

PRIMERGY TX150 S8

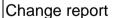
System configurator and order-information guide

November 2016

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PRIMERGY Server

Instructions

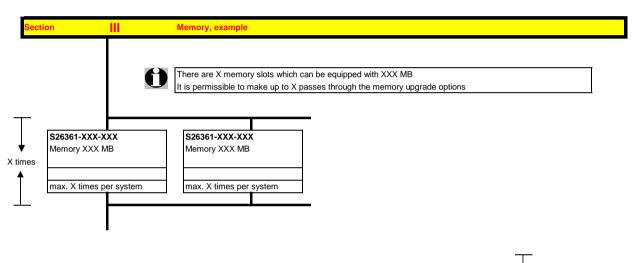
This document contains basic product and configuration information that will enable you to configure your system via PC-/System-Architect

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.



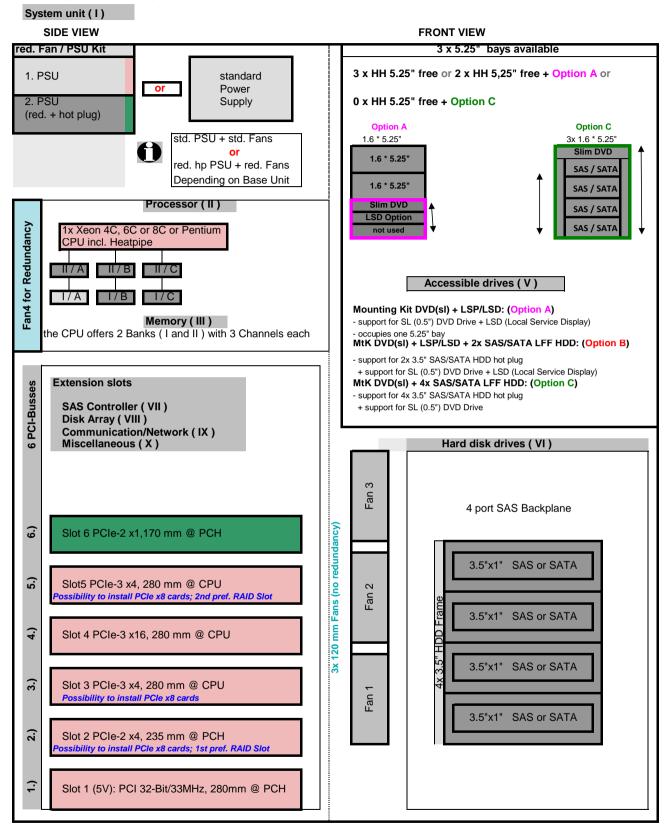
Further information in the internet see:

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

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

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

Configuration diagram PRIMERGY TX150 S8 SATA LFF (3.5") System Unit

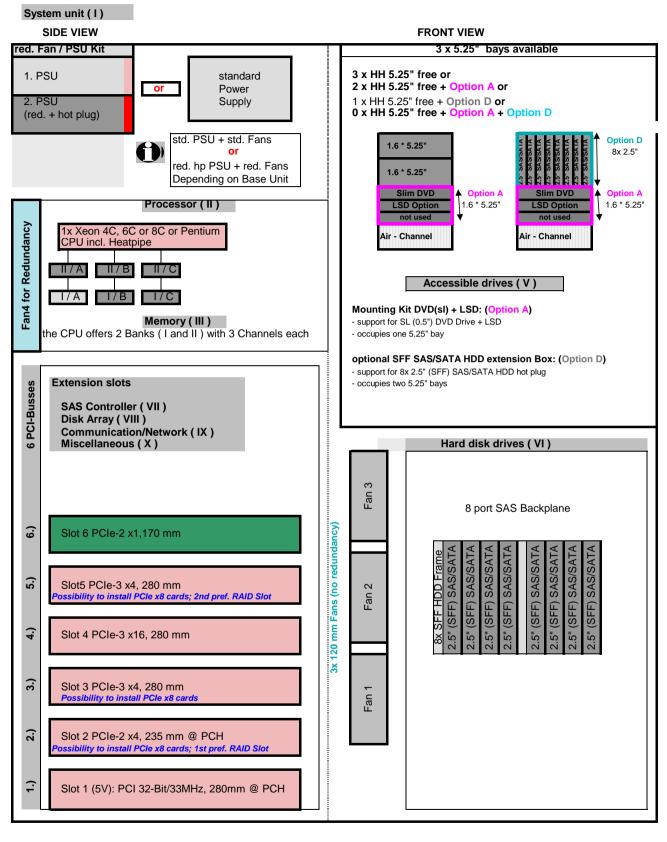


Key:

Included in basic unit

Option

Configuration diagram PRIMERGY TX150 S8 SFF (2.5") System Unit



Key:

Included in basic unit

Option

Start PRIMERGY TX150 S8

Section

Basic unit

System unit, Rack and Floorstand, including:

* Two lockable front covers in floorstand version

Door #1 for accessible drive bays

Door #2 for hot plug HDD bays

Both doors may be locked or door #1 may be left open while door #2 is still locked

* backplane with 4 (LFF) or 8 (SFF) bays for hot-plug HD's. Type depending on base unit:

Type 1: 4x hot plug LFF (3.5") SAS/SATA HDD (SAS/SATA LFF base units only)

Type 2: 8x (2x4) hot plug SFF (2.5") SAS HDD (SAS SFF base units only)

* PSU and Fan Type depending on base unit:

Type 1: standard PSU and standard Fans (3 System Fans)

(V101and V301, V501 and V701 base units)

Type 2: without PSU (450W must be added), 1 additional fan for redundancy

(V201, V401, V601 and V801 base units)

for Type 1 base units there is an upgrade to

hot plug redundant PSU and redundant Fans available

* 3 bays 5.25" for accessible drives (half Hight)

Systemboard D3079 with:

One Pentium 2c or Xeon 4C, 6C & 8C CPU (Socket-B2)

with 3 memory channels

CPU has to be selected for an orderable basic unit.

* Chipset Intel® C600 Series (codenamed Patsburg)

6 PCI slots: - 1x PCIe-3 x16

- 2x PCIe-3 x4 (mechanically x8)

- 1x PCIe-2 x4 (mechanically x8)

- 1x PCI 32/33

- 1x PCle-2 x1

- No mix of registered and unbuffered modules is allowed

- First Memory (one module) has to be selected for an orderable basic unit

- Memory upgrade is possible module wise for the Independent Channel Mode or for the Performance Mode.

- Memory mirrroring is supported with 2 identical modules in channel B+C

- Hot Spare Memory is supported with 3 identical modules in channel A+B+C

- SDDC (Chipkill) is supported only for registered memory modules,

* 6-port SATA controller on-board included in Intel Southbridge Patsburg A for SATA Raid0/1,

optional Southbridge Patsburg B with 4 ports for SAS RAID 0/1

Max. 4 SATA / SAS HD`s are supported

Max. 2 SATA accessible drives are supported (DVD, Backup)

* 2x1 Gbit Ethernet LAN on board (Intel Hartwell);

iSCSI boot integrated in System BIOS as selectable option

Reference in the interpretated Remote Management Controller) on-board server management controller with dedicated 10/100 Service LAN-port and

integrated graphics controller (max. Resolution: 1600 x 1200 at 16 bpp)

The Service LAN-port can be switched alternatively on standard Gbit LAN port

Interfaces:

* 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 at the rear, 2x external at the frontside, 3x internal for backup or UFM)

* 2x LAN RJ45, 1x Service-LAN RJ45

*internal Cables:

1. SATA cable for CD/DVD.

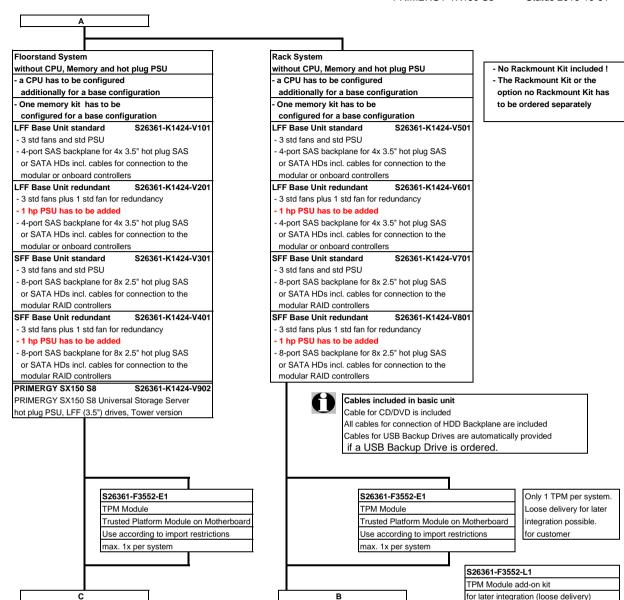
2. Cable for HDD Backplane

3. USB cable (if USB Backup is used)

* ServerView Suite Software package incl. ServerStart, ServerBooks, Management Software and Updates

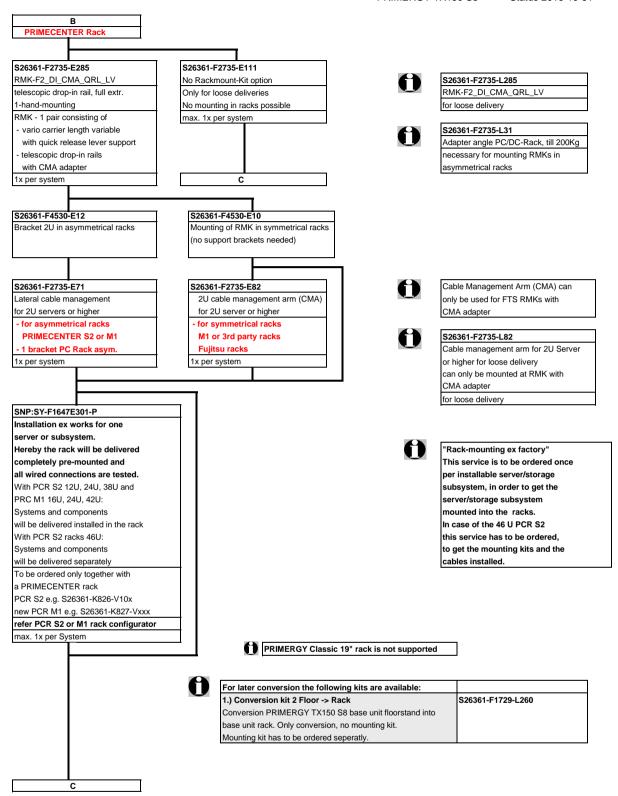
Documentation engl. (multilingual on CD)

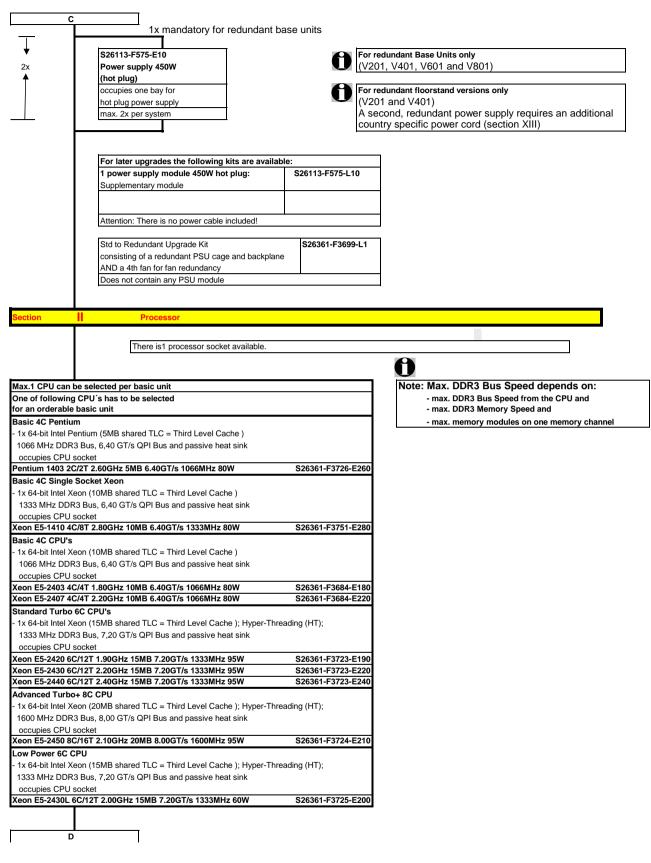
A



Trusted Platform Module on Motherboard
Use according to import restrictions

max. 1x per system





D

Section III Memor



- There are 6 memory slots for max.

96GB using RDIMM (6x 16GB 2R)

24GB using UDIMM (6x 4GB)

- The memory area is divided into 3 channels with 2 slots per channel
- Slot 1 of each channel belongs to memory bank 1, the slot 2 belongs to memory bank 2,

Registered and unbuffered memory modules can be selected

No mix of registered and unbuffered modules allowed.

Memory can be operated at 1.5V or 1.35V, even if the modules are of low voltage type.

Memory operating voltage can be set within BIOS (1.5V is default setting for max. speed).

In a 2 DIMMs per channel configuration, following frequencies are supported:

- 1.5V - 1600MHz max (depending on CPU, special memory modules)

SDDC (Chipkill) is supported for registered x4 organized memory modules only

1.) In the "Independent Channel Mode" is following configuration possible

Channels can be populated in any order in Independent Channel Mode. All 3 channels may be populated in any order and have no matching requirements. All channels must run at the same interface frequency but individual channels may run at different DIMM timings (RAS latency, CAS latency, and so forth)

No mix of registered and unbuffered modules allowed.

2.) "Rank Sparing Mode" configuration

- Within a memory channel, one rank is a spare of the other ranks.

The Spare Rank is held in reserve and is not available as system memory

For the effective memory capacity, please refer to the spreadsheet below.

The BIOS is set to the rank sparing setting.

Minimum configuration is: 2x 1R, 2x 2R or 1x4R DDR3 module per channel

This mode is not supported by x8 organized memory modules

3.) "Performance Mode" configuration

- In this configuration, the memory module population ex factory is spread across all channels.

The BIOS is set to the max. performance for memory.

Minimum configuration is: 3x identical modules

4.) In the "Mirrored Channel Mode" is following configuration possible

- Each memory bank can optionally be equipped with 2x registered memory modules

In each memory bank channel B and C $\,$ has to be

equipped with identical modules for mirrored channel mode.

In channel C is always the mirrored memory of channel B Minimum configuration is: 2x identical modules

This mode is not supported by x8 organized memory modules

D1

D1

Independent Mode

Independent Channel Mode allows all channels to be populated in any order. No specific Memory RAS features are defined

Requires min 1 memory Module per CPU

S26361-F3695-E1 Rank Sparing Mode Installation

BIOS Setup factory preinstalled to this mode. One Rank is spare of other ranks on the same channel. Spare Rank is not shown in System Memory. For effective capacity within a channel, please have a look below.

Supported for RDIMM only.

Requires min 2x 1R/2R or 1x 4R modules per CPU

S26361-F3695-E2 Performance Mode Installation

BIOS Setup factory preinstalled for max. Performance, LV memory might be set to 1.5V operation. Four identical memory modules

will be equipped in one memory bank to achieve highest memory performance. All four modules are active and full capacity can be used.

Multiple of 3 identical modules to be configured

S26361-F3695-F3 Mirrored Channel Mode Installation

BIOS Setup factory preinstalled to this mode. 2 identical memory modules are always equipped in one memory bank to use the

Mirrored channel Mode. Only one module contains active data, the 2nd module contains mirrored data

Supported for RDIMM only.

2 identical modules to be configured



Eff	Effective Memory capacity / Rank Sparing Mode, 1 Channel populated											
	UDIMM					RDIN						
	2GB	1R	2GB	2R	4GB	1R	8GB	2R	16GB	2R		
1DPC	na		na		na		na		na			
2DPC	2DPC na		na		4GB		12GB		24GB			



Minimum one memory module or order code = first memory

CPU, max. 2 modules per channel

6x per

Unbuffered Memory (UDIMM) no SDDC (chipkill) support one DDR3 unbuffered ECC mem. Module, 1.35V Choose up to 6 order codes per CPU

2GB (1x2GB) 1Rx8 L DDR3-1600 U ECC S26361-F3694-E51 4GB (1x4GB) 2Rx8 L DDR3-1600 LLECC S26361-F3694-F514

Registered Memory (RDIMM) with SDDC (chipkill) support one DDR3 registered ECC mem. Module, 1.35V

1600MHz supported with up to 2DPC (8 modules/CPU)

Choose up to 6 order codes per CPU						
4GB (1x4GB) 1Rx4 L DDR3-1600 R ECC	S26361-F3697-E514					
8GB (1x8GB) 2Rx4 L DDR3-1600 R ECC	S26361-F3697-E515					
16GB (1x16GB) 2Rx4 L DDR3-1600 R ECC	S26361-F3697-E516					

Note 1.)

Max. DDR3 memory speed depends on the memory configuration (No of mem modules per channe) as well as on the CPU type. The memory channel with the lowest speed defines the speed of all CPU channels in the system.

For real memory speed (depending on memory type / population), please check the spreadsheet "Memory speed" below



Mix of memory modules is only possible within the same group

Memory Configuration PRIMERGY TX150 S8

The CPU offers 6 Slots for DDR3 Memory Modules organised in 2 Banks and 3 Channels. Depending on the amount of memory configured you can decide between 4 basic modes of operation (see explanation below).

There are 2 different kinds of DDR3 Memory Modules available: UDIMM and RDIMM UDIMM / RDIMM offer different functionality. Mix of UDIMM / RDIMM is not alloved.

If 1.5V and 1.35V DIMMs are mixed, the DIMMs will run at 1.5V

Mode	Configuration	UDIMM	RDIMM	RDIMM	Application
		х8	х8	x4	
SDDC (chipkill) support	any	no	no	yes	detect multi-bit errors
Independant Channel Mode	1, 2 or 3 Modules per Bank	yes	yes	yes	offers max. flexibility, upgradeability, capacity use UDIMM modules for lowest cost
Mirrored Channel Mode *)	2 identical Modules / Bank	no	no	yes	offers maximum security
Performance Mode	3 identical Modules / Bank	yes	yes	yes	offers maximum performance and capacity
Rank Sparing Mode *)	min. 2 Ranks / Channel	no	no	yes	balances security and capacity

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

Capacity	Configuration	UDIMM	RDIMM	
Min. Memory	1 Module	1x2GB	1x4GB	
Max. Memory	4/6 Modules	6x4GB	6x16GB	

Memory-Speed:

Max. DDR3 memory speed depends on the memory configuration on one memory channel and the speed of the CPU

The memory channel with the lowest speed defines the speed of all CPU channels in the system

Mem. Speed provided by CPU				memory-bus speed depending on CPU type, figuration (DPC) and voltage setting (BIOS)									
	UDIMM 1600MHz												
Voltage setting (BIOS)	1.5\	ault]	1.35V			default]			1.35V				
	1	2		1	2		1	2	3	1	2		
	DPC	DPC		DPC	DPC		DPC	DPC	DPC	DPC	DPC		
CPU with 1600MHz DDR3 Bus	1333	1066		1333	1066		1600	1600	-	1333	1333		
CPU with 1333MHz DDR3 Bus	1333	1333		1066	1066		1333	1333	-	1333	1333		
CPU with 1066MHz DDR3 Bus	1066	1066		1066	1066		1066	1066	-	1066	1066		

1R - Single Rank 2R - Dual Rank

1DPC = 1 DIMM per Channel

2DPC = 2 DIMM per Channel

Configuration hints:

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

black sockets Bank II blue sockets

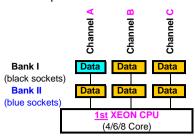
- A so called Bank consits of 1 memory module on every Channel available on the CPU (examples see below)

Bank I up to 3 memory modules connected to Channel A - C

Bank II up to 3 memory modules connected to Channel D - F

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

1. Independent Channel Mode



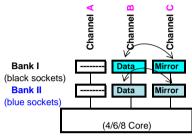
required

optional, same type in Bank per CPU

optional, any type

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. Mirrored Channel Mode



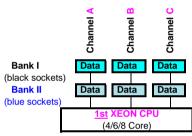
required

optional, same type in Bank per CPU

---- not used

Mirrored Channel Mode requires identical modules on channel B / C 50% of the capacity is used for the mirror => the available memory for applications is only half of the installed memory If this mode is used, a multiple of 2 identical modules has to be ordered.

3. Performance Channel Mode



required

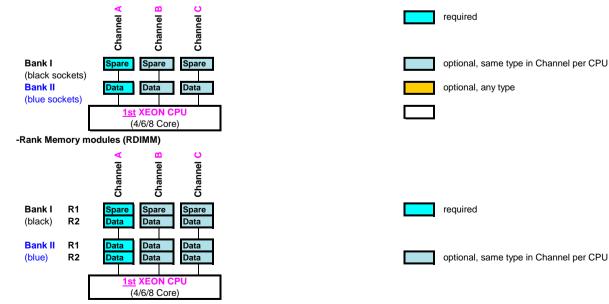
optional, same type in Bank per CPU

optional, any type

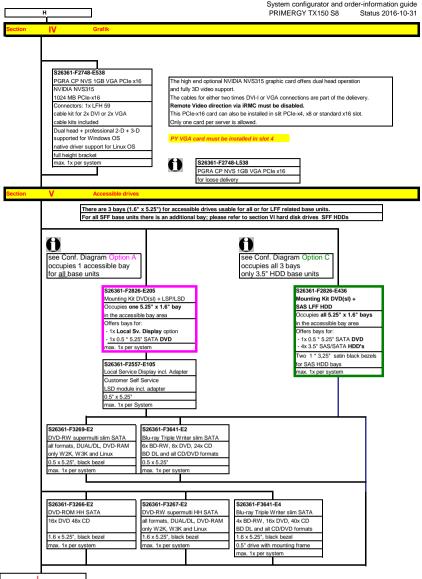
Performance Channel Mode requires identical modules on all channels of each Bank per CPU. If this mode is used, a multiple of 3 identical modules has to be ordered.

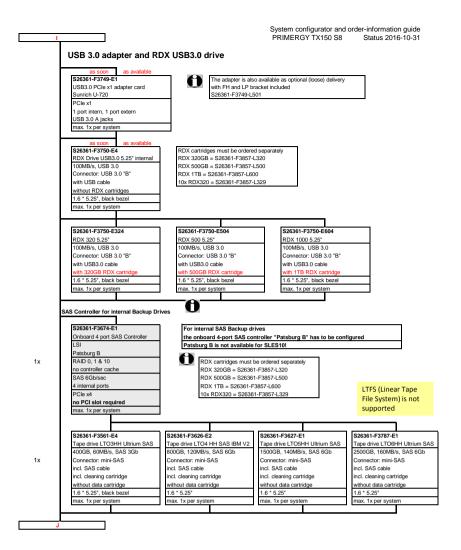
4. Rank Sparing Mode

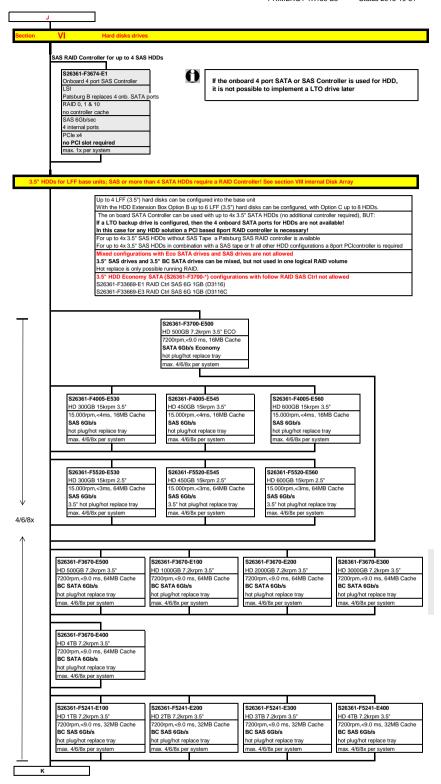
-Rank Memory modules (RDIMM)

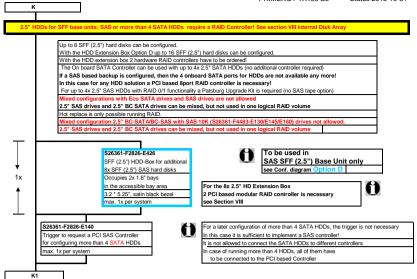


Rank Sparing Mode requires identical modules (same capacity and technology) within the same channel. The available memory for applications will vary depending on configuration. Please refer to the spreadsheet above "Effective Memory capacity with active Rank Sparing Mode". Population rule for Rank sparing mode is to achieve max. available memory.

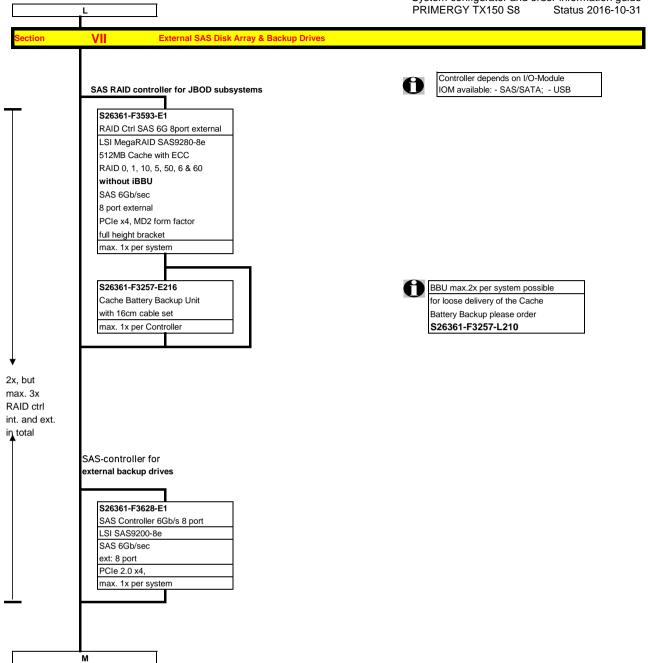


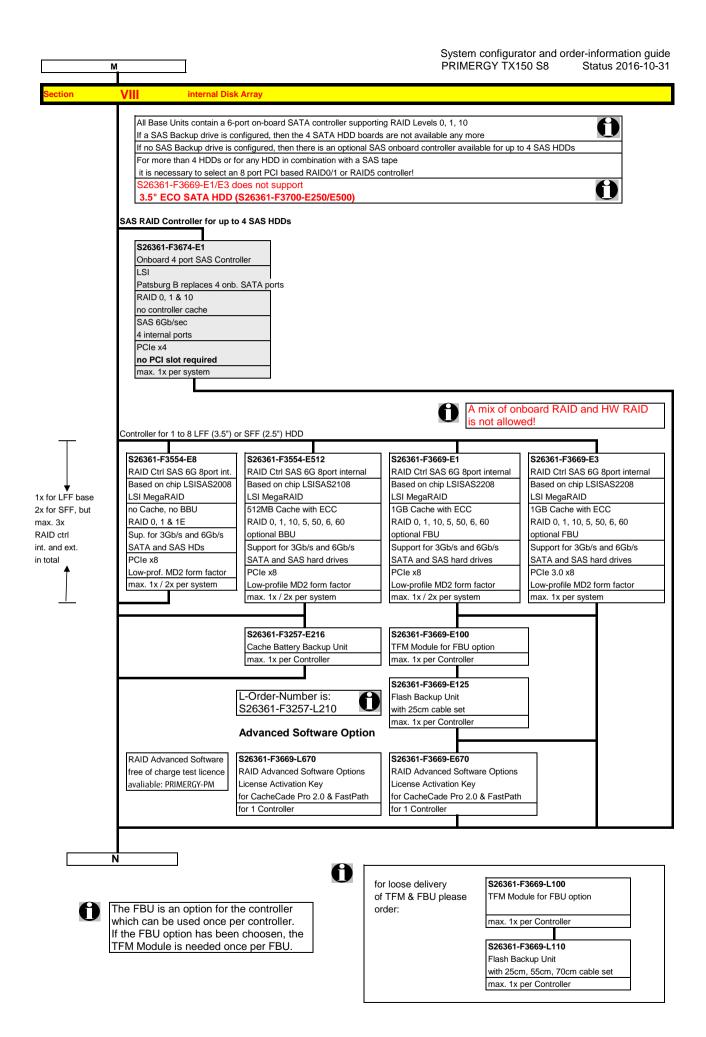


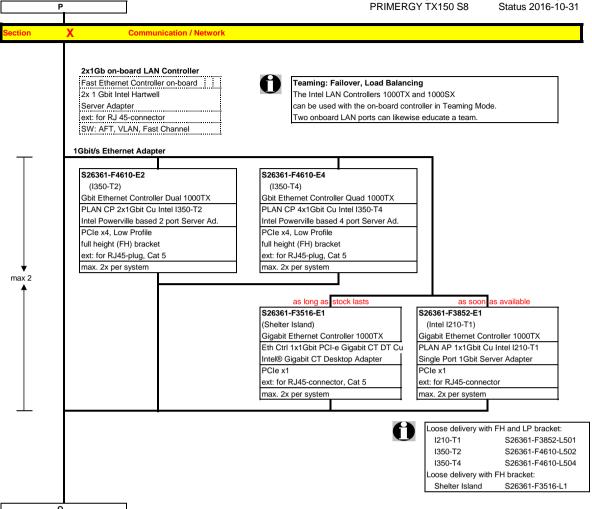


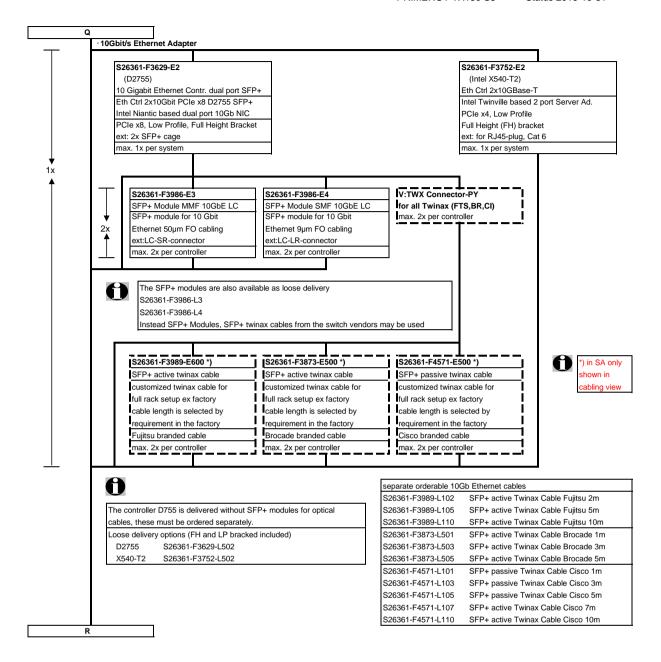


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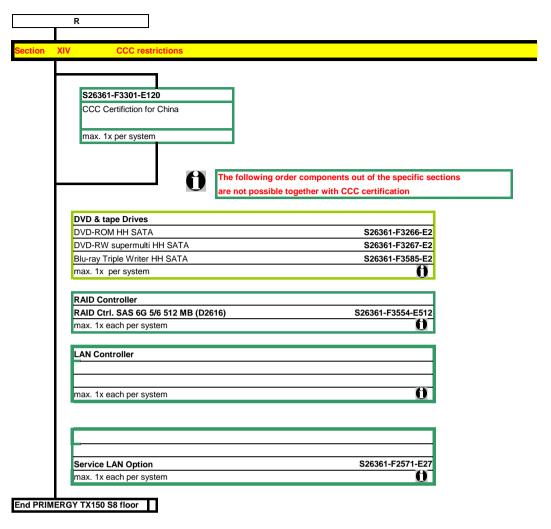






End PRIMERGY TX150 S8 floor

End PRIMERGY TX150S8 rack



Change Report

Date	Order number	Changes
Date	Order Hamber	onanges
2016-06-06	S26361-F3700-E250/L250	removed (EoL)
2016-05-10	S26361-F3669-E660/L660	removed
2016-05-10	S26361-F3669-E670/L670	RAID advanced SW option added
2016-04-05	T26139-Y1757-E10	added power cord for Taiwan
2016-03-21	S26361-F1452-E140	added region kit Europe
2016-03-14	T26139-Y1742-E10	changed color to black
2015-12-10	USB mouse portfolio	S26381-K457-E101/*-L101 mouse option removed (EOL)
2015-10-27	USB mouse portfolio	USB mouse order codes updated
2015-07-21	S26361-F2748-E537	NVS300 deleted and NVS315 available.
2015-07-21		HDD 2.5" SAS 12G 10K added.
2015-06-11	T26139-Y1751-E10	country specific power cords updated and china cable/optional power cords added
2015-04-22	S26361-F5524-E*	SSD SATA Read-Intensive added.
2015-03-16	S26361-F5520-E*	HDD 2.5" SAS 6G 15K up to 600GB within 3.5" Carrier
2015-01-28	DDS6	deleted
2015-01-27	S26361-F2826-E106	deleted
2014-12-15	S26361-F2748-E538 S26361-F3852-E1	PGRA CP NVS 1GB VGA PCIe x16 added plus EOL dates for predessesor / first delivery added new Single Port 1Gbit NIC
2014-10-09	S26361-F3852-E1	defined as "can"-position to RMK
	S26361-F3787-E1	LTO6 drive: LTFS (Linear Tape File System) is not supported
	S26361-F3301-E123	Added certification for India
2014-06-16	S26361-F3739-xxx	EOL EOL
2014-06-16	S26361-F3740-xxx	EOL
	SW 32 bit / SW 64 bit	pages deleted
	PRIMERGY SX150	order code corrected (K1424)
	PRIMERGY SX150	inserted in base unit
2014-03-17	S26361-F3739-E201	phase out
2014-03-17	S26361-F3740-E201	phase out
2014-03-17	S26361-F3610-E202	EOL
2013-10-18	Optional USB Comps	no longer available
2013-10-16	DDS5	removed from configurator due to EoL
2013-05-28	S26361-F3787-E1	LTO6 added
2013-05-16	\$26361-F3670-E400	New 3.5" BC-SATA 7.2K HDD 4TB
2013-05-16 2013-05-13	S26361-F5241-E*	New 3.5" BC-SAS 7.2K HDD 1/2/3/4TB HDD & SSD description text updated
2013-03-13	S26361-F3857-E4	RDX USB2.0 removed due to EOL
2013-03-26	S26361-F3669-E660/L660	RAID advanced SW option added - for RAID Ctrl SAS 6G 1GB (D3116C) added
	S26361-F3669-E3	RAID Ctrl SAS 6G 1GB (D3116C) added
2013-03-14	S26361-F3750-E324/504/E604	RDX & Cartridge bundles added
	S26361-F3641-E4	BD slim with frame added again
	S26361-F5247-E***	New 2.5" SAS 10K HDD (mix with BC-SATA supported, sucessor for *F5227*)
	S26361-F3641-E4	BD slim with frame removed
2012-12-07	S26381-K457-E100 and E101	new mouse numbers
	S26381-K520-Exxx	new Keyboard numbers
	S26361-F2826-E106	HDD Box w/o LSD possible
	S26361-F3776-E2	ENABLING LOW NOISE MODE TX150 added
	S26361-F5228-E500/E100	add 2.5" BC-SAS HDD
2012-10-08	S26361-F3749-Ex	Added RDX Drive
2012-10-08	S26361-F3750-Ex	Added USB3.0 Adapter
2012-10-01	S26361-F3986-E4	New SFP+ Module SMF 10GbE LC New 4-port Intel LAN controller and upgrade kit - as soon as available
2012-10-01	S26361-F3740-E201/E701	New 4-port Intel LAN controller and upgrade kit - as soon as available New 2-port Intel LAN controller and upgrade kit - as soon as available
2012-10-01 2012-09-28	S26361-F3739-E201/E701 S26361-F4541-E200	EOL: 200GB SSD SAS SLC
2012-09-28	020001-1 4041-2200	Cable length for BBU and FBU in text corrected (UJ)
2012-08-01		First Release
. —		