



# DDR3 UNBUFFERED SDRAM DIMM

BL12864BA BL25664BA  
BL12864BE BL25664BE  
BL12864BX

## Features

- 240-pin, unbuffered dual in-line memory module (UDIMM)
- Physical dimensions are compliant to JEDEC MO-269B
- Fast data transfer rates: PC3-16000, PC3-14400, PC3-12800, and PC3-10600
- 1GB (128 Meg x 64) and 2GB (256 Meg x 64)
- Exclusively designed for high-performance systems
- Critical performance parameters tested for functionality
- Speed verification performed in-system
- VDD = VDDQ = +1.8V ±0.075V or VDD = VDDQ = +1.9V ±0.075V or VDD = VDDQ = +2.0V ±0.075V
- VDDSPD = +3.0V to +3.6V
- Reset pin for improved system stability
- Nominal and dynamic on-die termination (ODT) for data, strobe, and mask signals
- 8 internal device banks for concurrent operation
- Fixed burst length of 8 (BL8) and burst chop of 4 (BC4) via the mode register
- Adjustable data-output drive strength
- Serial Presence-Detect (SPD) EEPROM
- Gold edge contacts
- RoHS compliant
- Fly-by topology



- Terminated command, address, and control bus
- Aluminum heat spreader
- 1.18" (30.00mm) PCB Height

## Timing Parameters

Module Marking	Module Bandwidth	Latency (CL - tRCD - tRP - tRAS)
2009	16.0 GB/s	9 - 9 - 9 - 28 *
1808	14.4 GB/s	8 - 8 - 8 - 24 *
1608	12.8 GB/s	8 - 8 - 8 - 24 *
1336	10.6 GB/s	6 - 6 - 6 - 20 *

\* Performance is verified during testing.

## SPD Programming

Module Marking	SPD Profile
BA	JEDEC standard
BE	NVIDIA EPP 2.0
BX	Intel XMP

## Part Numbers

Part Number	Module Density	Voltage (VDD)	Memory Clock/Data Bit Rate	Banking Configuration	Component Configuration
BL12864BE2009	1GB	2.0V	1.00ns/2000 MT/s	Single	128 Meg x 8
BL12864BE1808	1GB	1.9V	1.11ns/1800 MT/s	Single	128 Meg x 8
BL12864BX1808	1GB	1.9V	1.11ns/1800 MT/s	Single	128 Meg x 8
BL12864BA1608	1GB	1.8V	1.25ns/1600 MT/s	Single	128 Meg x 8
BL12864BA1336	1GB	1.8V	1.50ns/1333 MT/s	Single	128 Meg x 8
BL25664BA1608	2GB	1.8V	1.25ns/1600 MT/s	Dual	128 Meg x 8
BL25664BA1336	2GB	1.8V	1.50ns/1333 MT/s	Dual	128 Meg x 8



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