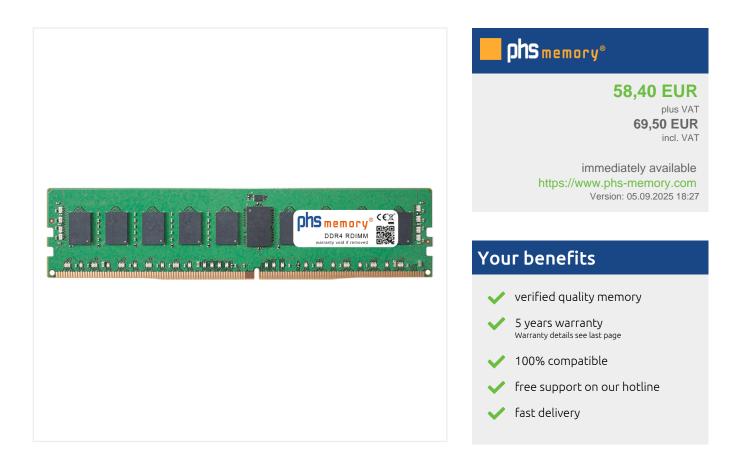


# 16GB Computer memory DDR4 for QNAP TDS-16489U-SE1-R2 RDIMM



### 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	DDR4		
ECC support	ja		
JEDEC Norm	PC4-19200R		
DRAM Organization	1Gx8		
Rank	2Rx8		
Туре	RDIMM (ECC Registered)		
Number of pins	288 Pin DIMM		
Memory data transfer rate	2400MHz @ CL17		
Voltage	1,2 Volt		
Speciality	-		
Board dimensions	133,35 x 31,25 (LxB mm)		
Operating temperature	0° C - 85° C		
Storage temperature	-40° C - +95° C		
RoHS compliant	Yes		
SKU	SP298659		
EAN	4063369614642		

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	QNAP
Device type	Storage/NAS
Device family	NAS TDS
Device series	TDS-16489U Serie
Device name	TDS-16489U-SE1-R2
Standard memory	64GB (8x8GB)
Maximum memory*	1TB
Number of memory sockets	8

\* The specifications for the maximum memory upgrade may differ from those of the manufacturer QNAP. 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?

Gerne supports Sie unser memoryteam bei der Wahl des richtigen Computer memorys and Konfiguration Ihres Gerätes.

- Die Computer memory können als RDIMM (Registered DIMM) or LRDIMM (Load Reduced DIMM) memory ausgewählt werden
- RDIMM and LRDIMM can not be mixed.
- Bei einer Aufrüstung sollten Sie deshalb wissen, welche memory bereits vorhanden sind or komplett with LRDIMMcomputer memory upgrade.

#### 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 QNAP TDS-16489U-SE1-R2

Size	SKU	Technology	Туре	Number of pins	Brand	Reference no.
8GB	SP298663	DDR4	RDIMM (ECC Registered)	288 Pin DIMM	PHS-memory®	RAM-8GDR4ECT 0-RD-2400, RAM -8GDR4ECK0-RD -2666
16GB	SP298659	DDR4	RDIMM (ECC Registered)	288 Pin DIMM	PHS-memory®	RAM-16GDR4EC T0-RD-2400, RA M-16GDR4ECK0 -RD-2666, RAM- 16GDR4ECT0-R D-3200
32GB	SP298657	DDR4	RDIMM (ECC Registered)	288 Pin DIMM	PHS-memory®	RAM-32GDR4EC T0-RD-2133, RA M-32GDR4-RD-2 133
32GB	SP298656	DDR4	RDIMM (ECC Registered)	288 Pin DIMM	PHS-memory®	RAM-32GDR4EC T0-RD-2400, RA M-32GDR4ECK0 -RD-2666
64GB	SP298655	DDR4	LRDIMM (ECC LR DIMM)	288 Pin DIMM	PHS-memory®	RAM-64GDR4EC S0-LR-2400, RA M-64GDR4ECS0 -LR-2666

#### 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 https://www.phs-memory.com/-W5Y



# 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