

## KVR29S21S8/16

16GB 1Rx8 2G x 64-Bit PC4-2933  
CL21 260-Pin SODIMM

### DESCRIPTION

This document describes ValueRAM's KVR29S21S8/16 is a 2G x 64-bit (16GB) DDR4-2933 CL21 SDRAM (Synchronous DRAM), 1Rx8, non-ECC, memory module, based on eight 2G x 8-bit FBGA components. The SPD is programmed to JEDEC standard latency DDR4-2933 timing of 21-21-21 at 1.2V. This 260-pin DIMM uses gold contact fingers. The electrical and mechanical specifications are as follows:

### FEATURES

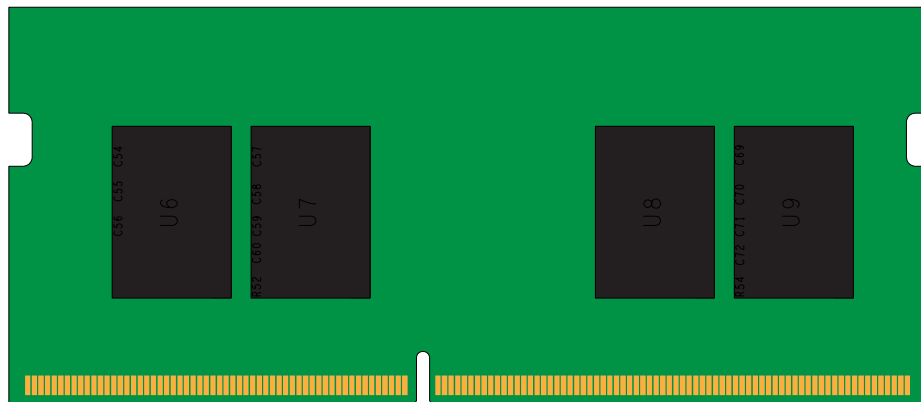
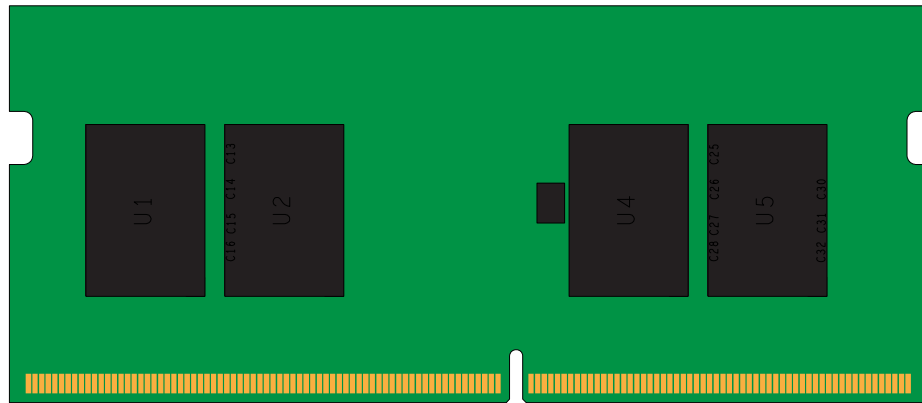
- Power Supply: VDD = 1.2V Typical
- VDDQ = 1.2V Typical
- VPP = 2.5V Typical
- VDDSPD = 2.2V to 3.6V
- Nominal and dynamic on-die termination (ODT) for data, strobe, and mask signals
- Low-power auto self refresh (LPASR)
- Data bus inversion (DBI) for data bus
- On-die VREFDQ generation and calibration
- Single-rank
- On-board I2 serial presence-detect (SPD) EEPROM
- 16 internal banks; 4 groups of 4 banks each
- Fixed burst chop (BC) of 4 and burst length (BL) of 8 via the mode register set (MRS)
- Selectable BC4 or BL8 on-the-fly (OTF)
- Fly-by topology
- Terminated control command and address bus
- PCB: Height 1.18" (30.00mm)
- RoHS Compliant and Halogen-Free

### SPECIFICATIONS

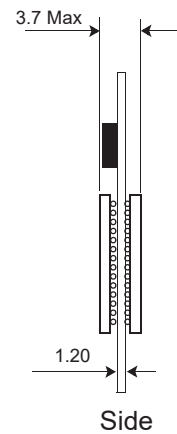
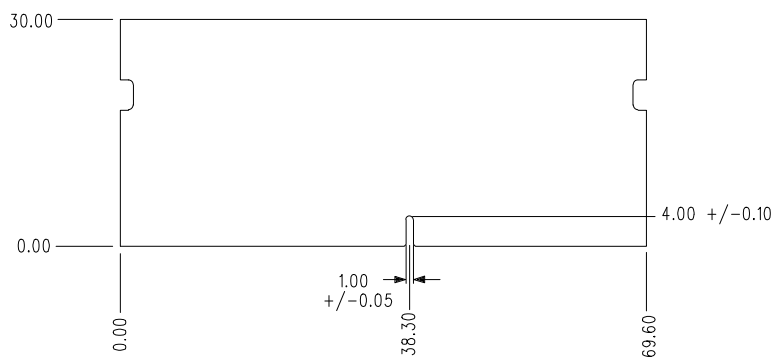
CL(IDD)	21 cycles
Row Cycle Time (tRCmin)	45.75ns(min.)
Refresh to Active/Refresh Command Time (tRFCmin)	350ns(min.)
Row Active Time (tRASmin)	32ns(min.)
UL Rating	94 V - 0
Operating Temperature	0° C to +85° C
Storage Temperature	-55° C to +100° C

Continued >>

### MODULE DIMENSIONS



All measurements are in millimeters.  
(Tolerances on all dimensions are  $\pm 0.12$  unless otherwise specified)



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