

SR870BN4 Configuration Guide

**A quick reference guide to assist customers in ordering the components
necessary to configure the SR870BN4 platform**



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SR870BN4 Configuration Guide

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SR870BN4 Feature Dependencies

Feature	Required Hardware for Model 0 (SBNMB000)	Required Hardware for Model 1 (SBNMB00X)
1 to 4 Processors	One processor heat sink and one power pod for each processor, plus 1 Y-cable for each pair of power pods.	One processor heat sink and one power pod for each processor, plus 1 Y-cable for each pair of power pods.
	Thermal Blanks needed in empty CPU slots (included in Model 0).	Thermal Blanks needed in empty CPU slots (included in Model 1).
16 DDR DIMM slots	Two memory boards (included in Model 0). Memory must be installed in groups of 4 DIMMs (details on DIMM order are provided in the product guide ¹).	Two memory boards (included in Model 1). Memory must be installed in groups of 4 DIMMs (details on DIMM order are provided in the product guide ¹).
Redundant Power Supplies	Model 0 has 1 power supply. A 2nd power supply must be added if redundancy is needed (only redundant at 200V – 240V).	Model 1 has 2 power supplies for redundancy at 200V – 240V.
3 Hot Plug SCSI disk drives	Three SCSI drive carriers are included in Model 0. Requires ½ inch height (slim line), 3.5 inch SCSI drives. See Intel's list of supported drives ¹ .	Three SCSI drive carriers are included in Model 1. Requires ½ inch height (slim line), 3.5 inch SCSI drives. See Intel's list of supported drives ¹ .
Embedded Network Controller (NIC)	Model 0 contains onboard controller with 1 Ethernet port.	Model 1 contains onboard controller with 1 Ethernet port.
IDE Devices	See Intel's list of supported drives ¹ .	Model 1 includes (1) DVD ROM device. See Intel's list of supported drives ¹ .

SR870BN4 - Power Subsystem Supported Features

The SR870BN4 Model 0 comes with 1 power supply, which is sufficient for any configuration of processors, memory and I/O devices possible at 200V – 240V, but does not provide redundancy. A filler panel must be installed in systems using only 1 power supply

The SR870BN4 Model 1 comes with 2 power supplies, which is sufficient for any configuration of processors, memory and I/O devices possible at 200V – 240V and provides redundancy.

The DC to DC (D2D) converters needed for the maximum system configuration are as follows:

- Two 5V DC to DC converters (standard on Model 0 and Model 1)
- Five 2.5/3.3V DC to DC converter (standard on Model 0 and Model 1)

¹ See “Reference Information” section on page 8 for details on available documents

¹ See “Reference Information” section on page 8 for details on available documents

Base System Configuration Guide

SBNMB000

MM# 880673

1. "Model 0" Base Systems are configured with the following:

- 1 Chassis (4U, Rack Mount)
- 1 Processor Baseboard (includes: 1 Y Cable and 4 sockets for Itanium® 2 processor, Madison and Montecito processors)
- 2 Memory Boards (2 x 8 DDR RAM DIMM sockets, 32GB total memory capacity)
- 1 I/O Baseboard with 8 PCI slots, on-board Ultra 320 SCSI controller
- 1 I/O Riser board with 4M of FLASH ROM, Baseboard Management Controller (BMC), Ports (4 USB, 1 Serial, 1 Video), and 10/100/1000 Intel 82540EM Ethernet Embedded Network Controller
- 1 Power Distribution Board
- 1 SCSI Hot Swap Backplane
- 1 Midplane Board
- 1 Front Panel Board
- 1 1200 W Power Supply
- 5 2.5 / 3.3V DC to DC Converters
- 2 5V DC to DC Converters
- 2 1" Fans
- 2 1.5" Fans
- 3 SCSI Disk Drive Carriers
- 1 Front Bezel, 1 P-Bay Bezel (color: Raven Black)

1 Resource Kit containing the following on CDROM: Documents: Product Guide and Product Quick Start Guide; Utilities: SDR Viewer, SEL Viewer, FRU/SDR Loader, System Maintenance Utility (SMU), EFI Platform Diagnostics, EFI Configuration Tool, and LSI Logic SCSI Driver for Linux† (64-bit) and Windows† .NET

2. They do NOT contain the following *necessary* items:

- Processors
- Processor heat sinks
- MVRs or Processor Power Pods (*processor dependent, see page 5 for more details*)
- External Power Cords
- Rack Mount Slide Rail Kit
- Hard Disk Drives
- Memory

3. To order your necessary items use the following table:

Product Codes	MM#	Min. Qty	Description
Dual-Core Intel® Itanium® 2 Processor 9000 Series			
BX805499010 ⁺	885382	1	Processor / Heat Sink Kit (includes: 1.60 GHz / 6MB cache Intel® Itanium® 2 9000 series processor with heat sink attached)
BX805499015	885383	1	Processor / Heat Sink Kit (includes: 1.4 GHz / 12MB cache Dual-Core Intel® Itanium® 2 9000 series processor with heat sink attached)
BX805499020	885381	1	Processor / Heat Sink Kit (includes: 1.42 GHz / 12MB cache Dual-Core Intel® Itanium® 2 9000 series processor with heat sink attached)
BX805499030	885380	1	Processor / Heat Sink Kit (includes: 1.60 GHz / 8MB cache Dual-Core Intel® Itanium® 2 9000 series processor with heat sink attached)
BX805499040	885379	1	Processor / Heat Sink Kit (includes: 1.60 GHz / 18MB cache Dual-Core Intel® Itanium® 2 9000 series processor with heat sink attached)

BX805499050	885374	1	Processor / Heat Sink Kit (includes: 1.60 GHz / 24MB cache Dual-Core Intel® Itanium® 2 9000 series processor with heat sink attached)
Intel® Itanium® 2 Processors			
BX80543JC1300G	875045	1	Processor / Heat Sink Kit (includes: 1.3GHz / 3MB cache Itanium® 2 processor with heat sink attached)
BX80543JC1600G	875043	1	Processor / Heat Sink Kit (includes: 1.6GHz / 3MB cache Itanium® 2 processor with heat sink attached)
BX80543KC1500H	874986	1	Processor / Heat Sink Kit (includes: 1.5GHz / 4MB cache Itanium® 2 processor with heat sink attached)
ATGMVR48V			
ATGMVR48V	883847	1	MVR - Modular Voltage Regulator (required for Dual-Core Intel® Itanium® 2 Processor 9000 Series)
ATGPPOD			
ATGPPOD	882105	1	Power Pod with Y cable (supports ONLY BX80543JC1300G, BX80543JC1600G and BX80543KC1500H processor kits)
ATGRAILKIT			
ATGRAILKIT	848491	1	Rackmount Slide Rail Kit for standard EIA compliant 19" inch rack
Hard Disk Drives			
Hard Disk Drives	N/A	N/A	OEMs purchase these directly from vendors. See Intel's list of supported drives ¹
Memory			
Memory	N/A	N/A	OEMs purchase these directly from vendors. See Intel's list of qualified memory DIMMs ¹ .

+ Single Core only and does not support hyper-threading technology.

4. Additional accessories that may be desirable for your configuration are:

Product Codes	MM#	Min Order Qty	Description
ATG1200PS	882218	1	Power Supply, 1200W, PFC, 48V and 12V outputs, hot swap
ATGDVDROMKIT	886190	1	Panasonic * DVDROM drive, Adapter Board & Carrier
ATGCDDVDCAR	882256	1	Slim Line CDROM/DVD Adaptor Board & Carrier, no drive ¹
ATGSCSICC	886111	1	External SCSI Cable & Connector
ATGRAIDCBL	848874	1	RAID Cable for External Drives
ATGSMLPRTSKIT	883255	1	Small Parts Kit (includes: spare CPU thermal blank, insertion extraction mechanisms, PCI slot dividers, PCIX IO baseboard protective cover, Hot Plug manually operated retention latches, power supply filler panel, and screws)

¹ See "Reference Information" section on page 8 for details on available documents

¹ See "Reference Information" section on page 8 for details on available documents

Integrated System Configuration Guide

SBNMB000X

MM# 880674

1. Integrated Systems are configured with the following:

- 1 Chassis (4U, Rack Mount)
- 1 Processor Baseboard (includes: 1 Y Cable and 4 sockets for Itanium® 2 processor, Madison and Montecito processors)
- 2 Memory Boards (2 x 8 DDR RAM DIMM sockets, 32GB total memory capacity)
- 1 I/O Baseboard with 8 PCI slots, on-board Ultra 320 SCSI controller
- 1 I/O Riser board with 4M of FLASH ROM, Baseboard Management Controller (BMC), Ports (4 USB, 1 Serial, 1 Video), and 10/100/1000 Intel 82540EM Ethernet Embedded Network Controller
- 1 Power Distribution Board
- 1 SCSI Hot Swap Backplane
- 1 Midplane Board
- 1 Front Panel Board

2 1200 W Power Supply

- 5 2.5 / 3.3V DC to DC Converters
- 2 5V DC to DC Converters
- 2 1" Fans
- 2 1.5" Fans
- 3 SCSI Disk Drive Carriers
- 1 Front Bezel, 1 P-Bay Bezel (color: Raven Black)

1 Rack Mount Slide Rail Kit

- 1 Slim Line DVD IDE Device

1 External SCSI Cable & Connector

1 RAID Cable for External Drives

1 Resource Kit containing the following on CDROM: Documents: Product Guide and Product Quick Start Guide; Utilities: SDR Viewer, SEL Viewer, FRU/SDR Loader, System Maintenance Utility (SMU), EFI Platform Diagnostics, EFI Configuration Tool, and LSI Logic SCSI Driver for Linux† (64-bit) and Windows‡ .NET

Note - differences from the Base System Configuration Guide (SBNMB000 Model 0) are bold and underlined

2. They do NOT contain the following *necessary* items:

- Processors
- Processor heat sinks
- Processor Power Pods
- External Power Cords
- Hard Disk Drives
- Memory

3. To order your necessary items use the following table:

Product Codes	MM#	Min Order Qty	Description
Dual-Core Intel® Itanium® 2 Processor 9000 Series			
BX805499010 ⁺	885382	1	Processor / Heat Sink Kit (includes: 1.60 GHz / 6MB cache Intel® Itanium® 2 9000 series processor with heat sink attached)
BX805499015	885383	1	Processor / Heat Sink Kit (includes: 1.4 GHz / 12MB cache Dual-Core Intel® Itanium® 2 9000 series processor with heat

			sink attached)
BX805499020	885381	1	Processor / Heat Sink Kit (includes: 1.42 GHz / 12MB cache Dual-Core Intel® Itanium® 2 9000 series processor with heat sink attached)
BX805499030	885380	1	Processor / Heat Sink Kit (includes: 1.60 GHz / 8MB cache Dual-Core Intel® Itanium® 2 9000 series processor with heat sink attached)
BX805499040	885379	1	Processor / Heat Sink Kit (includes: 1.60 GHz / 18MB cache Dual-Core Intel® Itanium® 2 9000 series processor with heat sink attached)
BX805499050	885374	1	Processor / Heat Sink Kit (includes: 1.60 GHz / 24MB cache Dual-Core Intel® Itanium® 2 9000 series processor with heat sink attached)
Intel® Itanium® 2 Processors			
BX80543KC1500H	874986	1	Processor / Heat Sink Kit (includes: 1.5GHz / 4MB cache Itanium® 2 processor with heat sink attached)
BX80543KC1600J	875042	1	Processor / Heat Sink Kit (includes: 1.6GHz / 6MB cache Itanium® 2 processor with heat sink attached)
BX80543KC1600K	875050	1	Processor / Heat Sink Kit (includes: 1.6GHz / 9MB cache Itanium® 2 processor with heat sink attached)
ATGMVR48V	883847	1	MVR - Modular Voltage Regulator (required for Dual-Core Intel® Itanium® 2 Processor 9000 Series)
ATGPPOD	882105	1	Power Pod with Y cable (supports ONLY BX80543JC1300G, BX80543JC1600G and BX80543KC1500H processor kits)
Hard Disk Drives	N/A	N/A	OEMs purchase these directly from vendors. See Intel's list of supported drives ¹
Memory	N/A	N/A	OEMs purchase these directly from vendors. See Intel's list of qualified memory DIMMs ¹ .

+ Single Core only and does not support hyper-threading technology.

4. Additional accessories that may be desirable for your configuration are:

Product Codes	MM#	Min Order Qty	Description
ATGSMLPRTSKIT	883255	1	Small Parts Kit (includes: spare CPU thermal blank, insertion extraction mechanisms, PCI slot dividers, PCIX IO baseboard protective cover, Hot Plug manually operated retention latches, power supply filler panel, and screws)

¹ See "Reference Information" section on page 8 for details on available documents

Reference Documentation Information

1. **SR870BN4 Hardware and Operating System Validation Test List Plan** – contains a prioritized list of operating systems and adapter cards Intel plans to validate. Available on IBL.
2. **SR870BN4 System Enabling Components Document** – includes component descriptions, functions, part numbers, and vendor contacts for heat sinks, power supplies, power pods, Y cable, power cables, DC to DC converters, and bezels. Available on IBL.
3. **SR870BN4 Product Guide** – provides detailed information on board and system component descriptions and features, SW and utility configurations, hot swappable system components, servicing, and technical reference guide. Provided with Model 0 and Model 1 systems, and also available on IBL.

SR870BN4 SKU List

	Product Code	MM#	Description	Minimum Order Qty
Systems	SBNMB000	880673	Model 0 System (see page 4 for details)	1
	SBNMB000X	880674	Integrated System (see page 6 for details)	1
Boards	BBACPUBOARD	882224	CPU Board	1
	BBADDRMEM1GB	882333	Memory Board	1
	BBAIOBOARD	882279	I/O Board	1
	BBARFRECH4	882223	I/O Riser Board	1
	BBASCSIHBP	882322	Hot Swap SCSI Backplane Board	1
	BBAMIDPLANE	882342	Passive Midplane Board	1
	BBAHPIBOARD	882413	Hot Plug Indicator Board (w/ chassis ID LED & insulation for PCI slots), does not include cable	1
	BBAFPNL	882410	Front Panel Board (w/chassis ID LED & illuminated On/Off switch)	1
	BBAPDB	882328	Power Distribution Board	1
	Processors	Dual-Core Intel® Itanium® 2 Processor 9000 Series		
	BX805499010⁺	885382	Processor / Heat Sink Kit (includes: 1.60 GHz / 6MB cache Intel® Itanium® 2 9000 series processor with heat sink attached)	1
	BX805499015	885383	Processor / Heat Sink Kit (includes: 1.4 GHz / 12MB cache Dual-Core Intel® Itanium® 2 9000 series processor with heat sink attached)	1
	BX805499020	885381	Processor / Heat Sink Kit (includes: 1.42 GHz / 12MB cache Dual-Core Intel® Itanium® 2 9000 series processor with heat sink attached)	1
	BX805499030	885380	Processor / Heat Sink Kit (includes: 1.60 GHz / 8MB cache Dual-Core Intel® Itanium® 2 9000 series processor with heat sink attached)	1
	BX805499040	885379	Processor / Heat Sink Kit (includes: 1.60 GHz / 18MB cache Dual-Core Intel® Itanium® 2 9000 series processor with heat sink attached)	1
	BX805499050	885374	Processor / Heat Sink Kit (includes: 1.60 GHz / 24MB cache Dual-Core Intel® Itanium® 2 9000 series processor with heat sink attached)	1
	Intel® Itanium® 2 Processors			
	BX80543KC1500H	864776	Processor / Heat Sink Kit (includes: 1.5GHz / 4MB cache Itanium® 2 processor with heat sink attached)1	1
	BX80543KC1600J	864770	Processor / Heat Sink Kit (includes: 1.6GHz / 6MB cache Itanium® 2 processor with heat sink attached)	1
	BX80543KC1600K	867433	Processor / Heat Sink Kit (includes: 1.6GHz / 9MB cache Itanium® 2 processor with heat sink attached)	1
Accessories	ATG1200PS	882218	Power Supply, 1200W, PFC, 48V and 12V outputs, hot swap	1
	ATGMVR48V	883847	MVR - Modular Voltage Regulator (required for Dual-Core Intel® Itanium® 2 Processor 9000 Series)	1
	ATGPPOD	882105	Power Pod with Y cable (supports ONLY BX80543JC1300G, BX80543JC1600G and BX80543KC1500H processor kits)	1
	ATGD2D3VS3	882122	DC to DC Converter, 2.5 / 3V (VID, 3 Per CPU Bd, 2 Per I/O Bd), Rev. S3	1
	ATGD2D5VS3	882409	DC to DC Converter, 5V (2 per I/O Bd), Rev. S3	1
	ATGCDDVDCAR	882256	Slim Line CDROM/DVD Adaptor Board & Carrier, no drive	1
	ATGHDCARTORX	848499	Slim Line HDD carrier, no drive	1
	ATGSCSICC	886111	External SCSI Cable and Connector	1

	ATGRAILKIT	848491	Rackmount Slide Rail Kit	1
	ATGCOUNTKIT	871309	Resource Kit (see page 4 for details)	1
	ATGSMLPRTSKIT	883255	Small Parts Kit (see page 7 for details)	1
Spares	ATG10FAN	882277	1" Fan	1
	ATG15FAN	882252	1.5" Fan	1
	ATGCPUMOD	882408	CPU / Memory Module Carrier, no boards	1
	ATGFBZL	848493	Front Bezel (color: Raven Black)	1
	ATGPBAYBZL	848593	P-Bay Bezel (color: Raven Black)	1
	ATGRAIDCBL	848874	RAID Cable for External Drives	1
	ATGACCBL	848600	Internal AC cable	1
	ATGCBLKIT	883256	Cable kit (internal Hot Plug Indicator Board, Power POD, Y Cables), does not include AC Cable	1

+ Single Core only and does not support hyper-threading technology.

Small Parts Kit Content

ATGSMLPRTSKIT MM# 883255

Quantity	Item
2	Shoulder Screw, Insert/Extract Mechanism
2	Insertion / Extraction Mechanism, Left
2	Insertion / Extraction Mechanism, Right
1	Insertion / Extraction P-Bay Mechanism, Left
1	Insertion / Extraction P-Bay Mechanism, Right
2	PCI Divider – Short
2	PCI Divider – Long
3	Hot Plug Manually Operated Retention Latches
2	Locking Card Guide
2	PCI Filler Panel
2	PCI EMI Shield
2	EMI Clip – Small
2	EMI Clip – Large
1	Insertion / Extraction Collar
1	SCSI Backplane Captive Fastener
1	PDB / CPU Board Captive Fastener
1	AC Power Cord Strain Relief
1	Processor / Power Pod Thermal Blank
1	Power Supply Filler Panel