

Memory Module Specifications

KSM29RS4/16HCI

16GB 1Rx4 2G x 72-Bit PC4-2933

CL21 Registered w/Parity 288-Pin DIMM

DESCRIPTION

Kingston's KSM29RS4/16HCI is a 2G x 72-bit (16GB) DDR4-2933 CL21 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 DDR4-2933 timing of 21-21-21 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: PC4-2933, 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)	21 cycles
Row Cycle Time (tRCmin)	46.32ns(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 (C-DIE)
RCD: IDT

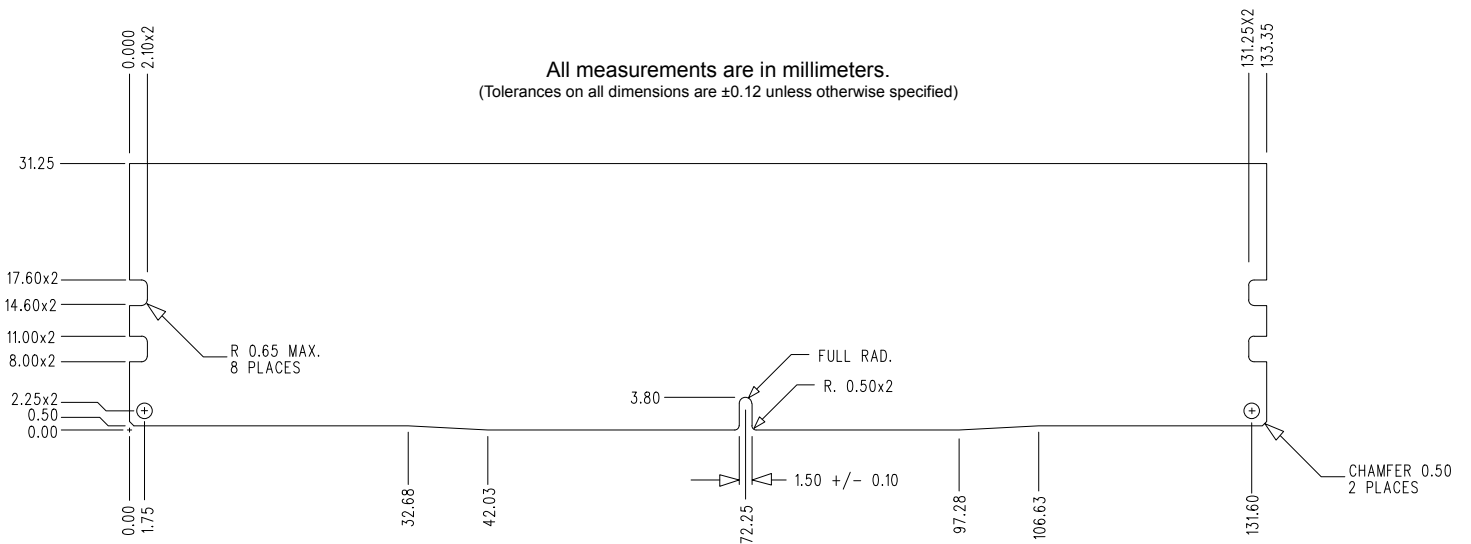
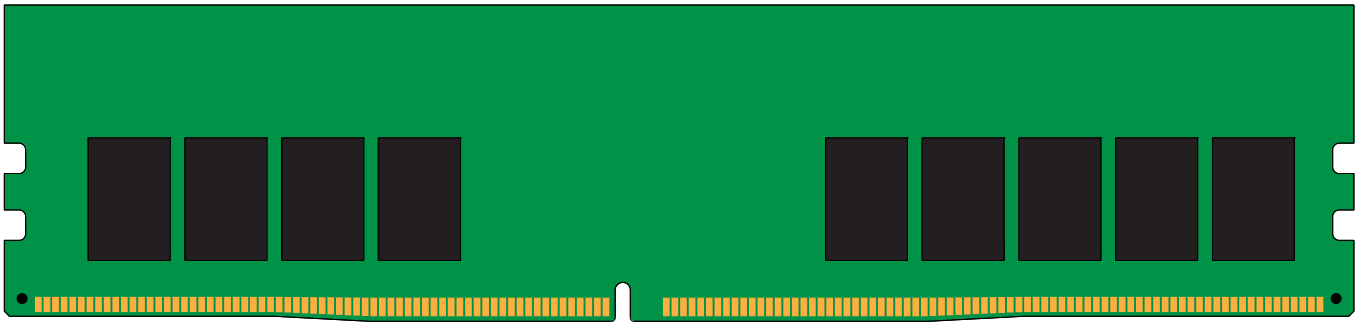
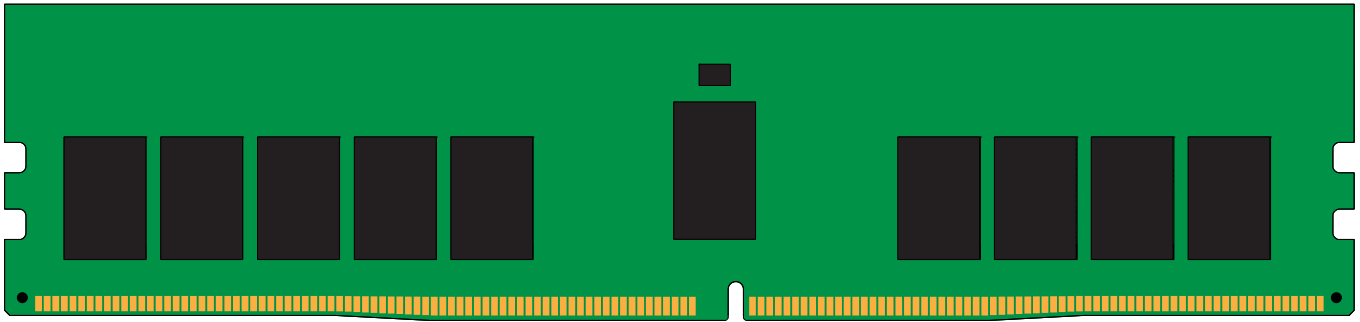
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IDD Specifications

IDD		unit
Symbol	2933	
IDD0	1120	mA
IDD0A	1138	mA
IDD1	1328	mA
IDD1A	1310	mA
IDD2N	940	mA
IDD2NA	940	mA
IDD2NT	1030	mA
IDD2NL	814	mA
IDD2NG	940	mA
IDD2ND	922	mA
IDD2NP	940	mA
IDD2P	652	mA
IDD2Q	868	mA
IDD3N	1138	mA
IDD3NA	1138	mA
IDD3P	850	mA
IDD4R	2372	mA
IDD4RA	2426	mA
IDD4RB	2390	mA
IDD4W	2282	mA
IDD4WA	2372	mA
IDD4WB	2066	mA
IDD4WC	2300	mA
IDD4WP	2624	mA
IDD5B	3982	mA
IDD5F2	3046	mA
IDD5F4	2776	mA
IDD6N	393	mA
IDD6E	519	mA
IDD6R	267	mA
IDD6A	519	mA
IDD7	4244	mA
IDD8	231	mA

IPP		unit
Symbol	2933	
IPP0	99	mA
IPP1	117	mA
IPP2N	58	mA
IPP2P	58	mA
IPP3N	288	mA
IPP3P	288	mA
IPP4R	342	mA
IPP4W	342	mA
IPP5B	1134	mA
IPP5F2	756	mA
IPP5F4	630	mA
IPP6N	90	mA
IPP6E	126	mA
IPP6R	74	mA
IPP6A	126	mA
IPP7	504	mA
IPP8	58	mA

MODULE DIMENSIONS



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