PRIMERGY RX1330 M6
Rack server

Chapter	Folder	Content
	Cover	List of content, Instructions for usage of this configurator, abbreviations
	Description	System Description for easier understanding
1	Base	describes base unit of RX1330 M6, HDD cage kits
2		describes rack mount kits and services
3	CPU	Order code and Infos of processors
4	RAM	DDR5 System memory (RAM)
5	GFX	Graphics-cards
6	HD_cage	none
7	RAID	SAS / RAID Controller and components
8	ODD	optical disk drives (DVD, DVD-rw, Blu ray)
9	Backup	none
10	HD_SSD	Storage drives - PCIe SSD - SAS/SATA SSD & HDD
11	LAN_FC_IB	LAN Components
12		Fibre Channel Controller
13		Infiniband Controller (n.a. for RX1330 M6)
14	PSU	Power supply units, power cables, country specific opt.
15	USB_devices	none
16	others	System Management, ATD, RS232 port, TPM module, FH-Riser

Instructions

This document contains basic product and configuration information that supports you in more complicated configurations.

In any case we recommend to use the WebArchitect to make sure, that you configure a valid system.

This System configurator is divided into several chapters. They are identical to the current price list and WebArchitect.

Please follow this document step by step from the top to the bottom.

Chapter xx - description of chapter

Text fields with grey color offer extra information for related topics (e.g prerequesites, technical back ground, configuration rules, limitations, ...

For example:

S26361-F4610-E2	<-- order code E-part (bold)
S26361-F4610-L3	<-- order code L-part (bold)
PLAN 2x1Gb Ethern. Controller	<-- "name" of this part
i350-T2 chip (based on Intel Powerville) offers 2x1Gb RJ45 connectors	<--description of this part, in same cases as well description of content
PCIe Gen2 x4 full height card	<--requires a free PCIe slot --> means total amount of PCIe slots reduced
max. 6x per system	<--indicates how often this part can be configured in the related Server

PYBVAP04	<-- "PYB" order code (bold) for BTO(Built to Order) part
PY-VAP04	<-- "PY-" order code (bold) for Loose delivery part
Front VGA connector (15-pin)	<-- "name" of this part
Front VGA connector (15-pin) including cable and front connector	<--description of this part, in same cases as well description of content
Not for 10x3.5", 32xEDSFF Base unit	<-- Limitation for this part
max. 1x per system	<--indicates how many this part can be configured in the related Server

For further information see:

Link to datasheet:
https://sp.ts.fujitsu.com/dmsp/Publications/public/ds-py-rx1330-m6-en.pdf

https://www.fujitsu.com/global/products/computing/servers/primergy/index.html
(internet)

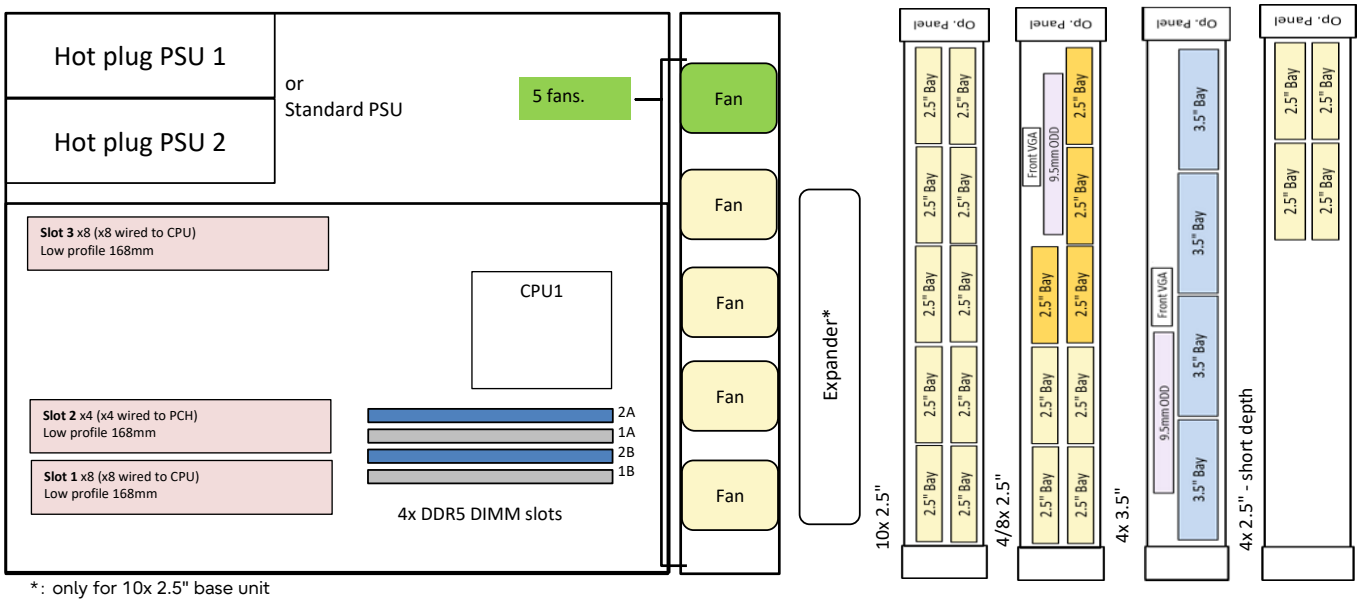
https://extranet.ts.fujitsu.com/com/tools/configure/server/Pages/default.aspx
(extranet)

Fujitsu is providing the content of this document with very high accuracy. In case you identify a mistake, we would kindly encourage you to inform us. We kindly ask for understanding, that errors still may occur and that Fujitsu may change this document without notice

Abbreviations

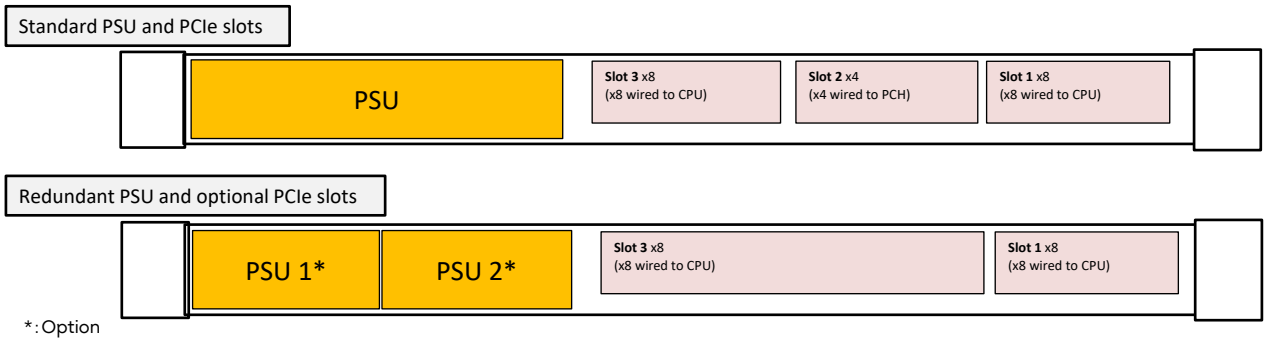
SAS	Drives, RAID	Serial attached SCSI Device (HDD, SSD, LTO drives); SAS3.0 = 12GBit/s; SAS4.0 = 24GBit/s
SATA	Drives, RAID	Serial ATA (HDD, SSD) current SATA speed = 6GBit/s
HDD	Drives	Hard disk drive (Non volatile storage device), 2.5" (SFF) or 3.5" (LFF)
SSD	Drives	Solid state disk (Non volatile storage device), 2.5" (SFF)
SFF	Drives	small form factor (=2.5")
LFF	Drives	large form factor (=3.5")
CPU	Processor	central processing unit ("processor")
RAID	Drives, RAID	RAID 0 = max speed, RAID 1 = mirroring, RAID 5 = 1 out of x drives is spare
storage tiering	RAID	offers optimized storage allocation (fast area for "hot data"; slower area for "cold data")
hot data	Drives	Data which are currently being processed
cold data	Drives	Data which are currently not processed (only stored)
ODD	Drives	optical disk drive (i.e. DVD-player, DVD-burner, Blu ray player, blu ray burner)
OS	operating system	OS=operating system - required for running, organize and administrating the server
E-Part	"Einbau-Part"	"e.g. S26361-F1234-**E**240" ordercode with "E" means it is either integrated into to Server (CPU, Mem, ..) or integrated in the shipping box /Keyboard, Mouse, ..)
L-Part	"Lose Lieferung-Part"	"e.g. S26361-F1234-L240" ordercode with "L" means, the part will be shipped with extra package, may be as well with extra shipment

PRIMERGY RX1330 M6 schematics of the System board and fans



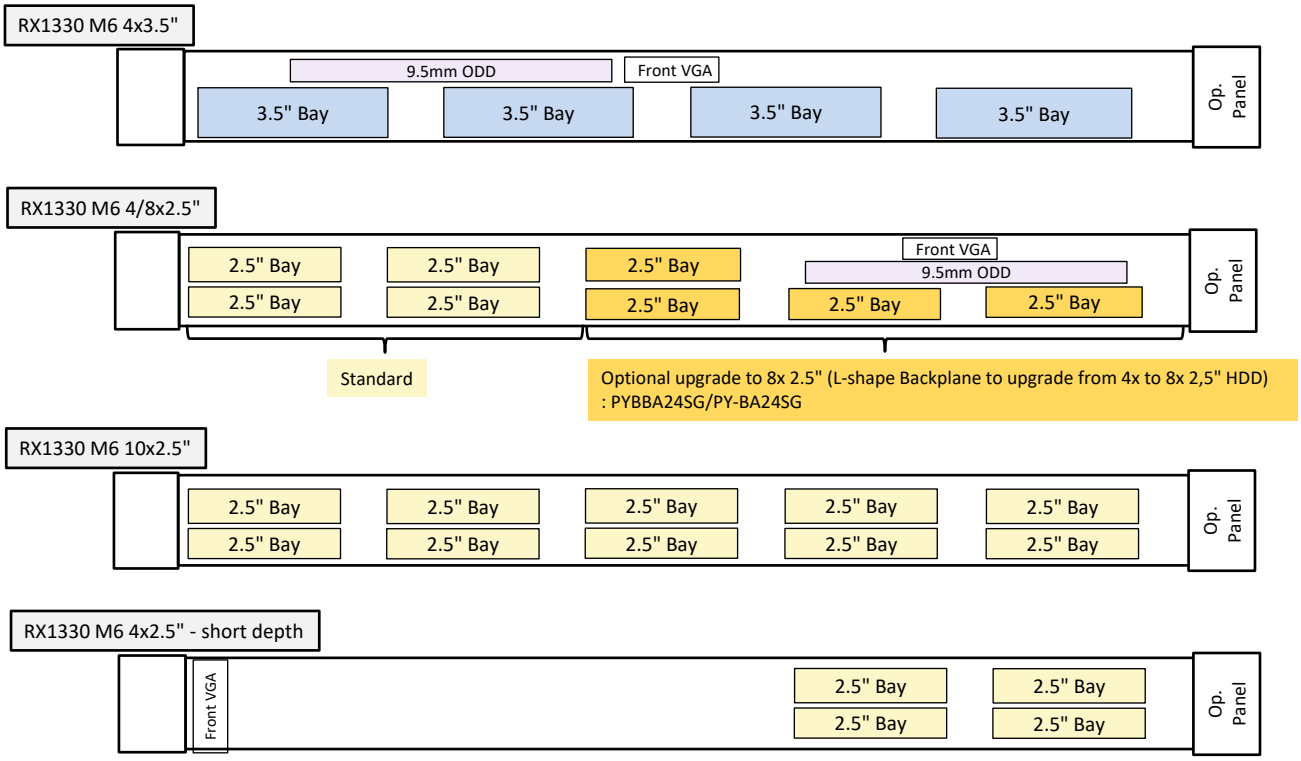
*: only for 10x 2.5" base unit

PRIMERGY RX1330 M6 - Rear view with PSU and PCIe slots



*:Option

PRIMERGY RX1330 M6 - Front view



recommended components for RX1330 M6	#
embedded Lifecycle Management (eLCM)	1x

Chapter 1 - base unit

Start

Power supply units & cooling
The PRIMERGY RX1330 M6 offer fixed standard 400W power supply with 94% efficiency or bays for 1x or 2x hot plug (opt. redundant) power supply units of 500W/900W with up to 96% efficiency. The PRIMERGY RX1330 M6 is equipped non-hot plug fans (4+1 for redundant).

Server Management
iRMC S6 (integrated Remote Management Controller) on-board with dedicated (or shared) 10/100/1000 Service LAN-port and integrated graphics controller. With the integrated onboard indicators and controls You can highlight easily failed components via LEDs. The LEDs can be displayed during service even without mains connection by simply pressing the "indicate CSS" button.

Platform
Fujitsu Systemboard D4133 based on Chipset Intel® C266
> Xeon E2400 series CPUs and Pentium CPU
Slots: as standard 3 PCIe slots are on Board - please see schematics in "description"
> 3 PCIe slots low profile, 168 mm length, all are mechanically x8
Slot 1 PCIe-Gen5 x8 - supports modular RAID functions, routed to CPU
Slot 2 PCIe-Gen4 x4, routed to PCH
Slot 3 PCIe-Gen5 x8, routed to CPU
The required riser cards for the above configuration are part of the standard delivery.
Slot 3 can also be upgraded to PCIe Gen5 x8 full height, 168mm length (!Slot 2 and it's riser is not available in this case!)
Onboard RAID(Intel VROC(SATA RAID)) 0/1/10 6Gbit/s available for SATA drives
System RAM up to DDR5-4400 MT/s
2x2 memory slots for max. 128GB* DDR5 RAM available, Please see folder "CPU" and "RAM" for further details.

Software
ServerView Suite Software incl. ServerView Installation Manager, Management Software and Updates is optional available

Connectivity

Interfaces at rear side	Interfaces at front
-1 service LAN RJ45 (1 Gbit) - 1x VGA (15 pins) - 4x USB 3.2 Gen1 Type A - 2x 1GbE LAN	for base units with up to 8x drives: 2x USB 3.2 Gen1 Type A (on "ear"), 1x USB3.2 Gen2x2 Type C for base units with 10 drives: 2x USB 3.2 Gen1 Type A (on "ear") Interfaces internal - 2x M.2 (80mm and 110mm)modules: 1x SATA/NVMe(PCIe x4) and 1x SATA - 4x SATA 6G for HDD - 1x SATA 6G for ODD

Rack version for 19" racks with 1 height unit

Basic unit is without CPU and Memory
For an orderable basic unit CPU and one memory
= first memory has to be selected

Basic unit with standard power supply unit

4x 3.5" LFF HDD bays **PYR1336R3S**

No Bay upgrade kit option possible

[Limitation]
- NVIDIA A2/L4 can not be supported
- 95W CPU(Xeon E-2486/E2488) can not be supported
- Up to ErP Lot9, Energy Star and Advanced Thermal design (Please refer to each related chapter)

(PYR1336R3S: Default Configuration)

Type 1-1: 4x 3.5" LFF SATA: Onboard SATA

Type 1-2: 4x 3.5" LFF SAS/SATA:
PRAID CP600i / EP640i / EP680i or PSAS CP 2200-16i
or PRAID EP 3252-8i

Basic unit with bays for hot-plug power supply unit

4x 3.5" LFF HDD bays **PYR1336R3N**

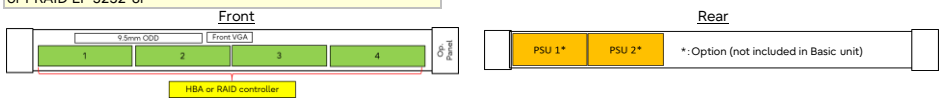
No Bay upgrade kit option possible

[Limitation]
- Up to ErP Lot9, Energy Star and Advanced Thermal design (Please refer to each related chapter)

(PYR1336R3N: Default Configuration)

Type 1-1: 4x 3.5" LFF SATA: Onboard SATA

Type 1-2: 4x 3.5" LFF SAS/SATA:
PRAID CP600i / EP640i / EP680i or PSAS CP 2200-16i
or PRAID EP 3252-8i



Basic unit with standard power supply unit

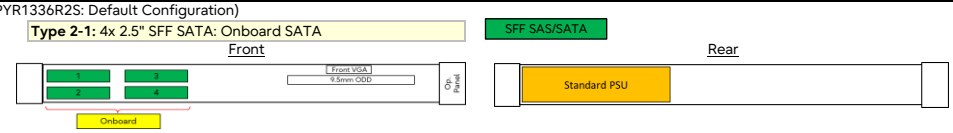
4x 2.5" SFF HDD bays **PYR1336R2S**

Upgrade Kit 4x 2.5" to 8x 2.5" is supported

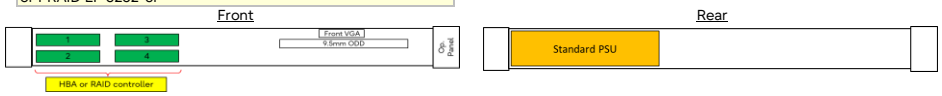
[Limitation]
- NVIDIA A2/L4 can not be supported
- 95W CPU(Xeon E-2486/E2488) can not be supported
- Up to ErP Lot9, Energy Star and Advanced Thermal design (Please refer to each related chapter)

(PYR1336R2S: Default Configuration)

Type 2-1: 4x 2.5" SFF SATA: Onboard SATA

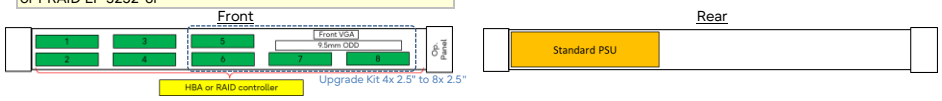


Type 2-2: 4x 2.5" SFF SAS/SATA:
PRAID CP600i / EP640i / EP680i or PSAS CP 2200-16i
or PRAID EP 3252-8i



(PYR1336R2S + PY*A24SG[Upgrade Kit 4x 2.5" to 8x 2.5"])

Type 2-3: 8x 2.5" SFF SAS/SATA:
PRAID CP600i / EP640i / EP680i or PSAS CP 2200-16i
or PRAID EP 3252-8i



Basic unit with bays for hot-plug power supply unit

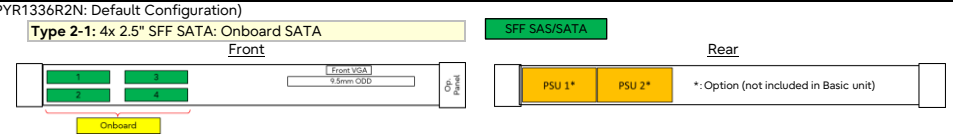
4x 2.5" SFF HDD bays **PYR1336R2N**

Upgrade Kit 4x 2.5" to 8x 2.5" is supported

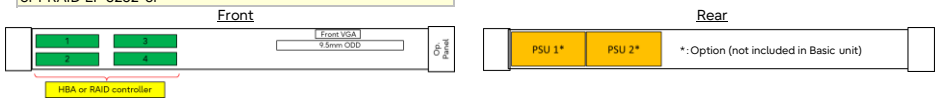
[Limitation]
- Up to ErP Lot9, Energy Star and Advanced Thermal design (Please refer to each related chapter)

(PYR1336R2N: Default Configuration)

Type 2-1: 4x 2.5" SFF SATA: Onboard SATA

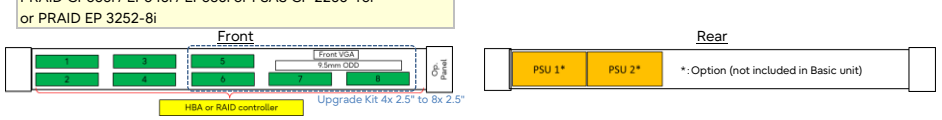


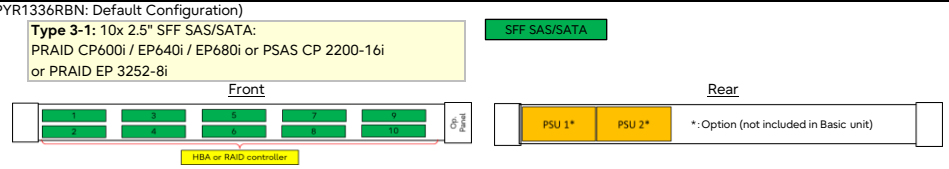
Type 2-2: 4x 2.5" SFF SAS/SATA:
PRAID CP600i / EP640i / EP680i or PSAS CP 2200-16i
or PRAID EP 3252-8i

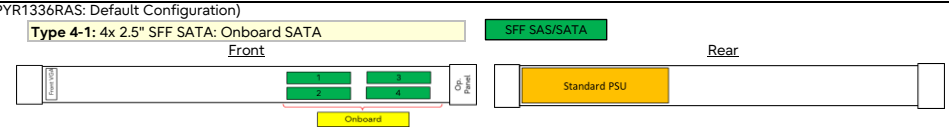
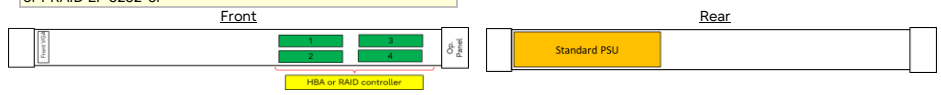


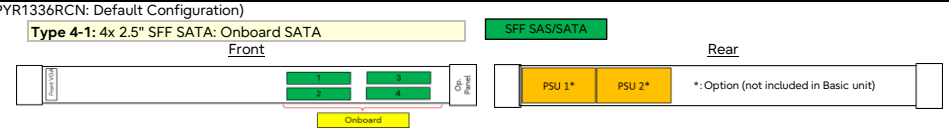
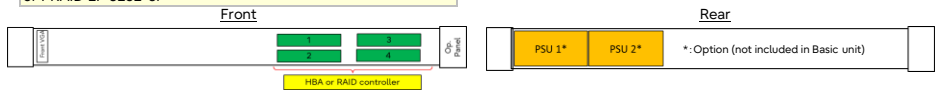
(PYR1336R2N + PY*A24SG[Upgrade Kit 4x 2.5" to 8x 2.5"])

Type 2-3: 8x 2.5" SFF SAS/SATA:
PRAID CP600i / EP640i / EP680i or PSAS CP 2200-16i
or PRAID EP 3252-8i



Basic unit with bays for hot-plug power supply unit	(PYR1336RBN: Default Configuration)
10x 2.5" SFF HDD bays **PYR1336RBN** **No Bay upgrade kit option possible** **[Limitation]** - Up to ErP Lot9, Energy Star and Advanced Thermal design (Please refer to each related chapter)	**Type 3-1:** 10x 2.5" SFF SAS/SATA: PRAID CP600i / EP640i / EP680i or PSAS CP 2200-16i or PRAID EP 3252-8i 

Basic unit with standard power supply unit	(PYR1336RAS: Default Configuration)
4x 2.5" SFF HDD bays (short depth) **PYR1336RAS** **No Bay upgrade kit option possible** **[Limitation]** - NVIDIA A2/L4 can not be supported - 95W CPU(Xeon E-2486/E2488) can not be supported - Up to ErP Lot9, Energy Star and Advanced Thermal design (Please refer to each related chapter)	**Type 4-1:** 4x 2.5" SFF SATA: Onboard SATA  **Type 4-2:** 4x 2.5" SFF SAS/SATA: PRAID CP600i / EP640i / EP680i or PSAS CP 2200-16i or PRAID EP 3252-8i 

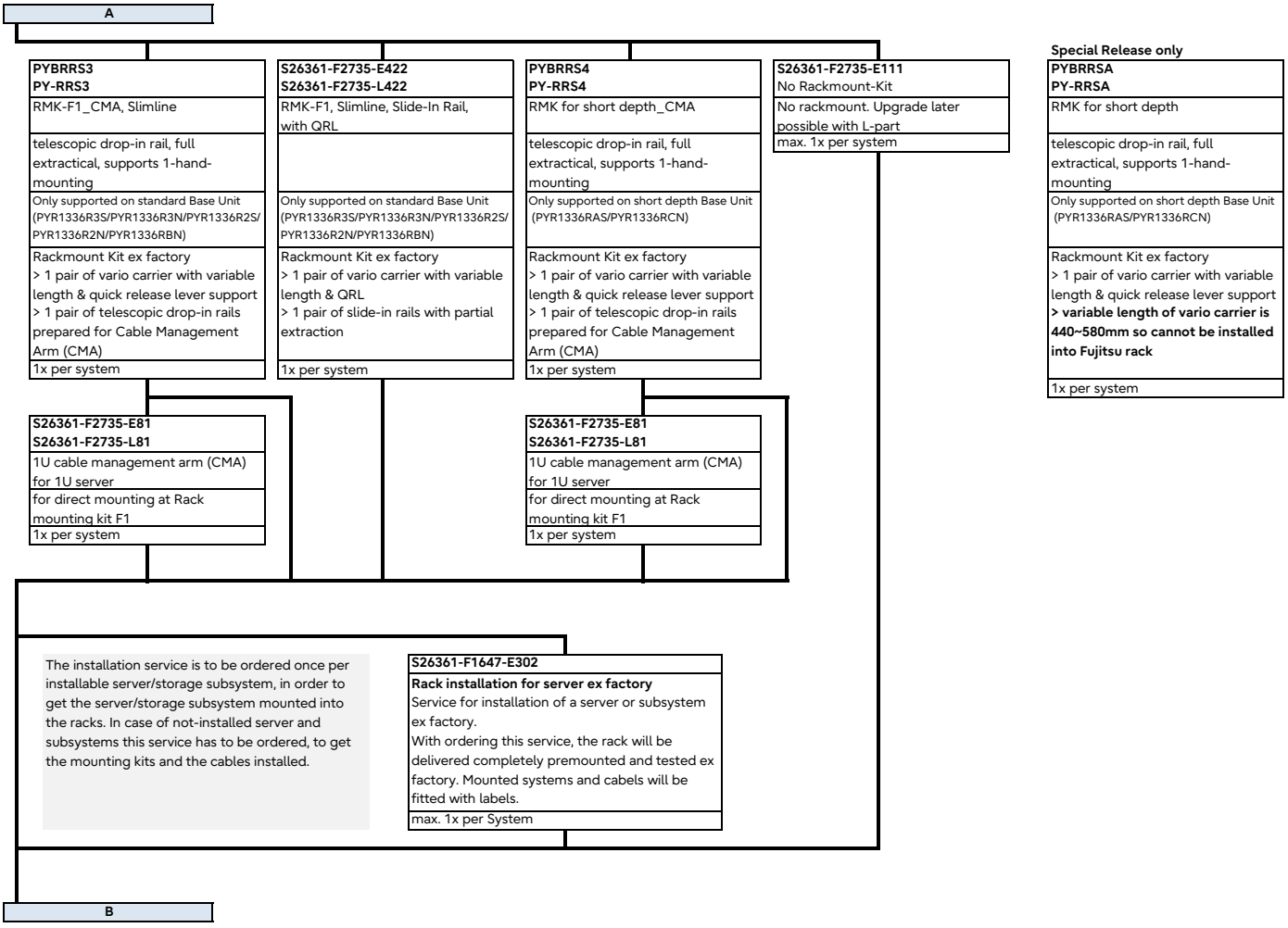
Basic unit with bays for hot-plug power supply unit	(PYR1336RCN: Default Configuration)
4x 2.5" SFF HDD bays (short depth) **PYR1336RCN** **No Bay upgrade kit option possible** **[Limitation]** - NVIDIA A2/L4 can not be supported - Up to ErP Lot9, Energy Star and Advanced Thermal design (Please refer to each related chapter)	**Type 4-1:** 4x 2.5" SFF SATA: Onboard SATA  **Type 4-2: 4x 2.5" SFF SAS/SATA:** PRAID CP600i / EP640i / EP680i or PSAS CP 2200-16i or PRAID EP 3252-8i 

PYBBA24SG **PY-BA24SG**
Upgrade Kit 4x 2.5" to 8x 2.5"
Including HDD cage, backplane and SAS 4.0 cables
Only supported on 4x 2.5" SFF HDD bays Base Unit (PYR1336R2S/PYR1336R2N)
max. 1x per system

PYBPRE847 **PY-PRE847**
Full height riser card kit
Offers 1x FH PCIe 5.0 x8 slot, 1x full height PCIe cards with max. 168mm lenght
will be inserted instead of Slot 2 and Slot 3
will be inserted into Slot 3 PCIe 5.0 x8
max. 1x per system

A

Chapter 2 - Rack architecture



Chapter 3- CPU

B

One of following CPU´s has to be selected for an orderable basic unit (max 1x)

Pentium (Alder Lake) 64-bit Intel Pentium processor supporting DDR5 @ 4800MT/s		order code (BTO)	order code (Loose delivery)	
Pentium Gold G7400	2C/4T 3.7GHz 6MB 4800MT/s 46W	PYBCP67C1	-	
Xeon E-24xx (Raptor Lake-E) 64-bit Intel Xeon processor supporting DDR5 @ 4800MT/s		order code (BTO)	order code (Loose delivery)	
Xeon E-2414	4C/4T 2.6GHz 12MB 4800MT/s Turbo 55W	PYBCP67E7	-	
Xeon E-2434	4C/8T 3.4GHz 12MB 4800MT/s Turbo 55W	PYBCP67E8	-	
Xeon E-2436	6C/12T 2.9GHz 18MB 4800MT/s Turbo 65W	PYBCP67E1	-	
Xeon E-2456	6C/12T 3.3GHz 18MB 4800MT/s Turbo 80W	PYBCP67E2	-	
Xeon E-2486	6C/12T 3.5GHz 18MB 4800MT/s Turbo 95W	PYBCP67E3	-	**
Xeon E-2468	8C/16T 2.6GHz 24MB 4800MT/s Turbo 65W	PYBCP67E4	-	
Xeon E-2478	8C/16T 2.8GHz 24MB 4800MT/s Turbo 80W	PYBCP67E5	-	
Xeon E-2488	8C/16T 3.2GHz 24MB 4800MT/s Turbo 95W	PYBCP67E6	-	**

C

**) Not supported on base unit with Std. Powersupply
(PYR1336R3S, PYR1336R2S, PYR1336RAS)

Chapter 4 - DDR5 System memory

C

There are 2 memory banks with 2 DIMM slots each.

Single channel memory configuration allow maximum flexibility:
Additional memory can be configured as single memory modules.

Dual channel memory configurations for maximum performance:
For optimum performance memory has to be configured in pairs of memory modules with identical size.

The memory speed depends on memory configuration:
Single channel memory configuration : max. 4,400 MT/s
Dual channel memory configuration(1R) : max. 4,000 MT/s
Dual channel memory configuration(2R) : max. 3,600 MT/s

Max. 128GB unbuffered DDR5 RAM for UDIMMs with 32GB moduls

Memory module is not included in the base unit and has to be configured min 1x memory modules.
All memory module installing in one system must be identical.
Any mix of different memory modules with different order code is not supported.

16GB DDR5 Unbuffered DIMM 4800MT/s 1R x8		**order code (BTO)**	**order code (loose delivery)**
16GB (1x16GB) 1Rx8 DDR5-4800 U ECC	single rank	PYBME16UH	PY-ME16UH
32GB DDR5 Unbuffered DIMM 4800MT/s 2R x8		**order code (BTO)**	**order code (loose delivery)**
32GB (1x32GB) 2Rx8 DDR5-4800 U ECC	dual rank	PYBME32UH	PY-ME32UH
min 1x / max 4x for System			

D

Chapter 5 - Graphics cards

The different GPU mixed configuration does not support.

D

The hight end optional NVIDIA Graphic card offers triple head operation
and fully 3D video support.
Remote Video direction via iRMC must be disabled.
Only one card per server is allowed.

PYBVG4T2L **PY-VG4T2L**
NVIDIA T400
NVIDIA T400 4GB PCIe 3.0 x16
Connectors: 3x Mini-DP
no cable kits included cable must be ordered seperately
Low profile bracket
max. 1x per system

S26361-F4066-E11 **S26361-F4066-L11**
MiniDP-DP ADAPTER
max. 3x per card

S26361-F4066-E11 is
One cable case
S26361-F4066-E12(1pcs) or S26361-F4066-E13(1pcs)

Two cables case
S26361-F4066-E12(2pcs) or
S26361-F4066-E13(2pcs) or
S26361-F4066-E12(1pcs)/ S26361-F4066-E13(1pcs)

Three cables case
S26361-F4066-E12(3pcs) or
S26361-F4066-E13(3pcs) or
S26361-F4066-E12(1pcs)/ S26361-F4066-E13(2pcs) or
S26361-F4066-E12(2pcs)/ S26361-F4066-E13(1pcs)

S26361-F4066-E12 **S26361-F4066-L12**
DP-VGA ADAPTER
max. 3x per card

S26361-F4066-E13 **S26361-F4066-L13**
DP-DVI ADAPTER
max. 3x per card

PYBVAP06 **PY-VAP06**
Front VGA connector (15-pin)
Front VGA connector (15-pin) including cable and front connector
not for 10x2.5" and short depth base units
max. 1x per system

PYBVAP07 **PY-VAP07**
Front VGA connector (15-pin)
Front VGA connector (15-pin) including cable and front connector
only for short depth base units
max. 1x per system

PYBVG4A8L **PY-VG4A8L**
NVIDIA A2
NVIDIA A2 Card with 16GB GDDR6 RAM.
PCIe *8 (Gen4) - single width, Low-Profile bracket, no exlernal power cable, 60W
Limitation: - Not supported on base unit with Std. Powersupply / short depth base unit (PYR1336R3S, PYR1336R2S, PYR1336RAS, PYR1336RCN) - ATD40 and ATD45(S26361-F3776-E340/S26361-F3776-E345) are not supported when NVIDIA A2/L4 is ordered.
max. 2x per system (internal RAID/HBA controllers and 2nd NVIDIA A2 are exclusive)

PYBVG4L1L **PY-VG4L1L**
NVIDIA L4
NVIDIA L4 24GB GDDR6 memory. PCIe Gen4
PCIe *16 (Gen4) - single width, Low-Profile bracket, no exlernal power cable, 70W
Limitation: - Not supported on base unit with Std. Powersupply / short depth base unit (PYR1336R3S, PYR1336R2S, PYR1336RAS, PYR1336RCN) - ATD40 and ATD45(S26361-F3776-E340/S26361-F3776-E345) are not supported when NVIDIA A2/L4 is ordered.
max. 2x per system (internal RAID/HBA controllers and 2nd NVIDIA L4 are exclusive)

PY-TKHP01
Cooling kit for high-performance option
Contains FANs to support NVIDIA A2/L4 Necessary for NVIDIA A2/L4 loose delivery
Not supported on base unit with Std. Powersupply / short depth base unit (PYR1336R3S, PYR1336R2S, PYR1336RAS, PYR1336RCN)
Updating system information with using the Chassis ID Prom tool is necessary
max. 1x per system

E

Chapter 7 - SAS / RAID Controller

E

- See pictures in "Chapter 1 - base unit" for details of combinations
- internal RAID/HBA controllers and 2nd NVIDIA A2/L4 are exclusive

max number of drives depends on base units

onboard SATA controller with SW-RAID

onboard controller for SATA HDD or SSD drives					
6Gb/s SATA	Intel VROC (SATA RAID) based on chipset	No Cache	SW-RAID 0, 1, 10	1x	**onboard, included**

internal HBA and RAID controller, no 2nd Level cache

internal RAID / HBA controllers for SAS, SATA HDD or SSD drives					
PRAID CP600i LP	No Cache	RAID 0, 1, 10	1x	**PYBSR4FAL**	**PY-SR4FA**
8 ports 3, 6 & 12Gb/s SAS/SATA HDD/SSD, supports up to 8 drives without expander supports SED (Self Encrypting Drives) requires 1x LP PCIe 4.0 x8 (int.) slot, based on LSI SAS3808					

internal RAID / HBA controllers for SAS, SATA HDD or SSD drives					
PSAS CP 2200-16i LP	No Cache	HBA + RAID 0, 1, 10, 5	1x	**PYBSC4MA1L**	**PY-SC4MA1**
16 ports 6, 12 & 24Gb/s SAS/SATA HDD/SSD, supports up to 16 SAS/SATA drives without expander requires 1x LP PCIe 4.0 x8 (int.) slot					

internal RAID controller with 2nd Level cache

internal RAID controllers for SAS, SATA HDD or SSD drives					
PRAID EP640i LP	4GB Cache	RAID 0, 1, 10, 5, 50, 6, 60	1x	**PYBSR4C63L**	**PY-SR4C63**
8 ports 3, 6 & 12Gb/s SAS/SATA HDD/SSD, supports up to 8 drives without expander supports SED (Self Encrypting Drives) requires 1x LP PCIe 4.0 x8 (int.) slot, based on LSI SAS3908					
PRAID EP680i LP	8GB Cache	RAID 0, 1, 10, 5, 50, 6, 60	1x	**PYBSR4C6L**	**PY-SR4C6**
16 ports 3, 6 & 12Gb/s SAS/SATA HDD/SSD, supports up to 16 SAS/SATA drives without expander supports SED (Self Encrypting Drives) requires 1x LP PCIe 4.0 x8 (int.) slot, based on LSI SAS3916					
optional Flash Backup Unit (FBU)					
FBU option for PRAID EP6xx: Supercap securing the power supply of the RAID controller in case of power failure including cable with 83cm length (for standard model: PYR1336R3S, PYR1336R3N, PYR1336R2S, PYR1336R2N, PYR1336RBN)			1x	**S26361-F4042-E183**	**S26361-F4042-L110**
FBU option for PRAID EP6xx: Supercap securing the power supply of the RAID controller in case of power failure including cable with 55cm length (for short depth model: PYR1336RAS, PYR1336RCN)			1x	**S26361-F4042-E155**	**S26361-F4042-L110**

internal RAID controllers for SAS, SATA HDD or SSD drives					
PRAID EP 3252-8i LP	2GB Cache	RAID 0, 1, 10, 5, 50, 6, 60	1x	**PYBSR4MA1L**	**PY-SR4MA1**
8 ports 6, 12 & 24Gb/s SAS/SATA HDD/SSD, supports up to 8 drives without expander supports SED (Self Encrypting Drives) requires 1x LP PCIe 4.0 x8 (int.) slot					
optional Flash Backup Unit (FBU)					
FBU option for PRAID EP 325x: Supercap securing the power supply of the RAID controller in case of power failure including cable with 80cm length (for standard model: PYR1336R3S, PYR1336R3N, PYR1336R2S, PYR1336R2N, PYR1336RBN)			1x	**PYBFBM013**	**PY-FBM01**
FBU option for PRAID EP 325x: Supercap securing the power supply of the RAID controller in case of power failure including cable with 46cm length (for short depth model) (for short depth model: PYR1336RAS, PYR1336RCN)			1x	**PYBFBM012**	**PY-FBM01**

up to 1x FBU can be integrated per System

Cable kit for upgrade cards: For upgrade L-parts RAID/HBA controller card, L-parts Cable kit is required.
Cable Kit for EP6xxi/CP6xxi/EP325x/CP2200 for standard base units : **PY-CBS116**
Cable Kit for EP6xxi/CP6xxi/EP325x/CP2200 for short depth base units : **PY-CBS117**

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external HBA controller, no 2nd Level cache

external HBA controllers for SAS HDD or SSD drives					
PSAS CP600e LP	No Cache	HBA, no RAID	2x	**PYBSC4FAEL**	**PY-SC4FAE**
16 ports 3, 6 & 12Gb/s SAS/SATA HDD/SSD, 4x SFF8644 (external Mini-SAS HD) requires 1x LP PCIe 4.0 x8 (int.) slot, based on LSI SAS3816					

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Chapter 8 - ODD optical disk drives

The base units with up to 8x HDD offer 1x 9.5mm optical drive bay

No ODD for 10x 2,5" HDD and short depth base units.

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Config with 1x 9.5mm bay

S26361-F3778-E1 **S26361-F3778-L1**	**S26361-F3641-E6** **S26361-F3641-L6**	**S26361-F3718-E2** **S26361-F3718-L2**
DVD-RW supermulti ultra slim	Blu-ray Triple Writer ultra slim	DVD-ROM ultra slim
all formats, DUAL/DL, DVD-RAM only W2K, W3K and Linux	6x BD-RW, 8x DVD, 24x CD, BD DL and all CD/DVD formats	16x DVD; 48x CD-ROM
9.5mm, black bezel	9.5mm, black bezel	9.5mm black bezel
max. 1x per system	max. 1x per system	max. 1x per system

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Chapter 10 - storage drives

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SATA drives can be connected to the onboard Controller (max. 4x), or require a dedicated SAS / RAID Controller.
SAS drives require a dedicated SAS / RAID Controller.
PCIe-SSDs require a dedicated RAID Controller.
FIPS and SED drives are Self Encrypting Drives, and they require either a RAID controller with SED support or an HBA and in addition a software instance, supporting SED Key Management. It is strongly recommended to order a RAID controller with SED function for SED/FIPS drives.

SATA, SAS and PCIe drives can be mixed based on RAID spec, but cannot be used in one logical RAID volume.
FIPS and SED drives can be mixed based on RAID spec, but cannot be used in one logical RAID volume.
One logical RAID volume must be created the same order code products.

Hard Disk Sector Format Information:
512n HDD: 512 byte sectors on the drive media.
512e (e=emulation) HDD: 4K physical sectors on the drive media with 512 byte logical configuration.
DWPD: Drive Writes Per Day over 5 years.

When using SSDs with VMware ESXi, select the SSDs that meet the endurance requirement described in KB2145210 below.
https://kb.vmware.com/kb/2145210

HDD Classes:
Economic (ECO) SATA: Entry Class Drives, for non critical applications.
Business-Critical (BC) -SATA=Nearline SATA Enterprise Drives / 7.2Krpm, SATA 6G.
Business-Critical (BC) -SAS=Nearline SAS Enterprise Drives / 7.2Krpm, SAS 12G .
Mission-Critical (MC)=SAS 10K and SAS 15K Enterprise Drives with max. performance and reliability.

Warranty:
SSD and SATA DOM have a built-in Wear-Out indicator. In this case the warranty for such a component, as an exception to the system warranty, is restricted to the time period until the indicator reaches the exhaust level.

2.5" (SFF) SATA SSD

SSD SATA 2.5" Mixed Use (SFF) Enterprise with hot plug/hot replace tray

based on **Samsung PM897a** drives

Capacity	*Formfactor*	*Interface*	*Endurance*	*DWPD*		*order code E-part*	*order code L-part*
480GB	2.5" (SFF)	SATA 6Gb/s	Mixed Use	3	SED	**PYBSS48NKS**	**PY-SS48NKS**
960GB	2.5" (SFF)	SATA 6Gb/s	Mixed Use	3	SED	**PYBSS96NKS**	**PY-SS96NKS**
1.92TB	2.5" (SFF)	SATA 6Gb/s	Mixed Use	3	SED	**PYBSS19NKS**	**PY-SS19NKS**
3.84TB	2.5" (SFF)	SATA 6Gb/s	Mixed Use	3	SED	**PYBSS38NKS**	**PY-SS38NKS**

This SSDs can be used as Non-SED drives, but it requires a RAID controller with SED support for using as SED drives.

max. 4x or 10x - depending on base unit & configuration

SSD SATA 2.5" Mixed Use (SFF) Enterprise with hot plug/hot replace tray

based on **Samsung PM897** drives

Capacity	*Formfactor*	*Interface*	*Endurance*	*DWPD*		*order code E-part*	*order code L-part*
480GB	2.5" (SFF)	SATA 6Gb/s	Mixed Use	3		**PYBSS48NKQ**	**PY-SS48NKQ**
960GB	2.5" (SFF)	SATA 6Gb/s	Mixed Use	3		**PYBSS96NKQ**	**PY-SS96NKQ**
1.92TB	2.5" (SFF)	SATA 6Gb/s	Mixed Use	3		**PYBSS19NKQ**	**PY-SS19NKQ**
3.84TB	2.5" (SFF)	SATA 6Gb/s	Mixed Use	3		**PYBSS38NKQ**	**PY-SS38NKQ**

max. 4x or 10x - depending on base unit & configuration

SSD SATA 2.5" Mixed Use (SFF) Enterprise with hot plug/hot replace tray

based on **Micron 5400 MAX** drives

Capacity	*Formfactor*	*Interface*	*Endurance*	*DWPD*		*order code E-part*	*order code L-part*
480GB	2.5" (SFF)	SATA 6Gb/s	Mixed Use	5,0		**PYBSS48NQ**	**PY-SS48NQ**
960GB	2.5" (SFF)	SATA 6Gb/s	Mixed Use	5,0		**PYBSS96NQ**	**PY-SS96NQ**
1.92TB	2.5" (SFF)	SATA 6Gb/s	Mixed Use	5,0		**PYBSS19NQ**	**PY-SS19NQ**
3.84TB	2.5" (SFF)	SATA 6Gb/s	Mixed Use	3,5		**PYBSS38NQ**	**PY-SS38NQ**

max. 4x or 10x - depending on base unit & configuration

SSD SATA 2.5" Read Intensive (SFF) Enterprise with hot plug/hot replace tray

based on **Samsung PM893a** drives

Capacity	*Formfactor*	*Interface*	*Endurance*	*DWPD*		*order code E-part*	*order code L-part*
480GB	2.5" (SFF)	SATA 6Gb/s	Read Intensive	1,0	SED	**PYBSS48NME**	**PY-SS48NME**
960GB	2.5" (SFF)	SATA 6Gb/s	Read Intensive	1,0	SED	**PYBSS96NME**	**PY-SS96NME**
1.92TB	2.5" (SFF)	SATA 6Gb/s	Read Intensive	1,0	SED	**PYBSS19NME**	**PY-SS19NME**
3.84TB	2.5" (SFF)	SATA 6Gb/s	Read Intensive	1,0	SED	**PYBSS38NME**	**PY-SS38NME**
7.68TB	2.5" (SFF)	SATA 6Gb/s	Read Intensive	1,0	SED	**PYBSS76NME**	**PY-SS76NME**

This SSDs can be used as Non-SED drives, but it requires a RAID controller with SED support for using as SED drives.

max. 4x or 10x - depending on base unit & configuration

SSD SATA 2.5" Read Intensive (SFF) Enterprise with hot plug/hot replace tray

based on **Samsung PM893** drives

Capacity	*Formfactor*	*Interface*	*Endurance*	*DWPD*		*order code E-part*	*order code L-part*
240GB	2.5" (SFF)	SATA 6Gb/s	Read Intensive	1,0		**PYBSS24NMD**	**PY-SS24NMD**
480GB	2.5" (SFF)	SATA 6Gb/s	Read Intensive	1,0		**PYBSS48NMD**	**PY-SS48NMD**
960GB	2.5" (SFF)	SATA 6Gb/s	Read Intensive	1,0		**PYBSS96NMD**	**PY-SS96NMD**
1.92TB	2.5" (SFF)	SATA 6Gb/s	Read Intensive	1,0		**PYBSS19NMD**	**PY-SS19NMD**
3.84TB	2.5" (SFF)	SATA 6Gb/s	Read Intensive	1,0		**PYBSS38NMD**	**PY-SS38NMD**
7.68TB	2.5" (SFF)	SATA 6Gb/s	Read Intensive	1,0		**PYBSS76NMD**	**PY-SS76NMD**

max. 4x or 10x - depending on base unit & configuration

SSD SATA 2.5" Read Intensive (SFF) Enterprise with hot plug/hot replace tray

based on **Micron 5400 PRO** drives

Capacity	*Formfactor*	*Interface*	*Endurance*	*DWPD*		*order code E-part*	*order code L-part*
240GB	2.5" (SFF)	SATA 6Gb/s	Read Intensive	1,5		**PYBSS24NME**	**PY-SS24NME**
480GB	2.5" (SFF)	SATA 6Gb/s	Read Intensive	1,5		**PYBSS48NMF**	**PY-SS48NMF**
960GB	2.5" (SFF)	SATA 6Gb/s	Read Intensive	1,5		**PYBSS96NMF**	**PY-SS96NMF**
1.92TB	2.5" (SFF)	SATA 6Gb/s	Read Intensive	1,5		**PYBSS19NMF**	**PY-SS19NMF**
3.84TB	2.5" (SFF)	SATA 6Gb/s	Read Intensive	1,2		**PYBSS38NMF**	**PY-SS38NMF**
7.68TB	2.5" (SFF)	SATA 6Gb/s	Read Intensive	0,6		**PYBSS76NMF**	**PY-SS76NMF**

max. 4x or 10x - depending on base unit & configuration

2.5" (SFF) Hard drives

HDD SAS 2.5" 10K 512n (SFF) Enterprise Mission Critical with hot plug/hot replace tray

Capacity	*RPM*	*Interface*	*Sector*		*order code E-part*	*order code L-part*
300GB	10 000	SAS 12Gb/s	512n		**PYBSH301EB**	**PY-SH301EB**
600GB	10 000	SAS 12Gb/s	512n		**S26361-F5729-E160**	**S26361-F5729-L160**
1.2TB	10 000	SAS 12Gb/s	512n		**S26361-F5729-E112**	**S26361-F5729-L112**

max. 4x or 10x - depending on base unit & configuration

HDD SAS 2.5" 10K 512e (SFF) Enterprise Mission Critical with hot plug/hot replace tray

Capacity	*RPM*	*Interface*	*Sector*		*order code E-part*	*order code L-part*
1.8TB	10 000	SAS 12Gb/s	512e		**S26361-F5730-E118**	**S26361-F5730-L118**
2.4TB	10 000	SAS 12Gb/s	512e		**S26361-F5543-E124**	**S26361-F5543-L124**

max. 4x or 10x - depending on base unit & configuration

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3.5" (LFF) SATA SSD

SSD SATA 3.5" Mixed Use (LFF) 2.5" SSD Enterprise with 3.5" hot plug/hot replace tray

based on **Samsung PM897a** drives

Capacity	*Formfactor*	*Interface*	*Endurance*	*DWPD*		*order code E-part*	*order code L-part*
480GB	3.5" (LFF)	SATA 6Gb/s	Mixed Use	3	SED	**PYBTS48NK9**	**PY-TS48NK9**
960GB	3.5" (LFF)	SATA 6Gb/s	Mixed Use	3	SED	**PYBTS96NK9**	**PY-TS96NK9**
1.92TB	3.5" (LFF)	SATA 6Gb/s	Mixed Use	3	SED	**PYBTS19NK9**	**PY-TS19NK9**
3.84TB	3.5" (LFF)	SATA 6Gb/s	Mixed Use	3	SED	**PYBTS38NK9**	**PY-TS38NK9**

This SSDs can be used as Non-SED drives, but it requires a RAID controller with SED support for using as SED drives.

max. 4x - depending on base unit & configuration

SSD SATA 3.5" Mixed Use (LFF) 2.5" SSD Enterprise with 3.5" hot plug/hot replace tray

based on **Samsung PM897** drives

Capacity	*Formfactor*	*Interface*	*Endurance*	*DWPD*		*order code E-part*	*order code L-part*
480GB	3.5" (LFF)	SATA 6Gb/s	Mixed Use	3		**PYBTS48NK8**	**PY-TS48NK8**
960GB	3.5" (LFF)	SATA 6Gb/s	Mixed Use	3		**PYBTS96NK8**	**PY-TS96NK8**
1.92TB	3.5" (LFF)	SATA 6Gb/s	Mixed Use	3		**PYBTS19NK8**	**PY-TS19NK8**
3.84TB	3.5" (LFF)	SATA 6Gb/s	Mixed Use	3		**PYBTS38NK8**	**PY-TS38NK8**

max. 4x - depending on base unit & configuration

SSD SATA 3.5" Mixed Use (LFF) 2.5" SSD Enterprise with 3.5" hot plug/hot replace tray

based on **Micron 5400 MAX** drives

Capacity	*Formfactor*	*Interface*	*Endurance*	*DWPD*		*order code E-part*	*order code L-part*
480GB	2.5" (SFF)	SATA 6Gb/s	Mixed Use	5,0		**PYBTS48NKA**	**PY-TS48NKA**
960GB	2.5" (SFF)	SATA 6Gb/s	Mixed Use	5,0		**PYBTS96NKA**	**PY-TS96NKA**
1.92TB	2.5" (SFF)	SATA 6Gb/s	Mixed Use	5,0		**PYBTS19NKA**	**PY-TS19NKA**
3.84TB	2.5" (SFF)	SATA 6Gb/s	Mixed Use	3,5		**PYBTS38NKA**	**PY-TS38NKA**

max. 4x - depending on base unit & configuration

SSD SATA 3.5" Read Intensive (LFF) 2.5" SSD Enterprise with 3.5" hot plug/hot replace tray

based on **Samsung PM893a** drives

Capacity	*Formfactor*	*Interface*	*Endurance*	*DWPD*		*order code E-part*	*order code L-part*
480GB	3.5" (LFF)	SATA 6Gb/s	Read Intensive	1,0	SED	**PYBTS48NMB**	**PY-TS48NMB**
960GB	3.5" (LFF)	SATA 6Gb/s	Read Intensive	1,0	SED	**PYBTS96NMA**	**PY-TS96NMA**
1.92TB	3.5" (LFF)	SATA 6Gb/s	Read Intensive	1,0	SED	**PYBTS19NMA**	**PY-TS19NMA**
3.84TB	3.5" (LFF)	SATA 6Gb/s	Read Intensive	1,0	SED	**PYBTS38NMA**	**PY-TS38NMA**
7.68TB	3.5" (LFF)	SATA 6Gb/s	Read Intensive	1,0	SED	**PYBTS76NMA**	**PY-TS76NMA**

This SSDs can be used as Non-SED drives, but it requires a RAID controller with SED support for using as SED drives.

max. 4x - depending on base unit & configuration

SSD SATA 3.5" Read Intensive (LFF) 2.5" SSD Enterprise with 3.5" hot plug/hot replace tray

based on **Samsung PM893** drives

Capacity	*Formfactor*	*Interface*	*Endurance*	*DWPD*		*order code E-part*	*order code L-part*
240GB	3.5" (LFF)	SATA 6Gb/s	Read Intensive	1,0		**PYBTS24NM9**	**PY-TS24NM9**
480GB	3.5" (LFF)	SATA 6Gb/s	Read Intensive	1,0		**PYBTS48NM9**	**PY-TS48NM9**
960GB	3.5" (LFF)	SATA 6Gb/s	Read Intensive	1,0		**PYBTS96NM9**	**PY-TS96NM9**
1.92TB	3.5" (LFF)	SATA 6Gb/s	Read Intensive	1,0		**PYBTS19NM9**	**PY-TS19NM9**
3.84TB	3.5" (LFF)	SATA 6Gb/s	Read Intensive	1,0		**PYBTS38NM9**	**PY-TS38NM9**
7.68TB	3.5" (LFF)	SATA 6Gb/s	Read Intensive	1,0		**PYBTS76NM9**	**PY-TS76NM9**

max. 4x - depending on base unit & configuration

SSD SATA 3.5" Read Intensive (LFF) 2.5" SSD Enterprise with 3.5" hot plug/hot replace tray

based on **Micron 5400 PRO** drives

Capacity	*Formfactor*	*Interface*	*Endurance*	*DWPD*		*order code E-part*	*order code L-part*
240GB	2.5" (SFF)	SATA 6Gb/s	Read Intensive	1,5		**PYBTS24NMB**	**PY-TS24NMB**
480GB	2.5" (SFF)	SATA 6Gb/s	Read Intensive	1,5		**PYBTS48NMC**	**PY-TS48NMC**
960GB	2.5" (SFF)	SATA 6Gb/s	Read Intensive	1,5		**PYBTS96NMB**	**PY-TS96NMB**
1.92TB	2.5" (SFF)	SATA 6Gb/s	Read Intensive	1,5		**PYBTS19NMB**	**PY-TS19NMB**
3.84TB	2.5" (SFF)	SATA 6Gb/s	Read Intensive	1,2		**PYBTS38NMB**	**PY-TS38NMB**
7.68TB	2.5" (SFF)	SATA 6Gb/s	Read Intensive	0,6		**PYBTS76NMB**	**PY-TS76NMB**

max. 4x - depending on base unit & configuration

3.5" (LFF) Hard drives

HDD SAS 3.5" 7.2K 512n (LFF) Enterprise Business Critical with hot plug/hot replace tray

Capacity	*RPM*	*Interface*	*Sector*		*order code E-part*	*order code L-part*
2TB	7 200	SAS 12Gb/s	512n		**PYBCH2T7G6**	**PY-CH2T7G6**
4TB	7 200	SAS 12Gb/s	512n		**PYBCH4T7G6**	**PY-CH4T7G6**

max. 4x - depending on base unit & configuration

HDD SAS 3.5" 7.2K 512e (LFF) Enterprise Business Critical with hot plug/hot replace tray

Capacity	*RPM*	*Interface*	*Sector*		*order code E-part*	*order code L-part*
6TB	7 200	SAS 12Gb/s	512e		**PYBCH6T7BA**	**PY-CH6T7BA**
8TB	7 200	SAS 12Gb/s	512e		**PYBCH8T7B9**	**PY-CH8T7B9**
12TB	7 200	SAS 12Gb/s	512e		**PYBCHCT7B8**	**PY-CHCT7B8**
14TB	7 200	SAS 12Gb/s	512e		**PYBCHET7B8**	**PY-CHET7B8**
16TB	7 200	SAS 12Gb/s	512e		**PYBCHGT7B5**	**PY-CHGT7B5**
18TB	7 200	SAS 12Gb/s	512e		**PYBCHJT7B2**	**PY-CHJT7B2**
20TB	7 200	SAS 12Gb/s	512e		**PYBCHLT7B**	**PY-CHLT7B**

max. 4x - depending on base unit & configuration

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HDD SATA 3.5" 7.2K 512n (LFF) Enterprise Business Critical with hot plug/hot replace tray

Capacity	*RPM*	*Interface*	*Sector*		*order code E-part*	*order code L-part*
2TB	7 200	SATA 6Gb/s	512n		**PYBBH2T7BA**	**PY-BH2T7BA**
4TB	7 200	SATA 6Gb/s	512n		**PYBBH4T7BA**	**PY-BH4T7BA**

max. 4x - depending on base unit & configuration

HDD SATA 3.5" 7.2K 512e (LFF) Enterprise Business Critical with hot plug/hot replace tray

Capacity	*RPM*	*Interface*	*Sector*		*order code E-part*	*order code L-part*
6TB	7 200	SATA 6Gb/s	512e		**PYBBH6T7EA**	**PY-BH6T7EA**
8TB	7 200	SATA 6Gb/s	512e		**PYBBH8T7E5**	**PY-BH8T7E5**

max. 4x - depending on base unit & configuration

M.2 SSD

M.2 drive for VMware ESXi and for other OSs cannot be mixed
M.2 SATA and M.2 PCIe drive cannot be mixed

SSD SATA M.2 drive for booting, non hot-plug, for VMware ESXi

based on **Micron 5400 PRO** drives

Capacity	*Formfactor*	*Interface*		*Category*		*order code E-part*	*order code L-part*
240GB	M.2	SATA 6Gb/s		Boot		**PYBMF24NVD**	**PY-MF24NVD**

M.2 drive is designed for use as a VMware ESXi boot drive.
2x M.2 drive for any Hypervisor by the onboard chipset Software RAID is not supported.
max. 1x per Server; in case M.2 drive is installed in connector located on Motherboard (please see folder "description"). VMware ESXi is only supported.
2x M.2 drives required; in case M.2 drives are used with PDUAL CP300.

SSD SATA M.2 drive for booting, non hot-plug

based on **Micron 5400 PRO** drives

Capacity	*Formfactor*	*Interface*	*DWPD*	*Category*		*order code E-part*	*order code L-part*
240GB	M.2	SATA 6Gb/s	1,5	Boot		**PYBMF24YN5**	**PY-MF24YN5**
480GB	M.2	SATA 6Gb/s	1,5	Boot		**PYBMF48YN5**	**PY-MF48YN5**
960GB	M.2 2280	SATA 6Gb/s	1,5	Boot		**PYBMF96YN**	**PY-MF96YN**

M.2 drive is designed for use as a boot drive with the Endurance Spec. above.
2x M.2 drive for any Hypervisor by the onboard chipset Software RAID is not supported.
max. 2x per Server; in case M.2 drive is installed in connector located on Motherboard (please see folder "description"). VMware is not supported.
2x M.2 drives required; in case M.2 drives are used with PDUAL CP300.

SSD PCIe M.2 drive for booting, non hot-plug

based on **Micron 7450 PRO** drives

Capacity	*Formfactor*	*Interface*	*DWPD*	*Category*		*order code E-part*	*order code L-part*
480GB	M.2 2280	PCIe4.0 x4	0,9	Boot		**PYBBS48PEA**	**PY-BS48PEA**
960GB	M.2 2280	PCIe4.0 x4	0,9	Boot		**PYBBS96PEA**	**PY-BS96PEA**

M.2 drive is designed for use as a boot drive with the Endurance Spec. above.
max. 1x per Server; connector located on Motherboard (please see folder "description").
2x M.2 drives required; in case M.2 drives are used with PDUAL CP300.
Not supported on base unit with Std. Powersupply (PYR1336R3S, PYR1336R2S, PYR1336RAS)
short depth base unit (PYR1336RCN) support only BTO(E-part), not support Loose delivery(L-part)

PY-TKHP01

Cooling kit for high-performance option
Contains FANs to support SSD PCIe M.2 drive
Necessary for SSD PCIe M.2 drive loose delivery except for PYR1336RCN
Not supported on base unit with Std. Powersupply / short depth base unit (PYR1336R3S, PYR1336R2S, PYR1336RAS, PYR1336RCN)
Updating system information with using the Chassis ID Prom tool is necessary
max. 1x per system

Dual M.2

PDUAL CP300 and M.2 drive on Motherboard cannot be mixed

PDUAL CP300, dual M.2 for booting, non hot-plug

Capacity	*Formfactor*	*Interface*		*Category*		*order code E-part*	*order code L-part*
n/a	AIC	PCIe		Boot	LP	**PYBDMCP35L**	**PY-DMCP35**

PDUAL CP300 is a carrier of 2x SSD SATA or PCIe M.2 drives, which offers RAID1 with the 2x SSD M.2 drives.
PDUAL CP300 is designed for use as a hardware-mirrored (RAID1) boot device for Hypervisor, which cannot be supported by M.2 via the onboard chipset Software RA
Supported RAID levels : RAID1 and 0 (optional), 2x same type of SSD M.2 drives need to be ordered separately.
Supported M.2 drives : SSD SATA M.2 240GB/480GB/960GB or 240GB for VMware ESXi. (PY*MF24YN5/PY*MF48YN5/PY*MF96YN or PY*MF24NVD) or
SSD PCIe M.2 480GB/960GB. (PY*BS48PEA/PY*BS96PEA) [SSD PCIe M.2 is only available for base unit with Red. Powersupply]
max. 1x per Server, requires 2x SSD M.2 drives.

RAID PRESET option

Component			*order code E-part*	*order code L-part*
pre-config. RAID1 Array for M.2 in PDUAL			**S26361-F5659-E13**	-

This option allows pre-configuration of 2x M.2 modules to a RAID1 Array with PDUAL CP300 ex factory.
max. 1x per Server, requires 1x PDUAL CP300.

K

Chapter 11 - Communications / Ethernet Network Components

K

PRIMERGY RX1330 M6 provides default Intel LAN on Motherboard:
- 2x Controller Intel I210 1000BASE-T, provides
- 2x RJ45 ports, 10M/100M/1G autonegotiate for 10M/100M/1G capable Ethernet network infrastructure
- Wake-On LAN supported on both ports
- PXE and iSCSI boot support
- Maximum one port can be configured as a **shared** Management LAN port

Network PCIe Adapters

Broadcom 1GbE BEASE-T for PCIe				
PLAN CP BCM5719-4P 4X 1000BASE-T PCIe LP	2x	Broadcom, 1GTx4port	PYBLA284L	PY-LA284
max. 2x adapters per system				
Intel 1GbE BEASE-T for PCIe				
PLAN CP 2x1Gbit Cu Intel I350-T2 LP	2x	Intel, 1GTx2port	S26361-F4610-E202	S26361-F4610-L502
PLAN CP 4x1Gbit Cu Intel I350-T4 LP	2x	Intel, 1GTx4port	S26361-F4610-E204	S26361-F4610-L504
max. 2x adapters per system (both I350-T2 and I350-T4 in total)				
Broadcom 10GbE BEASE-T for PCIe				
PLAN EP P210TP 2X 10GBASE-T PCIe LP	2x	Broadcom, 10GTx2port	PYBLA3K2L	PY-LA3K2
max. 2x adapters per system				
Intel 10GbE BEASE-T for PCIe				
PLAN EP X710-T2L 2x10GBASE-T LP	2x	Intel, 10GTx2port	PYBLA342L	PY-LA342
PLAN EP X710-T4L 4x10GBASE-T LP	2x	Intel, 10GTx4port	PYBLA344L	PY-LA344
max. 2x adapters per server system				
Broadcom 10GbE for PCIe				
Each cage consumes 1x optical SFP+ transceiver per port.				
Dual rate 10G/1G support requires 10G/1G Dual Rate SFP+ Optical Transceiver Modules.				
All ports on this card need to install the same Parts Number of optical module.				
PLAN EP P210P 2x10Gb SFP PCIe LP	2x	Broadcom, 10Gx2port	PYBLA3J2L	PY-LA3J2
Optional, 10Gb SFP+ optical transceiver module, select one per cage				
SFP+ Module Multi Mode Fiber 10GbE LC	2x	Finisar, 10G SR SFP+	S26361-F3986-E3	S26361-F3986-L3
SFP+ Transceiver 10G/1G Dual Rate SR	2x	Intel, 1G/10G SR SFP+	S26361-F3986-E5	S26361-F3986-L5
SFP+ Transceiver 10G/1G Dual Rate LR	2x	Intel, 1G/10G LR SFP+	S26361-F3986-E6	S26361-F3986-L6
max. 1x per port				
max. 2x adapters per system				
Intel 10GbE for PCIe				
Each cage consumes 1x optical SFP+ transceiver per port.				
Dual rate 10G/1G support requires 10G/1G Dual Rate SFP+ Optical Transceiver Modules.				
All ports on this card need to install the same Parts Number of optical module.				
PLAN EP X710-DA2 2x10Gb SFP+ LP	2x	Intel, 10Gx2port	S26361-F3640-E202	S26361-F3640-L502
Optional, 10Gb SFP+ optical transceiver module, select one per cage				
SFP+ Module Multi Mode Fiber 10GbE LC	2x	Finisar, 10G SR SFP+	S26361-F3986-E3	S26361-F3986-L3
SFP+ Transceiver 10G/1G Dual Rate SR	2x	Intel, 1G/10G SR SFP+	S26361-F3986-E5	S26361-F3986-L5
SFP+ Transceiver 10G/1G Dual Rate LR	2x	Intel, 1G/10G LR SFP+	S26361-F3986-E6	S26361-F3986-L6
max. 1x per port				
max. 2x adapters per system				

Broadcom 25GbE for PCIe				
Each cage consumes 1x optical SFP28 or SFP+ transceiver per port. All ports on this card need to install the same Parts Number of optical module. 10G SFP BTO is not available for 25G cards, please select L parts.				
PLAN EP P225P 25Gb 2p SFP28 PCIe LP	2x	Broadcom, 25Gx2port	PYBLA3H2L	PY-LA3H2
Optional, 25Gb SFP28 optical transceiver module with LC connector, each cage consumes one.				
SFP28 25G SR E25GSFP28SRX LC	2x	Intel, 25G SR SFP28	PYBSFPS56	PY-SFPS56
max. 1x per port				
Optional, 10Gb SFP+ optical transceiver module, each cage consumes one.				
SFP+ Transceiver 10G/1G Dual Rate SR	2x	Intel, 1G/10G SR SFP+	[redacted]	S26361-F3986-L5
SFP+ Transceiver 10G/1G Dual Rate LR	2x	Intel, 1G/10G LR SFP+		S26361-F3986-L6
max. 1x per port				
max. 2x adapters per system				
Intel 25GbE for PCIe				
Each cage consumes 1x optical SFP28 or SFP+ transceiver per port. All ports on this card need to install the same Parts Number of optical module. 10G SFP BTO is not available for 25G cards, please select L parts.				
PLAN EP E810-XXVDA2 2x25Gb LP	2x	Intel, 25Gx2port	PYBLA402L	PY-LA402
Optional, 25Gb SFP28 optical transceiver module with LC connector, each cage consumes one.				
SFP28 25G SR E25GSFP28SRX LC	2x	Intel, 25G SR SFP28	PYBSFPS56	PY-SFPS56
max. 1x per port				
Optional, 10Gb SFP+ optical transceiver module, each cage consumes one.				
SFP+ Transceiver 10G/1G Dual Rate SR	2x	Intel, 1G/10G SR SFP+	[redacted]	S26361-F3986-L5
SFP+ Transceiver 10G/1G Dual Rate LR	2x	Intel, 1G/10G LR SFP+		S26361-F3986-L6
max. 1x per port				
max. 2x adapters per system				
NVIDIA 25GbE for PCIe				
Each cage consumes 1x optical SFP28 or SFP+ transceiver per port. All ports on this card need to install the same Parts Number of optical module. 10G SFP BTO is not available for 25G cards, please select L parts.				
PLAN EP MCX6-LX 25Gb 2p SFP28 PCIe LP	2x	NVIDIA, 25Gx2port	PYBLA402L4	PY-LA4024
Optional, 25Gb SFP28 optical transceiver module with LC connector, each cage consumes one.				
SFP28 25G SR E25GSFP28SRX LC	2x	Intel, 25G SR SFP28	PYBSFPS56	PY-SFPS56
SFP28 Transceiver 25G SR MMA2P00-AS LC	2x	NVIDIA, 25G SR SFP28	S26361-F4054-E701	S26361-F4054-L701
max. 1x per port				
Optional, 10Gb SFP+ optical transceiver module, each cage consumes one.				
SFP+ Transceiver 10G/1G Dual Rate SR	2x	Intel, 1G/10G SR SFP+	[redacted]	S26361-F3986-L5
SFP+ Transceiver 10G/1G Dual Rate LR	2x	Intel, 1G/10G LR SFP+		S26361-F3986-L6
max. 1x per port				
max. 2x adapters per system				

L

Chapter 12 - Communications / Fibre Channel Components

L

Fibre Channel PCIe Adapters

32Gb Fibre Channel adapter with LC interface for 50 m optical cables (OM4 or OM3)				
PFC EP LPe35002 2x 32Gb LP will be available in CQ2'24	2x	Broadcom, 32GFCx2port	PYBFC422L	PY-FC422
PFC EP LPe35000 1x 32Gb LP will be available in CQ2'24	2x	Broadcom, 32GFCx1port	PYBFC421L	PY-FC421
PFC EP QLE2772 2x 32Gb LP	2x	Marvell, 32GFCx2port	PYBFC412L	PY-FC412
PFC EP QLE2770 1x 32Gb LP	2x	Marvell, 32GFCx1port	PYBFC411L	PY-FC411
16Gb Fibre Channel adapter with LC interface for 50 m optical cables (OM4 or OM3)				
PFC EP LPe31002 2x 16Gb LP will be available in CQ2'24	2x	Broadcom, 16GFCx2port	S26361-F5596-E202	S26361-F5596-L502
PFC EP LPe31000 1x 16Gb LP will be available in CQ2'24	2x	Broadcom, 16GFCx1port	S26361-F5596-E201	S26361-F5596-L501
PFC EP QLE2692 2x 16Gb LP	2x	Marvell, 16GFCx2port	S26361-F5580-E202	S26361-F5580-L502
PFC EP QLE2690 1x 16Gb LP	2x	Marvell, 16GFCx1port	S26361-F5580-E201	S26361-F5580-L501
max. 2 adapters per system (mixed configurations are supported)				

M

Chapter 14 - Power supply unit, power cable, certifications, region kits

M

Power supply unit

Basic unit with standard power supply unit

Basic unit with bays for hot-plug power supply unit

modular redundant Power Supply				
PSU for redundancy				
occupies hot plug PSU slot, min. 1 / max. 2x per system				
input nominal voltage (AC): 100V-240V, max: 90V-264V; input dropout 10ms/100% load, 47Hz-63Hz				
500W platinum PSU	94% eff.	Connector type: C13, **APAC/JAPAN region only**	**PYBPU501**	**PY-PU501**
500W titanium PSU	96% eff.	Connector type: C13, nom. 220-240V, max. 180-264V	**PYBPU503**	**PY-PU503**
900W platinum PSU	94% eff.	Connector type: C13, **APAC/JAPAN region only** *not support for short depth base units	**PYBPU902**	**PY-PU902**
900W titanium PSU	96% eff.	Connector type: C13, nom. 220-240V, max. 180-264V *not support for short depth base units	**PYBPU901**	**PY-PU901**
FJBU: 4 min. backup time for gracefull shutdown, max 1 per system [Power cord option is not required]				
Fujitsu Battery Unit		380W(peak), 280W(continuous) 12V battery module	**PYBBBG04**	**PY-BBG04**
Dummy module instead PSU [Power cord option is not required]				
Dummy module for closing the 2nd PSU hole, in case only 1 PSU is equipped, max. 1x per system			**S26113-F574-E99**	

Power cord option for Rack Server, 1x per PSU		
Cable powercord rack, 1.8m, black, IEC 320 C14 -> C13 (10A plug)	**T26139-Y1968-E180**	**T26139-Y1968-L180**
Cable powercord rack, 2.5m, black, IEC 320 C14 -> C13 (10A plug)	**T26139-Y1968-E250**	**T26139-Y1968-L250**
Cable powercord rack, 4m, black, IEC 320 C14 -> C13 (10A plug)	**T26139-Y1968-E100**	**T26139-Y1968-L10**
Cable powercord (USA) 15A, 1.8m, black, NEMA 5-15 connector 498G -> C13 (plug), 15A, , rack or wall	**T26139-Y1741-E90**	**T26139-Y1741-L90**
Cable powercord (Thailand), 1.8m, rack or wall	**T26139-Y1753-E10**	**T26139-Y1753-L10**
Cable powercord (Taiwan), 1.8m, rack or wall	**T26139-Y1757-E10**	**T26139-Y1757-L10**
Cable powercord (D, A, B, F, NL, FIN, N, S, E, P, RUS, TR), 1.8m, grey		**T26139-Y1740-L10**
Cable powercord (UK, IR), 1.8m, grey		**T26139-Y1744-L10**
Cable powercord (I), 1.8m, grey		**T26139-Y1745-L10**
Cable powercord (DK), 1.8m, grey		**T26139-Y1746-L10**
Cable powercord (ISR), 2.5m, black		**T26139-Y1747-L18**
no power cord	**T26139-Y3850-E10**	

Std to Redundant PSU Upgrade Kit		
includes PSU cage and power backplane		**PY-TKPC04**

Region Kits, required to order one of them, 1x per System	build-in order code	loose delivery order code	
Region Kit APAC/EMEA, Contains warranty sheet and safety instructions for APAC and EMEA	**S26361-F1452-E100**	-	
Region Kit America, Contains warranty sheet, registration hints and safety instructions for America	**S26361-F1452-E130**	-	
Region Kit Europe, Contains warranty sheet and safety instructions in German, English, French, Spanish, Italian,	**S26361-F1452-E140**	-	(Sales region for EMEIA only)
Region Kit China for CCC option required systems, Contains warranty sheet and safety instructions for China,	**S26361-F1452-E101**	-	(Sales region for APAC only)

Certifications, optional 1x per system	build-in order code	loose delivery order code
Certification for China, (CCC), Reduced component selection possible, only with no power cord option	**S26361-F3301-E120**	-

N

Chapter 15 - Accessories

N

http://www.fujitsu.com/fts/products/computing/peripheral/accessories/index-facts.html

External USB Optical Disc Drive	
Ultra Slim Portable DVD Writer (Hitachi-LG)	**S26341-F103-L142**

O

Chapter 16 - others (Energy Star restrictions)

O

PYBES21
E-Star Fam1 Certification
RX/TX13x0 Mx E-Star Fam1 Limits configuration in accordance with Energy Star 4.0 requirements
max. 1x per system

limitations for E-Star Fam1certification.

please make sure to follow the guidelines below in order meet ENERGY STAR V4.0 Fam1 requirements:

Not allowed:
- base unit: 10x 2.5" SFF HDD bays (PYR1336RBN)
- CPU: Pentium Gold G7400 (PYBCP67C1)
- CPU: Xeon E-2414 (PYBCP67E7)
- CPU: Xeon E-2434 (PYBCP67E8)
- Any HDDs

Maximum sotrage quantity 8pcs [(SSD 3,5" LFF or SSD 2,5" SFF) + SSD M.2]

ENERGY STAR-configurationen will be labeld:	PRIMERGY RX1330 M6 E-Star Fam1
non ENERGY STAR-configurationen will be labeld:	PRIMERGY RX1330 M6

Serial port option is not relevant for E-Star

P

Chapter 16 - others (ErP Lot 9 restriction)

P

Region Kits, 1x per System	
Region Kit APAC/EMEA/India, Contains warranty sheet and safety instructions for APAC, EMEA and India	S26361-F1452-E100
Region Kit America, Contains warranty sheet, registration hints and safety instructions for America	S26361-F1452-E130

Region Kits, 1x per System	
Region Kit Europe*, Contains warranty sheet and safety instructions in German, English, French, Spanish, Italian, Polish, Russian and Welsh language	S26361-F1452-E140

*Region kit Europe must be orderd for shipment to ship in EU and EFTA countries to apply ErP Lot9 restriction

Erp Lot9 Configuration for Xeon, 1x per System	
Erp Lot9 Configuration 1	PYBETL28

Restriction for ErP Lot 9 directive,

Limitation
Not allowed:
- CPU: Pentium Gold G7400 (PYBCP67C1)

Erp Lot9 Configuration for Pentium, 1x per System	
Erp Lot9 Configuration 2	PYBETL29

Restriction for ErP Lot 9 directive,

Limitation
Not allowed:
- Internal RAID / HBA controllers
- 1GbE Ethernet card
- NVIDIA T400 (PYBVG4T2L)

<Internal RAID / HBA controllers>
- PYBSR4FAL
- PYBSC4MA1L
- PYBSR4C63L
- PYBSR4C6L
- PYBSR4MA1L

<1GbE Ethernet card>
- PYBLA284L
- S26361-F4610-E202
- S26361-F4610-E204

Q

Chapter 16 - others

Q

PYBRMC44 **PY-RMC44**
iRMC advanced pack
integrated remote Management controller activation key for graphical console redirection and remote media redirection
max. 1x per system

iRMC S6 (integrated Remote Management Controller) onboard server mgmnt with dedicated 10/100/1000 LAN-port and integrated graphics controller.

PYBLCM14 **embedded Lifecycle Management (eLCM)**
Server Online Update OS driver Update Hardware firmware update
Server Offline Update Hardware update via Update Manager Express
PrimeCollect Autonomous creation of Primecollect archives Creation and use of PrimeCollect archives over AIS connect
Custom Image (Jukebox function) Automatic and manual download of CD and DVD Images Automatic and manual start of CD and DVD Images
max. 1x per system

Executing system updates, controlling the hardware setup or running diagnostic tests on components are frequent tasks of IT administrators to ensure a continuous 24x7 server operation. ServerView embedded Lifecycle Management (eLCM) for Fujitsu PRIMERGY servers greatly supports such routine tasks by consolidating and enhancing management functions directly available ("embedded") within the server.

Loose delivery
eLCM Activation Pack (Node Locked License) **PY-LCM14**
options contains: **- Paper with TAN for Licensekey**

will be available in CQ4'24

iRMC MicroSD card option			
Capacity	Interface	E-parts	L-parts
64GB	SDXC	PYBMD64R1	PY-MD64R1
128GB	SDXC	PYBMD12R1	PY-MD12R1
max. 1x per system, instead of 16GB MicroSD card			

PYBSSS3
iRMC standard/legacy Option
When this product is orderd, following iRMC default setting is changed. Unique default password: No. The fixed password is printed on ID tag. SSH: Enabled USB Host LAN : Enabled Force to change default pwd to use Redfish/RESTful/other interfaces: No
max. 1x per system

S26361-F3776-E340
Cool-safe ® Advanced Thermal design 40°C(ATD40)
enables the PRIMERGY Server to cope with temperatures from 5-40° in operating mode due to extended Fan settings
Limitation: Refer to "General rules for ATD40 and ATD45"
this setting can be activated ex factory only
max. 1x per system

S26361-F3776-E345
Cool-safe ® Advanced Thermal design 45°C(ATD45)
enables the PRIMERGY Server to cope with temperatures from 5-45° in operating mode due to extended Fan settings
Limitation: Refer to "General rules for ATD40 and ATD45"
this setting can be activated ex factory only
max. 1x per system

PYBTPM19 **PY-TPM19**
TPM 2.0 Module V2
SPI interface
max. 1x per system

PYBNTPM
No TPM for WINSVR
Either PYBTPM19 or PYBNTPM is required in ordering Windows Server 2022 OEM
max. 1x per system

PYBCOM09 **PY-COM09**
serial port (RS232)
mounted on a low profile PCIe slot, max. 1x per system
max. 1x per system

PYBFOP25 **PY-FOP06**
1U Front Bezel
max. 1x per system

general rules for ATD40 and ATD45:
ATD40 and ATD45 use high performance cooling components
ATD40: <PYR1336R3N, PYR1336R2N, PYR1336RBN> - CPU can be supported up to 80W. No support 95W CPU - NVIDIA A2/L4 can not be supported - SSD PCIe M.2 drive can not be supported - Fujitsu Battery Unit can not be supported - Flash Backup Unit (FBU) for SAS / RAID Controller can not be supported <PYR1336RCN> - CPU can be supported up to 80W. No support 95W CPU - Fujitsu Battery Unit can not be supported
ATD45: <PYR1336R3N, PYR1336R2N, PYR1336RBN> - CPU can be supported up to 80W. No support 95W CPU - NVIDIA A2/L4 can not be supported - SSD PCIe M.2 drive can not be supported - Fujitsu Battery Unit can not be supported - Flash Backup Unit (FBU) for SAS / RAID Controller can not be supported <PYR1336RCN> - CPU can be supported up to 80W. No support 95W CPU - Fujitsu Battery Unit can not be supported <All base unit> - PLAN EP MCX6-LX 25Gb can not be supported - PLAN EP P210TP can not be supported - PDUAL CP300 can not be supported

Your Server is ready

Date of change	Configurator revis	Folder / order code / description	What has been changed / comment	Name
10.04.2024	1.03	Cover	updated the address of "For further information see:"	H. Okabe
28.03.2024	1.02	others	updated "general rules for ATD40 and ATD45"	H. Okabe
25.03.2024	1.01	others	revised the description about iRMC MicroSD card options for eLCM	Y. Sugiyama
22.03.2024	1,00		1st release	H. Okabe