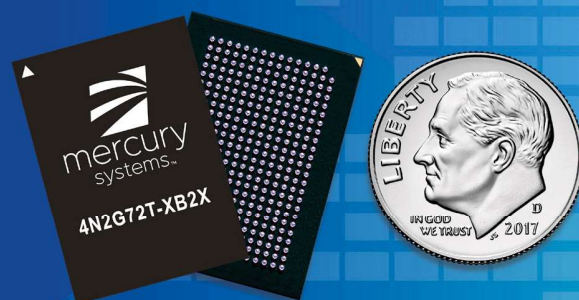


# High Density Secure Memory DDR4 SDRAM

*Available From 4GB to 16GB*

- **Advanced miniaturization technology**
- **Data transfer speeds up to 2666 Mb/s**
- **-55 to +125°C operating temperatures**
- **Including Decoupling and Terminations**
- **Manufactured in a DMEA-trusted US facility**



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 quickly accelerating production of DDR4 memory devices. We are currently in production of the 4GB and 8GB versions. We are engaging with customers in design opportunities for 16GB versions and are expecting a 32GB version in 2022. To participate in our design program, please contact your Mercury Systems representative or contact us at [Secure.Memory@mercy.com](mailto:Secure.Memory@mercy.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

\*Contact factory for availability

- Programmable data strobe preambles
- Command/Address latency (CAL)
- Multipurpose register READ and WRITE capability
- 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)

## Benefits

- Up to 83% space-savings vs discrete chip packages
- Military-grade performance without sacrificing the benefits of DDR4 memory
- Eutectic solder balls for superior board-level reliability
- Up to 93% component reduction
- 100% burn-in and electrical test for the highest quality assurance
- Manufactured in a DMEA-trusted facility
- Available component End of Life management for long-term supply continuity

## 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

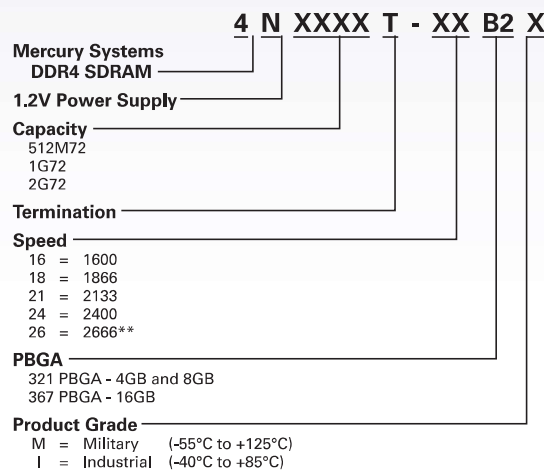
**Figure 1 - Part Numbers**

**DDR4 SDRAM MCPs**

Size	Organization	Part Number	Data Rate (Mb/s)**	Voltage (V)	Package	Dimensions	Temperature
4GB	512M x 72	4N512M72T-XB2X	1600-2666	1.2	321 PBGA	13mm x 20mm	I, M
8GB	1G x 72	4N1G72T-XB2X	1600-2666	1.2	321 PBGA	13mm x 20mm	I, M
16GB	2G x 72	4N2G82T-XB2X	1600-2400	1.2	367 PBGA	16mm x 28mm	I, M

\*\* Contact factory for 2666 availability.

**Figure 2 - Part Numbering Matrix**



Example Part Number: 4N2G72T-24B2M

\*\* Contact factory for 2666 availability..

## Need More Help?

Contact Mercury's Secure Memory application engineering team at

[secure.memory@mrchy.com](mailto:secure.memory@mrchy.com)

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[www.mrchy.com/ddr4](http://www.mrchy.com/ddr4)

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