

### FEATURES

- Non-volatile 256Mb (32Mb x 8, 16Mb x 16) DDR3
- Supports standard DDR3 SDRAM features
- $V_{DD} = 1.5v \pm 0.075v$
- Up to 667MHz  $f_{CK}$  (1333MT/sec/pin)
- Page size of 512 bits (x8) or 1024 bits (x16)
- On-device termination
- On-Chip DLL aligns  $DQ$ ,  $DQS$ ,  $\overline{DQS}$  transition with  $CK$  transition
- All addresses and control inputs are latched on rising edge of Clock
- Burst length of 8 with programmable Burst Chop length of 4
- Standard 10x13mm 78-Ball (x8) or 96-ball (x16) BGA Package



### DESCRIPTION

The EMD3D256M08/16B 256Mb DDR3 Spin-Torque MRAM is a non-volatile memory that offers non-volatility and high endurance at DDR3 speeds. The device is capable of DDR3 operation at rates of up to 1333MT/Sec/Pin. It is designed to comply with all DDR3 DRAM features including on-device termination (ODT) and internal ZQ calibration but with the benefit of data persistence and extremely high write cycle endurance.

With Spin-Torque MRAM technology, cell refresh is not required, which greatly simplifies system design and reduces overhead.

All control and address inputs are synchronized with a pair of externally supplied differential clocks, with input latching at clock crosspoints. I/Os are synchronized with a pair of bidirectional strobes ( $DQS$ ,  $\overline{DQS}$ ). The device uses a  $RAS/CAS$  multiplexing scheme and operates at 1.5V.

For more information contact Everspin [here](#).