

# 32GB Computer memory DDR3 for Lenovo System x3650 M4 HD (5460) RDIMM





# Your benefits ✓ verified quality memory ✓ 5 years warranty Warranty details see last page ✓ 100% compatible ✓ free support on our hotline ✓ fast delivery

# PHS-memory® - computer memory with 100% quality

- many years of IT competence
- Free support for optimal configuration and product selection
- High availability through professional warehouse management
- Fast delivery in throughout Europe
- Short response times and professional order processing due to full digitalization throughout the entire process with complete traceability
- Incoming goods inspection include checks of the DRAMs, PCBs and the programmed SPDs in order to exclude possible errors (Controlled BOM).
- PHS-memory® brand memories guarantee 100% compatibility to the specified system.
- PHS-memory® memories can be used together with existing memories in the device depends on to the configuration rules of the system.
- The "fallback option" in the SPD of PHS-memory® allows DRAMs with higher clock rates to be operated together with older memory modules with lower clock rates within the system.
- Products with unique serial number for service and warranty
- Pre-sales and after-sales support by technically trained personnel



# Memory Specification



Memory size	32GB		
Memory technology	DDR3		
ECC support	yes		
JEDEC Norm	PC3L-12800R		
DRAM Organization	2Gx4		
Rank	4Rx4 (4DRx4 DDP)		
Туре	RDIMM (ECC Registered)		
Number of pins	240 Pin DIMM		
Memory data transfer rate	1600MHz @ CL11		
Voltage	1,35 Volt		
Speciality	DDP		
Board dimensions	133,35 x 30 (LxB mm)		
Operating temperature	0° C - 85° C		
Storage temperature	-40° C - +95° C		
RoHS compliant	yes		
SKU	SP464808		
EAN	4067488283239		

Note: The module specified in this datasheet is one of several possible configurations available under this part number.

Some details may differ from the specifications described here and the illustration, but have no negative influence on the functionality.



### System Specifications

The memory is 100% compatible with this sytem:

System manufacturer	Lenovo
Device type	Server
Device family	IBM System x
Device series	x3650 M4 Serie
Device name	System x3650 M4 HD (5460)
Standard memory	8GB (1x8GB)
Maximum memory*	512GB
Number of memory sockets	16

<sup>\*</sup>The specifications for the maximum memory upgrade may differ from those of the manufacturer Lenovo. Often the information given in the manual for the maximum memory upgrade is not up to date. New memory technologies, bios updates or newer software versions often allow the use of memory modules with a higher capacity than specified by the manufacturer with the same performance and stability.

# Information on memory allocation

# Which memory configuration is possible?

Our memory team will be happy to help you choose the right memory and configure your server.

Technologie	max. RAM 1 x CPU	max. RAM 2 x CPU	
UDIMM ECC	64GB RAM (8 x 8GB ECC UDIMM)	128GB RAM (16 x 8GB ECC UDIMM)	
RDIMM	192GB RAM (12 x 16GB RDIMM)	)	
		384GB RAM (24 x 16GB RDIMM)	
LRDIMM	384GB RAM (12 x 32GB LRDIMM)		
		768GB RAM (24 x 32GB RDIMM)	

ECC DIMM, Registered DIMM and Load Reduced LRDIMM memory modules must not be mixed. Bei einer Aufrüstung sollten Sie deshalb wissen, welche memory bereits vorhanden sind, or komplett auf RDIMMcomputer memory upgrade.

#### Principles of memory assembly

- Each CPU has 4 memory channels with 3 memory slots each
- ECC DIMM, Registered DIMM and Load Reduced LRDIMM memory modules must not be mixed
- Bei Einsatz of ECC UDIMM or 4Rank (4Rx..) RDIMM memoryn können nur jeweils 2 of 3 memoryslots pro memorykanal belegt werden
- memorysteckplätze for die kein Prozessor vorhanden ist dürfen nicht bestückt werden

#### Memory configuration for good system performance

- Verteilen Sie die memory gleichmäßig auf die memorysteckplätze and gleichmäßig auf die CPUs
- Wenn mehr als eine CPU vorhanden sind, sollten die memory pro CPU identisch (gespiegelt zur anderen CPU) bestückt werden.



# Information on memory installation

- Turn off the system
- Remove the plug of the power supply unit (if connected)
- Remove the battery, according to the user manual of the system
- Always ground yourself before touching electronic components
- Protect the memory module from static voltages:
  - Do not touch the gold pins of the memory module
  - Only touch the sides of the memory module
  - Use a grounding strap and/or ESD glove if possible

General installation instructions are supplied by E-Mail.



# Further memory options for Lenovo System x3650 M4 HD (5460)

Size	SKU	Technology	Туре	Number of pins	Brand	Reference no.
8GB	SP188288	DDR3	RDIMM (ECC Registered)	240 Pin DIMM	PHS-memory®	00D5036
16GB	SP188287	DDR3	RDIMM (ECC Registered)	240 Pin DIMM	PHS-memory®	46W0672
32GB	SP464808	DDR3	RDIMM (ECC Registered)	240 Pin DIMM	PHS-memory®	
32GB	SP465575	DDR3	LRDIMM (ECC LR DIMM)	240 Pin DIMM	PHS-memory®	
32GB	SP188289	DDR3	LRDIMM (ECC LR DIMM)	240 Pin DIMM	PHS-memory®	46W0761

# PHS-memory® warranty

Every PHS-memory® is equipped with a 5-years-warranty of perfect operation. If the RAM module is defective or fails within 5 years of purchase when used properly, you will receive an appropriate RAM module free of charge. If a suitable memory module is no longer available, we will refund the purchase price.





# Contact Information

PHS-electronic gmbh - www.phs-memory.com -Karl-Götz-Str. 5 97424 Schweinfurt Germany Phone: +49 9721 784678 E-Mail: info@phs-memory.com Web: www.phs-memory.com

All information without guarantee. Technical changes and errors excepted. You can find current price information in our online shop at https://www.phs-memory.com