

# Memory Module Specifications

## KSM24LQ4/64HMI

64GB 4Rx4 8G x 72-Bit PC4-2400

CL17 Load Reduced w/Parity 288-Pin DIMM

### DESCRIPTION

Kingston's KSM24LQ4/64HMI is a 8G x 72-bit (64GB) DDR4-2400 CL17 SDRAM (Synchronous DRAM) load reduced w/ parity, 4Rx4, ECC, memory module, based on thirty-six 4G x 4-bit DDP 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 Specifications (page 2)

### Module Assembly

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

**RCD:** IDT

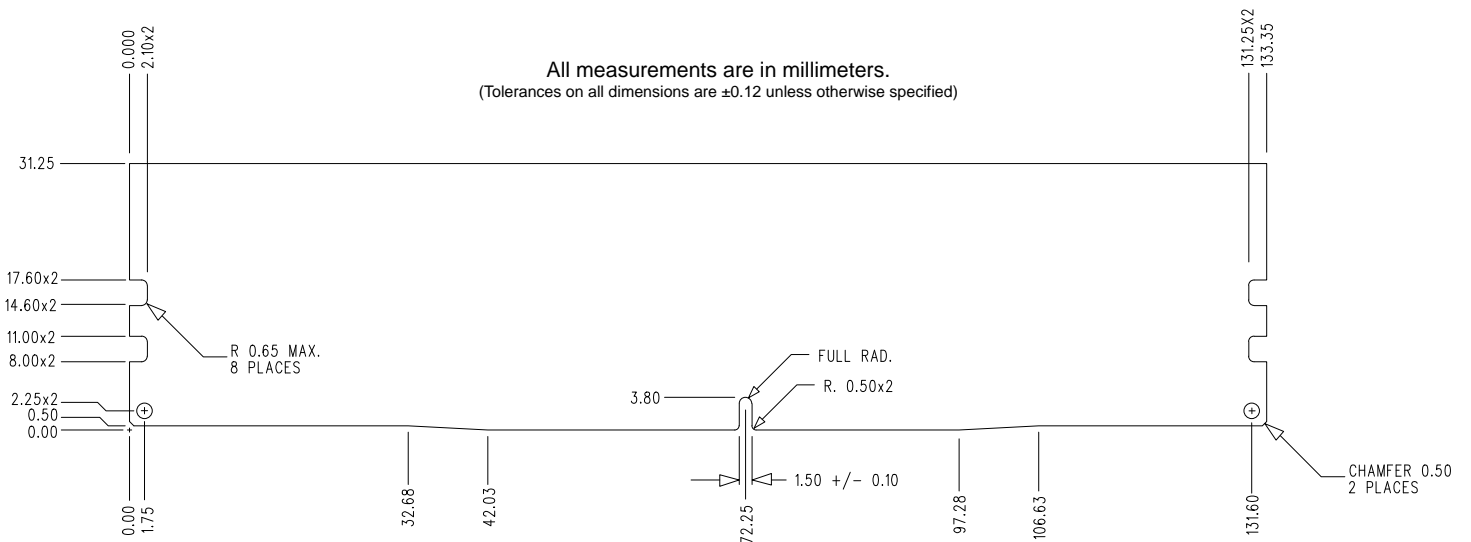
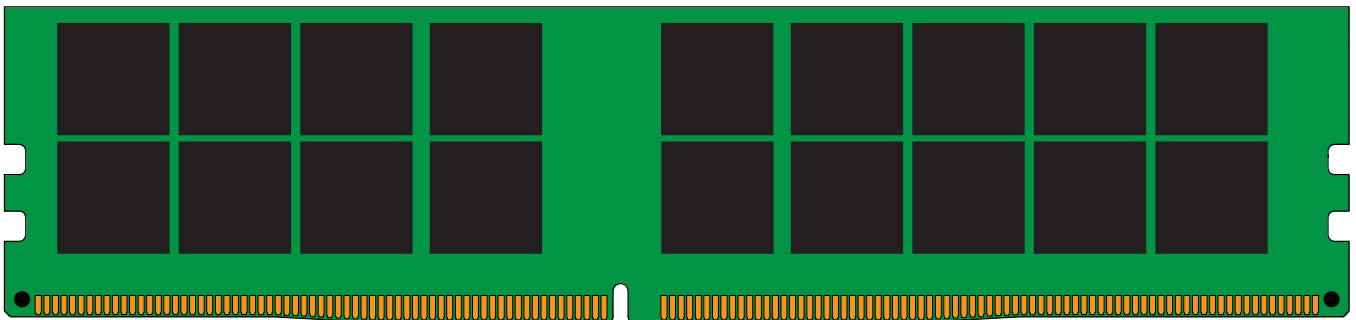
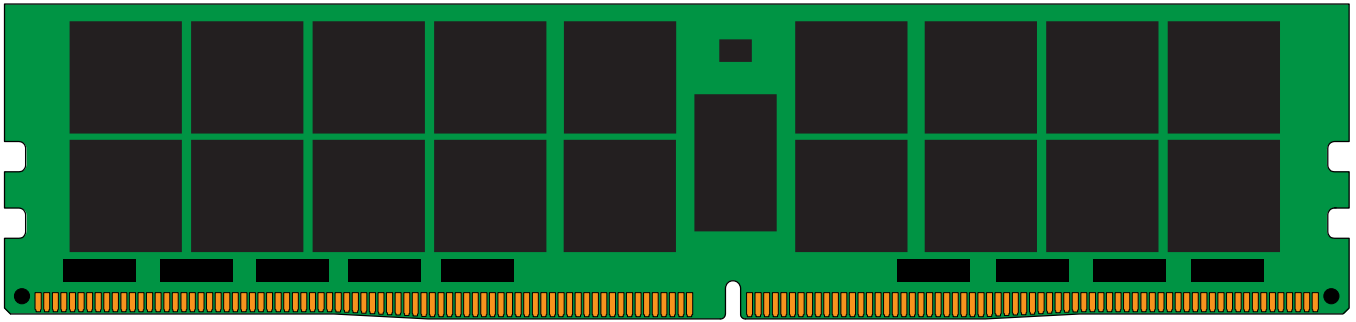
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## IDD Specifications

IDD		unit
Symbol	2400	
IDD0	3058	mA
IDD0A	3130	mA
IDD1	3687	mA
IDD1A	3741	mA
IDD2N	2950	mA
IDD2NA	3022	mA
IDD2NT	2950	mA
IDD2NL	2374	mA
IDD2NG	2734	mA
IDD2ND	2590	mA
IDD2NP	2878	mA
IDD2P	2116	mA
IDD2Q	2662	mA
IDD3N	3886	mA
IDD3NA	4318	mA
IDD3P	3196	mA
IDD4R	4936	mA
IDD4RA	5026	mA
IDD4RB	4936	mA
IDD4W	5107	mA
IDD4WA	5287	mA
IDD4WB	5107	mA
IDD4WC	5035	mA
IDD4WP	5287	mA
IDD5B	5686	mA
IDD5F2	4984	mA
IDD5F4	4642	mA
IDD6N	1513	mA
IDD6E	1945	mA
IDD6R	1441	mA
IDD6A	2161	mA
IDD7	6142	mA
IDD8	793	mA

IPP		unit
Symbol	2400	
IPP0	279	mA
IPP1	270	mA
IPP2N	252	mA
IPP2P	252	mA
IPP3N	432	mA
IPP3P	432	mA
IPP4R	270	mA
IPP4W	270	mA
IPP5B	981	mA
IPP5F2	819	mA
IPP5F4	729	mA
IPP6N	468	mA
IPP6E	540	mA
IPP6R	324	mA
IPP6A	612	mA
IPP7	459	mA
IPP8	252	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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