High Density Secure Memory
DDR4 SDRAM

Available From 4GB to 16GB

Mercury Systems’ advanced design and packaging techniques miniaturize DDR4 SDRAM memory in a compact, highly ruggedized package. These devices are ideally suited for military and commercial aerospace applications requiring high-speed DDR4 memory optimized for size, weight, and power.

Mercury Systems is currently engaging with customers in design opportunities requiring DDR4 memory performance. To participate in this design program, please contact your Mercury Systems representative or contact us at Secure.Memory@mrcy.com

Product Features

• DDR4 Data Rate = DDR4-1600, DDR4-1866, DDR4-2133, DDR4 2400 and DDR4-2666*
• $V_{CC} = V_{CCQ} = 1.2V$
• $V_{PP} = 2.5V$
• Military and Industrial temperature ranges
• Output driver calibration
• Configured as 1-Rank x72-bit data
• Up to 16 internal banks: 4 groups of 4 banks each
• 8n-bit prefetch architecture
• Programmable data strobe preambles
• Command/Address latency (CAL)
• Multipurpose register READ and WRITE capability

Benefits

• Write and read leveling
• Self refresh mode and Low-Power Auto Self Refresh (LPASR)
• Nominal, park, and dynamic On-Die Termination (ODT)
• Data bus inversion (DBI) for data bus
• Command/Address (CA) parity
• Databus write Cyclic Redundancy Check (CRC)

Plastic Ball Grid Array (PBGA) Package

• As small as 13 x 20 x 2.36 mm package
• 321 and 367 pin packages
• 0.8 mm pitch
• Moisture Sensitivity Level (MSL) 3

* These products may or may not be under development, not qualified or characterized and is subject to change or cancellation 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.
### Figure 1 - Part Numbers

<table>
<thead>
<tr>
<th>Size</th>
<th>Organization</th>
<th>Part Number</th>
<th>Data Rate (Mb/s)**</th>
<th>Voltage (V)</th>
<th>Package</th>
<th>Dimensions</th>
<th>Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>4GB</td>
<td>512M x 72</td>
<td>4N612M72T-XBX</td>
<td>1333-2400</td>
<td>1.2</td>
<td>321 PBGA</td>
<td>13mm x 20mm</td>
<td>I, M</td>
</tr>
<tr>
<td>8GB</td>
<td>1G x 72</td>
<td>4N1G72T-XBX</td>
<td>1333-2400</td>
<td>1.2</td>
<td>321 PBGA</td>
<td>13mm x 20mm</td>
<td>I, M</td>
</tr>
<tr>
<td>16GB*** ◊ 2G x 72</td>
<td>4N2G72T-XBX</td>
<td>1333-2666</td>
<td>1.2</td>
<td>367 PBGA</td>
<td>16mm x 23mm</td>
<td>I, M</td>
<td></td>
</tr>
</tbody>
</table>

*** Contact factory for availability  
◊ Contact factory for 2666 Mb/s availability

### Figure 2 - Part Numbering Matrix

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Mercury Systems
DDR4 SDRAM
1.2V Power Supply
Capacity
512M72  
1G72  
2G72

Termination

Speed
16 = 1600  
18 = 1866  
21 = 2133  
24 = 2400  
26 = 2666

PBGA
321 PBGA - 4 and 8GB  
367 PBGA - 16GB

Product Grade
M = Military (-55°C to +125°C)  
I = Industrial (-40°C to +85°C)
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Example Part Number: 4N2G72T-26367M

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Need More Help?
Contact Mercury’s Secure Memory application engineering team at secure.memory@mrcy.com

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