

Memory Module Specifications

KSM32RS4/16HDR

16GB 1Rx4 2G x 72-Bit PC4-3200

CL22 Registered w/Parity 288-Pin DIMM

DESCRIPTION

Kingston's KSM32RS4/16HDR is a 2G x 72-bit (16GB) DDR4-3200 CL22 SDRAM (Synchronous DRAM) registered w/ parity, 1Rx4, ECC, memory module, based on eighteen 2G 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

DRAM: HYNIX (D-DIE)

RCD: Rambus

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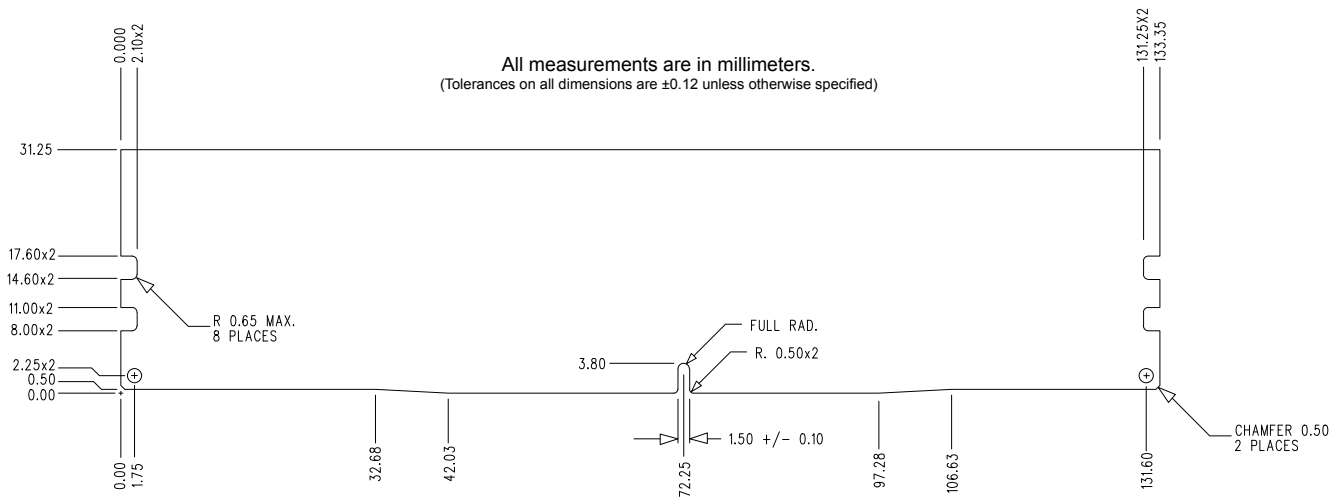
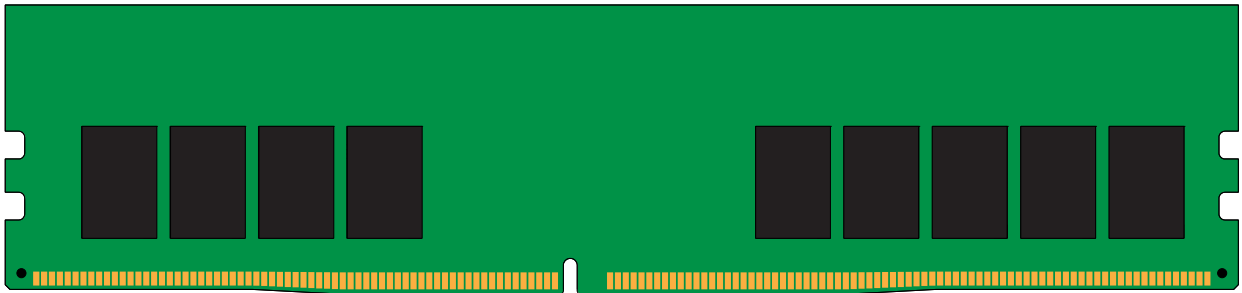
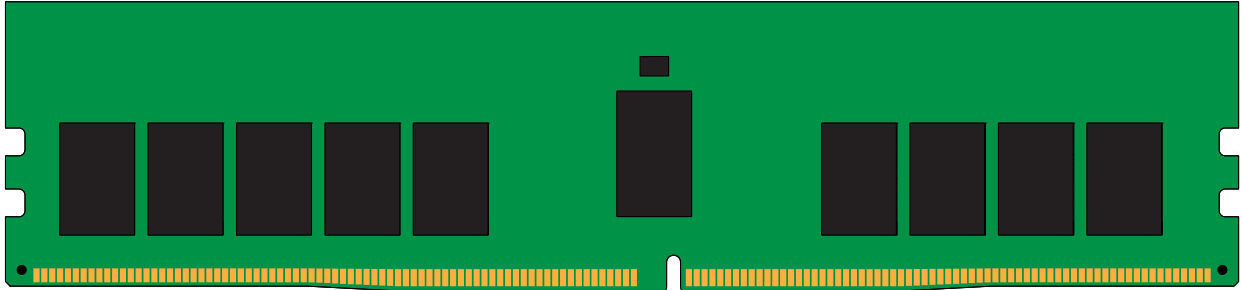
IDD Specifications

IDD		unit
Symbol	3200	
IDD0	1081	mA
IDD0A	1081	mA
IDD1	1241	mA
IDD1A	1309	mA
IDD2N	963	mA
IDD2NA	964	mA
IDD2NT	1053	mA
IDD2NL	829	mA
IDD2NG	959	mA
IDD2ND	941	mA
IDD2NP	973	mA
IDD2P	627	mA
IDD2Q	894	mA
IDD3N	995	mA
IDD3NA	994	mA
IDD3P	696	mA
IDD4R	2215	mA
IDD4RA	2267	mA
IDD4RB	2226	mA
IDD4W	2236	mA
IDD4WA	2330	mA
IDD4WB	2054	mA
IDD4WC	2239	mA
IDD4WP	2608	mA
IDD5B	3998	mA
IDD5F2	3010	mA
IDD5F4	2707	mA
IDD6N	325	mA
IDD6E	454	mA
IDD6R	206	mA
IDD6A	454	mA
IDD7	4083	mA
IDD8	159	mA

IPP		unit
Symbol	3200	
IPP0	71	mA
IPP1	80	mA
IPP2N	42	mA
IPP2P	34	mA
IPP3N	200	mA
IPP3P	193	mA
IPP4R	260	mA
IPP4W	256	mA
IPP5B	974	mA
IPP5F2	646	mA
IPP5F4	529	mA
IPP6N	73	mA
IPP6E	104	mA
IPP6R	50	mA
IPP6A	102	mA
IPP7	521	mA
IPP8	36	mA

continued

MODULE DIMENSIONS



The product images shown are for illustration purposes only and may not be an exact representation of the product.
Kingston reserves the right to change any information at anytime without notice.