

16GB Computer memory DDR5 for Lenovo ThinkCentre M90a Gen 5 (12SH) SO DIMM





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 | 16GB |
|---------------------------|-----------------|
| Memory technology | DDR5 |
| ECC support | no |
| JEDEC Norm | PC5-38400-S |
| Туре | SO DIMM |
| Number of pins | 262 Pin SO 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 | SP530322 |
| EAN | 4067488945304 |
| | |

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 M90a Gen 5 (12SH) |
| Standard memory | 8GB / 16GB |
| Maximum memory* | 96GB / 64GB according to manufacturer |
| Number of memory sockets | 2 |
| Annotation | for die folgenden Modelle: 12SH0000BL, 12SH0000CK, 12SH0000CR, 12SH0000EE, 12SH0000EU, 12SH0000FN, 12SH0000FR, 12SH0000GE, 12SH0000HX, 12SH0000MB, 12SH0000MD, 12SH0000MF, 12SH0000MG, 12SH0000MF, 12SH0000MG, 12SH0000MS, 12SH0000MT, 12SH0000MX, 12SH0000MT, 12SH0000MX, 12SH0000MZ, 12SH0000PG, 12SH0000PB, 12SH0000PG, 12SH0000TR, 12SH00001BL, 12SH0001CK, 12SH0001EU, 12SH0001EE, 12SH0001FR, 12SH0001FN, 12SH0001HX, 12SH0001MB, 12SH0001MD, 12SH0001MB, 12SH0001MD, 12SH0001MF, 12SH0001MG, 12SH0001MF, 12SH0001MG, 12SH0001MF, 12SH0001MT, 12SH0001MF, 12SH0001MT, 12SH0001MS, 12SH0001MZ, 12SH0001MS, 12SH0004MD, 12SH0004MB, 12SH0004MD, 12SH0004MB, 12SH0004MD, 12SH0004MF, 12SH0004MD, 12SH0004MF, 12SH0004MD, 12SH0004MF, 12SH0004MT, 12SH0004MS, 12SH0004MT, 12SH0004MX, 12SH0004MT, 12SH0004MX, 12SH0004MT, 12SH0004MS, 12SH0004MT, 12SH0004MS, 12SH0004MT, 12SH0004MS, 12SH0004MT, 12SH0004MS, 12SH0004MT, 12SH0004MS, 12SH0004MT, 12SH0004MS, 12SH0004TR, 12SH0004PG, 12SH0004TR, 12SH0004UK, 12SH0004ZY, 12SH0005CR, 12SH0005EE, |

Product Datasheet | SP530322

16GB Computer memory for ThinkCentre M90a Gen 5 (12SH)



12SH0005EU, 12SH0005FN, 12SH0005FR, 12SH0005FR, 12SH0005GE, 12SH0005HX, 12SH0005MB, 12SH0005MD, 12SH0005MF, 12SH0005MG, 12SH0005MG, 12SH0005MK, 12SH0005MT, 12SH0005MT, 12SH0005MT, 12SH0005MZ, 12SH0005FD, 12SH0005FB, 12SH0005FB, 12SH0005FR, 12SH0005TR, 12SH0005TR, 12SH0005UK, 12SH0005TR, 12SH0005BL, etc.

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.

^{*} 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.



Further memory options for Lenovo ThinkCentre M90a Gen 5 (12SH)

| Size | SKU | Technology | Туре | Number of pins | Brand | Reference no. |
|------|----------|------------|---------|--------------------|-------------|---------------|
| 8GB | SP530321 | DDR5 | SO DIMM | 262 Pin SO DIMM | PHS-memory® | |
| 16GB | SP530322 | DDR5 | SO DIMM | 262 Pin SO DIMM | PHS-memory® | |
| 24GB | SP530323 | DDR5 | SO DIMM | 262 Pin SO DIMM | PHS-memory® | |
| 32GB | SP530324 | DDR5 | SO DIMM | 262 Pin SO DIMM | PHS-memory® | |
| 48GB | SP530325 | DDR5 | SO DIMM | 262 Pin SO 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.





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