Intel® Server Products for Cloud – VSAN* Ready Node (VRN) Product Family

System Deployment and Configuration Guide

A document to provide guidance for initial system setup and OS installation and identification of available system options

Revision 1.1
July 2016
Intel® Server Boards and Systems
## Document Revision History

<table>
<thead>
<tr>
<th>Date Published</th>
<th>Revision</th>
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</thead>
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<td>1.1</td>
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</tr>
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**1 Introduction**

The Intel® Server Products for Cloud – VSAN® Ready Node (VRN) Product Family includes both single node and multi-node server systems.

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Server systems within this product family were specifically created to offer Intel customers with pre-configured systems that are VMWare® VSAN certified. Intel has extensively tested these systems to ensure best operation and reliability with the VMWare VSAN operating environment.
To maintain VMWare VSAN certification, no changes can be made to the predefined system configuration. Changing the pre-configured system configuration may invalidate the VMWare VSAN certification performed by VMWare and Intel.

Changes to the system that may impact VMWare VSAN certification include the following:

- Updating the factory installed system software stack with revisions that are not VSAN certified. The system software stack includes: system BIOS, BMC Firmware and ME Firmware
- Adding or changing processors
- Adding or changing the system memory
- Adding or changing I/O devices such as add-in PCIe cards or modules
- Adding or changing non-matching (different manufacturer, and/or different model number) storage devices such as Hard Drives and any type of SSDs, than those shipped in the original system configuration

Notes:

1 – For its standard server boards and systems, Intel releases updates to the system software stack via System Update Packages (SUP), which can be downloaded from the Intel web site. However, since the Intel® VSAN Ready Node server systems are VSAN certified, the pre-installed system software stack should not be changed unless updated to another system software stack that has passed VSAN certification for the specified system configuration. Intel customers of Intel® VSAN Ready Nodes, should NOT update the system software stack unless a downloaded SUP identifies that it is VSAN certified for Intel® VSAN Ready Nodes. This information will be communicated via the README file included with every posted SUP for the given 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 will not invalidate the VSAN certification

Hard Drives for Hybrid configurations are not included and must be purchased separately. Only certified hard drives can be added to hybrid system configuration to maintain VSAN certification. The following table identifies certified hard drives that can be added to Hybrid system configurations and still maintain VSAN certification.

<table>
<thead>
<tr>
<th>Model</th>
<th>Vendor</th>
<th>Model Number</th>
<th>Description</th>
<th>Quantity</th>
<th>Install Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>VRN2224THY2</td>
<td>Seagate*</td>
<td>ST1200MM0088</td>
<td>1.2TB 12GB SAS 10K rpm SFF HDD</td>
<td>2 per node</td>
<td>Slots 1,2,7,8,13,14,19,20</td>
</tr>
<tr>
<td>VRN2224THY4</td>
<td>Seagate</td>
<td>ST1200MM0088</td>
<td>1.2TB 12GB SAS 10K rpm SFF HDD</td>
<td>4 per node</td>
<td>Slots 2,3,8,9,14,15,20,21</td>
</tr>
<tr>
<td>VRN2224THY6</td>
<td>Seagate</td>
<td>ST2000NX0433</td>
<td>2TB 12GB SAS 7.2K rpm SFF HDD</td>
<td>4 per node</td>
<td>Slots 2,3,8,9,14,15,20,21</td>
</tr>
<tr>
<td>VRN2208WHY8</td>
<td>Seagate</td>
<td>ST1200MM0088</td>
<td>1.2TB 12GB SAS 10K rpm SFF HDD</td>
<td>8 per server</td>
<td>Slots 1 through 7 and 9 through 15</td>
</tr>
</tbody>
</table>

See Appendix B for Drive Installation Instructions.
This section provides information necessary to appropriately install the VMWare® VSAN operating environment on to your Intel® VSAN Ready Node. To maintain and be compliant with the VMWare VSAN certification, the installation steps should be followed as specified. Deviating from the documented OS installation requirements may invalidate the VMWare VSAN certification performed by VMWare and Intel.

1. Acquire the appropriate Software License from your VMWare partner or authorized VMWare distributor/reseller
2. Attach the installation media which holds the Operating System Installation Image to the server system
3. Identify the required boot device. (See Note Below)

NOTE: In order to maintain VSAN certification for any of the Intel® VSAN Ready Nodes, ESXi must be installed to a specific storage device within the specific VSAN ready node configuration. The following table identifies the required boot device to install ESXi to for each Intel® VSAN Ready Node configuration.

<table>
<thead>
<tr>
<th>System Model</th>
<th>Storage Device Vendor</th>
<th>Storage Device Model Number</th>
<th>Storage Device Location within the server system</th>
</tr>
</thead>
<tbody>
<tr>
<td>VRN2224THY2</td>
<td>Innodisk*</td>
<td>SATADOM 3SE 32 GB</td>
<td>SATADOM on server board</td>
</tr>
<tr>
<td>VRN2224THY4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VRN2224THY6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VRN2208WHY8</td>
<td>Intel®</td>
<td>SSD DC S3710 Series (200 GB, 2.5in)</td>
<td>SATA SSD installed in rear drive bay</td>
</tr>
<tr>
<td>VRN2208WAF6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VRN2208WAF8</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. Power on the Server and access the <F2> BIOS Setup utility to configure the primary boot device to the device identified in Step 3.
5. Save Changes and Exit BIOS Setup
6. Install ESXi on to the specified boot device
7. Follow the VMWare Installation wizard
8. After the installation has concluded, restart the server
9. Follow remaining VMWare instructions to complete your installation

Please refer to the following links for additional VMWare VSAN information.

Note: the following links may be updated by VMWare without further notice.

**vSAN Product Page**
http://www.vmware.com/products/virtual-san

**vSAN Administration Guide:**

**vSAN POC guide**
# Appendix A - System Configuration Options

## Intel® Server System VRN2208WAF8

<table>
<thead>
<tr>
<th>Intel Product Code (iPC): VRN2208WAF8</th>
<th>Order Information:</th>
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<tr>
<td></td>
<td>MM#: 950558</td>
</tr>
<tr>
<td></td>
<td>UPC: 735858321105</td>
</tr>
<tr>
<td></td>
<td>EAN: 5032037089258</td>
</tr>
</tbody>
</table>

**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 VRN2208WAF8 includes the following:

1. – 2U Chassis with Quick Reference Label affixed to top cover  
2. – Intel® Server Board S2600WT w/ Dual 10GbE – iPC S2600WTTR  
3. – 1100W AC Power Supply Module – iPC AXX1100PCRPS  
4. – PCIe Riser card brackets  
   - Includes (1) – 3-slot PCIe* riser card – iPC A2UL8RISER2  
   - Includes (1) – 2-slot low profile PCIe* riser card – iPC A2UX8X4RISER  
5. – Standard Air duct  
6. – Hot swap system fans – iPC FR2UFAN60H5W  
7. – Standard control panel assembly (board only – iPC FXXFPANEL)  
8. – Front I/O Panel assembly (1 x VGA and 2 x USB)  
9. – SATA Optical drive bay with filler panel – (optical drive sold separately)  
   - Includes optical drive mounting latch kit – iPN H19168-00x  
   - Includes 300mm optical drive / internal mount SSD power cable – iPN H23901-00x  
10. – 2.5" Hot-swap drive bays with drive carriers and drive blanks  
    - Includes (1) – 12Gb SAS backplane – iPC A2U8X25S3HSDK  
    - Includes (8) – 2.5" hot swap drive trays – iPC FXX25HSCAR2  
11. – Multiport 730mm SAS/SATA data cables – iPC AXXCB730HDDHD  
12. – Backplane 250mm I2C cable – iPN G41809-00x  
13. – Backplane power cable – iPN H23927-00x  
14. – Intel® 2x2.5" Rear Mount Hot Swap Drive Bay with drive carriers accessory kit - A2UREARHSDK  
15. – Intel® 8x2.5" Combo Backplane accessory kit - (4) PCIe* SSD SFF (NVMe*) + (4) SATA - A2U44X25NVMEDK  
16. – Intel® SSD DC S3510 Series (1.2 TB, 2.5in, SATA) – Drive Bay 1 Slots 0 through 7, Drive Bay 2 Slots 4 through 7.  
17. – Intel® SSD DC P3700 Series (400GB , 2.5in, PCIe NVMe) – Drive Bay 2 – Drive Slots 0 and 1  
18. – Intel® SSD DC S3710 Series (200GB , 2.5in, SATA) – Rear drive bay Slot 0 (** OS Boot Device – VSAN Cert Requirement)  
19. – Intel® I/O Module AX10GBNIAIOM - Dual SFP+ port 10GbE IO module based on Intel® 82599ES 10 Gigabit Ethernet Controller  
20. – AXRMM4LITE – Intel® Remote Management Module Node Accessory Key  
21. – Intel® RAID Controller RS3UC080 – Pass thru mode only  
22. – Intel® Xeon® Processor E5-2680 v4 – 2.40 GHz, 35 MB Intel® Smart Cache  
23. – CPU heatsinks – iPC FXXCA84X106HS  
24. – Samsung* 16GB DIMM - M393A2G40DB0-CPB

**NOTE:** Systems shipped to the US & Canada will include two North American power cords.

For a complete list of available FRU replacement parts, refer to the Intel® Server Board S2600WT Product Family Configuration Guide at the following Intel web site:

**Intel® Server System VRN2208WAF6**

<table>
<thead>
<tr>
<th>Product Code (iPC): VRN2208WAF6</th>
<th>Order Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) – 2U Chassis with Quick Reference Label affixed to top cover</td>
<td>MM#: 950560</td>
</tr>
<tr>
<td>(1) – Intel® Server Board S2600WT w/ Dual 10GbE – iPC S2600WTTR</td>
<td>UPC: 735858321112</td>
</tr>
<tr>
<td>(2) – 1100W AC Power Supply Module – iPC AXK1000PCRPS</td>
<td>EAN: 5032037089265</td>
</tr>
<tr>
<td>(2) – PCIe Riser card brackets</td>
<td>Product Type: Fully Integrated Server System</td>
</tr>
<tr>
<td>• Includes (1) – 3-slot PCIe* riser cards – iPC A2UL8RISER2</td>
<td>Chassis Form Factor: 2U rack mount</td>
</tr>
<tr>
<td>• Includes (1) – 2-slot low profile PCIe* riser card – iPC A2UX8X4RISER</td>
<td>Chassis dimensions: L=712mm, W=439mm, H=89mm</td>
</tr>
<tr>
<td>(1) – Standard Air duct</td>
<td>Outer Box Dimensions: L=983mm, W=577mm, H=260mm</td>
</tr>
<tr>
<td>(6) – Hot swap system fans – iPC FR2UFAN60HHW</td>
<td></td>
</tr>
<tr>
<td>(1) – Standard control panel assembly (board only – iPC FXXPANEL)</td>
<td></td>
</tr>
<tr>
<td>(1) – Front I/O Panel assembly (1 x VGA and 2 x USB)</td>
<td></td>
</tr>
<tr>
<td>(1) – SATA Optical drive bay with filler panel – (optical drive sold separately)</td>
<td></td>
</tr>
<tr>
<td>• Includes optical drive mounting latch kit – iPN H19168-00x</td>
<td></td>
</tr>
<tr>
<td>• Includes 300mm optical drive / internal mount SSD power cable – iPN H23901-00x</td>
<td></td>
</tr>
<tr>
<td>(8) – 2.5&quot; Hot-swap drive bays with drive carriers and drive blanks</td>
<td></td>
</tr>
<tr>
<td>• Includes (1) – 12Gb SAS backplane – iPC A2U8X25S3HSDDK</td>
<td></td>
</tr>
<tr>
<td>• Includes (8) – 2.5&quot; hot swap drive trays – iPC FXX25HSCAR2</td>
<td></td>
</tr>
<tr>
<td>(2) – Multiport 730mm SAS/SATA data cables – iPC AXXCLB730HDHD</td>
<td></td>
</tr>
<tr>
<td>(1) – Backplane 250mm I2C cable – iPN G41809-00x</td>
<td></td>
</tr>
<tr>
<td>(1) – Backplane power cable – iPN H23927-00x</td>
<td></td>
</tr>
<tr>
<td>(1) – Intel® I/O Module AXK10GBNIAOM – Dual SFP+ port 10GbE IO module based on Intel® 82599ES 10 Gigabit Ethernet Controller</td>
<td></td>
</tr>
<tr>
<td>(1) – Intel® Remote Management Module Lite accessory key – AXXXRM44LITE</td>
<td></td>
</tr>
<tr>
<td>(1) – Intel® RAID Controller RS3UC080 – Pass thru mode only</td>
<td></td>
</tr>
<tr>
<td>(1) – Intel® 2x2.5&quot; Rear Mount Hot Swap Drive Bay with drive carriers accessory kit - A2UREARHSDK</td>
<td></td>
</tr>
<tr>
<td>(1) – Intel® 8x2.5&quot; Combo Backplane accessory kit - (4) PCIe* SSD SFF (NVMe*) + (4) SAS support) - A2U44X25NVME</td>
<td></td>
</tr>
<tr>
<td>(8) – Intel® SSD DC S3510 Series (1.2 TB, 2.5in, SATA) – Drive Bay 1 Slots 0 through 7</td>
<td></td>
</tr>
<tr>
<td>(2) – Intel® SSD DC P3700 Series (400 GB, 2.5in, PCIe NVMe) - Drive Bay 2 – Drive Slots 0 and 1</td>
<td></td>
</tr>
<tr>
<td>(1) – Intel® SSD DC S3710 Series (200 GB, 2.5in, SATA) – Rear drive bay Slot 0 (** OS Boot Device – VSAN Cert Requirement)</td>
<td></td>
</tr>
<tr>
<td>(2) – Intel® Xeon® Processor E5-2680 v4 – 2.40 GHz, 35 MB Intel® Smart Cache</td>
<td></td>
</tr>
<tr>
<td>(2) – CPU heatsinks – iPC FXCA84X106HS</td>
<td></td>
</tr>
<tr>
<td>(16) – Samsung 16GB DIMM - M393A2G40DB0-CPB</td>
<td></td>
</tr>
</tbody>
</table>

**Intel product code VRN2208WAF6 includes the following:**

1. 2U Chassis with Quick Reference Label affixed to top cover
2. Intel® Server Board S2600WT w/ Dual 10GbE – iPC S2600WTTR
3. 1100W AC Power Supply Module – iPC AXK1000PCRPS
4. PCIe Riser card brackets
   - Includes (1) – 3-slot PCIe* riser cards – iPC A2UL8RISER2
   - Includes (1) – 2-slot low profile PCIe* riser card – iPC A2UX8X4RISER
5. Standard Air duct
6. Hot swap system fans – iPC FR2UFAN60HSW
7. Standard control panel assembly (board only – iPC FXXPANEL)
8. Front I/O Panel assembly (1 x VGA and 2 x USB)
9. SATA Optical drive bay with filler panel – (optical drive sold separately)
   - Includes optical drive mounting latch kit – iPN H19168-00x
   - Includes 300mm optical drive / internal mount SSD power cable – iPN H23901-00x
10. 2.5" Hot-swap drive bays with drive carriers and drive blanks
    - Includes (1) – 12Gb SAS backplane – iPC A2U8X25S3HSDDK
    - Includes (8) – 2.5" hot swap drive trays – iPC FXX25HSCAR2
11. Multiport 730mm SAS/SATA data cables – iPC AXXCLB730HDHD
12. Backplane 250mm I2C cable – iPN G41809-00x
13. Backplane power cable – iPN H23927-00x
15. Intel® Remote Management Module Lite accessory key – AXXXRM44LITE
16. Intel® RAID Controller RS3UC080 – Pass thru mode only
17. Intel® 2x2.5" Rear Mount Hot Swap Drive Bay with drive carriers accessory kit - A2UREARHSDK
18. Intel® 8x2.5" Combo Backplane accessory kit - (4) PCIe* SSD SFF (NVMe*) + (4) SAS support) - A2U44X25NVME
19. Intel® SSD DC S3510 Series (1.2 TB, 2.5in, SATA) – Drive Bay 1 Slots 0 through 7
20. Intel® SSD DC P3700 Series (400 GB, 2.5in, PCIe NVMe) - Drive Bay 2 – Drive Slots 0 and 1
21. Intel® SSD DC S3710 Series (200 GB, 2.5in, SATA) – Rear drive bay Slot 0 (** OS Boot Device – VSAN Cert Requirement)
22. Intel® Xeon® Processor E5-2680 v4 – 2.40 GHz, 35 MB Intel® Smart Cache
23. CPU heatsinks – iPC FXCA84X106HS
24. Samsung 16GB DIMM - M393A2G40DB0-CPB

**NOTE:** Systems shipped to the US & Canada will include two North American power cords.

For a complete list of available FRU replacement parts, refer to the Intel® Server Board S2600WT Product Family Configuration Guide at the following Intel web site:

Intel® Server System VRN2208WHY8

Intel product code VRN2208WHY8 includes the following:

1. 2U Chassis with Quick Reference Label affixed to top cover
2. Intel® Server Board S2600WT w/ Dual 10GbE – iPC S2600WTTR
3. 1100W AC Power Supply Module – iPC AXX1100PCRPS
4. AC Power Cord retention strap assembly – iPN H23961-00x
5. 3-slot PCIe* riser card brackets
   - Includes (1) 3-slot PCIe* riser cards – iPC A2UL8RISER2
   - Includes (1) 2-slot low profile PCIe* riser card – iPC A2UX8X4RISER
6. Standard Air duct
7. SATA Optical drive bay with filler panel – (optical drive sold separately)
   - 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 (2) 12Gb SAS backplane – iPC A2U8X25S3HSDK
   - Includes (16) 2.5” hot swap drive trays – iPC FXX25HSCAR2
9. Multiport 730mm SAS/SATA data cables – iPC AXXCBL730HDHD
10. Backplane 250mm I2C cable – iPN G41809-00x
11. Backplane power cable – iPN H23927-00x
12. Intel® 2x2.5” Rear Mount Hot Swap Drive Bay with drive carriers accessory kit - A2UREARHSDK
13. Intel® I/O Module AXX10GBNIAOM - Dual SFP+ port 10GbE IO module based on Intel® 82599ES 10 Gigabit Ethernet Controller
15. Intel® RAID Controller RS3UC080 – Pass thru mode only
16. Intel® SSD DC S3710 Series (200 GB, 2.5in, SATA) – Rear drive bay Slot (** OS Boot Device – VSAN Cert Requirement)
17. Intel® SSD DC S3710 Series (400 GB, 2.5in, SATA) – Front Bay 1 – Drive Slot 0 and Front Bay 2 – Drive Slot 8
18. Intel® Xeon® Processor E5-2680 v4 – 2.40 GHz, 35 MB Intel® Smart Cache
19. CPU heatsinks – iPX FXXCA84X106HS
20. Samsung* 16GB DIMM - M393A2G40DB0-CPB

NOTE: Systems shipped to the US & Canada will include two North American power cords.

For a complete list of available FRU replacement parts, refer to the Intel® Server Board S2600WT Product Family Configuration Guide at the following Intel web site:

Intel® Server System VRN2224THY6

Fully Integrated 2U 4-Node system including: CPUs, Memory, SATA drives, VSAN ready node

<table>
<thead>
<tr>
<th>Product Code (iPC): VRN2224THY6</th>
<th>Order Information</th>
</tr>
</thead>
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<tr>
<td></td>
<td>MM#: 950553</td>
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<tr>
<td></td>
<td>UPC: 735858321082</td>
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<td>EAN: 032037089234</td>
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Intel product code VRN2224THY6 includes the following:

(1) – Intel Server Chassis H2224XXKR2 – 2U Chassis with Quick Reference Label affixed to top cover
(1) – Pre-installed Standard Control Panel assembly (board only) – iPC H2000FPANEL2
(1) – Power Distribution Board – iPC FXXCRPSPDB2
(1) – Power Interposer Board – iPC FXXCRPSPIB
(2) – 1600W 80 PLUS Platinum PSUs – iPC FXX1600PCRPS
(4) – 2.5” Hot-swap drive bays with drive carriers and drive blanks, includes:
  • (1) – 12 Gb SAS backplane – iPC FHW24X25HS12G
  • (24) – 2.5” hot swap drive carriers – iPC FXX25HSCAR2
(4) – HNS2600TP24SR Server Node – Each node includes the following:
  • Intel® Server Board S2600TPR
  • (2) – CPU heat sinks
  • (2) – Intel® Xeon® Processor E5-2680 v4 – 2.40 GHz, 35 MB Intel® Smart Cache
  • (1) – Intel® Remote Management Module Lite accessory key – AXXRMM4LITE
  • (1) – Innodisk® SATADOM 3SE 32 GB (** OS Boot Device – VSAN Cert Requirement)
  • (16) – Samsung® 16GB DIMM - M393A2G40DB0-CPB
  • (1) – PCI Express® x16 (200 pin) rIOM riser and rIOM carrier board kit – iPC AXXKPTPM2IOM
  • (1) – 12Gb/s Bridge Board – iPC FHWKPTPBGB24 - Also referred as Intel® RAID Controller RS3PC
(8) – Intel® SSD DC S3710 Series (400 GB, 2.5in SATA 6Gb/s, 20nm, MLC) - Drive bay slots 0,1,6,7,12,13,18, and 19
(1) – Enhanced Value Rail Kit – iPC AXXELVRAIL

NOTE: Systems shipped to the US & Canada will include two North American power cords.

For a complete list of available FRU replacement parts, refer to the Intel® Server Board S2600TP Product Family Configuration Guide at the following Intel web site:

Intel® Server Products for Cloud – VSAN® Ready Node (VRN) Product Family
System Deployment and Configuration Guide

Intel® Server System VRN2224THY4

Order Information
MM#: 950552
UPC: 735858321075
EAN: 5032037089227

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 VRN2224THY4 includes the following:
(1) – Intel Server Chassis H2224XXKR2 – 2U Chassis with Quick Reference Label affixed to top cover
(1) – Pre-installed Standard Control Panel assembly (board only) – iPC FH2000FPANEL2
(1) – Power Distribution Board – iPC FXXCRPSPDB2
(1) – Power Interposer Board – iPC FXXCRPSPIB
(2) – 1600W 80 PLUS Platinum PSUs – iPC FXX1600PCRPS
(4) – 2.5" Hot-swap drive bays with drive carriers and drive blanks, includes:
• 12 Gb SAS backplane – iPC FHW24X25HS12G
• (24) – 2.5" hot swap drive carriers – iPC FXX25HSCAR2
(4) – HNS2600TP24SR Server Node – Each node includes the following:
• Intel® Server Board S2600TPR
• (2) – CPU heat sinks
• (2) – Intel® Xeon® Processor 2620 v4 – 2.10 GHz, 20 MB Intel® Smart Cache
• (1) – Intel® Remote Management Module Lite accessory key – AXXRMM4LITE
• (1) – Innodisk® SATADOM 3SE 32 GB (** OS Boot Device – VSAN Cert Requirement)
• (8) – Samsung® 16GB DIMM - M393A2G40DB0-CPB
• (1) – Dual SFP+ port I/O module - iPC AX10GBNIAOM
• (1) – PCI Express® x16 (200 pin) rIOM riser and rIOM carrier board kit –iPC AXXKPTPM2IOM
• (1) – 12Gb/s Bridge Board – iPC FHWKPTPBGB24 - Also referred as Intel® RAID Controller RS3PC
(8) – Intel® SSD DC S3710 Series (200 GB, 2.5in SATA 6Gb/s, 20nm, MLC) - Drive bay slots 0,1,6,7,12,13,18, and 19
(1) – Enhanced Value Rail Kit – iPC AXEELVRAIL
NOTE: The rail kit only supports specific rack type with 3/8" square and 7.1mm round holes

NOTE: Systems shipped to the US & Canada will include two North American power cords.

For a complete list of available FRU replacement parts, refer to the Intel® Server Board S2600TP Product Family Configuration Guide at the following Intel web site:
## Intel® Server System VRN2224THY2

### Product Code (iPC): VRN2224THY2

**Fully Integrated 2U 4-Node system including:**
- CPUs, Memory, SATA drives, VSAN ready node

### Order Information
- **MM#:** 950551
- **UPC:** 735858321068
- **EAN:** 5032037089210

### Intel product code VRN2224THY2 includes the following:

1. Intel Server Chassis H2224XXKR2 – 2U Chassis with Quick Reference Label affixed to top cover
2. Pre-installed Standard Control Panel assembly (board only) – iPC FH2000FPANEL2
3. Power Distribution Board – iPC FXXCRPSDB2
4. Power Interposer Board – iPC FXXCRPSPIB
5. 1600W 80 PLUS Platinum PSUs – iPC FXX1600PCRPS
6. 2.5” Hot-swap drive bays with drive carriers and drive blanks, includes:
   - (1) – 12 Gb SAS backplane – iPC FHW24X25HS12G
   - (24) – 2.5” hot swap drive carriers – iPC FXX25HSCAR2
7. HNS2600TP24SR Server Node – Each node Includes the following:
   - Intel® Server Board S2600TPR
   - CPU heat sinks
   - Intel® Xeon® Processor 2620 v4 – 2.10 GHz, 20 MB Intel® Smart Cache
   - Intel® Remote Management Module Lite accessory key – AXXRMM4LITE
   - Innodisk® SATADOM 3SE 32 GB (** OS Boot Device – VSAN Cert Requirement)
   - Samsung® 16GB DIMM - M393A2G40DB0-CPB
   - Dual SFP+ port I/O module - iPC AXX10GBNIAIOM
   - PCI Express* x16 (200 pin) rIOM riser and rIOM carrier board kit –iPC AXXKPTPM2IOM
   - 12Gb/s Bridge Board – iPC FHWKPTPBGB24 – Also referred as Intel RAID Controller RS3PC
8. Intel* SSD DC S3710 Series (400 GB, 2.5in SATA 6Gb/s, 20nm, MLC) - Drive bay slots 0, 6, 12, and 18
9. Enhanced Value Rail Kit – iPC AXCELVRAIL

**NOTE:** The rail kit only supports specific rack type with 3/8” square and 7.1mm round holes

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### Systems shipped to the US & Canada will include two North American power cords.

For a complete list of available FRU replacement parts, refer to the Intel® Server Board S2600TP Product Family Configuration Guide at the following Intel web site:

Rail Kit Options

To install a rack mount server system into a rack, a rail mounting kit must be installed.

Intel VSAN Ready Node models VRN2224HY (2/4/6) include the following Intel Rail Kit option in the shipping product: Intel® Enhanced Value Rail Kit AXXELVRAIL. Supported premium feature rail kits must be ordered separately. Available premium feature rail kits are listed in the following table.

All other available Intel® VSAN Ready Node models do not include rail kits in the shipping product. Rail Kits for these systems must be ordered separately. All supported rail kits are listed in the following table.

Table 3. Intel® Rail Kit Accessory Kit Options

<table>
<thead>
<tr>
<th>iPC – Intel Product Code</th>
<th>Product Order Information</th>
<th>Product Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>iPC – AXXELVRAIL</td>
<td>MM# – 920970</td>
<td>Enhanced Value Rail Kit</td>
</tr>
<tr>
<td></td>
<td>UPC – 00735858244367</td>
<td>• Works for all 438mm wide Intel® Rack Chassis 1U, 2U, 4U</td>
</tr>
<tr>
<td></td>
<td>EAN – 5032037038980</td>
<td>• Adjustment within 609.6mm~765mm to fit difference depth rack</td>
</tr>
<tr>
<td></td>
<td>MOQ – 1</td>
<td>• 424.2mm maximum travel length</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 2/3 extension from rack</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 130 lbs (59 kgs) max support weight</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Tool-less chassis attach</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Tools required to attach to rails to rack</td>
</tr>
<tr>
<td></td>
<td>Note: No Cable Management Arm (CMA) support.</td>
<td></td>
</tr>
<tr>
<td>iPC – AXSSHTRAIL</td>
<td>MM# – 939210</td>
<td>2U+ Premium quality rails with no CMA support.</td>
</tr>
<tr>
<td></td>
<td>UPC – 00735858291996</td>
<td>• Travel distance 780mm</td>
</tr>
<tr>
<td></td>
<td>EAN – 5032037070553</td>
<td>• Tool-less installation</td>
</tr>
<tr>
<td></td>
<td>MOQ – 1</td>
<td>• Full extension from rack</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Kit includes: Rails, screws, installation manual</td>
</tr>
<tr>
<td>iPC – AXXFULLRAIL</td>
<td>MM# – 939209</td>
<td>2U+ Premium quality rails with CMA support.</td>
</tr>
<tr>
<td></td>
<td>UPC – 00735858291989</td>
<td>• Travel distance 780mm</td>
</tr>
<tr>
<td></td>
<td>EAN – 5032037070546</td>
<td>• Tool-less installation</td>
</tr>
<tr>
<td></td>
<td>MOQ – 1</td>
<td>• Full extension from rack</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Kit includes: Rails, screws, installation manual</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• For Cable Management arm – order iPC AXXCMA2</td>
</tr>
<tr>
<td>iPC – AXXCMA2</td>
<td>MM# – 939211</td>
<td>Cable management arm</td>
</tr>
<tr>
<td></td>
<td>UPC – 00735858292009</td>
<td>• Compatible with AXXFULLRAIL only</td>
</tr>
<tr>
<td></td>
<td>EAN – 5032037070560</td>
<td>MOQ – 1</td>
</tr>
</tbody>
</table>

Advisory Note – Available rack and cabinet mounting kits are not designed to support shipment of the server system while installed in a rack. If you chose to do so, Intel advises you verify your shipping configuration with appropriate shock and vibration testing, before shipment. Intel does not perform shipping tests which cover the complex combination of unique rack offerings and custom packaging options.

Caution: Exceeding the specified maximum weight limit of a given rail kit or misalignment of the server in the rack may result in failure of the rack rails, causing 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.
Locking Front Bezel Accessory Kit Option

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.

Table 4. Intel® Locking Front Bezel Accessory Kit Option

<table>
<thead>
<tr>
<th>iPC - Intel Product Code</th>
<th>Product Order Information</th>
<th>Product Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>iPC – A2UBEZEL</td>
<td>MM# – 918086</td>
<td>2U Front Bezel Accessory Kit</td>
</tr>
<tr>
<td></td>
<td>UPC – 735858241137</td>
<td>Kit Includes:</td>
</tr>
<tr>
<td></td>
<td>EAN – 5032037035880</td>
<td>(1) 2U locking bezel</td>
</tr>
<tr>
<td></td>
<td>MOQ – 1</td>
<td>(1) Front Panel Window Insert</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1 Set) Bezel branding inserts – two ID badges, one wave</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1 Set) Keys</td>
</tr>
</tbody>
</table>

The face of the bezel assembly includes snap-in identification badge options and a wave feature option to allow for customization.
Figure 4. 2U Front Bezel Accessory With Snap-on Options

Figure 5. 2U Front Bezel Accessory - ID Badge Option mechanical drawings
Appendix B – Drive Installation Instructions

**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.

### 2.5" Drive Carrier Extraction

**Figure 6. Installing Hot-swap storage devices – 2.5" carrier extraction**

- Remove the drive carrier from the chassis by pressing the green button and pulling open the lever (see letter 'A')
- Pull the carrier out of the drive bay (see letter 'B')

### 2.5" Hard Disk Drive (HDD) / Solid State Device (SSD) Installation

**Figure 7. 2.5" Storage Device Installation – Remove the drive blank**

- Remove the four screws securing the plastic drive blank to the carrier (see letter 'C')
- Remove the drive blank from the carrier (see letter 'D')

**Figure 8. 2.5" Storage Device Installation – Mount Drive to Carrier**
Install the storage device into the carrier. Verify the connector end of the drive is located towards the back of the carrier (see letter ‘E’).

Secure the drive to the carrier using four screws

2.5” Drive Carrier Insertion

With the lever open, insert the drive assembly into the chassis

Push in the lever to lock it into place (see letter ‘F’)