

# Memory Module Specifications

## KSM32RD4/64HCR

64GB 2Rx4 8G x 72-Bit PC4-3200

CL22 Registered w/Parity 288-Pin DIMM

### DESCRIPTION

Kingston's KSM32RD4/64HCR is a 8G x 72-bit (64GB) DDR4-3200 CL22 SDRAM (Synchronous DRAM) registered w/ parity, 2Rx4, ECC, memory module, based on thirty-six 4G x 4-bit FBGA components. The SPD is programmed to JEDEC standard latency DDR4-3200 timing of 22-22-22 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 = 2.41V 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: PC4-3200, PC4-2933, PC4-2666, 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)	22cycles
Row Cycle Time (tRCmin)	45.75ns(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

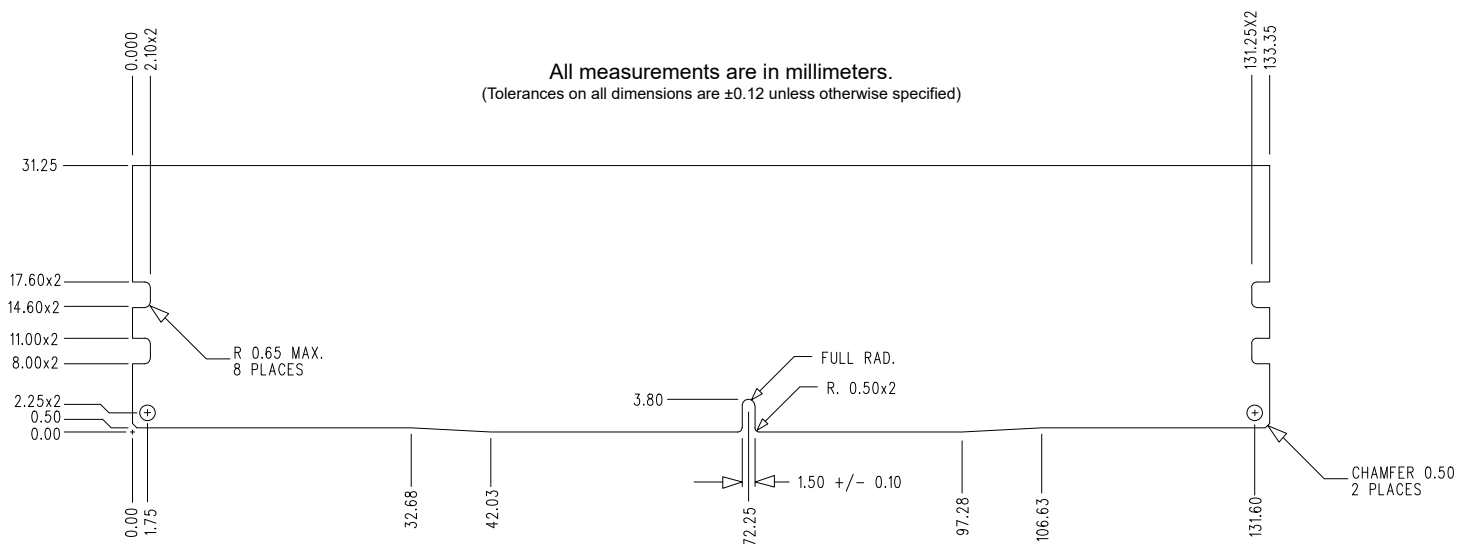
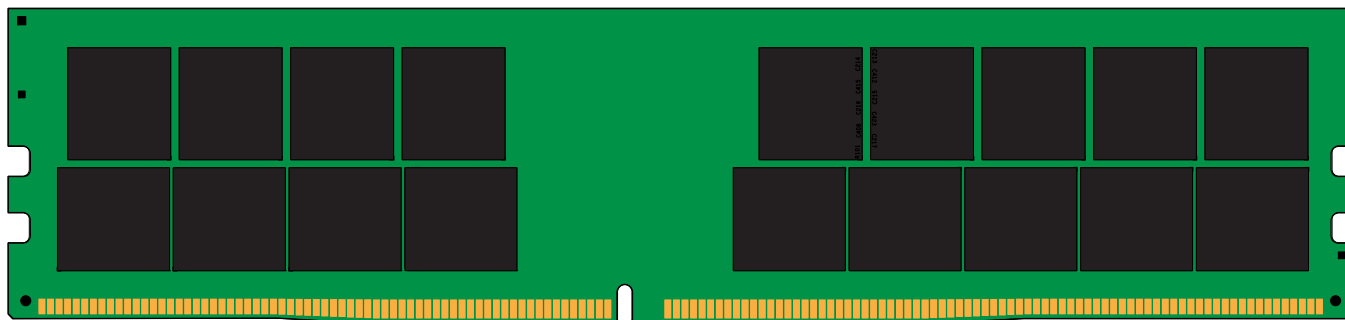
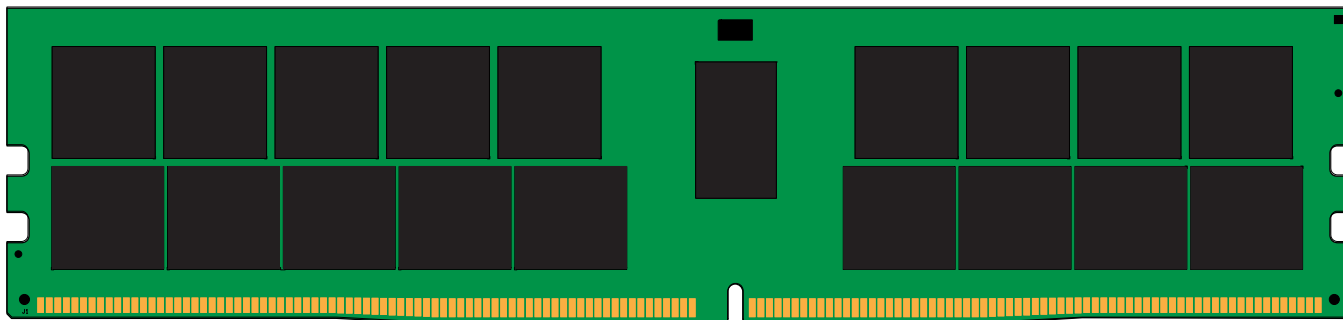
<b>DRAM:</b> HYNIX (C-DIE)
<b>RCD:</b> Rambus

## IDD Specifications

IDD		unit
Symbol	3200	
IDD0	1675	mA
IDD0A	1675	mA
IDD1	1843	mA
IDD1A	1912	mA
IDD2N	1531	mA
IDD2NA	1532	mA
IDD2NT	1688	mA
IDD2NL	1215	mA
IDD2NG	1512	mA
IDD2ND	1448	mA
IDD2NP	1570	mA
IDD2P	1015	mA
IDD2Q	1450	mA
IDD3N	1795	mA
IDD3NA	1855	mA
IDD3P	1335	mA
IDD4R	2708	mA
IDD4RA	2752	mA
IDD4RB	2708	mA
IDD4W	2638	mA
IDD4WA	2722	mA
IDD4WB	2526	mA
IDD4WC	2648	mA
IDD4WP	3103	mA
IDD5B	10062	mA
IDD5F2	7250	mA
IDD5F4	6201	mA
IDD6N	1221	mA
IDD6E	2084	mA
IDD6R	569	mA
IDD6A	2088	mA
IDD7	4279	mA
IDD8	356	mA

IPP		unit
Symbol	3200	
IPP0	64	mA
IPP1	65	mA
IPP2N	48	mA
IPP2P	48	mA
IPP3N	56	mA
IPP3P	56	mA
IPP4R	74	mA
IPP4W	74	mA
IPP5B	988	mA
IPP5F2	686	mA
IPP5F4	564	mA
IPP6N	144	mA
IPP6E	241	mA
IPP6R	76	mA
IPP6A	213	mA
IPP7	438	mA
IPP8	48	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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