

Intel[®] Server Systems

SR4850HW4S and SR6850HW4S

Configuration Guide

Rev 3.03

A reference guide to assist customers in ordering components to configure
SAS 3.5" Harwich 800T-based server systems - RoHS compliance w/ server exemption.

SR4850HW4S = **Harwich 800T** 4U Server **SAS 3.5**
SR6850HW4S = **Harwich 800T** 6U Server **SAS 3.5**

Revisions/Additions in blue font



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2. Revision History

| Date | Rev | Modification |
|---------------|------|--|
| Mar 23, 2005 | 1.1 | Corrected system DVD from a DVD/CDRW to a DVD-ROM. |
| Sept 27, 2005 | 2.0 | Harwich 800T revisions. |
| Apr 24, 2006 | 2.7 | Harwich 800T MM#s revised, DVD spare |
| Apr 25, 2006 | 3.0 | Harwich 800T SAS MM#s added |
| Sept 25, 2006 | 3.01 | Updated Boxed and Tray Processor Reference Codes |
| Oct 25, 2006 | 3.02 | Updated BHWBASEM MM# |
| Apr 3, 2007 | 3.02 | Updated SHW4URM3SA and SHW6URM3SA MM# |

3. Important Notes

1. The SRx850HW4S boardset is ordered and shipped as two separate boards. The two boards are the baseboard and the memory board. Each system can accommodate up to four memory boards. System SKUs include one memory board in the base configuration.
2. The 6U server platform SR6850HW4S (product code SHW6URM3SA) comes preconfigured with 1 power supply and an empty second power supply bay. The second power supply bay must be filled with either a second power supply (AHW6UPWR) or a power bay fan (AHW6UPWRFAN).
3. Systems will not ship with processors, hard drives, or memory. These parts must be obtained separately from the system.
4. VRMs are not included with the platform.
5. Heat sinks are not included with the platform.
6. Processor thermal blanks must be ordered separately (if no processor is installed).
7. Either a Button Control Panel or Intel® Local Control Panel must be ordered for installation in the system.
8. Intel® Server Management Professional or Advanced modules must be ordered for installation in the system.
9. The SRx850HW4S memory board supports DDR2 400 SDRAM registered DIMMs.
10. The Intel factory will package board orders into single order packaging and ship to fill customer orders. Each board MM is a self-contained shipping package of one board.
11. Power cords are not shipped with the system and must be obtained from local suppliers. Please review the power cord enabling documents on support.intel.com, they cover all the countries that we intend to sell the product and have how to order the correct cable:
<http://support.intel.com/support/motherboards/server/sr6850hw4/sb/cs-020878.htm>
<http://support.intel.com/support/motherboards/server/sr4850hw4/sb/cs-020879.htm>
12. All parts listed below are RoHS compliant with server exemption.

4. System Configuration Options

*SR4850HW4S
4U Platform*



*SR6850HW4S
6U Platform*

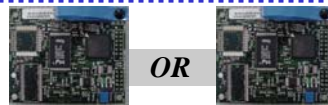


Mandatory Accessories



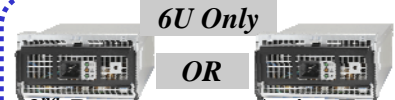
*Button Control
Panel*

*LCD Control
Panel*



*IMM
Professional*

*IMM
Advanced*



*2nd Power
Supply*

*Active Fan
Blank*

Optional Accessories



*ROMB Key and
Battery*



*Fibre Channel
Module*



*Rack Rails and
CMA*



*Up to 3 additional
memory boards.*



Pedestal Kit (6U)



Bezels

5. 4U System Part Configurator: SR4850HW4S

| Mandatory Accessories | |
|--|---|
| Feature | Product |
| Intel Management Module <i>(Choose one per System)</i> | IMM Professional AHWIMMPRO2 |
| | IMM Advanced AHWIMMADV2 |
| Control Panel <i>(Choose one per System)</i> | Button control panel AXXBCPMOD2 |
| | LCD control panel AXXLCPMOD2 |
| Processor Heat Sinks and Blanks <i>(All 4 sockets must have Processor + Heatsink OR Processor Blank)</i> | Processor heat sink AHWPROCHS <i>NOTE: Boxed processors include this heat sink.</i> |
| | Processor blank AHWPROCBLANK |
| Processor VRM <i>(Use with 3 and 4 processors)</i> | Processor core 10.2 VRM AHWVRMPM <i>(one required for each processor used in socket 3 and 4)</i> |
| | Processor cache 9DO VRM AHWVRMCM <i>(one per system required for iL3 processor used in socket 3 and 4)</i> |
| Optional Accessories | |
| Feature | Product |
| RAID Solutions | Intel® SAS RAID Activation Key AXXRAK18E |
| | Intel® RAID Smart Battery AXXRSBBU3 <i>(only used with Activation Key above)</i> |
| Fibre Channel Module | Fibre channel module AHWFCMOD |
| Rack Mount Solutions | Rack rails AXXRAIL3U7U |
| | Cable Management Arm AXXCMA3U7U |
| Memory board | 4 DIMM memory board BHW4DIMMM |
| Front Bezel | 4U Front bezel for rack mount AHW4URBEZEL |

6. 6U System Part Configurator: SR6850HW4S

| Mandatory Accessories | |
|--|---|
| Feature | Product |
| Intel Management Module <i>(Choose one per System)</i> | IMM Professional AHWIMMPRO2 |
| | IMM Advanced AHWIMMADV2 |
| Control Panel <i>(Choose one per System)</i> | Button control panel AXXBCPMOD2 |
| | LCD control panel AXXLCPMOD2 |
| Processor Heat Sinks and Blanks <i>(All 4 sockets must have Processor + Heatsink OR Processor Blank)</i> | Processor heat sink AHWPROCHS <i>NOTE: Boxed processors include this heat sink.</i> |
| | Processor blank AHWPROCBLANK |
| Processor VRM <i>(Use with 3 and 4 processors)</i> | Processor core 10.2 VRM AHWVRMPM <i>(one required for each processor used in socket 3 and 4)</i> |
| | Processor cache 9DO VRM AHWVRMCM <i>(one per system required for iL3 processor used in socket 3 and 4)</i> |
| 6U Power Supply #2 Second power supply or a power fan. <i>(Choose one per System)</i> | Power supply module. 6U. 15Amp, 110v/220v. AHW6UPWR |
| | Power bay fan. 6U. AHW6UPWRFAN |
| Optional Accessories | |
| Feature | Product |
| RAID Solutions | Intel® SAS RAID Activation Key AXXRAK18E |
| | Intel® RAID Smart Battery AXXRSBBU3 <i>(only used with Activation Key above)</i> |
| Fibre Channel Module | Fibre channel module AHWFCMOD |
| Rack Mount Solutions | Rack rails AXXRAIL3U7U |
| | Cable Management Arm AXXCMA3U7U |
| Memory board | 4 DIMM memory board BHW4DIMMM |
| Front Bezel | Front bezel for rack mount AHW6URBEZEL |
| | Front bezel for pedestal mount AHW6UPBEZEL |

7. Base System SKU Configuration Contents



7.1 Table 1: Base System Product Code Contents

| Product Code | Description |
|---|---|
| <p style="text-align: center;">SHW4URM3S A</p> | <p>Intel® Server System SR4850HW4S (Harwich 800T SAS) 4U Rack.</p> <ul style="list-style-type: none"> • 1x Baseboard • 1x Front Panel IO board • 1x Memory Board (1X4) plus bracket • 3x Memory Board Filler Baffles • 0x Intel Management Module (Professional IMM) • 2x Power Supply Module (15Amp, 208) • 1x 1/2" DVD-ROM Drive • 0x Button Control Panel • 1x SAS 4U Backplane Board • 1x Rack Faceplate (Granby) • 5x HDD Carrier (Black) • 1x Base Chassis (Granby) • 0x Power Supply Filler Panel • 0x Processor Thermal Dummy • 2x Fan Module • 1x SATA Cable (Base board to SATA/IDE conversion board) • 1x Front Panel Cable • 1x Drive Power Cable (Tape Backup and DVD-ROM) • 1x Fan Power Cable • 1x Internal SAS Cable (Base board to SAS Backplane) • 1x Internal SAS ROMB Module • 1x Sample Safety Label • 1x System Serial # Label • 1x System Packaging • 1x Rack Handles (Pair) |
| <p style="text-align: center;">SHW6URM3S A</p> | <p>Intel® Server Platform SR6850HW4S (Harwich 800T SAS) 6U Rack.</p> <ul style="list-style-type: none"> • 1x Baseboard • 1x Front Panel IO board • 1x Memory Board (1X4) plus bracket • 3x Memory filler baffles • 0x Intel Management Module (Professional IMM) • 1x Power Supply Module (15Amp, 110/208) • 1x 1/2" DVD-ROM Drive • 0x Button Control Panel Board • 1x SAS 6U Backplane Board • 1x Rack Faceplate (Gilbert) • 10x HDD Carrier (Black) • 1x Base Chassis (Gilbert) • 0x Processor Thermal Dummy • 6x Fan Module • 1x SATA Cable (Base board to STAT/IDC conversion board) • 1x Front Panel Cable (SCSI to Front Panel) • 1x Drive Power Cable (Tape Backup and DVD-ROM) • 1x Fan Power Cable • 1x Internal SAS Cable (Base board to SAS Backplane) • 1x Internal SAS ROMB Module • 1x Front Connect Cable (100-pin) (Base board to front panel IO board) • 1x Sample Safety Label • 1x System Serial # Label • 1x System Packaging • 1x Rack Handles (Pair) |

8. Complete Product Ordering Code Listings

The following table lists all of the product codes applicable to the Harwich platform (sorted by category). Following the table are individual document sections which provide additional product descriptions for each product code.



8.1 Table 2: Base System Codes

| Image | Product Code | MM / UPC | Description | Qty Per | Min Order |
|--|-------------------|---------------|---|------------|--------------|
|  | SHW4URM3SA | 886995 | Intel® Server System SR4850HW4S. 4 Socket, 4U, SAS 3.5" | 1 | 1 |
|  | SHW6URM3SA | 887385 | Intel® Server System SR6850HW4S. 4 Socket, 6U, SAS 3.5" | 1 | 1 |





8.2 Table 3: Common System Accessory Codes

| Image | Product Code | MM / UPC | Description | Qty Per | Min Order |
|--|---------------|----------|---|---------|-----------|
|  | AXXRAK18E | 877661 | Intel® SAS RAID Activation Key. | 1 | 5 |
|  | BHW4DIMMM | 876163 | Memory board. 4 DIMM DDR2-400. 1 Pack. | 1 | 1 |
|  | BHW4DIMMMBULK | 877532 | Memory board. 4 DIMM. 8 Pack. | 1 | 8 |
|  | AHWPROCHS | 869848 | Intel CEK processor heat sink. | 1 | 1 |
| | AHWPROCBLANK | 881378 | Intel CEK processor blank. One required for every empty processor slot to maintain proper airflow for cooling. | 1 | 1 |
| | AHWVRMCM | 883663 | Processor cache VRM 9DO for Intel® Xeon™ processor MP with iL3 cache. One VRM 9DO supports both processors three and four. No VRM is required for processors one and two. | 1 | 1 |
| | AHWVRMPM | 881372 | Processor core VRM 10.2 for Intel® Xeon™ processor MP. A VRM 10.2 is required for each processor three and four. | 1 | 1 |
|  | AXXBCPMOD2 | 881379 | Button Control Panel Module. | 1 | 1 |
|  | AXXLCPMOD2 | 879578 | Intel® Local Control Panel. (LCP) | 1 | 1 |
|  | AHWIMMPRO2 | 878718 | Intel® Server Management Module Professional. Only for Intel® Server Platforms SR4850HW4 & SR6850HW4. | 1 | 1 |
|  | AHWIMMADV2 | 878719 | Intel® Server Management Module Advanced. Only for Intel® Server Platforms SR4850HW4 & SR6850HW4. | 1 | 1 |
|  | AXXRAIL3U7U | 877762 | Rack rails for 3U-7U chassis. Does not include the cable management arm. Toolless J-hook design. Supports both the SR4850HW4 and SR6850HW4. | 1 | 1 |
|  | AXXCMA3U7U | 862119 | Rack cable management arm. 3U-7U chassis. Does not include the rack rails. Supports both the SR4850HW4 and SR6850HW4. | 1 | 1 |
|  | AXXRSBBU3 | 883471 | Intel® RAID Smart Battery. | 1 | 1 |
|  | AHWFCMOD | 881842 | Intel® Fibre Channel Module (HWFCM). | 1 | 1 |
| Cable | AHWEXTSCSI | 869985 | Cable: Internal cable for External SCSI port. | 1 | 1 |
| Cable | AHWINTSCSI | 869424 | Cable: Internal cable for 5.25" peripheral bay. | 1 | 1 |


8.2.1 Table 4: 4U Unique Accessory Codes for SHW4URM3SA

| Image | Product Code | MM / UPC | Description | Qty Per | Min Order |
|--|--------------|----------|--|---------|-----------|
|  | AHW4UPWR | 881373 | Power supply module. 4U. 15Amp, 208V. | 1 | 1 |
|  | AHW4URBEZEL | 861922 | Rack bezel for SR4850HW4. | 1 | 1 |
| | AHW4U3SASKIT | 882972 | SAS 3.5" Conversion kit for SR4850HW4M (SCSI conversion to SAS) - Contains Cable, Backplane, and SAS Module (FHW4UINTSAS, FHW4U3SASBP, FXXSROMBSAS18E) | 1 | 1 |

8.2.2 Table 5: 6U Unique Accessory Codes for SHW6URM3SA

| Image | Product Code | MM / UPC | Description | Qty Per | Min Order |
|--|--------------|----------|---|---------|-----------|
|  | AHW6UPEDKIT | 881375 | SR6850HW4 pedestal conversion kit. | 1 | 1 |
|  | AHW6UPWR | 881376 | Power supply module. 6U. 15Amp, 110V/220V. | 1 | 1 |
| | AHW6UPWRFAN | 881377 | Power bay fan. Mandatory when a second power supply is not installed in the SR6850HW4. | 1 | 1 |
|  | AHW6URBEZEL | 861924 | Rack bezel for SR6850HW4. | 1 | 1 |
|  | AHW6UPBEZEL | 881839 | Pedestal bezel for SR6850HW4. | 1 | 1 |
| | AHW6U3SASKIT | 882993 | SAS 3.5" Conversion kit for SR6850HW4M (SCSI conversion to SAS) - Contains Cable, Backplane, and SAS Module(FHW6UINTSAS, FHW6U3SASBP, FXXSROMBSAS18E) | 1 | 1 |

8.3 Table 6: Common System Spare Part Codes

| Image | Product Code | MM / UPC | Description | Qty Per | Min Order |
|--|----------------|----------|--|---------|-----------|
| | FXXSROMBSAS18E | 878038 | Intel® SAS ROMB Module. | 1 | 5 |
|  | BHWBASEM | 885977 | Intel® Server Board SE8501HW4. | 1 | 1 |
| Board | FHWSATAIDE | 870273 | SATA to IDE conversion board. | 1 | 1 |
| Cable | FHWINTRU | 871387 | Cable: Intrusion switch for SR4850HW4 and SR6850HW4. | 1 | 1 |
| Plastic | FHWPCIDIVIDER | 871912 | PCI Divider assembly. | 1 | 1 |
| | SBCEDVD | 865263 | Optical Drive, DVD-ROM, single pack. | 1 | 1 |

8.3.1 Table 7: 4U 3.5" SAS Unique Spare Part Codes for SHW4URM3SA

| Image | Product Code | MM / UPC | Description | Qty Per | Min Order |
|---------|---------------|----------|--|---------|-----------|
| Board | FHW4U3SASBP | 876328 | SAS 3.5" 4U backplane for SR4850HW4S. | 1 | 1 |
| Cable | FHW4UINTSAS | 876302 | Cable: Internal SAS ROMB to 4U 3.5" SAS BP cable for SR4850HW4S. | 1 | 1 |
| Kit | AHW4U3SASKIT | 882972 | SAS 3.5" Conversion kit for SR4850HW4M (SCSI conversion to SAS) - Contains (FHW4UINTSAS, FHW4U3SASBP, FXXSROMBASAS18E) | 1 | 1 |
| Fan | FHW4UFAN | 881380 | System fan for the SR4850HW4. | 1 | 1 |
| Board | FHW4UFRTPNL | 881385 | Front IO panel board for SR4850HW4. | 1 | 1 |
| Board | FHW4UPDB | 881390 | Power distribution board for SR4850HW4. | 1 | 1 |
| Cable | FHW4UFPSATA | 871296 | Cable: Front panel and SATA cable bundle for SR4850HW4. | 1 | 1 |
| Plastic | FHW4UPRODUCT | 871907 | Processor Air Duct for SR4850HW4. | 1 | 1 |
| Plastic | FHW4UPCILATCH | 871909 | PCI Card hold down latches. Set of 8 for SR4850HW4. | 1 | 1 |

8.3.2 Table 8: 6U 3.5" SAS Unique Spare Part Codes for SHW6URM3SA

| Image | Product Code | MM / UPC | Description | Qty Per | Min Order |
|---------|---------------|----------|--|---------|-----------|
| Board | FHW6U3SASBP | 876358 | SAS 3.5" 6U backplane for SR6850HW4S (6U). | 1 | 1 |
| Cable | FHW6UINTSAS | 876303 | Cable: Internal SAS ROMB to 6U 3.5" SAS BP cable for SR4850HW4S. | 1 | 1 |
| Kit | AHW6U3SASKIT | 882993 | SAS 3.5" Conversion kit for SR6850HW4M (SCSI conversion to SAS) - Contains (FHW6UINTSAS, FHW6U3SASBP, FXXSROMBASAS18E) | 1 | 1 |
| Fan | FHW6UFAN | 869992 | System fan for the SR6850HW4 (6U). | 1 | 1 |
| Board | FHW6UFRTPNL | 881393 | Front IO panel board for SR6850HW4 (6U). | 1 | 1 |
| Board | FHW6UPDB | 881404 | Power distribution board for SR6850HW4 (6U). | 1 | 1 |
| Cable | FHW6UFPSATA | 871300 | Cable: Front panel and SATA cable bundle | 1 | 1 |
| Plastic | FHW6UPCILATCH | 871910 | PCI Card hold down latches. Set of 8 for SR6850HW4. | 1 | 1 |
| Plastic | FHW6UPRODUCT | 871911 | Processor Air Duct for SR6850HW4. | 1 | 1 |

8.4 Table 9: Boxed Processor Codes Reference (Heatsink Included)

| Category | Product Code | Description |
|-----------------|-----------------|--|
| Boxed Processor | BX805507140M | 3.4 GHz/16M/800 Dual-Core Intel® Xeon™ processor 7140M series |
| Boxed Processor | BX805507130M | 3.2 GHz/8M/800 Dual-Core Intel® Xeon™ processor 7130M series |
| Boxed Processor | BX805507120M | 3.0 GHz/4M/800 Dual-Core Intel® Xeon™ processor 7120M series |
| Boxed Processor | BX805507110M | 2.6 GHz/4M/800 Dual-Core Intel® Xeon™ processor 7110M series |
| Boxed Processor | BX80560KG3000H | 3.00 GHz/4M/800 Dual-Core Intel® Xeon™ processor 7000 sequence |
| Boxed Processor | BX80560KF3000H | 3.00 GHz/4M/667 Dual-Core Intel® Xeon™ processor 7000 sequence |
| Boxed Processor | BX80560KG2800F | 2.80 GHz/2M/800 Dual-Core Intel® Xeon™ processor 7000 sequence |
| Boxed Processor | BX80560KF2660F | 2.66 GHz/2M/667 Dual-Core Intel® Xeon™ processor 7000 sequence |
| Boxed Processor | BX80546KF3333M | 64-bit Intel® Xeon™ processor MP with 8MB L3 cache at 3.33 GHz |
| Boxed Processor | BX80546KF3000M | 64-bit Intel® Xeon™ processor MP with 8MB L3 cache at 3.0 GHz |
| Boxed Processor | BX80546KF2833H | 64-bit Intel® Xeon™ processor MP with 4MB L3 cache at 2.83 GHz |
| Boxed Processor | BX80546KF3660EM | 64-bit Intel® Xeon™ processor MP with 1MB L2 cache at 3.66 GHz |
| Boxed Processor | BX80546KF3160EM | 64-bit Intel® Xeon™ processor MP with 1MB L2 cache at 3.16 GHz |

8.5 Table 10: Trayed Processor Codes Reference (Requires Heatsink-AHWPROCHS)

| Category | Product Code | Description |
|----------------|---------------|---|
| Tray Processor | 80550KG096007 | 3.4 GHz/16M/800 Dual-Core Intel® Xeon™ processor 7140M series |
| Tray Processor | 80550KG0888M | 3.2 GHz/8M/800 Dual-Core Intel® Xeon™ processor 7130M series |
| Tray Processor | 80550KF0804M | 3.0 GHz/4M/800 Dual-Core Intel® Xeon™ processor 7120M series |
| Tray Processor | 80550KG0644M | 2.6 GHz/4M/800 Dual-Core Intel® Xeon™ processor 7110M series |