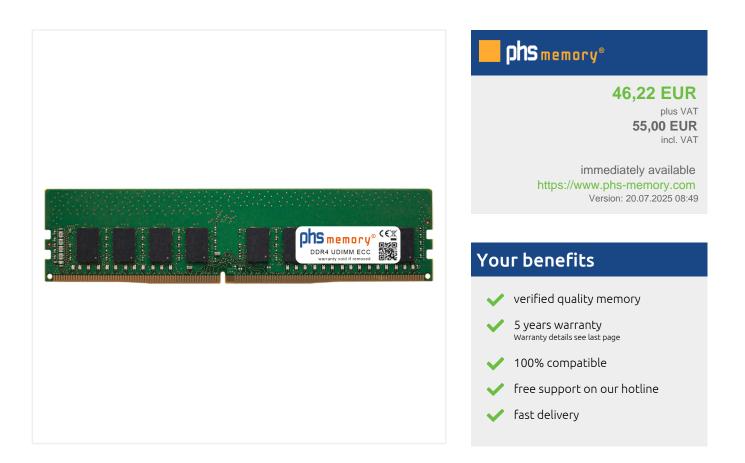
phs memory®

16GB Computer memory DDR4 for Portwell ROBO-8113VG2AR-KBL UDIMM ECC



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

-	133.35mm
DR4 UDIMM ECC warranty void if removed	31.25mm 30.75mm 17.60mm
■ 56.10mm	

Memory size	16GB			
Memory technology	DDR4			
ECC support	yes			
JEDEC Norm	РС4-2133Р-Е			
DRAM Organization	1Gx8			
Rank	2Rx8			
Туре	UDIMM ECC (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	SP273653			
EAN	4063369427761			

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	Portwell
Device type	Industry Board
Device family	ROBO
Device series	8100 Serie
Device name	ROBO-8113VG2AR-KBL
Maximum memory*	64GB
Number of memory sockets	2

* The specifications for the maximum memory upgrade may differ from those of the manufacturer Portwell. 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

What should be considered when upgrading RAM?

- Der schnelle Dual Channel Mode Betrieb wird bei der paarweisen Installation der memory optimal supports
- If you have a Core i5 or Core i7 processor, you can only use the UDIMM memory
- If you are using a Xeon processor, you can use ECC UDIMM memory or UDIMM memory without ECC
- Die ECC Funktion wird nur dann supports, wenn alle eingesetzten Computer memory UDIMM ECC memory sind.

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
 - Only couch 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 Portwell ROBO-8113VG2AR-KBL

4GBSP273655DDR4UDIMM (Non- ECC unbuffered)288 Pin DIMMPHS-memory®8GBSP273656DDR4UDIMM (Non- ECC unbuffered)288 Pin DIMMPHS-memory®16GBSP273654DDR4UDIMM (Non- ECC unbuffered)288 Pin DIMMPHS-memory®16GBSP273653DDR4UDIMM (Non- ECC unbuffered)288 Pin DIMMPHS-memory®16GBSP273653DDR4UDIMM ECC (ECC unbuffered)288 Pin DIMMPHS-memory®32GBSP420710DDR4UDIMM ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC (ECC	Size	SKU	Technology	Туре	Number of pins	Brand	Reference no.
ECC unbuffered)16GBSP273654DDR4UDIMM (Non- ECC unbuffered)288 Pin DIMMPHS-memory®16GBSP273653DDR4UDIMM ECC (ECC unbuffered)288 Pin DIMMPHS-memory®32GBSP420710DDR4UDIMM ECC UDIMM ECC288 Pin DIMMPHS-memory®	4GB	SP273655	DDR4	ECC	288 Pin DIMM	PHS-memory®	
ECC unbuffered)16GBSP273653DDR4UDIMM ECC (ECC unbuffered)288 Pin DIMMPHS-memory®32GBSP420710DDR4UDIMM ECC 288 Pin DIMM288 Pin DIMMPHS-memory®	8GB	SP273656	DDR4	ECC	288 Pin DIMM	PHS-memory®	
(ECC unbuffered) 32GB SP420710 DDR4 UDIMM ECC 288 Pin DIMM PHS-memory®	16GB	SP273654	DDR4	ECC	288 Pin DIMM	PHS-memory®	
· · · · · · · · · · · · · · · · · · ·	16GB	SP273653	DDR4	(ECC	288 Pin DIMM	PHS-memory®	
unbuffered)	32GB	SP420710	DDR4	(ECC	288 Pin DIMM	PHS-memory®	
32GB SP307879 DDR4 UDIMM (Non- 288 Pin DIMM PHS-memory® ECC unbuffered)	32GB	SP307879	DDR4	ECC	288 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.com/-W5Y



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.com