



PRIMEQUEST 3800E2

System Configuration Guide

Feb. 26, 2024 Ver. 6.1

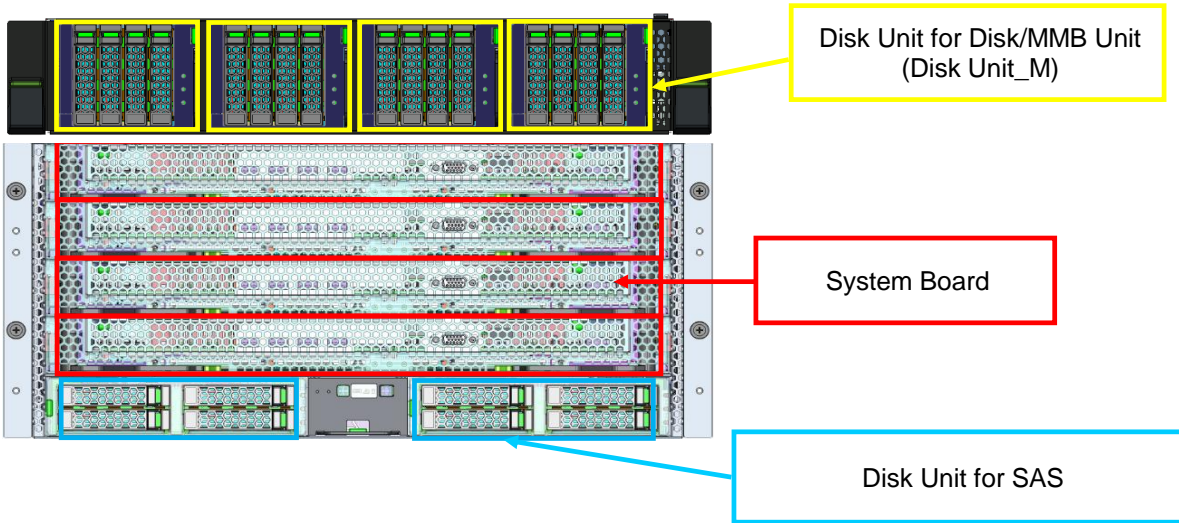
Contents

1. Overview
2. Base unit
3. System Board (SB)
4. CPU
5. Memory
6. MMB
7. I/O Unit
8. Disk Unit (DU)
9. HDD / SSD / PCIe-SSD
10. Power Supply Unit (PSU), Power Cords
11. PCI Box
12. PCI Card
13. Rack Installation
14. Maximum Quantity of PCIe Cards
15. Available OS
16. Restrictions
Change Report

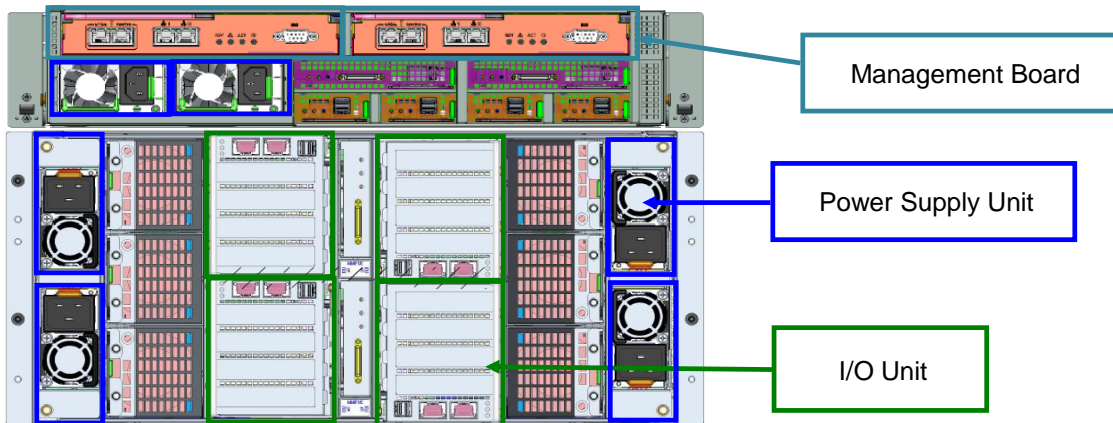
1. Overview

Feb. 26, 2024 Ver. 6.1

Front side

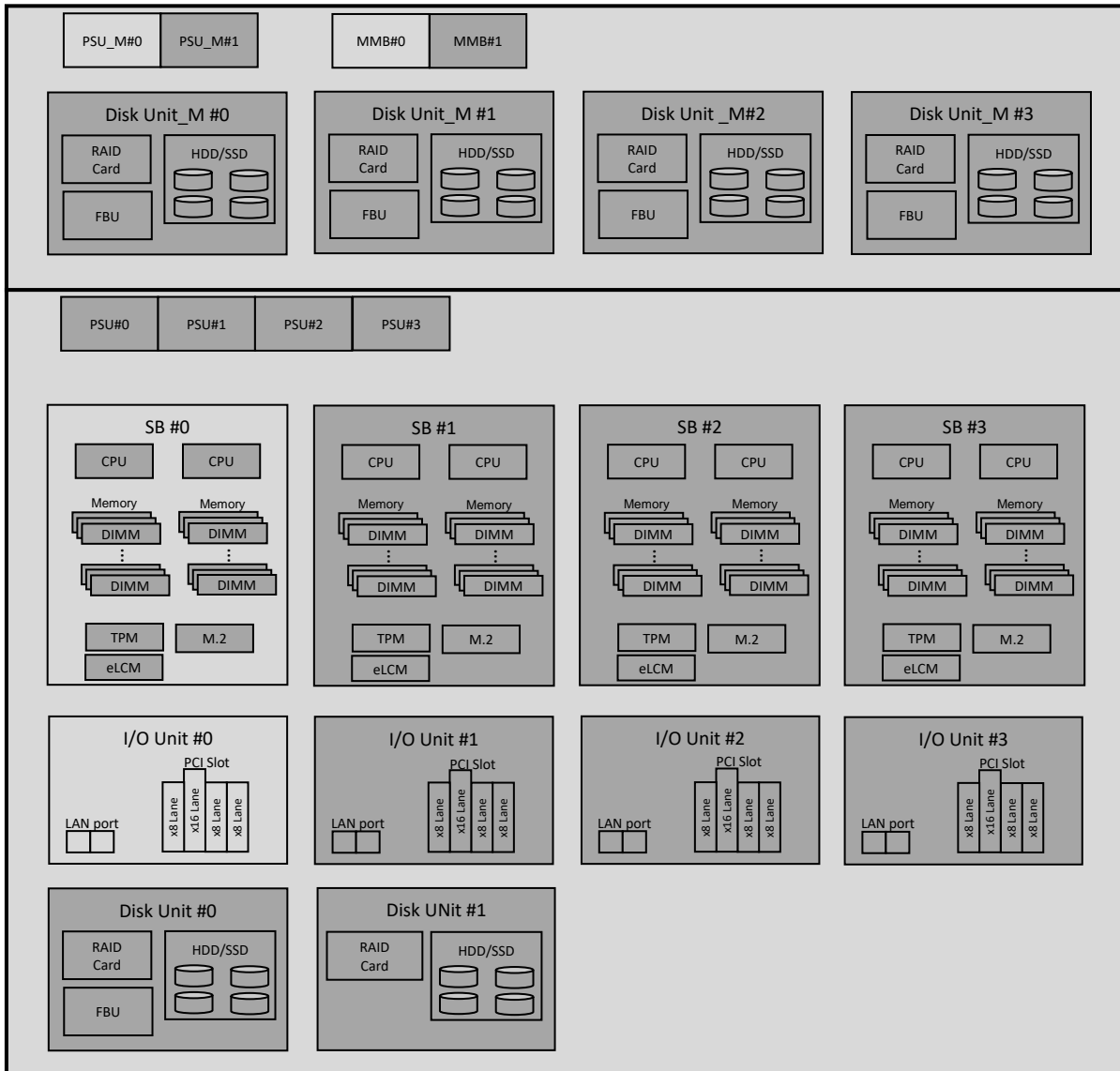


Rear side



Configuration Diagram

Feb. 26, 2024 Ver. 6.1

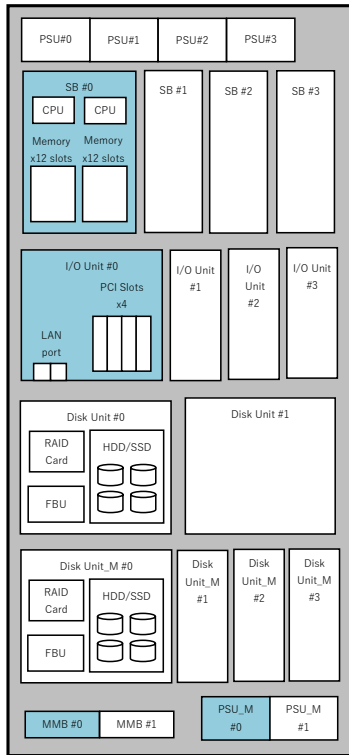


 Light gray color components Included in Base Unit.

 Dark gray color components are optional.

2.Base Unit

Feb. 26, 2024 Ver. 6.1



Part Numbers Legend:

Part numbers:

MX-***** is a Build-to-Order (BTO) option to be assembled with Base Unit

MCX-***** is an option to be shipped separately from Base Unit (Loose Delivery)

The following options are NOT included in the Base Unit.
 - CPU, Memory, PSU, power cord

The following components are included in the Base Unit.
 - 1x System Board
 - 1x I/O Unit
 - 1x PSU_M
 - 1x Rack Mount Kit
 - 1x MMB

PRIMEQUEST 3800E2 Base Unit
MCK3AC111

- Rack mount type
- 1x System Board is included in the Base Unit, Max. 4x System Boards can be mounted.
- 1x I/O Unit is included in the Base Unit, Max. 4x I/O Units can be mounted.
- Max. 4 x PCI Boxes can be connected.
- 1 x MMB is included. An additional MMB can be mounted for redundancy.
- 2 x LAN ports per MMB
- PSUs need to be ordered, Max. 4x PSUs can be mounted.
- 1x PSU_M is included in the Base Unit, Max. 2x PSU_Ms can be mounted.
- Power cords need to be ordered. The quantity is equal to the quantity of PSUs and PSU_Ms.
- Rack space : 7U

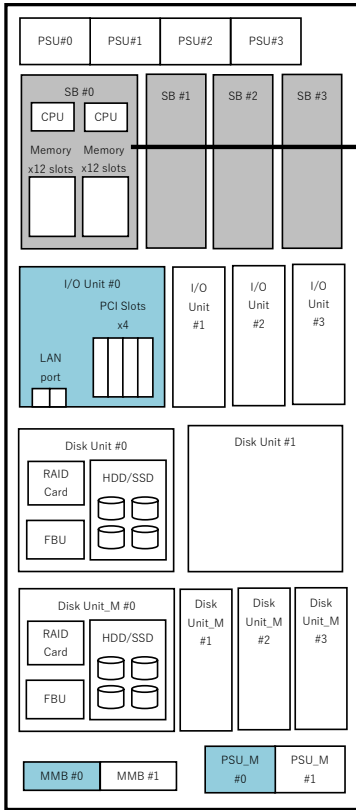
Advanced Thermal Design Option
MC-0PTH2
 Operating temperature of up to 40°C

When this option is selected, CPUs exceeding 165W can

→ System Board

3. System Board (SB)

Feb. 26, 2024 Ver. 6.1



1x System Board is included in the Base Unit.
Max. 4x System Board can be mounted per Base Unit.

System Board
MC-3HSBD1 / MCX3HSBD1 (LD)

- Min. 1 x SB needs to be mounted. Max. 4 x SB can be mounted per Base Unit.
- The System Board does not include a security chip called TPM.
- Neither CPU nor memory module is included. CPU and memory need to be ordered separately.
- Min. 2 x CPU and 2 x memory module need to be mounted on each System Board.
- Max. 12 x memory modules (24 x DIMMs) can be mounted.

The following options can be install in home SB.

eLCM Activation License (no load)
MC-6KMA11 / MCX6KMA11 (LD)

- For PRIMEQUEST 3800E2
- One License per Partition (Home SB)

The following functions are NOT available for the System Board with TPM.

- Reserved SB

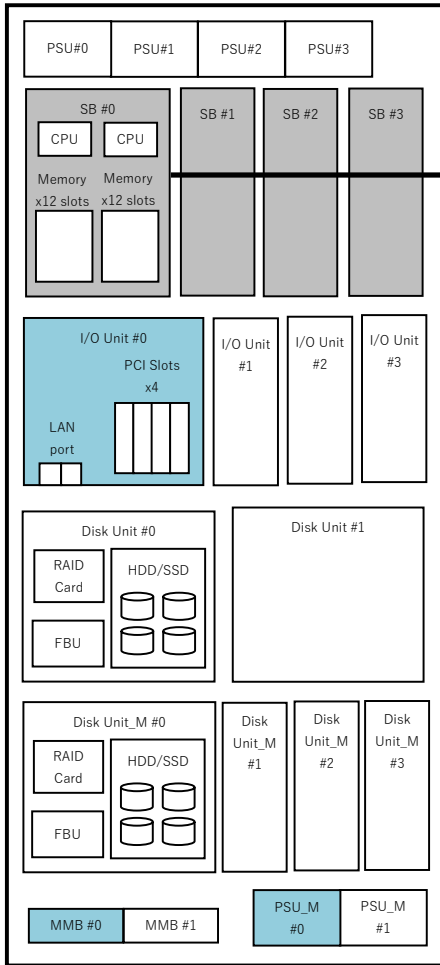
TPM module V2.0
MC-6HTP51 / MCX6HTP51(LD)

- Available except for China
- One for Partition (Home SB)

→ **USB Flash Device & M.2 Flash Device**

USB Flash Device & M.2 Flash Device

Feb. 26, 2024 Ver. 6.1



Only one type of the following options can be installed on each System Board.

USB Flash Device 64GB Dual
MC-5FA411 / MCX5FA411(LD)
 - 2x 64GB micro SD card, HW mirrored

M.2 Flash Device (VMware, 240GB)
MC-5FB781 / MCX5FB781 (LD)
 - 1 x M.2 Flash Devices can be mounted for VMware boot only
 - DWPD : 1.5

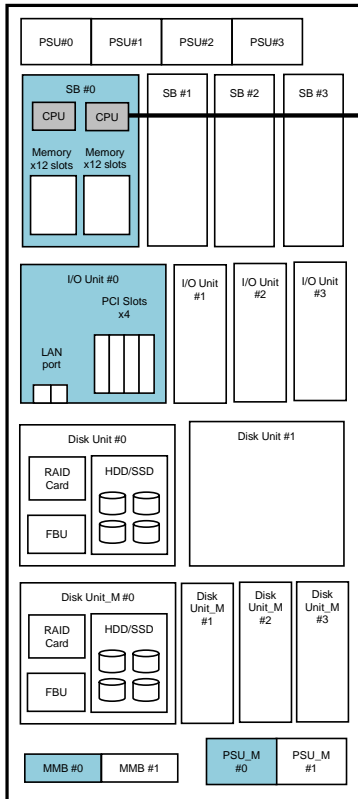
M.2 Flash Device 480GB
MC-5FB7B1 / MCX5FB7B1 (LD)
 - Max 2 x M.2 Flash Device can be mounted for except VMware
 - DWPD : 1.5

M.2 Flash Device 240GB
MC-5FB791 / MCX5FB791 (LD)
 - Max 2 x M.2 Flash Device can be mounted for except VMware
 - DWPD : 1.5

→ CPU

4.CPU

Feb. 26, 2024 Ver. 6.1



- 2x CPUs required for one System board except PPAR with 1SB.
- Combinatios of PPAR is only "SB#0 and SB#1" or "SB#2 and SB#3" when Gold 62xx is mounted on SB.
- Can not mix different CPUs in one partition.
- CPUs with number 'xxxxL' support up to 4.5TB of memory.
- CPUs with number 'xxxxM' support up to 2TB of memory.

*(Number of cores / Frequency / Max. memory per CPU / TDP)

Intel Xeon Platinum 8280L Processor (28C/2.7GHz/4.5TB/205W)	
MC-3BJA41 / MCX3BJA41 (LD)	
Intel Xeon Platinum 8280 Processor (28C/2.7GHz/1TB/205W)	
MC-3BJA11 / MCX3BJA11 (LD)	
Intel Xeon Platinum 8276L Processor (28C/2.2GHz/4.5TB/165W)	
MC-3BKA41 / MCX3BKA41 (LD)	
Intel Xeon Platinum 8276 Processor (28C/2.2GHz/1TB/165W)	
MC-3BKA11 / MCX3BKA11 (LD)	
Intel Xeon Platinum 8270 Processor (26C/2.7GHz/1TB/205W)	
MC-3BKB11 / MCX3BKB11 (LD)	
Intel Xeon Platinum 8268 Processor (24C/2.9GHz/1TB/205W)	
MC-3BJC11 / MCX3BJC11 (LD)	
Intel Xeon Platinum 8260L Processor (24C/2.4GHz/4.5TB/165W)	
MC-3BKC41 / MCX3BKC41 (LD)	
Intel Xeon Platinum 8260 Processor (24C/2.4GHz/1TB/165W)	
MC-3BKC11 / MCX3BKC11 (LD)	
Intel Xeon Platinum 8253 Processor (16C/2.2GHz/1TB/125W)	
MC-3BKG11 / MCX3BKG11 (LD)	
Intel Xeon Platinum 8256 Processor (4C/3.8GHz/1TB/105W)	
MC-3BKN11 / MCX3BKN11 (LD)	

CPU mounting condition

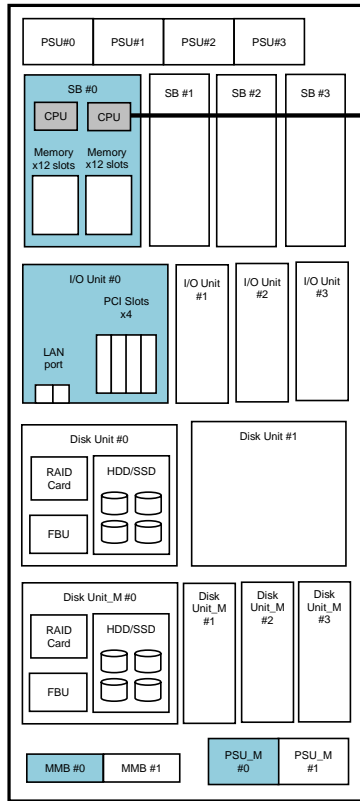
# of SBs in one PPAR	# of CPUs in one PPAR
1SB	1 or 2
2SB	4
3SB	6
4SB	8

- 1 CPU/SB can be configured PPAR that has 1SB only.
- 1CPU/PPAR can be connected IOU0 and/or IOU1 only.
- Only the same kind of CPU can be installed in the partition.
- Different types of CPUs can be installed in the different partitions.

→ CPU(2)

4.CPU

Feb. 26, 2024 Ver. 6.1



- 2x CPUs required for one System board except PPAR with 1SB.
- Combinatio of PPAR is only "SB#0 and SB#1" or "SB#2 and SB#3" when Gold 62xx is mounted on SB.
- Can not mix different CPUs in one partition.
- CPUs with number 'xxxxL' support up to 4.5TB of memory.
- CPUs with number 'xxxxM' support up to 2TB of memory.

*(Number of cores / Frequency / Max. memory per CPU / TDP)

Intel Xeon Gold 6262V Processor (24C/1.9GHz/1TB/135W)	
MC-3BRC11 / MCX3BRC11 (LD)	
Intel Xeon Gold 6254 Processor (18C/3.1GHz/1TB/200W)	
MC-3BMF11 / MCX3BMF11 (LD)	
Intel Xeon Gold 6252 Processor (24C/2.1GHz/1TB/150W)	
MC-3BNC11 / MCX3BNC11 (LD)	
Intel Xeon Gold 6248 Processor (20C/2.5GHz/1TB/150W)	
MC-3BNE11 / MCX3BNE11 (LD)	
Intel Xeon Gold 6246 Processor (12C/3.3GHz/1TB/165W)	
MC-3BSJ11 / MCX3BSJ11 (LD)	
Intel Xeon Gold 6244 Processor (8C/3.6GHz/1TB/150W)	
MC-3BNL11 / MCX3BNL11 (LD)	
Intel Xeon Gold 6242 Processor (16C/2.8GHz/1TB/150W)	
MC-3BNG11 / MCX3BNG11 (LD)	
Intel Xeon Gold 6240L Processor (18C/2.6GHz/4.5TB/150W)	
MC-3BNF41 / MCX3BNF41 (LD)	
Intel Xeon Gold 6240 Processor (18C/2.6GHz/1TB/150W)	
MC-3BNF11 / MCX3BNF11 (LD)	
Intel Xeon Gold 6238L Processor (22C/2.1GHz/4.5TB/140W)	
MC-3BND41 / MCX3BND41 (LD)	
Intel Xeon Gold 6238 Processor (22C/2.1GHz/1TB/140W)	
MC-3BND11 / MCX3BND11 (LD)	
Intel Xeon Gold 6234 Processor (8C/3.3GHz/1TB/130W)	
MC-3BPL11 / MCX3BPL11 (LD)	
Intel Xeon Gold 6230 Processor (20C/2.1GHz/1TB/125W)	
MC-3BRE11 / MCX3BRE11 (LD)	
Intel Xeon Gold 6226 Processor (12C/2.7GHz/1TB/125W)	
MC-3BNJ11 / MCX3BNJ11 (LD)	
Intel Xeon Gold 6222V Processor (20C/1.8GHz/1TB/115W)	
MC-3BPE11 / MCX3BPE11 (LD)	

CPU mounting condition

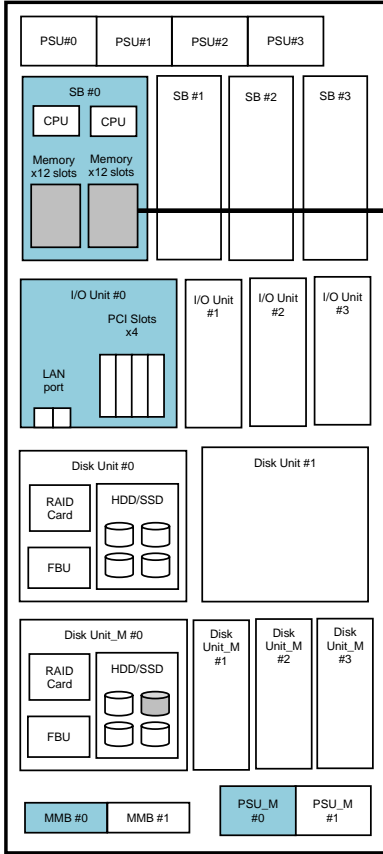
# of SBs in one PPAR	# of CPUs in one PPAR
1SB	1 or 2
2SB	4
3SB	6
4SB	8

- 1 CPU/SB can be configured PPAR that has 1SB only.
- 1CPU/PPAR can be connected IOU0 and/or IOU1 only.
- Only the same kind of CPU can be installed in the partition.
- Different types of CPUs can be installed in the different partitions.

Memory

5.Memory

Feb. 26, 2024 Ver. 6.1



- At least one set of memory (2 DIMMs) must be installed for each CPU.
 - Max 6 sets of memory (12 DIMMs) can be installed for each CPU.

32GB Memory (16GB 1Rx4 DDR4 RDIMM x2)	MC-3CE611 / MCX3CE611 (LD)
64GB Memory (32GB 2Rx4 DDR4 RDIMM x2)	MC-3CE711 / MCX3CE711 (LD)
128GB Memory (64GB 2Rx4 DDR4 RDIMM x2)	MC-3CE811 / MCX3CE811 (LD)
128GB Memory (64GB 4Rx4 DDR4 LRDIMM x2)	MC-3CE821 / MCX3CE821 (LD)
256GB Memory (128GB 8Rx4 DDR4 LRDIMM 3DS x2)	MC-3CE911 / MCX3CE911 (LD)
512GB Memory (256GB 8Rx4 DDR4 LRDIMM 3DS x2)	MC-3CEA11 / MCX3CEA11 (LD)
* 256GB 8R LRDIMM can not be installed on a CPU with a memory limit of 1TB.	
128GB DDR-T DCPMM(NVM/LRDIMM)	MC-3CK811 / MCX3CK811(LD)
256GB DDR-T DCPMM(NVM/LRDIMM)	MC-3CK911 / MCX3CK911(LD)
512GB DDR-T DCPMM(NVM/LRDIMM)	MC-3CKA11 / MCX3CKA11(LD)

If configuration of PRIMEQUEST3800E2 includes a DCPMM, it is necessary to check validity of DCPMM installation.
 For request of configuration check, please submit request to the contact point for PRIMEQUEST.
fj-pq-tech@dl.jp.fujitsu.com

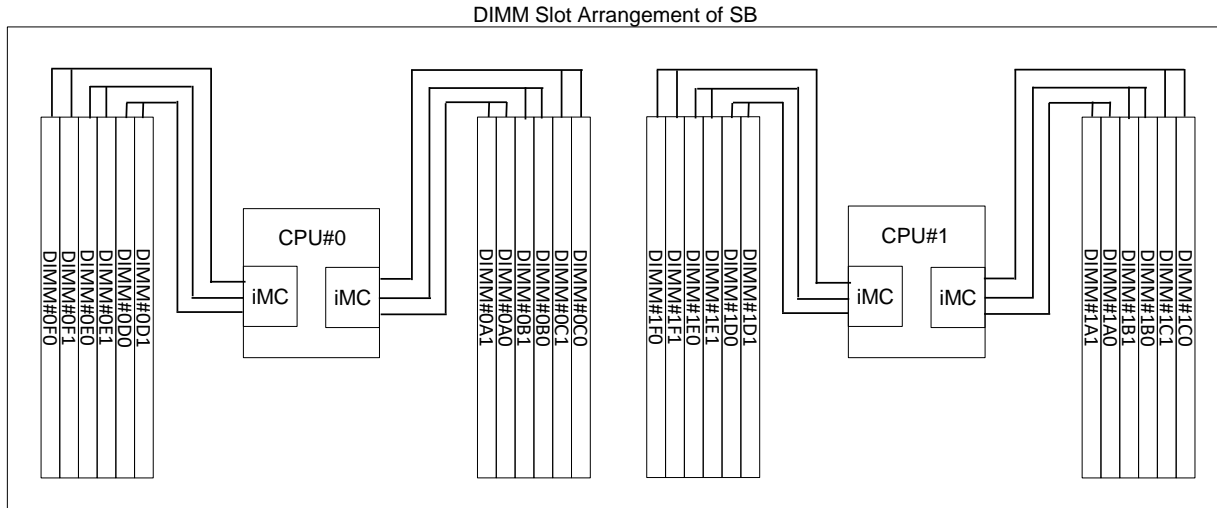
Memory Mounting

Memory Mounting

Feb. 26, 2024 Ver. 6.1

1. Memory and DIMM slots

- (1) Memory module for PRIMEQUEST is composed of 2 x DIMMs.
- (2) At least 2 DIMMs have to be installed in one CPU (4 DIMMs in one SB) in Normal mode and Spare mode, 4 DIMMs have to be installed in one CPU (8 DIMMs in one SB) in Mirror mode.
- (3) Up to 12 DIMMs can be installed in each CPU.
- (4) DIMM Slot Arrangement of SB is shown below.
DIMM#xx0 is farther Slots and DIMM#xx1 is nearer Slots among the six DIMM Slots connected to the iMC.



MSC : Memory Scale-up Controller on MSB
iMC : Memory Controller

2. Memory Mounting Conditions

- (1) A mixture of different type of memory is not possible in the system.
The exception is a combination of 16GB RDIMM and 32GB RDIMM, which is possible to mix in the system.
- (2) Units of memory expansions : One set (2 DIMMs) for one CPU in Normal Mode and Spare Mode, 2 sets (4 DIMMs) for one CPU in Mirror Mode.

3. Memory Support for Operating Systems of PRIMEQUEST 3800E2

Operating System	Max. Memory Capacity (TB)
Microsoft® Windows Server® 2016 (Standard / Datacenter) Microsoft® Hyper-V Server 2016	3
Microsoft® Windows Server® 2019 (Standard / Datacenter) Microsoft® Hyper-V Server 2019	3
Red Hat® Enterprise Linux® 7	12
SUSE® Linux Enterprise Server 12	24
SUSE® Linux Enterprise Server 15	24
VMware vSphere® 6.5	4
VMware vSphere® 6.7	4



Memory Mounting 2

Feb. 26, 2024 Ver. 6.1

DIMM mounting order on System Board

At least one AEP DIMMs have to be installed in one CPU.

DDR4 DIMM installation order

The order of DIMM installation is shown in the following table. DIMMs are installed in order from one with small number.

Memory Mode	Lockstep	CPU#0						CPU#1						Remark
		iMC#0			iMC#1			iMC#0			iMC#1			
		0A0	0B0	0C0	0D0	0E0	0F0	1A0	1B0	1C0	1D0	1E0	1F0	
Normal	Disabled	0A1	0B1	0C1	0D1	0E1	0F1	1A1	1B1	1C1	1D1	1E1	1F1	(*3)
		1	2	4(*1), 8	1	2	4(*1), 8	1	3	5(*1), 9	1	3	5(*1), 9	
	Enabled	6	6(*2)	10	6	6(*2)	10	7	7(*2)	11	7	7(*2)	11	(*3)
		1	4	8	2	6	10	1	5	9	3	7	11	
Spare	Disabled	1	4	8	2	6	10	1	5	9	3	7	11	(*3)
		1	4	8	2	6	10	1	5	9	3	7	11	
	Enabled	-	-	-	-	-	-	-	-	-	-	-	-	
		-	-	-	-	-	-	-	-	-	-	-	-	
Full Mirror/ Address Range Mirror	Disabled	1	1	4	1	1	4	1	1	5	1	1	5	
		2	2	4	2	2	4	3	3	5	3	3	5	
	Disabled (768GB CPU)	1	1	2	1	1	2	1	1	3	1	1	3	(*4)
		-	-	-	-	-	-	-	-	-	-	-	-	
Enabled	-	-	-	-	-	-	-	-	-	-	-	-		
	-	-	-	-	-	-	-	-	-	-	-	-		

(*1)(*2) In the case of four DIMMs in iMC, remove DIMM installed in (*1) slot and then install DIMM to (*2) slot.

(*3) When the CPU which memory capacity is 768GB is installed, 128GB DIMM can be installed up to number 5 and cannot be installed after number 6.

(*4) Only when the CPU which memory capacity is 768GB and 128GB DIMM are installed together, this installation order is applied.

Memory Mixed Condition

Feb. 26, 2024 Ver. 6.1

Which size of DIMM can be installed together in a DDR CH or an SB are shown in the following tables.

The type of the DIMM mixed installation condition for each DIMM.

	16GB 1R RDIMM	32GB 2R RDIMM	64GB 2R RDIMM	64GB 4R LRDIMM	128GB 8R LRDIMM (3DS)	256GB 8R LRDIMM (3DS)
16GB 1R RDIMM	-	YES (*1)	YES (*1)			
32GB 2R RDIMM	YES (*1)	-	YES (*1)			
64GB 2R RDIMM	YES (*1)	YES (*1)	-			
64GB 4R LRDIMM				-		
128GB 8R LRDIMM(3DS)					-	YES
256GB 8R LRDIMM(3DS)					YES	-

YES: Mixable in DDR CH/SB/Partition

Blank: Not Mixable in DDR CH/SB/Partition

"-": Same DIMM

(*1) When RDIMM or LRDIMM other than 3DS with different rank number is populated together within a DDR channel, the DIMM with largest rank number must be populated at far side and the DIMM with smallest rank number must be populated at near side.

Mixable conditions

	Yes (Mixable in DDR CH)	"-" (Mixable in DDR CH)	Blank (Not Mixable in Partition)
DDR CH	YES	YES	
SB	YES	YES	
Partition	YES	YES	
System	YES	YES	YES

YES: Mixable in DDR CH/SB/Partition

Blank: Not mixable in DDR CH/SB/Partition

Memory Mixed Installation Condition

Feb. 26, 2024 Ver. 6.1

DIMM mixed installation conditions are shown in the following table.
 Same symbols mean that same DIMMs can be installed which is defined in the table below.
 Different symbols mean that different DIMMs can be mixed.

DIMM mixed installation condition.

Memory Mode	Lockstep	CPU#0						CPU#1					
		iMC#0			iMC#1			iMC#0			iMC#1		
		0A0	0B0	0C0	0D0	0E0	0F0	0A0	0B0	0C0	0D0	0E0	0F0
		0A1	0B1	0C1	0D1	0E1	0F1	0A1	0B1	0C1	0D1	0E1	0F1
Normal	Disabled	□	△	○	☆	▽	◇	■	▲	●	★	▼	◆
	Enabled	♠	♥	♣	♠	♥	♣	♠	♥	♣	♠	♥	♣
Sparing	Disabled	□	△	○	☆	▽	◇	■	▲	●	★	▼	◆
	Enabled	Not Supported											
Full Mirror (Mirror Keep) / Address Range Mirror	Disabled	□	□	□	△	△	△	■	■	■	▲	▲	▲
	Enabled	○	○	○	☆	☆	☆	●	●	●	★	★	★
Full Mirror (Capacity Keep)	Disabled	□	□	□	□	□	□	□	□	□	□	□	□
	Enabled	Not Supported											

Mixing condition shown contains installation conditions about near side and far side in DDR CH.
 When RDIMM or LRDIMM other than 3DS with different rank number is populated together within a DDR channel, the DIMM with largest rank number must be populated at far side and the DIMM with smallest rank number must be populated at near side.

DCPMM(NVM/LRDIMM) installation pattern

Feb. 26, 2024 Ver. 6.1

The mountable number of DCPMM is in the range of one to six per CPU.

The following table shows the installation pattern of DDR4 DIMMs and DCPMMs allowed by Fujitsu.

DCPMM installation pattern within CPU

Mode	Pattern	CPU#0						Remark
		iMC#0			iMC#1			
		0A0	0B0	0C0	0D0	0E0	0F0	
		0A1	0B1	0C1	0D1	0E1	0F1	
AD	2-2-2	DRAM1	DRAM1	DRAM1	DRAM1	DRAM1	DRAM1	(*1) Symmetric Any DRAM
		DCPMM1	DCPMM1	DCPMM1	DCPMM1	DCPMM1	DCPMM1	
MM	2-2-2	DRAM1	DRAM1	DRAM1	DRAM1	DRAM1	DRAM1	(*1) Symmetric Any DRAM
		DCPMM1	DCPMM1	DCPMM1	DCPMM1	DCPMM1	DCPMM1	
AD+MM	2-2-2	DRAM3	DRAM3	DRAM3	DRAM3	DRAM3	DRAM3	(*1) Symmetric Except for 3DS LRDIMM
		DCPMM1	DCPMM1	DCPMM1	DCPMM1	DCPMM1	DCPMM1	
AD	2-1-1	DRAM1	DRAM1	DRAM1	DRAM1	DRAM1	DRAM1	(*1) Symmetric Any DRAM
		DCPMM1	-	-	DCPMM1	-	-	
MM	2-1-1	DRAM2	DRAM2	DRAM2	DRAM2	DRAM2	DRAM2	(*1) Symmetric RDIMM only (16 or 32GB)
		DCPMM1	-	-	DCPMM1	-	-	
AD+MM	2-1-1	DRAM3	DRAM3	DRAM3	DRAM3	DRAM3	DRAM3	(*1) Symmetric Except for 3DS LRDIMM
		DCPMM1	-	-	DCPMM1	-	-	
AD	2-2-1	DRAM1	DRAM1	DRAM1	DRAM1	DRAM1	DRAM1	(*1) Symmetric Any DRAM
		DCPMM1	DCPMM1	-	DCPMM1	DCPMM1	-	
MM	2-2-1	DRAM1	DRAM1	DRAM1	DRAM1	DRAM1	DRAM1	(*1) Symmetric Any DRAM
		DCPMM1	DCPMM1	-	DCPMM1	DCPMM1	-	
AD+MM	2-2-1	DRAM3	DRAM3	DRAM3	DRAM3	DRAM3	DRAM3	(*1) Symmetric Except for 3DS LRDIMM
		DCPMM1	DCPMM1	-	DCPMM1	DCPMM1	-	

Mode	DDR4 Type	Capacity
DRAM1	RDIMM	Any Capacity
	3DS LRDIMM	
	LRDIMM	
	3DS LRDIMM	
DRAM2	RDIMM	16GB or 32GB
	-	
	-	
	-	
DRAM3	RDIMM	Any Capacity
	3DS LRDIMM	
	LRDIMM	
	-	
DCPMM1	-	Any Capacity

AD: App Direct Mode

MM: Memory Mode (100%)

AD+MM: Memory Mode (Except for 100%)

(*1) Symmetric Population across all CPU.

If configuration of PRIMEQUEST3800E2 includes a DCPMM, it is necessary to check validity of DCPMM installation.

For request of configuration check, please submit request to the contact point for PRIMEQUEST.

fj-pq-tech@dl.jp.fujitsu.com

Datacenter Persistent Memory Modules (DCPMM)

Feb. 26, 2024 Ver. 6.1

DCPMM Firmware

As of November 15, 2019

Size	DCPMM Firmware	Unified Firmware
128GB DDR-T DCPMM (NVM/LRD1MM)	01.02.00.5395	PB19092 or later
256GB DDR-T DCPMM (NVM/LRD1MM)		
512GB DDR-T DCPMM (NVM/LRD1MM)		

Support DCPMM Modes

OS	Memory Mode	App Direct Mode	Mixed Mode
Windows Server 2019	●	▲	—
SUSE SLES 12 SP4	—	●	—
SUSE SLES 15 SP1	▲	●	▲
Red Hat EL 7.6	●	●	▲
Red Hat EL 8.0	●	●	▲
Vmwear ESXi6.7U3	—	●	—

● : Available

▲ : Planned

— : Not Available

Support of OS Boot from DCPMM Modules

OS	Mode
Windows Server 2019	App Direct Mode
Red Hat EL 7.6	App Direct Mode

Boot from DCPMM namespace is not supported by ServerView Installation Manager.

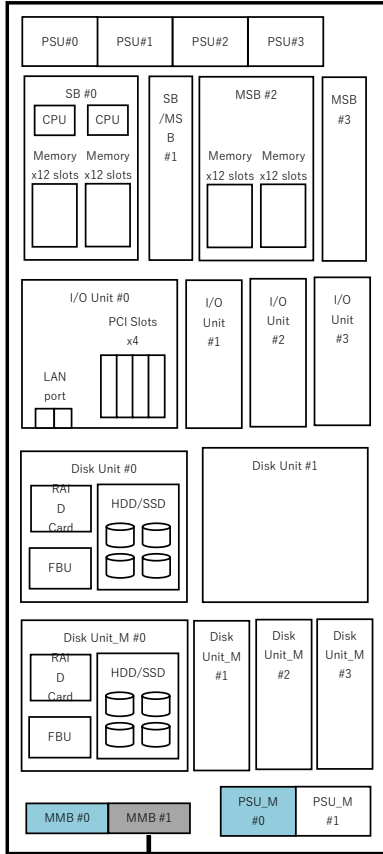
Please do manual installation of OS if boot from DCPMM is required.

Notes

- Please always keep both DCPMM and BIOS firmware to the latest version.
- Please keep aware that Fujitsu provides only integrated firmware for PRIMEQUEST 3800E2. This means the customers must apply such integrated firmware if they are going to update the firmware for DCPMM.
- To update the integrated firmware, you must power off the entire server.
- DCPMM must be reconfigured if DCPMM is added or replaced while in App Direct Mode. Refer to the DCPMM manuals at the <http://manuals.ts.fujitsu.com/> for the configuration of DCPMM.
- As memory cells of DCPMM are wearing parts, an DCPMM can only tolerate a limited number of write jobs. PBW (PetaBytes Written) is an indicator which specifies write endurance of an DCPMM. Depending on how the product is used, the number of writing times may reach the end of write endurance within the product lifespan. Percentage of data written to the lifetime can be confirmed in MMB Web-UI. Refer to the following documents for how to check the status of write endurance of DCPMM.
"Lifecycle monitoring of DCPMM on PRIMEQUEST 3000 series"
<http://manuals.ts.fujitsu.com/index.php?id=5406-14274-18399-18783>
Select x86 Servers > PRIMEQUEST Servers > PRIMEQUEST 3000 Series > Common

6.Management Board (MMB)

Feb. 26, 2024 Ver. 6.1

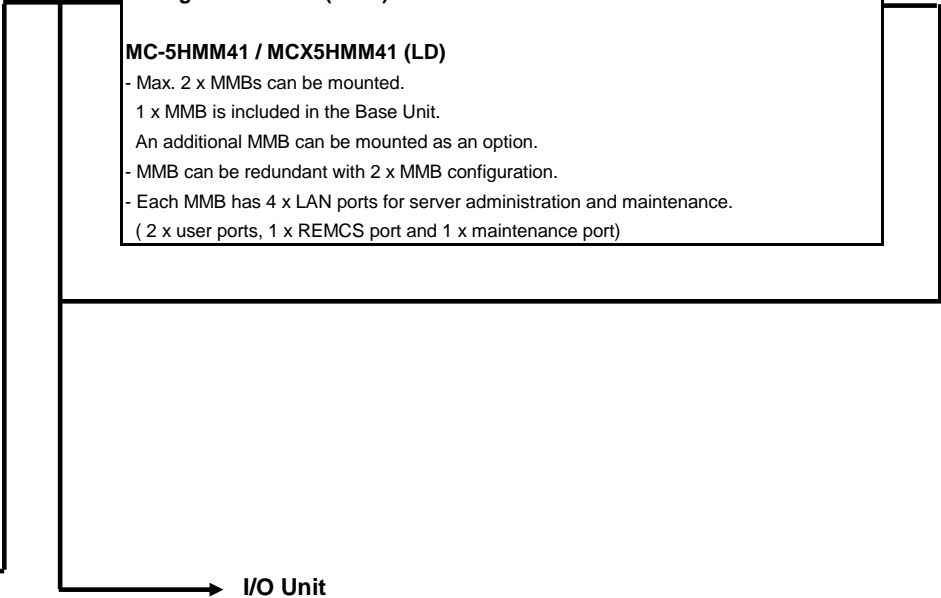


1x MMB is included in the Base Unit.
Max. 2x MMBs can be mounted in a Base unit.

Management Board (MMB)

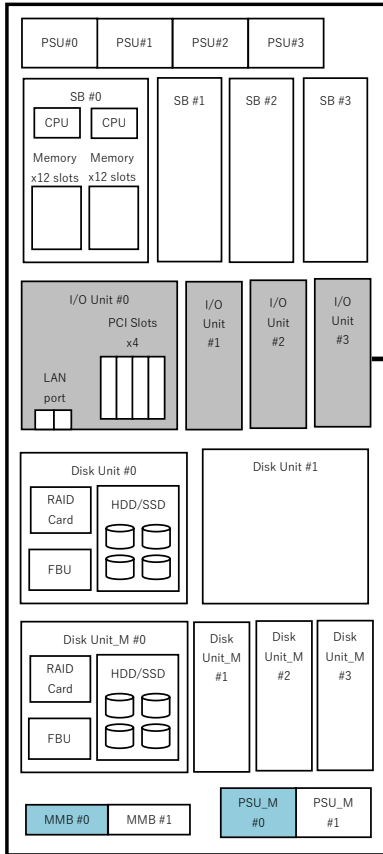
MC-5HMM41 / MCX5HMM41 (LD)

- Max. 2 x MMBs can be mounted.
- 1 x MMB is included in the Base Unit.
- An additional MMB can be mounted as an option.
- MMB can be redundant with 2 x MMB configuration.
- Each MMB has 4 x LAN ports for server administration and maintenance. (2 x user ports, 1 x REMCS port and 1 x maintenance port)



7.I/O UNIT

Feb. 26, 2024 Ver. 6.1



1x I/O Unit is included in the Base Unit.
Max. 4x I/O Units can be mounted per Base Unit.

I/O Unit
MC-5HUX71 / MCX5HUX71 (LD)

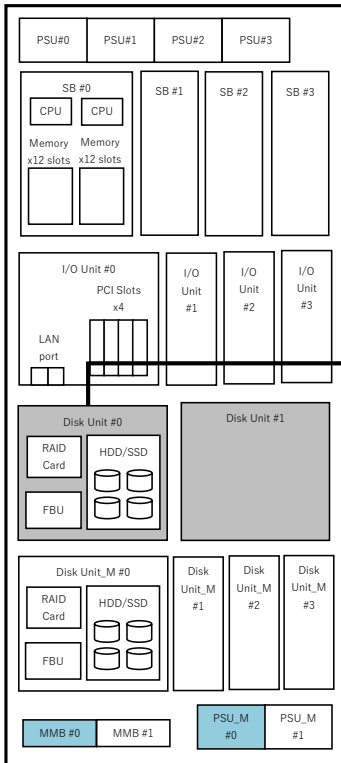
- 1x I/O Unit is included in the Base Unit.
- Max. 4 x I/O Units can be mounted.
- 2 x 10GBASE-T LAN ports per I/O Unit.
- 4x Low Profile PCIe slots per I/O Unit.
- PCI Express 3.0 x16 Lane x1 slot, x8 Lane x3 slots
- 12 PCIe slots in the PCI Box are available using PCI Box connection card.
- PCI hot plug is not supported. PCI hot plug is available on PCI Box.

With PSU 2 + n configuration, IOU can only be installed with a maximum of 2 units.
Please refer to 'Power Supply Unit' for details.

→ Disk Unit

8. Disk Unit

Feb. 26, 2024 Ver. 6.1



Disk Unit

- Max. 2 of the following Disk Units can be mounted on the Base Unit.
- In order to mount Disk Unit #1, I/O Unit #1 is required.

Disk Unit for SAS (SAS3.0)
MC-5HDU71 / MCX5HDU71 (LD)
 - Max. 2x Disk Units per Base Unit.
 - 1x RAID Controller card per Disk Unit needs to be mounted.
 - Max 4x HDD/SSD can be mounted per Disk Unit.

Option for Disk Unit SAS (SAS3.0)

SAS RAID Controller Card (EP420i) *will reach EOL on 2024/3
MC-0JSRA1 / MCX0JSRA1 (LD)
 - One RAID Controller card enables to mount 4x disk drives such as HDD or SSD.
 - 12Gbps for each disk drive. 2GB of cache memory
 - RAID 0/1/1E/5/6/10 and hot spare supported

Flash Back-up Unit *will reach EOL on 2024/3
MC-0JFB61 / MCX0JFB61 (LD)
 - Flash Backup Unit for RAID Controller EP420i with cache memory.

RAID Advanced SW Option CacheCade *will reach EOL on 2024/3
MC-0KLA51 / MCX0KLA51 (LD)
 License Activation Key for CacheCade 2.0 for PRAID EP420i / 420e

SAS RAID Controller Card (EP540i)
MC-0JSR71 / MCX0JSR71 (LD)
 - One RAID Controller card enables to mount 4x disk drives such as HDD or SSD.
 - 12Gbps for each disk drive. 4GB of cache memory
 - RAID 0/1/1E/5/6/10 and hot spare supported

Flash Back-up Unit for EP5x0i
MC-0JFB41 / MCX0JFB41 (LD)
 - Flash Backup Unit for RAID Controller EP540i/EP580i with cache memory.

SAS RAID Controller Card (EP580i)
MC-0JSR81 / MCX0JSR81 (LD)
 - One RAID Controller card enables to mount 4x disk drives such as HDD or SSD.
 - 12Gbps for each disk drive. 8GB of cache memory
 - RAID 0/1/1E/5/6/10 and hot spare supported

Flash Back-up Unit for EP5x0i
MC-0JFB41 / MCX0JFB41 (LD)
 - Flash Backup Unit for RAID Controller EP540i/EP580i with cache memory.

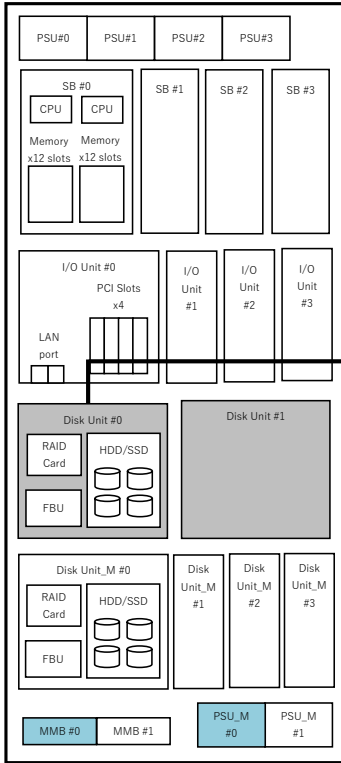
- Connection between I/O Unit and Disk Unit

I/O Unit	Disk Unit
I/O Unit #0	Disk Unit #0
I/O Unit #1	Disk Unit #1

→ Disk for HDD or SSD

8. Disk Unit

Feb. 26, 2024 Ver. 6.1



Disk Unit

- Max. 2 of the following Disk Units can be mounted on the Base Unit.
- In order to mount Disk Unit #1, I/O Unit #1 is required.

Disk Unit for PCIe SFF (DU_PCIEA)
MC-5HDU61 / MCX5HDU61 (LD)
 - Max. 2x Disk Units per Base Unit.
 - 1x RAID Controller card per Disk Unit needs to be mounted.
 - Max 4x PCIe-SSD SFFs can be mounted per Disk Unit.

SAS RAID Controller Card (EP540i)
MC-0JSR71 / MCX0JSR71 (LD)
 - One RAID Controller card enables to mount Max 4x PCIe-SSD SFFs
 - 12Gbps for each disk drive. 4GB of cache memory
 - RAID 0/1/1E/5/6/10 and hot spare supported

SAS RAID Controller Card (EP580i)
MC-0JSR81 / MCX0JSR81 (LD)
 - One RAID Controller card enables to mount Max 4x PCIe-SSD SFFs
 - 12Gbps for each disk drive. 8GB of cache memory
 - RAID 0/1/1E/5/6/10 and hot spare supported

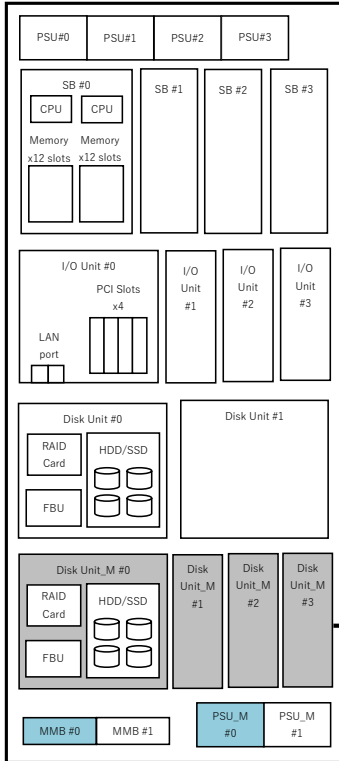
- Connection between I/O Unit and Disk Unit

I/O Unit	Disk Unit
I/O Unit #0	Disk Unit #0
I/O Unit #1	Disk Unit #1

→ Disk for PCIe-SSD

Disk Unit for DMBU(Disk/MMB Unit) (DU_M)

Feb. 26, 2024 Ver. 6.1



Disk Unit for DMBU(Disk/MMB Unit) (DU_M)

- Max. 4 Disk Units can be mounted on the Disk/MMB Unit
- In order to mount Disk Unit #1, #2 and #3, I/O Unit #1, #2 and #3 is required respectively.

Disk Unit for DMBU(Disk/MMB Unit) (DU_M)
MC-5HDU51 / MCX5HDU51 (LD)
 - Max. 4x Disk Units per Disk/MMB Unit.
 - 1x RAID Controller card is required per Disk Unit.
 - Max 4x SAS HDD/SSD can be mounted per Disk Unit.

SAS RAID Controller Card (EP420i) *will reach EOL on 2024/3
MC-0JSRA1 / MCX0JSRA1 (LD)
 - One RAID Controller card allows mounting of 4x disk drives such as HDD or SSD.
 - 12Gbps for each disk drive. 2GB of cache memory
 - RAID 0/1/1E/5/6/10 and hot spare supported

RAID Advanced Software Options *will reach EOL on 2024/3
MC-0KLA51 / MCX0KLA51 (LD)
 License Activation Key for CacheCade 2.0

Flash Back-up Unit *will reach EOL on 2024/3
MC-0JFB61 / MCX0JFB61 (LD)
 - Flash Backup Unit for RAID Controller (2GB Cache)

- Connection between I/O Unit and Disk Unit_M

I/O Unit	Disk Unit
I/O Unit #0	Disk Unit_M#0
I/O Unit #1	Disk Unit_M#1
I/O Unit #2	Disk Unit_M#2
I/O Unit #3	Disk Unit_M#3

SAS RAID Controller Card (EP540i)
MC-0JSR71 / MCX0JSR71 (LD)
 - One RAID Controller card allows mounting of 4x disk drives such as HDD or SSD.
 - 12Gbps for each disk drive. 4GB of cache memory
 - RAID 0/1/5/6/10 and hot spare supported
 - No RAID Software License required.

Flash Back-up Unit for EP5x0i
MC-0JFB41 / MCX0JFB41 (LD)
 - Flash Backup Unit for RAID Controller

SAS RAID Control Card (8GB Cache)
MC-0JSR81 / MCX0JSR81 (LD)
 - One RAID Controller card allows mounting of 4x disk drives such as HDD or SSD.
 - 12Gbps for each disk drive. 8GB of cache memory
 - RAID 0/1/5/6/10 and hot spare supported
 - No RAID Software License required.

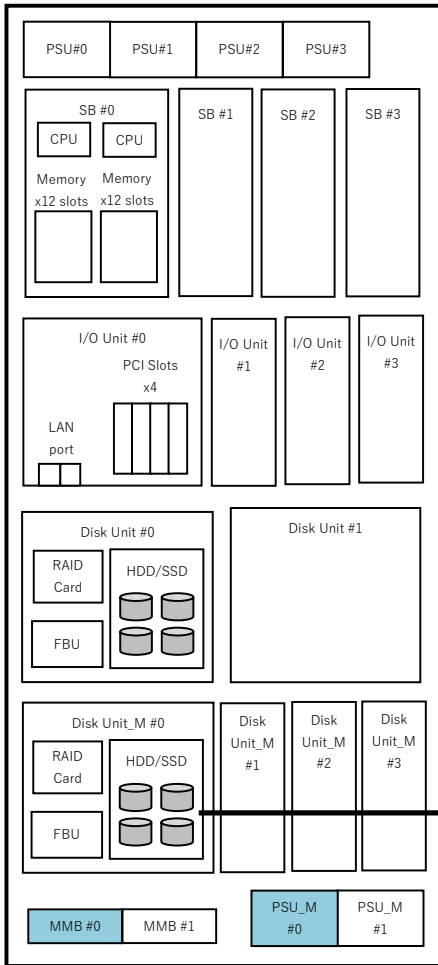
Flash Back-up Unit for EP5x0i
MC-0JFB41 / MCX0JFB41 (LD)
 - Flash Backup Unit for RAID Controller

→ Disk for HDD or SSD

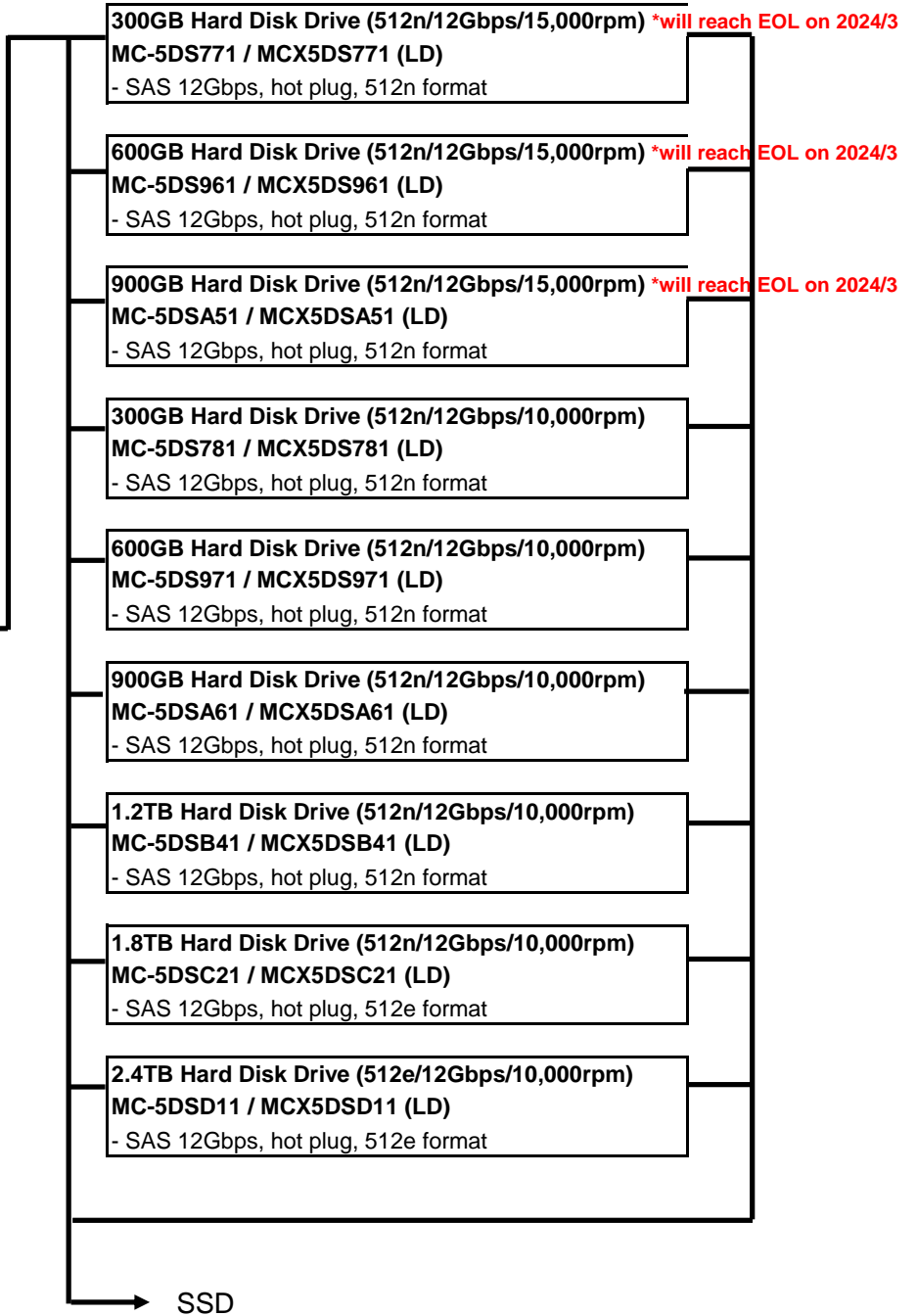
9.HDD

Feb. 26, 2024 Ver. 6.1

Max. 4 pcs of HDD/SSD can be mounted per the Disk Unit or the Disk Unit for DMBU(Disk/MMB Unit) (DU_M).

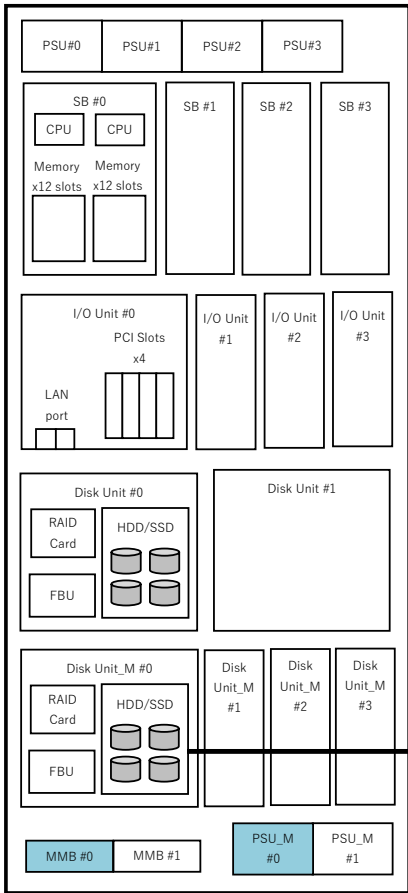


HDD



9.SSD

Feb. 26, 2024 Ver. 6.1



Max. 4 pcs of HDD/SSD can be mounted per the Disk Unit or the Disk Unit for DMBU(Disk/MMB Unit) (DU_M).

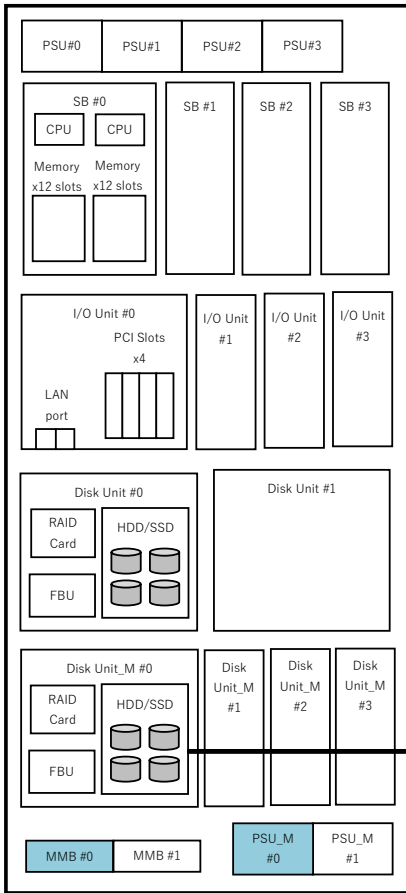


As flash memory cells are wearing parts, an SSD can only tolerate a limited number of write jobs. DWPD (Drive Write Per Day) is an indicator which specifies write endurance of an SSD. Depending on how the product is used, the number of writing times may reach the end of write endurance within the product lifespan. Product status can be confirmed by management tools such as iRMC Web-UI and Server View RAID Manager (SVRM).

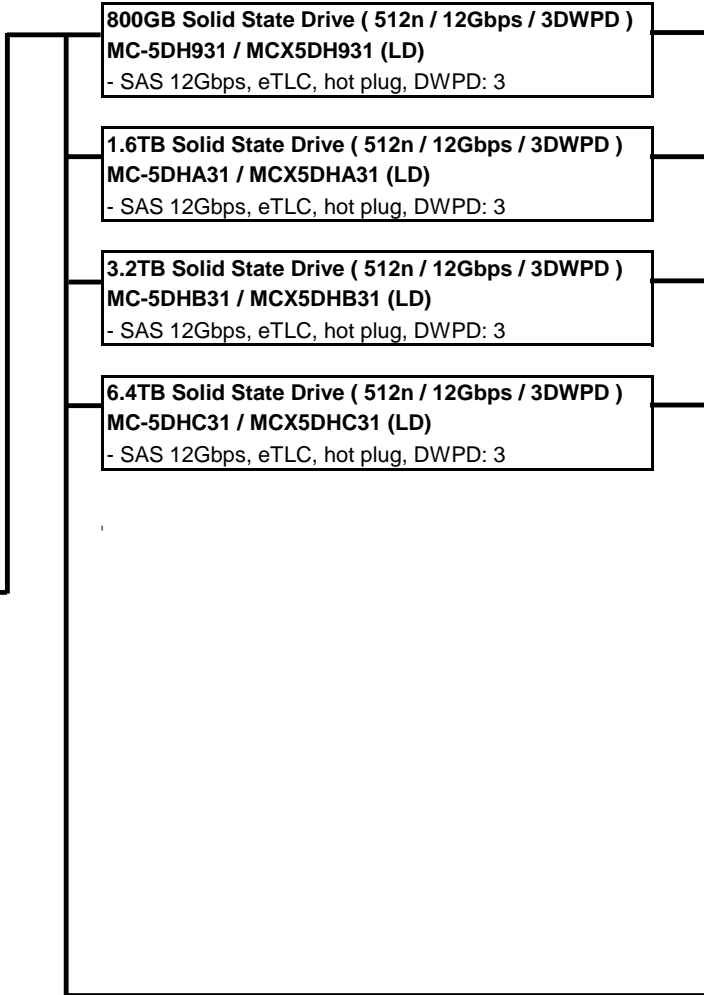
SSD 2

9.SSD

Feb. 26, 2024 Ver. 6.1



Max. 4 pcs of HDD/SSD can be mounted per the Disk Unit or the Disk Unit for DMBU(Disk/MMB Unit) (DU_M).

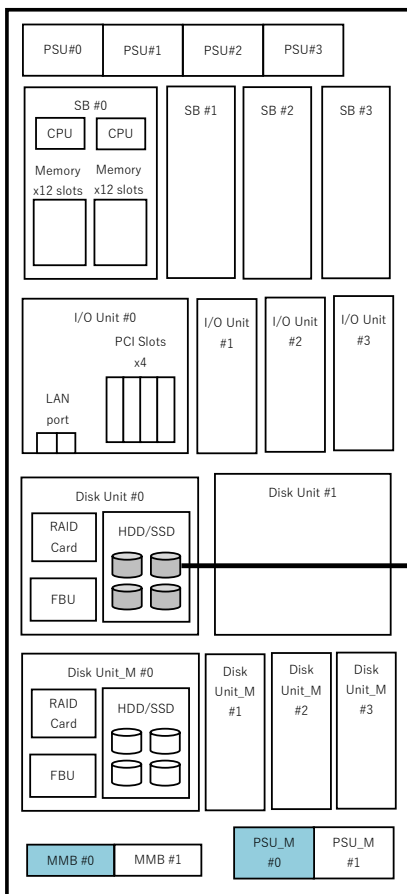


As flash memory cells are wearing parts, an SSD can only tolerate a limited number of write jobs. DWPD (Drive Write Per Day) is an indicator which specifies write endurance of an SSD. Depending on how the product is used, the number of writing times may reach the end of write endurance within the product lifespan. Product status can be confirmed by management tools such as iRMC Web-UI and Server View RAID Manager (SVRM).

→ PCIe-SSD

9.PCie-SSD

Feb. 26, 2024 Ver. 6.1



Max. 4 pcs of PCIe-SSD can be mounted per the Disk Unit for PCIe SFF.

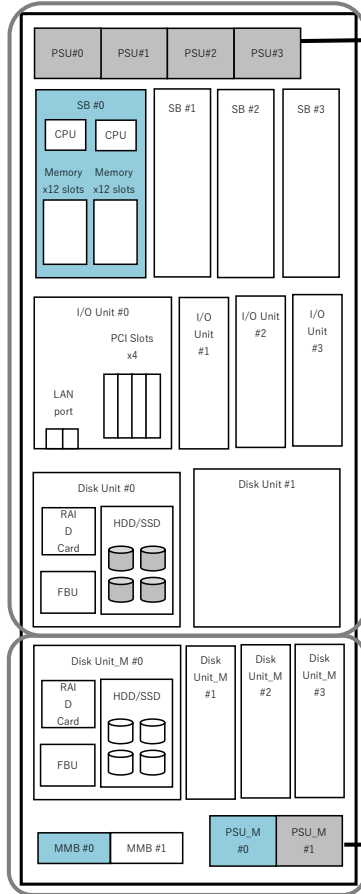
1.6TB Solid State Drive
 PCIe-SSD SFF 1.6TB 3DWPD
MC-5DKD31/ MCX5DKD31 (LD)

As flash memory cells are wearing parts, an SSD can only tolerate a limited number of write jobs. DWPD (Drive Write Per Day) is an indicator which specifies write endurance of an SSD. Depending on how the product is used, the number of writing times may reach the end of write endurance within the product lifespan. Product status can be confirmed by management tools such as iRMC Web-UI and Server View RAID Manager (SVRM).

Power Supply Unit (PSU)

10.Power Supply Unit (PSU)

Feb. 26, 2024 Ver. 6.1



No PSU is included in the Base unit,
At least two PSU's need to be mounted per system.
Max. 4x PSUs can be mounted for PSU redundancy.

200V Normal PSU
MC-5HPS71 / MCX5HPS71 (LD)
- Max. 4x PSUs can be mounted for PSU redundancy.
- 80PLUS® Platinum certified

Due to power supply voltage fluctuations when operating with two high-power PSUs
Performance may be reduced to approximately 10% for up to 2 seconds to avoid system
down.
When using a high-output power supply, use a UPS or CVCF to prevent power supply
voltage fluctuations..

200V High Power PSU
MC-5HPS81 / MCX5HPS81 (LD)
- Max. 4x PSUs can be mounted for PSU redundancy.
- 80PLUS® Platinum certified
- Not supported advanced thermal design option

One PSU_M is included for Disk/MMB Unit.
Max. 2x PSU_Ms can be mounted for PSU redundancy.

200V Normal PSU for DMBU
MC-5HPS91 / MCX5HPS91 (LD)
- 1x PSU_M is included for Disk/MMB Unit.
- Max. 2x PSU_Ms can be mounted for PSU redundancy.
- 80PLUS® Platinum certified

Power Cords

AC Power input	# of components					# of PSUs		Dual Power feed
	CPU (W)	DIMM	IOU	PCIeSSD	DCPMM	PSU	PSU_M	
Normal PSU 240V	>=200	96 slots (Max. 12TB)	4	8	0	3 + 1 (*1)	1 + 1 (*1)	No
	<=165		4	8		3 + 1 (*1)	1 + 1 (*1)	No
	>=200		2	2		2 + 1 (*2) / 2 + 2 (*3)	1 + 1 (*2, *3)	Yes
	<=165		2	2		2 + 1 (*2) / 2 + 2 (*3)	1 + 1 (*2, *3)	Yes

AC Power input	# of components					# of PSUs		Dual Power feed
	CPU	DIMM	IOU	PCIeSSD	DCPMM	PSU	PSU_M	
High Power PSU	8	96 slots (Max. 12TB)	4	8	48	2 + 1	1 + 1	No
						2 + 2	1 + 1	Yes

*1: At least 3 PSUs and 1 PSU_M are required. No installation restriction of components.
4 PSUs and 2 PSU_Ms configuration is resistant to failure of one power supply unit. Dual power feed is not possible.
*2: At least 2 PSUs and 1 PSU_M are required. The maximum number of I/O unit is 2.
3 PSUs and 2 PSU_Ms configuration is resistant to failure of one power supply unit.
*3: At least 2 PSUs and 1 PSU_M are required. The maximum number of I/O unit is 2.
4 PSUs and 2 PSU_Ms configuration is dual power feed configuration.
Dual power feed configuration is resistant to one data center power feed failure and PSU failure.

10.Power Cords for Base Unit

Feb. 26, 2024 Ver. 6.1



power cord

* The same quantity of Power Cords need to be ordered as that of PSU.

IEC AC 200V Cable(3m)
MC-0HCB13 / MCX0HCB13 (LD)
 - IEC60320 C20, 3m
 - power cord x 1

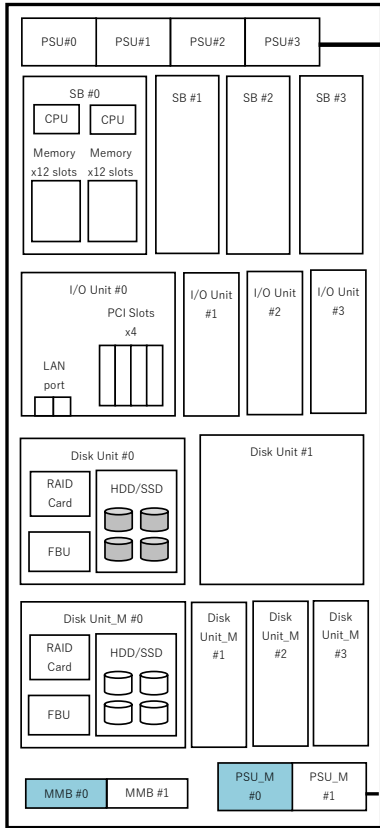
IEC AC 200V Cable(1m)
MC-0HCB11 / MCX0HCB11 (LD)
 - IEC60320 C20, 1m
 - power cord x 1

* The same quantity of Power Cords need to be ordered as that of PSU_M.

IEC AC 200V Cable (3m) for PCI Box and DMBU
MC-0HCB43 / MCX0HCB43 (LD)
 - IEC60320 C20, 3m
 - power cord x 1

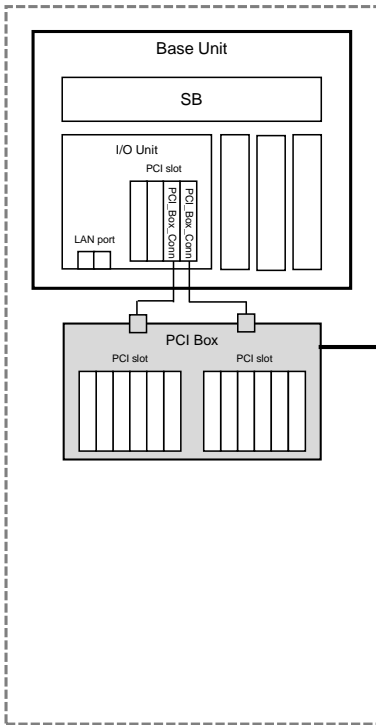
IEC AC 200V Cable (1m) for PCI Box and DMBU
MC-0HCB41 / MCX0HCB41 (LD)
 - IEC60320 C20, 1m
 - power cord x 1

→ PCI Box



11.PCI Box

Feb. 26, 2024 Ver. 6.1



To connect a PCI Box, a PCI Box Connection Card needs to be ordered and mounted in an I/O Unit. 1 x PCI Box cannot be connected to 2 different Base Units of PRIMEQUEST.

PCI Box
MC-0HPB32

- 1 x PCI Box has 2 x connection ports to connect to PCI Box Connection Cards.
- 1 x connection port is used to support 6 x PCI Cards.
- If 2 x connection ports are used to connect 2 x PCI Box Connection Cards, max. 12 x PCI Cards can be mounted.
- 1 x PCI Box can be connected to two different I/O units or one I/O unit with 2x connection ports.
- No PSU is included. Min. 1 x PSU for PCI Box needs to be mounted.
- Fans are mounted with redundant configuration as default configuration.
- Rack space : 4U
- PCI cards are hot pluggable.
- 12 x PCI Card Cassettes are included.
- PCI Cards with Full Height bracket need to be chosen.

PSU for PCI Box
MC-0HPS51 / MCX0HPS51 (LD)

- 1 x PSU is included.
- Max. 2 x PSUs can be mounted per PCI Box for redundancy.

PCI Box Connection Card
MC-0JPC21 / MCX0JPC21 (LD)

- PCI Slots with Low Profile bracket are supported.
- 6 x PCI Cards in a PCI Box can be supported per connection port.
- 1 x PCI Box Connection Cable (2m long) is included.
- Max. 8 x PCI Box Connection Cards can be mounted per Base Unit.

→ next page

Base Units and PCI Boxes need to have the same power supply condition.

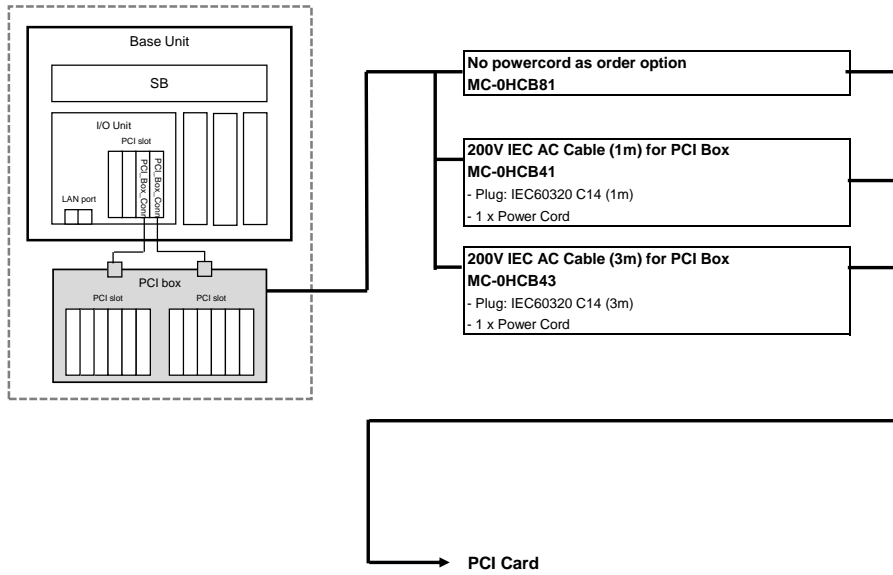
Input voltage	Power feed	Redundancy	# of PSU	Required quantity	
				PSU	Power cord
AC 200V	Single	Not available	1	1	1
		Available (*1)	1+1	2	2
	Dual	Available (*2)	1x2	2	2

(*1) Single power feed configuration will help to supply power even in the event of PSU failure.

(*2) Dual power feed configuration will help to supply power even in the event of one Power feed failure or PSU failure.

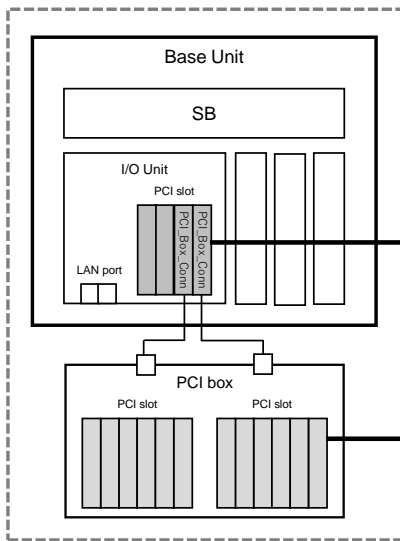
Power Cords for PCI Box

Feb. 26, 2024 Ver. 6.1



12.PCI Cards

Feb. 26, 2024 Ver. 6.1



Max. 56 PCI cards(excluding PCI Box Connection Cards) can be mounted in I/O Units and PCI Boxes.
 I/O Unit : Max. 4 cards can be mouted per I/O Unit
 - 1x PCIe x16 (Low Profile)
 - 3x PCIe x8 (Low Profile)
 PCI Box : Max. 12 cards can be mouted per PCI Box
 - 12x PCIe x8 (Full Height, hotpluggable slots)

PFC EP LPe31000 1x 16Gb Emulex

MC-0JFCF1 (Low Profile)
 MC-0JFCF2 (Full Height)
 MCX0JFCF1 (LD, LP/FH)
 Single Channel 16Gbps Fibre Channel Card

PFC EP LPe31002 2x 16Gb Emulex

MC-0JFCG1 (Low Profile)
 MC-0JFCG2 (Full Height)
 MCX0JFCG1 (LD, LP/FH)
 Dual Channel 16Gbps Fibre Channel Card

PFC EP LPe32000 1x 32Gb Broadcom

MC-0JFCM1 (Low Profile)
 MC-0JFCM2 (Full Height)
 MCX0JFCM1 (LD, LP/FH)
 Single Channel 32Gbps Fiber Channel Card

PFC EP LPe32002 2x 32Gb Broadcom

MC-0JFCN1 (Low Profile)
 MC-0JFCN2 (Full Height)
 MCX0JFCN1 (LD, LP/FH)
 Dual Channel 32Gbps Fiber Channel Card

PFC EP QLE2690 1x 16Gb Qlogic

MC-0JFCP1 (Low Profile)
 MC-0JFCP2 (Full Height)
 MCX0JFCP1 (LD, LP/FH)
 Single Channel 16Gbps Fibre Channel Card

PFC EP QLE2692 2x 16Gb Qlogic

MC-0JFCQ1 (Low Profile)
 MC-0JFCQ2 (Full Height)
 MCX0JFCQ1 (LD, LP/FH)
 Dual Channel 16Gbps Fibre Channel Card

PFC EP QLE2740 1x 32Gb Cavium

MC-0JFCK1 (Low Profile)
 MC-0JFCK2 (Full Height)
 MCX0JFCK1 (LD, LP/FH)
 Dual Channel 32Gbps Fibre Channel Card

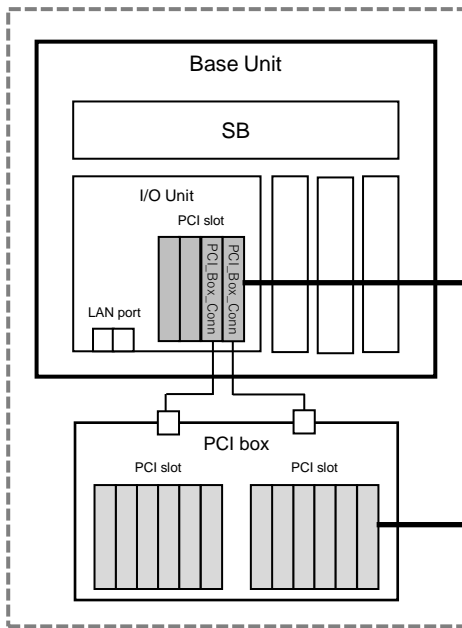
PFC EP QLE2742 2x 32Gb Cavium

MC-0JFCL1 (Low Profile)
 MCX0JFCL1 (LD, LP)
 Dual Channel 32Gbps Fibre Channel Card

→ PCI Cards 2

PCI Cards 2

Feb. 26, 2024 Ver. 6.1



Max. 56 PCI cards(excluding PCI Box Connection Cards) can be mounted in I/O Units and PCI Boxes.
 I/O Unit : Max. 4 cards can be mouted per I/O Unit
 - 1x PCIe x16 (Low Profile)
 - 3x PCIe x8 (Low Profile)
 PCI Box : Max. 12 cards can be mouted per PCI Box
 - 12x PCIe x8 (Full Height, hotpluggable slots)

PLAN CP 4x1Gbit Cu Intel I350-T4 LP
MC-0JGED1 (Low Profile)
MC-0JGED2 (Full Height)
MCX0JGED1 (LD, LP/FH)
 Quad Channel 1000BASE-T

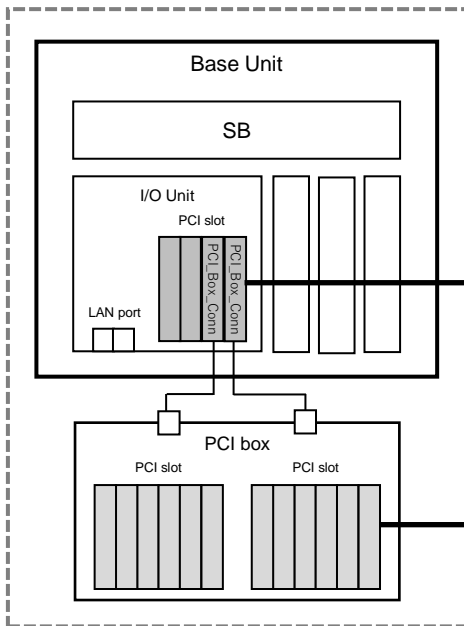
PLAN EP X550-T2 2x10GBASE-T
MC-0JXEJ1 (Low Profile)
MC-0JXEJ2 (Full Height)
MCX0JXEJ1 (LD, LP/FH)
 Dual Channel 1000BASE-T

PLAN EP X710-T4 4x10GBASE-T LP
MC-0JXF11(Low Profile)
MCX0JXF11 (LD, LP/FH)
 Quad Channel 10BASE-T

→ **PCI Cards 3**

PCI Cards 3

Feb. 26, 2024 Ver. 6.1



Max. 56 PCI cards(excluding PCI Box Connection Cards) can be mounted in I/O Units and PCI Boxes.
 I/O Unit : Max. 4 cards can be mouted per I/O Unit
 - 1x PCIe x16 (Low Profile)
 - 3x PCIe x8 (Low Profile)
 PCI Box : Max. 12 cards can be mouted per PCI Box
 - 12x PCIe x8 (Full Height, hotpluggable slots)

PLAN EP X710-DA2 2x10Gb SFP+
MC-0JXEK1 (Low Profile)
MC-0JXEK2 (Full Height)
MCX0JXEK1 (LD, LP/FH)
 Dual Channel 10Gb SFP+

SFP+ Module Multi Mode Fiber 10GbE LC
MC-0JXEL1 / MCX0JXEL1 (LD)

PLAN EP XXV710-DA2 2x25GbE
MC-0JXEH1 (Low Profile)
MCX0JXEH1 (LD, LP)
 Dual Channel 25GbE SFP28

SFP28 Module Multi Mode Fiber 25GbE LC
MC-0JCEJ1 / MCX0JCEJ1 (LD)

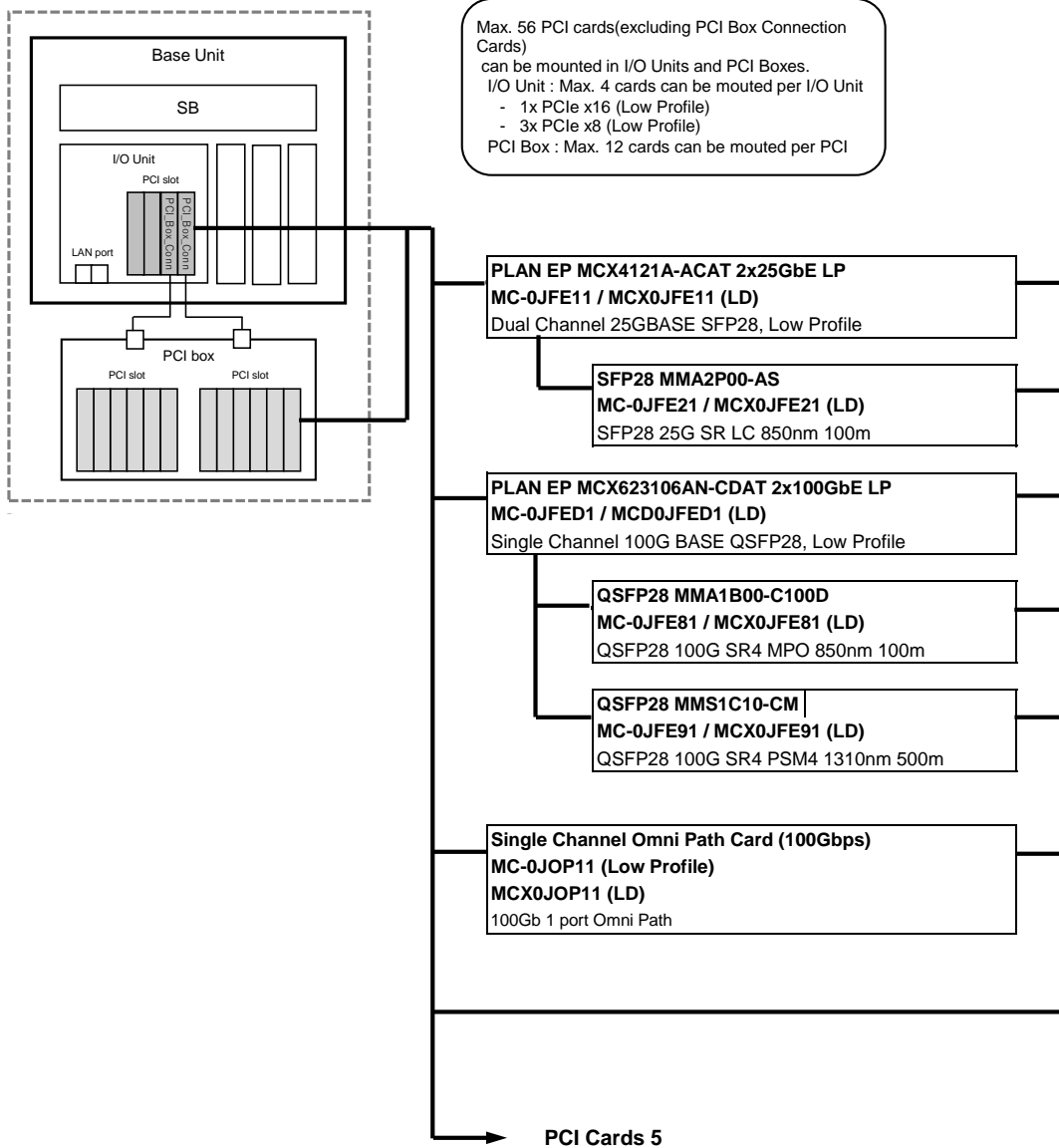
PLAN EP X710-DA4 4x10Gb SFP+
MC-0JXF71 (Low Profile)
MCX0JXF71 (LD, LP)
 Quad Channel 10BASE SFP+

SFP+ Module Multi Mode Fiber 10GbE LC
MC-0JXEL1 / MCX0JXEL1 (LD)

→ **PCI Cards 4**

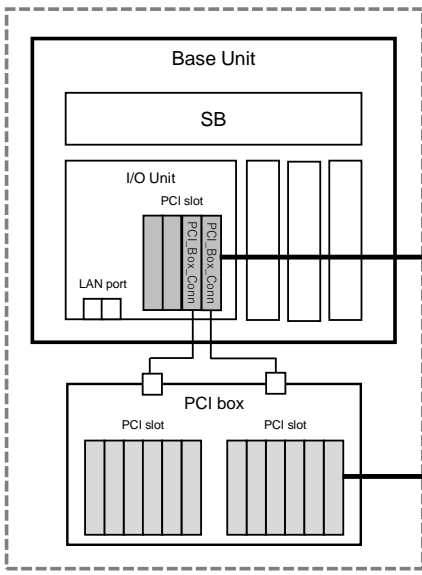
PCI Cards 4

Feb. 26, 2024 Ver. 6.1



PCI Cards 6

Feb. 26, 2024 Ver. 6.1



Max. 56 PCI cards(excluding PCI Box Connection Cards) can be mounted in I/O Units and PCI Boxes.
 I/O Unit : Max. 4 cards can be mouted per I/O Unit
 - 1x PCIe x16 (Low Profile)
 - 3x PCIe x8 (Low Profile)
 PCI Box : Max. 12 cards can be mouted per PCI Box
 - 12x PCIe x8 (Full Height, hotpluggable slots)

PRAID EP420e
MC-0JSRB1 (Low Profile)
MC-0JSRB2 (Full Height)
MCX0JSRB1 (LD, LP/FH)
 Dual Channel 12Gbps SAS RAID

RAID Advanced SW Option CacheCade
MC-0KLA51 / MCX0KLA51 (LD)
 License Activation Key for CacheCade 2.0 for PRAID EP420e
 One license is required for one RAID card.

FBU Mounting kit for IOUE2 EP420e
MC-0HCKC1 / MCX0HCKC1 (LD)
 FBU Mounting Kit for I/O Unit
 - Max. 4 FBU can be mounted.
 - FBU can be connected only to the card in slot#0 of each I/O Unit.

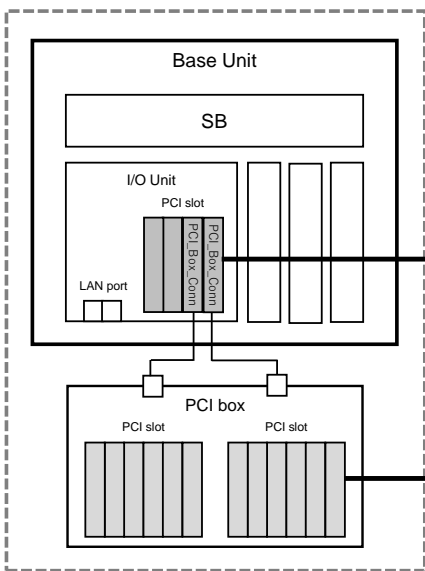
RAID Ctrl FBU option with 25cm cable
MC-0JFB51 / MCX0JFB51 (LD)
 Max. 4 FBU can be mounted in FBU Mounting Kit.

PSAS CP400e
MC-0JSS41 (Low Profile)
MC-0JSS42 (Full Height)
MCX0JSS41 (LD, LP/FH)
 Dual Channel SAS card (8 port) for external Backup Cabinet.

→ PCI Cards 6

PCI Cards 7

Feb. 26, 2024 Ver. 6.1



Max. 56 PCI cards(excluding PCI Box Connection Cards) can be mounted in I/O Units and PCI Boxes.
 I/O Unit : Max. 4 cards can be mouted per I/O Unit
 - 1x PCIe x16 (Low Profile)
 - 3x PCIe x8 (Low Profile)
 PCI Box : Max. 12 cards can be mouted per PCI Box
 - 12x PCIe x8 (Full Height, hotpluggable slots)

PRAID EP540e
MC-0JSRC1(Low Profile)
MC-0JSRC2 (Full Height)
MCX0JSRC1 (LD, LP/FH)
 Dual Channel 12Gbps(4GBcash) SAS RAID

FBU kit E EP540e
MC-0HCKB1 / MCX0HCKB1 (LD)
 FBU Kit
 - Max. 4 FBU can be mounted.
 - FBU can be connected only to the card in slot#0 of each I/O Unit.

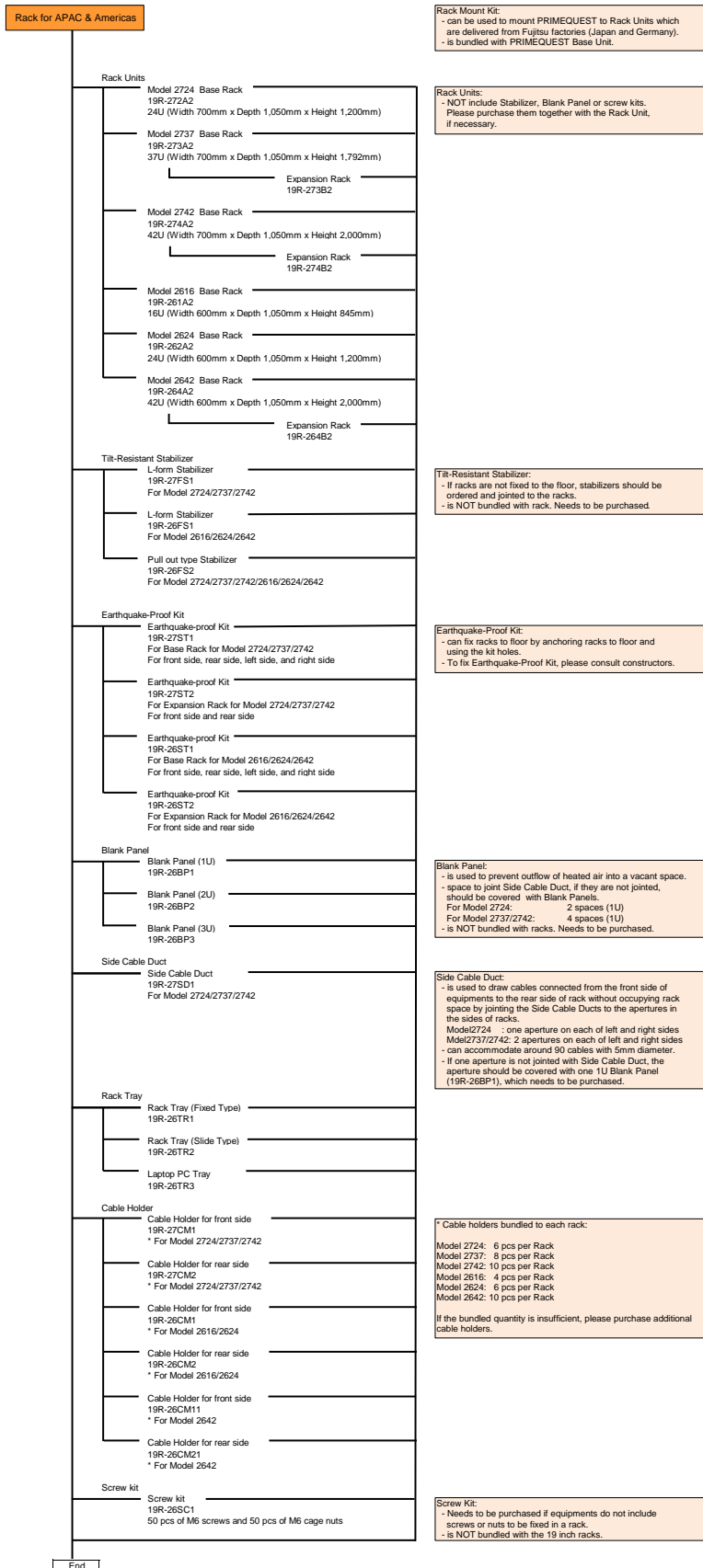
RAID Ctrl FBU option with 25cm cable
MC-0JFB81 / MCX0JFB81 (LD)
 Max. 4 FBU can be mounted in FBU Mounting Kit.

→ Rack Installation

13.Rack Installation for APAC and Americas

Feb. 26, 2024 Ver. 6.1

For the details of rack products, please refer to "19 inch Rack Handbook".
<https://globalpartners.ts.fujitsu.com/sites/primeweb/services/servers/primequest/document/Pages/dc-h-guide.aspx>



14. Maximum Quantity of PCIe Cards

Feb. 26, 2024 Ver. 6.1

Maximum Quantity of PCI Cards that can be mounted.

Product Name	Order Number				per Partition / per System	
	BTO	BTO for PCI Box	LD	3800E2	ESXi *6	
SAS RAID controller card (EP420i)	PRAID EP420i	*6 *7	MC-0JSRA1	Not mountable	MCX0JSRA1	6c / 6c
SAS RAID controller card (EP540i)	PRAID EP540i	*6 *7	MC-0JSR71	Not mountable	MCX0JSR71	
RAID controller card (EP580i)	PRAID EP580i	*6 *7	MC-0JSR81	Not mountable	MCX0JSR81	
PRAID EP420e	PRAID EP420e	*6	MC-0JSRB1	MC-0JSRB2	MCX0JSRB1	2c / 4c
PRAID EP540e	PRAID EP540e	*6	MC-0JSRC1	MC-0JSRC2	MCX0JSRC1	2c / 4c
PSAS CP400e	PSAS CP400e	*6	MC-0JSS41	MC-0JSS42	MCX0JSS41	4c / 8c
PFC EP LPe31000 1x 16Gb Emulex	Broadcom LPe31000	*1 *2 *6	MC-0JFCF1	MC-0JFCF2	MCX0JFCF1	16p / 24c
PFC EP LPe31002 2x 16Gb Emulex	Broadcom LPe31002	*1 *2 *6	MC-0JFCG1	MC-0JFCG2	MCX0JFCG1	8p / 16c
PFC EP LPe32000 1x 32Gb Broadcom	Broadcom LPe32000	*1 *2 *6	MC-0JFCM1	MC-0JFCM2	MCX0JFCM1	
PFC EP LPe32002 2x 32Gb Broadcom	Broadcom LPe32002	*1 *2 *6	MC-0JFCN1	MC-0JFCN2	MCX0JFCN1	16c / 24c
PFC EP QLE2690 1x 16Gb Qlogic	Qlogic QLE2690	*1 *6 *7	MC-0JFCP1	MC-0JFCP2	MCX0JFCP1	8c / 12c
PFC EP QLE2692 2x 16Gb Qlogic	Qlogic QLE2692	*1 *6 *7	MC-0JFCQ1	MC-0JFCQ2	MCX0JFCQ1	8c / 16c
PFC EP QLE2740 1x 32Gb Cavium	Qlogic QLE2740	*1 *6 *7	MC-0JFCK1	MC-0JFCK2	MCX0JFCK1	
PFC EP QLE2742 2x 32Gb Cavium	Qlogic QLE2742	*1 *6 *7	MC-0JFCL1	Not mountable	MCX0JFCL1	4
PLAN CP 4x1Gbit Cu Intel I350-T4	Intel i350-T4		MC-0JGED1	MC-0JGED2	MCX0JGED1	8
PLAN EP X550-T2 2x10GBASE-T	Intel X550-T2		MC-0JXEJ1	MC-0JXEJ2	MCX0JXEJ1	8c / 24c
PLAN EP X710-DA2 2x10Gb SFP+	Intel X710-DA2	*3	MC-0JXEK1	MC-0JXEK2	MCX0JXEK1	4
PLAN EP X710-T4 4x10GbE-T	Intel X710-T4		MC-0JXF11	Not mountable	MCX0JXF11	8c / 16c
PLAN EP X710-DA4 4x10Gb SFP+ LP	Intel X710-DA4	*6	MC-0JXF71	Not mountable	MCX0JXF71	2
PLAN EP XXV710-DA2 2x 25GbE	Intel XXV710-DA2		MC-0JXEH1	Not mountable	MCX0JXEH1	4c / 8c
PLAN EP MCX4121A-ACAT 2x25GbE	Mellanox MCX4121A-ACAT	*6	MC-0JFE11	Not mountable	MCX0JFE11	4c / 4c
PLAN EP MCX416A-BCAT 2x40GbE	Mellanox MCX416A-BCAT	*6	MC-0JFE41	Not mountable	MCX0JFE41	4c / 4c
PLAN EP MCX415A-CCAT 1x100GbE	Mellanox MCX415A-CCAT	*6	MC-0JFE71	Not mountable	MCX0JFE71	4c / 4c
PLAN EP MCX623106AN-CDAT 2x100GbE LP	Mellanox MCX623106AN-CDAT		MC-0JFED1	Not mountable	MCX0JFED1	2c / 2c
POP EP 100Gb 1 port Omni Path	POP EP 100Gb 1 port Omni Path		MC-0JOP11	Not mountable	MCX0JOP11	4c / 4c
PCI Box connection card		*5	MC-0JPC21	Not mountable	MCX0JPC21	See note *5

Notes:

Max. Qty : must satisfy the both limits of partition and system.

Mc / Nc max. M cards can be mounted per partition. / total N cards can be mounted in the system including PCI Boxes.

Pp / Qc the total number of ports of the same kind of cards is allowed up to P ports. / total Q cards can be mounted in the system including PCI Boxes.

*1) Broadcom Fibre Channel Cards and Qlogic Fibre Channel Cards CANNOT be used in the same partition.

*2) Max total ports number of "Broadcom Fibre Channel Cards" and "LAN cards" per partition is 16 ports.

*3) Max number of 'PLAN EP X710-DA2 2x10Gb SFP+' [MC-0JXEK1/MC-0JXEK2] per partition is 8. [Restriction] Max. number for these products per system is 24.

*4) Max. number depends on the configuration of CPU and PSU. Please refer 'Power Supply Unit' for details.

*5) Two connect cards are mountable per I/O units. Max. four connect cards are mountable to two I/O units as the maximum number of I/O units in a system.

*6) EP420i and EP420e, or EP540i/580i and EP420e/EP540e are supported with a total of up to 2 cards by ESXi.

Emulex FC (LPe3100x, LPe3200x) is supported with a total of up to 8 cards by ESXi.

QLogic FC (QLE2690, QLE2692, QLE2740, QLE2742) is supported with a total of up to 8 cards by ESXi.

Mellanox PLANs(25/40/100Gb) are supported with a total of up to 4 ports by ESXi.

Up to 16 10Gb ports are supported by ESXi 6.7.

Refer to the following documents for restriction on VMware vSphere.

<https://configmax.vmware.com/home>

*6) Mixing of Mellanox 25G/40G/100G LAN card and 100G Infiniband HCA card is not allowed.

*7) EP420i and EP540i/580i are not allowed to be populated together in a partition.

*8) QLogic FC (QLE2690, QLE2692, QLE2740, QLE2742) is supported with a total of up to 16 ports.

16.Restrictions

Feb. 26, 2024 Ver. 6.1

The following functions are restricted as of July 2019.

No.	
1	Intel 10GbE LAN cards [MC*0JXEK*] (X710-DA2) can be mounted up to eight per PPAR.
2	"Intel TXT" does not work.
3	Intel 10GbE-T LAN cards [MC*0JXEJ*] (X550-T2) does not work on Windows OS with Legacy mode.
4	Please update NVM version to 6.01 when XXV710-DA2 [MC*0JXEH1] and X710-DA2 [MC*0JXEK*] are mounted to the same chassis.
5	Mellanox 25/40/100Gb LAN cards [MC*0JFE11/MC*0JFE41/MC*0JFE71], Mellanox Infiniband cards do not work in the same Partition.
6	Intel TXT function of Windows Server 2016 does not work with PRIMEQUEST.
7	In the Legacy mode, the installation of Windows OS cannot be done to the M.2 flash device [MC*5FB741/MC*5FB751]. Please use the uEFI mode.
8	TPM module does not work with Windows Server 2019.
9	The iSCSI does not work with VMware 6.5.
10	Address range mirror is not supported with VMware.
11	Secure Boot does not work with Linux OSes.
12	EP540i, EP580i [MC*0JSR71/MC*0JSR81] and EP540e don't work with Extended Partition.
13	Infiniband cards do not work with Extended Partition.
14	Don't update the firmware of QLE269x and QLE274x [MC*0JFCP*/MC*0JFCQ*/MC*0JFCK*/MC*0JFCL*] to 8.08.05 or later, if they are on PCI-BOX with Extended Partition.
15	M.2 Flash device with only SLES12 SP4 are supported. Other OSes are planned.
16	Oracle Linux/VM do not support SAN-Boot.
17	Apply the firmware PB19033 or later for the following CPUs. Intel Xeon Platinum 8260 [MC*3BKC1*/ MC*2BKC1*/ MC*1BKC11]
18	When using Extended Partitioning function with SLES15, apply the firmware PB19054 or later.
19	Quad channel LAN card (10GBASE-T) MC*0JXF11 is not supported on Windows Server.
20	When using a dual channel SAS array controller card (12 Gbps) 4 GB cache (MC*0JSRC*), apply the firmware PB19061 (BIOS 01.21 version) or later.
21	When using M.2 flash device [MC*5FB741/MC*5FB751/MC*5FB771], apply the firmware PB19043 or later.
22	When using eLCM function, apply the firmware PB19053 or later.
23	Apply the firmware PB19053 or later for the following CPUs. Intel Xeon Gold 6262V[MC*3BRC11], 6244[MC*3BNL11], 6240L[MC*3BNF41], 6240M[MC*3BNF21], 6238L[MC*3BND41], 6238M[MC*3BND21], 6238[MC*3BND11], 6234[MC*3BPL11], 6226[MC*3BNJ11], 6222V[MC*3BPE11]
24	<p>When using PCI passthrough and allocating more than 1.5 GB of guest OS memory on RHEL KVM or SLES KVM, increase the amount of memory per guest to the amount allocated to the guest OS as follows.</p> <p>Host OS Type Increase Memory RHEL 6/KVM 2GB RHEL 7/KVM 1.5 GB RHEL 8/KVM 1.5 GB SLES/KVM 512 MB SLES/XEN: 2.25 GB</p> <p>If the guest OS is Windows, Physically shared devices is not available. Use Virtualized and Emulated Devices or Paravirtualized devices.</p> <p>PCI passthrough improves device performance slightly but disables the migration and limits the virtual machine snapshot. Check for these limitations before deciding whether to use PCI passthrough.</p> <p>For more information, please contact the following email address. PCI Pass-Through Technical Contact: contact-pcipaththrou@cs.jp.fujitsu.com</p>

Feb. 26, 2024 Ver. 6.1

Change Report

Date	Order number	Changes
kwi. 02, 2019		Ver. 1.0
lip. 02, 2019		Ver. 2.0
wrz. 17, 2019		Ver. 3.0
lis. 15, 2019		Ver. 4.0
Jun.10, 2020		Ver. 5.0
kwi. 01, 2020		Ver. 5.1
Oct. 1, 2020		Ver. 5.2
Feb. 1, 2021		Ver. 5.3
Mar. 1, 2021		Ver. 5.4
May. 1, 2021		Ver. 5.5
Aug. 1, 2021		Ver. 5.6
Mar. 29, 2022		Ver. 5.7
Nov. 28, 2022		Ver. 5.8
Dec. 25, 2023		Ver. 6.0
Feb. 26, 2024		Ver. 6.1