP 0-3 730mm HD MS SAS Mezz -> BP 4-7 730mm HD MS From data above, select appropriate cable kits from <u>list below:</u> AXXCBL730HDMS	SAS PCIe -> BP 0-3 ** 730 or 875mm HD HD SAS PCIe -> BP 4-7 ** 800 or 950mm HD HD From Riser #2: SAS PCIe -> BP 0-3 ** 730 or 875mm HD HD SAS PCIe -> BP 4-7 ** 650 or 800mm HD HD From data above, select appropriate cable kits from list below: AXXCBL650HDHD AXXCBL650HDHD (2) 730mm Included in all 2.5" L6 AXXCBL800HDHD AXXCBL875HDHD (4) 875mm Included in R2224 L6 AXXCBL950HDHD	SAS PCIe -> BP 0-3 ** 730 or 875mm HD MS SAS PCIe -> BP 4-7 ** 800 or 950mm HD MS From Riser #2: SAS PCIe -> BP 0-3 ** 800 or 875mm HD MS SAS PCIe -> BP 4-7 ** 650 or 800mm HD MS From data above, select appropriate cable kits from list below: AXXCBL650HDMS AXXCBL650HDMS AXXCBL730HDMS AXXCBL875HDMS AXXCBL875HDMS AXXCBL950HDMS

2U 2.5" Front Mount Drive Configurations – SAS Data Cable Guide (with SAS Expander)

SAS drive configurations consisting of more than 8 drives may require the addition of a SAS Expander card. In the 2U 16x2.5" or 24x2.5" system configurations, a SAS expander can be mounted in the area directly behind the drive bays. Intel provides two SAS expander options to support these drive configurations:

Intel Product Code	Order Information	Product Description	Product Type
iPC – RES3TV360	MM# – 932894 UPC – 00735858287364 EAN – 5032037067102 MOQ - 5	 SAS 3.0 12 Gb/s expander featuring 6Gbps data aggregation for 12Gbps data transferwith 6Gb/s devices Internal mount mid-plane form factor 36 internal ports supporting point-to-pont 12, 6, and 3 Gb/s data transfer rates RA 4-pin power connector HD Mini-SAS 8643 Connectors Kit includes: (1) SAS expander card; (1) 130mm Power cable; (1 set) Expander-to-backplane cables: (4) HD-HD 165mm, (1) HD-HD 300mm, (1) HD-HD 250mm; (3) Rubber Pads; mounting screws Required (sold separately) HD-HD 12 Gb/sec Raid Controller-to-Expander cables – See table section 4.7.3 MD MS 6 Ch /s PAID Controller to Expander cables – See table 	• 2U Accessory Kit
iPC – RES2CV360	MM# – 918935 UPC – 00735858241168 EAN – 5032037035897 MOQ - 1	 HD-MS 6 Gb/s RAID Controller-to-Expander cables – See table section 4.7.3 SAS 2.0 6 Gb/s expander Internal mount mid-plane form factor 36 Port 6Gb expander card with ports configurable for input or output Power from 4-pin connector Mini-SAS 8087 connectors Kit includes: (1) 6 Gb/s SAS Expander card; (1) 130mm power cable; (3) rubber mounting pads; (1 set) 6 Gb Expander to 6 Gb bacplane cables: (3) MS-MS 165mm, (2) MS-MS 185mm, (1) MS-MS 245mm (NOTE: included data cables not compatible in R2312WT system) Required (sold separately): iPC – AXXCBLEXPHDMS - MS-HD 6Gb Expander to 12 Gb Backplane Data Cable kit, SAS Data Cables from 6 Gb SAS RAID PCIe/Mezz Card to expander. See Table 10. 	• 2U Accessory Kit

Note: The onboard SATA ports are not compatible with SAS Expander cards. The onboard SATA ports can only be cabled directly to a specified backplane.

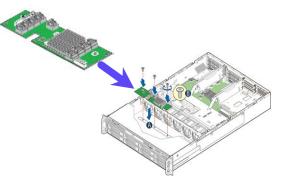


Table 10. 2U 2.5" Front Mount Drive Configurations with SAS Expander – SAS Data Cable Guide

Mezzanine 12Gb SAS ROC Module to 12 Gb	12Gb SAS RAID PCIe* add-in card to 12 Gb	Mezzanine 6 Gb SAS ROC Module to 12 Gb	6Gb SAS RAID PCIe* add-in card to 12 Gb	Mezzanine 6 Gb SAS ROC Module to 6 Gb	6Gb SAS RAID PCIe* add-in card to 6 Gb
SAS Expander	SAS Expander	SAS Expander	SAS Expander	SAS Expander	SAS Expander
12 Gb SAS Expander RES3TV360 installed:	12 Gb SAS Expander RES3TV360 installed:	12 Gb SAS Expander RES3TV360 installed:	12 Gb SAS Expander RES3TV360 installed:	6 Gb SAS Expander RES2CV360 installed:	6 Gb SAS Expander RES2CV360 installed:
SAS Mezz -> Exp 0-3 (G) 730mm HD HD SAS Mezz -> Exp 4-7 (H) 730mm HD HD	From Riser #1: SAS PCIe -> Exp 0-3 (G) 650mm HD HD SAS PCIe -> Exp 4-7 (H) 650mm HD HD	SAS Mezz -> Exp 0-3 (G) 730mm HD MS SAS Mezz -> Exp 4-7 (H) 730mm HD MS	From Riser #1: SAS PCIe -> Exp 0-3 (G) 650mm HDMS SAS PCIe -> Exp 4-7 (H) 650mm HDMS	SAS Mezz -> Exp 0-3 (A) 730mm MS MS SAS Mezz -> Exp 4-7 (B) 730mm MS MS	From Riser #1: SAS PCIe -> Exp 0-3 (G) 650mm MSMS SAS PCIe -> Exp 4-7 (H) 650mm MSMS
From data above, select appropriate cable kits from <u>list below:</u> AXXCBL730HDHD (2) 730mm cables Included in all 2.5" L6)	From Riser #2: SAS PCIe -> Exp 0-3 (G) 730mm HD HD SAS PCIe -> Exp 4-7 (H) 730mm HD HD From data above, select appropriate cable kits from list below: AXXCBL650HDHD AXXCBL730HDHD (2) 730mm cables Included in all 2.5" L6)	From data above, select appropriate cable kits from <u>list below:</u> AXXCBL730HDMS	From Riser #2: SAS PCIe -> Exp 0-3 (G) 730mm HDMS SAS PCIe -> Exp 4-7 (H) 730mm HD MS From data above, select appropriate cable kits from <u>list below:</u> AXXCBL650HDMS AXXCBL730HDMS	From data above, select appropriate cable kits from <u>list below:</u> AXXCBL730MSMS	From Riser #2: SAS PCIe -> Exp 0-3 (G) 730mm MSMS SAS PCIe -> Exp 4-7 (H) 730mm MS MS From data above, select appropriate cable kits from list below: AXXCBL650MSMS AXXCBL730MSMS
12 Gb SAS Expander	12 Gb SAS Expander to	12 Gb SAS Expander	12 Gb SAS Expander	6 Gb SAS Expander to	6 Gb SAS Expander to
to drive bays	drive bays	to drive bays	to drive bays	drive bays	drive bays
Use cables included in SAS Expander Kit	Use cables included in SAS Expander Kit	Use cables included in SAS Expander Kit	Use cables included in SAS Expander Kit	Cable Kit Required: iPC – AXXCBLEXPHDMS	Cable Kit Required: iPC – AXXCBLEXPHDMS

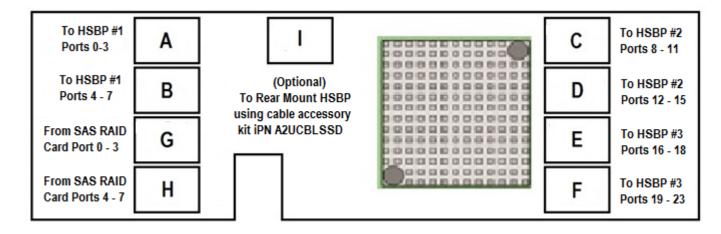


Figure 9. – 12Gb Internal 36-Port Intel® RAID Expander Card RES3TV360 - Connector Identification Block Diagram

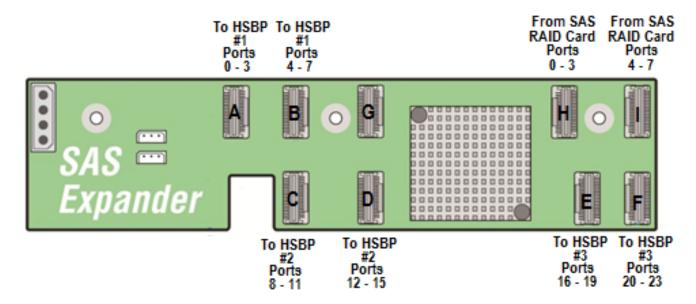


Figure 10. – 6 Gb Internal 36-Port Intel® RAIDExpander Card RES2CV360 - Connector Identification Block Diagram

4.3 Intel SAS / SATA Data Cable Kits

Each cable accessory kit referenced in the this section will identify the connector type at each end of the cable using the following identifiers: **HR**, **HD**, and **MS**. The following table identifies the three cable connector types and their identifiers.

*	HR = Right Angle SFF-8643 Mini SAS HD Connector
Contraction of the second seco	HD = Straight SFF-8643 Mini SAS HD Connector
	MS = Straight SFF-8087 Mini SAS Connector (compatible with 6Gb/sec SAS controllers and expanders)

Cable Kit Product Code Decoder

Example - iPC AXXCBL950HDMS

AXXCBL - Identifies an accessory cable kit

950 – identifies the length of the cable

HD - identifies that one cable connector supports an SFF-8643 type connector

MS - identifies that one cable connector supports an SFF-8087 type connector

Table 11. Storage Data Cable Kit Description and Order Inforr	nation
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Image	Order Information	Description
	iPC – AXXCBL950HDHD MM – 936122 UPC – 00735858286596 EAN – 5032037066495 MOQ – 1	950 mm long, cable kit (2 cables included) straight SFF8643 to straight SFF8643 Used in multiple systems as spare and/or accessory (1304, 2308, 2312)
	iPC – AXXCBL875HDHD MM – 936123 UPC – 00735858284769 EAN – 5032037065054 MOQ – 1	875 mm long, cable kit (2 cables included) straight SFF8643 to straight SFF8643 Used in multiple systems as spare and/or accessory (1304, 1208 2208, 2312)
	iPC – AXXCBL800HDHD MM – 937312 UPC – 00735858286015 EAN – 5032037066006 MOQ – 1	800 mm long, cable kit (2 cables included) straight SFF8643 to straight SFF8643 Used in multiple systems as spare and/or accessory (1203, 1208, 2308, 2312)
	iPC – AXXCBL730HDHD MM – 936178 UPC – 00735858284745 EAN – 5032037065030 MOQ – 1	730 mm long, cable kit (2 cables included) straight SFF8643 to straight SFF8643 Used in multiple systems as spare and/or accessory (1208, 2208)
	iPC – AXXCBL650HDHD MM – 937129 UPC – 00735858284752 EAN – 5032037065047 MOQ – 1	650 mm long, cable kit (2 cables included) straight SFF8643 to straight SFF8643 Used as accessory when installing 12G ROC module in 1208 for optimal cabling. (longer cable may be used)
	iPC – AXXCBL1UHRHD MM – 937311 UPC – 00735858287401 EAN – 5032037067140 MOQ – 1	Combo cable kit, contains 2 cables. One of each of the following: 730mm (AXXCBL800HRHD), 800mm right angle SFF8643 to straight SFF8643, Spare cables used in 1U WT systems to connect to onboard SATA ports.

Image	Order Information	Description
	iPC – AXXCBL950HDMS MM – 937131	950 mm long, cable kit (2 cables included) straight SFF8643to straight SFF8087
Kara I	UPC – 00735858286633 EAN – 5032037066532 MOQ – 1	Required in WT 2U systems with 6G SAS ROC module or 6G SAS RAID cards. (1304 with HBA, 2308 and 2312 HBA/module)
	iPC – AXXCBL875HDMS MM – 937130	875 mm long, cable kit (2 cables included) straight SFF8643 to straight SFF8087
EAN	UPC – 00735858286626 EAN – 5032037066525 MOQ – 1	Required in WT 2U systems with 6G SAS ROC module or 6G SAS RAID cards. (1304 and 1208 with HBA, 2216,2224,2312 with HBA/module)
	iPC – AXXCBL800HDMS MM – 937309	800 mm long, cable kit (2 cables included) straight SFF8643 to straight SFF8087
Con Alexandre	UPC – 00735858286084 EAN – 5032037066075 MOQ – 1	Required in WT 2U systems with 6G SAS ROC module or 6G SAS RAID cards. (1304 and 1208 with module, 2308 and 2312 HBA/module)
	iPC – AXXCBL730HDMS MM – 927238	730 mm long, cable kit (2 cables included) straight SFF8643 to straight SFF8087
	UPC – 00735858266970 EAN – 5032037053648 MOQ – 5	Required in WT 2U systems with 6G SAS ROC module or 6G SAS HBA cards. (1208 with HBA, 2208 with HBA/module)
	iPC – AXXCBL650HDMS MM – 927237	650 mm long, cable kit (2 cables included) straight SFF8643 to straight SFF8087
Alexandree and a second	UPC – 00735858266963 EAN – 5032037053631 MOQ – 5	Used as accessory when installing 6Gb ROC module in 1208 for optimal cabling. (longer cable may be used)

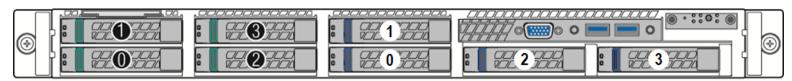
Image	Order Information	Description
	iPC – AXXCBLEXPHDMS MM – 937127 UPC – 00735858284776 EAN – 5032037065061 MOQ – 1	6 Gb Expander to 12 Gb Backplane cable kit 6Gb MS – to – 12Gb HD (3) 165 mm , (1) 185 mm , (1) 245 mm , (1) 300 mm straight SFF8643 to straight SFF8087
	iPC – AXXCBL650MSMS MM – 918376 UPC – 00735858224444 EAN – 5032037019910 MOQ – 5	650 mm long, cable kit (2 cables included) straight SFF8087 to straight SFF8087 Required in WT 2U systems with 6Gb SAS ROC module or 6Gb SAS HBA cards. (1208 with HBA, 2208 with HBA/module) and 6 Gb Expander card
	iPC – AXXCBL730MSMS MM – 921049 UPC – 00735858245340 EAN – 5032037039864 MOQ – 1	730 mm long, cable kit (2 cables included) straight SFF8087 to straight SFF8087 Required in WT 2U systems with 6Gb SAS ROC module or 6Gb SAS HBA cards. (1208 with HBA, 2208 with HBA/module) and 6 Gb Expander card
	iPC – AXXCBL880SATA MM – 922988 UPC – 00735858250290 EAN – 5032037044806 MOQ – 10	Spare SATA ODD Data cable for rack chassis family – 880mm long Included with ODD accessories
	iPC - A2UCBLSSD MM# – 937328 UPC – 00735858287005 EAN – 5032037066747 MOQ - 1	 2U Cable kit accessory This kit includes cables necessary to provide simultaneous support for up to two internal air duct mounted SATA SSDs + rear drive bay (iPC – A2UREARHSDK) Kit includes: (1) Power Cable – Connectors to support rear drive bay and 2 internal mount SSDs (No CD/DVD Drive support) (1) fan out multiport SATA Data cabe – Cable connectors include (1) HD mini-SAS SFF8643 + (4) 7-pin SATA + (1) SGPIO

5. Intel 1U / 2U System Configuration Options

The following sections identify available accessory kits supported within the Intel® S2600WT product family.

5.1 1U 8x2.5" Combo PCIe* SFF (NVMe) SSD / SAS Backplane – Intel® Accessory Kit A1U44X25NVMEDK

- The 8x2.5" combo backplane kit is capable of supporting a combination of both SAS devices and up to four PCIe* SFF (Small Form Factor) (NVMe) SSD drives
- All eight drive connectors are capable of supporting a SAS device, but only four include SFF8639 connectors that can support PCIe* SFF (NVMe) SSDs
- This kit is only supported in dual processor configurations



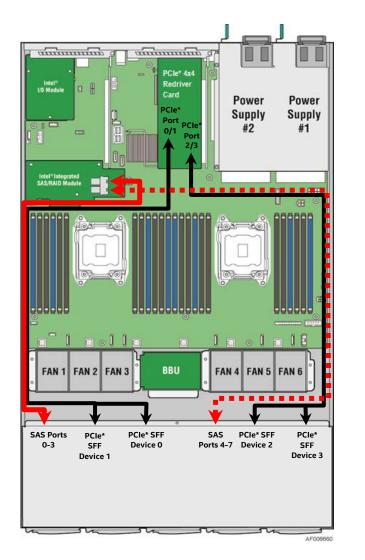
SAS / SATA Drives 0 - 3

PCIe* SSD SFF (NVMe) Drives 0 - 3

Intel Product Code	Order Information	Product Description	Product Type
iPC – A1U44X25NVMEDK		1U 8x2.5" Combo PCIe* SFF (NVMe) SSD / SAS Backplane Kit	
		Kit IncludesL	
		(1) Combo Hot Swap Backplane PCBA	
	MM# – 936251	(4) SAS / SATA Hot Swap Drive Carriers (Green Latch)	
	UPC – 00735858288873	(4) PCIe* SFF SSD (NVMe) Hot Swap Drive Carriers (Blue Latch)	
	EAN – 5032037068154	(2) Dual PCIe* Port Cables	• 1U Accessory Kit
	MOQ – 1	(1) PCIe x16 Add-in card	
		(1) Installation Guide	
		Required (Sold Separately):	
		SAS / SATA Data cables - See section 5.1.1	

See the Intel® Server System R1000WT Technical Product Specification for additional information

5.1.1 1U 8x2.5" – Intel[®] Accessory Kit A1U44X25NVMEDK Cable Guide



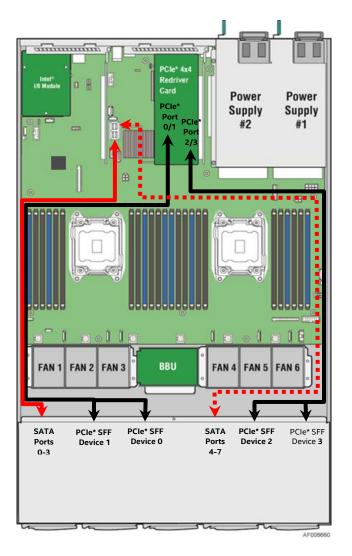


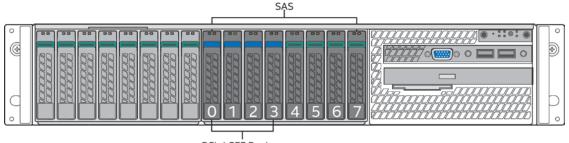
Figure 11. 1U Combo Backplane (iPC – A1U44X25NVMEDK) Cable Routing

System Configuration	Drive Support	Cables for On- board Multi-port SATA Ports to Backplane	Cables for Mezzanine 12 Gb SAS ROC Module to Backplane	Cables for Mezzanine 6 Gb SAS RAID module to Backplane	Cables for 12 Gb SAS RAID PCIe* add-in card to Backplane	Cables for 6 Gb SAS RAID PCIe* add-in card to Backplane
	A1U44X25NVMEDK Accessory kit	730 mm HR HD Connect cable to: SATA -> BP 0-3 and / or	650 mm HD HD Connect cable to: SAS Mezz -> BP 0-3 and/or	650 mm HD MS Connect cable to: SAS Mezz -> BP 0-3 and/or	From Riser #1 730 mm HD HD Connect cable to: SAS PCIe -> BP 0-3	From Riser #1 730 mm HD MS Connect cable to: SAS PCIe -> BP 0-3
R1208WTxxx R1208WTTGS R1208WT2GS	Option 8 x 2.5" Combo SAS / SATA + PCle* SSD SFF (NVMe) 12 Gb SAS capable	800 mm HR HD Connect cable to: sSATA -> BP 4-7 Cables Included with system SKUs.	800 mm HD HD Connect cable to: SAS Mezz -> BP 4-7 Cable Kits Required: AXXCBL650HDHD	800 mm HD MS Connect cable to: SAS Mezz -> BP 4-7 Cable Kits Required: AXXCBL650HDMS	and/or 875mm HD HD Connect cable to: SAS PCIe -> BP 4-7	and/or 875mm HD MS Connect cable to: SAS PCIe -> BP 4-7
with A1U44X25NVMEDK	PCIe* cables included in accessory kit. For SAS/SATA support see the following options	Cable kit required for building block integration: AXXCBL1UHRHD Use PCIe* cables included with Combo backplane kit for PCIe* SSD / NVMe drive support	and / or AXXCBL800HDHD Use PCIe* cables included with Combo backplane kit for PCIe* SSD / NVMe drive support	and / or AXXCBL800HDMS Use PCIe* cables included with Combo backplane kit for PCIe* SSD / NVMe drive support	Cable Kits Required: AXXCBL730HDHD and / or AXXCBL875HDHD Use PCIe* cables included with Combo backplane kit for PCIe* SSD / NVMe drive support	Cable Kits Required: AXXCBL730HDMS and / or AXXCBL875HDMS Use PCIe* cables included with Combo backplane kit for PCIe* SSD / NVMe drive support

Table 12. 1U 8x2.5" Combo Backplane SAS/SATA Cable Guide

5.2 2U 8x2.5" Combo PCIe* SFF (NVMe) SSD / SAS Backplane – Intel® Accessory Kit A2U44X25NVMEDK

- The 8x2.5" combo backplane kit is capable of supporting a combination of both SAS devices and up to four PCIe* SFF (Small Form Factor) (NVMe) SSD drives
- All eight drive connectors are capable of supporting a SAS device, but only four include SFF8639 connectors that can support PCIe* SFF (NVMe) SSDs
- The PCIe* x16 interface add-in card MUST be installed in a x16 riser card (included), and is only supported in the Riser #2 slot of the server board.
- This kit is only supported in dual processor configurations
- The 2U system is limited to supporting only one combo backplane kit in addition to one or two other backplane options
- The combo backplane module can only be supported in the first (left) drive bay when no other backplane module is installed
- Due to thermal and power limits associated with 16 x 2.5" and 24 x 2.5" front drive configurations, the combo backplane module can only be supported in the second (middle) drive bay



AF006778

PCIe* SFF Devices

Intel Product Code	Order Information	Product Description	Product Type
iPC – A2U44X25NVMEDK	MM# – 936253 UPC – 00735858288880 EAN – 5032037068161 MOQ – 1	2U 8x2.5" Combo PCle* SFF (NVMe) SSD / SAS Backplane Kit Kit Includes: (1) 8x2.5" Drive Bay Assembly with backplane (4) SAS / SATA Hot Swap Drive Carriers (Green Latch) (4) PCle* SFF SSD (NVMe) Hot Swap Drive Carriers (Blue Latch) (2) Dual PCle* Port Cables (1) PCle x16 Add-in card (1) 2-slot PCIe Riser card PCBA and mounting screws (1) I2C jumper cable (used in dual backplane configurations) (1) Installation Guide Required (Sold Separately): SAS / SATA Data cables - See sections 5.2.1& 5.2.2	• 2U Accessory Kit

See the Intel[®] Server System R2000WT Technical Product Specification for additional information.

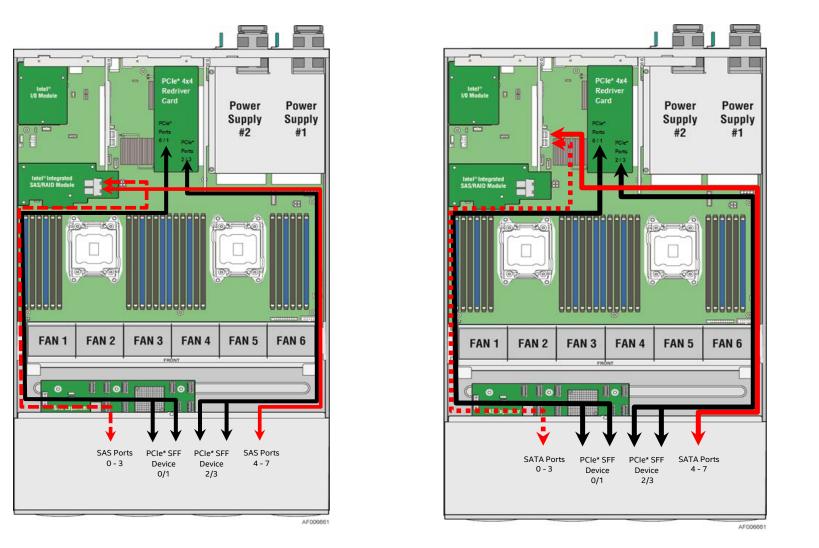


Figure 12. 2U Combo Backplane (iPC – A2U44X25NVMEDK) Cable Routing

5.2.1 2U 8x2.5" – Intel[®] Accessory Kit A2U44X25NVMEDK SAS/SATA Cable Guide

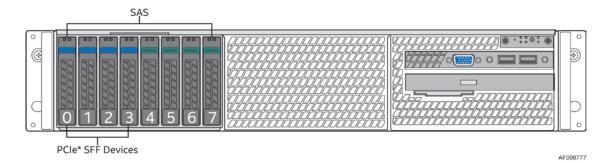


Figure 13. Combo Backplane Module Placement – 8 x 2.5" front drive configurations

System Configuration	Drive Bay #1	Cables for On-board Multi-port SATA Ports to Backplane	Cables for Mezzanine 12 Gb SAS ROC Module to Backplane	Cables for Mezzanine 6 Gb SAS RAID module to Backplane	Cables for 12 Gb SAS RAID PCIe* add-in card to Backplane	Cables for 6 Gb SAS RAID PCIe* add-in card to Backplane
		730 mm HD HD	730 mm HD HD	730 mm HD MS	From Riser #1	From Riser #1
		Connect cable to:	Connect cable to:	Connect cable to:		
		SATA -> BP 0-3	SAS Mezz -> BP 0-3	SAS Mezz -> BP 0-3	730 mm HD HD	730 mm HD MS
		Included w/system	Included w/system		Connect cable to:	Connect cable to:
		SKUs	SKUs	and/or	SAS PCIe -> BP 0-3	SAS PCIe -> BP 0-3
		and / or	and/or			
	8 x 2.5" Combo			730 mm HD MS	and/or	and/or
R2208WT	SAS / SATA + PCle*	730 mm HR HD	730 mm HD HD	Connect cable to:		
	SSD SFF (NVMe)	Connect cable to:	Connect cable to:	SAS Mezz -> BP 4-7	730 mm HD HD	730 mm HD MS
	iPC	sSATA -> BP 4-7	SAS Mezz -> BP 4-7		Connect cable to:	Connect cable to:
	A2U44X25NVMEDK	Included w/system	Included w/system	Cable Kits Required:	SAS PCIe -> BP 4-7	SAS PCIe -> BP 4-7
		SKUs	SKUs	(1 or 2)		
	PCIe* cables included			AXXCBL730HDMS	Cable Kits Required:	Cable Kits Required:
D: D //4	in accessory kit. For	Cable kit required for	Cable kit required for		(1 or 2)	(1 or 2)
Drive Bay #1	SAS/SATA support	building block	building block	Use PCIe* cables	AXXCBL730HDHD	AXXCBL730HDMS
populated	see the following	integration:	integration:	included with Combo		
	options	(2) AXXCBL730HDHD	(2) AXXCBL730HDHD	backplane kit for PCIe*	Use PCIe* cables included	Use PCIe* cables
				SSD SFF / NVMe drive	with Combo backplane kit	included with Combo
		Use PCIe* cables	Use PCIe* cables	support	for PCIe* SSD SFF / NVMe	backplane kit for PCIe*
		included with Combo	included with Combo		drive support	SSD SFF / NVMe drive
		backplane kit for PCIe*	backplane kit for PCIe*			support
		SSD SFF / NVMe drive	SSD SFF / NVMe drive			
		support	support			

5.2.2 2U 16x2.5" / 24x2.5" — Intel[®] Accessory Kit A2U44X25NVMEDK SAS / SATA Cable Guide

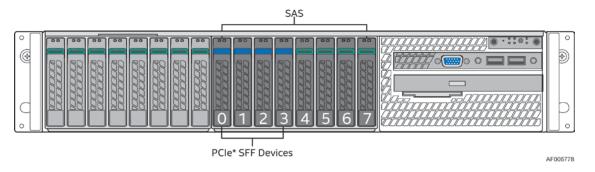
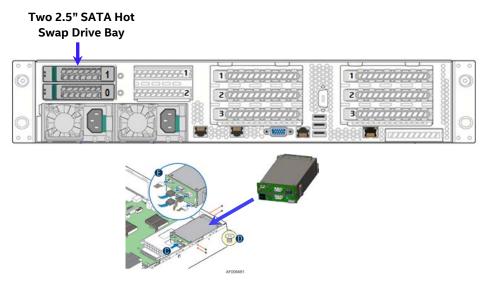


Figure 14. Combo Backplane Module Placement - 16 x 2.5" and 24 x 2.5" front drive configurations

System Configuration	Cables for Drive Bay #1	Drive Bay #2 Backplane Type	Cables for Mezzanine 12 Gb SAS ROC Module to Drive Bay #2	Cables for Mezzanine 6 Gb SAS RAID module to Drive Bay #2	Cables for 12 Gb SAS RAID PCIe* add-in card to Drive Bay #2	Cables for 6 Gb SAS RAID PCIe* add-in card to Drive Bay #2
R2216WT R2224WT	See section 4.7.1	8 x 2.5" Combo SAS / SATA + PCIe* SSD SFF (NVMe) iPC A2U44X25NVMEDK PCIe* cables included in accessory kit. For SAS/SATA support see the following options	730mm HD HD Connect cable to: SAS Mezz -> BP 0-3 and/or 800mm HD HD Connect cable to: SAS Mezz -> BP 4-7 One or both cable kits for building block integration: (1) AXXCBL730HDHD (1) AXXCBL730HDHD (1) AXXCBL800HDHD Use PCle* cables included with Combo backplane kit for PCle* SSD / NVMe drive support	730mm HD MS Connect cable to: SAS Mezz -> BP 0-3 and/or 800mm HD MS Connect cable to: SAS Mezz -> BP 4-7 One or both cable kits for building block integration: (1) AXXCBL730HDMS (1) AXXCBL800HDMS Use PCle* cables included with Combo backplane kit for PCle* SSD / NVMe drive support	From Riser #1 730 mm HD HD Connect cable to: SAS PCIe -> BP 0-3 and/or 800 mm HD HD Connect cable to: SAS PCIe -> BP 4-7 One or both cable kits for building block integration: (1) AXXCBL730HDHD (1) AXXCBL800HDHD Use PCIe* cables included with Combo backplane kit for PCIe*	From Riser #1 730 mm HD MS Connect cable to: SAS PCIe -> BP 0-3 and/or 800 mm HD MS Connect cable to: SAS PCIe -> BP 4-7 One or both cable kits for building block integration: (1) AXXCBL730HDMS (1) AXXCBL800HDMS Use PCIe* cables included with Combo backplane kit for PCIe*
					SSD SFF / NVMe drive support	SSD SFF / NVMe drive support

5.3 2U Rear Mount Hot Swap Drive Bay Accessory Kit – iPC A2UREARHSDK

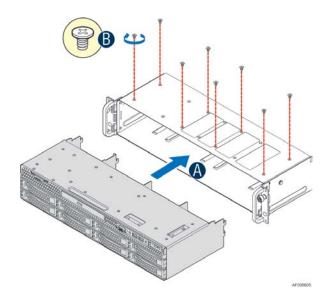
The 2U product family provides the option to support two 2.5" 6 Gb/sec hot swap SSDs installed to a modular drive bay mounted in the back of the system



Intel Product Code	Order Information	Product Description	Product Type
iPC – A2UREARHSDK	MM – 934976 UPC – 735858283298 EAN – 5032037064354 MOQ – 1	2U Rear Mount Hot Swap Drive Bay Accessory Kit Kit Includes: (1) Drive Bay Assembly and mounting hardware (2) 2.5" Hot Swap Drive Carriers (2) SATA Data Cables (1) Power Cable (1) I2C Cable (1) SGPIO cable (1) SGPIO cable	• 2U Accessory Kit System and Building Block
iPC - A2UCBLSSD	MM# – 937328 UPC – 735858287005 EAN – 5032037066747 MOQ - 1	2U Fixed Mount SSD + Rear Drive Bay Cable KitThis kit includes cables to provide simultaneous support for up to twointernal fixed mount SATA SSDs + rear drive bayKit includes:(1) Power Cable – Connectors to support rear drive bay and 2 internalmount SSDs (No CD/DVD Drive support)(1) Fan out multiport SATA Data cable – Cable connectors include (1)HD mini-SAS SFF8643 + (4) 7-pin SATA + (1) SGPIO	• 2U Cable kit accessory

5.4 2U 8x3.5" Front Mount Hot Swap Backplane Assembly - iPC A2U8X35S3HSDK

8x3.5" SAS/SATA Front Mount Hot-Swap Drive Bay Module option for 2U Building Block Chassis iPC – R2000WTxxx.



Intel Product Code	Order Information	Product Description	Product Type
iPC – A2U8X35S3HSDK	MM# – 936191 UPC – 00735858288781 EAN – 5032037068062 MOQ – 5	2U 8x3.5" Front Mount Hot Swap Backplane Assembly Kit Includes: (1) Drive Bay Assembly Module (1) 8x3.5" hot swap backplane (8) 3.5" drive carriers + drive blanks (1) 175mm I2C Cable (1) 500mm ODD/SSD Power Cable (1) Chassis mounting clip (1 set) mounting hardware Required (Sold Separately): SAS / SATA Data Cables. See section 4.2.3	 2U Building Block Accessory Kit

See the Intel[®] Server System R2000WT product family System Integration and Service Guide for complete kit installation instructions.

5.5 2U 8x2.5" Drive Bay Module Options

2U system configurations that include support for 2.5" front mount storage devices can support up to three 8x2.5" drive bay modules. Intel makes available different types of 8x2.5" drive bay modules and can support from 1 to 3 of the same module or a mix of different modules. Only the PCIe* SSD (NVMe) compatible module (iPC – A2U44X25NVMEDK) has the limitation of only supporting one of these modules in combination with other backplane modules in the system.

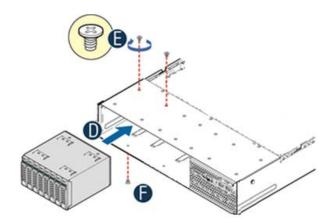


Figure 15. R2208WT and R2216WT based system with Front I/O Module Bay Assembly

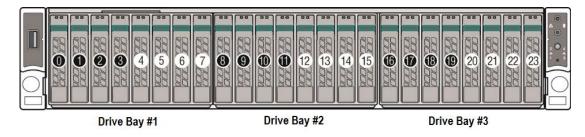


Figure 16. 2U 2.5" Drive Bay Numbering

Drive numbering in the illustrations above is for general reference only. Actual drive numbering will be dependent on SAS / SATA controller configuration and how they are cabled to the backplane. Each drive bay will include a single backplane. Each backplane will include a multi-port data connector for each set of four drives. Ex) for an 8 drive configuration, the backplane will include 2 four port data connectors. In the illustration above, drives showing a common Drive ID label color share a common data connector on the backside of the given backplane.

R2208WT (8x2.5" – 1 drive bay) and **R2216WT** (16x2.5" – 2 drive bays) system configurations utilize the same front I/O module bay assembly containing the System Control Panel and Front I/O Panel (as shown in Figure 9). When upgrading a R2208WT based system to an R2216WT based system, all that is needed is the removal of the Bay #2 face plate to insert the new drive bay, and adding the required data cables. No other chassis changes or additions are required.

Available SAS / SATA 8x25" accessory kits include the following.

Intel Product Code	Order Information	Product Description	Product Type
iPC– A2U8X25S3HSDK		8x2.5" SAS/SATA Front Mount Hot Swap Drive Bay Module for all 2U 2.5" systems	
	MM# – 935066 UPC – 00735858288767 EAN – 5032037068048 MOQ – 1	Kit Includes: (1) Drive Bay Assembly Module (1) 8x2.5" hot swap backplane (8) 2.5" drive carriers + drive blanks (1) 75mm I2C Backplane-to-Backplane jumper cable (1 set) mounting hardware Required (Sold Separately): SAS / SATA Data Cables. See section 4.2.5	 2U 2.5" Drive Upgrade Kit 2U Building Block Accessory Kit

Intel Product Code	Order Information	Product Description	Product Type
		8x2.5" Dual Port SAS Front Mount Hot Swap Drive Bay Module for all 2U 2.5" systems	
iPC – A2U8X25S3DPDK	MM# – 935067 UPC – 00735858288774 EAN – 5032037068055 MOQ – 1	Kit Includes: (1) Drive Bay Assembly Module (1) 8x2.5" hot swap backplane (8) 2.5" drive carriers + drive blanks (1) 75mm I2C Backplane-to-Backplane jumper cable (1 set) mounting hardware Required (Sold Separately): SAS / SATA Data Cables. See section 4.2.5	 2U 2.5" Drive Upgrade Kit 2U Building Block Accessory Kit

For a 2U building block configuration consisting of 24x2.5" drives (3 drive bays – See Figure 10) or when upgrading a R2208WT or R2216WT system to a 24 drive R2224WT system, the 2U storage front panel option of Intel Accessory Kit A2UHANDLKIT must be installed.

Intel Product Code	Order Information	Product Description	Product Type
iPC – A2UHANDLKIT	MM# – 936038 UPC – 00735858288866 EAN – 5032037068147 MOQ – 1	1U / 2U Rack Handle Kit This kit includes 3 different rack handles , including: (1) Set of 2U storage rack handles with control panel and USB support (R2312WT & R2224WT) (1) Set of 2U non –storage rack handles (R2208WT & R2216WT) (1) Set of 1U rack handles (R1304WT & R1208WT	 2U – 24 2.5" Drive Upgrade Kit 1U / 2U Spares Kit

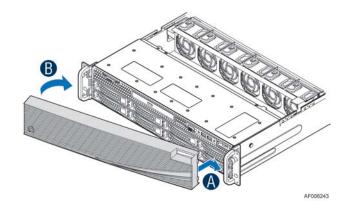
See the Intel Server System R2000WT Product Family System Integration and Service Guide for complete system integration and upgrade instructions.

5.6 Locking Front Bezel Accessory Kits

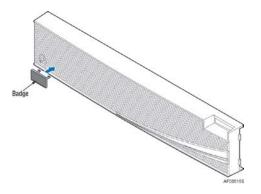
The optional front bezel is made of Black molded plastic and uses a snap-on design. When installed, its design allows for maximum airflow to maintain system cooling requirements. The front bezel includes a keyed locking mechanism which can be used to prevent unauthorized access to installed storage devices and front I/O ports.

5.6.1 2U Front Bezel Accessory Kit – iPC A2UBEZEL

Intel Product Code	Order Information	Product Description	Product Type
iPC – A2UBEZEL	MM# – 918086 UPC – 735858241137 EAN – 5032037035880 MOQ – 1	2U Front Bezel Accesory Kit Kit Includes: (1) 2U locking bezel (1) Front Panel Window Insert (1 Set) Bezel branding inserts – two ID badges, one wave (1 Set) Keys	• 2U Accessory Kit

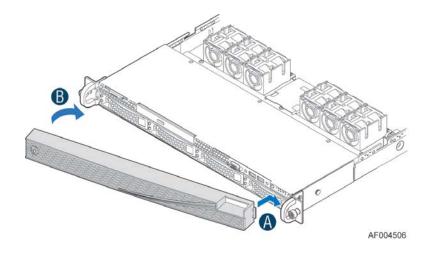


The face of the bezel assembly includes snap-in identification badge options and a wave feature option to allow for customization.

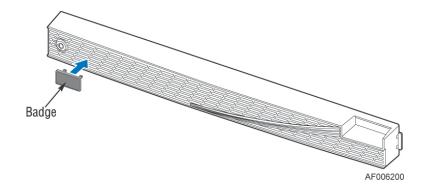


5.6.2 1U Front Bezel Accessory Kit – iPC A1UBEZEL

Intel Product Code	Order Information	Product Description	Product Type
iPC – A1UBEZEL	MM# – 917983 UPC – 735858241120 EAN – 5032037035873 MOQ – 1	1U Front Bezel Accessory Kit Kit Includes: (1) 1U locking bezel (1) Front Panel Window Insert (1 Set) Bezel branding inserts – two ID badges, one wave (1 Set) Keys	• 1U Accessory Kit



The face of the bezel assembly includes snap-in identification badge options and a wave feature option to allow for customization.



5.7 1U / 2U PCIe* Riser Card Accessory/Spare FRU Options

The Intel[®] Server Board S2600WT provides three riser slots. Riser slots 1 and 2 are capable of supporting different riser card options to meet needs of specific system configurations. Riser card options for riser slots 1 and 2 are common. Riser slot 3 is only supported in 2U system configurations and can only support a riser capable of supporting low profile PCIe^{*} add-in cards.

All PCIe* bus lanes to the riser slots are routed from the processors. Riser slot 1 has a total of 24 PCIe* 3.0 bus lanes routed from both processors; 16 lanes from processor #1 and 8 lanes from processor #2. Riser slot 2 has a total of 24 PCIe* 3.0 bus lanes routed from CPU 2. For riser slot 3, all PCIe* bus lanes are routed from CPU 2; 8 PCIe* bus lanes are PCIe* 3.0 compatible and 4 PCIe* lanes are PCIe* 2.0 compatible. See the product Technical Product Specification (TPS) for additional information.

Riser slots 1 and 2 are capable of supporting up to 100W maximum power each. Available power to each add-in card slot on a given riser card is defined by the PCIe* specification. The server board provides two Auxiliary 12V power connectors that when cabled (iPC **AXXGPGPUCABLE**), can provide additional power to high power PCIe* add-in cards.

Intel Product Code	Order Information	Product Description	Product Type
iPC – F1UL16RISER2	MM# – 934884 UPC – 00735858288682 EAN – 5032037067966 MOQ – 1	1U 1-slot PCIe riser card option One PCIe* add-in card slot – PCIe* x16, x16 mechanical Kit includes: (1) Riser card PCBA	 1U Building Block Accessory Kit 1U Spare FRU

5.7.1 1U Riser Card Options

Each riser card assembly has support for a single full height, ½ length PCIe* add-in card. However, riser card #2 may be limited to ½ length, ½ height add-in cards if either of the two mini-SAS HD connectors on the server board are used.

Note: Add-in cards that exceed the PCI specification for ½ length PCI add-in cards (167.65mm or 6.6in) may interfere with other installed devices on the server board.

5.7.2 2U Riser Card Options

Intel Product Code	Order Information	Product Description		Product Type	
		2U 3	-slot PCIe* riser card option		
iPC – A2UL8RISER2	MM# – 934885	Riser Slots #1 &	#2 Riser Card Option		
	UPC – 00735858288675 EAN – 5032037067959 MOQ – 1	Slot # Slot-1 (Top) Slot-2 (Middle) Slot-3 (Bottom)	Description PCIe* x8 elec, x16 mechanical PCIe* x8 elec, x16 mechanical PCIe* x8 elec, x8 mechanical		 2U Building Block Accessory Kit 2U Spare FRU
		Kit includes: (1) riser card PCBA	A		

Each 3-slot riser card assembly has support for up to two full height full length add-in cards (top and middle slots) and one full height ½ length add-in card (bottom slot).

Intel Product Code	Order Information		Product Description	Product Type
iPC – A2UL16RISER2	MM# – 934886	Riser Slots #1 &	-slot PCIe* Riser card option #2 Riser Card Option	 2U Building Block Accessory Kit 2U Spare FRU
	UPC – 00735858288668	Slot #	Description	
	EAN – 5032037067942	Slot-1 (Top)	PCIe* x16 elec, x16 mechanical	
	MOQ – 1	Slot-2 (Bottom)	PCIe* x8 elec, x8 mechanical	* Required Kit for Intel® Xeon Phi™ or
				high power PCIe* add-in card support
		Kit includes:		
		(1) Riser card PCB	A	
		(1) 12V-AUX Powe	er Cable	

Each 2-slot riser card assembly has support for one full height full length add-in card (top slot) and one full height ½ length add-in card (bottom slot).

Note: The **A2UL16RISER2** accessory kit includes a 12V Auxiliary Power cable which can be used to provide additional 12V power for high power PCIe* add-in cards that require it.

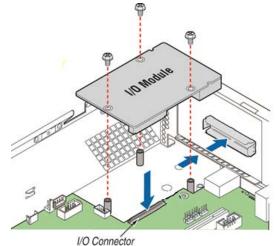
Note: The x16 2-slot riser card is included in Intel Accessory Kit A2U44X25NVMEDK. Systems configured with the A2U44X25NVMEDK accessory kit cannot support dual Intel® Xeon Phi™ coprocessor cards or dual non-Intel GPGPU cards.

Intel Product Code	Order Information		Product Description		Product Type
iPC – A2UX8X4RISER			2U 2-slot riser card option		
	MM# – 934883 UPC – 00735858283311 EAN – 5032037064378	Slot # Slot-1 (Top)	 #3 (only) Riser Card Option Description PCIe* x4 elec, x8 mechanical (PCIe* 2.0 support only) 	•	2U Building Block Accessory Kit 2U Spare FRU
	MOQ – 1	Slot-2 (Bottom) Kit include	PCIe* x8 elec, x8 mechanical		
		(1) Riser c			

Riser Slot #3 is provided to support up to two additional PCIe* add-in card slots for 2U server configurations. The available riser card option is designed to support low profile add-in cards only.

5.8 Intel[®] I/O Expansion Modules

The Intel® S2600WT product family includes support for a number of optional Intel® I/O modules that install onto proprietary connectors on the server board leaving all available PCIe* add-in cards slots available for other add-in card options. The onboard high density interface connector has x8 PCIe* 3.0 bus lanes routed to it from CPU 1.





Intel Product Code	Order Information	Product Description	Product Type
iPC - AXX1P40FRTIOM iPC - AXX2P40FRTIOM iPC - AXX2P40FRTIOM	MM# - 933742 UPC - 00735858282291 EAN - 5032037063623 MOQ - 1 MM# - 933743 UPC - 00735858282314 EAN - 5032037063647 MOQ - 1	Intel® I/O Modules AXX1P40FRTIOM & AXX2P40FRTIOM Intel® Single and Dual-Port 40G QSFP+ Ethernet I/O Moduless based on XL710-AM2 10 Gigabit Ethernet Controller On the dual port module, the 4x10GbE SFP+ break out is supported on Port 0 only Available Optics Accessories: Intel® Ethernet QSFP+ SR4 Optics, E40GQSFPSR Intel® Ethernet 40G DCO Optics, E40GDCOQSFP Connector and cables: 40GBASE-CR4, QSFP+ Direct Attached Copper Cable Intel® Ethernet QSFP+ SR4 Optics also supported Intel® Ethernet 40G DCO Optics, E40GDCOQSFP Cabling type: 10GBASE-CR4: Copper Direct Attach passive cable (1–7m); 10GBASE-SR4: MMF (OM3) up to 100m Intel® Ethernet 40G DCO Optics up to 50m Kits Include: (1) I/O module (1) EMI shield (1) Port Labeling Sticker (2 Port only model) (1 set) Mounting screws	• 1U / 2U Accessory Kit
iPC – AXX10GBNIAIOM	MM# – 917905 UPC – 00735858241090 EAN – 5032037035842 MOQ – 1	Intel® I/O Module AXX10GBNIAIOM Dual SFP+ port 10GbE IO module based on Intel® 82599ES 10 Gigabit Ethernet Controller Kit Includes: (1) I/O module (1) EMI shield (1) Port Labeling Sticker (1 set) Mounting screws	• 1U / 2U Accessory Kit

Intel Product Code	Order Information	Product Description	Product Type
iPC – AXX10GBTWLIOM3	MM – 941869 UPC – 00735858296656 EAN – 5032037072472 MOQ – 1	Intel® I/O Module AXX10GBTWLIOM3 Dual RJ-45 port 10GBASE-T IO module, based on Intel® Ethernet Controller X540 Kit Includes: (1) I/O module (1) EMI shield (1) Port Labeling Sticker (1 set) Mounting screws	• 1U / 2U Accessory Kit
iPC – AXX1FDRIBIOM	MM – 918607 UPC – 00735858241106 EAN – 5032037035859 MOQ – 1	Intel® I/O Module AXX1FDRIBIOM Single port, FDR 56GT/S speed Intel [®] I/O Expansion Infiniband* module Kit Includes: (1) I/O module (1) EMI shield (1) Port Labeling Sticker (1 set) Mounting screws	• 1U / 2U Accessory Kit
iPC – AXX2FDRIBIOM	MM – 920627 UPC – 00735858245722 EAN – 5032037040235 MOQ – 1	Intel® I/O Module AXX2FDRIBIOM Dual port, FDR 56GT/S (per port capable) speed Infiniband* module Kit Includes: (1) I/O module (1) EMI shield (1) Port Labeling Sticker (1 set) Mounting screws	• 1U / 2U Accessory Kit

Intel Product Code	Order Information	Product Description	Product Type
iPC – AXX4P1GBPWLIOM		Intel® I/O Module AXX4P1GBPWLIOM Quad port 1GbE IO Module based on Intel® Ethernet Controller I350	
	MM – 917911 UPC – 00735858241083 EAN – 5032037035835 MOQ – 1	Kit Includes: (1) I/O module (1) EMI shield (1) Port Labeling Sticker (1 set) Mounting screws	• 1U / 2U Accessory Kit

5.9 Intel[®] SAS RAID Add-in Cards, Modules, and Accessories

Intel[®] RAID offers a broad portfolio of RAID solutions designed to address the storage-related challenges of the modern day datacenter as well as the small business. The Intel[®] S2600WT product family includes support for the latest generation of 12 Gb/s SAS Intel[®] RAID add-in cards, modules, expanders, and accessories. Previous generation 6Gb/s Intel RAID cards can also be supported. See the published Tested Hardware and OS List for a full list of validated Intel RAID cards.

Additional information for Intel RAID products can be found at the following Intel web sites:

http://www.intelraid.com/files/Intel_RMS3_Brief_Final.pdf http://www.intelraid.com/files/Intel-1106-RAID-Brochure_New2014102.pdf http://www.intelraid.com/files/RAID_Matrix_20142.pdf

5.9.1 Intel[®] Integrated RAID Module RMS3 Product Family – SAS 3.0 (12 Gb/s)

Intel Product Code	Order Information	Product Description	Product Type
iPC – RMS3CC080	MM# – 932474 UPC – 00735858276832 EAN – 5032037060448 MOQ - 5	Intel® Integrated RAID Module RMS3CC080 Mezzanine Form Factor HW RAID Module 8 internal SAS / SATA ports Mini-SAS HD SFF8643 connectors LSI* SAS3108 ROC with 1GB DDR3 RAID Levels 0, 1, 5, 6, 10, 50, 60 Embedded 1GB DDR3 Cache Memory Supports Maintenance Free Backup Unit – iPC AXXRMFBU5 SAS Data cables not included . Must be purchased seperately	• 1U / 2U Accessory Kit
iPC – RMS3CC040	MM# –932473 UPC – 00735858276849 EAN – 5032037060455 MOQ – 5	Intel® Integrated RAID Module RMS3CC040 Mezzanine Form Factor HW RAID Module 4 internal SAS / SATA ports Mini-SAS HD SFF8643 connectors LSI* SAS3108 ROC with 1GB DDR3 RAID Levels 0, 1, 5, 6, 10, 50, 60 Embedded 1GB DDR3 Cache Memory Supports Maintenance Free Backup Unit – iPC AXXRMFBU5 SAS Data cables not included . Must be purchased seperately	• 1U / 2U Accessory Kit

Intel Product Code	Order Information	Product Description	Product Type
iPC – RMS3HC080	MM – 932469 UPC – 00735858276818 EAN – 5032037060424 MOQ – 5	Intel® Integrated RAID Module RMS3HC080 Mezzanine Form Factor Entry-RAID Module 8 internal SAS / SATA ports Mini-SAS HD SFF8643 connectors LSI* SAS3008 SAS IOC with Advanced Management Entry HW RAID levels – JBOD, RAID 0,1,10 & Hybrid 5,50 128MB server board memory utilized as cache memory for RAID 5/50 SAS Data cables not included . Must be purchased seperately	• 1U / 2U Accessory Kit
iPC – RMS3JC080	MM – 932472 UPC – 00735858276825 EAN – 5032037060431 MOQ – 5	Intel® Integrated RAID Module RMS3JC080 Mezzanine Form Factor Entry-RAID Module 8 internal SAS / SATA ports Mini-SAS HD SFF8643 connectors LSI* SAS3008 IOC with Basic Firmware Entry HW RAID levels – JBOD, RAID 0, 1, 1E, 10 SAS Data cables not included . Must be purchased seperately	• 1U / 2U Accessory Kit
iPC – AXXRMFBU5	MM# – 933907 UPC – 00735858276801 EAN – 5032037060417 MOQ – 5	Intel® RAID Maintenance Free Backup Unit AXXRFMBU5 A super-capacitor module and flash memory card designed to help protect data in dynamic memory during a power failure or system crash event. The AXXRMFBU5 kit is used with the 12 Gb/s Intel® Integrated RAID Modules Compatible with: Intel® Integrated RAID Module RMS3CC080 Intel® Integrated RAID Module RMS3CC040	• 1U / 2U Accessory Kit

5.9.2 Intel[®] RAID Controller Add-in Cards - SAS 3.0 (12Gb/s)

Intel Product Code	Order Information	Product Description	Product Type
iPC – RS3DC080	MM# – 934643 UPC – 00735858265355 MOQ – 5	Intel® RAID Controller RS3DC080 Low Profile, half length, (MD2 Compliant) PCIe* add-in card 8 internal SAS / SATA ports LSI* SAS3108 ROC RAID Levels – 0, 1, 5, 6, 10, 50, and 60 Embedded 1GB DDR3 Cache Memory Supports Maintenance Free Backup Unit – iPC AXXRMFBU4 SAS Data cables not included . Must be purchased seperately	• 1U / 2U Accessory Kit
iPC – RS3DC040	MM# – 934644 UPC – 00735858265362 MOQ – 5	Intel® RAID Controller RS3DC040 Low Profile, half length, (MD2 Compliant) PCIe* add-in card 4 internal SAS / SATA ports LSI* SAS3108 ROC RAID Levels – 0, 1, 5, 6, 10, 50, and 60 Embedded 1GB DDR3 Cache Memory Supports Maintenance Free Backup Unit – iPC AXXRMFBU4 SAS Data cables not included . Must be purchased seperately	• 1U / 2U Accessory Kit
iPC – RS3SC008	MM# – 928223 UPC – 00735858266956 EAN – 5032037068567 MOQ – 5	Intel® RAID Controller RS3SC008 Low Profile, half length, (MD2 Compliant) PCIe* add-in card 8 external SAS / SATA ports LSI* SAS3108 ROC RAID Levels – 0, 1, 5, 6, 10, 50, and 60 Embedded 1GB DDR3 Cache Memory Supports Maintenance Free Backup Unit – iPC AXXRMFBU4 SAS Data cables not included . Must be purchased seperately	• 1U / 2U Accessory Kit

Intel Product Code	Order Information	Product Description	Product Type
iPC – RS3MC044	MM# – 928244 UPC – 00735858266987 EAN – 5032037068574 MOQ – 5	Intel® RAID Controller RS3MC044 Low Profile, half length, (MD2 Compliant) PCIe* add-in card 4 internal SAS / SATA ports + 4 external SAS / SATA ports LSI* SAS3108 ROC RAID Levels – 0, 1, 5, 6, 10, 50, and 60 Embedded 1GB DDR3 Cache Memory Supports Maintenance Free Backup Unit – iPC AXXRMFBU4 SAS Data cables not included . Must be purchased seperately	• 1U / 2U Accessory Kit
iPC – RS3GC008	MM# – 928220 UPC – 00735858267175 EAN – 5032037053839 MOQ – 5	Intel® RAID Controller RS3GC008 Low Profile, half length, (MD2 Compliant) PCIe* add-in card Entry Level SAS Card 8 external SAS / SATA ports LSI* SAS3008 IOC RAID Levels – JBOD (SAS Connectivity) SAS Data cables not included. Must be purchased seperately	• 1U / 2U Accessory Kit
iPC – RS3UC080	MM# – 928218 UPC – 00735858267649 EAN – 5032037053938 MOQ – 5	Intel® RAID Controller RS3UC080 Low Profile, half length, (MD2 Compliant) PCIe* add-in card Entry Level SAS RAID Card 8 internal SAS / SATA ports LSI* SAS3008 IOC RAID Levels – 0, 1, 1E, 10, and JBOD SAS Data cables not included. Must be purchased seperately	• 1U / 2U Accessory Kit

Intel Product Code	Order Information	Product Description	Product Type
iPC – RS3FC044	MM# – 928219 UPC – 00735858267267 EAN – 5032037053921 MOQ – 5	Intel® RAID Controller RS3FC044 Low Profile, half length, (MD2 Compliant) PCIe* add-in card Entry Level SAS RAID Card 4 internal + 4 external SAS / SATA ports LSI* SAS3008 IOC RAID Levels – 0, 1, 1E, 10, and JBOD SAS Data cables not included. Must be purchased seperately	• 1U / 2U Accessory Kit
iPC – AXXRMFBU4	MM# – 937318 UPC – 00735858273787 EAN – 5032037058544 MOQ – 5	Intel® RAID Maintenance Free Backup Unit AXXRFMBU4 A super-capacitor module and flash memory card designed to help protect data in dynamic memory during a power failure or system crash event. The AXXRMFBU4 kit is used with the 12 Gb/s Intel® RAID Controller PCIe* Add-in Cards Compatible with: Intel® RAID Controller RS3DC080 Intel® RAID Controller RS3DC040 Intel® RAID Controller RS3SC008 Intel® RAID Controller RS3MC044	• 1U / 2U Accessory Kit

5.9.3 Intel[®] RAID Accessory Options

Intel Product Code	Order Information	Product Description	Product Type
iPC – AXXRPFKSSD2	MM# – 919499 UPC – 735858221467 EAN - 5032037051699 MOQ – 5	Intel® RAID SSD Cache with Fast Path I/O Upgrade Key to enable SSD Cache with Fastpath I/O for Intel [®] 's RAID RS25 and RS3 (based on LSI 3108) families of ROC products.	• 1U / 2U Accessory Kit
iPC – AXXRPFKDE2	MM# – 915317 UPC – 735858221474 EAN - 5032037051705 MOQ – 5	Intel® RAID Drive Encryption Management Upgrade Key to enable Drive Encryption Management for Intel®'s RAID RS25 and RS3 (based on LSI 3108) families of ROC products.	• 1U / 2U Accessory Kit
iPC – AXXRPFKSNSH2	MM# – 915318 UPC – 735858221481 EAN - 5032037051712 MOQ – 5	Intel® RAID Rapid RecoverySnapshot Upgrade Key to enable Rapid Recovery Snapshot for Intel®'s RAID RS25 and RS3 (based on LSI 3108) families of ROC products.	• 1U / 2U Accessory Kit
iPC – RKSATA4R5	MM# – 916346 UPC – 00735858238861 EAN – 5032037033640 MOQ - 5	ESRT2 SATA SW RAID activation key Used to enable onboard SATA controllers to support embedded ESRT2 SW RAID 5	• 1U / 2U Accessory Kit
			•

Intel Product Code	Order Information	Product Description	Product Type
iPC – AXXRMFBU5	MM# – 933907 UPC – 00735858276801 EAN – 5032037060417 MOQ – 5	Intel® RAID Maintenance Free Backup Unit AXXRFMBU5 A super-capacitor module and flash memory card designed to help protect data in dynamic memory during a power failure or system crash event. The AXXRMFBU5 kit is used with the 12 Gb/s Intel® Integrated RAID Modules Compatible with: Intel® Integrated RAID Module RMS3CC080 Intel® Integrated RAID Module RMS3CC040	• 1U / 2U Accessory Kit
iPC – AXXRMFBU4	MM# – 937318 UPC – 00735858273787 EAN – 5032037058544 MOQ – 5	Intel® RAID Maintenance Free Backup Unit AXXRFMBU4 A super-capacitor module and flash memory card designed to help protect data in dynamic memory during a power failure or system crash event. The AXXRMFBU4 kit is used with the 12 Gb/s Intel® RAID Controller PCIe* Add-in Cards Compatible with: Intel® RAID Controller RS3DC080 Intel® RAID Controller RS3DC040 Intel® RAID Controller RS3SC008 Intel® RAID Controller RS3MC044	• 1U / 2U Accessory Kit

iPC - AWTAUXBBUBKT IU / 2U RMFBU Mounting Option Kit Kit includes: Kit includes: Image: MM# - 937082 (1) - 2U RMFBU Mounting plate. The mounting plate installs in one of two possible mounting locations in front of either riser slot on the 2U air duct and can support up to two AXXRMFBU5 or AXXRSBBU9 units. Full length PCIe cards cannot be supported when this mounting plate is installed behind the given riser slot. • 1U / 2U Accessory Kit	Intel Product Code	Order Information	Product Description	Product Type
AXXRMFBU5 units in a 1U chassis		UPC – 00735858289344 EAN – 5032037068321	 1U / 2U RMFBU Mounting Option Kit Kit includes: (1) – 2U RMFBU Mounting plate. The mounting plate installs in one of two possible mounting locations in front of either riser slot on the 2U air duct and can support up to two AXXRMFBU5 or AXXRSBBU9 units. Full length PCIe cards cannot be supported when this mounting plate is installed behind the given riser slot. (1) – RMFBU plastic housing bracket to support two stacked 	

5.10 Intel Power Supply Modules and Power Cords

Intel Product Code	Order Information	Product Description	Product Type
iPC – AXX1100PCRPS	MM# – 936183 UPC – 00735858287920 EAN – 5032037067478 MOQ - 1	1100W AC CRPS 80+ Platinum efficiency power supply module Power cord sold separately	 2U Building Block Option 2U Accessory Kit 2U Spare FRU
iPC – FXX750PCRPS	MM# – 915604 UPC – 00735858234979 EAN – 5032037030601 MOQ - 1	750W AC CRPS 80+ Platinum efficiency power supply module Power cord sold separately	 1U / 2U Building Block Option 1U / 2U Accessory Kit 1U / 2U Spare FRU
iPC – AXX750DCCRPS	*Supported in Late Q3 2015	750W -48v DC (Direct current) CRPS 80+ Gold efficiency power supply module Kit Includes: (1) power supply (1) O-ring terminal adapter. Power cable sold separately	 1U / 2U Building Block Option 1U / 2U Accessory Kit 1U / 2U Spare FRU
iPC – AXXDCCRPSCBL	MM – 922062 UPC – 00735858247993 EAN – 5032037042871 MOQ – 1	4000mm (13ft) DC power cable . Connects directly to power supply instead of O-ring terminals adapter	 1U / 2U Accessory Kit 1U /2U Spare FRU
iPC – FPWRCABLENA	MM# – 879287 UPC – 00735858181129 EAN – 5032037015738 MOQ – 1	1500mm (59in) North American Power Cord	 1U / 2U Accessory Kit 1U / 2U Spare FRU

5.11 1U / 2U Rack Mount Kits

<u>Caution</u>: Exceeding the rail kit's specified maximum weight limit or misalignment of the server in the rack may result in failure of the rack rails, resulting in damage to the system or personal injury. Using two people or the use of a mechanical assist tool to install and align the server into the rack is highly recommended.

Intel Product Code	Order Information	Product Description	Product Type
iPC - AXXPRAIL	MM# – 924417 UPC – 00735858219686 EAN – 5032037014823 MOQ – 1	 1U / 2U Premium Rail Kit 1U and 2U compatible Adjustment within 609.6mm~762mm to fit difference depth rack 800mm maximum travel length Full extension from rack 54 lbs (24 kgs) max support weight Tool-less installation Drop in system install For Cable Management arm support – order iPC AXX1U2UCMA 	• 1U / 2U Accessory Kit
iPC - AXXELVRAIL	MM# – 920970 UPC – 00735858244367 EAN – 5032037038980 MOQ - 1	 1U / 2U Enhanced Value Rail Kit Works for all 438mm wide Intel[®] Rack Chassis 1U, 2U, 4U Adjustment within 609.6mm~765mm to fit difference depth rack 424.2mm maximum travel length 2/3 extension from rack 130 lbs (59 kgs) max support weight Tool-less chassis attach Tools required to attach to rails to rack Note: No Cable Management Arm support. 	• 1U / 2U Accessory Kit
iPC – AXX1U2UCMA	MM# – 913117 UPC – 00735858224604 EAN – 5032037019972 MOQ – 1	 1U / 2U Cable Management Arm (CMA) 1U / 2U compatible Support for Premium 1U/2U AXXPRAIL and 1U A1UFULLRAIL rail kit options only 	• 1U / 2U Accessory Kit

Intel Product Code	Order Information	Product Description	Product Type
iPC - AXX2POSTBRCKT	MM# – 918808 UPC – 00735858245319 EAN – 5032037039833 MOQ – 1	 1U / 2U 2-Post fixed mount bracket kit 1U and 2U compatible Tools required to attach components to rack NOTE: Not compatible with 24x2.5" drive or 12x3.5" drive system configurations 	• 1U / 2U Accessory Kit
iPC – A1USHRTRAIL	MM# – 939208 UPC –00735858289931 EAN –5032037068772 MOQ – 1	 1U Premium quality rails with no CMA support Travel distance 780mm Full extension from rack Kit includes: Rails, screws, installation manual 	1U Accessory Kit
iPC – A1UFULLRAIL	MM# –939207 UPC –00735858291972 EAN –5032037070539 MOQ – 1	 1U Premium quality rails with CMA support. Travel distance 780mm Full extension from rack Kit includes: Rails, screws, installation manual For Cable Management arm support – order iPC AXX1U2UCMA 	• 1U Accessory Kit
iPC – AXXFULLRAIL	MM# –939209 UPC –00735858291989 EAN –5032037070546 MOQ – 1	 2U+ Premium quality rails with CMA support. Travel distance 780mm Full extension from rack Kit includes: Rails, screws, installation manual For Cable Management arm – order iPC AXXCMA2 	2U Accessory Kit
iPC – AXXCMA2	MM# – 939211 UPC –00735858292009 EAN –5032037070560 MOQ – 1	Cable management arm Compatible with AXXFULLRAIL only 	2U Accessory Kit

5.12 Intel[®] Xeon Phi[™] Coprocessor Card and Non-Intel GPGPU Support

Intel[®] Xeon Phi[™] Coprocessor cards and non-Intel GPGPU cards are supported in the following 2U system configurations only: **R2208WT, R2308WT, and R2216WT**. Because of mechanical and themal limits, the **1U product family** and the **R2312WT... and R2224WT...** system configurations do NOT have support for Intel[®] Xeon Phi[™] coprocessor cards or non-Intel GPGPU cards.

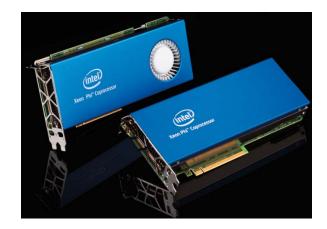
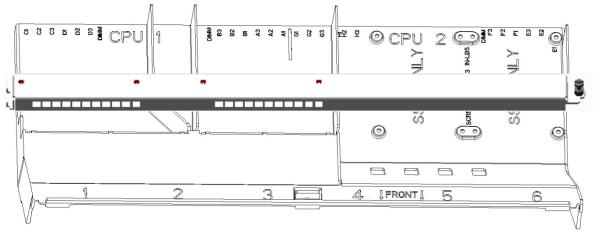


Figure 18. Intel® Xeon Phi ™ Coprosessor Cards With Active and Passive Cooling

- Supported 2U systems configured with the standard (default) air duct, can only support high power add-in cards (>75W) with active (with fan) heat sinks.
- In supported 2U system, high power add-in cards (>75W) with passive (no fan) heat sinks can only be supported in systems configured with a high air flow air duct available in Intel Accessory Kit iPC AWTCOPRODUCT
 - NOTE: Intel[®] Server System R2208WTTYC1 is a special system SKU that includes the necessary components to support passive high power (>75W) add-in cards like the Intel[®] Xeon Phi[™] coprocessor card or non-Intel GPGPU cards.



See the Intel® Server System R2000WT product family Technical Product Specification for more information.

Non-Intel GPGPU Support Disclaimer:

Intel incorporates necessary features and conducts appropriate thermal testing of its server systems to ensure the thermal requirements of Intel[®] Xeon Phi[™] coprocessor cards can be supported when the documented support criteria are met.

Intel can make support recommendations for non-Intel GPGPU cards listed on its Tested Hardware and Support List, based on the same support criteria. However, Intel cannot guarantee its server systems can meet the thermal requirements of these non-Intel high power add-in cards. System integrators should verify non-Intel GPGPU add-in card air flow and thermal requirements from vendor specifications before integrating them into the system. It is the responsibility of the system integrator to conduct appropriate system testing on server systems configured with a non-Intel GPGPU card to ensure reliable operation.

For non-Intel GPGPU cards listed on Intel's tested hardware and OS list, Intel will provide best internal support efforts to duplicate and understand reported issues. However, Intel cannot guarantee an issue will be root caused nor that a fix can be made available to correct it.

Intel Product Code	Order Information	Product Description	Product Type
	MM# - 934988 UPC - 00735858283328 EAN - 5032037064385 MOQ - 1	2U High Air flow Air Duct Kit Required 2U accessory kit when installing an Intel® Xeon Phi™ coprocessor card with passive heat sink (heat sink only, no fan) Kit Includes: (1) High air flow air duct (1) Metal shipping bracket (2) Non-intel GPGPU secure mounting adapters Note: Intel Xeon Phi cards with active heat sinks are NOT supported in systems configured with the high air flow air duct. Note: Systems configured with any type of Intel® Xeon Phi™ card and/or non-Intel GPGPU card must have the shipping bracket installed before the system is exposed to any level of shock or vibration or is shipped to	2U Accessory Kit
		the end user location. Failure to install the shipping bracket has the potential to cause serious damage to various components within the system.	

• Each Intel[®] Xeon Phi[™] coprocessor card and non-Intel GPGPU card must be installed into the top x16 slot of a 2-Slot PCIe^{*} Riser card. With a 2-slot riser card installed, the embedded fan speed control will operate system fans at a higher speed. 3-slot riser cards (as shipped in the standard platform configuration) cannot be used due to air flow and thermal limitations.

Intel Product Code	Order Information	Product Description			Product Type	
iPC – A2UL16RISER2	MM# – 934886		2U 2-slot riser card cessory kit when installing an In- other Non-Intel GPGPU card	tel® Xeon Phi™		
	UPC – 00735858288668 EAN – 5032037067942 MOQ – 1	Slot # Slot-1 (Top) Slot-2 (Bottom) Kit includes: (1) Riser card PCB. (1) 12V-AUX Powe			•	2U Building Block Accessory Kit 2U Spare FRU

6. 1U / 2U Miscellaneous Accessory Options

Intel Product Code	Order Information	Product Description	Product Type
iPC – A1U2ULCP	MM# – 921028 UPC – 00735858245302 EAN – 5032037039826 MOQ – 1	Intel® Local Control Panel A 1U / 2U front panel module which supports the following features: 2 line LCD screen Customized messaging Able to display critical system errors When installed this module replaces the front I/O port module on R1304, R1208, R2308, R2208, and R2216 based systems. The LCP module re-uses the existing front USB port assembly from these systems. It does NOT support a front video connector. This Kit is NOT compatible with R2224 and R2312 based systems. See the Intel® Local Control Panel Technical Product Specification for more information	• 1U / 2U Accessory Kit
iPC – AXXSATADVDROM	MM# – 937569 UPC – 00735858197663 EAN – 5032037015127 MOQ – 1	Slimline SATA DVDROM Drive 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	• 1U / 2U Accessory Kit
iPC – AXXSATADVDRWROM	MM# – 937575 UPC – 00735858197670 EAN – 5032037015134 MOQ - 1	Slimline SATA DVD+/-RW ROM Drive 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	• 1U / 2U Accessory Kit

Intel Product Code	Order Information	Product Description	Product Type
		1U fixed mount SSD mounting Kit	
iPC - AXXSSDODDKIT	MM# – 935065 UPC – 00735858288750 EAN – 5032037068031 MOQ – 1	Tray is installed in the optical drive bay of 1U systems. Kit includes: (1) – Metal SSD mounting tray accomodates one 2.5" SATA SSD (1) – 800mm SATA data cable (1) – SSD peripheral power cable Note: Maximum SSD thickness supported = 7mm Note: Systems configured with this kit cannot support an additional optical drive	• 1U Accessory Kit
		Serial Port Cable Kit	
iPC - AXXRJ45DB93	MM# – 920430 UPC – 00735858242820 EAN – 5032037037525 MOQ – 1	This kit provides serial port cables for use with systems that include a back panel cut out to support a DB9 Serial 'B' port as routed from the server board and for systems that include an external RJ45 Serial 'A' port that need to convert the connector to a DB9 style connector. Kit includes: (1) - 1040mm Internal Serial 'B' port cable – Onboard DH10 header- to- External Mount DB9 – for 2U systems (1) - 520mm Internal Serial 'B' port cable – Onboard DH10 header- to- External mount DB9 – for 2U systems (1) – 100mm DCD RJ45 to DB9 Dongle (1) – 100mm DSR RJ45 to DB9 Dongle	• 1U / 2U Accessory Kit

Intel Product Code	Order Information	Product Description	Product Type
iPC - AXXRMM4LITE	MM# – 911660 UPC – 00735858219297 EAN – 5032037014946 MOQ – 1	Intel® Remote Management Module 4 Lite Activation key Installation of this activation key on to the server board enables support for the following advanced server management features: Integrated KVM Media Redirection See the Intel Remote Management Module 4 and Integrated Web Console Users Guide for more information.	• 1U / 2U Accessory Kit
iPC - AXXTPME5	MM# – 919737 UPC – 00735858240352 EAN – 5032037035088 MOQ – 1	Intel [®] Trusted Platform Module (TPM) 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. AXXTPME5 implements TPM as per TPM PC Client specifications revision 1.2 by the Trusted Computing Group (TCG)	• 1U / 2U Accessory Kit

7. 1U / 2U 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
iPC – FXXFPANEL2	MM# – 937543 UPC – 00735858288712 EAN – 5032037067997 MOQ – 1	Front Panel board spare for use on 1U/2U rack systems (R1000, R2000 except R2224 and R2312) Rack chassis and P4000 Pedestal Chassis. Different from FXXFPANEL by 0.6mm offset of reset and power buttons.	• 1U / 2U Spare FRU
iPC – FXXCA84X106HS	MM# – 918318 UPC – 00735858236676 EAN - 5032037031448 MOQ – 2	1U Heat Sink FXXCA84X106HS (Cu/Al 84mmx106mm)	• 1U / 2U Spare FRU
iPC - FR1UFAN10PW	MM# – 935064 UPC – 00735858283342 EAN – 5032037064408 MOQ – 1	Three spare fans for 1U R1000WT system. 40x56mm dual rotor with 10p connector. Includes 3 fans in the bracket, with grommets preinstalled.	• 1U Spare FRU

Intel Product Code	Order Information	Product Description	Product Type
iPC - FR2UFAN60HSW	MM# – 934990 UPC – 00735858283359 EAN – 5032037064415 MOQ – 1	Two spare fans for 2U R2000WT system. 60x38mm, with hot swap connector. Includes 2 fans with finger guards and housing.	• 2U Spare FRU
iPC – FR1304S3HSBP	MM# – 934887 UPC – 00735858288835 EAN – 5032037068116 MOQ – 1	Hot swap backplane board spare for 1U 4x3.5" chassis (R1304 family).	• 1U Spare FRU
iPC – F1U8X25S3HSBP	MM# – 934888 UPC – 00735858288798 EAN – 5032037068079 MOQ – 1	Hot swap backplane board spare for 1U 8x2.5" chassis (R1208 family).	• 1U Spare FRU
iPC – FXX8X25S3HSBP	MM# – 934890 UPC – 00735858288804 EAN – 5032037068086 MOQ – 1	Single port hot swap backplane board spare for 2U 8x2.5" cage (R2200 and P4000 families). Includes one backplane board.	• 2U Spare FRU

Intel Product Code	Order Information	Product Description	Product Type
iPC – F2U8X35S3HSBP	MM# – 934892 UPC – 00735858288811 EAN – 5032037068093 MOQ – 1	Hot swap backplane board spare for 2U 8x3.5" chassis (R2308 family). Includes one backplane board.	• 2U Spare FRU
iPC – F2U12X35S3HSBP	MM# – 934893 UPC – 00735858288828 EAN – 5032037068109 MOQ – 1	Hot swap backplane board spare for 2U 12x3.5" chassis (R2312 family). Includes one backplane board.	• 2U Spare FRU
iPC – A2UHANDLKIT	MM# – 936038 UPC – 00735858288866 EAN – 5032037068147 MOQ – 1	1U / 2U Rack Handle Kit This kit includes 3 different rack handles , including: (1) Set of 2U storage rack handles with control panel and USB support (R2312WT & R2224WT) (1) Set of 2U non -storage rack handles (R2208WT & R2216WT) (1) Set of 1U rack handles (R1304WT & R1208WT	 2U – 24 2.5" Drive Upgrade Kit 1U / 2U Spares Kit

Intel Product Code	oduct Code Order Information Product Description		Product Type	
iPC – FXX25HSCAR2	MM# – 937542 UPC –00735858289405 EAN – 5032037068383 MOQ – 8	Spare 2.5" HDD hot swap carriers.	• 1U / 2U Spare FRU	
iPC – FXX35HSCAR	MM# – 936192 UPC – 00735858289412 EAN – 5032037068390 MOQ – 8	Spare 3.5" hot swap drive carriers. Includes mounting screws for mounting 2.5" SSDs.	• 1U / 2U Spare FRU	

8. Extended Warranty

iPC – SVCEWDPSY MM# – 911295 MOQ – 1	Two year extended warranty for Intel [®] Server Systems or Intel [®] Server Knock Down Kits + Intel [®] Server Boards that support two processors. Intel [®] RAID controller extended warranty is purchased separately.
iPC - SVCEWDPBD MM# – 911294 MOQ – 1	Two year extended warranty for Intel [®] Server Boards that support two processors.
iPC - SVCEWRAID MM# – 911298 MOQ – 1	Two year extended warranty for Intel® RAID controllers. Batteries are not included in the Extended Warranty. RAID expanders are included as part of the system SKU
_	MM# – 911295 MOQ – 1 iPC - SVCEWDPBD MM# – 911294 MOQ – 1 iPC - SVCEWRAID MM# – 911298

Glossary of Terms

A list of Acronyms and Terms used throughout this document

Acronym or Term	Definition	Acronym or Term	Definition
ВІК	B aseboard In K nock-Down-Kit – Integrated System	QSFP	Quad Small Form factor Pluggable
CRPS	Common Redundant Power Supply	RAID	Redundant Array of Independent Drives
EAN	International Article Number (Barcode)	Required Option	Hardware that must be added to the shipping configuration for the system to operate
EMI	Electromagnetic Interference	RMFBU	RAID Maintenance Free Backup Unit
ESRT2	Intel® Embedded Server RAID Technology 2	RMM4 Lite	Intel® Remote Management Module 4 Lite Activation key
FDR Infiniband	Fourteen Data Rate Infiniband	ROC	RAID on Chip
FRU	Field Replaceable Unit	RSTe	Intel® Rapid Stroage Technology
GPGPU	General Purpose computing on Graphics Processing Unit	SAS	Serial Attached SCSI
iPC	Intel Product Code	SATA	Serial ATA
iPN	Intel Product Number	SFP	Small Form factor Pluggable
LCP	Intel® Local Control Panel		
JBOD	Just a bunch of drives		
KDK	Knock-Down-Kit – (Chassis only product)	SKU	Stock Keeping Unit
KVM	Keyboard / Video / Mouse	SSD	Solid State Drive
MM#	Master Material order number	UPC	Universal Product Code (Barcode)
MOQ	Mimimum Order Quantity		
NVMe	NVM Express – based on Non-Volatile Memory Host Controller Interface Specification (NVMHCI)		
Optional Accessory	Hardware that can be added to the system to enhance the default feature set of the shipping configuration		
PCBA	Printed Cricuit Board Assembly		