

# 24GB Computer memory DDR5 for MSI Titan GT77 12UGS-049UK 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	24GB
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	SP514013
EAN	4067488781087

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	MSI		
Device type	Laptop		
Device family	Titan		
Device series	GT77 12UGS Serie		
Device name	Titan GT77 12UGS-049UK		
Standard memory	16GB (2x8GB)		
Maximum memory*	192GB		
Number of memory sockets	4		

<sup>\*</sup> The specifications for the maximum memory upgrade may differ from those of the manufacturer MSI. 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 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 MSI Titan GT77 12UGS-049UK

Size	SKU	Technology	Туре	Number of pins	Brand	Reference no.
16GB	SP514012	DDR5	SO DIMM	262 Pin SO DIMM	PHS-memory®	
24GB	SP514013	DDR5	SO DIMM	262 Pin SO DIMM	PHS-memory®	
32GB	SP514014	DDR5	SO DIMM	262 Pin SO DIMM	PHS-memory®	
48GB	SP514015	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

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