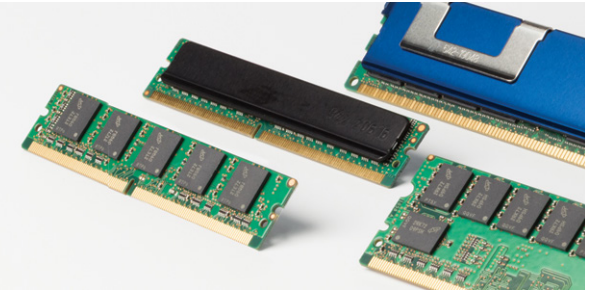


# DRAM for Every Design

## Micron® DRAM Module Form Factors Quick Reference Guide

Accelerate your time-to-market with quality DRAM modules rigorously tested for reliability in a wide range of applications. From the cost-sensitive needs of consumer computing to the extreme temperature and performance needs of industrial applications to the exacting specifications of enterprise systems, we have the right solution for your design.



Form Factor	Available <sup>1</sup> Technologies	Available <sup>1</sup> Densities	Bus Width <sup>2</sup>	Data Rate (MT/s)
<b>UDIMM</b> (unbuffered DIMM) ECC- and non-ECC-supported systems with no size constraints	DDR3, DDR4, DDR5	8GB to 48GB	x64/x72	1600 to 6400
<b>SODIMM</b> (small outline DIMM) ECC- and non-ECC-supported, space-sensitive systems	DDR3, DDR4, DDR5	8GB to 48GB	x64/x72	1600 to 6400
<b>RDIMM</b> (registered DIMM) ECC-supported networking, enterprise servers, and workstations	DDR3, DDR4, DDR5	8GB to 128GB	x72/x80	1600 to 6400
<b>LRDIMM</b> (load-reduced DIMM) Highest-density enterprise server and DDR4 networking systems	DDR4	64GB to 128GB	x72	1600 to 3200
<b>VLP RDIMM</b> (very low profile registered DIMM) Blade servers and networking ATCA height-compatible systems requiring ECC modules	DDR4	8GB to 32GB	x72	2666 to 3200
<b>VLP UDIMM</b> (very low profile unbuffered DIMM) Blade servers and networking ATCA height-compatible systems requiring ECC modules	DDR4	8GB to 32GB	x72	1333 to 3200
<b>Mini-RDIMM</b> (mini registered DIMM) Networking and other size-constrained systems requiring ECC modules	DDR4	8GB	x72	3200
<b>VLP Mini-RDIMM</b> (very low profile mini registered DIMM) Networking ATCA height-compatible and other size-constrained systems requiring ECC modules	DDR4	8GB	x72	3200

<sup>1</sup>Available = sampling or in production; <sup>2</sup>All x72 modules are ECC-enabled

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Device and Form Factor		Density	Pin Count	Width	Voltage	Data Rate	RoHS	PCB Dimensions
DDR5	UDIMM	8GB to 48GB	288	x64	1.1V	4800 to 6400 MT/s	Green	133.35mm L x 31.25mm H
	EUDIMM	16GB to 32GB	288	x72	1.1V	4800 to 6400 MT/s	Green	133.35mm L x 31.25mm H
	SODIMM	16Gb to 32GB	262	x64/x72	1.1V	4800 to 6400 MT/s	Green	69.6mm L x 30mm H
	RDIMM	16GB to 96GB	288	x72/x80	1.1V	4800 to 6400 MT/s	Green	133.35mm L x 31.25mm H
DDR4	UDIMM	4GB to 32GB	288	x64	1.2V	2666 to 3200 MT/s	Green	133.35mm L x 18.75-31.25mm H
	EUDIMM	8Gb to 32GB	288	x72	1.2V	2666 MT/s	Green	133.35mm L x 31.25mm H
	SODIMM	4GB to 32GB	260	x64/x72	1.2V	2666 to 3200 MT/s	Green	69.60mm L x 30mm H
	RDIMM	8GB to 64GB	288	x72	1.2V	2666 to 2933 MT/s	Green	133.35mm L x 31.25mm H
	LRDIMM	64GB to 128GB	288	x72	1.2V	2666 to 2933 MT/s	Green	133.35mm L x 31.25mm H
	VLP RDIMM	8GB to 32GB	288	x72	1.2V	2666 to 3200 MT/s	Green	133.35mm L x 18.75mm H
	VLP UDIMM	8GB to 32GB	288	x72	1.2V	2666 to 3200 MT/s	Green	133.35mm L x 18.75mm H
	Mini-RDIMM	8GB	288	x72	1.2V	3200 MT/s	Green	80.0mm L x 30mm H
	VLP Mini-RDIMM	8GB	288	x72	1.2V	3200 MT/s	Green	80.0mm L x 18.75mm H
	VLP Mini-UDIMM	8GB	288	x72	1.2V	3200 MT/s	Green	80.0mm L x 18.75mm H
DDR3	EUDIMM	4GB	240	x72	1.35V	1600 MT/s	Green	133.35mm L x 30mm H
	ECC SODIMM	8GB	204	x72	1.35V	1600 MT/s	Green	67.6mm L x 30mm H
	SODIMM	8GB	204	x64	1.35V	1600 MT/s	Green	67.6mm L x 30mm H
	RDIMM	8GB	240	x72	1.35V	1333 to 1866 MT/s	Green	133.35mm L x 30mm H

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