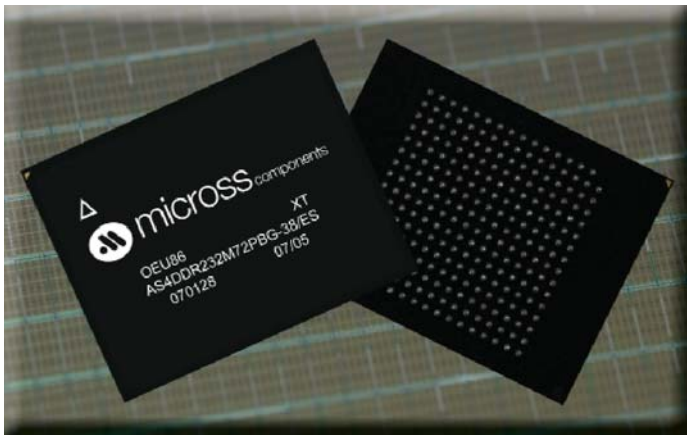
micross components

255 PBGA iNTEGRATED PLASTIC ENCAPSULATED MICROCIRCUIT



4.8Gb, 4.1 Gb, 2.4Gb & 2.1Gb SDRAM-DDR2 255 PBGA

FEATURES

- DDR2 Data rate = 667, 533, 400 MHz
- Available in Industrial, Enhanced and Military Temp
- Package: 255 PBGA, 25 x 32mm^2, 1.27mm pitch
- Differential data strobe (DQS, DQS#)
- Internal, pipelined, DDR architecture
- 4-bit prefetch architecture
- DLL for alignment of DQ and DQS transitions
- Programmable Burst lengths: 4 or 8
- Auto Refresh and Self Refresh Modes
- On Die Termination (ODT)
- Adjustable output drive strength
- 1.8V ±0.1V power supply and I/O (VCC/VCCQ)
- Programmable CAS latency: 3, 4, 5, or 6
- Posted CAS additive latency: 0, 1, 2, 3 or 4
- Weight: ~ 3.5 grams typical

NOTE: Self Refresh Mode available on Industrial and Enhanced temp. only

APPLICATIONS

Examples Include:

- Compact digital computing
  - ~Digital radio
  - ~Handheld GPS
  - ~Secure communications systems
- Missile guidance & navigation
- Smart munitions
- Portable manpack designs where weight & size is critical

BENEFITS:

- Reduction of interconnects
- Defined for easy SMT manufacturability (1.27mm ball pitch)
- Integrated package with full power & ground planes for improved high frequency signal
- Improved parasitics
- Excellent thermal properties
- 47% I/O reduction vs individual CSP approach
- Reduced trace lengths for lower parasitic capacitance
- Suitable for hi-reliability applications
- 100% tested / processed to:
  Industrial [IT] -40°C to +85°C
  Enhanced [ET] -40°C to +105°C
  Military [XT] -55°C to +125°C

OPTIONS

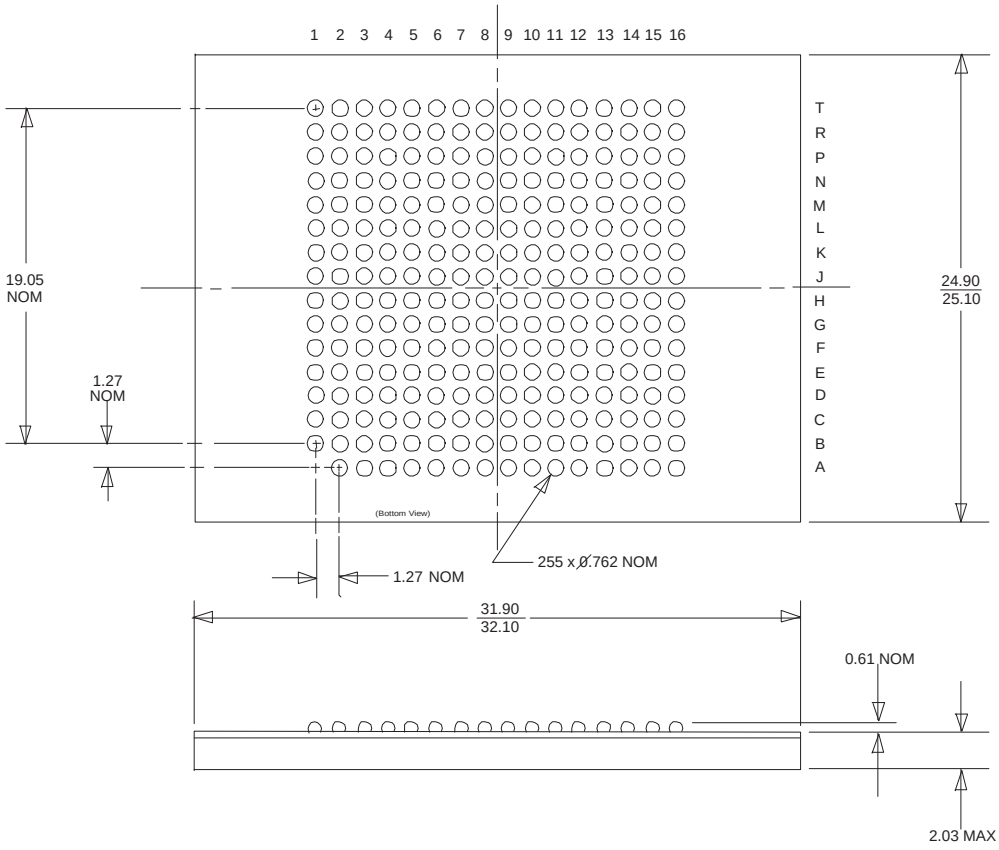
AS4DDR264M72PBG
4.8Gb, SDRAM-DDR2, 64M x 72
25mm x 32mm - 255 PBGA

AS4DDR264M64PBG
4.1Gb, SDRAM-DDR2, 64M x 64
25mm x 32mm - 255 PBGA

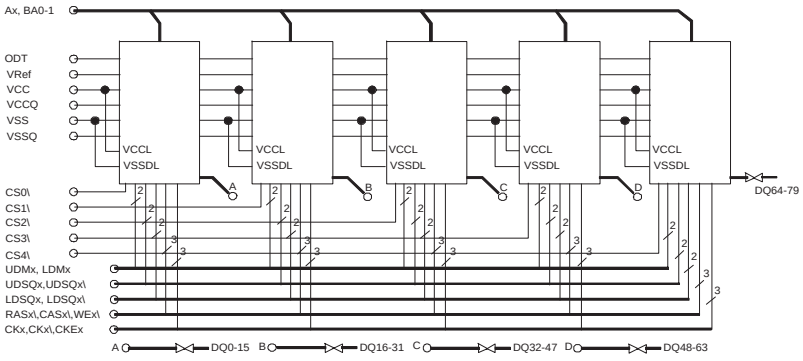
AS4DDR232M72PBG
2.4Gb, SDRAM-DDR2, 32M x 72
25mm x 32mm - 255 PBGA

AS4DDR232M64PBG
2.1Gb, SDRAM-DDR2, 32M x 64
25mm x 32mm - 255 PBGA

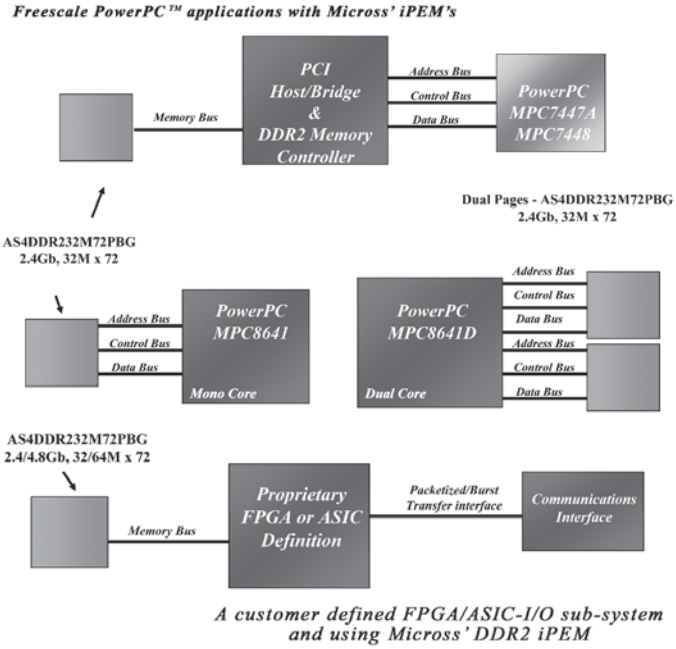
MECHANICAL DEFINITIONS



BLOCK DIAGRAM



SYSTEM BLOCK DIAGRAM



Phone: 512.339.1188
semiconductors@micross.com
www.micross.com

For more information or to view a complete datasheet, please visit our website at www.micross.com or call (512) 339-1188.