

NEC HPC 2812Rb-2

2U Server with 8 sockets

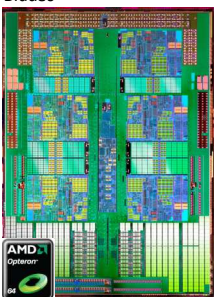


World-Class Efficiency Server in a dense 2U Chassis for NEC LX-Series

IT solutions based on the **NEC LX Series** are more than simply commodity technology. Our mission is to provide solutions that enable customers and partners to receive the greatest value from their IT investments by leveraging HPC technologies. With the new 4 node mini-blade server NEC introduces a new level of compute density to its high end product line LX-Series. computing product. Simplified maintenance, onboard Infiniband and 12 disk slots will enhance the availability of the cluster.



NEC HPC 2812Rb-2: hot-swappable PSU and Server-Blades



AMD Opteron™ Six-core Codename Istanbul



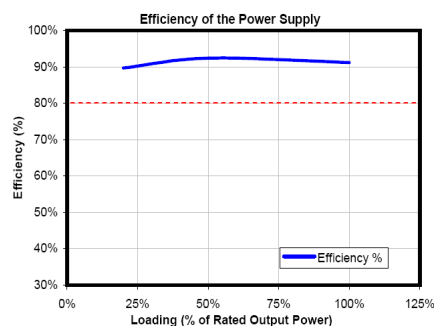
Mainboard

AMD Opteron 2000 Series Codename Istanbul

The latest AMD Opteron 2000 processor has six powerful processing units on each chip. With improved performance in the same electrical and thermal envelope as the previous generation, Six-Core AMD Opteron processors deliver exceptional energy efficiency with the AMD-P suite of power management features including AMD Smart Fetch technology, AMD Power Cap technology, and AMD CoolCore™ technology.

Houses 4 servers in 1 chassis – saving power and space on a new level

4 dual-socket mainboards with hot-pluggable highly-efficient PSU in a redundant 1+1 configuration with an outstanding efficiency of up to 92,4%.



Deploying 8 six-core AMD Opteron 2000 series clocked with 2.6 Ghz the servers theoretical peak performance amounts to almost 500 Gflops! This server can be deployed in LX-1000, LX-2200 and LX-2400.



The 80 PLUS specification?

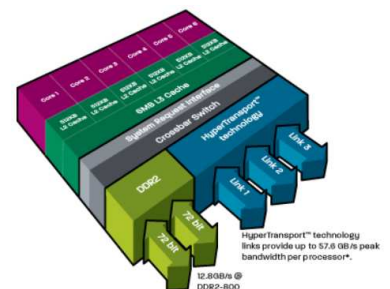
80 PLUS is an innovative, electric utility-funded incentive program to integrate more energy-efficient power supplies into desktop computers and servers.

The 80 PLUS performance specification requires multi-output power supplies in computers and servers to be 80% or greater energy efficient at 20%, 50% and 100% of rated load with a true power factor of 0.9 or greater. This makes an 80 PLUS certified power supply substantially more efficient than typical power supplies and creates a unique market differentiation opportunity for power supply and computer manufacturers.

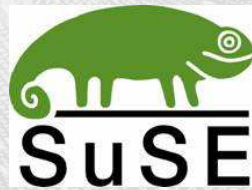
NEC HPC 2812Rb-2 is one of the main building blocks of the **NEC LX Series**. Being a scalable compute cluster resource for industry, academia and research, the cluster is delivered as a complete turnkey solution to the customer.



The complete system including the **OSCAR PRO** software enables users to immerse into High Performance Computing with less cluster expertise.



HyperTransport™ Technology is a high-speed, low latency, point-to-point link designed to increase the communication speed between integrated circuits in computers, servers, embedded systems, and networking and telecommunications equipment up to 48 times faster than some existing technologies.



Have a closer look at the HPC 2812Rb-2 Server's main features:

- 8x Six-core AMD Opteron™ 2000 Series processor (Socket F) in one 2U chassis
- 4x 3 Hot-swap 3.5" SATA drive bays (support RAID 0,1,5)
- 4x 64 GB DDR2 800/667 MHz registered ECC memory
- 4x Dual Gigabit Ethernet ports
- 4x PCI-Express x16
- 4x IB Connect-X DDR
- 4x IB Connect-X QDR (option)
- 4x IPMI 2.0 plus KVM over LAN
- 2x Shared hot-swap 1 200 PSU



Additionally we offer you 2 attractive options:

Decide for **NEC OSCAR Pro** and use highly efficient administration and monitoring software for Linux clusters in order to give your **HPC 2812Rb-2 Server** a high degree of scalability.

Our convenient **NEC HPC Services** performed by skilled HPC experts help you to install your solution, train your staff and develop your individual supercomputing infrastructure even further.



The new HPC 2812Rb-2 Server houses 4 hot-swap nodes in 1 chassis.

<p>Processor:</p> <ul style="list-style-type: none"> ▪ 2 Six-core AMD Opteron™ 2000 Series processor per node ▪ Up to 2.6 GHz clock speed ▪ HT3.0 Link support ▪ Up to 800 MHz direct memory 	<p>Input/Output:</p> <ul style="list-style-type: none"> ▪ 2 USB rear ports ▪ 2 USB internal ports ▪ 1 Infiniband port ▪ 2 RJ-45 LAN ports ▪ 1 RJ-45 Dedicated IPMI LAN port ▪ 1 VGA port
<p>Chipset:</p> <ul style="list-style-type: none"> ▪ nVIDIA MCP55 Pro CPU integrated NB functions, including DRAM controller and Hyper-Transport links 	<p>Infiniband:</p> <ul style="list-style-type: none"> ▪ Onboard Mellanox Connect-X DDR ▪ Mellanox ConnectX QDR InfiniBand 40Gbps Controller (option)
<p>Memory:</p> <ul style="list-style-type: none"> ▪ Supports DDR2 memory ▪ 667 / 800 MHz ECC Registered ▪ 8 DIMM Slots per node (32 in total) ▪ 8 GB max. per DIMM enables 64 GB per node (256 GB RAM per system) 	<p>Management :</p> <ul style="list-style-type: none"> ▪ Integrated IPMI 2.0 management with KVM and dedicated LAN ▪ Support for Intelligent Platform Management Interface v.2.0 ▪ Winbond® WPCM450 BMC
<p>PCI-X slots :</p> <ul style="list-style-type: none"> ▪ 1 PCI-E x16 (low profile) 	<p>BIOS:</p> <ul style="list-style-type: none"> ▪ 32 Mbit SPI Flash EEPROM with AMI® BIOS ▪ PCI 2.2
<p>Storage device :</p> <ul style="list-style-type: none"> ▪ 3 hot-swap SATA HDD bays 	<p>Chassis (integrating four nodes) :</p> <ul style="list-style-type: none"> ▪ Rack mountable 2U ▪ 438(W) x 724(D) x 88(H) mm ▪ 1200 watts dual PSU (93% efficiency) ▪ 1+1 Redundant
<p>Integrated LAN controllers :</p> <ul style="list-style-type: none"> ▪ Double-port Gigabit Ethernet ▪ 1x dedicated LAN port for IPMI 2.0 	<p>Operating system :</p> <ul style="list-style-type: none"> ▪ Red Hat® and Suse® distributions

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