

PRIMERGY TX2540 M1

System configurator and order-information guide

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PRIMERGY Server

Instructions

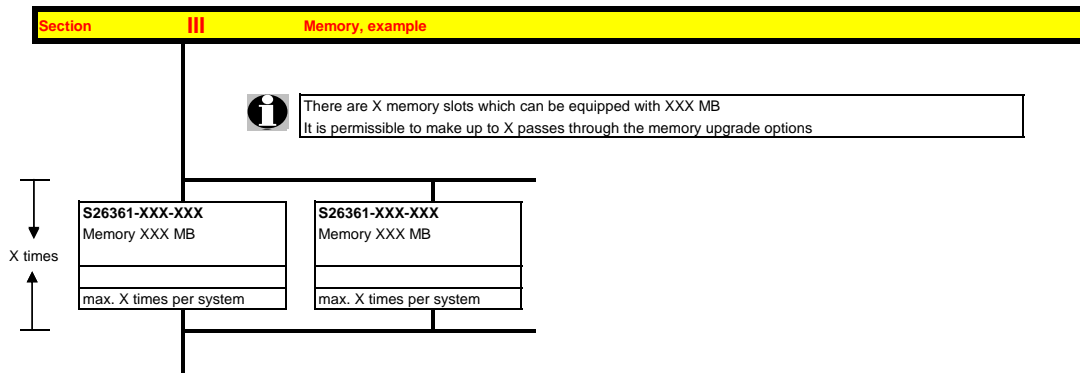
This document contains basic product and configuration information that will enable you to configure your system via PC-/System-Architect

Only these tools will ensure a fast and proper configuration of your PRIMERGY server or your complete PRIMERGY Rack system.

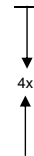
You can configure your individual PRIMERGY server in order to adjust your specific requirements.

The System configurator is divided into several chapters that are identical to the current price list and PC-/System-Architect.

Please follow the lines. If there is a junction, you can choose which way or component you would like to take. Go through the configurator by following the lines from the top to the bottom.



In one chapter you can only select as many components (here 4x) as the arrow indicates.



Please note that there are information symbols which indicate necessary information.



Further information in the internet see:

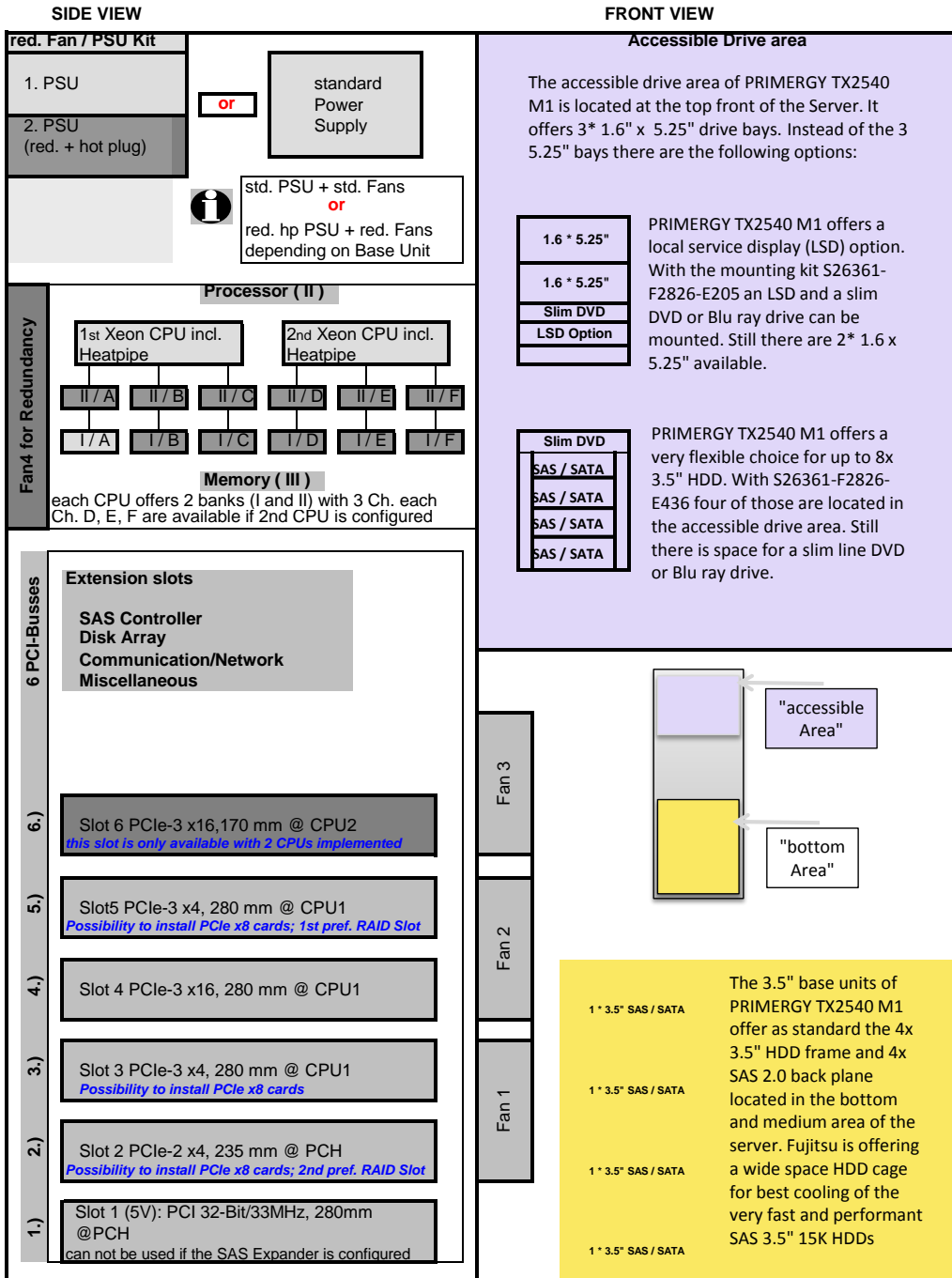
http://ts.fujitsu.com/products/standard_servers/index.html (internet)

https://partners.ts.fujitsu.com/com/order-supply/configurators/primergy_config/Pages/default.aspx (extranet)

Prices and availability see price list and PC-/System-Architect. Subject to change and errors excepted.

Configuration diagram PRIMERGY TX2540 M1 SATA LFF (3.5") System Unit

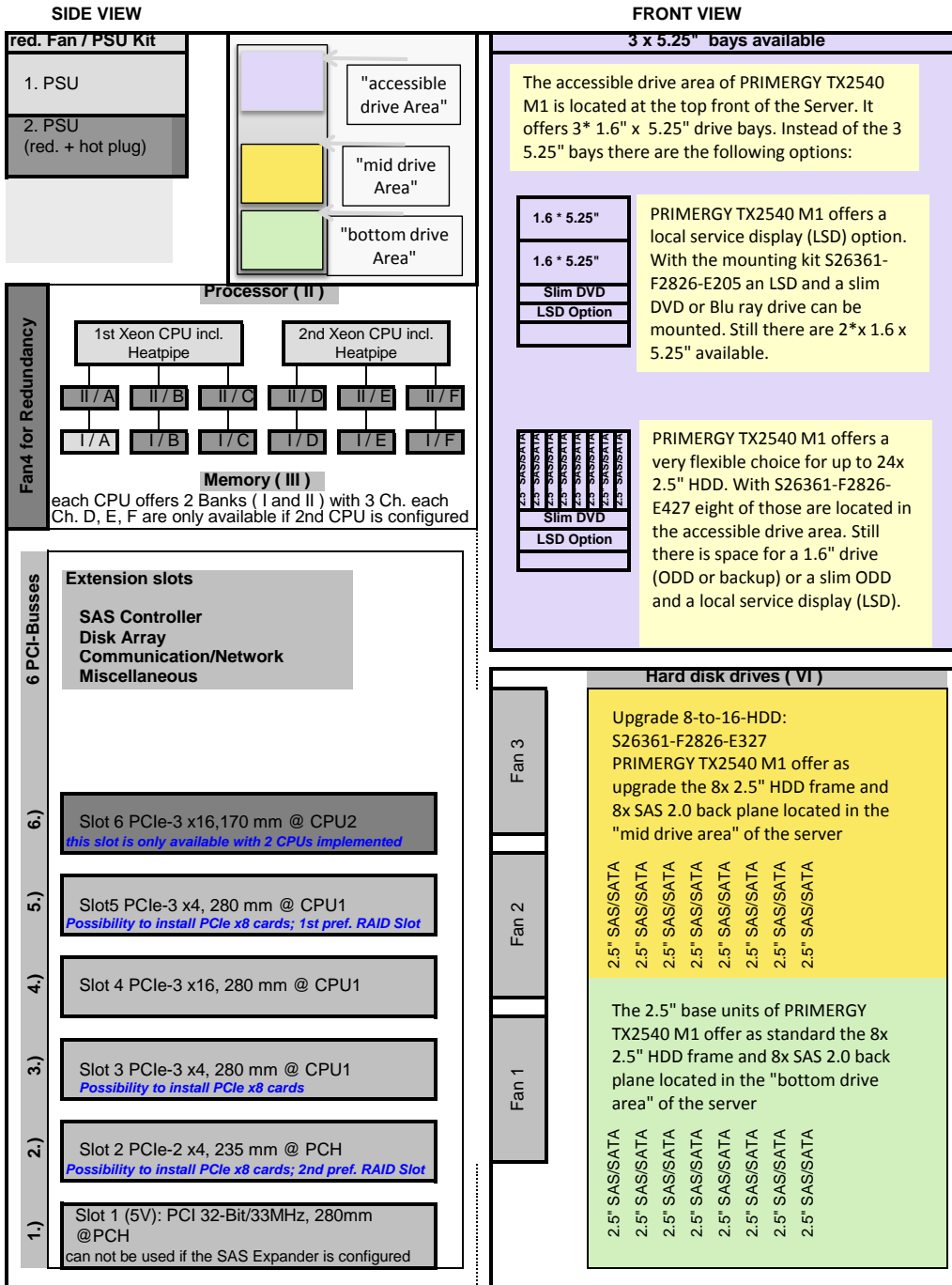
System unit (I)



Key:
 Included in basic unit
 Option

Configuration diagram PRIMERGY TX2540 M1 SFF (2.5") System Unit

System unit (I)



Key:

- Included in basic unit
- Option

Start PRIMERGY TX2540 M1

Section I -- Base unit

Tower or Rack Server base unit including:

Systemboard D3099-B
 Intel® C600 Series Platform Controller Hub (codename Patsburg)
 supports up to two Xeon E5-2400 v2 series (up to 10 cores, socket LGA1356) with 1 serial QPI link (Quick Path Interconnect)

12 DIMM sockets supporting up to 192GB DDR3 (up to 1600MHz) (Chipset can support up to 768GB, release pending)

iRMC S4 (integrated Remote Management Controller) on-board server management controller with dedicated 10/100/1000 Service LAN-port (with Realtek Phy 8211E) and integrated graphics controller (max. Resolution: 1920 x 1080 at 16 bpp)
 The Service LAN-port can be switched alternatively on standard Gbit LAN port

6 PCIe slots
 - 1x PCIe-3 *16 (only with CPU2)
 - 1x PCIe-3 *16
 - 2x PCIe-3 *4 (mechanical *8)
 - 1x PCIe-2 *4 (mechanical *8)
 - 1x PCI 32Bit 33MHz (support for 3.3V and 3.3+5V; ! no support of 5V-only cards)

* 1x RS-232-C (serial, 9pin) (usable for BMC or OS or shared)
 * 1x VGA (15 pin)
 * 9x USB 2.0 (UHCI) with 480MBit/s (4x external rear, 2x external front, 3x on Board for backup, CCR, UFM)
 * 2x LAN RJ45, 1x Service-LAN RJ45

4-port SATA 2.0 controller (SW-RAID 0,1,5, 10) or optional 4 ports for SAS RAID 0/1 (Licence Key required)
 2-port SATA 3.0 controller
 2x1 Gbit Ethernet LAN on board (Intel i210) supporting iSCSI boot option in System BIOS

two lockable front covers (Tower only)
 backplane with 4 (LFF) or 8 (SFF) bays for hot-plug HDs
 3 bays 5.25" for accessible drives (half height)

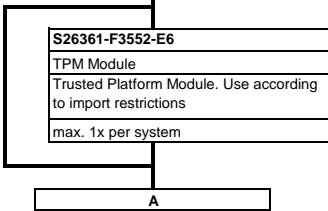
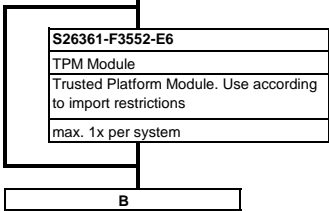
Standard power supply unit (PSU) 800W, up to 90% efficiency ("80-plus")
 Modular hot plug power supply unit 450W up to 94% efficiency (platinum)
 Modular hot plug power supply unit 800W up to 94% efficiency (platinum)
 Modular hot plug power supply unit 800W up to 96% efficiency (titanium)

3 x 120mm System fan (No hot-plug, no redundancy) - option for a 4th fan for N+1 redundancy

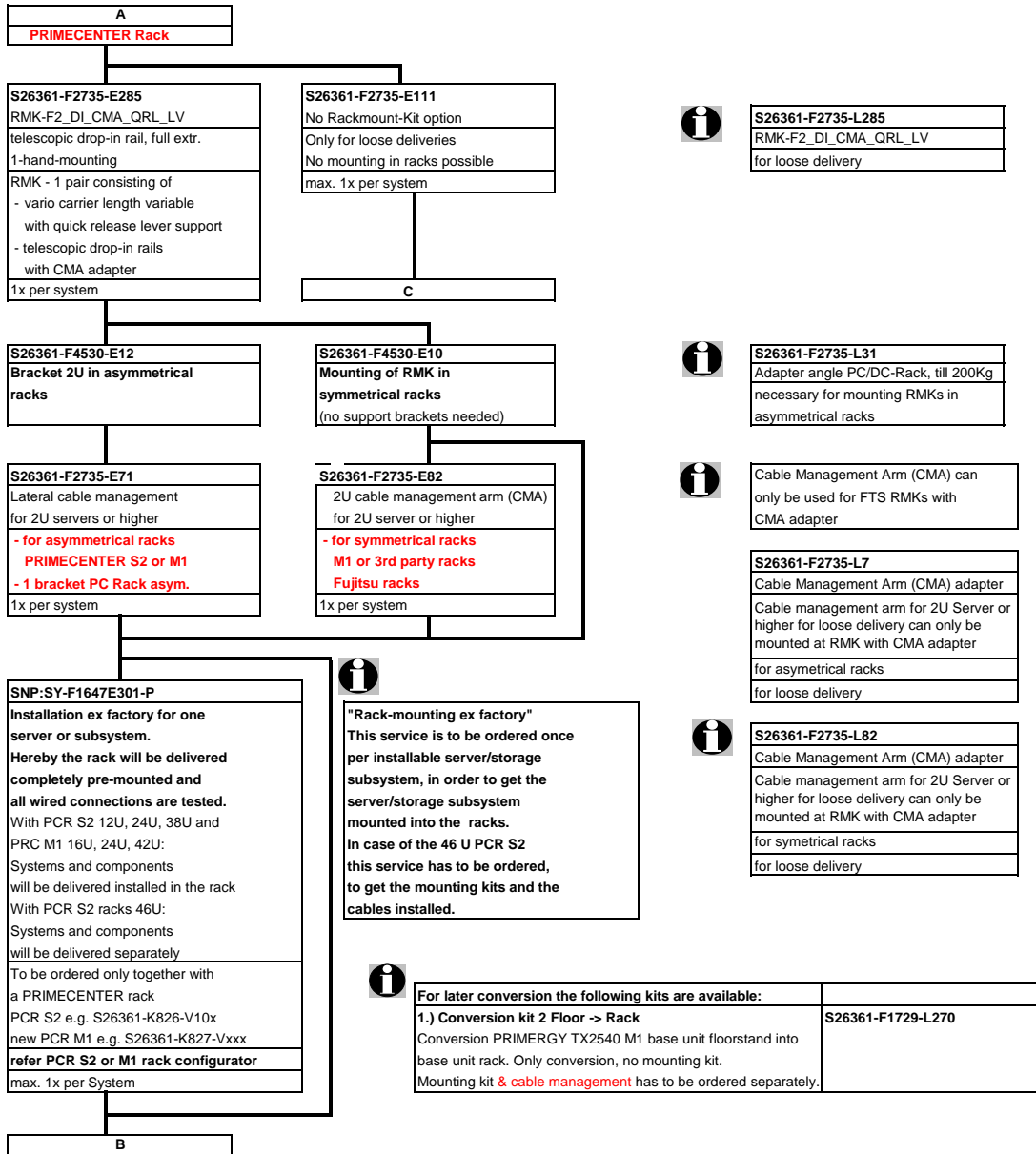
Software
 ServerView Suite DVD Pack incl. Installation SW, Management SW and Serviceability SW

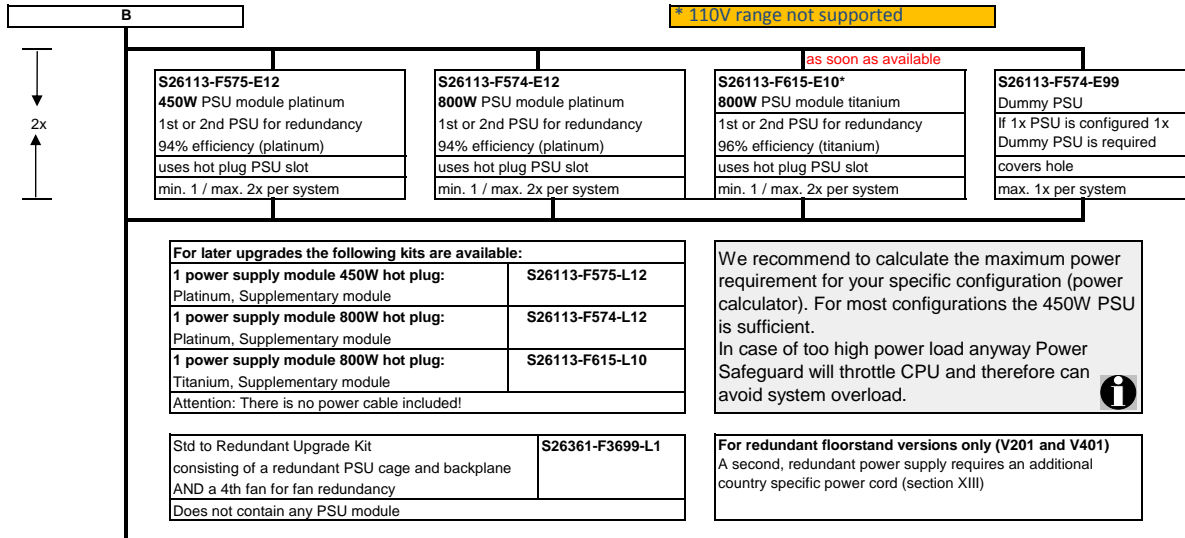
Floorstand System	
LFF Base Unit standard	S26361-K1463-V101
- 3 std fans and std PSU - 4-port SAS backplane for 4x 3.5" hot plug SAS or SATA HDs incl. cables for connection to the modular or onboard controllers	
LFF Base Unit redundant	S26361-K1463-V201
- 3 std fans plus 1 std fan for redundancy - 1 hp PSU has to be added - 4-port SAS backplane for 4x 3.5" hot plug SAS or SATA HDs incl. cables for connection to the modular or onboard controllers	
SFF Base Unit redundant	S26361-K1463-V401
- 3 std fans plus 1 std fan for redundancy - 1 hp PSU has to be added - 8-port SAS backplane for 8x 2.5" hot plug SAS or SATA HDs incl. cables for connection to the modular RAID controllers	

Rack System	
LFF Base Unit redundant	S26361-K1463-V601
- 3 std fans plus 1 std fan for redundancy - 1 hp PSU has to be added - 4-port SAS backplane for 4x 3.5" hot plug SAS or SATA HDs incl. cables for connection to the modular or onboard controllers	
SFF Base Unit redundant	S26361-K1463-V801
- 3 std fans plus 1 std fan for redundancy - 1 hp PSU has to be added - 8-port SAS backplane for 8x 2.5" hot plug SAS or SATA HDs incl. cables for connection to the modular RAID controllers	



S26361-F3552-L6
TPM Module
Trusted Platform Module. Use according to import restrictions
max. 1x per system



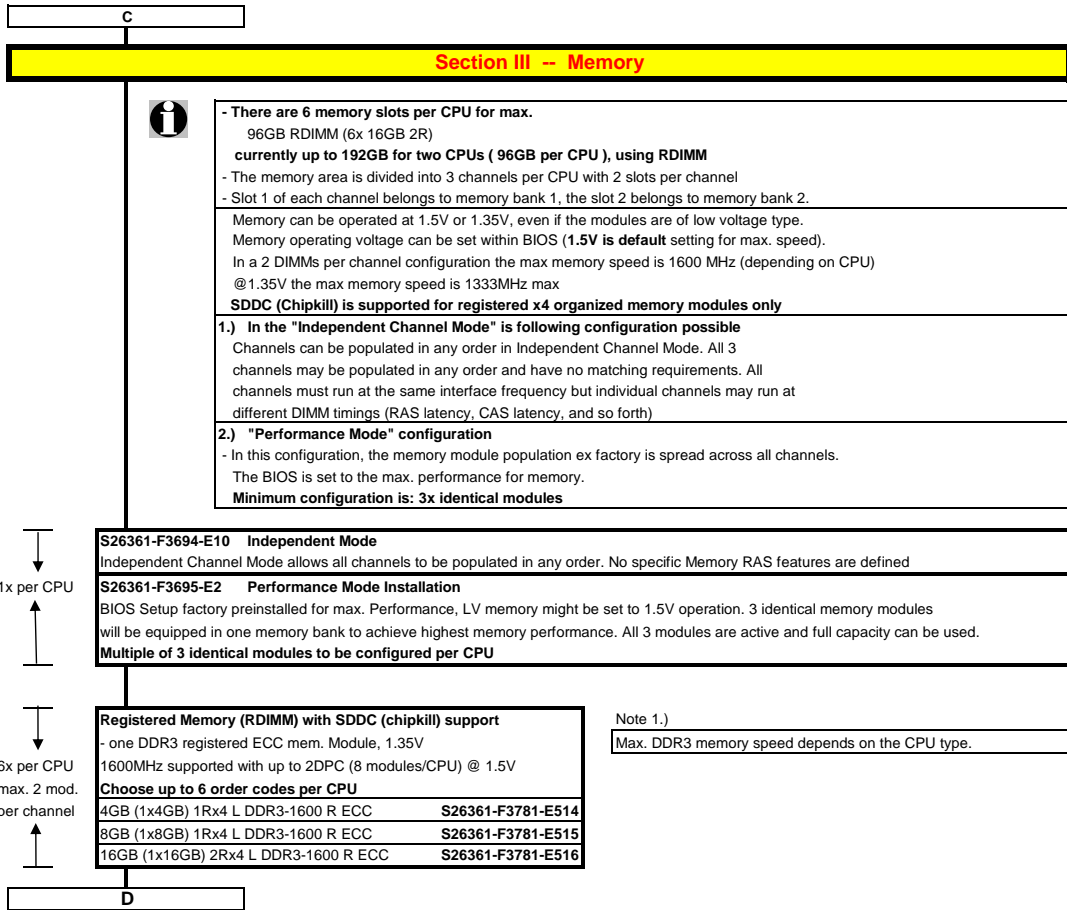


Section II -- Processors

There are 2 processor sockets available.
 The first socket must always be equipped with the **first CPU** which can be selected via configurator
 It is also possible to upgrade a dual-processor system later on with a **second CPU**
Two processors with different clock frequencies are not possible

Max. two CPUs can be selected per basic unit	
One of following CPUs has to be selected as first CPU for an orderable basic unit	
Optional second CPU has to be the same type like the first CPU	
Basic 4C CPUs	
- 1x 64-bit Intel Xeon (10MB shared TLC = Third Level Cache) 1333 MHz DDR3 Bus, 6,40 GT/s QPI Bus and passive heat sink occupies socket for one CPU	
Xeon E5-2403v2 4C/4T 1.80GHz 10MB 6.40GT/s 1333MHz 80W	S26361-F3828-E180
Xeon E5-2407v2 4C/4T 2.40GHz 10MB 6.40GT/s 1333MHz 80W	S26361-F3828-E240
Standard Turbo 6/8C CPUs	
- 1x 64-bit Intel Xeon (15/20MB shared TLC = Third Level Cache); Hyper-Threading (HT); 1600 MHz DDR3 Bus, 7,20 GT/s QPI Bus and passive heat sink occupies socket for one CPU	
Xeon E5-2420v2 6C/12T 2.20GHz 15MB 7.20GT/s 1600MHz 80W	S26361-F3829-E220
Xeon E5-2430v2 6C/12T 2.50GHz 15MB 7.20GT/s 1600MHz 80W	S26361-F3829-E250
Xeon E5-2440v2 8C/16T 1.90GHz 20MB 7.20GT/s 1600MHz 95W	S26361-F3829-E190
Advanced Turbo+ 8C/10C CPU	
- 1x 64-bit Intel Xeon (20MB shared TLC = Third Level Cache); Hyper-Threading (HT); 1600 MHz DDR3 Bus, 8,00 GT/s QPI Bus and passive heat sink occupies socket for one CPU	
Xeon E5-2450v2 8C/16T 2.50GHz 20MB 8.00GT/s 1600MHz 95W	S26361-F3830-E250
Xeon E5-2470v2 10C/20T 2.40GHz 25MB 8.00GT/s 1600MHz 95W	S26361-F3830-E240
Low Power 6C CPU	
- 1x 64-bit Intel Xeon (15MB shared TLC = Third Level Cache); Hyper-Threading (HT); 1333 MHz DDR3 Bus, 7,20 GT/s QPI Bus and passive heat sink occupies socket for one CPU	
Xeon E5-2430Lv2 6C/12T 2.40GHz 15MB 7.20GT/s 1600MHz 60W	S26361-F3831-E240

C



Memory Configuration PRIMERGY TX2540 M1

Each CPU offers 6 Slots for DDR3 Memory Modules organised in 2 Banks and 3 Channels.

If you need more than 6 Slots you have to configure the 2nd CPU.

Depending on the amount of memory configured you can decide between 2 basic modes of operation (see explanation below).

Mode	Configuration	RDIMM	Application
		x4	
SDDC (chipkill) support	any	yes	detect multi-bit errors
Independent Channel Mode	1, 2 or 3 Modules per Bank	yes	offers max. flexibility, upgradeability, capacity use UDIMM modules for lowest cost
Performance Mode	3 identical Modules / Bank	yes	offers maximum performance and capacity

*) For the delivery ex works the system will be prepared with dedicated BIOS setting.

Capacity	Configuration	RDIMM	Notes
Min. Memory per CPU	1 Module / CPU	4GB	with one CPU
Max. Memory per CPU	6 Modules / CPU	96GB	with one CPU
Max. Memory per System	12 Modules / System	192GB	if second CPU is configured

Memory-Speed:

Max. DDR3 memory speed depends on the speed of the CPU

Real maximum memory-bus speed depending on CPU type and voltage setting (BIOS; default is 1.5V)

Mem. Speed provided by CPU	RDIMM 1600MHz			
	1.5V		1.35V	
Voltage setting (BIOS)				
DIMM per Channel (DPC)	1	2	1	2
CPU with 1600MHz DDR3 Bus	1600	1600	1333	1333
CPU with 1333MHz DDR3 Bus	1333	1333	1333	1333

Configuration hints:

- The memory sockets on the systemboard offer a color coding:

Bank I black sockets

Bank II blue sockets

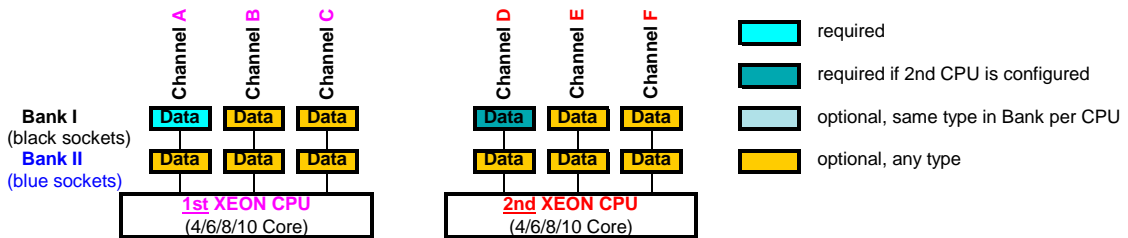
- A so called Bank consists of 1 memory module on every Channel available on one CPU (examples see below)

Bank I on CPU 1/2 up to 3 memory modules connected to Channel A - F on the 1st/2nd CPU

Bank II on CPU 1/2 up to 3 memory modules connected to Channel A - F on the 1st/2nd CPU

- See below and next page for a detailed descriptions of the memory configuration supported.

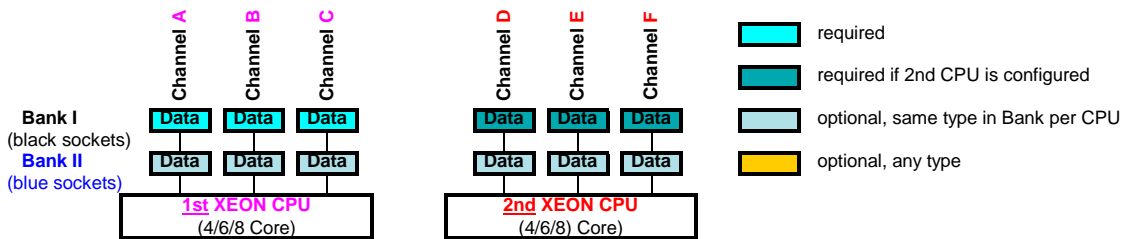
1. Independent Channel Mode



Independent Channel Mode allows all channels to be populated in any order

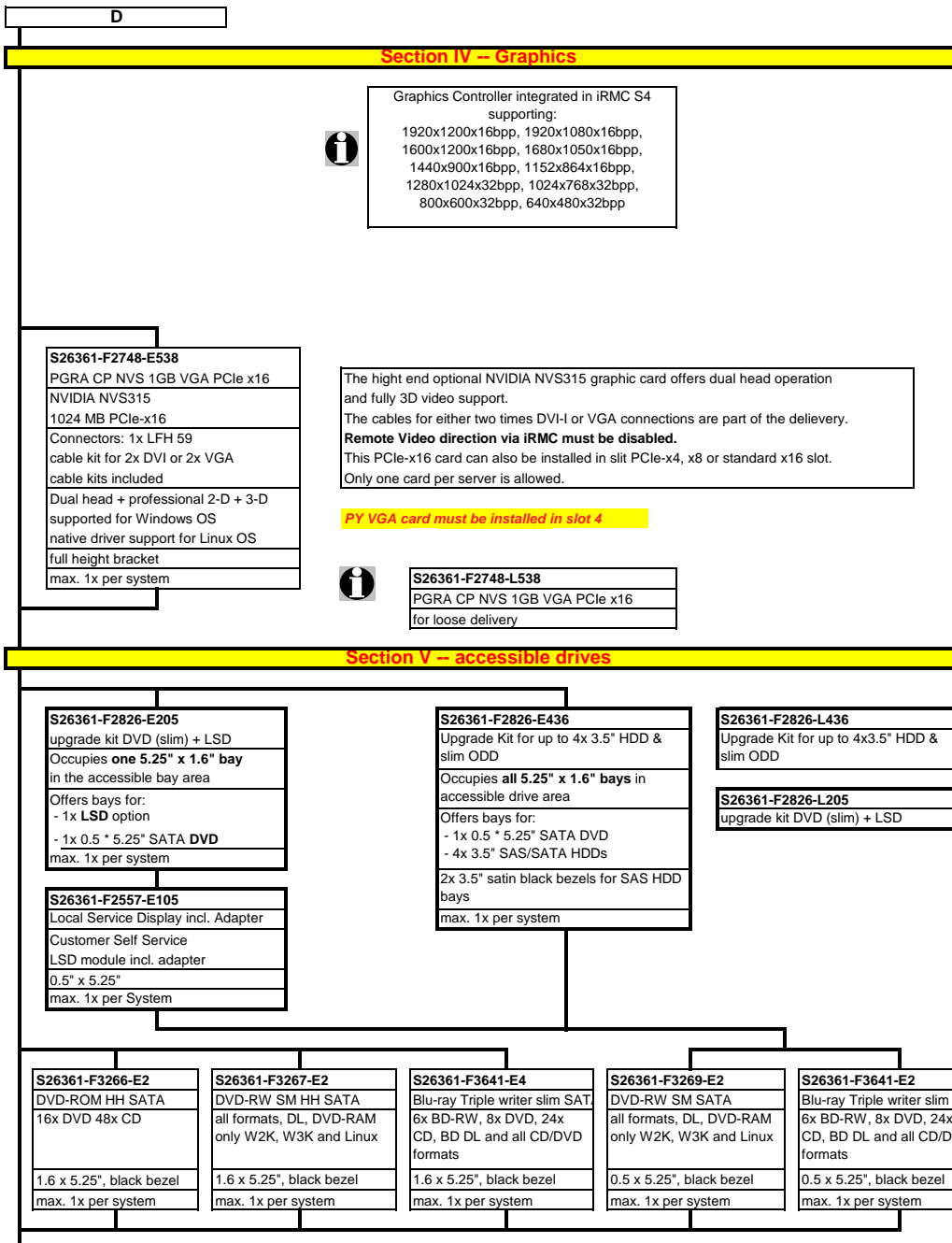
Can run with differently rated DIMMs and use the settings of the slowest DIMM installed in the system

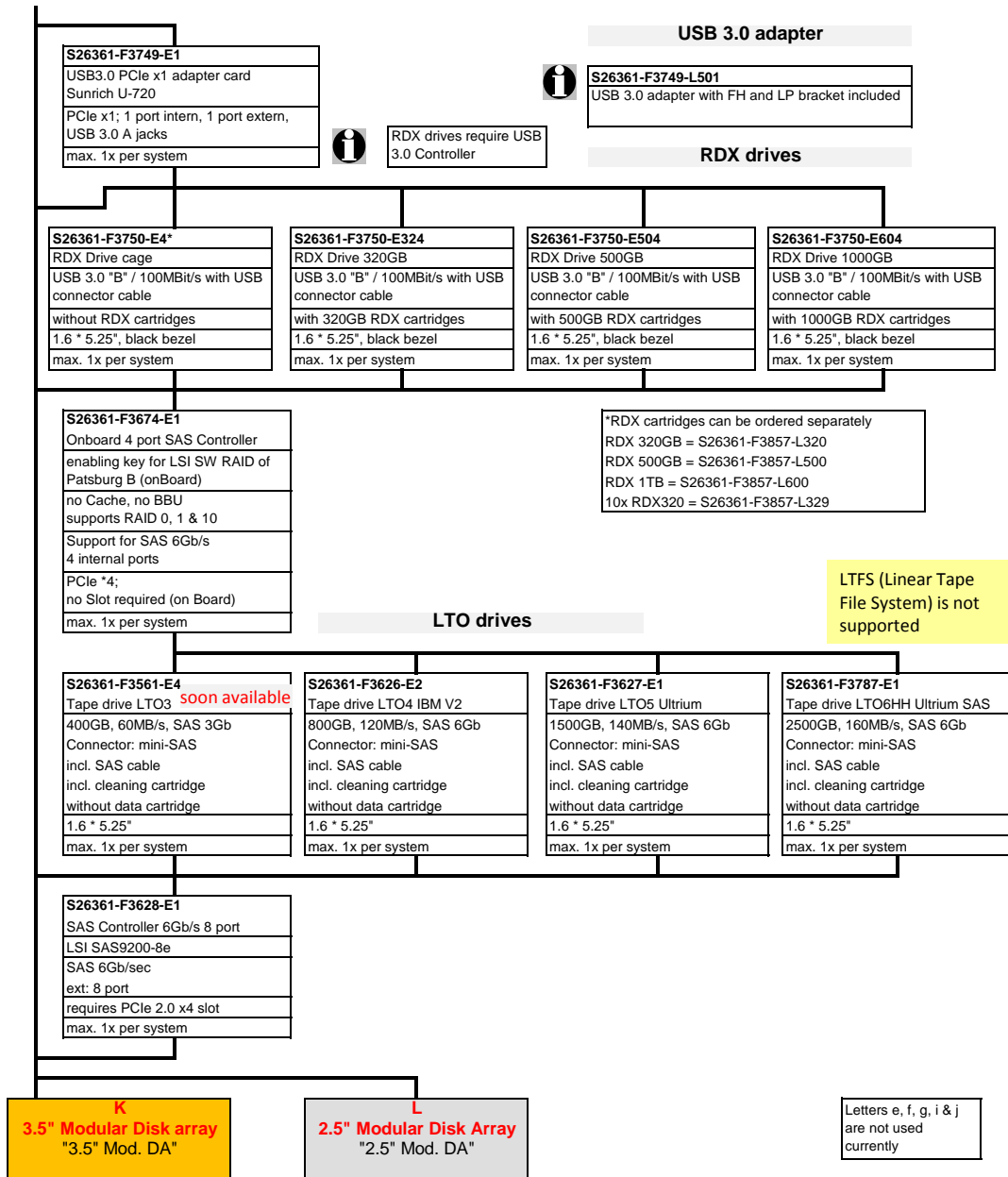
2. Performance Channel Mode

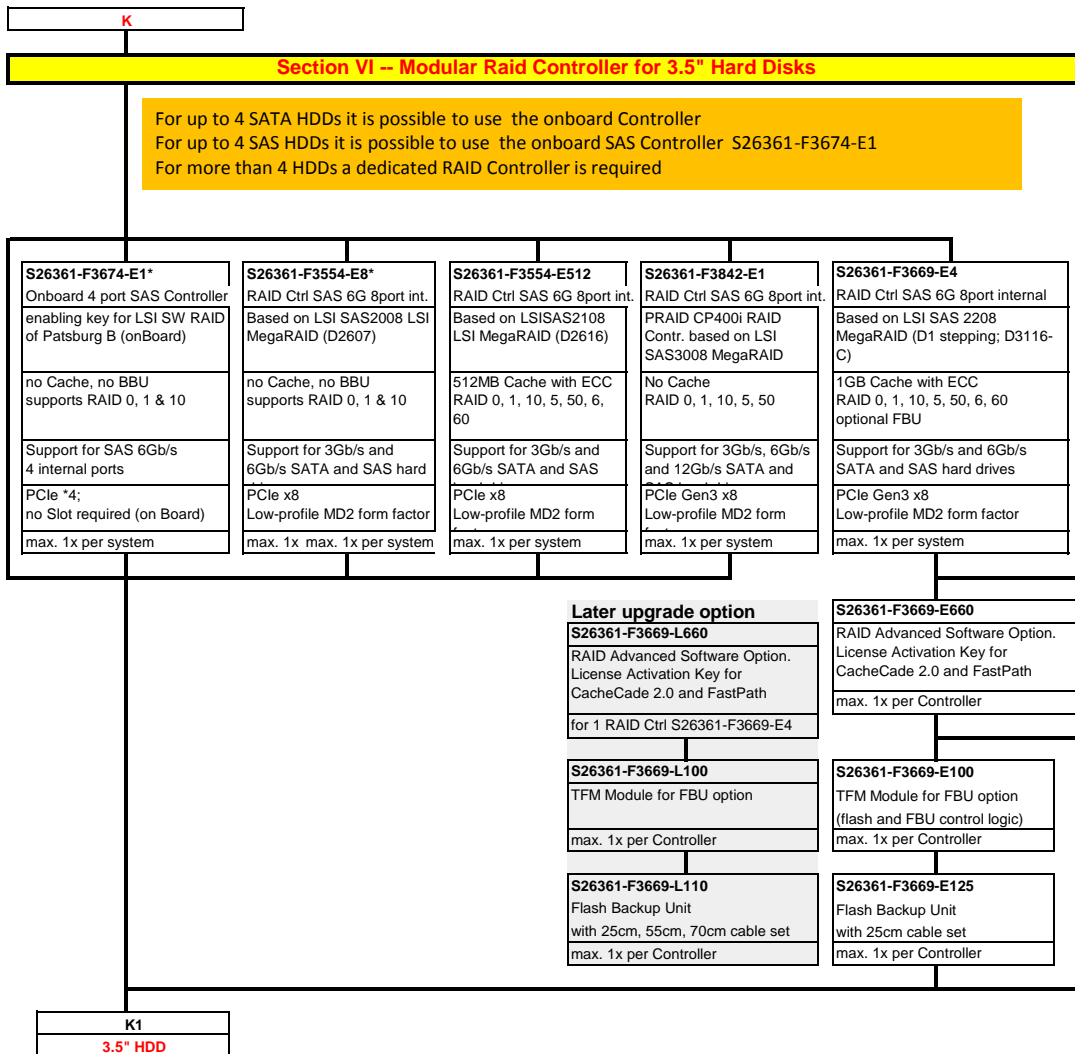


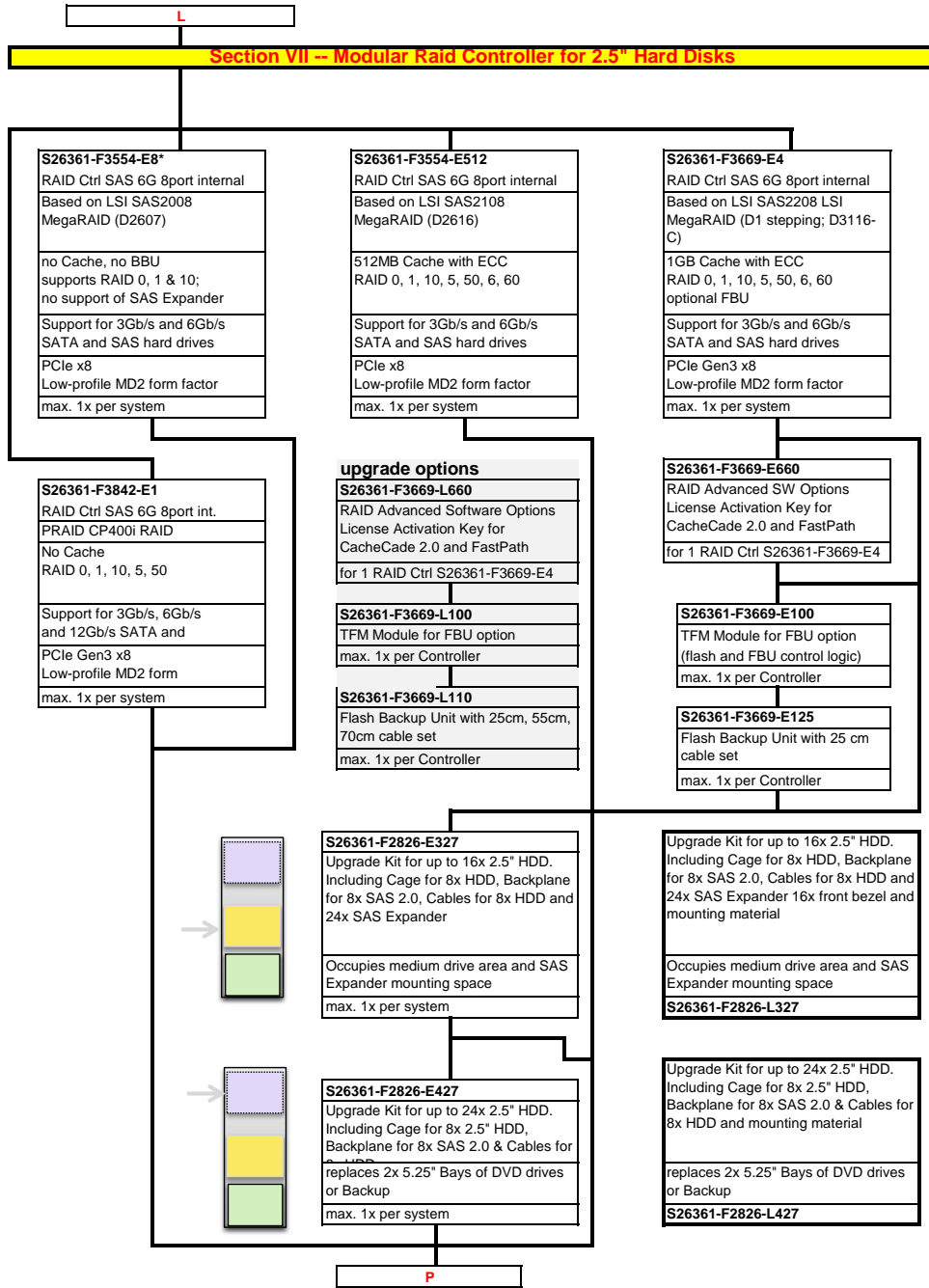
Performance Channel Mode requires identical modules on all channels of each Bank per CPU.

If this mode is used, a multiple of 3 identical modules has to be ordered.









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Section VIII -- 3.5" SAS / SATA Hard disk drives

Up to 8x 3.5" SAS or SATA hard disks can be configured. Mixed configurations with Eco SATA drives and SAS drives are not allowed. 3.5" SAS drives and 3.5" BC SATA drives can be mixed, but not used in one logical RAID volume

Solid State Disk 3.5", Mainstream Endurance*

SSD SATA 6Gb/s 2.5" within 3.5" hot plug/hot replace tray (H-P)		
100GB, Enterprise (EP), Mainstream Endurance (ME)	S26361-F5319-E100	*) SSD Mainstream Endurance 10DWPD over 5y
200GB, Enterprise (EP), Mainstream Endurance (ME)	S26361-F5319-E200	
400GB, Enterprise (EP), Mainstream Endurance (ME)	S26361-F5319-E400	
800GB, Enterprise (EP), Mainstream Endurance (ME)	S26361-F5319-E800	
max. 4x/8x per system		

Solid State Disk 3.5", Read-Intensive Endurance**

SSD SATA 6Gb/s 2.5" within 3.5" hot plug/hot replace tray (H-P)		
120GB, Enterprise (EP), Read-Intensive Endurance (RI)	S26361-F5528-E120	*) SSD Read-Intensive Endurance 0.3DWPD over 5y
240GB, Enterprise (EP), Read-Intensive Endurance (RI)	S26361-F5528-E240	
480GB, Enterprise (EP), Read-Intensive Endurance (RI)	S26361-F5528-E480	
800GB, Enterprise (EP), Read-Intensive Endurance (RI)	S26361-F5528-E800	
max. 4x/8x per system		

Business Critical (BC) SATA 6Gb/s HD 3.5" with hot plug/hot replace tray

500GB 7.200rpm, <9,0ms, 64MB Cache	S26361-F3670-E500	as soon as available
1TB 7.200rpm, <9,0ms, 64MB Cache	S26361-F3670-E100	
2TB 7.200rpm, <9,0ms, 64MB Cache	S26361-F3670-E200	
3TB 7.200rpm, <9,0ms, 64MB Cache	S26361-F3670-E300	
4TB 7.200rpm, <9,0ms, 64MB Cache	S26361-F3670-E400	
6TB 7.200rpm, <9,0ms, 128MB Cache, 512e	S26361-F3903-E600	
max. 4x/8x per system		

SAS 6Gb/s 3.5" with hot plug/hot replace tray

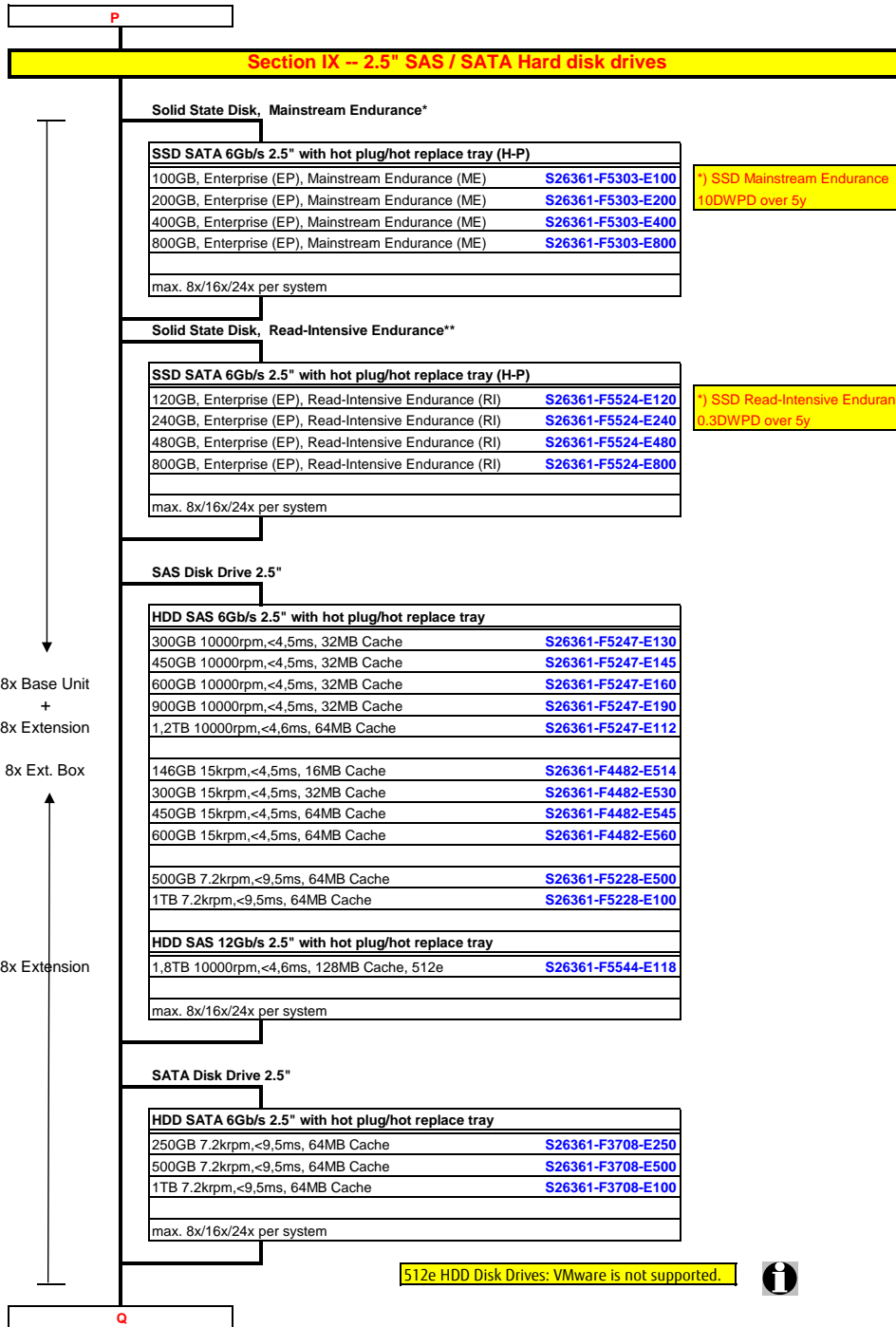
300GB 15000rpm, <4,5ms, 16MB Cache,	S26361-F4005-E530
450GB 15000rpm, <4,5ms, 16MB Cache	S26361-F4005-E545
600GB 15000rpm, <4,5ms, 16MB Cache	S26361-F4005-E560
1TB 7.200rpm, <9,0ms, 32MB Cache	S26361-F5241-E100
2TB 7.200rpm, <9,0ms, 32MB Cache	S26361-F5241-E200
3TB 7.200rpm, <9,0ms, 32MB Cache	S26361-F5241-E300
4TB 7.200rpm, <9,0ms, 32MB Cache	S26361-F5241-E400

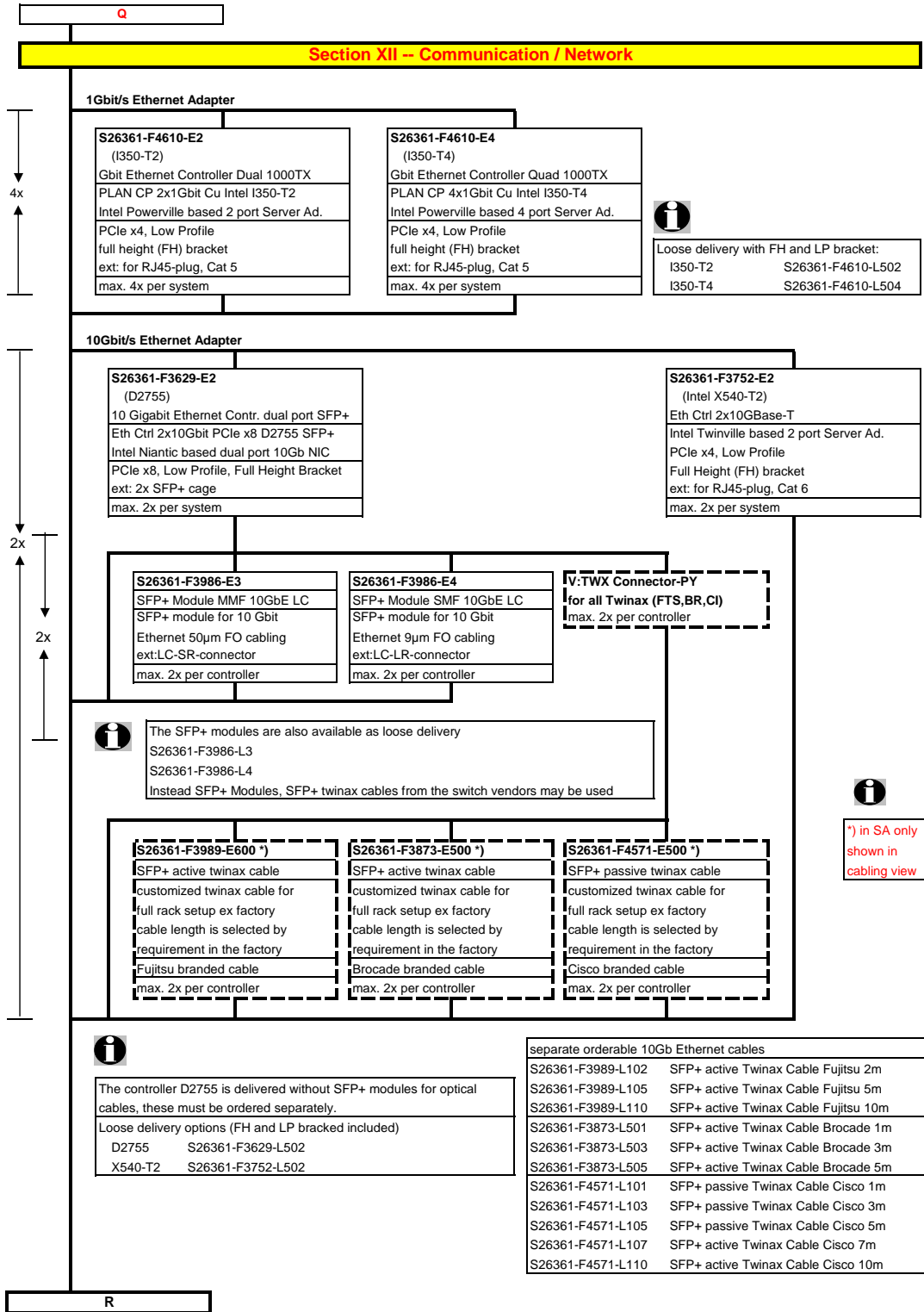
SAS 6Gb/s 2.5" within 3.5" hot plug/hot replace tray

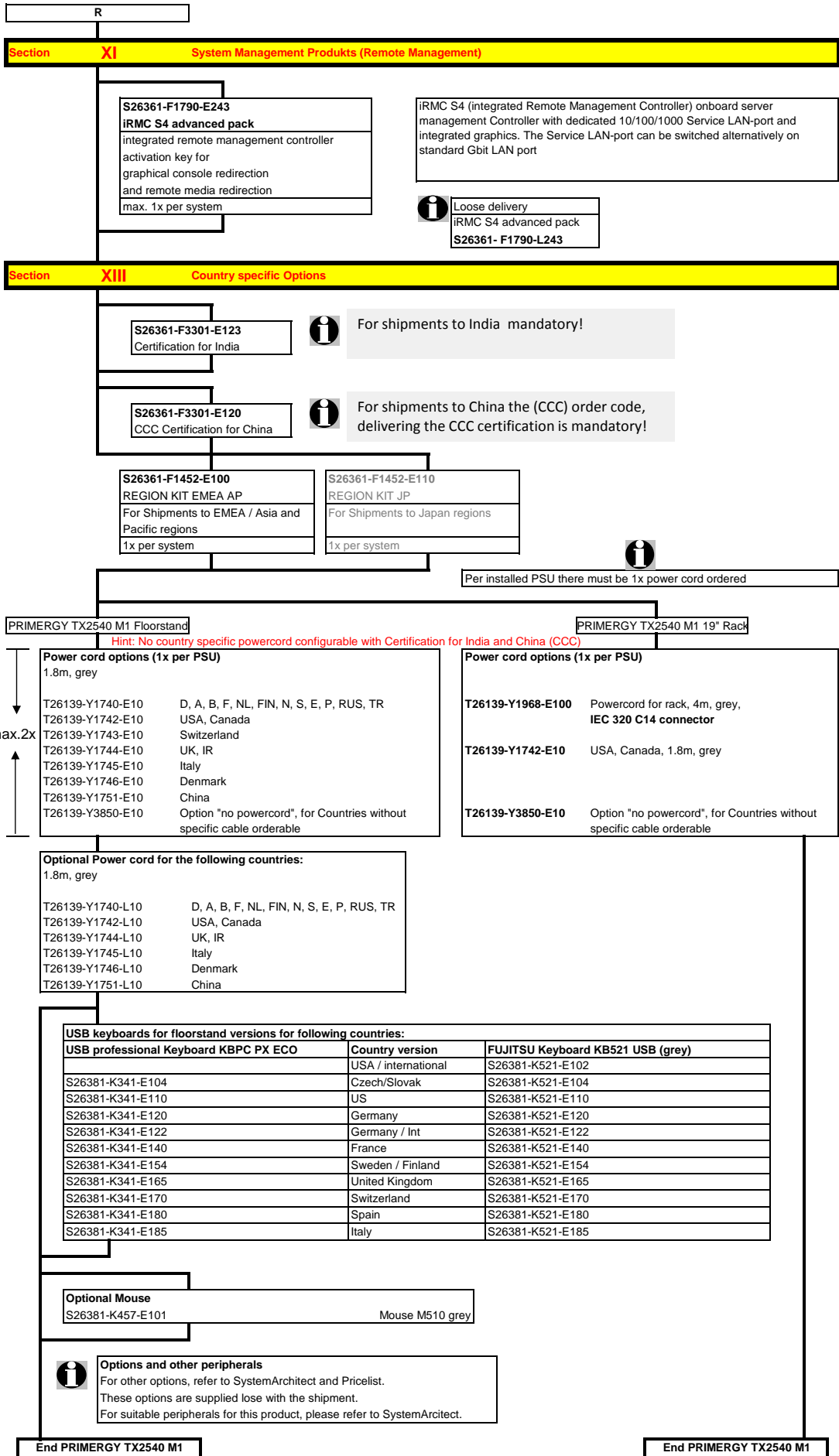
300GB 15000rpm, <3,0ms, 64MB Cache,	S26361-F5520-E530
450GB 15000rpm, <3,0ms, 64MB Cache	S26361-F5520-E545
600GB 15000rpm, <3,0ms, 64MB Cache	S26361-F5520-E560
max. 4x/8x per system	

Q

4",
or 8"







Change Report

Changes			
10.07.2015	S26361-F2748-E538	Klaus	EOL of NVS300 End July S26361-F2748-E537 deleted
18.06.2015	S26361-F2826-E436/-L436	Michail	Correction of max. amount of slim ODD and 3.5" HDD: from "8x" to "4x".
11.06.2015	T26139-Y1751-E10	Anja	China cable added and country specific power cords updated
05.05.2015	S26361-F3842-E1	Linne	Added PRAID CP400i
27.02.2015	S26361-F5544-E118	Özcan	Added 2.5" SAS 12G 0K HDD 512e 1.8TB
27.02.2015	S26361-F5520-E*	Özcan	Added 2.5" SAS 6G 15K HDD up to 600GB within 3.5" Carrier
17.02.2015	S26361-F3903-E600		Added HD SATA 6G 6TB 7.2K 512e HOT PL 3.5" BC
17.02.2015	S26361-F5524-*, S26361-F5528-*		Read-Intensive SSDs added
15.12.2014	S26361-F2748-E538	Klaus	PGRA CP NVS 1GB VGA PCIe x16 added plus EOL dates for predessor / first delivery
25.11.2014	Acc.drives & HD box	Martin	LTO3 - soon available
21.11.2014	Acc.drives & HD box	Martin	LTO3 added
07.10.2014	Drive cages	Martin	color codes of drive cages adopted to new style (green = bottom drive, orange = mid drive area, violet = accessible drive area)
26.08.2014	KB K521-E110	Martin	added
30.07.2014	S26361-F2735-E82	Sina	defined as „can“-position to RMK
22.07.2014	Link to configurator	Martin	corrected on folder "instructions"
10.07.2014	S26361-F3787-E1	Martin	LTO6 drive: LTFS (Linear Tape File System) is not supported
30.06.2014	S26361-F3301-E123 / -E120		Added 3.5" SATA 6G SSDs
10.06.2014	S26361-F5319-E*	Özcan	added
03.06.2014	PSAS 9200e	Martin	pages deleted
12.05.2014	SW 32 bit / SW 64 bit	Martin	corrected Order number S26361-F4530-E10 and S26361-F4530-E12
10.04.2014		Martin	Sheet Comm. Network updated
01.04.2014		Hans	First Release