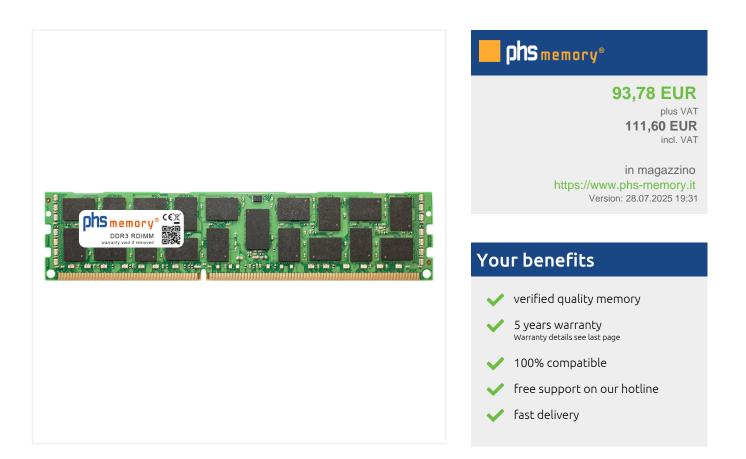
# phs memory®

## 32GB Computer memory DDR3 for Apple Mac Pro Quad Core 3.7GHz (Late 2013) RDIMM

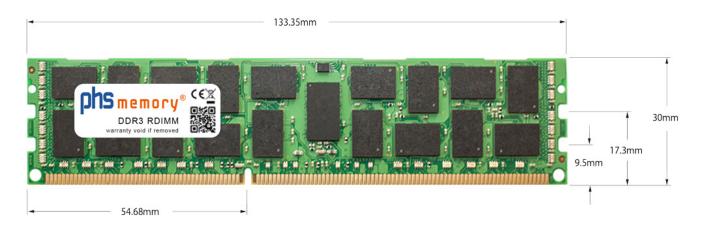


#### PHS-memory® - computer memory with 100% quality

- 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

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### Memory Specification



Memory size	32GB		
Memory technology	DDR3		
ECC support	yes		
JEDEC Norm	PC3L-12800R		
DRAM Organization	2Gx4		
Rank	4Rx4 (4DRx4 DDP)		
Туре	RDIMM (ECC Registered)		
Number of pins	240 Pin DIMM		
Memory data transfer rate	1600MHz @ CL11		
Voltage	1,35 Volt		
Speciality	DDP		
Board dimensions	133,35 x 30 (LxB mm)		
Operating temperature	0° C - 85° C		
Storage temperature	-40° C - +95° C		
RoHS compliant	yes		
SKU	SP463245		
EAN	4067488267468		

#### overRAMing maximize your RAM



Most systems - including the Apple Mac Pro Quad Core 3.7GHz (Late 2013) - can be upgraded with more memory than originally specified by the device manufacturer.

Therefore, our memory specialists continuously analyze new memory solutions in selected systems. Due to improved manufacturing technologies, new memories with higher performance and capacity will be tested for stability and functionality.

Then the new memory solutions are released for the respective systems. Use the benefits of larger computer memory capacity with the PHSmemory® overRAMing memory solutions.

https://www.phs-memory.it/-BOR

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.

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### System Specifications

The memory is 100% compatible with this sytem:

System manufacturer	Apple		
Device type	Workstation		
Device family	MacPro		
Device series	MacPro6,1 - Late 2013		
Device name	Mac Pro Quad Core 3.7GHz (Late 2013)		
Standard memory	12GB		
Maximum memory*	128GB / 64GB according to manufacturer		
Number of memory sockets	4		
Annotation	You can use either ECC UDIMM or RDIMM memories. These two different technologies can not be operated together in the system.		

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

Memory modules with our overRAMing-symbol are approved by us for maximum memory expansion.

### Information on memory allocation

#### What should be considered when upgrading RAM?

Folgende technischen Gegebenheiten sollte im Vorfeld beachtet werden:

- Sie können entweder ECC UDIMM or RDIMM memory verwenden.
- UDIMM ECC memory and RDIMM (Registered) server memory can not be shared.
- Mit RDIMM memory modulesn erreichen Sie einen maximalen Computer memory of 128GB.
- Bei Verwendung of ECC UDIMM Computer memoryn erreichen Sie maximal 32GB.

#### 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 Apple Mac Pro Quad Core 3.7GHz (Late 2013)

Size	SKU	Technology	Туре	Number of pins	Brand	Reference no.
8GB	SP132268	DDR3	UDIMM ECC (ECC unbuffered)	240 Pin DIMM	PHS-memory®	
16GB	SP132267	DDR3	RDIMM (ECC Registered)	240 Pin DIMM	PHS-memory®	MF622G/A
32GB	SP463245	DDR3	RDIMM (ECC Registered)	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

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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.it