



# PRIMEQUEST 3800E2

## System Configuration Guide

Apr. 2019 Ver. 1.0

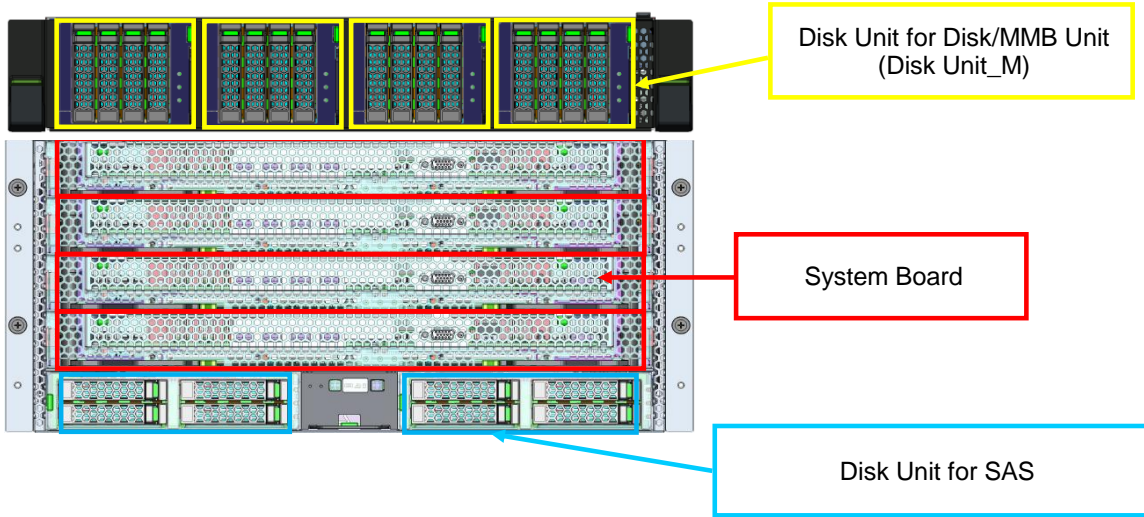
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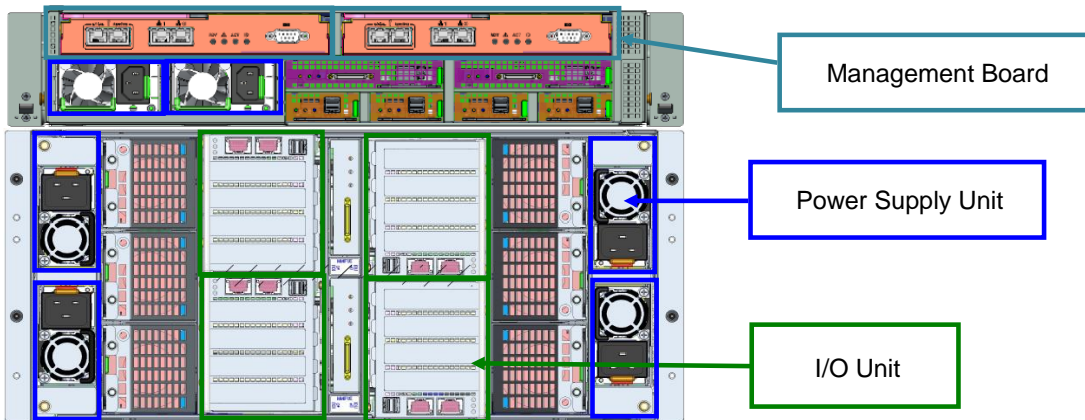
# 1. Overview

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## Front side

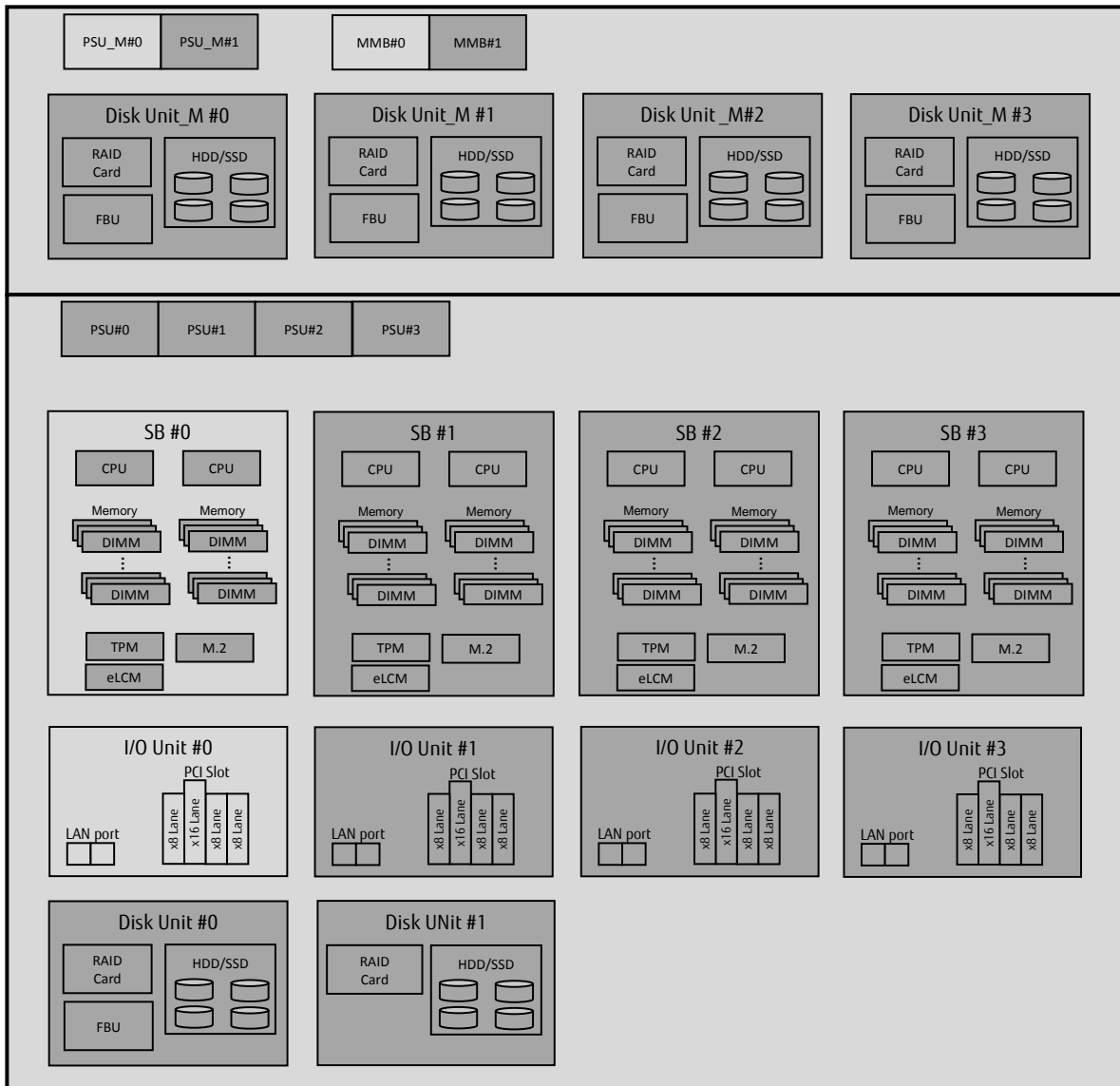


## Rear side




# Configuration Diagram

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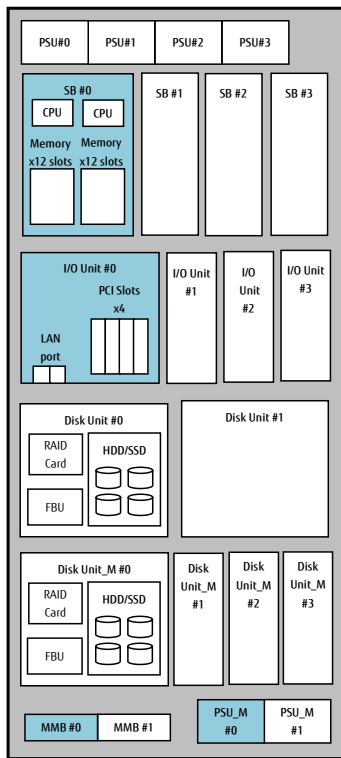


 Light gray color components Included in Base Unit.

 Dark gray color components are optional.

2.Base Unit

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**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

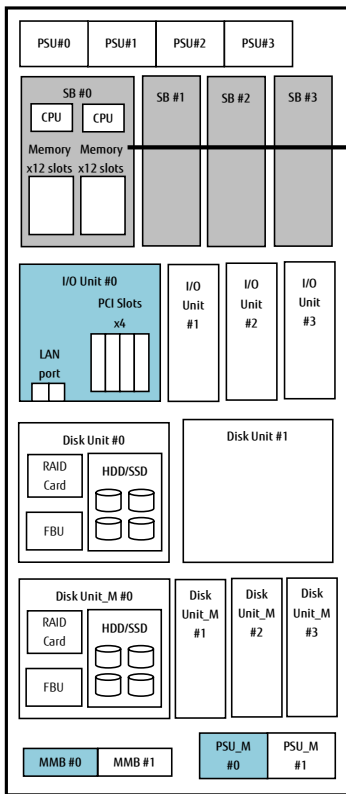
**Advanced Thermal Design Option**  
**MC-0PTH2**  
 Operating temperature of up to 40°C

When this option is selected, CPUs exceeding 165W can not be installed.

→ System Board

### 3. System Board (SB)

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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 functions are NOT available for the System Board with TPM.  
 - Reserved SB

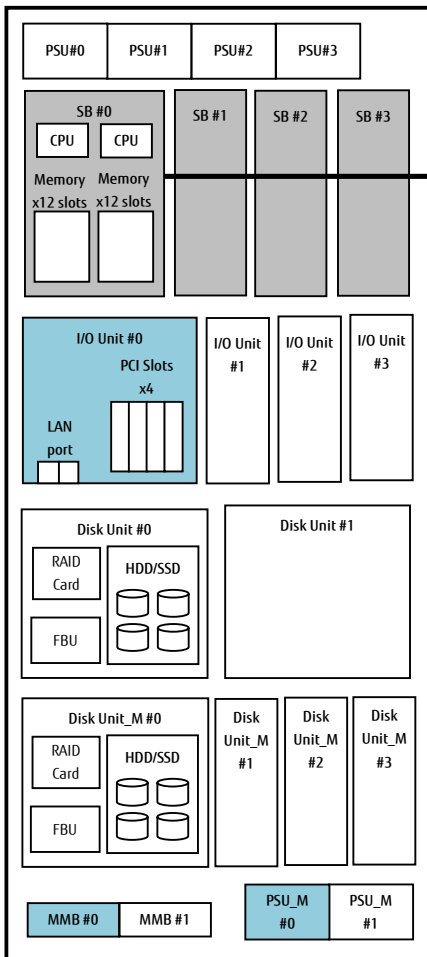
**TPM module V2.0**  
 MC-6HTP31 / MCX6HTP31(LD)

- Available except for China
- One for System Board

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

USB Flash Device & M.2 Flash Device

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

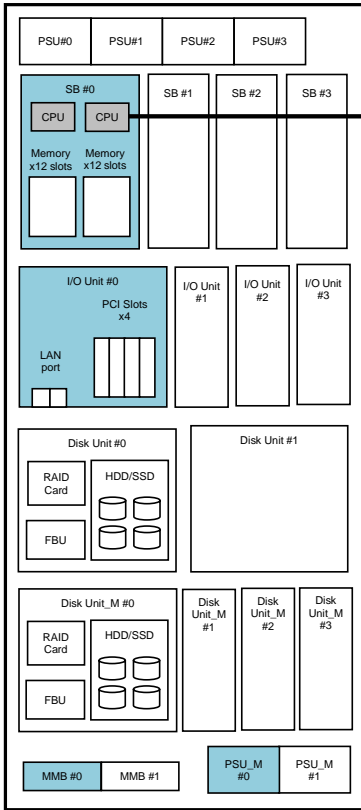
**USB Flash Device 64GB Dual**  
**MC-5FA411 / MCX5FA411(LD)**  
 - 2x 64GB micro SD card, HW mirrored  
 - Cannot be mounted with MC\*5FB751

**M.2 Flash Device 240GB (except ESXI)**  
**MC-5FB751 / MCX5FB751 (LD)**  
 - M.2 SATA 240GB except VMware  
 - Max 2 x M.2 Flash Device can be mounted.  
 - DWPD : 1.5  
 - Cannot be mounted with MC\*5FA411

→ CPU

# 4.CPU

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- 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 Platinum 8280L Processor (28C/2.7GHz/4.5TB/205W)	MC-3BJA41 / MCX3BJA41 (LD)	
Intel Xeon Platinum 8280M Processor (28C/2.7GHz/2TB/205W)	MC-3BJA21 / MCX3BJA21 (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 8276M Processor (28C/2.2GHz/2TB/165W)	MC-3BKA21 / MCX3BKA21 (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 8260M Processor (24C/2.4GHz/2TB/165W)	MC-3BKC21 / MCX3BKC21 (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)	
Intel Xeon Gold 6254 Processor (18C/3.1GHz/1TB/200W)	MC-3BMF11 / MCX3BMF11 (LD)	
Intel Xeon Gold 6248 Processor (20C/2.5GHz/1TB/150W)	MC-3BNE11 / MCX3BNE11 (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 6240 Processor (18C/2.6GHz/1TB/150W)	MC-3BNF11 / MCX3BNF11 (LD)	
Intel Xeon Gold 6230 Processor (20C/2.1GHz/1TB/125W)	MC-3BRE11 / MCX3BRE11 (LD)	

CPU mounting condition

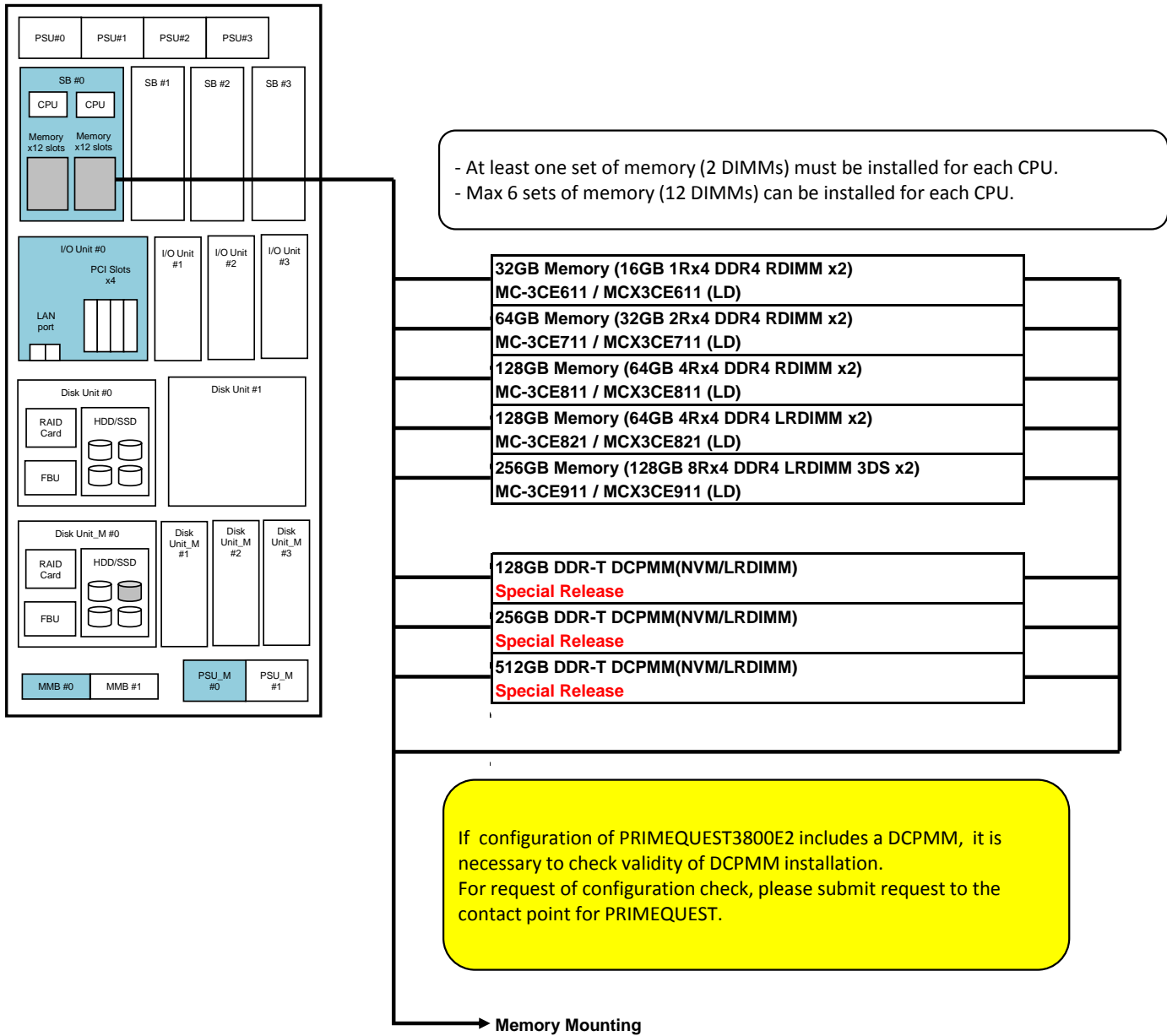
# of SBs in one Base Unit	# of CPUs in one Base Unit
1SB	1 or 2
2SB	4
3SB	6
4SB	8

- 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

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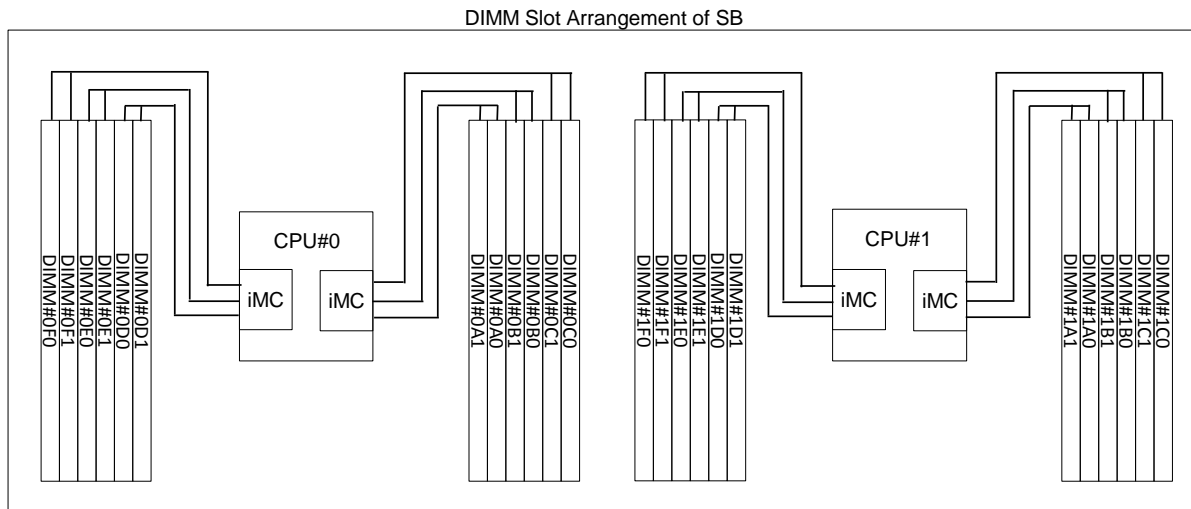


# Memory Mounting

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## 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

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**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	
		0A1	0B1	0C1	0D1	0E1	0F1	1A1	1B1	1C1	1D1	1E1	1F1	
Normal	Disabled	1	2	4(*1),8	1	2	4(*1),8	1	3	5(*1),9	1	3	5(*1),9	(*3)
		6	6(*2)	10	6	6(*2)	10	7	7(*2)	11	7	7(*2)	11	
	Enabled	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	
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

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

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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

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At least one DCPMMs have to be installed in one CPU.

Up to 6 DCPMMs can be installed in one CPU.

DCPMM increment unit is one unit. If DCPMM is installed, DDR4 DIMM increment unit is one unit.

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

### 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
		DCPMM1	DCPMM1	DCPMM1	DCPMM1	DCPMM1	DCPMM1	Any DRAM
MM	2-2-2	DRAM1	DRAM1	DRAM1	DRAM1	DRAM1	DRAM1	(*1) Symmetric
		DCPMM1	DCPMM1	DCPMM1	DCPMM1	DCPMM1	DCPMM1	Any DRAM
AD+MM	2-2-2	DRAM3	DRAM3	DRAM3	DRAM3	DRAM3	DRAM3	(*1) Symmetric
		DCPMM1	DCPMM1	DCPMM1	DCPMM1	DCPMM1	DCPMM1	Except for 3DS LRDIMM
AD	2-1-1	DRAM1	DRAM1	DRAM1	DRAM1	DRAM1	DRAM1	(*1) Symmetric
		DCPMM1	-	-	DCPMM1	-	-	Any DRAM
MM	2-1-1	DRAM2	DRAM2	DRAM2	DRAM2	DRAM2	DRAM2	(*1) Symmetric
		DCPMM1	-	-	DCPMM1	-	-	RDIMM only (16 or 32GB)
AD+MM	2-1-1	DRAM3	DRAM3	DRAM3	DRAM3	DRAM3	DRAM3	(*1) Symmetric
		DCPMM1	-	-	DCPMM1	-	-	Except for 3DS LRDIMM
AD	2-2-1	DRAM1	DRAM1	DRAM1	DRAM1	DRAM1	DRAM1	(*1) Symmetric
		DCPMM1	DCPMM1	-	DCPMM1	DCPMM1	-	Any DRAM
MM	2-2-1	DRAM1	DRAM1	DRAM1	DRAM1	DRAM1	DRAM1	(*1) Symmetric
		DCPMM1	DCPMM1	-	DCPMM1	DCPMM1	-	Any DRAM
AD+MM	2-2-1	DRAM3	DRAM3	DRAM3	DRAM3	DRAM3	DRAM3	(*1) Symmetric
		DCPMM1	DCPMM1	-	DCPMM1	DCPMM1	-	Except for 3DS LRDIMM

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%)

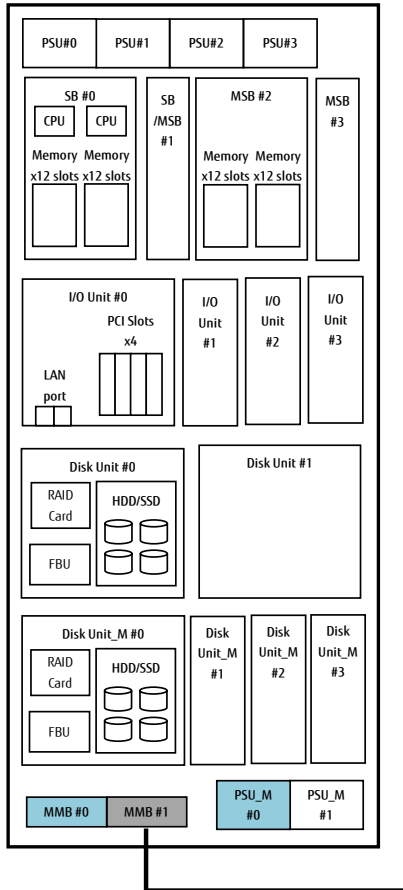
AD+MM: Memory Mode (Except for 100%)

(\*1) Symmetric Population across all CPU.

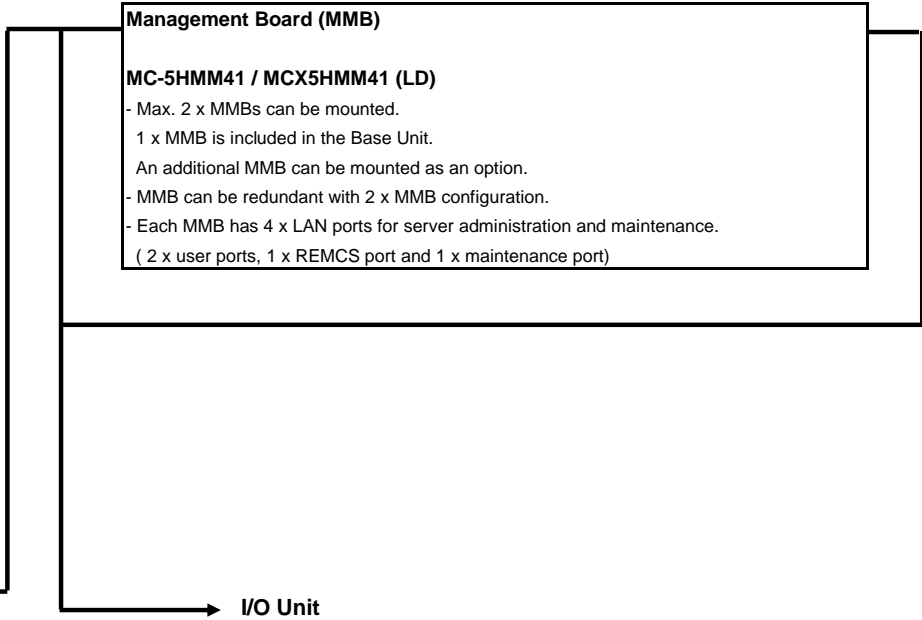
If configuration of PRIMEQUEST3800E2 includes a DCPMM, it is necessary to check validity of DCPMM installation. For request of configuration check, please submit request to the contact point for PRIMEQUEST.

## 6. Management Board (MMB)

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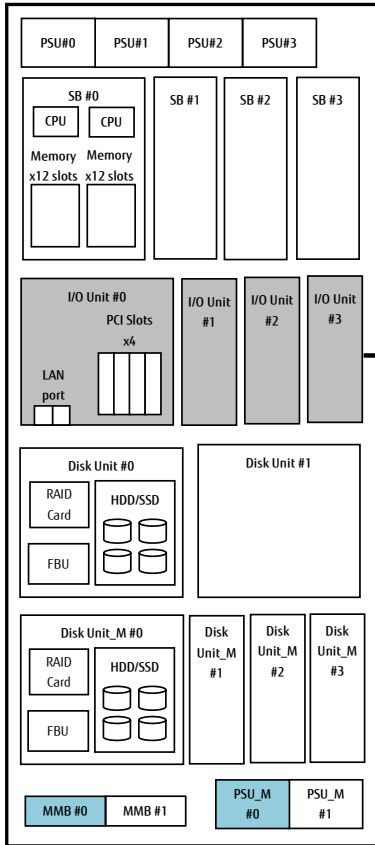


1x MMB is included in the Base Unit.  
Max. 2x MMBs can be mounted in a Base unit.



# 7.I/O UNIT

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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)**

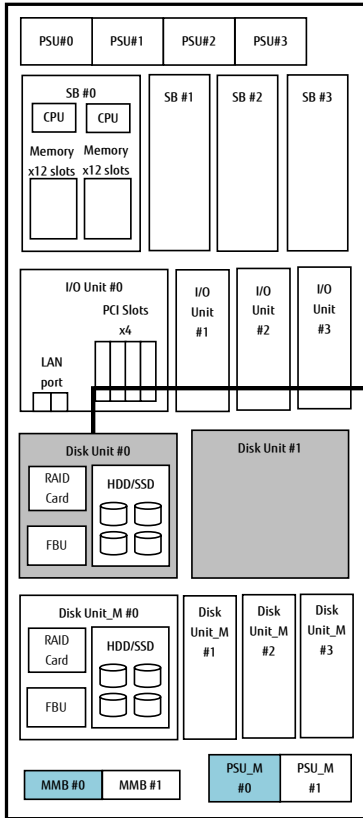
- 1x I/O Unit is included in the Base Unit.  
Max. 4 x I/O Units can be mounted.
- 2 x 10GBASE-T LAN ports per I/O Unit.
- 4x Low Profile PCIe slots per I/O Unit.
- PCI Express 3.0 x16 Lane x1 slot, x8 Lane x3 slots
- 12 PCIe slots in the PCI Box are available using PCI Box connection card.
- PCI hot 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

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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)**  
**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**  
**MC-0JFB61 / MCX0JFB61 (LD)**  
 - Flash Backup Unit for RAID Controller EP420i with cache memory.

**RAID Advanced Software Options**  
**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

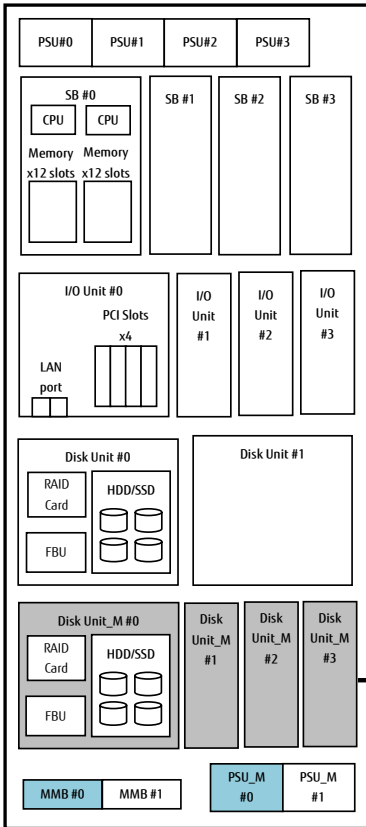
I/O Unit	Disk Unit
I/O Unit #0	Disk Unit #0
I/O Unit #1	Disk Unit #1

→ Disk Unit for DMBU(Disk/MMB Unit) (DU\_M)



Disk Unit for DMBU(Disk/MMB Unit) (DU\_M)

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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)**  
**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**  
**MC-0KLA51 / MCX0KLA51 (LD)**  
 License Activation Key for CacheCade 2.0

**Flash Back-up Unit**  
**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 Controller 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.

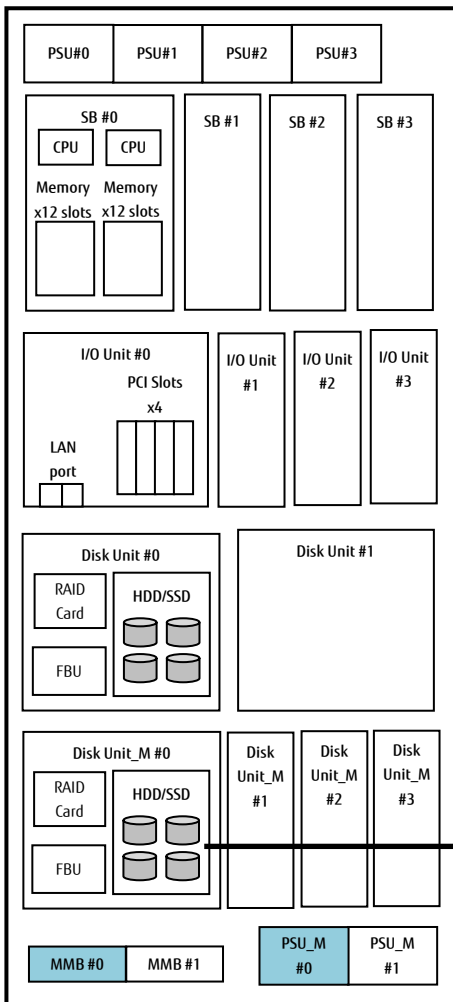
**Flash Back-up Unit for EP5x0i**  
**MC-0JFB41 / MCX0JFB41 (LD)**  
 - Flash Backup Unit for RAID Controller

HDD

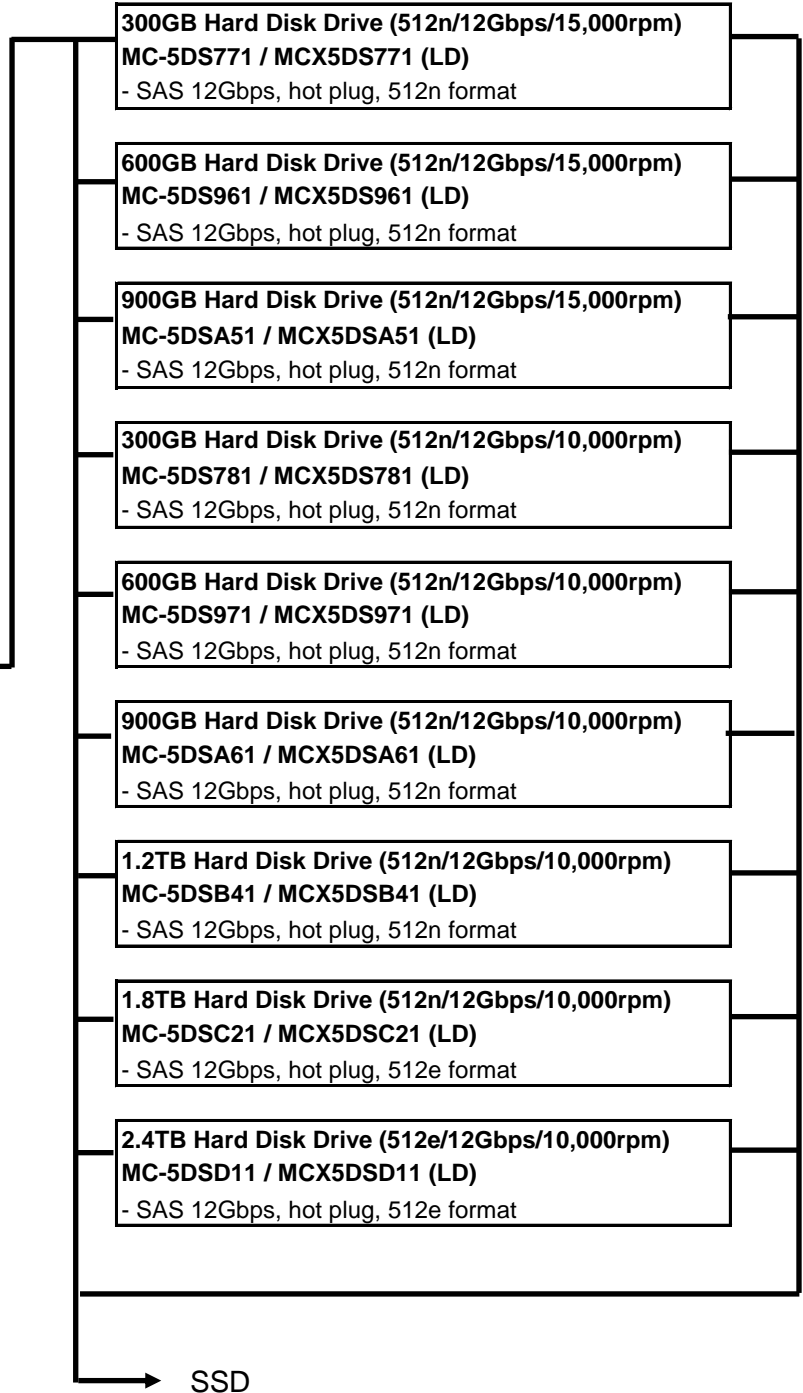
9.HDD

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

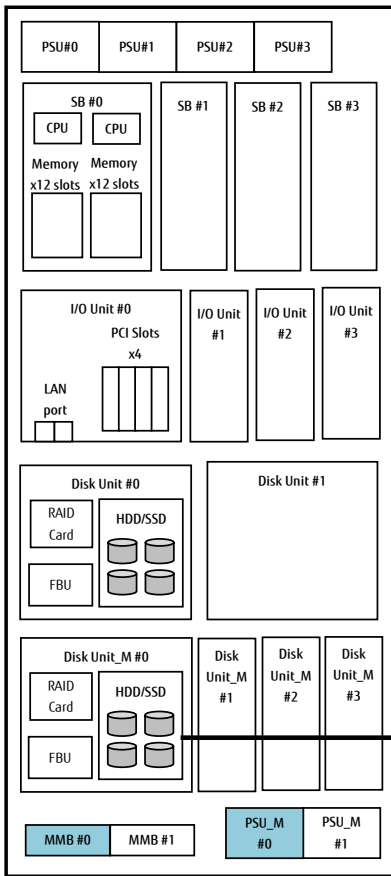


HDD



9.SSD

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

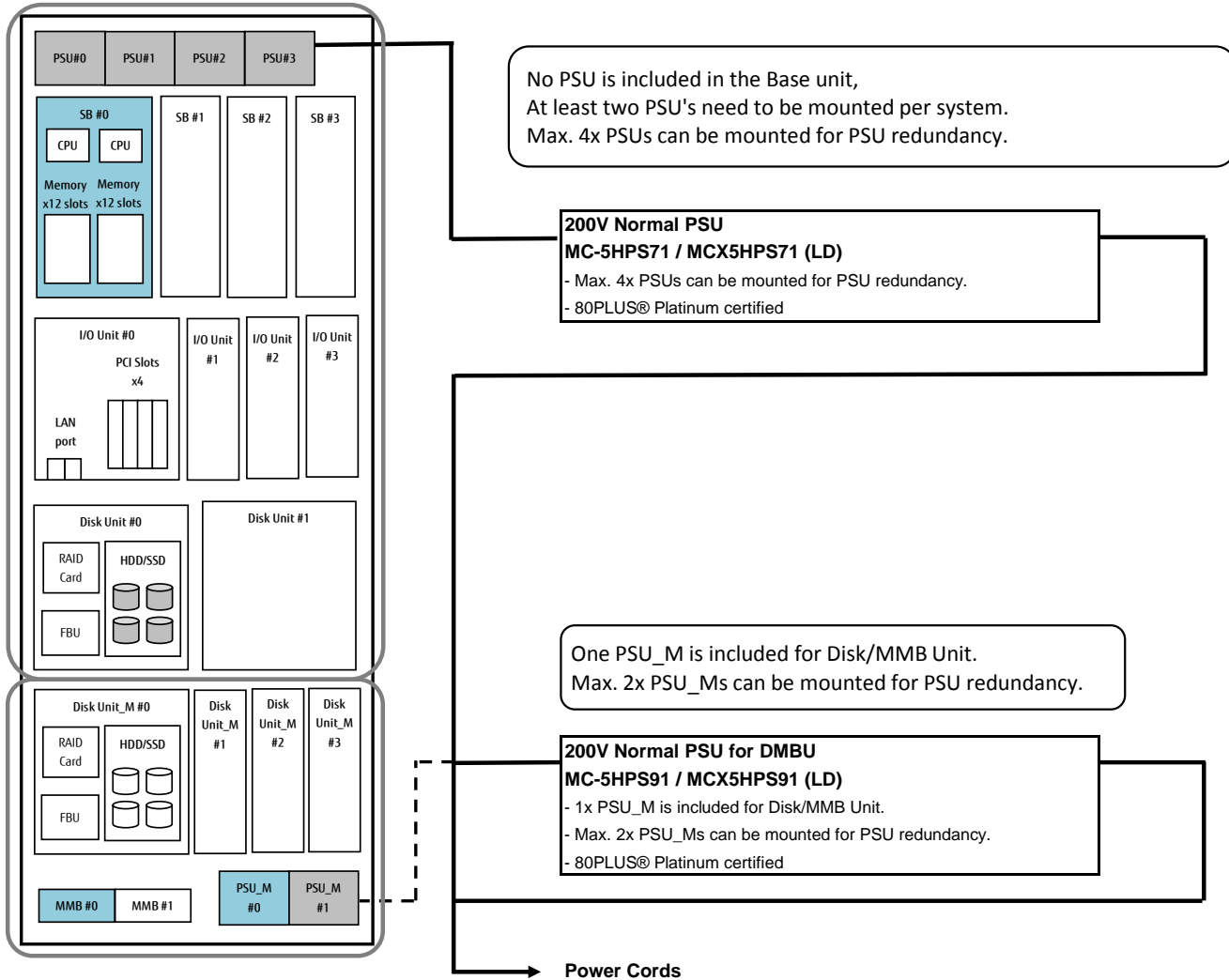
- 400GB Solid State Drive ( 512n / 12Gbps / 10DWPD )**  
**MC-5DG821 / MCX5DG821 (LD)**  
 - SAS 12Gbps, MLC, hot plug, DWPD: 10
- 800GB Solid State Drive ( 512n / 12Gbps / 10DWPD )**  
**MC-5DG921 / MCX5DG921 (LD)**  
 - SAS 12Gbps, MLC, hot plug, DWPD: 10
- 1.6TB Solid State Drive ( 512n / 12Gbps / 10DWPD )**  
**MC-5DGA21 / MCX5DGA21 (LD)**  
 - SAS 12Gbps, MLC, hot plug, DWPD: 10
- 400GB Solid State Drive ( 512n / 12Gbps / 3DWPD )**  
**MC-5DH821 / MCX5DH821 (LD)**  
 - SAS 12Gbps, MLC, hot plug, DWPD: 3
- 800GB Solid State Drive ( 512n / 12Gbps / 3DWPD )**  
**MC-5DH921 / MCX5DH921 (LD)**  
 - SAS 12Gbps, MLC, hot plug, DWPD: 3
- 1.6TB Solid State Drive ( 512n / 12Gbps / 3DWPD )**  
**MC-5DHA21 / MCX5DHA21 (LD)**  
 - SAS 12Gbps, MLC, hot plug, DWPD: 3
- 3.2TB Solid State Drive ( 512n / 12Gbps / 3DWPD )**  
**MC-5DHB21 / MCX5DHB21 (LD)**  
 - SAS 12Gbps, MLC, hot plug, DWPD: 3
- 6.4TB Solid State Drive ( 512n / 12Gbps / 3DWPD )**  
**MC-5DKG21 / MCX5DKG21 (LD)**  
 - SAS 12Gbps, MLC, hot plug, DWPD: 3

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)

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AC Power input	# of components				# of PSUs		Dual Power feed
	CPU (W)	DIMM	IOU	PCIeSSD	PSU	PSU_M	
240V	>=200	96 slots (Max. 12TB)	4	8	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

- \*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.

If the number of IOU or PCIe SSD exceed the above limit in the PSU 2 + n configuration (\*2, \*3), it is necessary to check the power consumption of the configuration.  
For request of configuration check, please submit request to the contact shown below

**fj-mktg-pq@dl.fujitsu.com**

10.Power Cords for APAC and Americas

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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

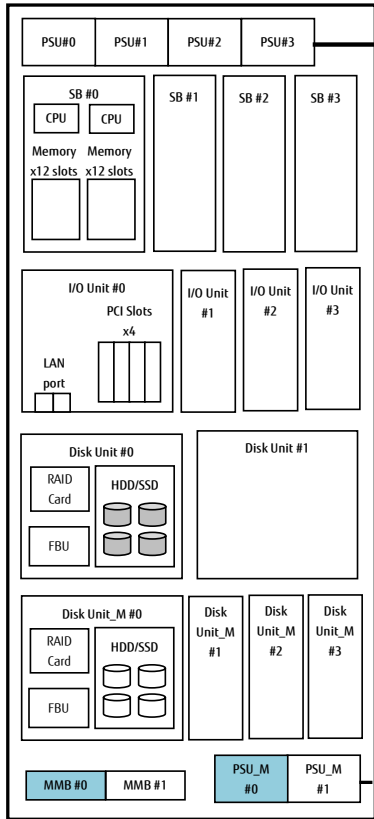
**IEC AC 200V Cable(1m)**  
**MC-0HCB11 / MCX0HCB11 (LD)**  
 - IEC60320 C20, 1m  
 - power cord x 1

\* 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

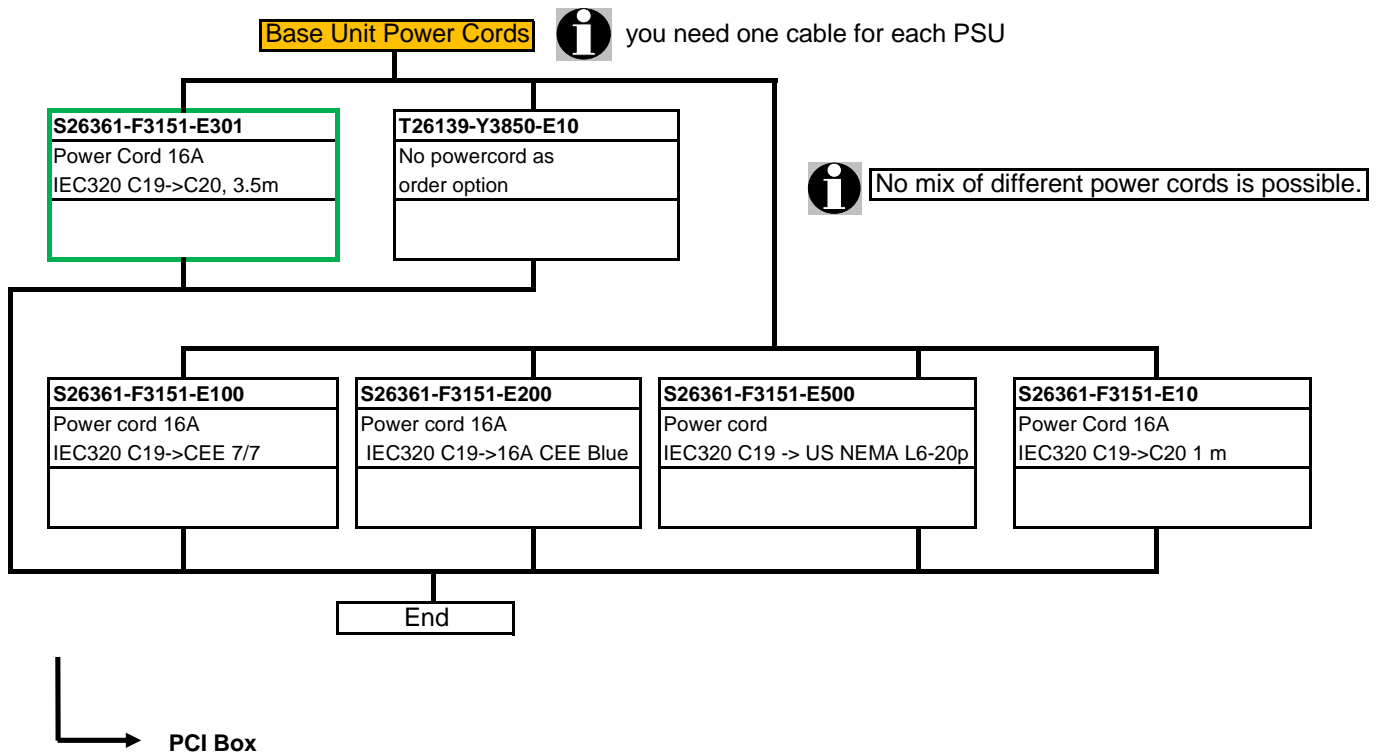
**IEC AC 200V Cable (1m) for PCI Box and DMBU**  
**MC-0HCB41 / MCX0HCB41 (LD)**  
 - IEC60320 C20, 1m  
 - power cord x 1

Power Cords



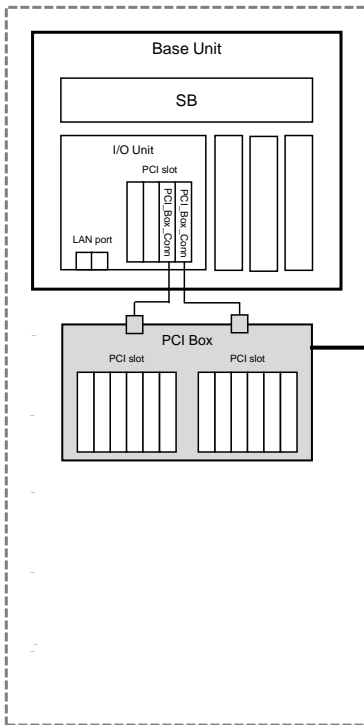
# 10.Power Cords for EMEA & India

Apr. 2019, Ver.1.0



11.PCI Box

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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.

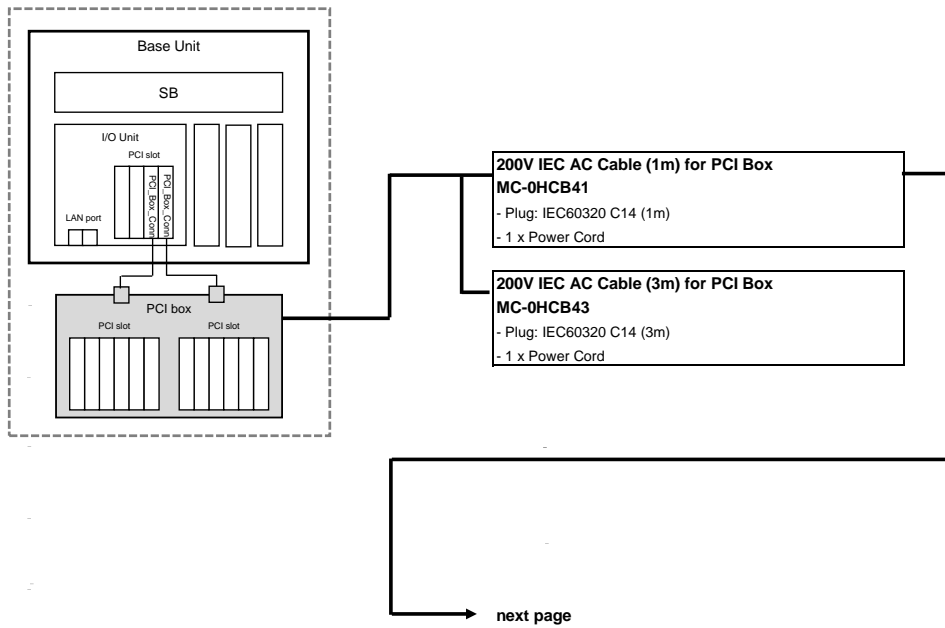
Input voltage	Power feed	Redundancy	# of PSU	Required quantity	
				PSU	Power cord
AC 200V	Single	Not available	1	1	1
		Available (*1)	1+1	2	2
	Dual	Available (*2)	1x2	2	2

(\*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.

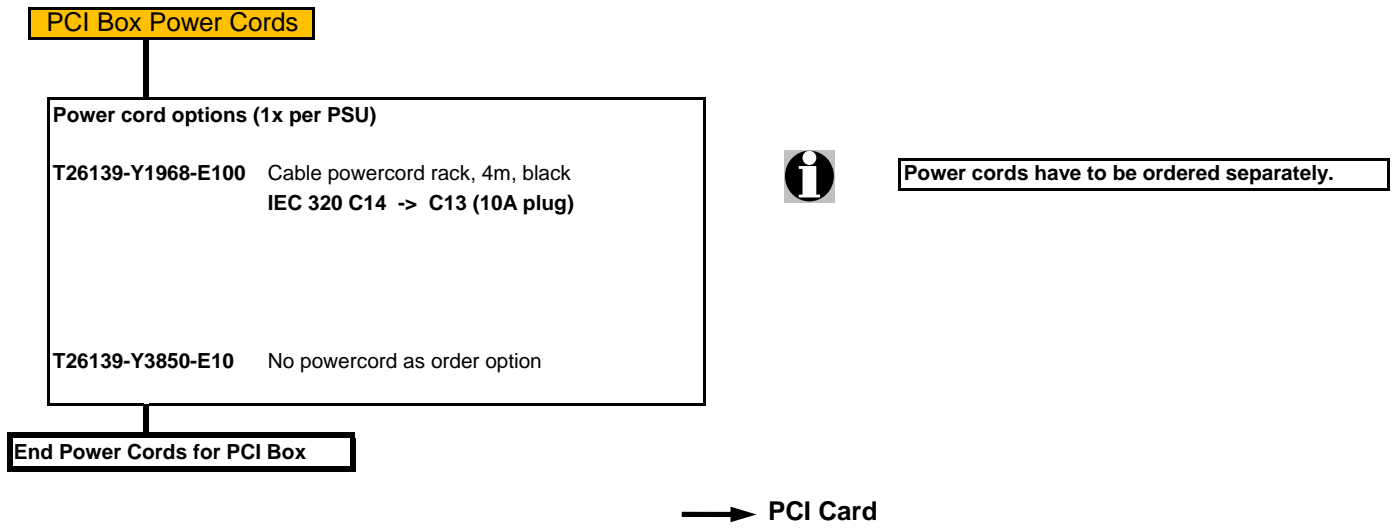
### Power Cords for PCI Box for APAC and Americas

Apr. 2019, Ver.1.0



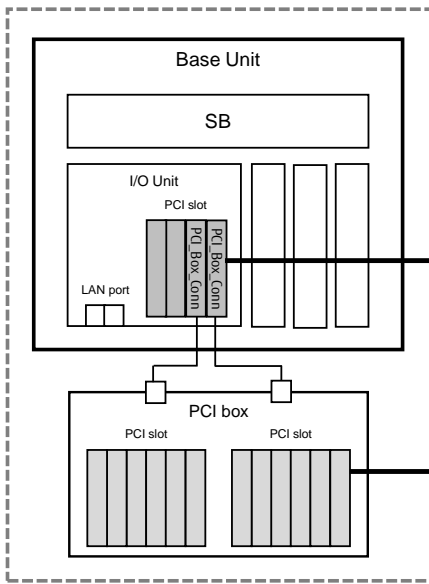


## Power Cords for PCI Box for EMEA & India



## 12.PCI Cards

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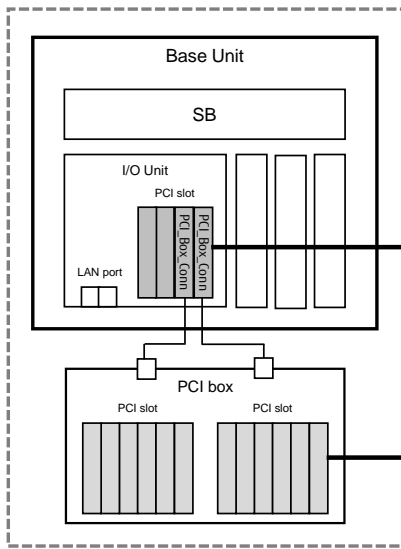
Max. 56 PCI cards(excluding PCI Box Connection Cards) can be mounted in I/O Units and PCI Boxes.  
 I/O Unit : Max. 4 cards can be mouted per I/O Unit  
 - 1x PCIe x16 (Low Profile)  
 - 3x PCIe x8 (Low Profile)  
 PCI Box : Max. 12 cards can be mouted per PCI Box  
 - 12x PCIe x8 (Full Height, hotpluggable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

<p><b>PFC EP LPe31000 1x 16Gb Emulex</b>                  MC-0JFCF1 (Low Profile)                  MC-0JFCF2 (Full Height)                  MCX0JFCF1 (LD, LP/FH)                  Single Channel 16Gbps Fibre Channel Card</p>
<p><b>PFC EP LPe31002 2x 16Gb Emulex</b>                  MC-0JFCG1 (Low Profile)                  MC-0JFCG2 (Full Height)                  MCX0JFCG1 (LD, LP/FH)                  Dual Channel 16Gbps Fibre Channel Card</p>
<p><b>PFC EP LPe32000 1x 32Gb Broadcom</b>                  MC-0JFCM1 (Low Profile)                  MC-0JFCM2 (Full Height)                  MCX0JFCM1 (LD, LP/FH)                  Single Channel 32Gbps Fiber Channel Card</p>
<p><b>PFC EP LPe32002 2x 32Gb Broadcom</b>                  MC-0JFCN1 (Low Profile)                  MC-0JFCN2 (Full Height)                  MCX0JFCN1 (LD, LP/FH)                  Dual Channel 32Gbps Fiber Channel Card</p>
<p><b>PFC EP QLE2690 1x 16Gb Qlogic</b>                  MC-0JFCP1 (Low Profile)                  MC-0JFCP2 (Full Height)                  MCX0JFCP1 (LD, LP/FH)                  Single Channel 16Gbps Fibre Channel Card</p>
<p><b>PFC EP QLE2692 2x 16Gb Qlogic</b>                  MC-0JFCQ1 (Low Profile)                  MC-0JFCQ2 (Full Height)                  MCX0JFCQ1 (LD, LP/FH)                  Dual Channel 16Gbps Fibre Channel Card</p>
<p><b>PFC EP QLE2740 1x 32Gb Cavium</b>                  MC-0JFCK1 (Low Profile)                  MC-0JFCK2 (Full Height)                  MCX0JFCK1 (LD, LP/FH)                  Dual Channel 32Gbps Fibre Channel Card</p>
<p><b>PFC EP QLE2742 2x 32Gb Cavium</b>                  MC-0JFCL1 (Low Profile)                  MCX0JFCL1 (LD, LP)                  Dual Channel 32Gbps Fibre Channel Card</p>

→ PCI Cards 2

PCI Cards 2

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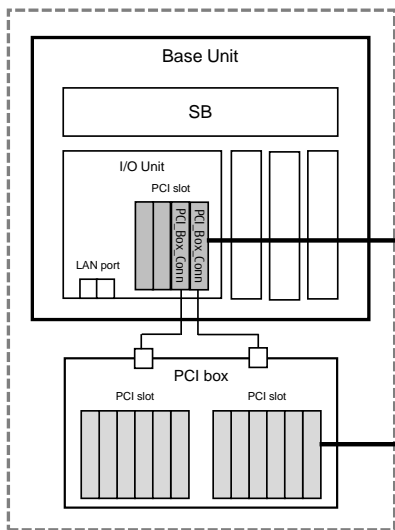
Max. 56 PCI cards(excluding PCI Box Connection Cards) can be mounted in I/O Units and PCI Boxes.  
 I/O Unit : Max. 4 cards can be mounted per I/O Unit  
 - 1x PCIe x16 (Low Profile)  
 - 3x PCIe x8 (Low Profile)  
 PCI Box : Max. 12 cards can be mounted per PCI Box  
 - 12x PCIe x8 (Full Height, hotpluggable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

<p><b>PLAN CP 2x1Gbit Cu Intel I350-T2 LP</b>                  MC-0JGEC1 (Low Profile)                  MC-0JGEC2 (Full Height)                  MCX0JGEC1 (LD, LP/FH)                  Dual Channel 1000BASE-T</p>
<p><b>PLAN CP 4x1Gbit Cu Intel I350-T4 LP</b>                  MC-0JGED1 (Low Profile)                  MC-0JGED2 (Full Height)                  MCX0JGED1 (LD, LP/FH)                  Quad Channel 1000BASE-T</p>
<p><b>PLAN EP X550-T2 2x10GBASE-T</b>                  MC-0JXEJ1 (Low Profile)                  MC-0JXEJ2 (Full Height)                  MCX0JXEJ1 (LD, LP/FH)                  Dual Channel 1000BASE-T</p>
<p><b>PLAN EP X710-DA2 2x10Gb SFP+</b>                  MC-0JXEK1 (Low Profile)                  MC-0JXEK2 (Full Height)                  MCX0JXEK1 (LD, LP/FH)                  Dual Channel 10Gb SFP+</p>
<p><b>SFP+ Module Multi Mode Fiber 10GbE LC</b>                  MC-0JXEL1 / MCX0JXEL1 (LD)</p>
<p><b>PLAN EP XXV710-DA2 2x25GbE</b>                  MC-0JXEH1 (Low Profile)                  MCX0JXEH1 (LD, LP)                  Dual Channel 25GbE SFP28</p>
<p><b>SFP28 Module Multi Mode Fiber 25GbE LC</b>                  MC-0JCEJ1 / MCX0JCEJ1 (LD)</p>
<p><b>PLAN EP QL41112 2x10GbE-T</b>                  MC-0JXF21 (Low Profile)                  MC-0JXF22 (Full Height)                  MCX0JXF21 (LD, LP/FH)                  Dual Channel 10GBASE-T</p>
<p><b>PLAN EP QL41132 2x10GbE SFP+</b>                  MC-0JXF41 (Low Profile)                  MC-0JXF42 (Full Height)                  MCX0JXF41 (LD, LP/FH)                  Dual Channel 10Gb SFP+</p>
<p><b>SFP+ Module Multi Mode Fiber 10GbE LC</b>                  MC-0JXEL1 / MCX0JXEL1 (LD)</p>

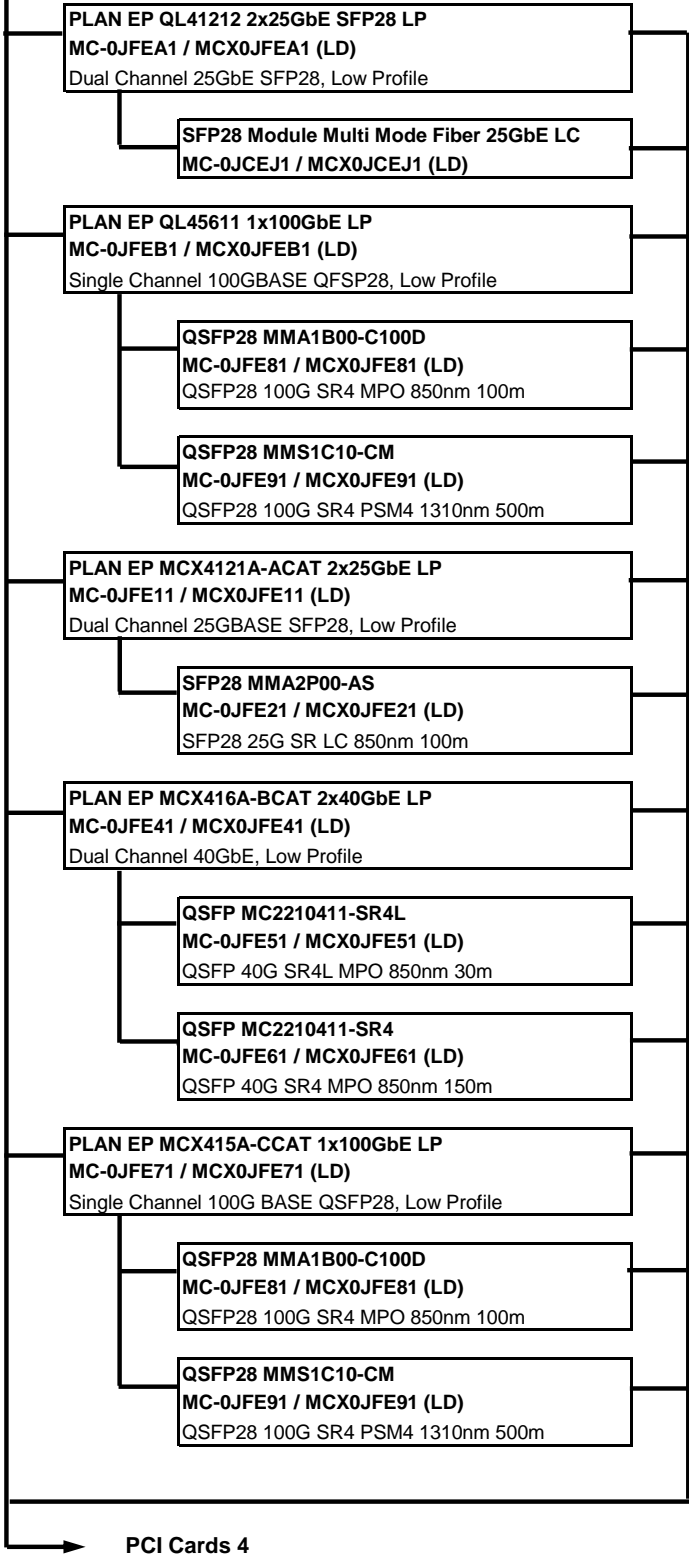
→ PCI Cards 3

PCI Cards 3

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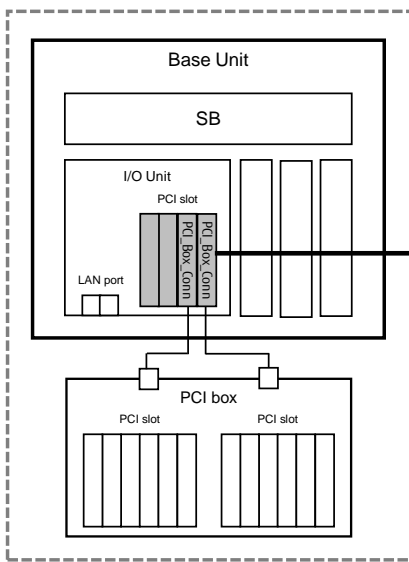


Max. 56 PCI cards(excluding PCI Box Connection Cards)  
 can be mounted in I/O Units and PCI Boxes.  
 I/O Unit : Max. 4 cards can be mouted per I/O Unit  
 - 1x PCIe x16 (Low Profile)  
 - 3x PCIe x8 (Low Profile)  
 PCI Box : Max. 12 cards can be mouted per PCI

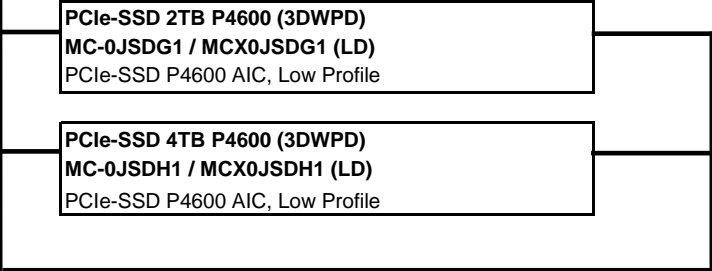


PCI Cards 4

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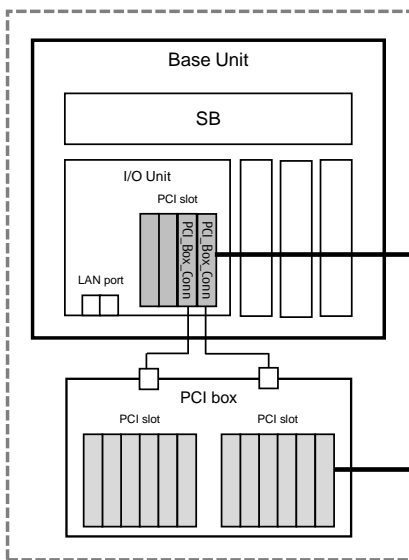
Max. 56 PCI cards(excluding PCI Box Connection Cards) can be mounted in I/O Units and PCI Boxes.  
 I/O Unit : Max. 4 cards can be mouted per I/O Unit  
 - 1x PCIe x16 (Low Profile)  
 - 3x PCIe x8 (Low Profile)  
 PCI Box : Max. 12 cards can be mouted per PCI Box  
 - 12x PCIe x8 (Full Height, hotpluggable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



→ PCI Cards 5

PCI Cards 5

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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.

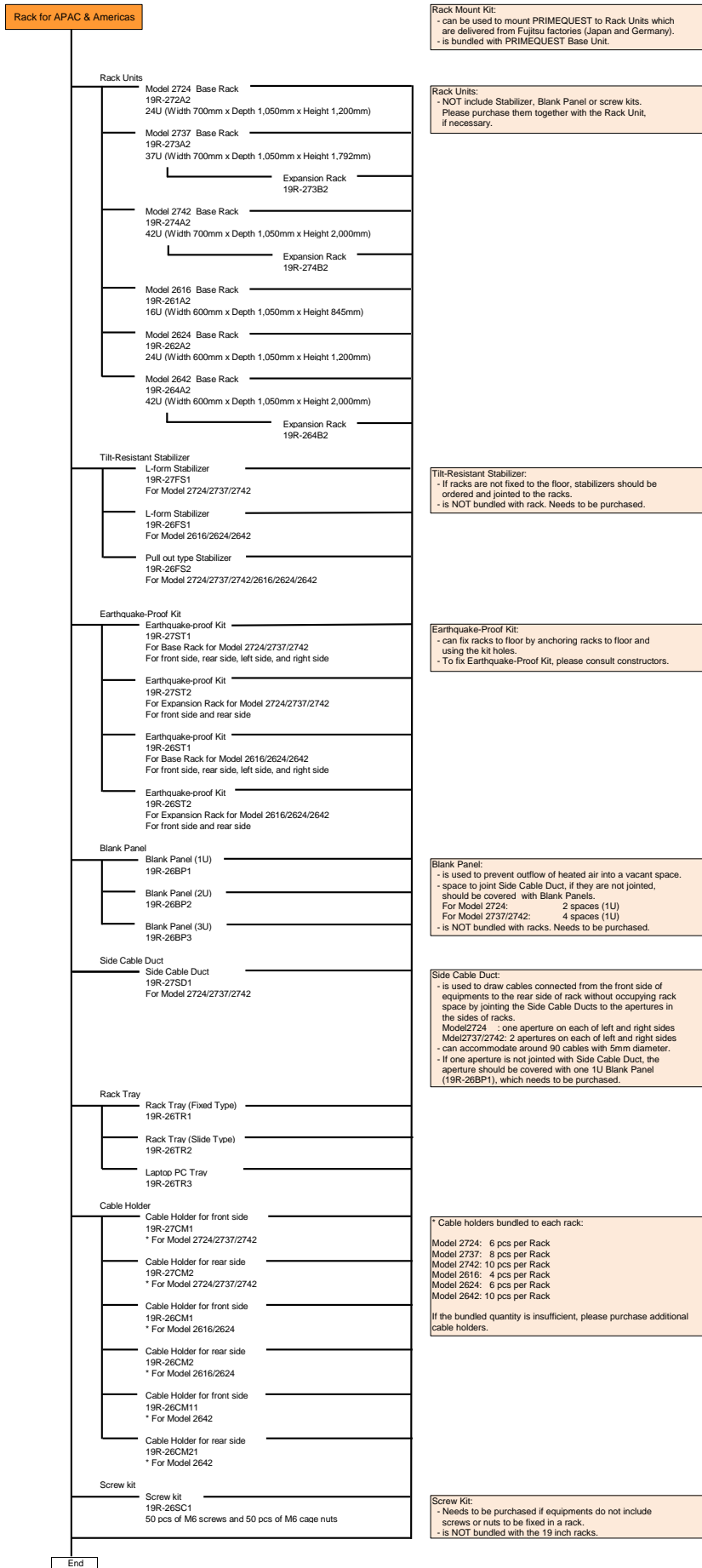
**PSAS CP400e**  
**MC-0JSS41 (Low Profile)**  
**MC-0JSS42 (Full Height)**  
**MCX0JSS41 (LD, LP/FH)**  
 Dual Channel SAS card (8 port) for external Backup Cabinet.

→ **Rack Installation**

13. Rack Installation for APAC and Americas

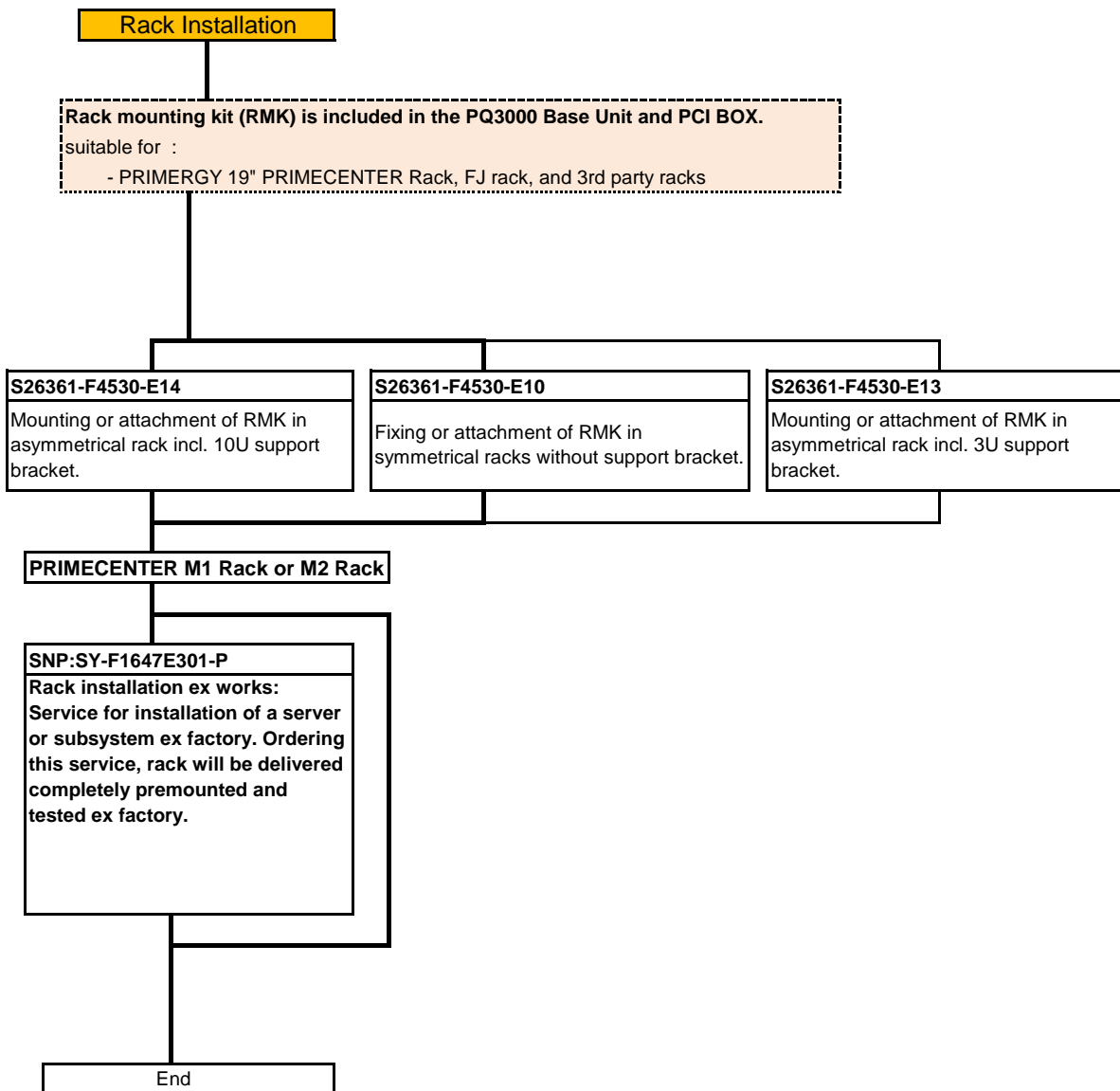
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For the details of rack products, please refer to "19 inch Rack Handbook".  
<https://globalpartners.ts.fujitsu.com/sites/primeweb/services/servers/primequest/document/Pages/dc-h-guide.aspx>



### 13.Rack Installation for EMEA and India

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For more configuration information, RACK COMPONENTS, PDU & KVM please see:  
<http://globalsp.ts.fujitsu.com/dmsp/Publications/public/cnfgPCM1rack.pdf>



## 14. Maximum Quantity of PCIe Cards

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Maximum Quantity of PCI Cards that can be mounted.

Product Name	Order Number			per Partition / per System			
	BTO	BTO for PCI Box	LD	Max. Qty			
SAS RAID controller card (EP420i)	PRAID EP420i	*6 *7	MC-0JSRA1	Not mountable	MCX0JSRA1		
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	6c / 6c	total 2
PRAID EP420e	PRAID EP420e	*6	MC-0JSRB1	MC-0JSRB2	MCX0JSRB1	2c / 4c	
PSAS CP400e	PSAS CP400e	*6	MC-0JSS41	MC-0JSS42	MCX0JSS41	4c / 8c	2
PFC EP LPe31000 1x 16Gb Emulex	Broadcom LPe31000	*1 *2 *6	MC-0JFCF1	MC-0JFCF2	MCX0JFCF1	16p / 24c	total 8
PFC EP LPe31002 2x 16Gb Emulex	Broadcom LPe31002	*1 *2 *6	MC-0JFCG1	MC-0JFCG2	MCX0JFCG1		
PFC EP LPe32000 1x 32Gb Broadcom	Broadcom LPe32000	*1 *2 *6	MC-0JFCM1	MC-0JFCM2	MCX0JFCM1	8p / 16c	
PFC EP LPe32002 2x 32Gb Broadcom	Broadcom LPe32002	*1 *2 *6	MC-0JFCN1	MC-0JFCN2	MCX0JFCN1		total 8
PFC EP QLE2690 1x 16Gb Qlogic	Qlogic QLE2690	*1 *6	MC-0JFCP1	MC-0JFCP2	MCX0JFCP1	16p / 24c	
PFC EP QLE2690 2x 16Gb Qlogic	Qlogic QLE2692	*1 *6	MC-0JFCQ1	MC-0JFCQ2	MCX0JFCQ1	16p / 12c	
PFC EP QLE2740 1x 32Gb Cavium	Qlogic QLE2740	*1 *6	MC-0JFCK1	MC-0JFCK2	MCX0JFCK1	8p / 16c	total 8
PFC EP QLE2742 2x 32Gb Cavium	Qlogic QLE2742	*1 *6	MC-0JFCL1	Not mountable	MCX0JFCL1	8p / 16c	
PLAN CP 2x1Gbit Cu Intel I350-T2	Intel I350-T2		MC-0JGEC1	MC-0JGEC2	MCX0JGEC1	16c / 24c	8
PLAN CP 4x1Gbit Cu Intel I350-T4	Intel I350-T4		MC-0JGED1	MC-0JGED2	MCX0JGED1		4
PLAN EP X550-T2 2x10GBASE-T	Intel X550-T2		MC-0JXEJ1	MC-0JXEJ2	MCX0JXEJ1	16c / 24c	8
PLAN EP X710-DA2 2x10Gb SFP+	Intel X710-DA2	*3	MC-0JXEK1	MC-0JXEK2	MCX0JXEK1	8c / 24c	4
PLAN EP XXV710-DA2 2x 25GbE	Intel XXV710-DA2		MC-0JXEH1	Not mountable	MCX0JXEH1	2c / 8c	2
PLAN EP QL41112 2x10GbE-T	Qlogic QL41112		MC-0JXF21	MC-0JXF22	MCX0JXF21	16c / 24c	8
PLAN EP QL41132 2x10GbE SFP+	Qlogic QL41132		MC-0JXF41	MC-0JXF42	MCX0JXF41		4
PLAN EP QL41212 2x25GbE SFP28	Qlogic QL41212		MC-0JFEA1	Not mountable	MCX0JFEA1	4c / 8c	4
PLAN EP QL45611 1x100GbE LP	Qlogic QL45611		MC-0JFEB1	Not mountable	MCX0JFEB1	4c / 4c	2
PLAN EP MCX4121A-ACAT 2x25GbE	Mellanox MCX4121A-ACAT	*6	MC-0JFE11	Not mountable	MCX0JFE11	4c / 8c	total 4
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	
PCIe-SSD 2TB P4600 (3DWPDP)	Intel P4600, 3DWPDP	*4	MC-0JSDG1	Not mountable	MCX0JSDG1		8
PCIe-SSD 4TB P4600 (3DWPDP)	Intel P4600, 3DWPDP	*4	MC-0JSDH1	Not mountable	MCX0JSDH1	8c / 8c	
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 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.

15. Available OS (1)

Apr. 2019, Ver.1.0

Product name	Order number			OS						
	Build to Order	BTO for PCI Box	Loose Delivery	Win2016 (1)	Win2019 (2)	RHEL (3)	SLES (4)	VMware (5)	Oracle Linux (6)	Oracle VM (7)
PRIMEQUEST 3800E2 Base Unit	MCK3AC111		NA	A	p	A	A	A	NA	NA
Advanced Thermal Design Option	MC-0PTH2		-	-	-	-	-	-	-	-
System Board	MC-3HSBD1		MCX3HSBD1	A	p	A	A	A	NA	NA
TPM Module(v2.0)	MC-6HTP31		MCX6HTP31	NA	NA	A	A	A	NA	NA
USB Flash Device 64GB Dual	MC-5FA411		MCX5FA411	NA	NA	NA	NA	6.7U1	NA	NA
M.2 Flash Device 240GB (except ESX)	MC-5FB751		MCX5FB751	p	p	p	12SP4	NA	NA	NA
Intel Xeon Platinum 8280L Processor (28C/2.7GHz/4.5TB/205W)	MC-3BJA41		MCX3BJA41	A	p	A	A	A	NA	NA
Intel Xeon Platinum 8280M Processor (28C/2.7GHz/2TB/205W)	MC-3BJA21		MCX3BJA21	A	p	A	A	A	NA	NA
Intel Xeon Platinum 8280 Processor (28C/2.7GHz/1TB/205W)	MC-3BJA11		MCX3BJA11	A	p	A	A	A	NA	NA
Intel Xeon Platinum 8276L Processor (28C/2.2GHz/4.5TB/165W)	MC-3BKA41		MCX3BKA41	A	p	A	A	A	NA	NA
Intel Xeon Platinum 8276M Processor (28C/2.2GHz/2TB/165W)	MC-3BKA21		MCX3BKA21	A	p	A	A	A	NA	NA
Intel Xeon Platinum 8276 Processor (28C/2.2GHz/1TB/165W)	MC-3BKA11		MCX3BKA11	A	p	A	A	A	NA	NA
Intel Xeon Platinum 8270 Processor (26C/2.7GHz/1TB/205W)	MC-3BKB11		MCX3BKB11	A	p	A	A	A	NA	NA
Intel Xeon Platinum 8268 Processor (24C/2.9GHz/1TB/205W)	MC-3BJC11		MCX3BJC11	A	p	A	A	A	NA	NA
Intel Xeon Platinum 8260L Processor (24C/2.4GHz/4.5TB/165W)	MC-3BKC41		MCX3BKC41	A	p	A	A	A	NA	NA
Intel Xeon Platinum 8260M Processor (24C/2.4GHz/2TB/165W)	MC-3BKC21		MCX3BKC21	A	p	A	A	A	NA	NA
Intel Xeon Platinum 8260 Processor (24C/2.4GHz/1TB/165W)	MC-3BKC11		MCX3BKC11	A	p	A	A	A	NA	NA
Intel Xeon Platinum 8256 Processor (4C/3.8GHz/1TB/105W)	MC-3BKN11		MCX3BKN11	A	p	A	A	A	NA	NA
Intel Xeon Platinum 8253 Processor (16C/2.2GHz/1TB/125W)	MC-3BKG11		MCX3BKG11	A	p	A	A	A	NA	NA
Intel Xeon Gold 6254 Processor (18C/3.1GHz/1TB/200W)	MC-3BMF11		MCX3BMF11	A	p	A	A	A	NA	NA
Intel Xeon Gold 6248 Processor (20C/2.5GHz/1TB/150W)	MC-3BNE11		MCX3BNE11	A	p	A	A	A	NA	NA
Intel Xeon Gold 6244 Processor (8C/3.6GHz/1TB/150W)	MC-3BNL11		MCX3BNL11	A	p	A	A	A	NA	NA
Intel Xeon Gold 6242 Processor (16C/2.8GHz/1TB/150W)	MC-3BNG11		MCX3BNG11	A	p	A	A	A	NA	NA
Intel Xeon Gold 6240 Processor (18C/2.6GHz/1TB/150W)	MC-3BNF11		MCX3BNF11	A	p	A	A	A	NA	NA
Intel Xeon Gold 6230 Processor (20C/2.1GHz/1TB/125W)	MC-3BRE11		MCX3BRE11	A	p	A	A	A	NA	NA
32GB Memory (16GB 1Rx4 DDR4 RDIMM x2)	MC-3CE611		MCX3CE611	A	p	A	A	A	NA	NA
64GB Memory (32GB 2Rx4 DDR4 RDIMM x2)	MC-3CE711		MCX3CE711	A	p	A	A	A	NA	NA
128GB Memory (64GB 4Rx4 DDR4 RDIMM x2)	MC-3CE811		MCX3CE811	A	p	A	A	A	NA	NA
128GB Memory (64GB 4Rx4 DDR4 LRDIMM x2)	MC-3CE821		MCX3CE821	A	p	A	A	A	NA	NA
256GB Memory (128GB 8Rx4 DDR4 LRDIMM 3DS x2)	MC-3CE911		MCX3CE911	A	p	A	A	A	NA	NA
128GB DDR-T DCPMM(NVM/LRDIMM)	*Special Release			A	p	A	A	A	NA	NA
256GB DDR-T DCPMM(NVM/LRDIMM)	*Special Release			A	p	A	A	A	NA	NA
512GB DDR-T DCPMM(NVM/LRDIMM)	*Special Release			A	p	A	A	A	NA	NA
Management Board	MC-5HMM41		MCX5HMM41	A	p	A	A	A	NA	NA
I/O Unit E	MC-5HUX71		MCX5HUX71	A	p	A	A	A	NA	NA
Disk Unit for SAS (SAS3.0)	MC-5H DU71		MCX5H DU71	A	p	A	A	A	NA	NA
Disk Unit for DMBU(Disk/MMB Unit) (DU_M)	MC-5H DU51		MCX5H DU51	A	p	A	A	A	NA	NA
SAS RAID controller card (EP420)	MC-0JSRA1		MCX0JSRA1	A	p	7.6	12SP4	6.7U1	NA	NA
SAS RAID controller card (EP540)	MC-0JSR71		MCX0JSR71	A	p	7.6	12SP4	6.7U1	NA	NA
RAID controller card (EP580)	MC-0JSR81		MCX0JSR81	A	p	7.6	12SP4	6.7U1	NA	NA
Flash Back-up Unit for EP420i	MC-0JFB61		MCX0JFB61	-	-	-	-	-	-	-
Flash Back-up Unit for EP5x0i	MC-0JFB41		MCX0JFB41	-	-	-	-	-	-	-
RAID Advanced Software Options	MC-0KLA51		MCX0KLA51	A	p	A	A	A	NA	NA
300GB Hard Disk Drive (512n/12Gbps/15,000rpm)	MC-5DS771		MCX5DS771	A	p	A	A	A	NA	NA
600GB Hard Disk Drive (512n/12Gbps/15,000rpm)	MC-5DS961		MCX5DS961	A	p	A	A	A	NA	NA
900GB Hard Disk Drive (512n/12Gbps/15,000rpm)	MC-5DSA51		MCX5DSA51	A	p	A	A	A	NA	NA
300GB Hard Disk Drive (512n/12Gbps/10,000rpm)	MC-5DS781		MCX5DS781	A	p	A	A	A	NA	NA
600GB Hard Disk Drive (512n/12Gbps/10,000rpm)	MC-5DS971		MCX5DS971	A	p	A	A	A	NA	NA
900GB Hard Disk Drive (512n/12Gbps/10,000rpm)	MC-5DSA61		MCX5DSA61	A	p	A	A	A	NA	NA
1.2TB Hard Disk Drive (512n/12Gbps/10,000rpm)	MC-5DSB41		MCX5DSB41	A	p	A	A	A	NA	NA
1.8TB Hard Disk Drive (512e/12Gbps/10,000rpm)	MC-5DSC21		MCX5DSC21	A	p	A	A	A	NA	NA
2.4TB Hard Disk Drive (512e/12Gbps/10,000rpm)	MC-5DSD11		MCX5DSD11	A	p	A	A	A	NA	NA
400GB Solid State Drive (512n/12Gbps/10DWPD)	MC-5DGA21		MCX5DGA21	A	p	A	A	A	NA	NA
800GB Solid State Drive (512n/12Gbps/10DWPD)	MC-5DGA21		MCX5DGA21	A	p	A	A	A	NA	NA
1.6TB Solid State Drive (512n/12Gbps/10DWPD)	MC-5DHA21		MCX5DHA21	A	p	A	A	A	NA	NA
3.2TB Solid State Drive (512n/12Gbps/3DWPD)	MC-5DHB21		MCX5DHB21	A	p	A	A	A	NA	NA
6.4TB Solid State Drive (512n/12Gbps/3DWPD)	MC-5DKG21		MCX5DKG21	A	p	A	A	A	NA	NA
200V Normal PSU	MC-5HPS71		MCX5HPS71	-	-	-	-	-	-	-
200V Normal PSU for DMBU	MC-5HPS91		MCX5HPS91	-	-	-	-	-	-	-
IEC AC(200V) Cable (1m)	MC-0HCB11		MCX0HCB11	-	-	-	-	-	-	-
IEC AC(200V) Cable (3m)	MC-0HCB13		MCX0HCB13	-	-	-	-	-	-	-
IEC AC(200V) Cable (1m) for PCI Box and DMBU	MC-0HCB41		MCX0HCB41	-	-	-	-	-	-	-
IEC AC(200V) Cable (3m) for PCI Box and DMBU	MC-0HCB43		MCX0HCB43	-	-	-	-	-	-	-
PCI Box	MC-0HPB32		MCX0HPB32	A	p	A	A	A	NA	NA
PSU for PCI Box	MC-0HPS51		MCX0HPS51	-	-	-	-	-	-	-
PCI Box Connection Card	MC-0JPC21		MCX0JPC21	A	p	A	A	A	NA	NA

- (1) Microsoft® Windows Server® 2016 (Standard/Datacenter)
- (2) Microsoft® Windows Server® 2019 (Standard / Datacenter)
- (3) Red Hat® Enterprise Linux® 7.6
- (4) SUSE® Linux Enterprise Server 12 SP4 / 15
- (5) VMware vSphere® 6.7 U1
- (6) Oracle® Linux 7
- (7) Oracle® VM 3.4

A : Available  
 NA : Not Available  
 p : planned

\* EP420i  
 \* EP540i  
 \* EP580i

15.Availalbe OS (2)

Apr. 2019, Ver.1.0

Product name	Order number			OS							
	Build to Order	BTO for PCI Box	Loose Delivery	Win2016 (1)	Win2019 (2)	RHEL (3)	SLES (4)	VMware (5)	Oracle Linux (6)	Oracle VM (7)	
PFC EP LPe31000 1x 16Gb Emulex	MC-0JFCF1	MC-0JFCF2	MCX0JFCF1	A	p	p	15	6.7U1	NA	NA	* Broadcom LPe31000
PFC EP LPe31002 2x 16Gb Emulex	MC-0JFCG1	MC-0JFCG2	MCX0JFCG1	A	p	p	15	6.7U1	NA	NA	* Broadcom LPe31002
PFC EP LPe32000 1x 32Gb Broadcom	MC-0JFCM1	MC-0JFCM2	MCX0JFCM1	A	p	p	15	6.7U1	NA	NA	* Broadcom LPe32000
PFC EP LPe32002 2x 32Gb Broadcom	MC-0JFCN1	MC-0JFCN2	MCX0JFCN1	A	p	p	15	6.7U1	NA	NA	* Broadcom LPe32002
PFC EP QLE2690 1x 16Gb Qlogic	MC-0JFCP1	MC-0JFCP2	MCX0JFCP1	A	p	p	p	6.7U1	NA	NA	* Qlogic QLE2690
PFC EP QLE2692 2x 16Gb Qlogic	MC-0JFCQ1	MC-0JFCQ2	MCX0JFCQ1	A	p	p	p	6.7U1	NA	NA	* Qlogic QLE2692
PFC EP QLE2740 1x 32Gb Cavium	MC-0JFCK1	MC-0JFCK2	MCX0JFCK1	A	p	p	p	6.7U1	NA	NA	* Qlogic QLE2740
PFC EP QLE2742 2x 32Gb Cavium	MC-0JFCL1		MCX0JFCL1	A	p	p	p	6.7U1	NA	NA	* Qlogic QLE2742
PLAN CP 2x1Gbit Cu Intel I350-T2	MC-0JGEC1	MC-0JGEC2	MCX0JGEC1	A	p	7.6	12SP4	6.7U1	NA	NA	* Intel I350-T2
PLAN CP 4x1Gbit Cu Intel I350-T4	MC-0JGED1	MC-0JGED2	MCX0JGED1	A	p	7.6	12SP4	6.7U1	NA	NA	* Intel I350-T4
PLAN EP X550-T2 2x10GBASE-T	MC-0JXEJ1	MC-0JXEJ2	MCX0JXEJ1	A	p	p	p	6.7U1	NA	NA	* Intel X550-T2
PLAN EP X710-DA2 2x10Gb SFP+	MC-0JXEK1	MC-0JXEK2	MCX0JXEK1	A	p	p	p	6.7U1	NA	NA	* Intel X710-DA2
SFP+ Module Multi Mode Fiber 10GbE LC	MC-0JXEL1		MCX0JXEL1	-	-	-	-	-	-	-	
PLAN EP XXV710-DA2 2x 25GbE	MC-0JXEH1		MCX0JXEH1	A	p	p	p	6.7U1	NA	NA	* Intel XXV710-DA2
SFP28 Module Multi Mode Fiber 25GbE LC	MC-0JCEJ1		MCX0JCEJ1	-	-	-	-	-	-	-	
PLAN EP QL41112 2x10GbE-T	MC-0JXF21	MC-0JXF22	MCX0JXF22	A	p	p	15	6.7U1	NA	NA	* Cavium QL41112HLRJ
PLAN EP QL41132 2x10GbE SFP+	MC-0JXF41	MC-0JXF42	MCX0JXEK1	A	p	p	15	6.7U1	NA	NA	* Cavium QL41132HLCU
PLAN EP QL41212 2x25GbE SFP28	MC-0JFEA1		MCX0JFEA1	A	p	p	15	6.7U1	NA	NA	* Cavium QL41212
PLAN EP QL45611 1x100Gb	MC-0JFEB1		MCX0JFEB1	A	p	p	15	6.7U1	NA	NA	* Cavium QL45611HLCU
PLAN EP MCX4121A-ACAT 2x25GbE	MC-0JFE11		MCX0JFE11	A	p	p	15	p	NA	NA	* Mellanox MCX4121A-ACAT
SFP28 MMA2P00-AS	MC-0JFE21		MCX0JFE21	-	-	-	-	-	-	-	
PLAN EP MCX416A-BCAT 2x40GbE	MC-0JFE41		MCX0JFE41	A	p	p	15	p	NA	NA	* Mellanox MCX416A-BCAT
QSFP MC2210411-SR4L	MC-0JFE51		MCX0JFE51	-	-	-	-	-	-	-	
QSFP MC2210411-SR4	MC-0JFE61		MCX0JFE61	-	-	-	-	-	-	-	
PLAN EP MCX415A-CCAT 1x100GbE	MC-0JFE71		MCX0JFE71	A	p	p	15	p	NA	NA	* Mellanox MCX415A-CCAT
QSFP28 MMA1B00-C100D	MC-0JFE81		MCX0JFE81	-	-	-	-	-	-	-	
QSFP28 MMS1C10-CM	MC-0JFE91		MCX0JFE91	-	-	-	-	-	-	-	
PCIe-SSD 2TB P4600 (3DWPDP)	MC-0JSDG1		MCX0JSDG1	A	p	p	p	6.7U1	NA	NA	* Intel P4600 SSD AIC
PCIe-SSD 4TB P4600 (3DWPDP)	MC-0JSDH1		MCX0JSDH1	A	p	p	p	6.7U1	NA	NA	* Intel P4600 SSD AIC
PRAID EP420e	MC-0JSRB1	MC-0JSRB2	MCX0JSRB1	A	p	7.6	12SP4	6.7U1	NA	NA	* EP420e
FBU for Ext. SAS RAID Card	MC-0JFB51		MCX0JFB51	-	-	-	-	-	-	-	
FBU Mounting kit for IOUE2 EP420e	MC-0HCKC1		MCX0HCKC1	-	-	-	-	-	-	-	
Dual channel 12Gbps SAS Card	MC-0JSS41	MC-0JSS42	MCX0JSS41	A	p	7.6	12SP4	6.7U1	NA	NA	* CP400e

## 16.Restrictions

Apr. 2019, Ver.1.0

The followin functions are restricted as of April 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.
13	M.2 Flash device with only SLES12 SP4 are supported. Other OSes are planned.
14	Oracle Linux/VM do not support SAN-Boot.

Apr. 2019, Ver.1.0

## Change Report

Date	Order number	Changes
April 2nd, 2019		Ver. 1.0