

Memory Module Specifications

KSM32RS8/16HD

16GB 1Rx8 2G x 72-Bit PC4-3200

CL22 Registered w/Parity 288-Pin DIMM

DESCRIPTION

Kingston's KSM32RS8/16HD is a 2G x 72-bit (16GB) DDR4-3200 CL22 SDRAM (Synchronous DRAM) registered w/ parity, 1Rx8, ECC, memory module, based on nine 2G x 8-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	22 cycles
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 Table (page2)

Module Assembly

DRAM: HYNIX (D-DIE)

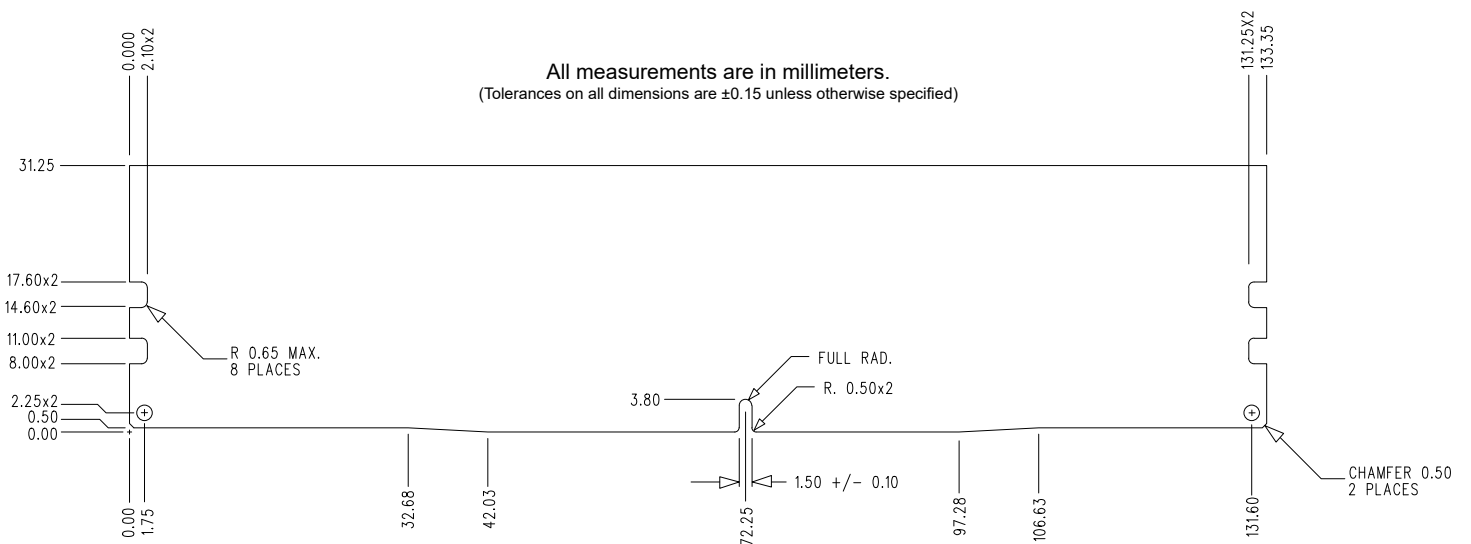
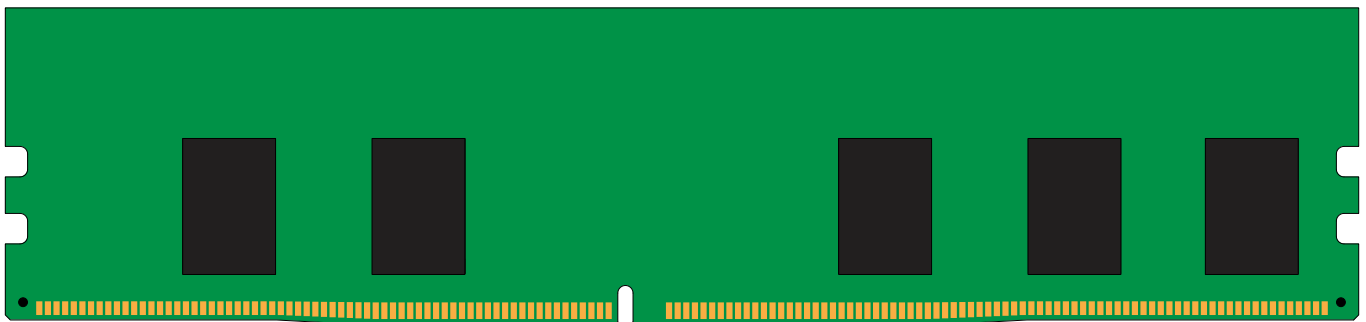
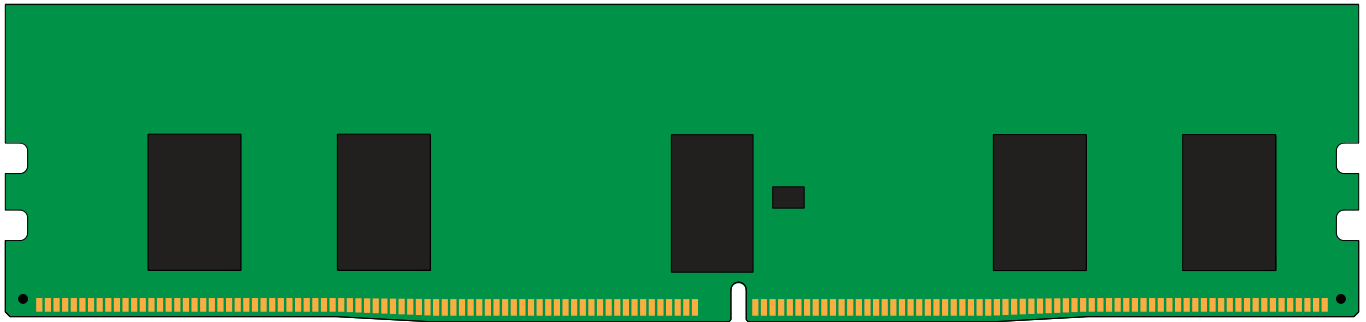
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IDD Specifications

IDD		unit
Symbol	3200	
IDD0	976	mA
IDD0A	976	mA
IDD1	1110	mA
IDD1A	1146	mA
IDD2N	859	mA
IDD2NA	859	mA
IDD2NT	904	mA
IDD2NL	742	mA
IDD2NG	859	mA
IDD2ND	832	mA
IDD2NP	868	mA
IDD2P	547	mA
IDD2Q	832	mA
IDD3N	1057	mA
IDD3NA	1066	mA
IDD3P	754	mA
IDD4R	1938	mA
IDD4RA	1974	mA
IDD4RB	1965	mA
IDD4W	1902	mA
IDD4WA	1947	mA
IDD4WB	1839	mA
IDD4WC	1839	mA
IDD4WP	2154	mA
IDD5B	5530	mA
IDD5F2	3982	mA
IDD5F4	3442	mA
IDD6N	382	mA
IDD6E	634	mA
IDD6R	202	mA
IDD6A	634	mA
IDD7	2208	mA
IDD8	148	mA

IPP		unit
Symbol	3200	
IPP0	42.3	mA
IPP1	37.8	mA
IPP2N	18.9	mA
IPP2P	17.1	mA
IPP3N	29.7	mA
IPP3P	28.8	mA
IPP4R	30.6	mA
IPP4W	33.3	mA
IPP5B	782.1	mA
IPP5F2	532.8	mA
IPP5F4	426.6	mA
IPP6N	54	mA
IPP6E	97.2	mA
IPP6R	26.1	mA
IPP6A	97.2	mA
IPP7	201.6	mA
IPP8	17.1	mA

MODULE DIMENSIONS



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