



## **DDR3 SDRAM 1600 / 1333 204-PIN SO\_DIMM 4GB 512Mx8**

### **DESCRIPTION:**

This document describes Aplus 512M x 64-bit 4GB DDR3 SDRAM (Synchronous DRAM) Dual In-Line Memory Module. The components on this module include eight 512M x 8-bit DDR3 SDRAMs in FBGA packages and a 2048-bit serial EEPROM. Those components were mounted on a 204-pin printed circuit board. This 204-pin SO\_DIMM is used to be mounted into 204-pin edge connector sockets and data I/O transactions could be apply on both edges of DQS. The electrical and mechanical specifications are as follows:

### **FEATURES:**

- RoHS compliant products
- JEDEC standard 1.5V  $\pm$  0.075V power supply
- 1.5V  $\pm$  0.075V power supply VDDQ
- 3.0V to 3.6V VDDSPD
- Fast data transfer rates: PC3-10600, PC3-12800
- Nominal and dynamic on-die termination (ODT) for data strobe and mask signals
- Single Rank
- On-board IIC temperature sensor with integrated serial presence-detect (SPD) EEPROM
- 8 inter selectable burst chop BC4 and burst length BL8 on- the-fly (OTF)
- Gold edge contacts
- Terminated control, command, and address bus

### **DDR3 DRAM Speed**

- DDR3-1600 1600Mbps CL-tRCD-tRP 11-11-11
- DDR3-1333 1333Mbps CL-tRCD-tRP 9-9-9

### **PERFORMANCE:**

**Clock Cycle Time (tCK) CL(1) 667 / 800**

**Row Cycle Time (tRC) 49.125ns for 1333  
48.125ns for 1600**

**REFRESH Row Cycle Time (tRCD) 13.125ns**

**Memory Clock/Data Rate: 1.5ns/1333MT/s, 1.25ns/1600MT/s**

Operating Temperature 0°C to 70°C

Storage Temperature -55°C to +100°C

