



Mobile Double Data Rate (DDR) SDRAM

MT46H16M16LF – 4 Meg x 16 x 4 Banks

MT46H8M32LF – 2 Meg x 32 x 4 Banks

For a complete data sheet, please refer to www.micron.com/mobilesds.

Features

- VDD = +1.8V ±0.1V, VDDQ = +1.8V ±0.1V
- Bidirectional data strobe per byte of data (DQS)
- Internal, pipelined double data rate (DDR) architecture; two data accesses per clock cycle
- Differential clock inputs (CK and CK#)
- Commands entered on each positive CK edge
- DQS edge-aligned with data for READS; center-aligned with data for WRITES
- Four internal banks for concurrent operation
- Data masks (DM) for masking write data—one mask per byte
- Programmable burst lengths: 2, 4, 8, 16 or full page
- Concurrent auto precharge option is supported
- Auto refresh and self refresh modes
- 1.8V LVCMOS compatible inputs
- On-chip temperature sensor to control refresh rate
- Partial array self refresh (PASR)
- Deep power-down (DPD)
- Selectable output drive (DS)
- Clock stop capability

Options

- VDD/VDDQ
 - 1.8V/1.8V
- Configuration
 - 16 Meg x 16 (4 Meg x 16 x 4 banks) 16M16
 - 8 Meg x 32 (2 Meg x 32 x 4 banks) 8M32
- Plastic Package
 - 60-Ball VFBGA¹ TBD
 - 90-Ball VFBGA²
- Timing – Cycle Time
 - 6ns @ CL = 3 -6
 - 7.5ns @ CL = 3 -75
 - 10ns @ CL = 3 -10
- Operating Temperature Range
 - Commercial (0° to +70°C) None
 - Industrial (-40°C to +85°C) IT

Marking

Figure 1: 60-Ball VFBGA Assignment

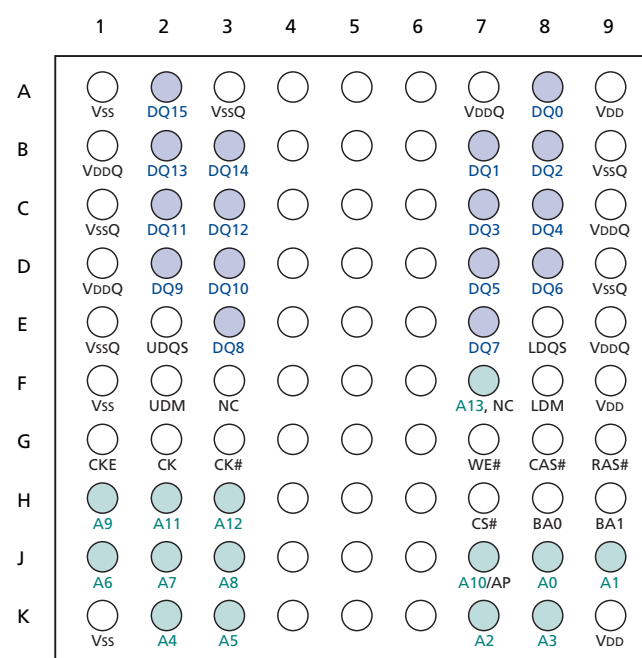


Table 1: Configuration Addressing

Architecture	16 Meg x 16	8 Meg x 32
Configuration	4 Meg x 16 x 4	2 Meg x 32 x 4
Refresh Count	8K	4K
Row Addressing	8K (A0–A12)	4K (A0–A11)
Bank Addressing	4 (BA0, BA1)	4 (BA0, BA1)
Column Addressing	1K (A0–A9)	1K (A0–A9)

Notes:1. Only available for x16 configuration.

2. Only available for x32 configuration.



256Mb: 16 Meg x 16, 8 Meg x 32 Mobile DDR SDRAM



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Advance: This data sheet contains initial descriptions of products still under development.**



Revision History

- Original Document, Preview03/05