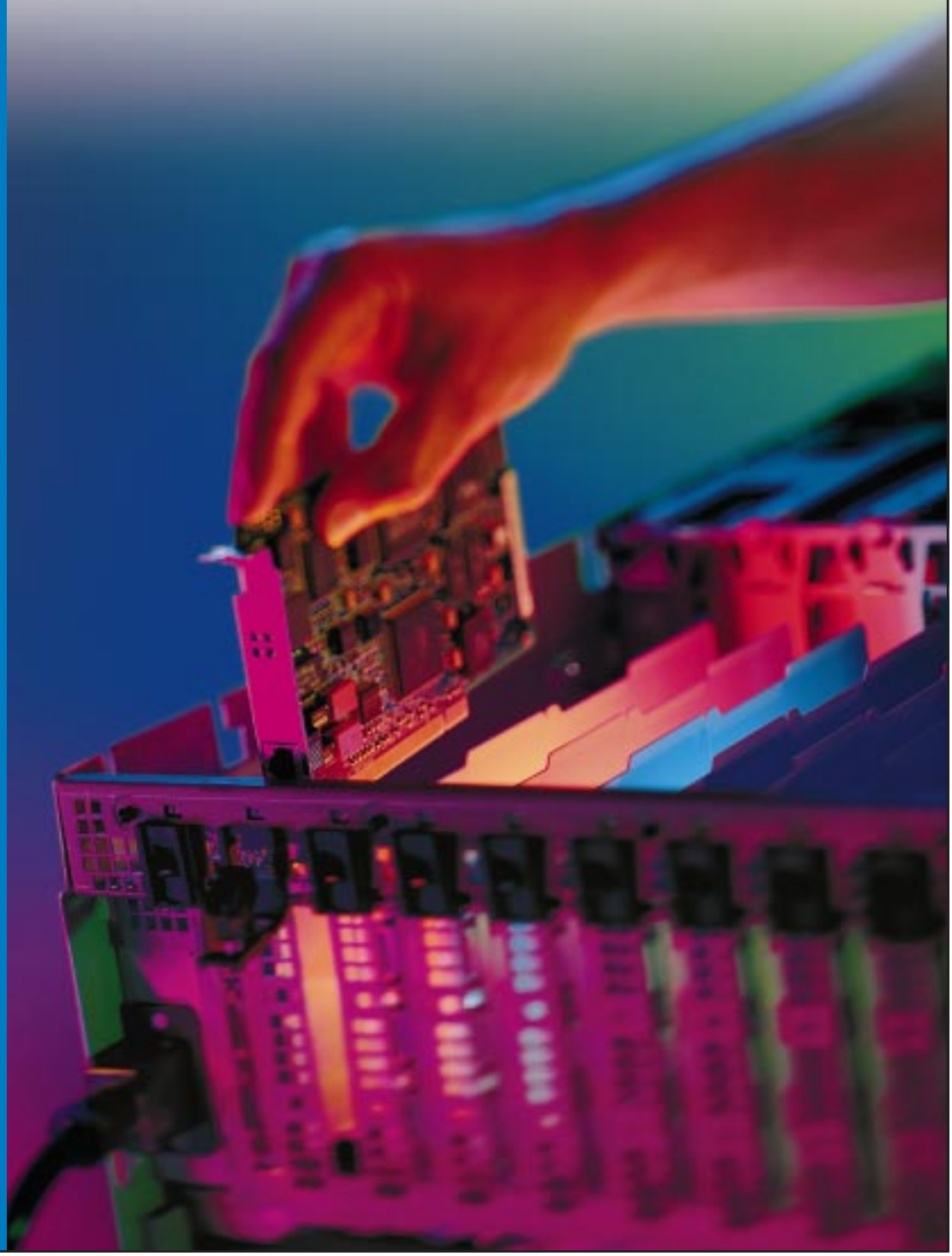
SRPL8 High-End 8-Way Intel® Pentium® III Xeon™ Processor Rack Mount Server

Supporting up to Eight Intel Pentium III Xeon Processors, Supporting 700 MHz and 900 MHz Speeds



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High-End 8-Way Server System

The SRPL8 system features the Profusion® chipset supporting up to eight Intel® Pentium® III Xeon™ processors supporting 700 MHz and 900 MHz speeds, 32 GB of ECC memory, 64-bit 100 MHz PCI-X and 33 MHz PCI, PCI Hot-Plug functionality and advanced System Management. It delivers balanced performance, offering both processor scalability and high I/O throughput. All this processing power is packaged in a space-efficient rack mount form factor to meet the needs of the enterprise computing market segment.

Scalable High-End Intel® Architecture

The Profusion chipset is a buffered crossbar switch managing five interconnected 100-MHz buses. Two buses support four processors each, two support memory, and the fifth bus supports the I/O subsystem. This multiple bus design allows processors, memory, and I/O to have direct paths to each other, keeping traffic on each bus down to a minimum. The memory design supports two subsystems of dual interleaving of ECC memory and there are ten hot-plug, 64-bit I/O slots supporting 100 MHz PCI-X and 33 MHz PCI operation.

Space Efficient 7U Design

This server was designed with rack density in mind, while making no compromises in the area of customer access and serviceability. Higher density offers more space in the rack for other important subsystems, such as disk arrays.

System Reliability, Availability, Serviceability (RAS)

Reliability and availability begin before the system boots, with the ability to automatically identify and isolate damaged components, including processors. In addition to ECC memory support, the ECC scanner software avoids potentially fatal double-bit errors by scanning all physical memory and finding/correcting single-bit errors that could become a double-bit error. The system comes standard with user accessible redundant and hot-swap fans and hot-plug power supplies with a redundancy option.

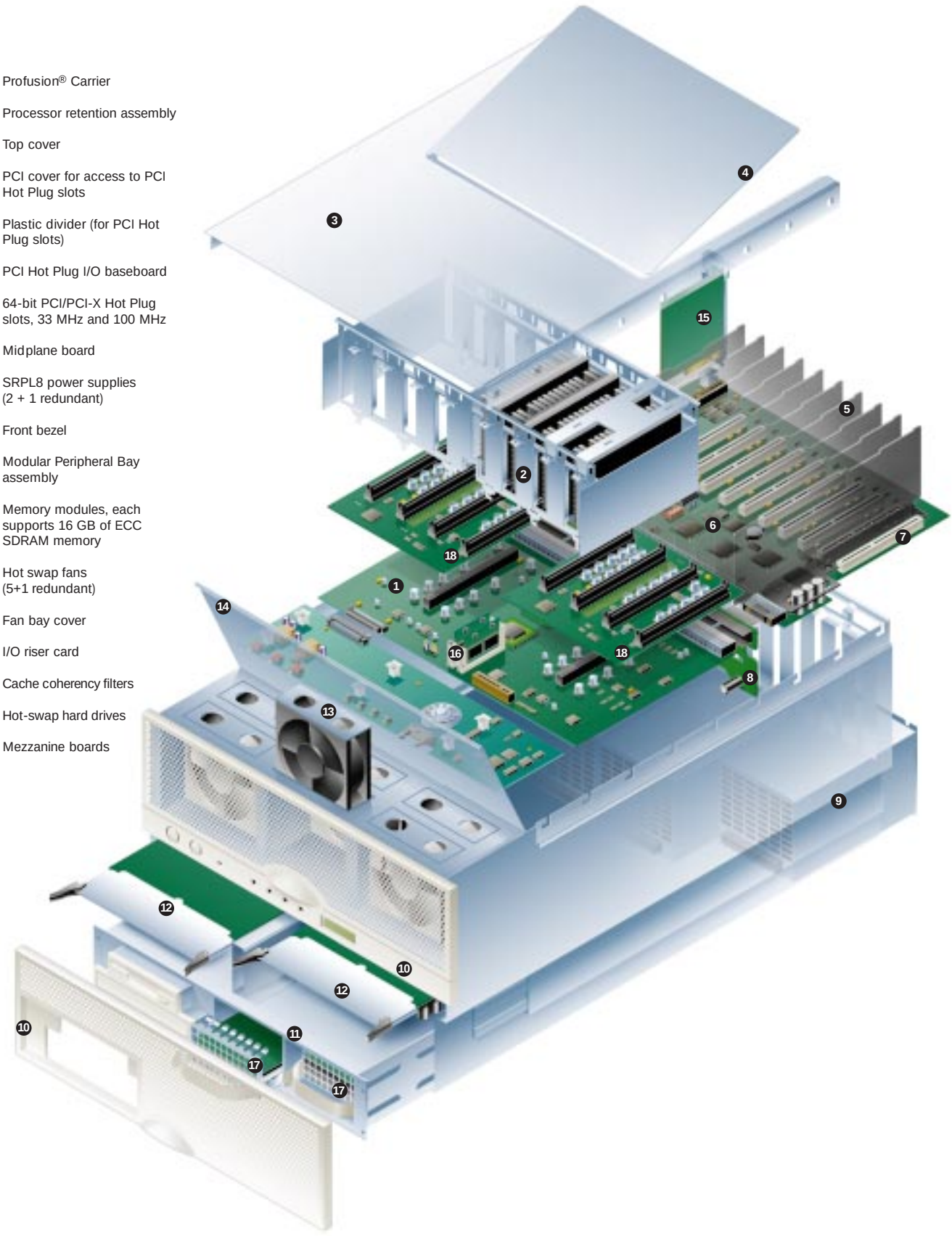
PCI Hot-Plug functionality is also standard, initially supporting "like for like" replacement of failed cards.

System Management

Management monitors key components' temperature and voltage levels, observes PCI slot status, predicts cooling system failure and identifies key FRU information (board and power supply name, type, revision, etc.). The Intelligent Platform Management Bus (IPMB) provides information to the LCD Display Panel, optional Emergency Management cards and LAN adapters, or to the Emergency Management Port. Management is enhanced further by daisy-chaining multiple servers over the Intelligent Chassis Management Bus (ICMB), allowing you to view and query status information associated with all of the systems on the ICMB interconnect.

Features	Benefits
One to eight Intel® Pentium® III Xeon™ processors, supporting 700 MHz and 900 MHz speeds	Scalable, high-performance symmetric multiprocessing for CPU intensive applications such as transaction processing
Up to 32GB ECC memory utilizing two subsystems of dual interleaving over two memory boards	Large memory support for high-end, memory intensive applications such as OLTP and decision support
Two PCI-X Segments, all supporting the PCI	100 MHz offers high I/O throughput and support of industry-leading peripheral controllers
Ten 64-bit PCI-X/PCI Slots, all supporting the PCI Hot Plug Specification (version 1.0), four 100 MHz PCI-X slots and six 33 MHz slots	Ten 64-bit slots offer exceptional expandability and scalability and the hot plug support provides enterprise-class High Availability
Integrated dual channel Ultra 160 SCSI, SVGA, Legacy I/O and USB ports	Compatibility and lower cost of integration
High density 12.25 (7U) (H) x 17.5 (W) x 28 (D) packaging	Reduced space requirement, lower cost of ownership and increased rack density for other subsystems
Two hot-swappable Ultra 160 SCSI,10K RPM hard disk drive bays (1" or 1.6") Modular Peripheral Bay	Enables low-cost, expandable RAID subsystem while providing the flexibility to OEM customers who want to have their own Peripheral Bay design
Redundant and hot-swap power supplies (optional) and fans (standard)	High availability and reduced Mean Time to Repair (MTTR)
Predictive power supply and cooling system failure	Higher availability by avoiding downtime associated with fan failures
Integrated server management, including built-in Emergency Management Port	In-Band and Out-of-Band management increases serviceability and availability, reducing the Total Cost of Ownership
Support for a variety of industry-standard Enterprise Console Management solutions	Robust server management options

1. Profusion® Carrier
2. Processor retention assembly
3. Top cover
4. PCI cover for access to PCI Hot Plug slots
5. Plastic divider (for PCI Hot Plug slots)
6. PCI Hot Plug I/O baseboard
7. 64-bit PCI/PCI-X Hot Plug slots, 33 MHz and 100 MHz
8. Midplane board
9. SRPL8 power supplies (2 + 1 redundant)
10. Front bezel
11. Modular Peripheral Bay assembly
12. Memory modules, each supports 16 GB of ECC SDRAM memory
13. Hot swap fans (5+1 redundant)
14. Fan bay cover
15. I/O riser card
16. Cache coherency filters
17. Hot-swap hard drives
18. Mezzanine boards



SRPL8 High-End 8-Way Specifications

Processors

Scalability	One to eight Intel® Pentium® III Xeon™ Processors, supporting 700 MHz and 900 MHz speeds
Configuration	One or two mezzanine boards that attach to the Profusion carrier baseboard. Each mezzanine board supports four processors and includes integrated VRMs. Empty processor slots must have processor bus termination modules; an empty mezzanine slot (or a mezzanine board with no processors populated on it) does not require termination. In configurations with more than one mezzanine board, two cache coherency filter boards are required.

I/O

Two PCI-X Segments	Four 64-bit PCI-X slots (Running at 100 MHz, PCI 2.2 Compliant & Non 5V Capable)
10 I/O Slots	Ten 64-bit slots supporting PCI Hot Plug, six PCI slots at 33 MHz (5V capable) and four PCI-X slots at 100 MHz (Non 5V Capable)
	Integrated Dual Ultra 160 SCSI Controller

Peripheral Bay Module

Hot Swap LVDS Hard Drives	Supporting two 3.5" Ultra 160 hot swap drives 7200 RPM or 10K RPM, 1" or 1.6" (Only drives on validated list fully supported)
Floppy	One 3.5" floppy drive (included)
CD-ROM	One CD-ROM or other 5.25" half height peripherals supported via IDE or on the single ended SCSI connector in Peripheral Bay

Cooling

Redundant Hot-Swap Fans	In-line redundant fans (two rows of three, six total) for cooling the CPU and the I/O sections plus fans in each power supply for cooling the power supply, memory DIMMs and the Peripheral Bay I/O devices. Redundant power supplies are needed for cooling redundancy in memory area and Peripheral Bay.

Server Management

Server Monitor Module	Supports Intel® Server Monitor Module (PCI based) as long as the module is Hot-Plug 1.0 compliant
	SMM feature connector on the baseboard
IPMB (Intelligent Platform Management Bus)	Provides access to all critical sub-systems, voltage and temperature as well as FRU information for keyboards
ICMB (Intelligent Chassis Management Bus)	Extends platform management bus outside of chassis to other chassis
Error Logging	All critical events logged to non-volatile memory
EMP	Emergency Management Port: Remote emergency management via a modem (power up/down, Reset)

Targeted Certifications

PCI	Rev 2.1 (Peripheral Components Interface)
ACPI	Rev 1.0 (Advanced Configuration and Power Interface)
WOL	Supports “off state” in Windows NT* Server 4.0 Wake up from S1, S4 and S5 sleep states with compatible LAN adapter (Wake on LAN*) in Microsoft Windows* 2000
MPS	Rev 1.1 and 1.4 (Multi-Processing Specification)
Windows NT* Hardware Design Guide	Rev 1.0 will be certified
WfM	1.1a (Wired for Management)
IPMI	Rev. 0.9 Compliant

Security

BIOS	Keyboard lockout mode Secure boot mode

Physical Characteristics

Height, Width, Depth	12.25 (7U) x 17.5 x 28 inches
Weight	~150 lbs. with packaging (minimal configuration)

Power Supplies

	2+1 system, two standard (third redundant supply optional)
Power (per supply)	750W at highline 650W at lowline
AC Voltage and Frequency	100-120/200-240V~60/50 Hz
Max. AC Current	100-120V~:12 Amps 200-240V~:7 Amps
DC power (total for 2 supplies)	+5V 58A +12V 58A +3.3V 58A +5V standby 2A -12V 1A +15Vbias 200mA

Environmentals & Safety

Temperature, Operating	+5° to +40°C (+41° to +104°F); with maximum de-rated 1° for every 305m (1000 ft.) above 1524m (5000 ft.)
Altitude	0 to 3048m (0 to 10,000 ft)
Temperature, Non-Operating	-40° to +70°C (-40° to +158°F)
Humidity, Non-Operating	95%, non-condensing at 30°C (86°F)
Acoustic Noise	Less than 52 dBA sound pressure at +5° to +28°C (+41° to +82°F) at the bystander’s position (configuration dependent) Less than 6.5 BA measured sound power at +5° to +28°C (+41° to +82°F)
Random Vibration, non-operating	5 to 20 Hz, 0.001 to 0.01 G^2 per Hz 20 to 500 Hz, 0.01 G^2 per Hz
Mechanical Shock, operating	2.0 G with 11 mSec duration, 1/2 sine wave
Electrostatic Discharge (ESD)	Tested to 20 KV (operating)
AC: Voltage[1]	90 to 132 volts and 180 to 264 volts
Frequency	47 to 63 Hz
Source Interrupt	No loss of data for power line drop-out of one cycle
Surge non-op and op	2.0 kV unidirectional 2.0 kV ring wave
Safety	UL 1950—CSA 950-95, 3rd Edition (USA/Canada) EN60 950, 2nd Edition including EMKO-TSE (74-SEC) 207/94 (Europe-German GS Mark & CE Mark—complies with EC Directive 73/23/EEC) IEC 950, 2nd Edition (International—CB Certificate)
Electromagnetic Compatibility	FCC CFR 47, Part 15 Class A (USA) ICES-003, Class A (Canada) CISPR 22, Class A (International) EN55022 Class A & EN50082-1 (Europe) - CE Mark - complies with EC Directive 89/336/EEC EN61000-3-2 Harmonics VCCI, Class A (Japan) AS/NZS 3548 (Australia/New Zealand)

For More Information

Reference **developer.intel.com** for product support and technical information for all of Intel’s server building blocks. For the number of your nearest Intel sales office, call 800-628-8686 (U.S. and Canada) or +44 1793 403000 (Europe). Reference Intel’s web page at **http://www.intel.com**

[1]The product can support 110V nominal AC input for full configurations. Please see instructions in the Product Guide.

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