

# RLDRAM 3

## Next-Generation Performance for Next-Generation Networks



networked  
innovation

### The Need for Speed

With annual global IP traffic of 2.3ZB expected by 2020 — the equivalent of all movies ever made crossing IP networks every two minutes — the pressure on IP networks continues to increase at an incredible pace. Thankfully, Micron has high-performance memory solutions to help you keep up.

Our reduced-latency DRAM (RLDRAM®) memory combines the density and high bandwidth of DRAM with the random access performance that next-generation networking packet processing demands. And with the introduction of Micron's latest generation of RLD RAM — RLD RAM 3 — you get even bigger benefits from this well-established DRAM technology.

### Better Performance for Your Network

Introducing our latest generation of RLD RAM for your next-generation designs. Micron® RLD RAM 3 offers densities up to 2.25Gb, bandwidth with up to 86.4 Gb/s and sub-7ns native random access. Sub-1ns READ is possible for SRAM-like performance.

Leveraging our extensive DRAM expertise, quality and scale, our RLD RAM 3 further raises the bar by offering the perfect balance of cost and performance for the next generation of networking designs.

### Why RLD RAM?

- 1. High Performance**  
Experience up to 1200 million random transactions per second per device.
- 2. High Density**  
Get maximum system density with our first 1Gb monolithic and 2Gb dual-die components.
- 3. Cost Effective**  
Get the perfect balance of density and performance for high transaction rate designs.
- 4. Long-Term Commitment**  
Choose a reliable memory partner with quality products for long-term support.
- 5. World-Class Support**  
Design in with ease with the help of our worldwide technical support and system expertise.



# Micron RLD RAM 3 Memory

## Performance and Features Comparison

This table shows how RLD RAM 3 provides comparable or better performance than QDR4 SRAM at a lower cost per bit.

Feature	RLDRAM 3	RLDRAM 3 (2 pieces)	QDR4 SRAM	Sigma DDR-IVe
Performance (Random Transaction Rate)	1200 million	<b>2400 million</b>	2133 million	1200 million
Density (Effective Density)	1125Mb (144Mb)*	<b>2250Mb (288Mb)*</b>	144Mb	144Mb
Footprint (mm <sup>2</sup> )	182	<b>392</b>	441	308
Power (W)	~2.7	<b>~5.5</b>	~5.9	~3.4
Cost per Effective Mb	X	<b>X</b>	4X	-

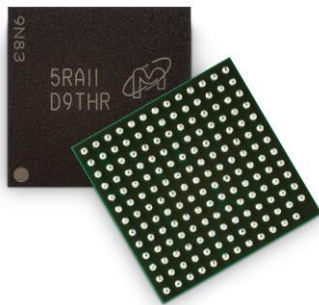
\* Effective density assumes eight copies of data.

## Longevity for RLD RAM 2

Micron continues to support our previous generation of RLD RAM technology, RLD RAM 2, for the long term — with the latest designs available on our 50nm node with 288Mb density and up to 1066 Mb/s and 15ns tRC.

## Contact Us

Contact your Micron sales representative or visit [micron.com](http://micron.com) today to find out more about what Micron RLD RAM memory can do for your next design.



Get the kind of performance that next-generation networking applications demand from high-performance Micron RLD RAM 3.

## Ecosystem Partners

Micron has partnered with Xilinx, Altera and Northwest Logic to ensure broad RLD RAM 3 support with the industry's latest high-performance FPGAs.

### Xilinx

- [Ultrascale Memory Interface Design Hub - RLD RAM 3](#)
- [Virtex Ultrascale FPGA VCU108 Evaluation Kit](#)

### Altera (Intel)

- [Arria 10 FPGA Development Kit - RLD RAM 3](#)
- [Arria 10 SOC Development Kit - RLD RAM 3](#)
- [External Memory Interface Handbook](#)
- [Northwest Controller Core – RLD RAM 3](#)

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