



# ONE SOURCE

for Industrial  
Multimarket  
Applications

## Micron® Industrial Multimarket Application Memory

The Industrial IoT/Industry 4.0 is transforming the world of manufacturing—extending automation and connectivity beyond traditional factory walls and driving strong demand for more data acquisition, communication, real-time analytics and data-driven decisions across a wide range of industrial verticals.

It is estimated 20 billion+ new smart connected devices will be deployed over the next decade. The best devices will be those that enable businesses to run more efficiently, require the least amount of maintenance and enable the least possible downtime.

Micron memory and storage solutions are the top choice across IIoT verticals like IPC/factory automation, surveillance, M2M, retail, digital signage, smart grid, transportation/fleet management, healthcare, and aerospace and defense applications.

Micron has been a trusted advisor to our industrial customers for more than 25 years. We understand the unique needs of this market and we bring a mindset to deliver sustainable value to our customers—because we firmly believe that IQ matters to our customers' success in IIoT.



Because IQ Matters to the success of your Industrial IoT designs.

## What is Micron's Industrial Quotient (IQ)?

*We bring to market a mindset and portfolio that delivers sustainable value to our customers in the following ways:*

- **Application-Specific Tuning**  
Extensive collaboration with global customers to develop in-depth understanding of application use cases and deliver products and features to meet those specific application needs.
- **Ruggedized Products**  
Product enhancements that enable consistent performance across extreme environments: extended temperature, thermal cycling, shock, humidity, etc.
- **High Reliability**  
Design and testing processes that add a high level of endurance and reliability to align with needs of long-lifecycle embedded applications.
- **Extensive Quality Testing**  
Rigorous testing to deliver the consistent performance across products and processes necessary in embedded and mission-critical applications.
- **Product Longevity**  
Extended lifecycle support for eligible products via our Product Longevity Program, which goes a step beyond standard lifecycle support to suit long-life applications.



# Micron® Memory for Industrial Multimarket Applications

Product Family	Voltage	Bus Width	Performance	Density Range	Temp Range <sup>2</sup>	Package Options
<b>Storage</b>						
SSDs	3V, 5V	x1	SATA III	64–256GB MLC, 32–128GB SLC	IT	2.5-inch, mSATA
Cards	3.3V	x4	SD 2.0, Class 10	32–256GB μSD	WT	μSD
e.MMC	3V	x1, x4, x8	MMC v5.0	4–128GB MLC	WT, IT	BGA
<b>eMCs and MCs</b>						
e.MMC + LPDDR2/3 MCs	3.3V	x8 e.MMC, x32 LPDDR2/3	933 MHz	4–8GB e.MMC, 4–8Gb LPDDR2/3	WT	BGA
NAND + LPDDR2 MCs	1.8V	x8 NAND x16, x32 LPDDR2	333–533 MHz 4-bit ECC	1–4Gb 100K SLC NAND 512Mb–4Gb LPDDR2	IT	BGA
NAND + LPDDR MCs	1.8V	x8, x16 NAND x16, x32 LPDDR	166–200 MHz 4-bit ECC	1–8Gb 100K SLC NAND 512Mb–4Gb LPDDR1	IT	BGA
<b>DRAM</b>						
MT40 DDR4 SDRAM	1.2V	x8, x16	2133–3200 MT/s	4–8Gb, 2–8GB	IT, AT	BGA, wafer, SODIMM, UDIMM, ECC SODIMM, ECC UDIMM, RDIMM
MT41 DDR3 SDRAM	1.35V	x8, x16	1600–2133 MT/s	1–8Gb, 1–8GB	IT, AT	BGA, wafer, SODIMM, UDIMM, ECC SODIMM, ECC UDIMM, RDIMM
MT47 DDR2 SDRAM	1.8V	x8, x16	800 MT/s	512Mb–2Gb, 512MB–2GB	IT, AT	BGA, wafer, SODIMM, UDIMM, RDIMM
MT48 SDRAM	3.3V	x8, x16, x32	133–167 MT/s	64–256Mb	IT, AT	TSOP, BGA, wafer
<b>Mobile DRAM</b>						
MT53 LPDDR4 SDRAM	1.1V	x32	3200 MT/s	4–32Gb	WT, IT, AT	BGA
LPDDR2 SDRAM	1.2V	x16, x32	1066 MT/s	512Mb–16Gb	WT, IT, AT	BGA, PoP, KGD
MT46 LPDDR SDRAM	1.8V	x16, x32	333–400 MT/s	512Mb–4Gb	WT, IT, AT	BGA, PoP, KGD
<b>SLC NAND</b>						
Serial SLC NAND LPIVLP	1.8V, 3V	x1, x2, x4	50 MHz on die (zero) ECC	1–8Gb 100K SLC NAND	IT	DFN, BGA, SO16, wafer
Parallel SLC NAND LPIVLP	1.8V, 3V	x8, x16	8-bit or on-die (zero) ECC	1–8Gb 100K SLC NAND	IT	TSOP, BGA, wafer
<b>Parallel NOR Flash</b>						
MT28EW	3V	x8, x16	Async	64Mb–2Gb	IT	TSOP, FBGA, BGA
<b>Serial NOR Flash</b>						
MT35X Xccela™ Flash	1.8V, 3V	x1, x8	200 MHz DDR	256Mb–2Gb	IT, AT	BGA, KGD, SOP
MT25Q	1.8V, 3V	x1, x2, x4	108–133 MHz	128Mb–2Gb	IT, AT	BGA, CSP, DFN, KGD, SOP

1. This table contains design-in products only (legacy product support covered in 5-year confidential roadmaps)

2. Typical temperature range: CT = 0°C to 95°C; WT = –25°C to 85°C; IT = –40°C to 85°C; AT = DRAM –40°C to 105°C; Flash = –40°C to 125°C

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