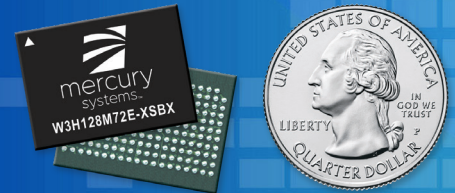


High Density Secure Memory DDR2 SDRAM

Available From 128MB to 1GB

- **Advanced miniaturization technology**
- **Data transfer speed up to 667 Mb/s**
- **-55 to +125°C operating temperature**
- **Manufactured in a DMEA-trusted US facility**



Mercury Systems' advanced design and packaging techniques miniaturize DDR2 SDRAM memory in a compact, highly ruggedized package. These devices are ideally suited for military and commercial aerospace applications requiring high-speed DDR2 memory optimized for size, weight, and power.

Mercury Systems is currently engaging with customers in design opportunities requiring DDR2 memory performance. To participate in this design program, please contact your Mercury Systems representative or contact us at Secure.Memory@mrcy.com

Product Features

- Data rate = 667, 533, 400 Mb/s
- Single Supply Voltage = 1.8V
- Differential data strobe (DQS, DQS#) per byte
- Internal, pipelined, double data rate architecture
- 4-bit prefetch architecture
- DLL for alignment of DQ and DQS transitions with clock signal
- Eight internal banks for concurrent operation (Per DDR2 SDRAM Die)
- Programmable Burst lengths: 4 or 8
- Auto Refresh and Self Refresh Modes
- On Die Termination (ODT)

- Adjustable data – output drive strength
- Programmable CAS latency: 3, 4 or 5
- Posted CAS additive latency: 0, 1, 2, 3 or 4
- Write latency = Read latency - 1* t_{CK}
- Commercial, Industrial and Military Temperature Ranges

Benefits

- Up to 75% space savings vs discrete chip packages
- Military-grade performance without sacrificing the benefits of DDR3 memory
- Up to 88% component reduction
- 100% burn-in and electrical test for the highest quality assurance
- Available component End of Life management for long-term supply continuity

Package

- 11mm x 14mm - 79 plastic ball grid array (PBGA); 16mm x 20mm - 208 PBGA; 16mm x 22mm - 208 PBGA; 21mm x 23mm - 255 PBGA
- 1mm or 1.27mm pitch
- Solder ball composition: Eutectic, lead free upon request
- Moisture Sensitivity Level (MSL): 3

* These products are subject to change without notice.

Mercury Systems is a leading commercial provider of secure sensor and safety-critical processing subsystems. Optimized for customer and mission success, Mercury's solutions power a wide variety of critical defense and intelligence programs.



ACQUIRE



DIGITIZE



PROCESS



STORAGE



EXPLOIT



DISSEMINATE

Figure 1 - Part Numbers

DDR2 SDRAM MCPs

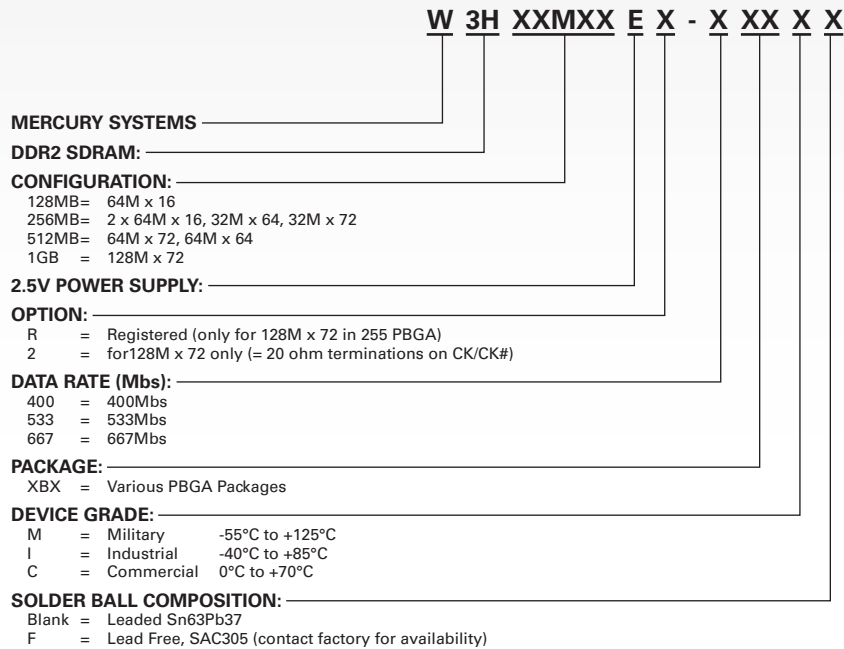
Size	Organization	Part Number	Data Rate (Mb/s)	Voltage (V)	Package	Dimensions	Temperature
128MB	64M x 16	W3H64M16E-XB2X	400-667	1.8	79 PBGA	11mm x 14mm	C, I, M
256MB	2 x 64M x 16	W3H264M16E-XB2X	400-667	1.8	79 PBGA	11mm x 14mm	C, I, M
256MB	32M x 64	W3H32M64E-XBX	400-667	1.8	208 PBGA	16mm x 20mm	C, I, M
256MB	32M x 72	W3H32M72E-XBX	400-667	1.8	208 PBGA	16mm x 20mm	C, I, M
512MB	64M x 64	W3H64M64E-XBX	400-667	1.8	208 PBGA	16mm x 20mm	C, I, M
512MB	64M x 72	W3H64M72E-XBX	400-667	1.8	208 PBGA	16mm x 20mm	C, I, M
512MB	64M x 72	W3H64M72E-XBXF	400-667	1.8	208 PBGA	16mm x 20mm	C, I, M
1GB	128M x 72	W3H128M72E-XSBX	400-667	1.8	208 PBGA	16mm x 22mm	C, I, M
1GB	128M x 72	W3H128M72E-XNBX*	400-667	1.8	208 PBGA	16mm x 22mm	C, I, M

Registered DDR2 SDRAM MCPs

Size	Organization	Part Number	Data Rate (Mb/s)	Voltage (V)	Package	Dimensions	Temperature
1GB	128M x 72	W3H128M72ER-XNBX	400-667	1.8	255 PBGA	21mm x 23mm	C, I, M

* Low profile

Figure 2 - Part Numbering Matrix



Example Part Number: W3H128M72E-667SBM

Need More Help?

Contact Mercury's Secure Memory application engineering team at

secure.memory@mrcy.com

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www.mrcy.com/ddr2

5026.02E_0820_DDR2-Product-Family-flyer



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