Data Sheet
April 2016

\Orchestrating a brighter world NEC

Scalable Modular Server

DX2000





Key Features

- 3U rack enclosure with up to 44 server nodes
- Up to 572 server nodes in a 42U server rack
- Support for the latest Intel® Xeon® Processor D Family
- Up to 64GB of high speed DDR4 memory per server node
- Up to 2.8TB memory per enclosure
- Two or four 10GbE links per server node
- 1502GB/s of total memory bandwidth per enclosure
- Full manageability with integrated EXPRESSSCOPE Engine 3

Ideal Platform to support IoT

Big data continues to flood the world in real time, generating valuable information that needs to be collected and analyzed using advanced analytics technology. The feedback generated through big data analytics creates a flow of information about people, things and services and is known as the Internet of Things (IoT). This dramatic flow of information will bring a big impact to business, including changes in the process of knowledge creation, a new social value creation, reformation of industrial structure and industry reorganization. Today's businesses must quickly convert enormous amounts of data into valuable information that provides business insight as well as solutions that can use this new power of IoT. To solve business challenges through IoT requires the ability to utilize big data, create high-speed big data analytics platform, and use an advanced analytics engine to analyze various forms of data such as text, images, audio and video. The Scalable Modular Server DX2000 from NEC is at the core of a high-speed big data analytics platform that delivers both high-speed processing and extreme density, while providing total solutions for big data utilization. NEC's solutions support building an IoT platform that will help lead your business to the next stage.

Features

Perfect For Big Data Solutions, Cloud and IaaS

The DX2000 is designed to deliver high-speed parallel processing with extreme density for big data solutions. It is suitable for organizations that want to analyze/visualize accumulated data without high levels of knowledge. Also, solutions integrated with this server is ideal for companies that want to utilize an extremely large amount of complex data in order to achieve sales expansion and cost reduction, for example, through demand prediction and effective recommendations. In addition, the DX2000 is suitable for other scale-out computing platforms such as bare metal cloud, private cloud and Infrastructure as a Service (IaaS).

High Performance with Hyper Scalability

The DX2000 incorporates up to 44 single-processor server modules with the energy-efficient, high-performance Intel® Xeon® Processor D Family in a 3U enclosure. With up to 2.8 TB total memory per enclosure (in 44 server nodes), the DX2000 provides extremely wide memory access bandwidth, which is approximately 5 times more than the total amount of memory access bandwidth that is provided by three conventional 1U rack, dual-processor general purpose servers. In addition, the total network bandwidth among server nodes in a chassis is 880Gbps, while the up-link is 640Gbps. These features provide in-memory distributed processing for real-time big data analytics for up to thousands of servers, along with a reduced total cost of ownership because of advanced power efficiency and smaller footprint in the data center.

Simplified Manageability

The integrated EXPRESSSCOPE Engine 3 technology of the DX2000 provides extensive remote management capabilities for chassis and modules including out-of-band management of each server. All modules and shared components, including fans, power supply units, and switch modules are hot-swappable and easy to replace.

Hardware Specifications

Server Module	
Form factor	Server module that plugs into the Module Enclosure
Number of processors	1
Processors	Intel® Xeon® Processor D-1527 (2.20GHz/4-core/6MB) Intel® Xeon® Processor D-1541 (2.10GHz/8-core/12MB) Intel® Xeon® Processor D-1571 (1.30GHz/16-core/24MB)
Memory type	DDR4-2133 ECC SO-DIMM
Memory slots	4
Memory capacity	8 GB / 16 GB / 32 GB / 64 GB
Storage type	M.2 SATA SSD
Internal storage capacity	128 GB / 256 GB / 512 GB
Network	2 10GbE links to switch modules 2 additional 10GbE links to switch modules with an optional 10G LAN module (Occupies one server module slot)
Systems management	EXPRESSSCOPE Engine 3
Operating systems and virtualization software *	Red Hat® Enterprise Linux® 7.2 VWware® ESXi™ 6.0

* Please contact your sales representative for the latest information.

Network Switch Module (L2)	
Form factor	Network Switch Module that plugs into the Module Enclosure
Network	Up link: 8 40G QSFP+ ports plus 1 1000BASE-T for management Down link: 44 10GbE

Module Enclosure	
Form factor / height	3U Rack
Server module slots	44 (22 slots can be used for 10G LAN modules and 8 slots can be used for PCIe cards) * The number of installable modules may change according to configuration.
Network switches	2 network switch modules (L2)
Redundant cooling fan	Standard, hot plug
Power supplies	3 Hot plug power supply 1600 Watt 200-240 VAC ± 10% 50 / 60 Hz ± 3 Hz
Redundant power supply	Standard, hot plug * Not redundant in some configurations
Temperature and humidity conditions (non-condensing)	Operating: 10 to 35* °C/ 50 to 95* °F , 20 to 80% Non-operating: -10 to 55°C/14 to 131°F, 20 to 80% * In specific configurations, the operable ambient temperature is up to 40°C/104°F
Dimensions (W x D x H) and maximum weight	448.0 x 769.0 x 130.0 mm / 17.6 x 30.3 x 5.1 in, 48 kg / 105.82 lbs.

For further information please contact your local NEC representative or:

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Cat.No. E03-16040009E