

Memory Module Specifications

KSM32RS8/16HAR

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

CL22 Registered w/Parity 288-Pin DIMM

DESCRIPTION

Kingston's KSM32RS8/16HAR 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(IDD)	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 (A-DIE)

RCD: Rambus

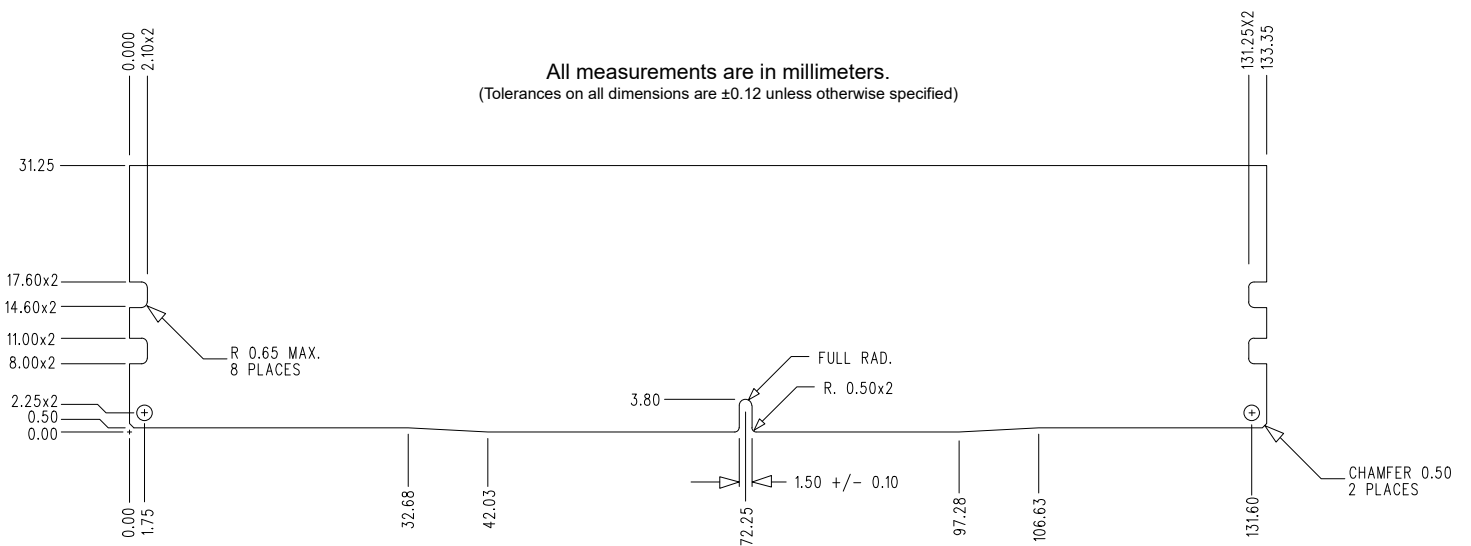
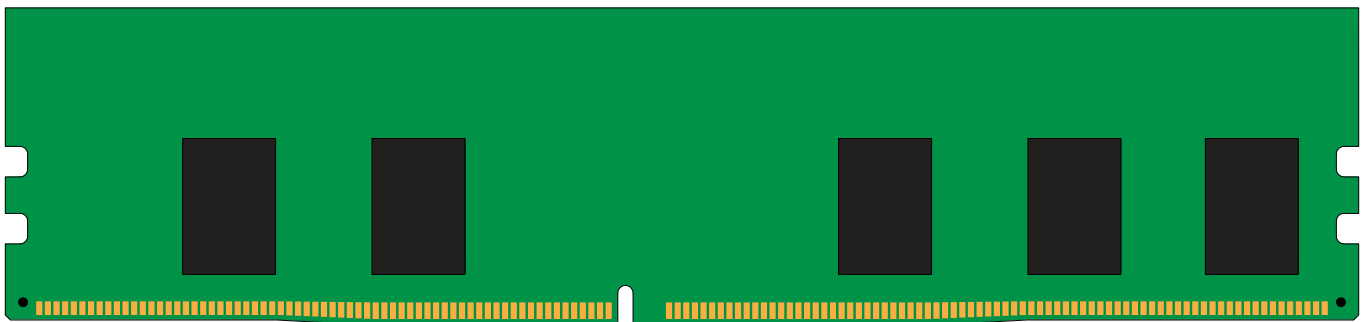
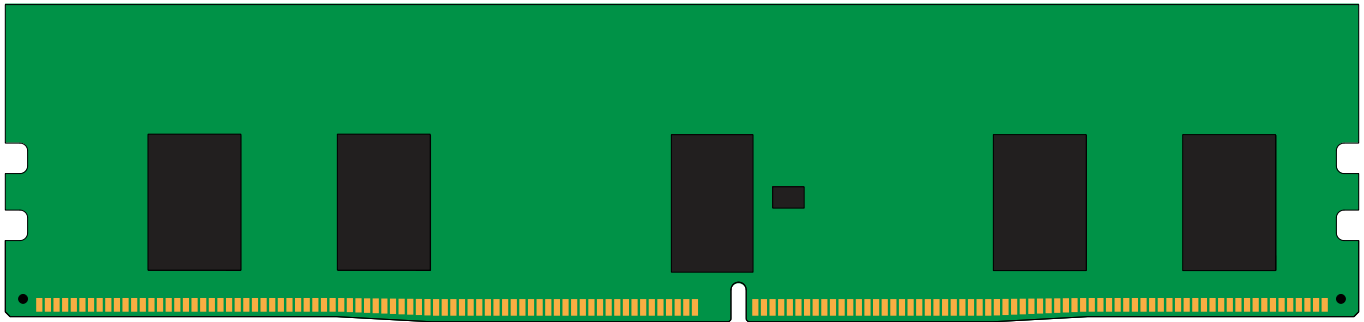
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IDD Specifications

IDD		unit
Symbol	3200	
IDD0	794	mA
IDD0A	795	mA
IDD1	912	mA
IDD1A	945	mA
IDD2N	714	mA
IDD2NA	715	mA
IDD2NT	768	mA
IDD2NL	609	mA
IDD2NG	711	mA
IDD2ND	702	mA
IDD2NP	727	mA
IDD2P	439	mA
IDD2Q	685	mA
IDD3N	798	mA
IDD3NA	798	mA
IDD3P	670	mA
IDD4R	1777	mA
IDD4RA	1786	mA
IDD4RB	1790	mA
IDD4W	1565	mA
IDD4WA	1615	mA
IDD4WB	1502	mA
IDD4WC	1564	mA
IDD4WP	1890	mA
IDD5B	3912	mA
IDD5F2	2882	mA
IDD5F4	2507	mA
IDD6N	351	mA
IDD6E	504	mA
IDD6R	216	mA
IDD6A	504	mA
IDD7	1726	mA
IDD8	180	mA

IPP		unit
Symbol	3200	
IPP0	27	mA
IPP1	27	mA
IPP2N	18	mA
IPP2P	18	mA
IPP3N	27	mA
IPP3P	27	mA
IPP4R	27	mA
IPP4W	27	mA
IPP5B	602	mA
IPP5F2	405	mA
IPP5F4	338	mA
IPP6N	45	mA
IPP6E	72	mA
IPP6R	27	mA
IPP6A	63	mA
IPP7	81	mA
IPP8	18	mA

MODULE DIMENSIONS



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