

**DESCRIPTION:**

This document describes Aplus 64M x 64-bit 512MB DDR333 CL2.5 SDRAM (Synchronous DRAM) memory module. The components on this module include eight 64M x 8-bit (4Banks) DDR333 SDRAM in TSOP packages. This 200-pin SO-DIMM uses gold contact fingers and requires +2.5V. The electrical and mechanical specifications are as follows:

**FEATURES:**

- Power supply: Vdd: 2.5V  $\pm$ 0.2V , Vddq: 2.5V  $\pm$  0.2V
- Max clock Freq: 166Mhz
- Double-data-rate architecture; two data transfers per clock cycle
- Bidirectional data strobe (DQS)
- Differential clock inputs (CK and CK)
- DLL aligns DQ and DQS transition with CK transition
- Programmable Read latency 2.5 (clock)
- Programmable Burst length (2,4,8)
- Programmable Burst type (sequential & interleave)
- Timing Reference: CL-tRCD-tRP (2.5-3-3)
- Edge aligned data output, center aligned data input
- Auto & Self refresh, 7.8us refresh interval (8K/64ms refresh)
- Serial presence detect with EEPROM
- PCB : Height 1.250 " (31.75mm),double sided component

**PERFORMANCE:**

Clock Cycle Time ( tCK )	6ns (min.) /12ns (max.)
Row Cycle Time ( tRC )	60ns (min.)
Refresh Row Cycle Time ( tRFC )	72ns (min.)
Row Active Time ( tRAS )	42ns (min.) /70,000ns (max.)
Power Dissipation	12W
UL Rating	94 V – 0
Operating Temperature	0 to 70
Storage Temperature	-55 to +150

