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› [SAMSUNG](#) /

› Samsung 16GB DDR5 4800MHz SODIMM RAM User Manual

## SAMSUNG M425R2GA3BB0-CQK

# Samsung 16GB DDR5 4800MHz SODIMM RAM User Manual

Model: M425R2GA3BB0-CQK

## 1. PRODUCT OVERVIEW

This manual provides essential information for the Samsung 16GB DDR5 4800MHz PC5-38400 CL40 SODIMM Laptop RAM Memory (Model: M425R2GA3BB0-CQK). This memory module is designed to enhance the performance of compatible laptop, notebook, mini PC, and All-in-One (AIO) systems by expanding their available memory resources.



Image 1.1: Front view of the Samsung 16GB DDR5 SODIMM RAM module. The module features multiple black memory chips on a green circuit board, with a white label displaying "SAMSUNG DDR5 SODIMM", "16GB 1Rx8 PC5-4800B", and the model number "M425R2GA3BB0-CQKOL".

## 2. SPECIFICATIONS

Feature	Detail
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Feature	Detail
Brand	SAMSUNG
Part Number	M425R2GA3BB0-CQK
Memory Type	DDR5 SDRAM
Memory Size	16 GB (Single Module)
Form Factor	SO-DIMM (262-Pin)
ECC Type	Non-ECC Unbuffered
Speed	4800 MHz (PC5-38400 / PC5-4800)
Rank	1Rx8 (Single Rank x8)
Voltage	1.1V
Product Dimensions	2.74 x 1.18 x 0.15 inches
Item Weight	1.44 ounces
Compatible Devices	Select Laptop, Notebook, Mini PC, and All-in-One (AIO) Systems. <i>Not compatible with Desktop PCs/computers.</i>

### 3. SETUP AND INSTALLATION

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Installing RAM requires careful handling of components. It is recommended to consult your system's specific manual for detailed instructions on memory installation, as procedures may vary between different laptop models.

#### 3.1. Before Installation

- **Compatibility Check:** Verify that your system supports DDR5 SO-DIMM memory and the specified speed (4800MHz). Refer to your laptop manufacturer's documentation.
- **Power Off:** Completely shut down your laptop and disconnect it from all power sources (AC adapter and battery).
- **Static Discharge:** Discharge any static electricity from your body by touching a grounded metal object before handling the memory module. Consider using an anti-static wrist strap.
- **Tools:** You may need a small Phillips-head screwdriver to open your laptop's memory compartment.

#### 3.2. Installation Steps (General Guide)

1. **Access Memory Slots:** Carefully open your laptop's memory compartment. This usually involves removing a back panel or keyboard.
2. **Remove Old Module (if applicable):** If replacing an existing module, gently push the retention clips on both sides outwards. The module will pop up at an angle. Pull it out carefully.
3. **Insert New Module:** Align the notch on the new Samsung DDR5 SO-DIMM module with the key in the memory slot. Insert the module at a 45-degree angle.

4. **Secure Module:** Gently push the module down until the retention clips snap into place on both sides, securing the module horizontally.
5. **Close Compartment:** Reattach the memory compartment cover and secure it with screws.
6. **Power On:** Reconnect the battery and AC adapter, then power on your laptop. The system should automatically detect the new memory. Note that the first boot after new memory installation may take longer as the BIOS verifies the new memory.

## 4. OPERATING PRINCIPLES

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Once installed, the Samsung DDR5 SO-DIMM memory module operates automatically with your system's motherboard and operating system. It provides the necessary volatile memory for your CPU to store and retrieve data quickly, enabling faster application loading, smoother multitasking, and improved overall system responsiveness.

- **Automatic Detection:** Modern operating systems and BIOS/UEFI firmware automatically detect and configure installed RAM.
- **Performance Enhancement:** Increasing RAM capacity allows your system to handle more applications and larger datasets simultaneously without relying heavily on slower storage (SSD/HDD) for virtual memory.
- **DDR5 Technology:** This module utilizes DDR5 technology, offering higher bandwidth and improved power efficiency compared to previous DDR generations.

## 5. MAINTENANCE

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RAM modules are generally maintenance-free components. However, following these guidelines can help ensure their longevity and optimal performance:

- **Keep Clean:** Ensure the memory slots and surrounding areas inside your laptop are free from dust and debris. Use compressed air if necessary, but avoid direct contact with the module's gold contacts.
- **Avoid Physical Damage:** Handle the module by its edges to prevent touching the integrated circuits or gold contacts. Store unused modules in anti-static bags.
- **Temperature Control:** Ensure your laptop has adequate ventilation to prevent overheating, which can affect all internal components, including RAM.

## 6. TROUBLESHOOTING

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If you encounter issues after installing the memory module, consider the following troubleshooting steps:

- **System Not Booting / No Display:**
  - Ensure the memory module is fully seated in its slot and the retention clips are locked.
  - Try reseating the module.
  - If multiple modules are installed, try booting with only one module at a time to identify a potentially faulty one.
  - As noted in customer reviews, the first boot after new memory installation can take several minutes for the BIOS to verify. Allow sufficient time before assuming an issue.
- **Incorrect RAM Amount Detected:**
  - Check your system's BIOS/UEFI settings to confirm the detected RAM.

- Ensure the module is correctly seated.
- Verify your operating system is 64-bit to utilize more than 4GB of RAM.
- **System Instability / Blue Screens (BSOD):**
  - Run a memory diagnostic tool (e.g., Windows Memory Diagnostic or MemTest86) to check for errors.
  - Ensure your system's BIOS/UEFI firmware is up to date.
  - Confirm the memory module's specifications (speed, voltage) are compatible with your system's motherboard.
- **Performance Issues:**
  - While this module expands memory, overall system performance depends on other components like CPU and SSD.
  - Ensure your operating system and drivers are up to date.

## 7. WARRANTY AND SUPPORT

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For warranty information and technical support regarding your Samsung memory module, please refer to the official Samsung support channels or the vendor from whom you purchased the product. Keep your proof of purchase for warranty claims.

You can often find support resources, FAQs, and contact information on the official Samsung website: [Samsung Support](#)

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