Take your IT infrastructure to the next level with NEC's proven server platform

An energy-saving infrastructure to make your IT green

Minimizing the environmental impact of products and services is one of the top priorities for today's businesses. While ensuring utmost performance and availability, the Express5800 server family provides comprehensive green IT technologies, including power control functionality that reduces the power consumption of each server and increases the number of servers which can run in a rack for server-dense data center environments.
The latest tower, rack, and ECO CENTER servers qualify with the energy efficiency specifications of theInternational ENERGY STAR program led by the U.S. Environmental Protection Agency.

Effective cooling

NEC makes power-efficient, silent server operations a reality through its optimized server design. The Express5800 server family uses lower power consumption components and also provides adequate airflow to eliminate hot spots and automatically adjusts cooling to change in operating temperatures. NEC's server engineering expertise ensures energy cost savings and stable server operations.

Improved compute performance with next-generation microprocessors

The latest Express5800 servers are powered by Intel® Xeon® processors based on Intel® QuickPath Interconnect (QPI). This high-speed, point-to-point interconnect improves processor and memory performance, allowing the Express5800 servers to run complex applications and achieve optimized performance for virtualized environments.

Easy to set up and manage

NEC's server management package frees administrators from demanding on-site tasks. The EXPRESSBUILDER setup support tool automates the installation of multiple servers in different physical locations. ESMPRO management software works in tandem with the EXPRESSSCOPE Engine 2 or 3 baseboard management chipset to enable remote operation and troubleshooting, helping to reduce management complexity while improving business efficiency.

Optional Products

1. Secure and reliable disk storage

- **RAID controllers**
  NEC provides preinstalled and optional RAID controllers with a choice of high-speed Serial ATA and highly reliable Serial Attached SCSI hard disk drives to meet your specific storage needs.
- **RAID management utility**
  NEC's Universal RAID Utility features simple and intuitive graphic interfaces that allow users to configure and manage RAID settings without any special knowledge.
- **Disk array units**
  NEC enables you to optimize your disk storage with a choice of competitively priced SATA or high-performance SAS disk drives for its disk array units. A 2U-height disk array unit allows up to 12 disk drives with RAID 1, 5 and 6 capability, and works as shared storage for clustered servers.

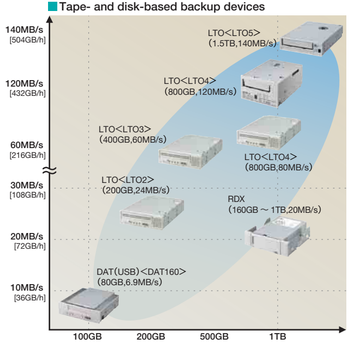
2. A compact console for easy server maintenance

A rack-mountable all-in-one console allows system managers to access multiple servers in a rack. A 17-inch monitor (SXGA), keyboard, mouse and 8-port sever switch unit are all included in a compact 1U form factor. Pulling the console out from the rack lifts up the monitor and keyboard.

3. Backup devices for reliable data storage

Protecting business data as a corporate information asset is vital for every organization. Losing data costs organizations time and money for system recovery, which results in significant lost business opportunities. NEC's Express5800 servers support large-capacity internal tape devices for long-term data archiving as well as removable disk cartridges for high-speed backup and immediate system recovery.

■Tape- and disk-based backup devices



Express5800 servers
http://www.nec.com/express/

NEC EXPRESS5800

For further information, please contact:

Cat.No. E05-11060003E

Empowered by Innovation NEC

Express5800 Servers

Drive your business agility in today's rapidly evolving IT environments

General-Purpose Standard Servers

Tower

2-Socket

T120b-M

Intel® Xeon® processor
X5675 (3.06 GHz)
X5650 (2.66 GHz)
E5645 (2.40 GHz)
E5620 (2.40 GHz)

Max. memory	192 GB
Max. storage*	
2.5-inch SAS	14.4 TB
2.5-inch SATA	16 TB
3.5-inch SATA	16 TB
2.5-inch SSD	1.6 TB
Network	1000BASE-T(×2)

* Requires optional HDD cages

T120b-E

Intel® Xeon® processor
X5650 (2.66 GHz)
E5645 (2.40 GHz)
E5620 (2.40 GHz)
E5606 (2.13 GHz)

Max. memory	192 GB
Max. storage*	
2.5-inch SAS	7.2 TB
2.5-inch SATA	8 TB
3.5-inch SATA	8 TB
2.5-inch SSD	800 GB
Network	1000BASE-T(×2)

* Requires optional HDD cages

1-Socket

GT110d New

Intel® Xeon® processor
E3-1220 (3.10 GHz)
Intel® Pentium® processor
G620 (2.60GHz)

GT110b

Intel® Celeron® processor
G1101 (2.26 GHz)

Max. memory	32 GB*1
Max. storage	
2.5-inch SAS	1.2 TB*2
2.5-inch SATA	4 TB
3.5-inch SATA	8 TB
2.5-inch SSD	400 GB
Network	1000BASE-T(×2)*3

*1 16GB for GT110b
*2 Requires an optional HDD cage
*3 1000BASET (x1) for GT110b

GT110d-S New

Air-cooled model
Intel® Xeon® processor
E3-1220 (3.10 GHz)
Intel® Pentium® processor
G620 (2.60GHz)

Water-cooled model
Intel® Core™ i3-2120 processor
(3.30 GHz)

Max. memory	32 GB
Max. storage	
2.5-inch SAS	4.5 TB*1*2
2.5-inch SATA	5 TB*1*3
3.5-inch SATA	4 TB
2.5-inch SSD	500 GB
Network	1000BASE-T(×2)

*1 For air-cooled model, requires an optional HDD cage
*2 2.7TB for water-cooled model
*3 3TB for water-cooled model

Rack-optimized

4-Socket

R140b-4

Intel® Xeon® processor
X7560 (2.26 GHz)
E7530 (1.86 GHz)
E7520 (1.86 GHz)

Max. memory*	512 GB
Max. storage	
2.5-inch SAS	7.2 TB
2.5-inch SATA	8 TB
2.5-inch SSD	800 GB
Network	1000BASE-T(×4)

* Requires the optional memory backboards

2-Socket

R120b-2

Intel® Xeon® processor
X5690 (3.46 GHz)/X5687 (3.60 GHz)
X5675 (3.06 GHz)/X5650(2.66 GHz)
E5645 (2.40 GHz)/E5620 (2.40 GHz)
E5606 (2.13 GHz)/E5503 (2 GHz)

Max. memory	192 GB
Max. storage	
2.5-inch SAS*	10.8 TB
2.5-inch SATA*	12 TB
3.5-inch SATA	12 TB
2.5-inch SSD*	1.2 TB
Network	1000BASE-T(×2)

* Requires optional HDD cages

R120b-1

Intel® Xeon® processor
X5690 (3.46 GHz)/X5675 (3.06 GHz)
X5650 (2.66 GHz)/E5645 (2.40 GHz)
L5640 (2.26 GHz)/E5620 (2.40 GHz)
E5606 (2.13 GHz)

Max. memory	192 GB
Max. storage	
2.5-inch SAS	5.4 TB
2.5-inch SATA	6 TB
3.5-inch SATA	6 TB
2.5-inch SSD	600 GB
Network	1000BASE-T(×2)

1-Socket

R110d-1E New

Intel® Xeon® processor
E3-1270 (3.40 GHz)
E3-1220 (3.10 GHz)
Intel® Pentium® processor
G620 (2.60 GHz)

Max. memory	32 GB
Max. storage	
2.5-inch SAS	5.4 TB*
2.5-inch SATA	6 TB
3.5-inch SATA	8 TB
2.5-inch SSD	600 GB
Network	1000BASE-T(×2)

* Requires an optional HDD cage

High-Density Blade Servers SIGMABLADE

2-Socket

B120a

Intel® Xeon® processor
X5550 (2.66 GHz)/L5520 (2.26 GHz)
E5504 (2 GHz)
E5502 (1.86 GHz)

Max. memory	128 GB
Max. storage	
2.5-inch SAS	1.8 TB
2.5-inch SATA	2 TB
Network	1000BASE-X(×2)

B120b

Intel® Xeon® processor
X5670 (2.93 GHz)/X5650 (2.66 GHz)
E5645 (2.40 GHz)/L5640 (2.26 GHz)
E5606 (2.13 GHz)

Max. memory	128 GB
Max. storage	
2.5-inch SAS	1.8 TB
2.5-inch SATA	2 TB
Network	1000BASE-X(×2)

B120b-h

Intel® Xeon® processor
X5680 (3.33 GHz)/X5650 (2.66 GHz)
E5645 (2.40 GHz)/L5640 (2.26 GHz)
L5630 (2.13 GHz)

Max. memory	192 GB
Max. storage	
2.5-inch SSD	200 GB
Network	10G BASE-KR(×2)

B120b-d

Intel® Xeon® processor
X5670 (2.93 GHz)
L5640 (2.26 GHz)

B120a-d

Intel® Xeon® processor
X5550 (2.66 GHz)/L5520 (2.26 GHz)
E5504 (2 GHz)
E5502 (1.86 GHz)

Max. memory	192 GB
Network	1000BASE-X(×2)

Optional Blade

Storage and I/O Blade

AD106b

Max. storage	
2.5-inch SAS	5.4 TB
2.5-inch SATA	6 TB
2.5-inch SSD	600 GB
Network	1000BASE-X(×2)

Tape Blade

AT101a

LTO4	800GB max. (uncompressed data)
Network	1000BASE-X(×2)

Blade Enclosures

SIGMABLADE-H v2

- Max. CPU blades:16
- Max. power units:6
- Height:10U
- Dimensions (W×D×Hmm): 483×823×442mm
- Max. power consumption:10,231W
- Max. weight:209kg

SIGMABLADE-M

- Max. CPU blades:8
- Max. power units:4
- Height:6U
- Dimensions (W×D×Hmm): 484.8×829×264.2mm
- Max. power consumption:5,136W
- Max. weight:119kg

Fault Tolerant Servers ft series

2-Socket

Windows Model

Windows Server® 2008 R2 model

R320b-M4

Intel® Xeon® processor
X5670 (2.93 GHz)

R320a-E4

Intel® Xeon® processor
E5504 (2 GHz)

Max. memory	96 GB
Max. storage	
2.5-inch SAS	4.8 TB
Network	1000BASE-T(×2)

Microsoft® Windows Server® 2008 R2 Enterprise (Hyper-V supported)

Windows Server® 2008 (32bit) model

R320a-M4

Intel® Xeon® processor
X5570 (2.93 GHz)

R320a-E4

Intel® Xeon® processor
E5504 (2 GHz)

Max. memory	48 GB
Max. storage	
2.5-inch SAS	4.8 TB
Network	1000BASE-T(×2)

Microsoft® Windows Server® 2008 Enterprise (32bit) SP2

Linux Model ,VMware Model

R320b-M4

Intel® Xeon® processor
X5670 (2.93 GHz)

R320a-E4

Intel® Xeon® processor
E5504 (2 GHz)

Max. memory	96 GB
Max. storage	
2.5-inch SAS	4.8 TB
Network	1000BASE-T(×2)

Red Hat® Enterprise Linux® 5.5 (EM64T)*
VMware vSphere™ 4 Update 2

* XenXVM (Kernel-based Virtual Machine) is not supported

Tower Conversion Kit

The tower configuration is ideal for customers considering a single server installed in an office environment.
Use the Tower Conversion Kit to install ft series as tower models.

Energy Saving Server ECO CENTER

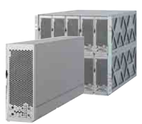
2-Socket

Modular server

E120b-M

Intel® Xeon® processor
L5640 (2.26 GHz)
L5630 (2.13 GHz)

Max. memory	96 GB
Max. storage	
2.5-inch SATA	640 GB
2.5-inch SSD	100 GB
Network	1000BASE-T(×2)



Rack server

E120b-1

Intel® Xeon® processor
E5645 (2.40 GHz)*1
L5640 (2.26 GHz)*2
L5630 (2.13 GHz)

*1 3.5-inch disk drive model only
*2 Consolidated power supply unit model only

Max. memory	64 GB
Max. storage	
2.5-inch SAS	7.2 TB
2.5-inch SATA	8 TB
3.5-inch SATA	8 TB
2.5-inch SSD	800 GB
Network	1000BASE-T(×2)

1-Socket

Modular server

E110b-M

Intel® Atom™ processor
N450 (1.66 GHz)

Max. memory	2 GB
Max. storage	
2.5-inch SATA	1 TB
2.5-inch SSD	100 GB
Network	1000BASE-T(×2)

Rack server

E110d-1 New

Intel® Xeon® processor
E3-1260L (2.40 GHz)

Max. memory	32 GB
Max. storage	
3.5-inch SATA	8 TB
Network	1000BASE-T(×2)

Rack server

iR110a-1H

Intel® Core™2 Duo processor
T9400 (2.53 GHz)
P8400 (2.26 GHz)

Max. memory	16 GB
Max. storage	
2.5-inch SAS	1.2 TB
2.5-inch SATA	2 TB
3.5-inch SATA	2 TB
Network	1000BASE-T(×2)

Scalable HA Server

8-Socket/4-Socket

A1080a-E (8-socket model)
A1080a-D (4-socket dual server model)
A1080a-S (4-socket model)

High-performance enterprise-class servers for business-critical applications

Intel® Xeon® processor E7 product family:
E7-8870 (2.40GHz)/E7-8850 (2GHz)
E7-8830 (2.13GHz)
E7-4820 (2GHz)*/E7-4807 (1.86GHz)*

* Not supported by A1080a-E

Max. memory	2TB/1TB
Max. storage	
2.5-inch SAS	10.8 TB/5.4 TB
Network	1000BASE-T(×2)

Thin Client Terminals

US300c

High performance and highly extensive terminal with dual monitor and multimedia capabilities

OS	Windows® Embedded Standard 2009
Weight	670 g
Protocol	RDP7.0 ICA11.2

US110c

Windows® CE 6 support with dual monitor capability

OS	Windows® CE6.0
Weight	670 g
Protocol	RDP6.0 ICA10.17

Workstation

53La

Powerful and reliable workstation in a 93mm slim form factor

Intel® Core™ i5 processor
660 (3.33 GHz)
Intel® Core™ i3 processor
540 (3.06 GHz)
Intel® Pentium® processor
G6950 (2.80 GHz)

Model			Processor	Memory	Internal Storage		OS Supported	Form Factor	Hot-plug	Redundancy	
				Max.	Disk size	Max. capacity			Disk Bays	Power	Fan
Standard Server (Tower)	1-Socket	GT110b	Intel® Celeron® processor G1101 (2.26GHz/2MB L3 cache)	16GB	2.5 inch	SATA: 4TB SAS: 1.2TB		Tower or 4U rack	–	–	–
					3.5 inch	SATA: 8TB					
		GT110d	Intel® Xeon® processor E3-1220 (3.10GHz/4C/8MB) Intel® Pentium® processor G620 (2.60GHz/2C/3MB)	32GB	2.5 inch	SATA: 4TB SAS: 1.2TB		Tower or 4U rack	–	–	–
					3.5 inch	SATA: 8TB					
		GT110d-S (air-cooled)	Intel® Xeon® processor E3-1220 (3.10GHz/4C/8MB) Intel® Pentium® processor G620 (2.60GHz/2C/3MB)	32GB	2.5 inch	SATA: 5TB SAS: 4.5TB		Tower	○	–	–
					3.5 inch	SATA: 4TB			–		
		GT110d-S (water-cooled)	Intel® Core™ i3-2120 processor (3.30GHz/2C/3MB)	32GB	2.5 inch	SATA: 3TB SAS: 2.7TB		Tower	○	–	–
					3.5 inch	SATA: 4TB			–		
	2-Socket	T120b-E	Intel® Xeon® processor X5650 (2.66 GHz, 6C/12T, 12MB L3 cache) E5645 (2.40 GHz, 6C/12T, 12MB L3 cache) E5620 (2.40 GHz, 4C/8T, 12MB L3 cache) E5606 (2.13GHz, 4C/4T, 8MB L3 cache)	192GB	2.5 inch	SATA: 8TB SAS: 7.2TB		Tower or 5U rack	○	○ (Option)	○ (Option)
					3.5 inch	SATA: 8TB					
		T120b-M	Intel® Xeon® processor X5675 (3.06 GHz, 6C/12T, 12MB L3 cache) X5650 (2.66 GHz, 6C/12T, 12MB L3 cache) E5645 (2.40 GHz, 6C/12T, 12MB L3 cache) E5620 (2.40 GHz, 4C/8T, 12MB L3 cache)	192GB	2.5 inch	SATA: 16TB SAS: 14.4TB		Tower or 5U rack	○	○ (Option)	○ (Option)
					3.5 inch	SATA: 16TB					
Standard Server (Rack)	1-Socket	R110d-1E	Intel® Xeon® processor E3-1270 (3.40GHz/4C/8MB) E3-1220 (3.10GHz/4C/8MB) Intel® Pentium® processor G620 (2.60GHz/2C/3MB)	32GB	2.5 inch	SATA: 6TB SAS: 5.4TB	Windows Server 2003 Windows Server 2008 Red Hat Linux	1U rack	○	–	–
					3.5 inch	SATA: 8TB					
	2-Socket	R120b-1	Intel® Xeon® processor X5690 (3.46 GHz, 6C/12T, 12MB L3 cache) X5675 (3.06 GHz, 6C/12T, 12MB L3 cache) X5650 (2.66 GHz, 6C/12T, 12MB L3 cache) E5645 (2.40 GHz, 6C/12T, 12MB L3 cache) L5640 (2.26 GHz, 6C/12T, 12MB L3cache) E5620 (2.40 GHz, 4C/8T, 12MB L3 cache) E5606 (2.13 GHz, 4C/4T, 8MB L3 cache)	192GB	2.5 inch	SATA: 6TB SAS: 5.4TB		1U rack	○	○ (Option)	○
			Intel® Xeon® processor X5650 (2.66 GHz, 6C/12T, 12MB L3 cache) E5620 (2.40 GHz, 4C/8T, 12MB L3 cache) E5606 (2.13 GHz, 4C/4T, 8MB L3 cache)		3.5 inch	SATA: 6TB					
		R120b-2	Intel® Xeon® processor X5690 (3.46 GHz, 6C/12T, 12MB L3 cache) X5687 (3.60 GHz, 4C/8T, 12MB L3 cache) X5675 (3.06 GHz, 6C/12T, 12MB L3 cache) X5650 (2.66 GHz, 6C/12T, 12MB L3 cache) E5645 (2.40 GHz, 6C/12T, 12MB L3 cache) E5620 (2.40 GHz, 4C/8T, 12MB L3 cache) E5606 (2.13 GHz, 4C/4T, 8MB L3 cache) E5503 (2 GHz, 2C/2T, 4MB L3 cache)	192GB	2.5 inch	SATA: 12TB SAS: 10.8TB		2U rack	○	○ (Option)	○ (Option)
			Intel® Xeon® processor X5650 (2.66 GHz, 6C/12T, 12MB L3 cache) E5620 (2.40 GHz, 4C/8T, 12MB L3 cache) E5606 (2.13 GHz, 4C/4T, 8MB L3 cache)		3.5 inch	SATA: 12TB					
	4-Socket	R140b-4	Intel® Xeon® processor X7560 (2.26GHz, 8C/16T, 24MB L3 cache) E7530 (1.86GHz, 6C/12T, 12MB L3 cache) E7520 (1.86GHz, 4C/8T, 18MB L3 cache)	512GB	2.5 inch	SATA: 8TB SAS: 7.2TB		4U rack	○	○	○