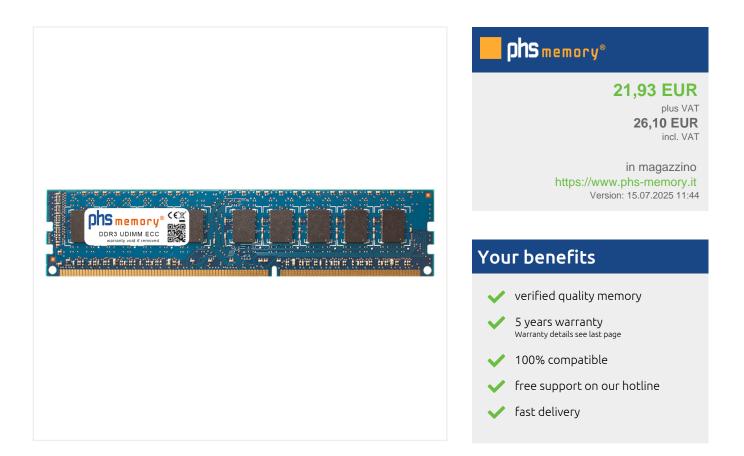
**phs** memory<sup>®</sup>

# 4GB Computer memory DDR3 for MSI H87M-P32 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	•		
DR3 UDIMM ECC Warranty void if removed		9.5mm	17.3mm	30mm
◄ 54.68mm	-	Ť		

Memory size	4GB		
Memory technology	DDR3		
ECC support	ја		
JEDEC Norm	PC3-10600E		
DRAM Organization	256Mx8		
Rank	2Rx8		
Туре	UDIMM ECC (ECC unbuffered)		
Number of pins	240 Pin DIMM		
Memory data transfer rate	1333MHz @ CL9		
Speciality	-		
Board dimensions	133,35 x 30 (LxB mm)		
Operating temperature	0° C - 85° C		
Storage temperature	-40° C - +95° C		
RoHS compliant	Yes		
SKU	SP157119		
EAN	4055069289251		

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	Motherboard-memory
Device family	Mainboard H
Device series	H87M Serie
Device name	H87M-P32
Maximum memory*	16GB
Number of memory sockets	2

\* 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 allocation

#### Help in choosing the right RAM:

Wir bieten Ihnen die schnelleren 1600MHz Computer memory for Ihr System an. Durch die Abwärtskompatibilität unserer Computer memory auf 1333MHz, können Sie die diese auch with bereits vorhandenen 1333MHz memoryn gemischt betreiben.

Main memories with ECC offer higher security through error detection and error correction. The ECC function is supported if ALL existing memories are equipped with ECC. You should use the UDIMM ECC memory if existing memories are equipped with ECC.

Der Einsatz verschiedener Ram Größen in den Steckplätzen ist möglich. Der Dual Channel Mode wird auch hierbei durch die Intel Flex Memory Technology supports.

Bei verschiedenen Computer memory capacityen müssen Sie darauf achten, dass die memory in memorykanal A größer sind als die Computer memory in memorykanal B.

## 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 H87M-P32

Size	SKU	Technology	Туре	Number of pins	Brand	Reference no.
4GB	SP157121	DDR3	UDIMM (Non- ECC unbuffered)	240 Pin DIMM	PHS-memory®	
4GB	SP157119	DDR3	UDIMM ECC (ECC unbuffered)	240 Pin DIMM	PHS-memory®	
8GB	SP157122	DDR3	UDIMM (Non- ECC unbuffered)	240 Pin DIMM	PHS-memory®	
8GB	SP157120	DDR3	UDIMM ECC (ECC unbuffered)	240 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.it/-W5Y



# Contact Information

PHS-electronic gmbh - www.phs-memory.it -Karl-Götz-Str. 5 97424 Schweinfurt Germania Phone: +49 9721 784678 E-Mail: info@phs-memory.it Web: www.phs-memory.it

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