

# DATASHEET

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

# 1. Features

## Key Parameter

Industry Nomenclature	Speed Grade	Data Rate MT/s			tRCD (ns)	tRP (ns)	tRC (ns)
		CL=7	CL=9	CL=11			
<b>PC3-12800</b>	-	1066	1333	1600	13.125	13.125	13.125

- 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
- VDD=VDDQ= 1.35 Volt (-0.067/+0.1V)
- 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: 9
  - Burst Length: switch on-the-fly: BL=8 or BC 4
- RoHS Compliant (*Section 14*)



### 3. Ordering Information

Type & Speed	Density	Height	Innodisk Memory P/N
DDR3L-1600 SODIMM	16GB	1.18"	M3S0-AGM1DLPC
	8GB	1.18"	M3S0-8GSSDLPC
	4GB	1.18"	M3S0-4GSSCLPC
	2GB	1.18"	M3S0-2GSJCLPC
	1GB	1.18"	M3S0-1GPFCLPC