Intel® Data Center Blocks for Cloud – Microsoft Windows Server* 2016

System Deployment and Configuration Guide

This document provides guidance for OS installation and identification of available system options for Intel® server systems supporting Intel® Xeon® Scalable processors.

Rev 1.0

November 2017

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Document Revision History

Date	Revision	Changes
November 2017	1.0	Initial public release.

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1. Introduction

Intel® Data Center Blocks (Intel® DCB) configurations are purpose-built with all-Intel® technology, optimized to address the needs of specific market segments. These fully-validated blocks deliver performance, reliability, and quality for solutions customer want and can trust to handle their demanding cloud workloads.

The Intel® Data Center Blocks for Cloud (Intel® DCB for Cloud) – Microsoft Windows Server* 2016 are unbranded server* systems that optimize the features and performance of Windows Server* 2016 to help accelerate the path to software-defined storage and private cloud. They includes both single node and multi-node server systems.

The following are examples of Intel hardware used in single- and multi-node systems.

Figure 1. Intel® Server Multi-Node Systems MCB2224BPHY1 and MCB2224BPAF3

Figure 2. Intel® Server Single-Node Systems MCB2208WFHY2, MCB2208WFAF4, MCB2208WFAF5

Figure 3. Intel® Server Single-Node System MCB2208WFAF6

1.1 Microsoft Windows Server 2016 Certification and the Intel® DCB for Cloud Server System

Server systems within this product family were specifically created to offer Intel customers with preconfigured systems that are Microsoft Windows Server* 2016 certified. Intel has extensively tested these systems to ensure best operation and reliability within the Microsoft Windows Server 2016 operating environment. This certification must be maintained to ensure continued best operation and reliability.

1.1.1 Maintaining Microsoft Windows Server 2016 Certification

To maintain Microsoft Windows Server 2016 certification, no changes can be made to the predefined system configuration. Changing the system configuration may invalidate the Microsoft Windows Server 2016 certification performed by Microsoft and Intel.

Changes to the pre-defined server system configuration that may impact Microsoft certification include:

- Updating the factory-installed system software stack with revisions that are not Microsoft-certified. The system software stack includes: system BIOS, BMC firmware, and ME firmware.[1]
- Changing processor model and quantity.
- Changing the system memory.
- Adding or changing I/O devices such as add-in PCIe cards or modules.
- Adding or changing to non-matching (different manufacturer and/or model number) storage devices such as Hard Disk Drives (HDD) and any type of Solid State Drives (SSD) other than those shipped in the original system configuration.[2]

Notes:

1. Intel releases updates to the system software stack for its standard server boards and systems via the System Update Package (SUP), which can be downloaded from the Intel website. However, since the Intel® DCB for Cloud server systems is Microsoft-certified, refrain from changing the pre-installed system software stack unless updating it to another system software stack which has passed Microsoft certification for that specific system configuration. Users of Intel® DCB for Cloud server systems should update the system software stack ONLY when a downloaded SUP identifies it as Microsoft-certified for Intel® DCB for Cloud server systems. Check the README file included with every posted SUP for each server product family.
2. Adding or swapping like storage devices (Same Manufacturer and Part Number) as shipped in the original system configuration is permitted and does not invalidate the Microsoft certification.

1.1.2 Hybrid System Configurations

Hybrid systems have both HDDs and SSDs. Only certified HDDs can be installed to hybrid system configuration to maintain Microsoft certification. HDDs for hybrid configurations are not included and must be purchased separately. The following table identifies certified HDDs that can be added to hybrid system configurations and still maintain Microsoft certification. Intel preinstalls certified boot and cache tier drives in all slots not identified in the table. See Section 3 for drive installation instructions.

Table 1. Certified hard drives for hybrid configurations

Model	Vendor	Model Number	Description	Quantity	Install Location
MCB2224BPHY1	Seagate*	T2000NX0433	2.5” HDD, 12Gb/s SAS 512E 2TB	16	Slots: 2, 3, 4, 5, 8, 9, 10, 11, 14, 15, 16, 17, 20, 21, 22, 23
MCB2208WFHY2	Seagate*	T2000NX0433	2.5” HDD, 12Gb/s SAS 512E 2TB	6	Slots: 2, 3, 4, 5, 6, 7

2. Microsoft Windows Server* 2016 Installation Requirements

For the Intel® DCB for Cloud Server System to function, a Microsoft Windows Server* 2016 operating system (OS) must be installed by customer.

This section provides information necessary to appropriately install the Microsoft Windows Server 2016 OS environment onto the Intel® DCB for Cloud Server System. To maintain and comply with the Microsoft Windows Server 2016 certification, follow the installation steps as specified.

Note: Deviating from the documented OS installation requirements may invalidate the Microsoft Windows Server 2016 certification performed by Microsoft and Intel.

1. Acquire the appropriate software license from a Microsoft partner or authorized Microsoft distributor/reseller.
2. Attach the installation media with the operating system installation image to the server system.
3. Identify the required boot device (see note below).
4. Power on the server. Press the <F2> key to enter the BIOS Setup Utility.
5. Make the device identified in step 3 the primary boot device.
6. Save changes and exit the BIOS Setup Utility by pressing the <F10> key.
7. Install Microsoft Windows Server 2016 onto the specified boot device. Follow the Microsoft Installation wizard to complete the installation.
8. Restart the server after the installation has concluded.
9. Follow the remaining Microsoft instructions to complete the installation.

Note: To maintain Microsoft certification for any Intel® DCB for Cloud Server System, Microsoft Windows Server 2016 must be installed to a specific storage device within the specific Intel® DCB for Cloud Server System configuration.

The following table identifies the required boot device to install Microsoft Windows Server 2016 for each Intel® DCB for Cloud Server System configuration listed.

Table 2. Specified boot drives for OS installation – certification requirement

System Model	Storage Device Vendor	Storage Device Model Number	Device Location in the Server System
MCB2224BPHY1 **MCB2224BPAF3**	Intel	Intel® SSD P3100 (256GB M.2, 80mm)	Installed on the slot 2 riser card AHW1UM2RISER2
MCB2208WFHY2 **MCB2208WFAF4** **MCB2208WFAF5** **MCB2208WFAF6**	Intel	Intel® SSD S3520 Series (480GB, M.2, 80mm)	Installed in the M.2 port 1 on the motherboard

3. System Configuration Options

Table 3. Intel® Server System MCB2224BPHY1

Intel Product Code (iPC): MCB2224BPHY1  **Fully integrated 2U, 4-Node system including: CPUs, Memory, and SATA SSDs**	**Order Information:** **MM#: 964007** **UPC: 00735858363419** **EAN: 5032037118750** **Product Type: Fully Integrated Server System** **Chassis Form Factor: 2U Rack Mount** **Chassis Dimensions: L=733mm, W=438mm, H=86.9mm** **Outer Box Dimensions: L=983mm, W=577mm, H=260mm**

Intel product code **MCB2224BPHY1** includes the following:

(1) 2U Chassis (24x2.5") **H2224XXLR3,** which includes these components:
- (1) Front Panel **FH2000FPANEL2**
- (1) Power Distribution Board **FXXCRPSPDB2**
- (1) Power Interposer Board **FXXCRPSPIB**
- (2) 2130W 80 Plus Platinum Power Supply Units (PSU) **FXX2130PCRPS**
- (1) 24 x 2.5" Hot-Swap Drive Bay, which includes:
  - (24) Tool-less Drive Carriers **FXX25HSCAR3**
  - (1) Backplane **HW24X25HS12G**
- (4) Blank Compute Module Slot Fillers
- (1) Basic Rack Rail Kit **AXXELVRAIL**
- **NOTE:** The rail kit only supports the specific rack type with 3/8" square and 7.1mm round holes.

(4) Compute Module (w/TPM 2.0, 2x10GbE SFP+ & 2x1GbE ,RDMA) **HNS2600BPS24**, which includes:
- (1) 1U Node Tray
- (1) Intel® Server Board **S2600BPS**
- (1) Power Docking Board **FHWBPNPB24**
- (3) 40x56mm Dual Rotor Managed Fans **FXX4056DRFAN2**
- (1) 1U Passive Heatsink for CPU #1 CUAL **FXXHP78X108HS**
- (1) 1U Passive Heatsink for CPU #2 Al **FXXEA78X108HS**
- (2) Standard Carrier Clips
- (1) Air Duct
- (1) External VGA Port Bracket
- (1) Riser Slot 2 Riser Card w/80mm M.2 SSD slot **AHW1UM2RISER2**

(8) Intel® Xeon® Gold 5115 processor (10 Cores, 2.4Ghz, 85W) **CD8067303535601**
(4) Bridge Board - 12G, IT mode-only **AHWBPBGB24**
(4) Intel® Remote Management Module Lite 2 Accessory Key **AXXRMM4LITE2**
(4) Intel® Solid State Drive (SSD) P3100 256GB (M.2, 80mm) **SSDPEKKA256G701**
(8) Intel® Solid State Drive (SSD) S4600 960GB 2.5" SFF SATA **SSDSC2KG960G701**
(32) Micron* RDIMM 16GB – DDR4, 288-pin, 2400MHz (8 DIMMs per node/32 DIMMs per system) **J47951-001**

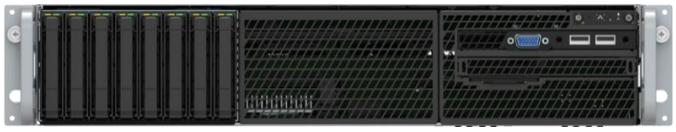
The following components are system-certified ingredients that are customer-supplied and do not ship with the Intel® DCB for Cloud server system purchase:
(16) – Seagate* 2TB SAS 2.5" HDD – **ST2000NX0433**

Systems shipped to the US and Canada include two (2) North American power cords.

For a complete list of available FRU replacement parts, refer to the Intel® Server Board S2600BP Product Family Configuration Guide at the following Intel web site:

https://www.intel.com/content/www/us/en/motherboards/server-motherboards/server-board-s2600bp.html

Table 4. Intel® Server System MCB2208WFHY2

Product Code (iPC): MCB2208WFHY2	**Order Information**
	**MM#: 964008**
	UPC: 00735858363402
	EAN: 5032037118743
	Product Type: Fully Integrated Server System
Fully integrated 2U, 1-Node system, including: CPUs, Memory, and SATA SSDs	**Chassis Form Factor: 2U Rack Mount**
	Chassis Dimensions: L=712mm, W=439mm, H=89mm
	Outer Box Dimensions: L=983mm,W=577mm, H=260mm

Intel product code **MCB2208WFHY2** includes the following:

(1) Intel Server System w/S260WFO, 2U1N, 8x2.5" **R2208WF0ZS**, which includes these components:
- (1) 2U Chassis with Quick Reference Label affixed to top cover
- (1) Intel® Server Board S2600WF0 (No on-board LAN) **S2600WF0**
- (2) PCIe Riser Card Brackets:
  - (2) 3-slot PCIe* Riser Cards **A2UL8RISER2**
  - (1) 2-slot Low Profile PCIe* Riser Card **A2UX8X4RISER**
- (8) – 2.5" Hot-Swap Drive Bays with drive carriers and drive blanks
  - (1) SAS/NVMe Combo Backplane **F2U8X25S3PHS**
  - (8) 2.5" Hot-Swap Drive Tool-Less Carriers **FXX25HSCAR3**
- (1) – Standard Control Panel Assembly
  - Board-only **FXXFPANEL2**
  - 300mm FP Cable **H34381-xxx**
- (1) – Front I/O Panel Assembly (1 x VGA and 2 x USB)
  - 620mm USB 3.0 Cable **H76899-xxx**
  - 400mm Video Cable **H62114-xxx**
- (1) – 250mm Backplane I2C Cable **H91166-xxx**
- (2) – 730mm Mini SAS HD Cable **AXXCBL730HDHD**
- (1) – 675mm Backplane Power Cable **H82108-XXX**
- (1) – Standard 2U Air Duct **H90554-xxx**
- (6) – Hot-Swap System Fans **FR2UFAN60HSW**
- (8) – DIMM slot blanks **G75158-00x**
- (1) – 1300W AC Power Supply Module (PSM) **AXX1300TCRPS**
- (1) – Power Supply Bay blank insert
- (2) – AC Power Cord retention strap assembly **H23961-00x**
- (2) – CPU Heat Sink **FXXCA78X108HS**
- (2) – CPU Heat Sink "NO CPU" mylar spacer insert **J16115-XXX**
- (2) – Standard CPU Carrier **H72851-xxx**
- (1) – 3x RMFBU Mounting Bracket **H18238-00x**
- (1) – 250mm Fixed Mount Solid State Drive (SSD) Power Cable

(2) Intel® Xeon Gold 5118 processor (12 Cores, 2.3Ghz, 105W) **CD8067303536100**
(2) Intel® Solid State Drive (SSD) P4600 1.6TB 2.5" SFF U.2 **SSDPE2KE016T701**
(1) Intel® Solid State Drive (SSD) S3520 480GB (M.2, 80mm) **SSDSCKJB480G701**
(1) Remote Management Module Lite 2 **AXXRMM4LITE2**
(1) Intel RAID Controller RS3UC080J (IT Mode) **RS3UC080J**
(1) OCuLink Cable – 530mm **AXXCBL530CVCR**
(1) OCuLink Cable - 470mm long cable **AXXCBL470CVCR**
(1) 1300W AC Common Redundant Power Supply **AXX1300TCRPS**
(1) Ethernet OCP Dual SFP+ **X527DA2OCPG1P5**
(12) RDIMM 32GB - DDR4, 288-pin, 2666MHz **J47951-00**1
(1) Trusted Platform Module (TPM) 2.0 **AXXTPMENC8**

These components are system-certified and customer-supplied but do not ship with the Intel® DCB for Cloud server system:
(6) **–** Seagate* 4TB SAS 3.5" HDD **- ST4000NM0034**

Systems shipped to the US and Canada include two (2) North American power cords.

For a complete list of available FRU parts, refer to the Intel® Server Board S2600WF Product Family Configuration Guide at: https://www.intel.com/content/www/us/en/motherboards/server-motherboards/server-board-s2600wf.html

Table 5. Intel® Server System MCB2224BPAF3

Product Code (iPC): MCB2224BPAF3  **Fully integrated 2U, 4-Node system, including: CPUs, Memory, and SATA SSDs**	**Order Information** **MM#: 961082** **UPC: 00735858363396** **EAN: 5032037118736** **Product Type: Fully Integrated Server System** **Chassis Form Factor: 2U Rack Mount** **Chassis Dimensions: L=733mm, W=438mm, H=86.9mm** **Outer Box Dimensions: L=983mm, W=577mm, H=266mm**

Intel product code **MCB2224BPAF3** includes the following:

(1) 2U Chassis (24x2.5") **H2224XXLR3,** which includes these components:
- (1) Front Panel **FH2000FPANEL2**
- (1) Power Distribution Board **FXXCRPSPDB2**
- (1) Power Interposer Board **FXXCRPSPIB**
- (2) 2130W 80 Plus Platinum PSUs **FXX2130PCRPS**
- (1) 24 x 2.5" Hot-Swap Drive Bay, which includes:
  - (24) Tool-less Drive Carriers **FXX25HSCAR3**
  - (1) Backplane **HW24X25HS12G**
- (4) Blank Compute Module Slot Fillers
- (1) Basic Rack Rail **AXXELVRAIL**
- **NOTE:** The rail kit only supports specific rack type with 3/8" square and 7.1mm round holes.

(4) Compute Module (w/TPM 2.0, 2x10GbE SFP+ & 2x1GbE, RDMA) **HNS2600BPS24,** which includes:
- (1) 1U Node Tray
- (1) Intel® Server Board **S2600BPS**
- (1) Power Docking Board **FHWBPNPB24**
- (3) 40x56mm Dual Rotor Managed Fans **FXX4056DRFAN2**
- (1) 1U Passive Heat Sink for CPU #1 CUAL **FXXHP78X108HS**
- (1) 1U Passive Heat Sink for CPU #2 Al **FXXEA78X108HS**
- (2) Standard Carrier Clips
- (1) Air Duct
- (1) External VGA Port Bracket
- (1) Riser Slot 2 Riser Card w/80mm M.2 Solid State Drive (SSD) slot **AHW1UM2RISER2**

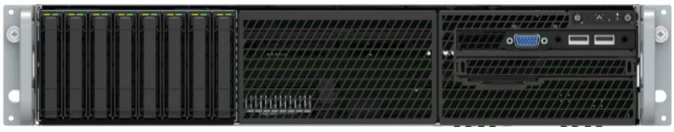
(8) Intel® Xeon Gold 5118 processor (12 Cores, 2.3Ghz, 105W) **CD8067303536100**
(8) Intel® Solid State Drive (SSD) P4600 1.6TB 2.5" SFF U.2 **SSDPE2KE016T701**
(4) Intel® Solid State Drive (SSD) P3100 256GB (M.2, 80mm) **SSDPEKKA256G701**
(16) Intel® S4500 1.92TB (SFF) **SSDSC2KB019T701**
(4) Bridge Board - 12G, IT mode only **AHWBPBGB24**
(4) Intel® Remote Management Module Lite 2 accessory key **AXXRMM4LITE2**
(32) Micron* RDIMM 32GB – DDR4, 288-pin, 2400MHz (8 DIMMs per node/32 DIMMs per system) **J47951-001**

Systems shipped to the US and Canada include two (2) North American power cords.

For a complete list of available FRU replacement parts, refer to the Intel® Server Board S2600BP Product Family Configuration Guide at the following Intel web site:

https://www.intel.com/content/www/us/en/motherboards/server-motherboards/server-board-s2600bp.html

Table 6. Intel® Server System MCB2208WFAF4

Product Code (iPC): MCB2208WFAF4	**Order Information**
	**MM#: 963649**
Fully Integrated 2U, 1-Node system, including: CPUs, Memory, and SATA + NVMe SSDs	**UPC: 00735858363389**
	EAN: 5032037118729
	Product Type: Fully Integrated Server System
	Chassis Form Factor: 2U Rack Mount
	Chassis Dimensions: L=712mm, W=439mm, H=89mm
	Outer Box Dimensions: L=983mm,W=577mm, H=260mm

Intel product code MCB2208WFAF4 includes the following:

(1) Intel Server System w/S260WFO, 2U1N, 8x2.5" **R2208WF0ZS,** which includes the following components:

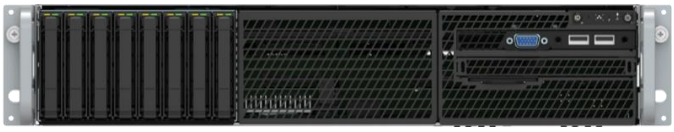
- (1) 2U Chassis with Quick Reference Label affixed to top cover
- (1) Intel® Server Board S2600WF0 (No Onboard LAN) **S2600WF0**
- (2) PCIe Riser Card Brackets:
  - (2) 3-slot PCIe* Riser Cards **A2UL8RISER2**
  - (1) 2-slot low profile PCIe* Riser Card **A2UX8X4RISER**
- (8) – 2.5" Hot-Swap Drive Bays with drive carriers and drive blanks
  - (1) SAS/NVMe Combo Backplane **F2U8X25S3PHS**
  - (8) 2.5" Hot-Swap Drive Tool-Less Carriers **FXX25HSCAR3**
- (1) – Standard Control Panel Assembly
  - Board-only **FXXFPANEL2**
  - 300mm FP Cable **H34381-xxx**
- (1) – Front I/O Panel Assembly (1 x VGA and 2 x USB)
  - 620mm USB 3.0 Cable **H76899-xxx**
  - 400mm Video Cable **H62114-xxx**
- (1) – 250mm Backplane I2C Cable **H91166-xxx**
- (2) – 730mm Mini SAS HD Cable **AXXCBL730HDHD**
- (1) – 675mm Backplane Power Cable **H82108-XXX**
- (1) – Standard 2U Air Duct **H90554-xxx**
- (6) – Hot-Swap System Fans **FR2UFAN60HSW**
- (8) – DIMM slot blanks **G75158-00x**
- (1) – 1300W AC Power Supply Module **AXX1300TCRPS**
- (1) – Power Supply Bay blank insert
- (2) – AC Power Cord retention strap assembly **H23961-00x**
- (2) – CPU Heatsink **FXXCA78X108HS**
- (2) – CPU Heatsink "NO CPU" mylar spacer insert **J16115-XXX**
- (2) – Standard CPU Carrier **H72851-xxx**
- (1) – 3x RMFBU Mounting Bracket **H18238-00x**
- (1) – 250mm Fixed Mount Solid State Drive (SSD) Power Cable

(2) Intel® Xeon® Gold 5115 processor (12 Cores, 2.3Ghz, 105W) **CD8067303536100**
(2) Intel® SSD P4600 1.6TB 2.5" SFF U.2 **SSDPE2KE016T701**
(1) Intel® SSD S3520 480GB (M.2, 80mm) **SSDSCKJB480G701**
(6) Intel® SSD S4500 1.92TB 2.5" SATA **SSDSC2KB019T701**
(1) Remote Management Module Lite 2 **AXXRMM4LITE2**
(1) Intel RAID Controller RS3UC080J (IT Mode) **RS3UC080J**
(1) OCuLink Cable – 530mm **AXXCBL530CVCR**
(1) OCuLink Cable - 470mm **AXXCBL470CVCR**
(1) 1300W AC Common Redundant Power Supply **AXX1300TCRPS**
(1) Ethernet OCP Dual SFP+ **X527DA2OCPG1P5**
(12) RDIMM 32GB - DDR4, 288-pin, 2666MHz **J47951-00**1
(1) Trusted Platform Module (TPM) 2.0 **AXXTPMENC8**

Systems shipped to the US and Canada include two (2) North American power cords.

For a complete list of available FRU parts, refer to the Intel® Server Board S2600WF Product Family Configuration Guide at: https://www.intel.com/content/www/us/en/motherboards/server-motherboards/server-board-s2600wf.html

Table 7. Intel® Server System MCB2208WFAF5

Product Code (iPC): MCB2208WAF5	**Order Information**
	**MM#: 963648**
Fully Integrated 2U, 1-Node system, including: CPUs, Memory and NVMe SSDs	**UPC: 00735858363372**
	EAN: 5032037118712
	Product Type: Fully Integrated Server System
	Chassis Form Factor: 2U Rack Mount
	Chassis Dimensions: L=712mm, W=439mm, H=89mm
	Outer Box Dimensions: L=983mm, W=577mm, H=260mm

Intel product code **MCB2208WFAF5** includes the following:

(1) Intel Server System w/S260WFO, 2U1N, 8x2.5" **R2208WF0ZS**, including these components:
- (1) 2U Chassis with Quick Reference Label affixed to top cover
- (1) Intel® Server Board S2600WF0 (No Onboard LAN) **S2600WF0**
- (2) PCIe Riser Card brackets:
  - (2) 3-slot PCIe* Riser Card **A2UL8RISER2**
  - (1) 2-slot low profile PCIe* Riser Card **A2UX8X4RISER**
- (8) – 2.5" Hot-Swap Drive Bays with drive carriers and drive blanks
  - (1) SAS/NVMe Combo Backplane **F2U8X25S3PHS**
  - (8) 2.5" Hot-Swap Drive Tool-Less Carriers **FXX25HSCAR3**
- (1) – Standard Control Panel Assembly
  - Board-only **FXXFPANEL2**
  - 300mm FP Cable **H34381-xxx**
- (1) – Front I/O Panel Assembly (1 x VGA and 2 x USB)
  - 620mm USB 3.0 Cable **H76899-xxx**
  - 400mm Video Cable **H62114-xxx**
- (1) – 250mm Backplane I2C Cable **H91166-xxx**
- (2) – 730mm Mini SAS HD Cable **Axxcbl730hdhd**
- (1) – 675mm Backplane Power Cable **H82108-XXX**
- (1) – Standard 2U Air Duct **H90554-xxx**
- (6) – Hot-Swap System Fans **FR2UFAN60HSW**
- (8) – DIMM slot blanks **G75158-00x**
- (1) – 1300W AC Power Supply Module (PSM) **AXX1300TCRPS**
- (1) – Power Supply Bay blank insert
- (2) – AC Power Cord retention strap assembly **H23961-00x**
- (2) – CPU Heatsink **FXXCA78X108HS**
- (2) – CPU Heatsink "NO CPU" mylar spacer insert **J16115-XXX**
- (2) – Standard CPU Carrier **H72851-xxx**
- (1) – 3x RMFBU Mounting Bracket **H18238-00x**
- (1) – 250mm Fixed Mount Solid State Drive (SSD) Power Cable

(2) Intel Xeon Gold 5120 (14 Cores, 2.2Ghz, 105W) **CD8067303535900**
(2) Intel® SSD P4600 1.6TB 2.5" SFF U.2 **SSDPE2KE016T701**
(1) Intel® SSD S3520 480GB (M.2, 80mm) **SSDSCKJB480G701**
(6) Intel® SSD P4500 2TB 2.5" NVMe U.2 **SSDPE2KX020T701**
(1) Remote Management Module Lite 2 **AXXRMM4LITE2**
(1) Intel® PCIe Switch AIC (8 ports) **AXXP3SWX08080**
(1) OCuLink Cable – 725mm cable kit **A2U8PSWCXCXK1**
(1) OCuLink Cable – 530mm **AXXCBL530CVCR**
(1) OCuLink Cable - 470mm **AXXCBL470CVCR**
(1) 1300W AC Common Redundant Power Supply **AXX1300TCRPS**
(1) Ethernet OCP Quad SFP+ **X527DA4OCPG1P5**
(12) RDIMM 32GB - DDR4, 288-pin, 2666MHz **J47951-001**
(1) Trusted Platform Module (TPM) 2.0 **AXXTPMENC8**

Systems shipped to the US and Canada include two (2) North American power cords.

For a complete list of available FRU parts, refer to the Intel® Server Board S2600WF Product Family Configuration Guide at: https://www.intel.com/content/www/us/en/motherboards/server-motherboards/server-board-s2600wf.html

Table 8. Intel® Server System MCB2208WFAF6

Product Code (iPC): MCB2208WAF6	**Order Information**
	**MM#: 963647** **UPC: 00735858363365** **EAN: 5032037118705**
Fully Integrated 2U, 1-Node system, including: CPUs, Memory and Optane and NVMe SSDs	**Product Type: Fully Integrated Server System** **Chassis Form Factor: 2U Rack Mount** **Chassis Dimensions: L=712mm, W=439mm, H=89mm** **Outer Box Dimensions: L=983mm, W=577mm, H=260mm**

Intel product code MCB2208WFAF6 includes the following:

(1) Intel Server System w/S260WFO, 2U1N, 8x2.5" **R2208WF0ZS**, which includes these components:
- (1) 2U Chassis with Quick Reference Label affixed to top cover
- (1) Intel® Server Board S2600WF0 (No Onboard LAN) **S2600WF0**
- (2) PCIe Riser Card Brackets:
  - (2) 3-slot PCIe* Riser Cards **A2UL8RISER2**
  - (1) 2-slot low profile PCIe* Riser Card **A2UX8X4RISER**
- (8) – 2.5" Hot-Swap Drive Bays with drive carriers and drive blanks
  - (1) SAS/NVMe Combo Backplane **F2U8X25S3PHS**
  - (8) 2.5" Hot-Swap Drive Tool-Less Carriers **FXX25HSCAR3**
- (1) – Standard Control Panel Assembly
  - Board only **FXXFPANEL2**
  - 300mm FP Cable **H34381-xxx**
- (1) – Front I/O Panel Assembly (1 x VGA and 2 x USB)
  - 620mm USB 3.0 Cable **H76899-xxx**
  - 400mm Video Cable **H62114-xxx**
- (1) – 250mm Backplane I2C Cable **H91166-xxx**
- (2) – 730mm Mini SAS HD Cable **AXXCBL730HDHD**
- (1) – 675mm Backplane Power Cable **H82108-XXX**
- (1) – Standard 2U Air Duct **H90554-Xxx**
- (6) – Hot-Swap System Fans **FR2UFAN60HSW**
- (8) – DIMM slot blanks **G75158-00x**
- (1) – 1300W AC Power Supply Module (PSM) **Axx1300tcrps**
- (1) – Power Supply Bay blank insert
- (2) – AC Power Cord retention strap assembly **H23961-00x**
- (2) – CPU Heat Sink **FXXCA78X108HS**
- (2) – CPU Heat Sink "NO CPU" mylar spacer insert **J16115-XXX**
- (2) – Standard CPU Carrier **H72851-xxx**
- (1) – 3x RMFBU Mounting Bracket **H18238-00x**
- (1) – 250mm Fixed Mount SSD Power Cable

(2) Intel® Xeon Gold 6152 processor (22 Cores, 2.1Ghz, 140W) **CD8067303406000**
(4) Intel® Optane SSD P4800 375GB 2.5" SFF U.2 **SSDPE21K375GA01**
(1) Intel® Solid State Drive (SSD) S3520 480GB (M.2, 80mm) **SSDSCKJB480G701**
(12) Intel® Solid State Drive (SSD) P4500 2TB 2.5" NVMe U.2 **SSDPE2KX020T701**
(1) 2U 8x2.5 Combo HSBP **A2U8X25S3PHS**
(2) Intel® PCIe Switch AIC (8 ports) **AXXP3SWX08080**
(2) OCuLink Cable – 875mm Cable Kit **A2U8PSWCXCXK1**
(2) OCuLink Cable – 700mm **AXXCBL700CVCR**
(1) OCuLink Cable – 530mm **AXXCBL530CVCR**
(1) OCuLink Cable - 470mm **AXXCBL470CVCR**
(1) 1300W AC Common Redundant Power Supply **AXX1300TCRPS**
(1) Ethernet OCP Quad SFP+ **X527DA4OCPG1P5**
(24) RDIMM 32GB - DDR4, 288-pin, 2666MHz **J47951-001**
(1) Trusted Platform Module (TPM) 2.0 **AXXTPMENC8**

Systems shipped to the US and Canada include two (2) North American power cords.

For a complete list of available FRU parts, refer to the Intel® Server Board S2600WF Product Family Configuration Guide at: https://www.intel.com/content/www/us/en/motherboards/server-motherboards/server-board-s2600wf.html

3.1 Rail Kit Options

To install a rack mount server system into a rack, use a rail mounting kit.

Intel® DCB for Cloud server system models **MCB2224BPHY1 and MCB2224BPAF3** include Intel® Enhanced Value Rail Kit **AXXELVRAIL**. The premium feature rail kit (**AXXFULLRAIL**) can be ordered separately. No Cable Management Arm (CMA) support is available for models **MCB2224BPHY1 and MCB2224BPAF3**.

All other Intel® DCB for Cloud server system models do not include rail kits in the shipping product. Rail kits for these systems must be ordered separately. All rail kits supported on **MCB2208WF** models are listed in the following table.

Table 9. Intel® Rail Kit accessory options for MCB2208WF models

iPC – Intel Product Code	Product Order Information	Product Details
AXXELVRAIL 	**MM# – 920970** **UPC – 00735858244367** **EAN – 5032037038980** **MOQ - 1**	**Enhanced Value Rail Kit** • Works for all 438mm-wide Intel® Rack Chassis 1U, 2U, 4U • Bracket adjustment within 609.6mm~765mm • 424.2mm maximum travel length • 2/3 extension from rack • 59 kg max support weight • Tool-less chassis attach • Tools required to attach rails to rack • No Cable Management Arm support
AXXSHRTRAIL 	**MM# – 939210** **UPC – 00735858291996** **EAN – 5032037070553** **MOQ – 1**	**2U Premium Feature Rails with no CMA Support** • Travel distance 788mm • Bracket adjustment from 594.8mm to 813mm • Tool-less installation • Supports up to 45Kg • Full extension from rack • Kit includes: Rails, screws, installation manual
AXXFULLRAIL 	MM# –939209 UPC –00735858291989 EAN –5032037070546 MOQ – 1	**2U+ Premium Feature Rails with CMA support.** • Travel distance 800mm • Bracket adjustment within 594.8mm~813mm • Tool-less installation • Full extension from rack • Kit includes: Rails, screws, installation manual • For Cable Management Arm, order **AXXCMA2**
AXXCMA2	MM# – 939211 UPC –00735858292009 EAN –5032037070560 MOQ – 1	**Cable Management Arm** • Compatible with AXXFULLRAIL only

4. Drive Extraction and Installation

Note: To maintain proper system cooling, all externally accessible drive bays must be populated with a drive carrier. Each drive carrier must have a hard disk drive (HDD), Solid State Device (SSD), or a supplied drive blank installed.

4.1 Drive Carrier Extraction

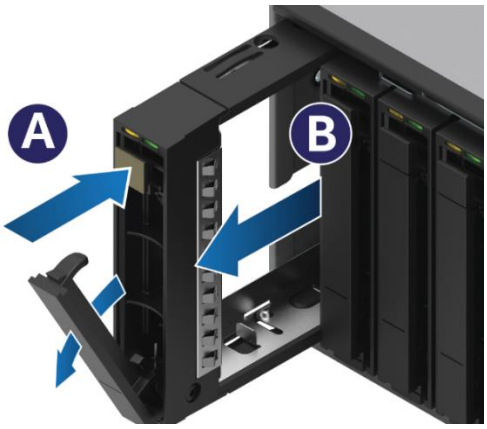


Figure 4. Drive carrier extraction from chassis

Before a new drive can be installed, the current driver carrier must be extracted from the chassis.

1. Remove the drive carrier from the chassis by first pressing the button on the carrier face plate to release the lever (see letter “A”).
2. Using the lever, pull the carrier from the drive bay (see letter “B”).

4.2 Drive Carrier Insertion/Installation

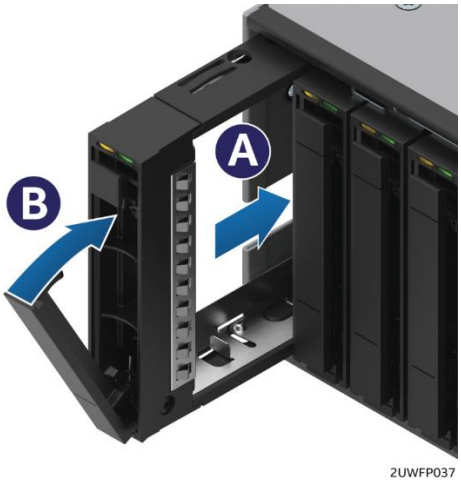


Figure 5. Drive carrier insertion into chassis

1. Align the drive assembly with the open drive bay
2. With the lever in the open position, insert the drive assembly into the drive bay (See letter “A”) and push forward until the drive makes contact with the backplane
3. Complete the drive installation by closing the drive assembly lever until it locks into place (See letter “B”)

4.3 2.5” HDD/SSD Drive Carrier Assembly

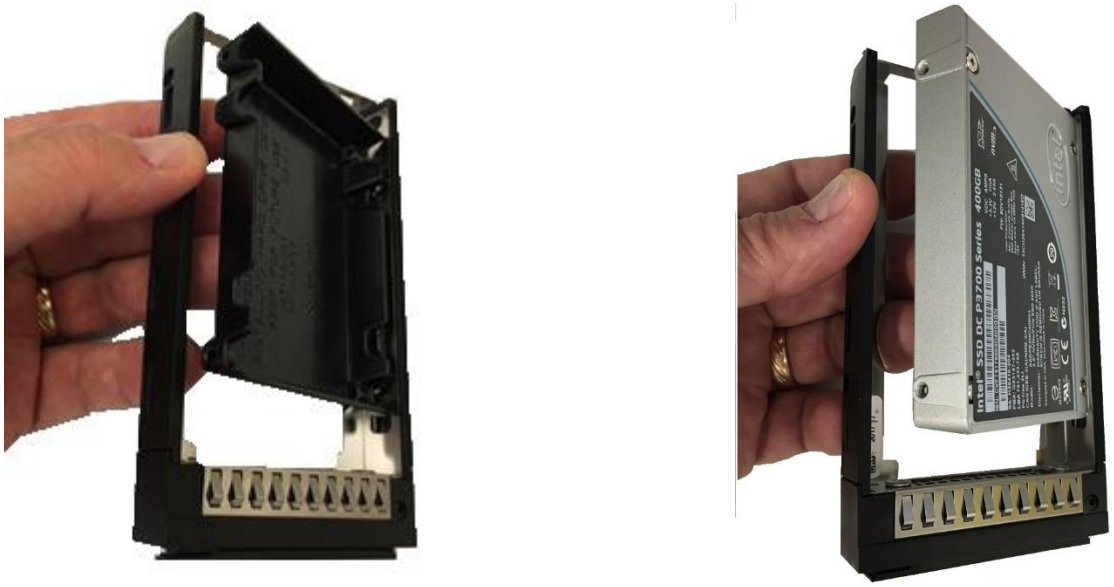


Figure 6. 2.5” Drive Carrier Assembly – Drive / Drive Blank Removal

1. Remove the drive or drive blank from the carrier by gently rotating the top edge of a carrier rail outwards while at the same time pushing the drive or drive blank up from the bottom (as shown above).

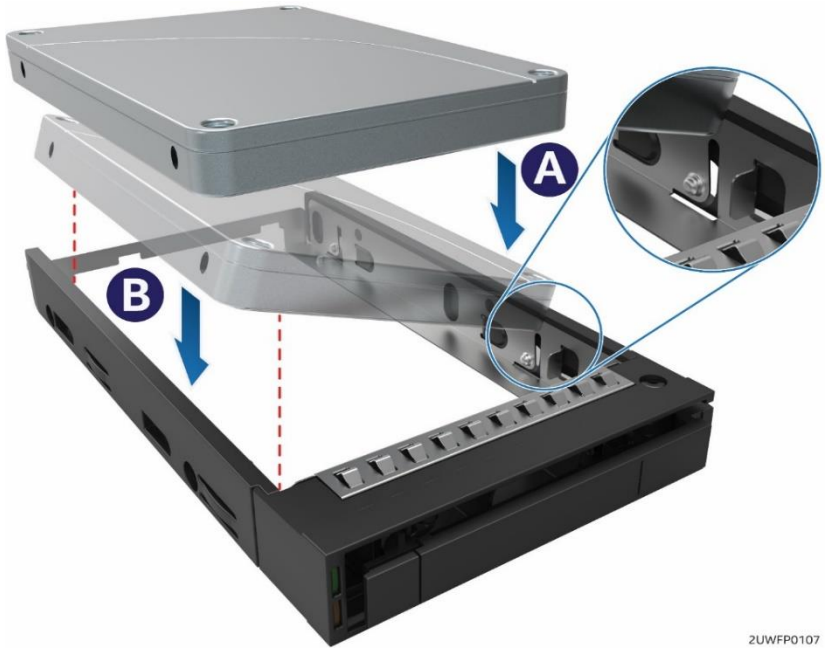


Figure 7. 2.5” Drive carrier assembly – drive installation into carrier

2. With the rear drive connector positioned towards the back of the drive carrier, align and position the mounting holes on one side of the drive over the mounting tabs located on the drive carrier side rail (see letter “A”).
3. Lower the other side of the drive into the carrier (see letter “B”) and press down on the drive until all mounting tabs are locked in place.

Note: The 2.5” drive blank and drive carrier each have an alignment feature (shown above) to ensure proper assembly. When re-installing a drive blank in to the drive carrier, ensure the features are aligned prior to installation. Failure to properly install a drive blank may result with the carrier assembly not fitting properly in to the chassis drive bay.

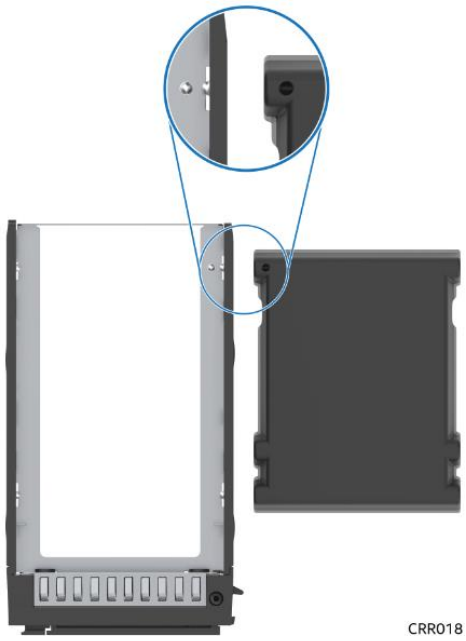


Figure 8. 2.5” Drive carrier assembly – alignment features

Appendix A. Glossary

Term	Definition
AP	Application Processor
BMC	Baseboard Management Controller
BIOS	Basic Input/Output System
CLI	Command Line Interface
CMA	Cable Management Arm
CPU	Central Processing Unit
CRPS	Common Redundant Power Supply
Intel® DCB	Intel® Data Center Blocks for Cloud
DDR	Double-data Rate
DDR4	Double-data Rate 4
DIMM	Dual In-line Memory Module (a plug-in memory module with signal and power pins on the front and back of the internal printed circuit board.
DOS	Disk Operating System
EI	Enhanced Intel
EMI	Electromagnetic Interference
FP	Front Panel
FRU	Field Replaceable Unit
GB	Gigabyte
GBE	Gigabyte Ethernet
GBPS	Gigabytes Per Second
GT/s	GigaTransfers per second
GUI	Graphical User Interface
HDD	Hard Disk Drive
HTTPS	Hyper Text Transfer Protocol Service
IP	Internet Protocol
iPC	Intel Product Code
iPN	Intel Part Number
ISTA	International Safe Transit Association
KB	Kilobyte
LAN	Local Area Network
LED	Light-Emitting Diode
LLA	Local Link Address (i.e. IPv6 Link)
MB	Megabyte
MM#	Master Material Order Number/Material Management Number
MOQ	Minimum Order Quantity
NDA	Non-Disclosure Agreement
NM	Node Manager
OS	Operating System
PCI	Peripheral Component Interconnect (or PCI Local Bus Standard – also called “Conventional PCI”)
PCIe*	Peripheral Component Interconnect Express* (an updated form of PCI offering better throughput and error management)
POST	Power-on Self-Test (BIOS activity from the time on Power On until Operating System boot begins.)
PSM	Power Supply Module

PSU	Power Supply Unit
RAM	Random Access Memory
RDIMM	Registered DIMM (also called buffered). (Memory modules have an address buffer register between the SDRAM modules and the system's memory controller.)
ROM	Read-Only Memory
RT	Runtime. Component of Intel® Platform Innovation Framework for EFI architecture.
SAS	Serial Attached SCSI (High-speed serial data version of SCSI)
SATA	Serial ATA (High-speed serial data version of the disk ATA interface)
SCA	Single Connector Attachment
SDRAM	Synchronous Dynamic Random Access Memory
SEL	System Event Log
SFF	Small Form Factor
SFF NVMe	NVMe SSD in a 2.5" Form Factor
SFP	Small Form Factor Pluggable
SFP+	The enhanced small form-factor pluggable (SFP+) is an enhanced version of the SFP that supports data rates up to 16 GBit/s.
SSD	Solid State Device
SUP	System Update Package
TPM	Trusted Platform Module
TPS	Technical Product Specification
USB	Universal Serial Bus (standard serial expansion bus meant for connecting peripherals)
VGA	Video Graphics Array