

# Memory Module Specifications

## KSM24RD8/16HAI

16GB 2Rx8 2G x 72-Bit PC4-2400

CL17 Registered w/Parity 288-Pin DIMM

### DESCRIPTION

Kingston's KSM24RD8/16HAI is a 2G x 72-bit (16GB) DDR4-2400 CL17 SDRAM (Synchronous DRAM) registered w/ parity, 2Rx8, ECC, memory module, based on eighteen 1G x 8-bit FBGA components. The SPD is programmed to JEDEC standard latency DDR4-2400 timing of 17-17-17 at 1.2V. Each 288-pin DIMM uses gold contact fingers. The electrical and mechanical specifications are as follows:

### FEATURES

- Power Supply: VDD=1.2V
- VDDQ = 1.2V
- VPP - 2.5V
- VDDSPD=2.25V to 2.75V
- Functionality and operations comply with the DDR4 SDRAM datasheet
- 16 internal banks
- Bank Grouping is applied, and CAS to CAS latency (tCCD\_L, tCCD\_S) for the banks in the same or different bank group accesses are available
- Data transfer rates: PC4-2400, PC4-2133, PC4-1866, PC4-1600
- Bi-Directional Differential Data Strobe
- 8 bit pre-fetch
- Burst Length (BL) switch on-the-fly BL8 or BC4(Burst Chop)
- Supports ECC error correction and detection
- On-Die Termination (ODT)
- Temperature sensor with integrated SPD
- This product is in compliance with the RoHS directive.
- Per DRAM Addressability is supported
- Internal Vref DQ level generation is available
- Write CRC is supported at all speed grades
- CA parity (Command/Address Parity) mode is supported

### SPECIFICATIONS

CL(IDD)	17 cycles
Row Cycle Time (tRCmin)	46.16ns(min.)
Refresh to Active/Refresh Command Time (tRFCmin)	350ns(min.)
Row Active Time (tRASmin)	32ns(min.)
Maximum Operating Power	*
UL Rating	94 V - 0
Operating Temperature	0° C to +85° C
Storage Temperature	-55° C to +100° C

\* See IDD Table (page 2)

### Module Assembly

**DRAM:** HYNIX (A-DIE)

**RCD:** IDT

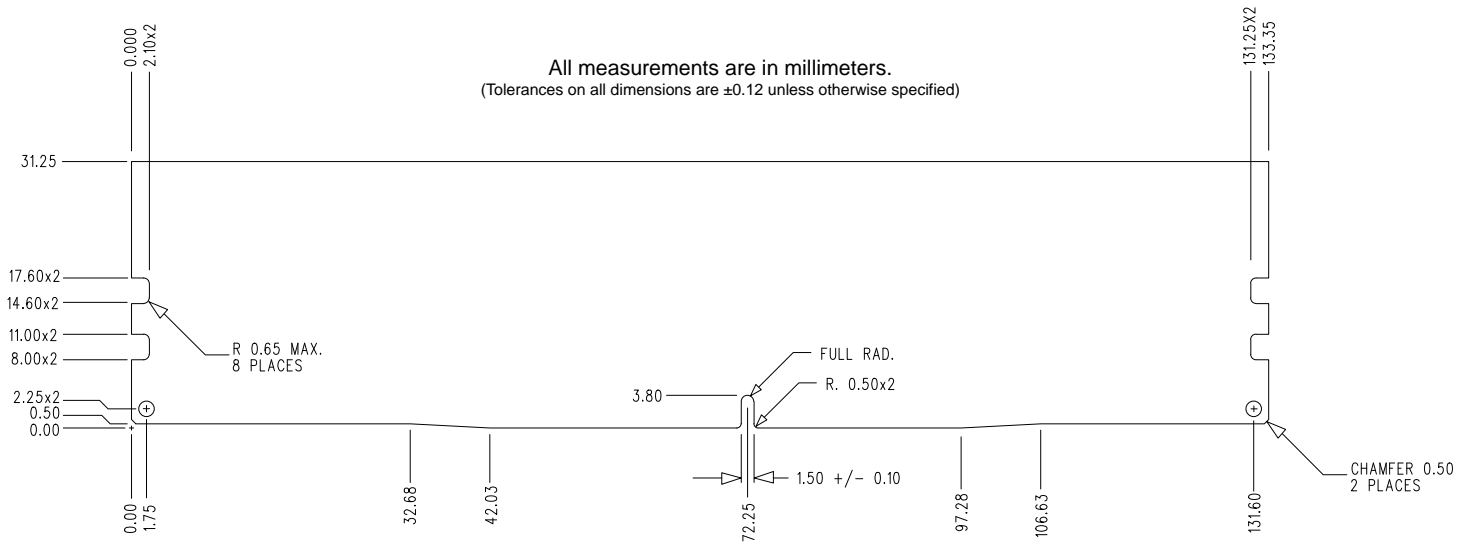
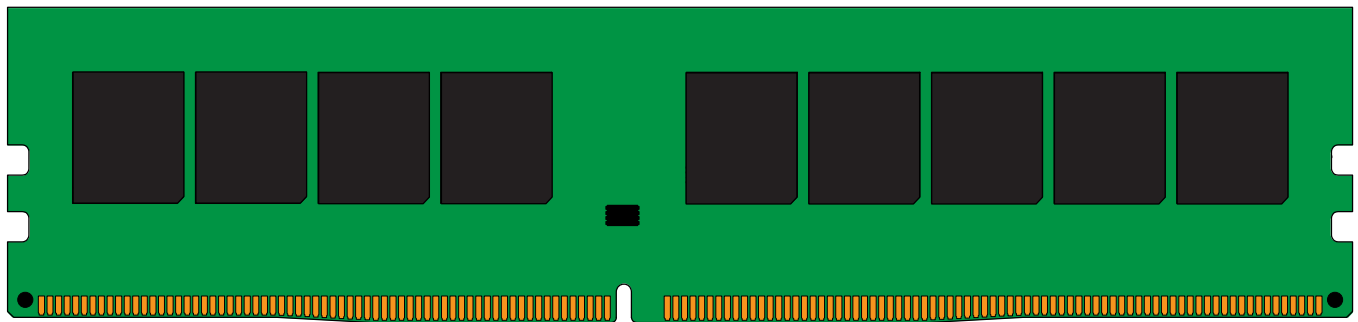
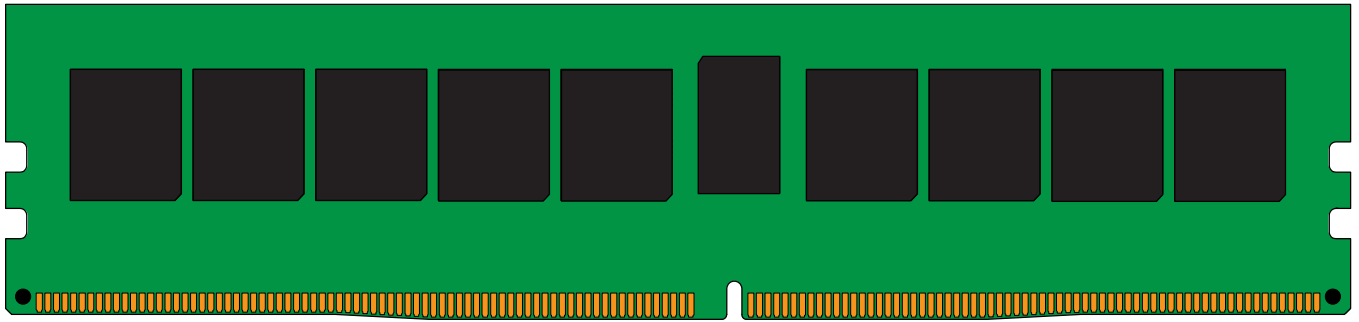
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## IDD Specifications

IDD		unit
Symbol	2400	
IDD0	1078	mA
IDD0A	1078	mA
IDD1	1209	mA
IDD1A	1236	mA
IDD2N	979	mA
IDD2NA	979	mA
IDD2NT	1069	mA
IDD2NL	817	mA
IDD2NG	961	mA
IDD2ND	961	mA
IDD2NP	961	mA
IDD2P	630	mA
IDD2Q	889	mA
IDD3N	1303	mA
IDD3NA	1303	mA
IDD3P	972	mA
IDD4R	1893	mA
IDD4RA	1983	mA
IDD4RB	1983	mA
IDD4W	1857	mA
IDD4WA	1884	mA
IDD4WB	1857	mA
IDD4WC	1803	mA
IDD4WP	2001	mA
IDD5B	2500	mA
IDD5F2	2014	mA
IDD5F4	1879	mA
IDD6N	418	mA
IDD6E	526	mA
IDD6R	274	mA
IDD6A	526	mA
IDD7	2145	mA
IDD8	238	mA

IPP		unit
Symbol	2400	
IPP0	83	mA
IPP1	92	mA
IPP2N	58	mA
IPP2P	58	mA
IPP3N	270	mA
IPP3P	270	mA
IPP4R	164	mA
IPP4W	164	mA
IPP5B	614	mA
IPP5F2	443	mA
IPP5F4	389	mA
IPP6N	72	mA
IPP6E	126	mA
IPP6R	74	mA
IPP6A	126	mA
IPP7	200	mA
IPP8	58	mA

## MODULE DIMENSIONS



The product images shown are for illustration purposes only and may not be an exact representation of the product.  
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