Memory Module Specifications



8GB 2Rx8 1G x 72-Bit PC3-12800 CL11 Registered w/Parity 240-Pin DIMM

DESCRIPTION

This document describes ValueRAM's 1G x 72-bit (8GB) DDR3-1600 CL11 SDRAM (Synchronous DRAM), registered w/parity, 2Rx8 ECC memory module, based on eighteen 512M x 8-bit FBGA components. The SPD is programmed to JEDEC standard latency DDR3-1600 timing of 11-11-11 at 1.5V. This 240pin DIMM uses gold contact fingers. The electrical and mechanical specifications are as follows:

FEATURES

- JEDEC standard 1.5V (1.425V ~1.575V) Power Supply
- VDDQ = 1.5V (1.425V ~ 1.575V)
- 800MHz fCK for 1600Mb/sec/pin
- 8 independent internal bank
- Programmable CAS Latency: 11, 10, 9, 8, 7, 6
- Programmable Additive Latency: 0, CL 2, or CL 1 clock
- 8-bit pre-fetch
- Burst Length: 8 (Interleave without any limit, sequential with starting address "000" only), 4 with tCCD = 4 which does not allow seamless read or write [either on the fly using A12 or MRS]
- Bi-directional Differential Data Strobe
- Internal(self) calibration : Internal self calibration through ZQ pin (RZQ : 240 ohm ± 1%)
- On Die Termination using ODT pin
- On-DIMM thermal sensor (Grade B)
- Average Refresh Period 7.8us at lower than TCASE 85°C, 3.9us at 85°C < TCASE ≤ 95°C
- Asynchronous Reset
- PCB : Height 1.180" (30.00mm), double sided component

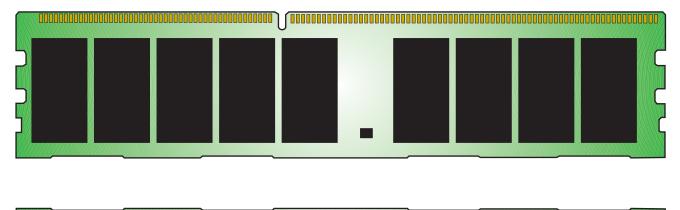
SPECIFICATIONS

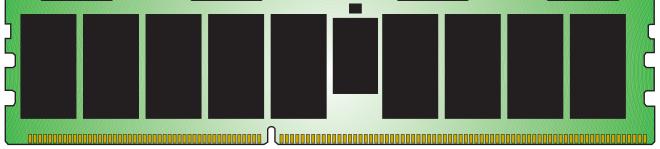
| CL(IDD) | 11 cycles |
|---|-------------------|
| Row Cycle Time (tRCmin) | 48.125ns (min.) |
| Refresh to Active/Refresh Command Time (tRFCmin) | 260ns (min.) |
| Row Active Time (tRASmin) | 35ns (min.) |
| Maximum Operating Power | 4.048 W* |
| UL Rating | 94 V - 0 |
| Operating Temperature | 0° C to 85° C |
| Storage Temperature | -55° C to +100° C |
| | |

Value RAM

*Power will vary depending on the SDRAM and Register/PLL used.

MODULE DIMENSIONS:





(units = millimeters)

