

DDR4 Memory Module Sockets

NEXT-GENERATION HIGH SPEED DIMM MODULE CONNECTOR

Vertical DDR4 DIMM sockets from Amphenol ICC provide 288 contacts on 0.85mm pitch and are designed to accept DDR4 memory modules that conform to JEDEC MO-309. The sockets facilitate convenient memory expansion in servers, workstations, desktop PCs, and embedded applications in communications and industrial equipment.

The DDR4 series complies to new interface standard JEDEC POD12. It allows a module seating plane of 2.40mm and support module variants in UDIMM, RDIMM and LRDIMM.

- Allows space to mount small passive components on the board bottom to maximize PCB space utilization
- Easy to insert and extract the module
- Support 1.60mm or 2.40mm thick motherboards
- Optimizes airflow
- Meets environment requirements



TARGET MARKETS



FEATURES

- Smaller pitch and lower operating voltage
- Supports faster data rates
- Reduced product width
- Various pin tail lengths for PCB thickness
- Lower insertion force
- Narrow housing solutions
- Provide option for one side latch fixed
- Robust design for housing, contact and latches

BENEFITS

- Less energy consumption
- Faster transition
- Saves board space
- Compatible to different customer requirements
- Easier for module card insertion and extraction
- Saves board space and benefits air-flow
- Saves board space
- Meet severe shock and vibration test criteria for high end servers

TECHNICAL INFORMATION

MATERIAL

- Insulator: High temperature thermal plastic (UL94V-0), color option
- Contacts: Copper alloy, gold flash or 15 microinches min. of gold or 30 microinches min. of gold (Contact area), tin or matte tin plating (solder area), nickel plating over all (underplate)
- Boardlock: Copper alloy, tin plating (solder area), nickel plating overall (underplate)

ELECTRICAL PERFORMANCE

- Voltage Rating: 30V AC (RMS)/DC
- Current Rating (0.7A/pin max.

MECHANICAL PERFORMANCE

- Insertion Force: 10.88Kgf max.
- Withdrawal Force: 14gf min. per contact pair
- Retention Force: Contact: 0.30Kgf min.
- Boardlock: 1.36Kgf min.
- Durability
- Vibration, Mechanical Shock
- Latch Overstress Force (3.5kg min. force held for 10s with no damage)
- Reseating – No damage
- Latch Actuation Force – The force to fully actuate the latch open shall be 4.5kgf max. per latch
- Module Rip Out Force – 9.1kgf min. retention force of the module in connector with no damage
- Retention of Connector to PCB – No lifting of connector from applicable PCB
- Total Insertion force to be 6.8kgf max.

SPECIFICATIONS

Amphenol:

- Product Specification: GS-12-1092
- Packaging Specification: GS-14-2267
- Application Specification: GS-20-0353

JEDEC:

- Module Outline: MO-309
- Socket Outlines:
 - PTH solder: SO-016
 - Surface-Mount: SO-017
 - Press-fit: SO-019

APPROVALS & CERTIFICATION

- UL E66906

ENVIRONMENTAL

- Solderability (Solder coverage – 95% min.)
- Resistance to Soldering Heat (Visual: no damage or discoloration of connector materials)
- Temperature life, Thermal shock
- Cycling temperature and humidity
- Temperature Rise: 30°C max.
- Mixed Flowing Gas, Thermal Disturbance, Salt Spray

PACKAGING

- Tray

TARGET MARKETS/APPLICATIONS



Routers
Switches
Wireless Infrastructure



Desktop PCs
Servers
Storage Systems
Supercomputers
Workstations



Embedded Systems

PART NUMBERS

| Description | Features | Part Numbers |
|--|--------------------|-------------------------|
| DDR4 Surface Mount (SMT) with forklocks, solder tabs or SMT hold downs, and dust cap | Standard | 10145891* / DDR4-288-S* |
| | With cap | 10136830* |
| | Tall housing | 10135356* |
| DDR4 Plated Through Hole (PTH) with forklocks and Pin-in-Paste version | Standard | 10145226* / DDR4-288-V* |
| | Pin-in-Paste | 10136688* |
| | Ultra low profile | 10129206* |
| | Single latch | 10144512* |
| | Longer tail length | 10144327* |
| DDR4 Press-fit (PF) with post | Standard | 10124806* |

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