

# 8GB Computer memory DDR4 for QNAP TS-451D2-4G SO DIMM

	phs memory®
DDR4 SO DIMM warranty void if removed	Result of the second se
	<ul> <li>verified quality memory</li> <li>5 years warranty Warranty details see last page</li> <li>100% compatible</li> <li>free support on our hotline</li> <li>fast delivery</li> </ul>

#### 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

← 69.73mm	
DR4 SO DIM DR4 SO DIM waranty void if removed	 30,13mm 20mm

Memory size	8GB
Memory technology	DDR4
ECC support	NO
JEDEC Norm	PC4-19200S
Туре	SO DIMM
Number of pins	260 Pin DIMM
Memory data transfer rate	2400MHz @ CL17
Voltage	1,2 Volt
Speciality	-
Board dimensions	69,73 x 30,13 (LxB mm)
Operating temperature	0° C - 85° C
Storage temperature	-40° C - +95° C
RoHS compliant	Yes
SKU	SP365696
EAN	4064578286811

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 TS
Device series	TS-x51D2 Serie
Device name	TS-451D2-4G
Standard memory	4GB (1x4GB)
Maximum memory*	32GB / 8GB according to manufacturer
Number of memory sockets	2

\* 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

For dual-DIMM configurations, you must use a pair of identical DDR4 modules.

### 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 TS-451D2-4G

Size	SKU	Technology	Туре	Number of pins	Brand	Reference no.
4GB	SP365695	DDR4	SO DIMM	260 Pin DIMM	PHS-memory®	RAM-4GDR4K0- SO-2666, RAM-4 GDR4A0-SO-266 6, RAM-4GDR4K 1-SO-2400, RAM -4GDR4A0-SO-2 400
8GB	SP365696	DDR4	SO DIMM	260 Pin DIMM	PHS-memory®	RAM-8GDR4K0- SO-2666, RAM-8 GDR4T0-SO-266 6, RAM-8GDR4K 0-SO-2400, RAM -8GDR4K1-SO-2 400
16GB	SP365694	DDR4	SO DIMM	260 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 https://www.phs-memory.es/-W5Y



# 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