

# 16GB Computer memory DDR4 for QNAP TVS-682 UDIMM





# 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	DDR4			
ECC support	no			
JEDEC Norm	PC4-2133P-U			
DRAM Organization	1Gx8			
Rank	2Rx8			
Туре	UDIMM (Non-ECC unbuffered)			
Number of pins	288 Pin DIMM			
Memory data transfer rate	2133MHz @ CL15			
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	SP154941			
EAN	4055069276404			

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 TVS
Device series	TVS-x82 Serie
Device name	TVS-682
Standard memory	8GB (2x4GB)
Maximum memory*	64GB
Number of memory sockets	4

<sup>\*</sup> 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

# Information on memory configuration

The following technical specifications should be considered in advance:

- Im Gerät können non ECC or ECC (Error-Correction-Code) RAM-memory installiert werden. Memory with der Description ECC besitzen eine Fehlerkorrektur.
- Non ECC memory modules cannot be used together with ECC memories.
- If a memory expansion is to be made with the already existing RAM memories, it must be checked which memory technology (non ECC / ECC) is already existing in the system.
- If memory modules are provided with higher speeds than specified by the system, the memory speed is automatically adjusted to the system specifications.
- When installing 4 modules, only 16GB modules can be installed.

### 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 TVS-682

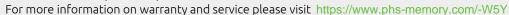
Size	SKU	Technology	Туре	Number of pins	Brand	Reference no.
4GB	SP154942	DDR4	UDIMM (Non- ECC unbuffered)	288 Pin DIMM	PHS-memory®	RAM-4GDR4A0- UD-2400, RAM- 4GDR4A1-UD-2 400, RAM-4GDR 4-LD-2133
8GB	SP154943	DDR4	UDIMM (Non- ECC unbuffered)	288 Pin DIMM	PHS-memory®	RAM-8GDR4-LD- 2133
4GB	SP520357	DDR4	UDIMM (Non- ECC unbuffered)	288 Pin DIMM	PHS-memory®	
8GB	SP570499	DDR4	UDIMM ECC (ECC unbuffered)	288 Pin DIMM	PHS-memory®	
16GB	SP154941	DDR4	UDIMM (Non- ECC unbuffered)	288 Pin DIMM	PHS-memory®	RAM-16GDR4A0 -UD-2400, RAM- 16GDR4A1-UD- 2400, RAM-16G DR4-LD-2133
8GB	SP520358	DDR4	UDIMM (Non- ECC unbuffered)	288 Pin DIMM	PHS-memory®	
16GB	SP570501	DDR4	UDIMM ECC (ECC unbuffered)	288 Pin DIMM	PHS-memory®	
8GB	SP570500	DDR4	UDIMM ECC (ECC unbuffered)	288 Pin DIMM	PHS-memory®	
32GB	SP308118	DDR4	UDIMM (Non- ECC unbuffered)	288 Pin DIMM	PHS-memory®	
32GB	SP570503	DDR4	UDIMM ECC (ECC unbuffered)	288 Pin DIMM	PHS-memory®	
16GB	SP570502	DDR4	UDIMM ECC (ECC unbuffered)	288 Pin DIMM	PHS-memory®	
32GB	SP520360	DDR4	UDIMM (Non- ECC unbuffered)	288 Pin DIMM	PHS-memory®	
32GB	SP570504	DDR4	UDIMM ECC (ECC	288 Pin DIMM	PHS-memory®	



unbuffered)

# 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