



# DDR2 SDRAM FBDIMM

**MT18HTF12872FD – 1GB**
**MT18HTF25672FD – 2GB**

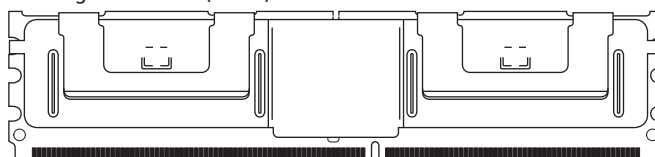
 For the latest data sheet, refer to Micron's Web site: [www.micron.com](http://www.micron.com)

## Features

- 240-pin DDR2 fully buffered, dual in-line memory module (FBDIMM) with ECC to detect and report channel errors to the host memory controller
- Fast data transfer rates: PC2-4200 and PC2-5300 using 533 MT/s and 667 MT/s DDR2 SDRAM components
- 3.2 Gb/s and 4.0 Gb/s link transfer rates
- High-speed, differential, point-to-point link between host memory controller and the AMB using serial, dual-simplex bit lanes
  - 10-pair southbound (data path to FBDIMM)
  - 14-pair northbound (data path from FBDIMM)
- Fault tolerant; can work around a bad bit lane in each direction
- High-density scaling with up to 8 dual-rank modules (288 DDR2 SDRAM devices) per channel
- SMBus interface to AMB for configuration register access
- In-band and out-of-band command access
- Deterministic protocol
  - Enables memory controller to optimize DRAM accesses for maximum performance
  - Delivers precise control and repeatable memory behavior
- Automatic DDR2 SDRAM bus and channel calibration
- Transmitter de-emphasis to reduce ISI
- MBIST and IBIST test functions
- Transparent mode for DDR2 SDRAM test support
- VDD = VDDQ = +1.8V for DDR2 SDRAM
- VREF = 0.9V SDRAM C/A termination
- VCC = 1.5V for advanced memory buffer (AMB)
- VDDSPD = +1.7V to +3.6V for SPD EEPROM
- Serial presence-detect (SPD) with EEPROM
- Gold edge contacts
- Dual rank
- Supports 95°C operation with 2X refresh (<sup>t</sup>REFI = 7.8µs at or below 85°C; <sup>t</sup>REFI = 3.9µs above 85°C)

**Figure 1: 240-Pin FBDIMM (MO-256 R/C B)**

PCB height: 30.35mm (1.19in)



## Options

- Package
  - 240-pin FBDIMM (lead-free)
- Frequency/CL<sup>1</sup>
  - 3.75ns @ CL = 5 (DDR2-667)
  - 3.75ns @ CL = 4 (DDR2-533)
- PCB height
  - 30.35mm (1.19in)

## Marking

Y
-667
-53E

Notes: 1. CL = CAS (READ) latency.



## 240-Pin 1GB, 2GB DDR2 SDRAM FBDIMM (DR, FB, x72) Features

**Table 1: FBDIMM / DDR2 SDRAM Addressing**

Parameter	1GB	2GB
Refresh count	8K	8K
Device bank addressing	4 (BA0, BA1)	8 (BA0, BA1, BA2)
Device page size per bank	1KB	1KB
Device configuration	512Mb (64 Meg x 8)	1Gb (128 Meg x 8)
Row addressing	16K (A0–A13)	16K (A0–A13)
Column addressing	2K (A0–A9)	2K (A0–A9)
Module rank addressing	2 (S0#, S1#)	2 (S0#, S1#)

**Table 2: Performance Parameters**

Speed Grade	Module Bandwidth	Peak Channel Throughput	Link Transfer Rate	Latency (CL- <sup>t</sup> RCD- <sup>t</sup> RP)
-667	PC2-5300	8.0 GB/s	4.0 GT/s	5-5-5
-53E	PC2-4200	6.4 GB/s	3.2 GT/s	4-4-4

**Table 3: Part Numbers and Label Markings**

Part Number <sup>1</sup>	Module Density	FBDIMM Configuration	Label Key Attributes
MT18HTF12872FDY-53E__	1GB	128 Meg x 72	1GB 2Rx8 PC2-4200F-444-10-B_
MT18HTF12872FDY-667__	1GB	128 Meg x 72	1GB 2Rx8 PC2-5300F-555-10-B_
MT18HTF25672FDY-53E__	2GB	256 Meg x 72	2GB 2Rx8 PC2-4200F-444-10-B_
MT18HTF25672FDY-667__	2GB	256 Meg x 72	2GB 2Rx8 PC2-5300F-555-10-B_

Notes: 1. All part numbers end with a two-place code (not shown), designating component and PCB revisions. Consult factory for current revision codes. Example: MT18HTF12872FDY-53EC2.



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