

# 48GB Computer memory DDR5 for Lenovo ThinkCentre M90t Gen 4 (12HL) UDIMM







## 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	48GB		
Memory technology	DDR5		
ECC support	no		
JEDEC Norm	PC5-38400-U		
Туре	UDIMM (Non-ECC unbuffered)		
Number of pins	288 Pin DIMM		
Memory data transfer rate	4800MHz		
Voltage	1,1 Volt		
Speciality	-		
Operating temperature	0° C - 85° C		
Storage temperature	-40° C - +95° C		
RoHS compliant	yes		
SKU	SP533248		
EAN	4067488975318		

# overRAMing - maximize your RAM



Most systems - including the Lenovo ThinkCentre M90t Gen 4 (12HL) - can be upgraded with more memory than originally specified by the device manufacturer.

Therefore, our memory specialists continuously analyze new memory solutions in selected systems. Due to improved manufacturing technologies, new memories with higher performance and capacity will be tested for stability and functionality.

Then the new memory solutions are released for the respective systems. Use the benefits of larger computer memory capacity with the PHSmemory® overRAMing memory solutions.

https://www.phs-memory.es/-BOR

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	Desktop			
Device family	ThinkCentre			
Device series	M90 Serie			
Device name	ThinkCentre M90t Gen 4 (12HL)			
Standard memory	16GB/32GB			
Maximum memory*	192GB / 128GB according to manufacturer			
Number of memory sockets	4			
Annotation	for die folgenden Modelle: 12HL0000BL, 12HL0000CK, 12HL0000CR, 12HL0000EE, 12HL0000EU, 12HL0000FN, 12HL0000FR, 12HL0000GE, 12HL0000HX, 12HL0000MB, 12HL0000MD, 12HL0000MF, 12HL0000MG, 12HL0000MK, 12HL0000MG, 12HL0000MX, 12HL0000MT, 12HL0000MX, 12HL0000MZ, 12HL0000PG, 12HL0000PB, 12HL0000PG, 12HL0000TR, 12HL0000UK, 12HL0000TR, 12HL0000TR, 12HL0001EE, 12HL0001EU, 12HL0001FN, 12HL0001FR, 12HL0001FN, 12HL0001HX, 12HL0001MB, 12HL0001MD, 12HL0001MF, 12HL0001MD, 12HL0001MF, 12HL0001MG, 12HL0001MF, 12HL0001MT, 12HL0001MS, 12HL0001MT, 12HL0001MS, 12HL0001MZ, etc.			

<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.

 $Memory\ modules\ with\ our\ over RAMing-symbol\ are\ approved\ by\ us\ for\ maximum\ memory\ expansion.$ 

# Information on memory installation

- Turn off the system
- Remove the plug of the power supply unit (if connected)

#### Product Datasheet | SP533248

48GB Computer memory for ThinkCentre M90t Gen 4 (12HL)



- 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 ThinkCentre M90t Gen 4 (12HL)

Size	SKU	Technology	Туре	Number of pins	Brand	Reference no.
8GB	SP533244	DDR5	UDIMM (Non- ECC unbuffered)	288 Pin DIMM	PHS-memory®	
16GB	SP533245	DDR5	UDIMM (Non- ECC unbuffered)	288 Pin DIMM	PHS-memory®	
24GB	SP533246	DDR5	UDIMM (Non- ECC unbuffered)	288 Pin DIMM	PHS-memory®	
32GB	SP533247	DDR5	UDIMM (Non- ECC unbuffered)	288 Pin DIMM	PHS-memory®	
48GB	SP533248	DDR5	UDIMM (Non- ECC unbuffered)	288 Pin DIMM	PHS-memory®	

# 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.

For more information on warranty and service please visit <a href="https://www.phs-memory.es/-W5Y">https://www.phs-memory.es/-W5Y</a>



## Contact Information

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

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