NEC Express5800/100 Series
R120a-2

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Highlights

■ Powerful, highly expandable 2-socket rack server (2U)
The R120a-2 delivers large-volume storage and massive I/O flexibility.

- Up to two Intel® Xeon® processors 5500 series

- Up to 192GB of memory

- Up to six 3.5-inch SAS/SATA or eight 2.5-inch SAS/SATA disk drives, with optional RAID 5 and 6 capability

- PCI Express 2.0, with twice the bandwidth of the previous generation

- Six expansion slots as standard, allowing the user to customize the expansion slot mix with optional riser cards

- 80PLUS® energy efficient power supply for reduced AC/DC loss

- A front display port, a pull-out tab, and tool-free guide rails to provide ease of maintenance

■ Dynamic scalability
Powered by Intel® Xeon® 5500 series with QuickPath Interconnect (QPI) technology, the R120a-2 achieves significant throughput performance improvement. The latest processor features include:

- Enhanced performance of individual processor cores to process more instructions per clock cycle

- Integrated Memory Controller to allow each processor to access its own dedicated memory

- High-speed QuickPath interconnects to link processors to memory and I/O without the conflict between processors

■ Simplified deployment and management
The R120a-2 offers integrated setup and management tools.

- The EXPRESSBUILDER setup support tool provides step-by-step guides via intuitive graphic interface and automates the setup process with the Express Setup function, dramatically reducing hands-on management of the server.

- The ESMPRO management software and the EXPRESSSCOPE Engine 2 remote management controller interact to monitor, control and troubleshoot from a remote console, with no need to travel for on-site operational tasks.

■ Ideal Environments and Applications

The R120a-2 is designed for medium to large businesses needing superior expandability, reliability and manageability to perform compute-intensive tasks.

- Application server to consolidate business-critical and general office applications, and process high volumes of data in tandem with a backend database

- Database server to handle large volumes of data, while providing greater compute power for working with application and web servers

- Web server to handle increasing user access requirements, while enhancing business efficiency by interacting with groupware and an application server

Specification Overview

Processors

Quad-core processors
Intel® Xeon® Processor X5570 (2.93GHz/8MB L3 Cache)
Intel® Xeon® Processor X5550 (2.66GHz/8MB L3 Cache)
Intel® Xeon® Processor E5520 (2.26GHz/8MB L3 Cache)
Intel® Xeon® Processor E5504 (2GHz/4MB L3 Cache)

Dual-core processor
Intel® Xeon® Processor E5502 (1.86GHz/4MB L3 Cache)

Memory

DDR3 DIMM with ECC
Up to 192GB (12 x 16GB)

Maximum storage

3.5-inch SATA : 6TB (6 x 1TB)
3.5-inch SAS : 2.7TB (6 x 450GB)
2.5-inch SATA : 4TB (8 x 500GB)[*1]
2.5-inch SAS : 2.4TB (8 x 300GB)

Removable media

1 x DVD-ROM drive (CD: max. X24 DVD: max. X8)
1 x floppy disk drive (optional)

Expansion slots

Total: 6 slots
  3 x PCI Express 2.0 X8[*2]
  1 x PCI Express 2.0 X4
  1 x PCI Express X4
  1 x dedicated slot for a RAID controller

Video

Integrated in the Server Management Controller (32MB)

*1 400GB (8 x 50GB) with Solid State Drives (SATA)
*2 The slot mix can be changed by installing one of the optional riser cards.

Network

2 x 1000BASE-T (100BASE-TX is supported)

Power consumption

133VA/123W up to 830VA/820W

Redundant power supply

Supported (hot plug)

Redundant cooling fan

Supported (hot plug)

External interfaces

2 x VGA, 1 x keyboard, 1 x mouse, 4 x USB 2.0, 1 x serial
2 x LAN, 1 x management LAN

Dimensions (mm) and weight

445W x 730D x 87H (2U) *485W x 825D x 87H (including front bezel, inner rails and protruding objects)
Std: 21kg   Max: 31kg

Operating systems

Microsoft® Windows Server® 2003, Standard/Enterprise Editions (SP1 or later)
Microsoft® Windows Server® 2003 R2, Standard/Enterprise Editions (x64)
Microsoft® Windows Server® 2008 Standard/Enterprise (x64)
Microsoft® Windows Server® 2008 R2 Standard/Enterprise
Red Hat® Linux™
VMware® ESXi™ 4

Note:
For Linux support, contact your local NEC sales office, or go to the NEC website at:
http://www.nec.com/global/prod/express/linux/index.html

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For further information, please contact:

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