

## DATASHEET

|                      |                                         |
|----------------------|-----------------------------------------|
| Module TYPE          | DDR3 16GB/8GB/4GB/2GB/1GB<br>ECC SODIMM |
| Module speed         | PC3-12800                               |
| CAS Latency          | CL-11                                   |
| Pin                  | 204pin                                  |
| SDRAM Operating Temp | 0 °C ~ 85 °C                            |

## 1. Features

### Key Parameter

| Industry<br>Nomenclature | Speed<br>Grade | Data Rate MT/s |      |       | tRCD  | tRP   | tRC   |
|--------------------------|----------------|----------------|------|-------|-------|-------|-------|
|                          |                | CL=7           | CL=9 | CL=11 | (ns)  | (ns)  | (ns)  |
| PC3-12800                | -              | 1066           | 1333 | 1600  | 13.75 | 13.75 | 13.75 |

JEDEC Standard 204-pin Dual In-Line Memory Module

- Intend for PC3-12800 applications
- Inputs and Outputs are SSTL-15 compatible
- VDD=VDDQ= 1.5 Volt  $\pm$  0.075
- Bi-directional Differential Data Strobe
- DLL aligns DQ and DQS transition with CK transition
- SDRAMs have 8 internal banks for concurrent operation
- Normal and Dynamic On-Die Termination support.
- SDRAMs are 78-ball BGA Package
- 8 bit pre-fetch
- Two different termination values (Rtt\_Nom & Rtt\_WR)
- Auto & self refresh 7.8 $\mu$ s ( $T_A \leq +85^{\circ}\text{C}$ )
- DRAM operating temperature range  
 $0^{\circ}\text{C} \leq T_A \leq +85^{\circ}\text{C}$
- Programmable Device Operation:
  - Burst Type: Sequential or Interleave
  - Device CAS# Latency: 11
  - Burst Length: switch on-the-fly:  
BL=8 or BC 4
- RoHS Compliant (Section 14)

## 2. PACKAGE DIMENSION

