One source

for industrial multimarket applications

Micron industrial multimarket application memory

The industrial IoT/Industry 4.0 is transforming the world of manufacturing. It is 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.

An estimated 20+ billion new smart, connected systems will be deployed over the next decade. The best systems will be those that enable industrial applications to run more efficiently, require the least amount of maintenance and are optimized for low power consumption.

Micron memory and storage solutions are the top choice across IIoT verticals like Industrial PCs in factory and process automation, video security, machine-to-machine/5G, 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 believe that IQ matters to our customers' success in IIoT.

What is Micron's industrial quotient (IQ)?

We bring to market a mindset and portfolio that deliver sustainable value to our customers with:

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.

Ruggedized products
Product enhancements that enable consistent performance across extreme environments: extended temperature, thermal cycling, shock, humidity, and humidity.

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.

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 unique application needs.

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Micron memory for industrial multimarket applications

Product family	Voltage	Bus width	Performance	Density range	Temp range	Package options
DRAM components[1] and modules[2]						
DDR5 SDRAM (MT60)	1.1V[1]	x8, x16[1]	4800–7200 MT/s[1]	16–24Gb[1]; 8–128GB[2]	(IT, AT, CT)[1], CT[2]	(BGA, FBGA)[1]; (ECC/SODIMM, ECC/UDIMM, RDIMM)[2]
DDR4 SDRAM (MT40)	1.2V[1]	x8, x16[1]	2133–3200 MT/s[1]	8–32Gb[1]; 4–64GB[2]	(IT, AT, CT)[1], CT[2]	(BGA, FBGA)[1]; (ECC/SODIMM, ECC/UDIMM, RDIMM)[2]
DDR3 SDRAM (MT41)	1.35V[1]	x8, x16[1]	1600–2133 MT/s[1]	1–8Gb[1]; 2–8GB[2]	IT, AT, UT, CT[2]	(BGA, FBGA)[1]; (ECC/SODIMM, ECC/UDIMM, RDIMM)[2]
DDR2 SDRAM (MT47)	1.8V[1]	x8, x16[1]	800 MT/s[1]	512Mb–2Gb[1]	(IT, AT)[1], CT[2]	BGA, VFBGA[1]
SDRAM (MT48)	3.3V[1]	x8, x16[1]	266–333 MT/s[1]	64Mb–256Mb[1]	IT[1], CT[2]	TSOP, VFBGA[1]
Low Power DRAM						
LPDDR5 (MT62)	1.05V, 1.8V	x16, x32, x64	Up to 8.5 Gbps	16–128Gb	WT, IT, AI, AT, UT	BGA, PoP
LPDDR4 (MT53)	1.1V	x16, x32, x64	Up to 4.2 Gbps	4–128Gb	WT, IT, AT	BGA, PoP
LPDDR3	1.2V	x32, x64	Up to 2.3 Gbps	8–32Gb	WT	BGA, PoP
LPDDR2	1.2V	x32	533 MHz	512Mb–2Gb	IT, AT	BGA
SLC NAND						
Serial SLC NAND LP/VLP	1.8V, 3V	x1, x2, x4	Up to 133 MHz, on-die (zero) ECC	1–32Gb SPI NAND SLC	IT, AT, CT	DFN, BGA, wafer
Parallel SLC NAND LP/VLP	1.8V, 3V	x8, x16	8-bit or on-die (zero) ECC	1–256Gb P-NAND SLC	IT, AT, CT	TSOP, BGA, wafer
NOR flash						
Octal NOR (MT35X)	1.8V, 3V	x1, x8	200 MHz DDR	256Mb–2Gb	IT, AT, UT	BGA
Serial NOR (MT25Q)	1.8V, 3V	x1, x2, x4	133–166 MHz	128Mb–2Gb	IT, AT, UT	BGA, CSP, DFN, KGD, SOIC
Parallel NOR (MT28EW)	3V	x8, x16	Async	128Mb–2Gb	IT, AT	TSOP, BGA
eMCPs and MCPs						
e.MMC + LPDDR4 eMCP	3.3V	x8 e.MMC, x32 LPDDR4	v5.1 (e.MMC); 2133 MHz (LPDDR4)	32GB e.MMC + 16Gb LPDDR4	IT	BGA
NAND + LPDDR4 MCP	1.8V	x8 NAND, x16, x32 LPDDR4	100K P/E SLC NAND; 1866–2133 MHz (LPDDR4)	4–16Gb SLC NAND + 4–16Gb LPDDR4	IT	BGA
NAND + LPDDR2 MCP	1.8V	x8 NAND, x32 LPDDR2	100K P/E SLC NAND; 533 MHz (LPDDR2)	4Gb SLC NAND + 2–4Gb LPDDR2	IT	BGA
Storage						
SSD (2100 AI)	3.3V/1.2V/ 0.9V	x4	PCIe Gen3	64GB–1TB	AI	BGA, M.2 (Type 2230)
Memory cards	3.3V	x4	SD3.0 UHS-I, U1/U3, Class 10	32GB–1.5TB	WT	microSD
e.MMC	3V	x1, x4, x8	e.MMC v5.0, e.MMC v5.1	32GB–256GB	WT, IT	BGA
UFS	1.2/3.3V	x1, x2	JESD220C 2.1, JESD220D 3.1	32GB–256GB	IT, AT	TFBGA, LFBGA

1. This table contains design-in products only.
2. Typical temperature range: IT = –40°C to 85°C; AI = –40°C to 95°C; WT = –25°C to 85°C; AT = –40°C to 105°C; UT = –40°C to 125°C

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