Micron's Industrial Temperature DRAM
For Ultimate Performance Under Extreme Conditions

For products operating at temperatures ranging from -40°C to +85°C, Micron Technology's extensive line of industrial temperature (IT) DRAM provides outstanding performance and proven reliability. We offer IT SDR and DDR SDRAM components and modules in an array of organizations, densities, and packages—all at Micron's high standards of quality—to give you flexibility in your designs and confidence they'll perform in the most extreme environments.

Extremely Low Power, Too

Micron's ultra low-power Mobile SDRAM family combines IT capability with two leading-edge, power-saving technologies that help ensure optimal functionality for wireless, handheld, and mobile computing devices. Temperature compensated self refresh and partial array self refresh enable Mobile SDRAM

to consume 70 percent less power than standard SDRAM while extending battery life for truly on-the-go applications.

Ideal for These Applications

- Automotive instrumentation
- In-car navigational systems
- Industrial mobile/wireless computing devices
- Cellular base stations
- Telematics systems
- Exterior communications boxes

Call us at 208-368-3900 or visit us on the Web at *www.micron.com/dram* for more details about Micron's industrial temperature DRAM components and modules.

Industrial Temperature Components

Density	Memory Configuration	Part Number	Speed Mark	Voltage	Refresh Rate	Package		Low Power ("L" part mark)	Samples	Production
						TSOP (TG) Pins	FBGA Balls			
■ **SDR SDRAM**										
64Mb	8 Meg x 8	MT48LC8M8A2TG	-75 IT	3.3V	4K	54	–	No	Now	Now
	4 Meg x 16	MT48LC4M16A2TG	-75 IT	3.3V	4K	54	–	No	Now	Now
	2 Meg x 32	MT48LC2M32B2TG	-7 IT	3.3V	4K	86	–	No	Now	Now
128Mb	16 Meg x 8	MT48LC16M8A2TG	-75 IT	3.3V	4K	54	–	No	Now	Now
	8 Meg x 16	MT48LC8M16A2TG	-75 IT	3.3V	4K	54	–	No	Now	Now
	4 Meg x 32	MT48LC4M32B2TG	-7 IT	3.3V	4K	86	–	No	Now	Now
	4 Meg x 32	MT48LC4M32B2FC	-7 IT	3.3V	4K	-	90 (11x13)	No	Now	EOL 4Q03
	4 Meg x 32	MT48LC4M32B2F5	-7 IT	3.3V	4K	-	90 (8x13)	No	4Q03	1Q04
256Mb	32 Meg x 8	MT48LC32M8A2TG	-75 IT	3.3V	8K	54	–	No	Now	Now
	16 Meg x 16	MT48LC16M16A2FG	-75 IT	3.3V	8K	-	54 (8x14)	No	Now	Now
	16 Meg x 16	MT48LC16M16A2TG	-75 IT	3.3V	8K	54	–	No	Now	Now
	8 Meg x 32	MT48LC8M32B2F5	-75 IT	3.3V	4K	-	90 (8x13)	No	2Q04	3Q04
	8 Meg x 32	MT48LC8M32B2TG	-75 IT	3.3V	4K	86	–	No	2Q04	3Q04
512Mb	128 Meg x 4	MT48LC128M4A2TG	-75 IT	3.3V	8K	54	–	No	1Q04	1Q04
	64 Meg x 8	MT48LC64M8A2TG	-75 IT	3.3V	8K	54	–	No	1Q04	1Q04
	32 Meg x 16	MT48LC32M16A2TG	-75 IT	3.3V	8K	54	–	No	1Q04	1Q04

Note: Products are tested to function at the extended temperature range of -40°C to +85°C for applications sensitive to these extended temperature ranges.

Industrial Temperature Components

Density	Memory Configuration	Part Number	Speed Matrix	Voltage	Refresh Rate	Package TSOP (TG) Pins	Package FBGA Balls	Low Power ("L" part mark)	Samples	Production
■ DDR SDRAM										
128Mb	16 Meg x 8	MT46V16M8TG	-75 IT	2.5V	4K	66	–	No	Now	Now
	8 Meg x 16	MT46V8M16TG	-75 IT	2.5V	4K	66	–	No	Now	Now
256Mb	32 Meg x 8	MT46V32M8TG	-75, -6T IT	2.5V	8K	66	–	No	Now	Now
	32 Meg x 8	MT46V32M8FG	-75, -6T IT	2.5V	8K	–	60 (8x14)	No	4Q03	1Q04
	16 Meg x 16	MT46V16M16TG	-75, -75Z, -6T[1] IT	2.5V	8K	66	–	No	Now	Now
	16 Meg x 16	MT46V16M16FG	-75, -75Z, -6T[1] IT	2.5V	8K	–	60 (8x14)	No	Now	1Q04
512Mb	64 Meg x 8	MT46V64M8TG	-75, -75Z IT	2.5V	8K	66	–	No	4Q03	1Q04
	64 Meg x 8	MT46V64M8FN	-75, -75Z IT	2.5V	8K	–	60 (10x12.5)	No	1Q04	2Q04
	32 Meg x 16	MT46V32M16TG	-75, -75Z[1] IT	2.5V	8K	66	–	No	4Q03	1Q04
	32 Meg x 16	MT46V32M16FN	-75, -75Z[1] IT	2.5V	8K	–	60 (10x12.5)	No	1Q04	2Q04
■ Mobile SDRAM										
64Mb	4 Meg x 16	MT48H4M16LFF4	-10, -8 IT	1.8V	4K	–	54 (8x8)	Yes	Now	4Q03
128Mb	8 Meg x 16	MT48H8M16LFF4	-10, -8 IT	1.8V	4K	–	54 (8x8)	Yes	Now	4Q03
	8 Meg x 16	MT48V8M16LFFF	-10, -8 IT	2.5V	4K	–	54 (8x9)	Yes	Now	Now
	8 Meg x 16	MT48V8M16LFFF4	-10, -8 IT	2.5V	4K	–	54 (8x8)	Yes	4Q03	1Q04
	8 Meg x 16	MT48LC8M16LFFF	-10, -8 IT	3.3V	4K	–	54 (8x9)	Yes	Now	Now
	8 Meg x 16	MT48LC8M16LFFF4	-10, -8 IT	3.3V	4K	–	54 (8x8)	Yes	4Q03	1Q04
	4 Meg x 32	MT48V4M32LFFC	-10, -8 IT	2.5V	4K	–	90 (11x13)	Yes	Now	Now
	4 Meg x 32	MT48V4M32LFF5	-10, -8 IT	2.5V	4K	–	90 (8x13)	Yes	4Q03	1Q04
	4 Meg x 32	MT48LC4M32LFFC	-10, -8 IT	3.3V	4K	–	90 (11x13)	Yes	Now	Now
	4 Meg x 32	MT48LC4M32LFF5	-10, -8 IT	3.3V	4K	–	90 (8x13)	Yes	4Q03	1Q04
256Mb	16 Meg x 16	MT48H16M16LFFG	-10, -8, -75 IT	1.8V	8K	–	54 (8x9)	Yes	Now	Now
	16 Meg x 16	MT48V16M16LFFG	-10, -8, -75 IT	2.5V	8K	–	54 (8x9)	Yes	Now	Now
	16 Meg x 16	MT48LC16M16LFFG	-10, -8, -75 IT	3.3V	8K	–	54 (8x9)	Yes	Now	Now
	8 Meg x 32	MT48H8M32LFF5	-10, -8 IT	1.8V	4K	–	90 (8x13)	Yes	1H04	3Q04
	8 Meg x 32	MT48V8M32LFF5	-10, -8 IT	2.5V	4K	–	90 (8x13)	Yes	1H04	3Q04
	8 Meg x 32	MT48LC8M32LFF5	-10, -8 IT	3.3V	4K	–	90 (8x13)	Yes	1H04	3Q04
512Mb	32 Meg x 16	MT48H32M16LFFG	-10, -8 IT	1.8V	8K	–	54 (8x14)	Yes	3Q04	4Q04
	32 Meg x 16	MT48V32M16LFFG	-10, -8 IT	2.5V	8K	–	54 (8x14)	Yes	3Q04	4Q04
	(2) 32 Meg x 16	MT48V32M16S2FG	-8 IT	2.5V	8K	–	54 (8x14)	Yes	Now	4Q03

Note: Products are tested to function at the extended temperature range of -40°C to +85°C for applications sensitive to these extended temperature ranges. [1]Limited availability.

Industrial Temperature Modules

Density	Description	Part Number	Speed Available	Package TSOP (TG) Pins	Samples	Production
■ SDR SDRAM – Unbuffered DIMMs						
64MB	8 Meg x 72, 3.3V, ECC Gold	MT5LSDT872AI-133	PC133	168	Now	Now
	8 Meg x 64, 3.3V, Gold	MT4LSDT864AI-133	PC133	168	Now	Now
128MB	16 Meg x 72, 3.3V, ECC Gold	MT5LSDT1672AI-133	PC133	168	Now	Now
	16 Meg x 64, 3.3V, Gold	MT4LSDT1664AI-133	PC133	168	Now	Now
256MB	32 Meg x 72, 3.3V, ECC Gold	MT9LSDT3272AI-133	PC133	168	Now	Now
	32 Meg x 64, 3.3V, Gold	MT8LSDT3264AI-133	PC133	168	Now	Now
512MB	64 Meg x 72, 3.3V, ECC Gold	MT18LSDT6472AI-133	PC133	168	Now	Now
	64 Meg x 64, 3.3V, Gold	MT16LSDT6464AI-133	PC133	168	Now	Now
■ SDR SDRAM – SODIMMs						
32MB	4 Meg x 64, 3.3V, Gold	MT4LSDT464HI-133	PC133	144	Now	Now
64MB	8 Meg x 64, 3.3V, Gold	MT4LSDT864HI-133	PC133	144	Now	Now
128MB	16 Meg x 64, 3.3V, Gold	MT4LSDT1664HI-133	PC133	144	Now	Now
256MB	32 Meg x 64, 3.3V, Gold	MT8LSDT3264HI-133	PC133	144	Now	Now
512MB	64 Meg x 64, 3.3V, Gold	MT16LSDF6464HI-133	PC133	144	Now	Now
■ DDR SDRAM – Unbuffered DIMMs						
128MB	16 Meg x 64, 2.5V, Gold	MT4VDDT1664AI-265	DDR266	184	Now	Now
512MB	64 Meg x 72, 2.5V, ECC Gold	MT18VDDT6472AI-265	DDR266	184	Now	Now
	64 Meg x 72, 2.5V, Dual-Bank, ECC Gold	MT18VDDT6472DI-265	DDR266	184	Now	Now
■ DDR SDRAM – SODIMMs						
256MB	32 Meg x 72, 2.5V, PLL Gold	MT9VDDT3272PHI-265	DDR266	200	Now	Now
	32 Meg x 72, 2.5V, Gold	MT9VDDT3272HI-265	DDR266	200	Now	Now

Note: Industrial temperature modules are specified with all components meeting industrial grade/temperature criteria. The module itself is not tested at industrial temperature. Industrial temperature modules are not available in low power at this time.

www.micron.com

Products are warranted only to meet Micron's production data sheet specifications. Products and specifications are subject to change without notice. Dates are estimates only.

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