

Micron® Flash Memory Support for Xilinx® Platforms

Save yourself time and money—Micron memory comes *validated* on Xilinx platforms

Product	SPI NOR Flash				BPI NOR Flash				NAND Flash	Managed NAND		
	Family	MT25T	MT25Q	N25Q*	M25P*	MT28GU*	P30/P33*	M29EW*	MT28EW	MT29F Parallel	MTFC	MTFC
Voltage	1.8V, 3.3V	1.8V, 3.3V	1.8V, 3.3V	3V	1.8V	1.8V, 3.3V	1.8V, 3.3V	1.8V, 3.3V	3.3V V _{cc} / 1.8-3.3V I/O	1.8V, 3V	3V, 1.8V	3V
Speed ¹	133 MHz/ 108 MHz	133 MHz/ 108 MHz	108 MHz	50 MHz	133 MHz, burst	52 MHz, burst	Asynch	Asynch	30 MB/s	eMMC 5.0	eMMC 4.41/4.51	
Width	x8	x1, x2, x4	x1, x2, x4	x1	x16 (non-MUX)	x16	x8, x16	x8, x16	x8, x16	x1, x4, x8	x1, x4, x8	
Density	256Mb–1Gb	128Mb–2Gb	16Mb–1Gb	512Kb–64Mb	256Mb–1Gb	64Mb–2Gb	64Mb–2Gb	128Mb–1Gb	1Gb–128Gb	4GB–64GB	4GB–64GB	
MPSoC												
Zynq® UltraScale+™ MPSoC	P	✓	✓							✓	✓	✓
SoC												
Zynq-7000 SoC	P	✓	✓				✓ ⁴	P	✓			✓ ⁸
Xilinx UltraScale+™ Series FPGAs												
Virtex®	P	✓	✓ ²		✓	✓ ⁷	✓	✓				
Kintex®	P	✓	✓ ²		✓	✓	✓	✓				
Xilinx UltraScale™ Series FPGAs												
Virtex	P	✓	✓ ²		✓	✓ ⁷	✓	✓				
Kintex	P	✓	✓ ²		✓	✓	✓	✓				
Xilinx 7-Series FPGAs												
Virtex-7 (1.8V only)	P	✓	✓ ²		✓	✓ ⁷	✓	✓				
Kintex-7	P	✓	✓ ²		✓	✓	✓	✓				
Artix-7	P	✓	✓ ²		✓	✓	✓	✓				
Xilinx 6-Series FPGAs												
Virtex-6 (x1 SPI only)		✓ ⁹	✓ ³	✓			✓ ^{5,7}					
Spartan®-6		✓ ⁹	✓ ³	✓			✓ ^{5,6}					
Xilinx Legacy FPGAs												
Virtex-5				✓			✓ ^{5,7}					
Spartan-3A				✓								

Please verify exact configuration and specification with your Xilinx or Micron representative.

P Pending characterization. 1. The max flash speed is dependent on the FPGA family supported frequency. 2. Supports up to 256Mb parts (consider MT25Q for larger storage needs). 3. Supports up to 128Mb. 4. Zynq-7000 only supported in densities of 32Mb–256Mb and width of x8 on M29EW. 5. P30 supported up to 1Gb. 6. P33 supported up to 1Gb. 7. P33 not supported. 8. Zynq-7000 supports x1 and x4 modes for storage only (cannot be used for boot). 9. MT25Q 128Mb is supported in ISE 14.7 by selecting N25Q128 in iMPACT. *EOL pending; please contact your Micron representative for details.

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Rev. K 2117 CCMMD-676576390-2452



Micron® DRAM Memory Support for Xilinx® Platforms

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Micron DRAM	Product	DDR4	DDR3L ⁴ /DDR3	DDR2	DDR	RLDRAM ^{®3}	RLDRAM ^{®2}	LPDDR4	LPDDR3	LPDDR2	HMC
	Family	MT40A	MT41K/MT41J	MT47	MT46	MT44	MT49	MT53	EDF/MT52	MT42	MT43
	Voltage (Core)	1.2V	1.35V, 1.5V	1.8V	2.5V	1.35V	1.8V	1.1V	1.2V	1.2V	1.2V
	Speed	526–1333 MHz	300–1066 MHz	125–533 MHz	77–200 MHz	200–1066 MHz	175–533 MHz	10–1600 MHz	10–933 MHz	10–533 MHz	15 Gb/s
	Width	x4 ¹ , x8, x16	x4 ¹ , x8, x16	x8, x16	x8, x16	x18, x36	x18, x36	x32	x32, x64	x16, x32	x32, x64
	Density	4Gb, 8Gb	1Gb, 2Gb, 4Gb, 8Gb	512Mb, 1Gb, 2Gb	256Mb, 512Mb	576Mb, 1.125Gb	288Mb, 576Mb	8Gb, 16Gb	8Gb, 16Gb, 32Gb	512Mb–16Gb	2GB, 4GB
	Modules	UDIMM, RDIMM, LRDIMM, SODIMM					–	–	–	–	–
	Extensible Processing Platforms – Zynq® UltraScale+™ -MPSoC										
Processing System	✓	✓						✓	✓		
Programmable Logic	✓	✓			✓	✓			✓		✓
Extensible Processing Platforms – Zynq-7000 SoC²											
Processing System		✓ ³	✓							✓	
Programmable Logic		✓	✓							✓	
Xilinx UltraScale+ Series FPGAs											
Virtex®	✓	✓			✓						✓
Kintex®	✓	✓			✓						✓
Xilinx UltraScale Series FPGAs											
Virtex	✓	✓			✓						✓
Kintex	✓	✓			✓						✓
Xilinx 7-Series FPGAs											
Virtex-7		✓	✓		✓	✓				✓	
Kintex-7		✓	✓		✓	✓				✓	
Artix®-7		✓	✓							✓	
Xilinx 6-Series FPGAs											
Virtex-6		✓	✓			✓					
Spartan®-6		✓	✓	✓							
Xilinx Legacy FPGAs											
Virtex-5		✓	✓	✓		✓					
Spartan-3A			✓	✓							

Please verify exact configuration and specification with your Xilinx or Micron representative.

1. The x4 width applies to UltraScale FPGAs only. 2. DRAM DIMMs not supported on Zynq-7000. 3. Zynq processing system can run up to 667 MHz on DDR3. 4. DDR3L (MT41K) devices are compatible with operation at 1.5V. Note that some density and speed combinations may be available only as 1.35V part numbers, but these meet the specification for operation at 1.5V.