

NEC EXPRESS5800/R320e-E4 Configuration Guide

Windows Server
model



Introduction

This document contains product and configuration information that will enable you to configure your system. The guide will ensure fast and proper configuration of your NEC EXPRESS5800 server.

Contents

- TECHNICAL SPECIFICATION 3**
 - Key Features.....3
 - Specification.....3
- EXTERNAL VIEWS 5**
 - Front and Rear Views5
 - Dimensions (mm).....7
- CONFIGURATION DIAGRAM 8**
- SERVER CONFIGURATION 9**
 - 1 Base Models9**
 - 2 2nd Processor9**
 - 3 Memory9**
 - 4 Internal Hard Disk Drives 11**
 - 5 Optical Drive.....12**
 - 6 PCI Card.....12**
 - 6.1 LAN Controller 12
 - 6.2 Fibre Channel / SAS Controller 12
 - 7 Other Add-in Components12**
 - 7.1 Input Devices.....12
 - 8 Add-on Components 13**
 - 8.1 17-inch LCD Console Drawer 13
 - 8.2 KVM Switch 13
 - 8.3 Flash FDD..... 13
 - 8.4 Operating System..... 14
 - 8.5 Tower Conversion Kit..... 14
 - 8.6 Dust Proof Filter..... 14
 - 8.7 External Tape Drives 15
 - 8.8 Boot Mode Setup Option 18
- REFERENCES..... 19**
 - Server Management 19
 - Supported PCI Cards and Installable Slots20
 - Notes for using Hyper-V21
 - Copyright Notice and Liability Disclaimer.....23
- REVISION HISTORY 24**

Technical Specification

Key Features

- Fault tolerant technology based on GeminiArchitecture™
- Full manageability by integrated EXPRESSSCOPE Engine 3
- High performance with the latest Intel® Xeon® processor E5-2600 v3 product family
- Up to 512GB of high speed DDR4-1866 memory

Specification

Model	R320e-E4	
Part Number	N8800-201F	
Processor	Type	Intel® Xeon® processor E5-2630 v3
	Clock speed	2.40 GHz
	Logical Number of Processors	1 or 2
	Cache	20MB
	Cores and Threads	8C / 16T
Chipset	Intel® C612 Chipset with GeminiEngine™	
Memory	Type	DDR4-2133 Registered DIMM (8/16GB DIMM), DDR4-2400 Registered DIMM (32GB DIMM)
	Memory Clock	1866MHz
	Logical Standard Capacity	0GB
	Logical Maximum Capacity	512GB (16 x 32 GB)
	Memory protection	ECC, x4 SDDC
Internal Storage	Standard Capacity	0GB
	Maximum Logical Capacity	HDD : SAS 9.6 TB (8×1.2TB) SSD : SAS 1.6 TB (8×200GB)
	Disk Controller	SAS: 12Gb/s (Standard)
	RAID	SAS : RAID 1 (Standard)
	Hot Plug	Supported
	Optical Disk Drive	DVD Super Multi drive ¹
	Optical Drive Bays [free]	1 [0]
	Logical Disk Drive Bays [free]	8 [8]
Expansion Slots [free]	Standard	Total: 2 slots available 2 Low-profile PCIe x4 Gen 3 (x8 connector)
	Video	
Video	Controller (VRAM)	Integrated in Server Management Controller (32MB)
	Resolution / Color Supported	800 x 600,1024 x 768, 1280 x 1024, 1,600x1,200/ 16.7M
Interfaces	1 VGA (15-pin mini D-sub, 1 rear per system) 4 USB2.0 (1 front, 3 rear per system) 4 1000BASE-T LAN connector (RJ-45, 2 rear per module) 2 Management LAN connector (RJ-45, 1 rear per module) 2 USB3.0 (option, for backup devices) ²	
Server Management	EXPRESSSCOPE Engine 3	
Power Supply	2 x 800 Watt (1 per module, 80 PLUS® Platinum certified) 100-240 VAC ± 10% 50 / 60 Hz ± 3 Hz	

CONFIGURATION GUIDE – NEC EXPRESS5800/R320e-E4 / Windows Server model

Model	R320e-E4
Power Consumption (Max. Config, Operating)	1,430 VA / 1,420 Watt
Dimensions (W x D x H)	483.0 x 734.0 x 176 mm / 19.0 x 29.0 x 7.0 in (4U)
Weight (Minimum / Maximum)	45 kg / 51 kg, 99.21 lbs. / 112.44 lbs.
Temperature, Relative Humidity (non-condensing)	Operating: 10° to 40° C / 50° to 104° F, 20 to 80% Non-Operating: -10° to 55° C / 14° to 131° F, 20 to 80%
Regulatory and Safety	FCC, CE, BSMI, CCC, UL, CB, RoHS
Operating Systems	Microsoft® Windows Server® 2008 R2 Enterprise SP1 Microsoft® Windows Server® 2012 R2 Standard Microsoft® Windows Server® 2012 R2 Datacenter

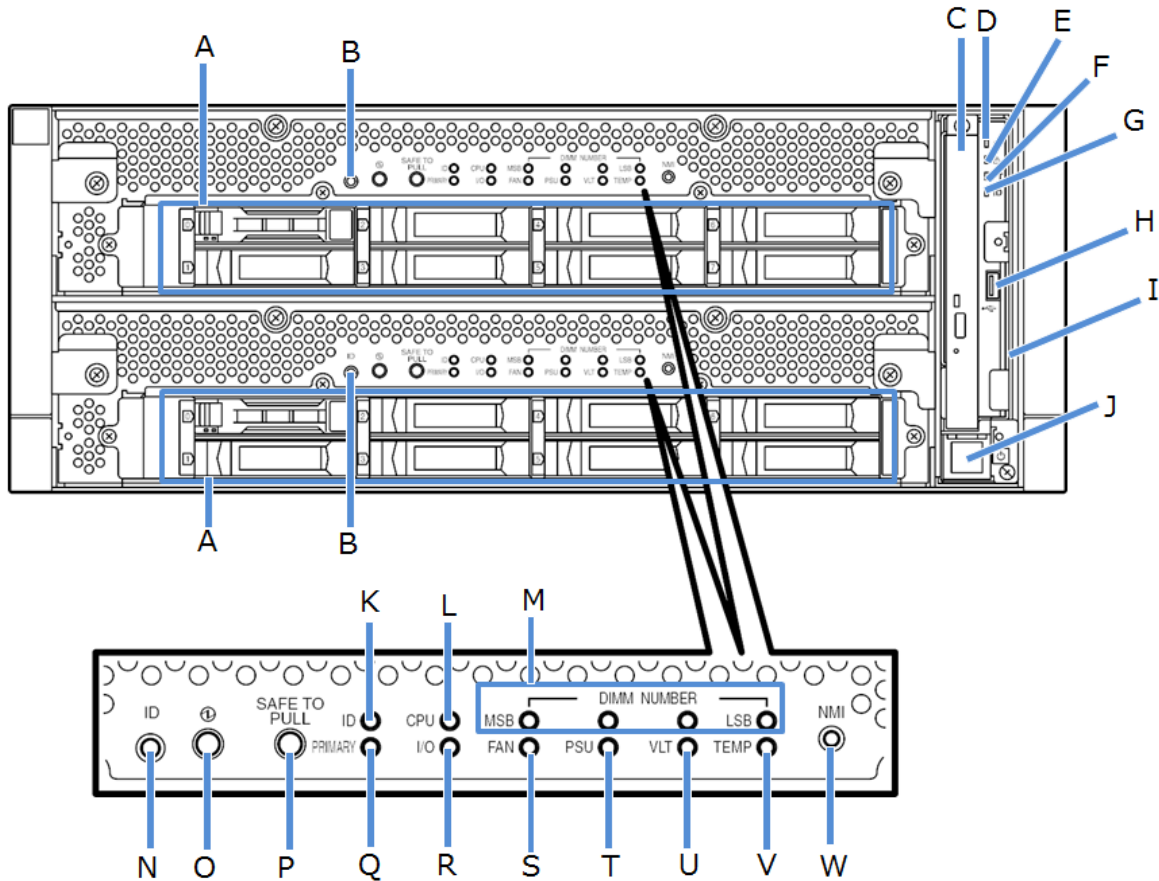
¹ Writing software is not provided for this DVD drive.

² The USB bus operates in USB 2.0 mode when the system is running with Windows Server 2008 R2 operating system.

External Views

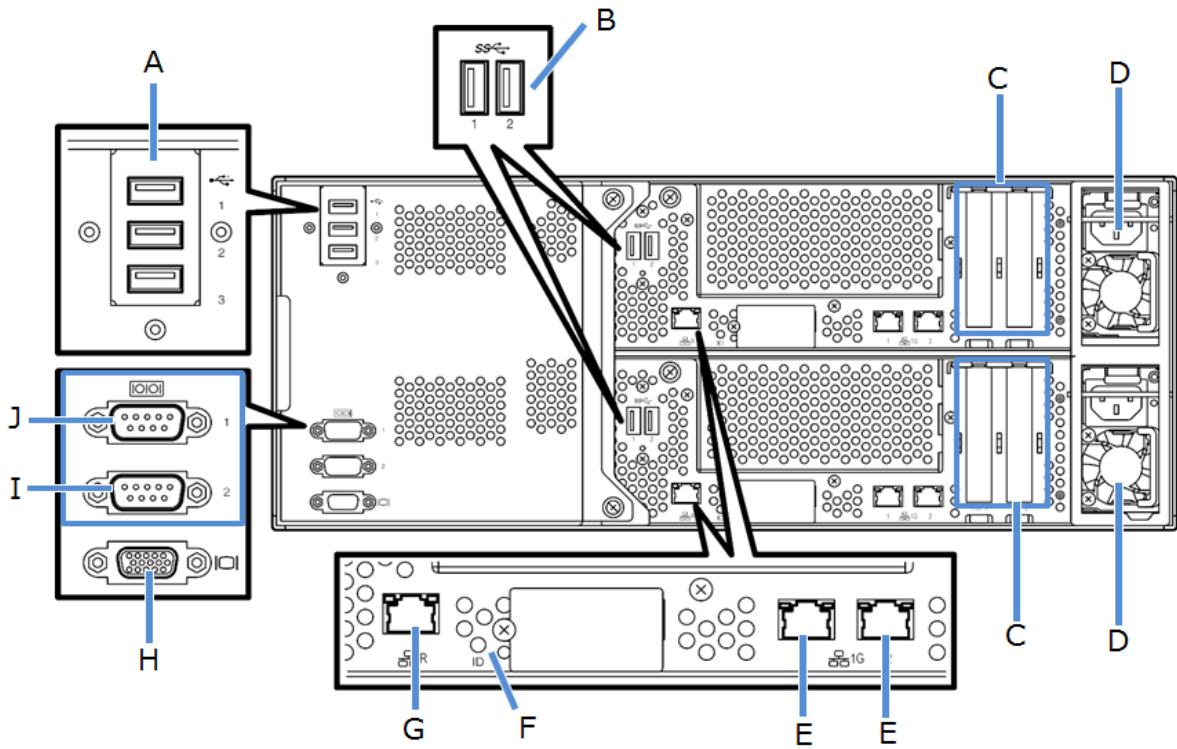
Front and Rear Views

Front View



Legend			
A.	Drive Bays	M.	Memory Fault LED
B.	UID Button	N.	UID Button
C.	DVD Super Multi Drive	O.	Module Power LED
D.	System Power LED	P.	SAFE TO PULL LED
E.	System Status LED	Q.	PRIMARY LED
F.	System FT LED	R.	IO Module Fault LED
G.	UID LED	S.	Fan Fault LED
H.	USB Connector	T.	PSU Fault LED
I.	Pull-out Tab	U.	DC Power Fault LED
J.	Power Button	V.	Temperature Fault
K.	Module ID LED	W.	NMI Button
L.	CPU Fault LED		

Rear View

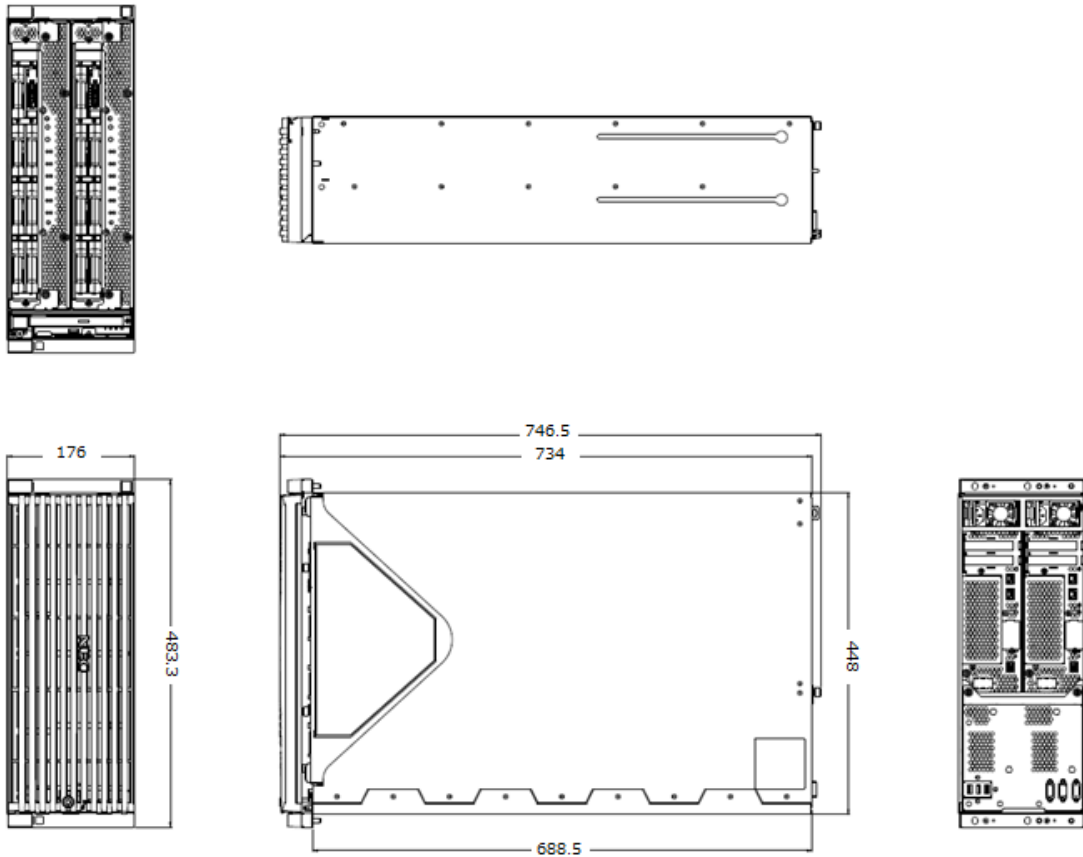


Legend			
A.	USB Connectors	F.	Module ID LED
B.	USB Connectors (option, for backup use)	G.	Management LAN Connector
C.	PCI Slots (Low-Profile)	H.	VGA Connector
D.	Power supply unit	I.J.	Serial Port Connector ¹
E.	Data LAN Connector		

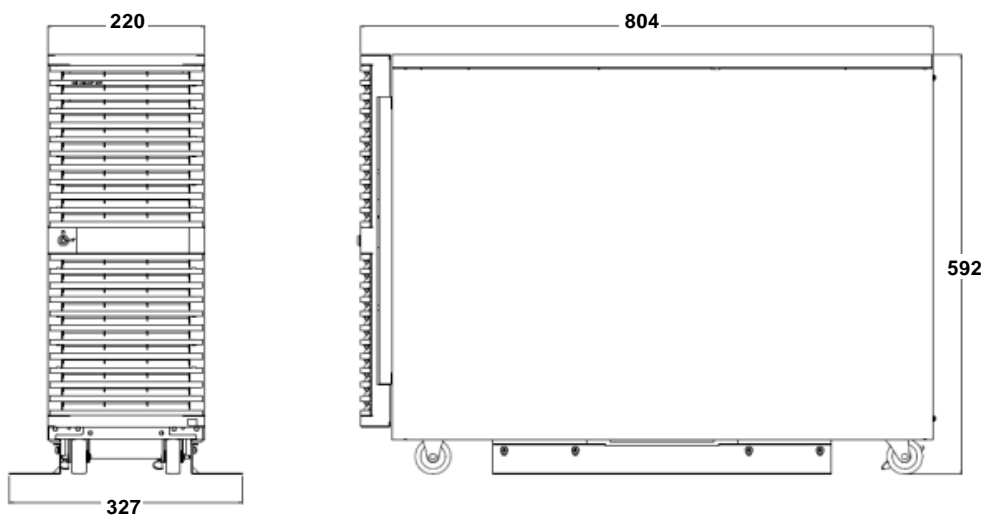
¹ For service personnel only.

Dimensions (mm)

Rack mount

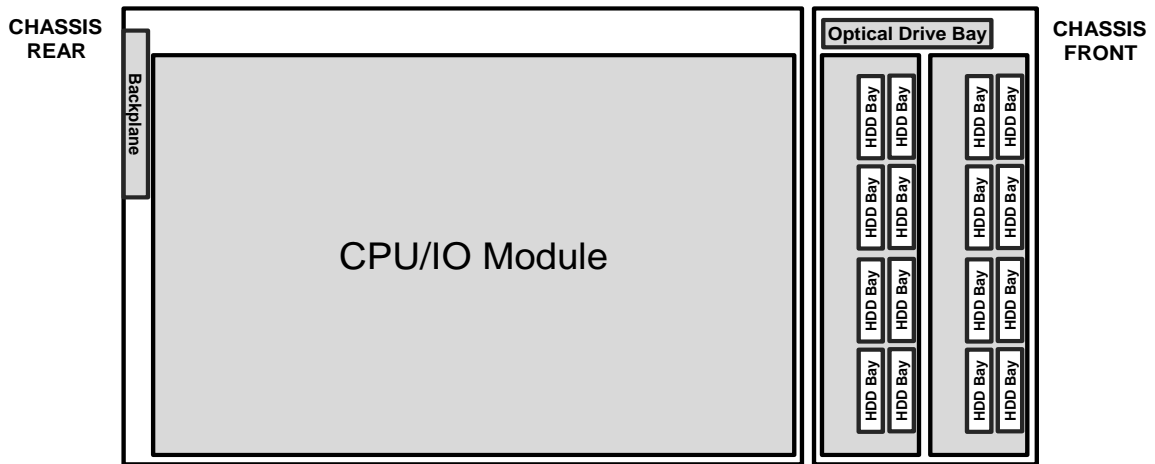


Tower Conversion (Optional)



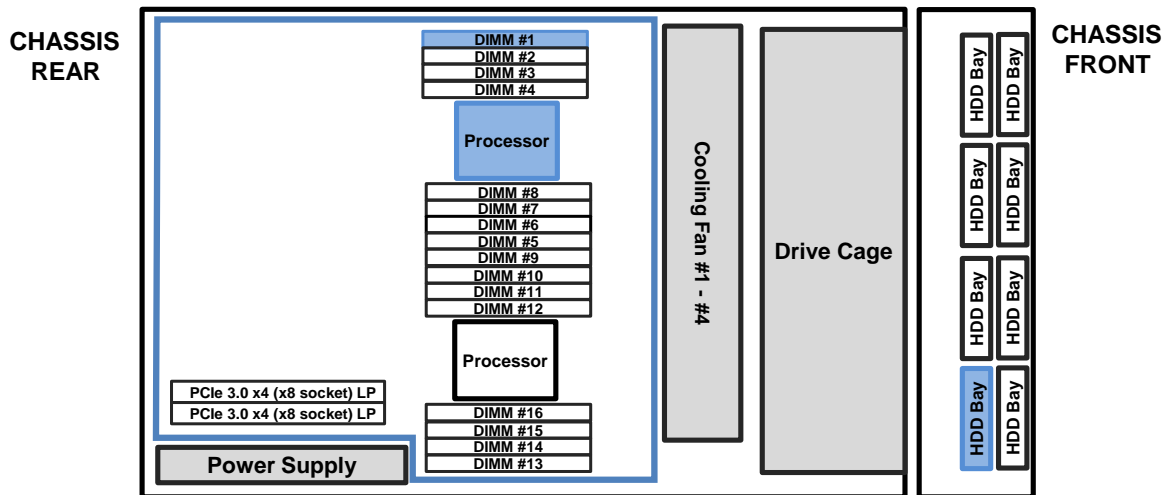
Configuration Diagram

Server

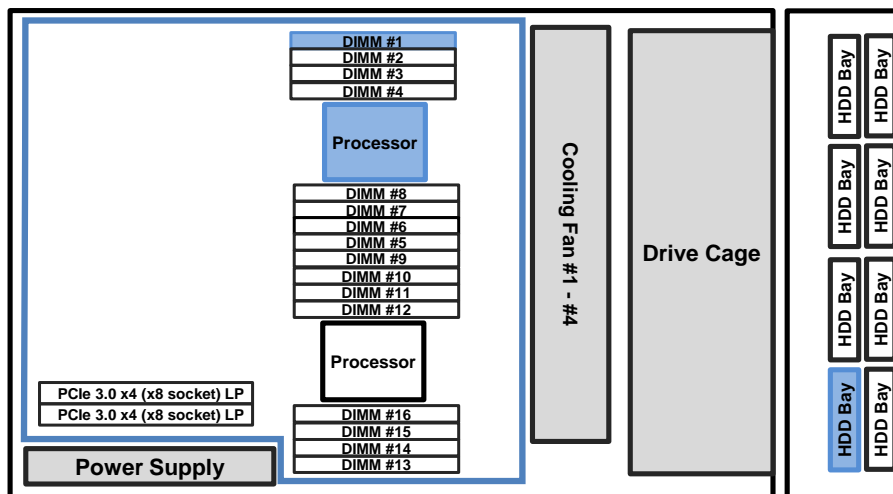


CPU/IO Module

CPU/IO module #0 :



CPU/IO module #1 :



Legend: Minimum required components Standard components

Server Configuration

1 Base Models

Product Name / Description	Part Number
Express5800/R320e-E4(8C/E5-2630v3) no RAM, no 2.5-inch HDD Including: Intel Xeon Processor E5-2630 v3, 1 x DVD Super Multi, EXPRESSBUILDER DVD	N8800-201F

2 2nd Processor

Available logical sockets: 1

Product Name / Description	Part Number
Xeon E5-2630v3 Processor Kit : 2.40 GHz / 8C-16T / 20 MB, 2 processors included	N8801-048

3 Memory

Available logical slots: 8 per processor

Product Name / Description	Part Number
8GB DDR4-1866 REG Memory Kit : 2 x 1 x 8GB DIMM included	N8802-063
64GB DDR4-1866 REG Memory Kit : 2 x 4 x 16GB DIMM included	N8802-064
128GB DDR4-2400 REG Memory Kit : 2 x 4 x 32GB DIMM included	N8802-068

NOTE:

- Minimum one memory kit must be installed.
- N8802-068 and N8802-065 can't be mixed.

Memory Configuration Guideline

See the table below for the number of memory kits required in accordance with logical main memory size and number of logical processors. Memory configurations which are not listed below are not supported in the system.

Number of Logical Processors	Logical Main Memory Size	Number of Memory Kits Required			
		8GB	64GB	128GB	
1	8GB ¹	1	-	-	
	16GB	2	-	-	
	24GB	3	-	-	
	32GB	4	-	-	
	48GB	6	-	-	
	64GB	8	-	-	
			-	1	-
	96GB	4	1	-	
	128GB	-	2	-	
			-	-	1
	256GB	-	-	2	
2	8GB ¹	1	-	-	
	16GB ¹	2	-	-	
	24GB ¹	3	-	-	
	32GB	4	-	-	
	48GB	6	-	-	
	64GB	8	-	-	
	96GB	12	-	-	
	128GB	16	-	-	
			-	2	-
	256GB	-	4	-	
			-	-	2
512GB	-	-	4		

¹ Interleave is not supported.

4 Internal Hard Disk Drives

Available bays: 8

Category	Product Name / Description	Part Number
SAS HDD	300GB 15K Hot Plug 2.5-inch SAS HDD : 1 x 300GB	N8850-063
	600GB 15K Hot Plug 2.5-inch SAS HDD : 1 x 600GB	N8850-064
	900GB 10K Hot Plug 2.5-inch SAS HDD : 1 x 900GB	N8850-065
	1.2TB 10K Hot Plug 2.5-inch SAS HDD : 1 x 1.2TB	N8850-066
SAS SSD (ME)	200GB Hot Plug 2.5-inch SSD: 1 x 200GB	N8850-067

NOTE:

- Hard drives must be installed in identical pairs to configure RAID 1.
- Storage pool and Thin Provisioning are not supported on Windows Server 2012 R2.

Required System Disk Capacity

See the table below for minimum required system disk capacity to store whole memory dump data.

It is recommended to install hard drives providing the minimum required system disk capacity to reduce the time to resynchronize after a hard drive replacement.

(For Microsoft® Windows Server® 2008 R2 Enterprise SP1)

Memory Size	Required System Disk Capacity	
	HDD	SSD
Up to 48GB	300GB	200GB
64GB		Not supported
96GB	600GB	
128GB to 256GB	900GB	
512GB	1.2TB	

(For Microsoft® Windows Server® 2012 R2 Standard / Datacenter)

Memory Size	Required System Disk Capacity	
	HDD	SSD
Up to 48GB	300GB	200GB
64GB		Not supported
96GB	600GB	
128GB	900GB	
256GB to 512GB	1.2TB	

Notes for BTO with SSD

The smallest capacity HDD/SSD is installed in the 1st HDD bay (as system disk) at factory.

- When the memory size is 64GB or more, system disk capacity should be at least 300GB. In that case, BTO with SSD is not possible. If you want to use 200GB SSD as data disk in such a system, order the 200GB SSD separately and install it later.

5 Optical Drive

Available bays: 1

Product Name / Description	Part Number
Internal DVD Super Multi Drive : 1 x DVD Super Multi drive, not including writing software	(Standard)

6 PCI Card

6.1 LAN Controller

Category	Product Name / Description	Part Number
LAN Controller	1000BASE-T 2ch board kit : 2 x GbE NIC Intel® Ethernet Server Adapter I350-T2V2	N8804-012
	10GBASE-T 1ch Adapter Kit : 2 x 10GbE NIC Intel® X540-T1 NOTE: - Up to one controller per module - FCoE functionality is not supported	N8804-011

NOTE:

- Be sure to use Intel PROset for network teaming. Do not use Windows Server 2012 R2 NIC Teaming (LBFO) since it may cause system trouble.
- For iSCSI (data) connection, NEC Storage M110, M310 are supported. For NEC Storage, contact your sales representative or refer to the NEC Storage WEB site. (<http://www.nec.com/global/prod/storage/>)

6.2 Fibre Channel / SAS Controller

Category	Product Name / Description	Part Number
Fibre Channel Controller	Fibre Channel 1ch Adapter Kit : 2 x FC Controller QLogic QLE2670 16Gbps Fibre Channel Adapters	N8803-040F
SAS Controller	SAS Controller : 1 x SAS Controller LSILogic SAS9300-8e 12Gbps Host Bus Adapter NOTE: - K410-322(02) SAS Cable is required for tape drive connection	N8803-041

NOTE:

- For supported NEC Storage products to connect with N8803-040F, contact your sales representative or refer to the NEC Storage WEB site. (<http://www.nec.com/global/prod/storage/>)

7 Other Add-in Components

7.1 Input Devices

Category	Product Name / Description	Part Number
Keyboard	USB Keyboard	N8870-002AF
Mouse	USB Optical Wheel Mouse	N8870-012
Cable	USB cable : 1.5m USB extension cable	K410-177(1A)

8 Add-on Components

8.1 17-inch LCD Console Drawer

Category		Product Name / Description	Part Number
Drawer w/ KVM Switch	Drawer	17-inch LCD Console Drawer (8port) 17-inch LCD, US 83-keys Keyboard, Optical mouse, 8 port KVM switch, 1U height, black	N8143-106F
	Cable	Switch Unit Connection Cable Set (USB, 1.8m) 1.8 m, 1 x 15-pin mini D-SUB to 1 x 15-pin mini D-SUB / 1 x 4-pin USB A	K410-118(1A)
		Switch Unit Connection Cable Set (USB, 3m) 3 m, 1 x 15-pin mini D-SUB to 1 x 15-pin mini D-SUB / 1 x 4-pin USB A	K410-118(03)
		Switch Unit Connection Cable Set (USB, 5m) 5 m, 1 x 15-pin mini D-SUB to 1 x 15-pin mini D-SUB / 1 x 4-pin USB A	K410-118(05)
Drawer w/o KVM Switch	Drawer	17inch LCD Console Unit 1U 17-inch LCD, US 83-keys Keyboard, Optical mouse, 1U height, 4-pin USB B to 4-pin USB A cable 2 m, PS/2 Y-splitter cable 2m, 15-pin mini D-sub VGA cable 2 m, black	N8143-105F
		17inch LCD Console Drawer (1port) 17-inch LCD, US 103-keys Keyboard with 10-key, Touch pad with 3-button, 1U height, 4-pin USB B to 4-pin USB A cable 1.8 m, Two PS/2 cable 1.8 m, 15-pin mini D-sub VGA cable 1.8 m, black	N8143-108F
	Keypad	Keyboard Unit (JP) JP 108-keys Keyboard with 10-key for N8143-108F 17inch LCD Console Drawer (1port)	N8143-109
		Keyboard Unit (UK) UK 104-keys Keyboard with 10-key, for N8143-108F 17inch LCD Console Drawer (1port)	N8143-111

8.2 KVM Switch

Category		Product Name / Description	Part Number
KVM Switch		Server Switch Unit (8 server) 1U USB 8 port KVM switch, black	N8191-14F
Cable	KVM	Switch Unit Connection Cable Set (USB,1.8m) 1.8 m, 1 x 15-pin mini D-sub to 1 x 15-pin mini D-sub / 1 x 4-pin USB A	K410-118(1A)
		Switch Unit Connection Cable Set (USB,3m) 3 m, 1 x 15-pin mini D-sub to 1 x 15-pin mini D-sub / 1 x 4-pin USB A	K410-118(03)
		Switch Unit Connection Cable Set (USB,3m) 5 m, 1 x 15-pin mini D-sub to 1 x 15-pin mini D-sub / 1 x 4-pin USB A	K410-118(05)
Cascading		Switch Unit Connection Cable 1.8 m 1.8 m, 1 x 15-pin mini D-sub - 1x 15-pin mini D-Sub / 2x PS/2	K410-119(1A)

8.3 Flash FDD

Order the Flash FDD if you need to prepare an alternative for a floppy drive.

Product Name / Description	Part Number
Flash FDD USB flash emulating USB floppy disk, Native capacity 1.44 MB	N8160-96

8.4 Operating System

License definition (Windows Server 2012 R2 downgrade from Windows Server 2016)

The basic way to understand Windows Server license definition of ft Server is not different from that of a general server. When invoking downgrade rights, the license definition is based on Windows Server 2016. It should be noted that licenses on ft Server are counted based on the number of physical cores, but when OS of OEM version is used, licenses are counted based on the number of cores mounted in one system on ft Server.

Attention is required, on the other hand, in the case with OS (such as PKG version and VL version) other than OEM version, the above special rule of core counting on one system is not applied.

The system of counting server license transitioned from “CPU-based license” to ”CPU core-based license”. If the configuration is within 2 CPUs with 16 cores, the rule of counting licenses are the same as before, however, if it exceeds 2 CPUs with 16 cores, the rule differs from before.

<Three rules>

1. All physical cores in the server are required to be licensed.
2. Each physical processor is required to be licensed with a minimum of 8 physical cores.
3. Each physical server is required to be licensed with a minimum of 16 physical cores.

[Ex.1] 8cores R320e-E4, 1CPU ' OEM version: 8 cores mounted on one system,
but 16 core licenses are required according to the rule 3.
other than OEM version: 16 core licenses are required for the cores mounted on both systems.

[Ex.2] 8cores R320e-E4, 2CPUs ' OEM version: 16 cores mounted on one system,
other than OEM version: 32 core licenses are required for the cores mounted on both systems.

8.5 Tower Conversion Kit

Product Name / Description	Part Number
Tower Conversion Kit 23 inch height pedestal with front bezel	N8843-005

8.6 Dust Proof Filter

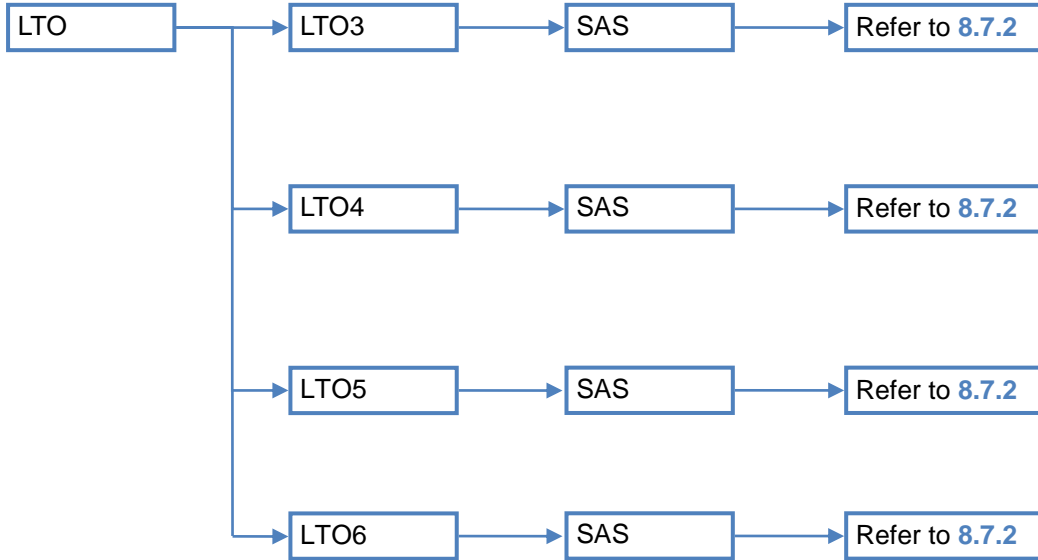
The server supports the dust resistant feature. Choose the following kit to install the system in dusty places.

Category	Product Name / Description	Part Number
Filter	4U-FT Dust Filter For R320e Dust Proof filter 10 pcs, attachment brackets for the front bezel included	N8847-002

8.7 External Tape Drives

8.7.1 Tape Drive Selection

Refer to the section in accordance with your type of tape drives.



8.7.2 LTO / SAS

Category	Product Name / Description	Part Number
Controller Required	SAS Controller 1 x LSI Logic SAS9300-8e 12Gb/s SAS, 8(SFF-8644), PCIe3.0(x8), Low Profile / Full Height	N8803-041
External Cable Required	External SAS cable 2 m, for Tape Drive Enclosure connection	K410-322(02)
Tape Enclosure Required	1U Device Expansion Unit 2 x 5-inch media bays	N8141-69F
Power Supply Recommended	Power Unit non-hot plug power supply	N8181-124F
Internal Cable	SAS Cable For 1U Device Expansion Unit internal connection NOTE: Required one per each tape drive.	K410-335(00)
Drive 2 bays available	Internal LTO (SAS) LTO3, Half height, Native capacity 400GB, black	N8151-126
	Internal LTO (SAS) LTO4, Half height, Native capacity 800GB, black	N8151-127
	Internal LTO (SAS) LTO5, Half height, Native capacity 1500GB, black	N8151-128
	Internal LTO (SAS) LTO6, Half height, Native capacity 2.5 TB, black	N8151-129
	Internal LTO (SAS) LTO7, Half height, Native capacity 6 TB, black	N8151-136

8.7.3 Notes for Double Backup

In a single backup configuration, in case a CPU/IO module or backup device fails, backup is not possible until the failed part is repaired or replaced. If this does not meet your system requirements, consider a double backup configuration.

Refer to the following notes on double backup configuration.

- When configuring two sets of a SAS controller, a SAS cable and a backup device, two backup devices are recognized separately by the OS. When scheduling an automatic backup job, make a job for each backup device so that the other backup device can backup in case one device fails.
- With BrightStor ARCserve Backup, backup is not executed if you enter an asterisk (*) in the group box under the destination tab when defining a job. Be sure to create two backup jobs by correctly selecting the device group for the group box, and entering an asterisk (*) or the name of the media in the media box.

8.7.4 Supported Backup Software

See the table below for the supported backup software on NEC EXPRESS5800/R320e.

For Microsoft® Windows Server® 2008 R2 Enterprise SP1

Tape drive		Backup software		
Product Name / Description	Part Number	Arcserve	Arcserve	Backup Exec
		Arcserve r16.5	Arcserve r17	Backup Exec 15
		WS2008R2	WS2008R2	WS2008R2
Internal LTO (SAS) LTO3, Native capacity 400 GB	N8151-102/126	✓ *a1	✓ *a1	✓ *b1
Internal LTO (SAS) LTO4, Native capacity 800 GB	N8151-90/127	✓ *a1	✓ *a1	✓ *b1
Internal LTO (SAS) LTO5, Native capacity 1.5 TB	N8151-103/128	✓ *a1	✓ *a1	✓ *b1
Internal LTO (SAS) LTO6, Native capacity 2.5 TB	N8151-106/129	✓ *a1	✓ *a1	✓ *b1
Internal LTO (SAS) LTO7, Native capacity 6 TB	N8151-136	-	-	-

*a1: Do not disable the tape driver on the device manager.

*b1: Do not install the Symantec driver. Apply the driver which comes with the tape drive.

NOTE:

- Disaster Recovery Option is not supported on the ft server system.

For Microsoft® Windows Server® 2012 R2 Standard / Datacenter

Tape drive		Backup software		
Product Name / Description	Part Number	Arcserve	Arcserve	Backup Exec
		Arcserve r16.5	Arcserve r17	Backup Exec 15
		WS2012 R2	WS2012 R2	WS2012 R2
Internal LTO (SAS) LTO3, Native capacity 400 GB	N8151-102/126	✓ *a1	✓ *a1	✓
Internal LTO (SAS) LTO4, Native capacity 800 GB	N8151-90/127	✓ *a1	✓ *a1	✓
Internal LTO (SAS) LTO5, Native capacity 1.5 TB	N8151-103/128	✓ *a1	✓ *a1	✓
Internal LTO (SAS) LTO6, Native capacity 2.5 TB	N8151-106/129	✓ *a1	✓ *a1	✓
Internal LTO (SAS) LTO7, Native capacity 6 TB	N8151-136	-	✓ *a1	✓

*a1: Do not disable the tape driver on the device manager.

NOTE:

- Disaster Recovery Option is not supported on the ft server system.

8.7.5 RDX

Category	Product Name / Description	Part Number
Internal Cable <i>Required</i>	Internal USB Cable 1 x Internal USB Cable for USB3.0	K410-349(00)
External Cable <i>Required</i>	External USB Cable 1.17 m, 1 x external USB3.0 to 1 x USB3.0 device, mount bracket included	K410-307(1A)
Tape Enclosure <i>Required</i>	1U Device Expansion Unit 2 x 5-inch media bays	N8141-69F
Power supply <i>Recommended</i>	Power Unit non-hot plug power supply	N8181-124F
Drive <i>Required</i>	Internal RDX (USB) RDX(USB), installed in N8141-69F 1U Device Expansion Unit	N8151-125

Data cartridge:

- RDX Cartridge (500GB) [N8153-02]
- RDX Cartridge (1TB) [N8153-03]
- RDX Cartridge (2TB) [N8153-09]
- RDX Cartridge (3TB) [N8153-10]

NOTE:

- The USB bus operates in USB 2.0 mode when the system is running with Windows Server 2008 R2 operating system.
- Do not boot the OS from RDX. Remove the RDX from boot order or set the lowest priority on the BIOS setup menu.
- The eject button may be disabled when the OS is running.
- NTFS is recommended as the file system. exFAT is not supported.
- For backup software, use Windows Server Backup, ARCserve Backup or Backup Exec.
- Please do not access RDX from the OS directly, since RDX connection is not duplicated. Be sure to use backup software.

8.8 Boot Mode Setup Option

Product Name / Description	Part Number
Boot Mode Setup Option (Legacy Mode) Setup option to change the OS Boot Mode to Legacy mode	NESV16-003

NOTE:

- As the default settings at the factory, UEFI mode is set as OS Boot mode. Order NESV16-003 Boot Mode Setup Option (Legacy Mode) for Windows Server 2008 R2 that requires Legacy Mode.

References

Server Management

The EXPRESSSCOPE Engine 3, integrated into the server, provides superior remote control and system management features listed in the table below.

Hardware monitoring	Temperature/voltage/power/fan /degeneration (memory/hard drive)	✓
	Hardware event log collection	✓
Boot monitoring	Booting, BIOS/POST stall, OS stall, shutdown	✓
Alerting	HW error, Boot error and OS panic (by SNMP, E-Mail)	✓
Remote KVM (via LAN)	POST/BIOS setup, DOS utility	✓
	Panic screen, Boot screen	✓
	Text-based screen (OS console)	✓
	GUI-based screen (OS console)	✓
Remote control (via LAN)	Remote reset/power on-off/ dump	✓
	OS shutdown	✓
	Remote media (CD/DVD/FD)	✓
	Server Management Command Line Protocol (DMTF compliant)	✓
	Remote control via Web browser (without dedicated app)	✓
	Remote batch	✓
	Scheduling (without UPS)	✓
Others	Set automatic IP address via DNS/DHCP	✓
Remote wakeup	Wake On LAN, Wake On Ring	✓
Centralized management	Monitoring and control of multiple servers	✓
Industry standard	IPMI	2.0

Supported PCI Cards and Installable Slots

Part Number	Product Name	Slots		Notes
	Slot # :	#1	#2	
	PCI Slot:	x4	x4	
	Card height:	LP	LP	
	Slot type:	x8	x8	
N8804-012	1000BASE-T 2ch board kit	✓	✓	
N8804-011	10GBASE-T 1ch board set	✓	✓	Max. 1
N8803-040F	Fibre Channel board kit	✓ ¹	✓ ¹	
N8803-041	SAS board	✓ ¹	✓ ¹	Max. 1

¹ Not installable when using Tower Conversion Kit.

Notes for using Hyper-V

Brief system interruption during synchronization process

In the synchronization process of CPU modules, a memory copy is performed to duplex memory on both CPU modules. Most of the memory area can be copied without interrupting the system through the so-called brownout copy method, and just a small portion requires the system to stop. However, with Hyper-V, the system cannot use the brownout copy method. Therefore, the system does not respond for a longer period of time during the synchronization process of the CPU modules than without Hyper-V. See the table below for the reference values of interruption during re-synchronization of CPU/IO modules in a Hyper-V system. It is recommended that your system design take the interruption into account.

Model / Memory Size	8GB	16GB	32GB	64GB	128GB	256GB	512GB
Express5800/R320e-E4	2sec	3sec	5sec	8sec	15sec	30sec	60sec
Express5800/R320e-M4	2sec	3sec	3sec	5sec	9sec	18sec	27sec

About Guest OS

Guest operating systems supported on NEC Express5800/ft series are the same as other Express5800 Servers. The tables below show the supported guest OS.

For Windows Server 2008 R2 Hyper-V

OS	Edition	SP
Windows Server 2008 R2 (x64)	Standard / Enterprise	RTM/SP1
Windows Server 2008 (x86/x64)	Standard / Enterprise	RTM/SP2
Windows Server 2003 R2 (x86/x64)	Standard / Enterprise	SP2
Windows Server 2003 (x86/x64)	Standard / Enterprise	SP2
Windows 2000 *1	Server / Advanced Server	SP4*2
Windows 7 (x86/x64)	Professional	RTM/SP1
Windows Vista (x86/x64)	Business	SP1/SP2
Windows XP (x64)	Professional	SP2
Windows XP (x86) *1	Professional	SP2/SP3
SUSE Linux Enterprise Server 10 (x86/x64)	-	SP3
Red Hat Enterprise Linux 5.2 - 5.5 (x86/x64)	-	-

*1: Microsoft support has already ended since July 13, 2010.

*2: Must be installed with the sp4-applied media

For Windows Server 2012 R2 Hyper-V

OS	Edition	SP
Windows Server 2012 R2 (x64)	Standard / Datacenter	RTM
Windows Server 2012 (x64)	Standard / Datacenter	RTM
Windows Server 2008 R2 (x64)	Standard / Enterprise	SP1
Windows Server 2008 (x86/x64)	Standard / Enterprise	SP2
Windows Server 2003 R2 (x86/x64)	Standard / Enterprise	SP2
Windows Server 2003 (x86/x64)	Standard / Enterprise	SP2
Windows 8.1 (x64)	Pro	RTM
Windows 8 (x86/x64)	Pro	RTM
Windows 7 (x86/x64)	Professional	SP1
Windows Vista (x86/x64)	Business	SP2
Windows XP (x64)	Professional	SP2
Windows XP (x86)	Professional	SP3

Backup

When using Hyper-V on a FT server, prepare a separate server for backup in the same way as for other general purpose servers with Hyper-V. For backup patterns, refer to each backup software company's web site.

NEC ESMPRO Agent

For monitoring guest operating systems, NEC ESMPRO Agent for Guest OS is required. Contact your sales representative for this software.

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For hard drive capacity measurements, 1 GB = 1 billion bytes. Actual formatted capacity is less.

Revision History

Revision	Date	Description
5.3	2017.12.01	Others: Windows Server 2012 R2 downgrade from Windows Server 2016
5.2	2017.10.31	New products added: 128GB DDR4-2400 REG Memory Kit / N8802-068 Discontinued product deleted: 128GB DDR4-1866 LR Memory Kit / N8802-065
5.1	2017.09.08	Others: Corrected the driver information to install Backup Exce 15 on Windows Server 2008 R2
5.0	2016.10.03	New products added: Internal LTO (SAS) / N8151-136 RDX Cartridge (3TB) / N8153-10
4.0	2016.8.19	Discontinued product deleted: RDX Cartridge (320GB) / N8153-01 Others: Corrected the specification table (Resolution / Color, Power Consumption) Added a note for Internal Hard Disk Drives Updated the Supported Backup Software information Removed External USB Cable / K410-197(00)
3.0	2016.4.27	Others: Changed the part number of Fibre Channel 1ch Adapter Kit N8803-040 to N8803-040F
2.1	2016.3.17	Others: Changed the required system disk capacity for Windows Server 2012 R2
2.0	2015.12.18	New products added: 1U Device Expansion Unit / N8141-69F Power Unit / N8181-124F Discontinued product deleted: 2U Tape Drive Enclosure / N8141-75F Power Supply / N8181-54F
1.0	2015.10.13	Initial release