

# Memory Module Specifications

## KSM56R46BD8PMI-48HMI

48GB 2Rx8 6G x 80-Bit

PC5-5600 CL46 Registered EC8 288-Pin DIMM

### DESCRIPTION

Kingston's KSM56R46BD8PMI-48HMI is a 6G x 80-bit (48GB) DDR5-5600 CL46 SDRAM (Synchronous DRAM), 2Rx8, ECC, memory module, based on twenty 3G x 8-bit FBGA components. The SPD is programmed to JEDEC standard latency DDR5-5600 timing of 46-45-45 at 1.1V. Each 288-pin DIMM uses gold contact fingers. The electrical and mechanical specifications are as follows:

### FEATURES

- Power Supply: VDD = 1.1V Typical
- VDDQ = 1.1V Typical
- VPP = 1.8V Typical
- VDDSPD = 1.8V to 2.0V
- On-Die ECC
- x80 ECC (x40, 2 independent I/O sub channels)
- 32 internal banks
- Hard/Soft Post Package Repair
- Sideband access with I3C/I2C
- PCB: Height 1.23" (31.25mm)
- RoHS Compliant and Halogen-Free

### SPECIFICATIONS

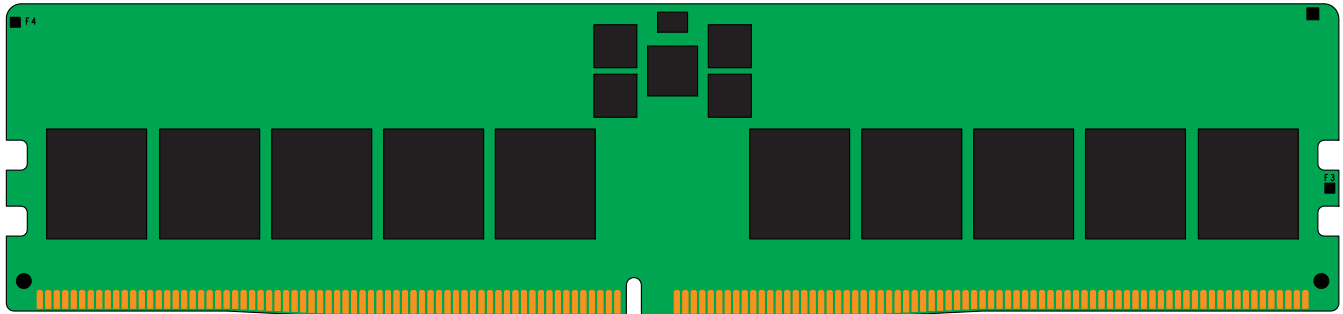
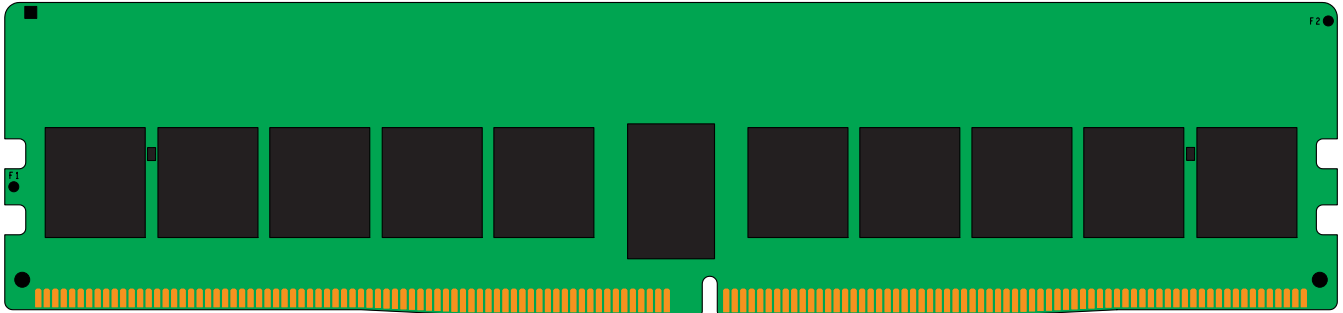
|  |                   |
|--|-------------------|
| CL(IDD)  | 46 cycles         |
| Row Cycle Time (tRCmin)                          | 48ns(min.)        |
| Refresh to Active/Refresh Command Time (tRFCmin) | 295ns(min.)       |
| Row Active Time (tRASmin)                        | 32ns(min.)        |
| Row Precharge Time (tRPmin)                      | 16ns(min.)        |
| UL Rating  | 94 V - 0          |
| Operating Temperature                            | 0° C to +95° C    |
| Storage Temperature                              | -55° C to +100° C |

### Module Assembly

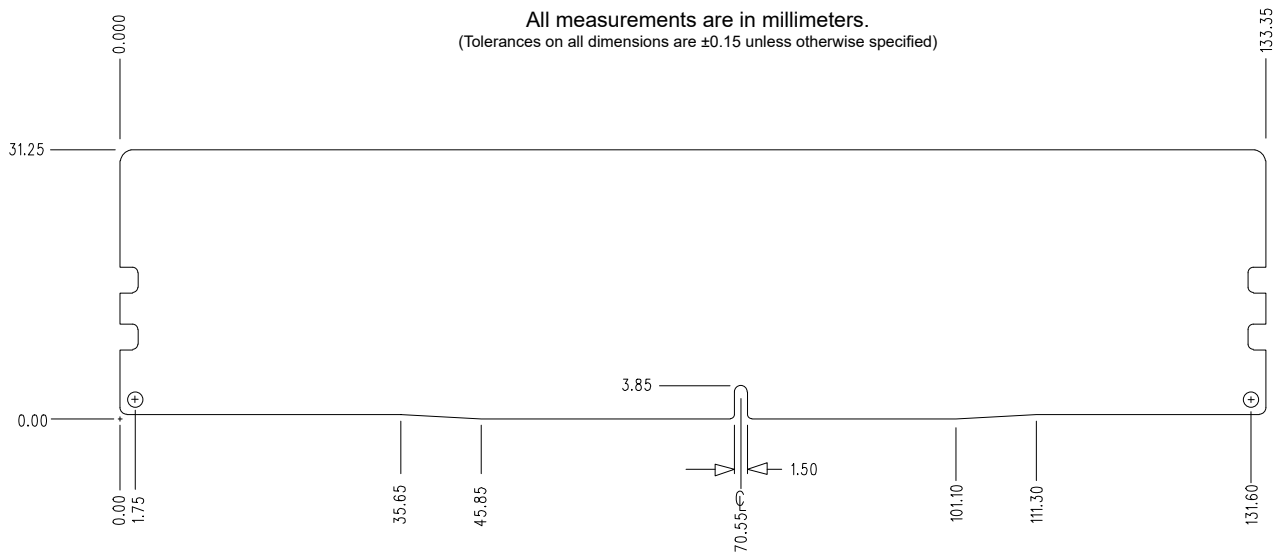
|                            |
|----------------------------|
| <b>DRAM:</b> Hynix (M-Die) |
| <b>RCD:</b> IDT/Renesas    |
| <b>PMIC:</b> MPS           |
| <b>SPD Hub:</b> Montage    |
| <b>TS:</b> IDT/Renesas     |

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## MODULE DIMENSIONS



All measurements are in millimeters.  
(Tolerances on all dimensions are  $\pm 0.15$  unless otherwise specified)



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| Revision No. | History         | Release Date | Remark | Editor   | Approved |
|--------------|-----------------|--------------|--------|----------|----------|
| A            | Initial Release | 03/07/24     |        | David Y. | Henry N. |

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