

Micron® Flash Memory Support for Xilinx® Platforms

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

Micron Flash		SPI NOR Flash		Managed NAND			NAND Flash	BPI NOR Flash	
	Family	MT35X	MT25Q	MTFC	MTFC	MTFC	MT29F Parallel	MT28EW	MT28FW
	Voltage	1.8V	1.8V, 3.3V	3V, 1.8V	3V, 1.8V	3V	1.8V, 3V	3.3V Vcc/ 1.8-3.3V I/O	3.3V Vcc/ 1.8-3.3V I/O
	Speed ¹	up to 200 MHz	133 MHz/ 108 MHz	e.MMC 5.1	e.MMC 5.0	e.MMC 4.41/4.51	30 MB/s	Asynch	Asynch
	Width	x1, x8	x1, x2, x4	x1, x4, x8	x1, x4, x8	x1, x4, x8	x8, x16	x8, x16	x16
	Density	256Mb–2Gb	128Mb–2Gb	16GB–128GB	4GB–8GB	2GB–8GB	1Gb–128Gb	128Mb–1Gb	2Gb
Xilinx FPGA Family	ACAP								
	Versal™	✓ ⁷	✓	✓	✓	✓			
	MPSoC/RFSoc								
	Zynq® UltraScale+™ MPSoC/RFSoc		✓	✓	✓	✓	✓		
	SoC								
	Zynq-7000 SoC		✓	✓ ²	✓ ²	✓ ²	✓ ⁶	✓ ⁴	
	Xilinx UltraScale+™ Series FPGAs								
	Virtex®		✓					✓	✓
	Kintex®		✓					✓	✓
	Xilinx UltraScale™ Series FPGAs								
	Virtex		✓					✓	✓
	Kintex		✓					✓	✓
	Xilinx 7-Series FPGAs								
	Virtex-7 (1.8V only)		✓					✓	✓
	Kintex-7		✓					✓	✓
	Artix-7		✓					✓	✓
	Spartan®-7		✓						
	Xilinx 6-Series FPGAs								
	Virtex-6 (x1 SPI only)		✓ ³						
	Spartan-6		✓ ³					✓ ⁵	
	Xilinx Legacy FPGAs								
	Virtex-5		✓ ³						
	Spartan-3A		✓ ³						

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. Zynq-7000 supports x1 and x4 modes for storage only (cannot be used for boot). 3. MT25Q 128Mb is supported in ISE 14.7 by selecting N25Q128 in IMPACT. 4. x8 support only. 5. Contact Xilinx for a workaround solution on Spartan-6 platforms with ISE 14.7 iMPACT. 6. M79A supports boot and storage; M70A for storage only. 7. Use I/O Pin Configuration Option 1: Boot in SDR (Extended-SPI Protocol with Octal Commands).

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Micron® DRAM Memory Support for Xilinx® Platforms

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Micron DRAM		DDR4	DDR3L ⁴ /DDR3	DDR2	DDR	RLDRAM®3	RLDRAM®2	LPDDR4/4X	LPDDR3	LPDDR2
	Family	MT40A	MT41K/MT41J	MT47	MT46	MT44	MT49	MT53	EDF/MT52	MT42
	Voltage (Core)	1.2V	1.35V, 1.5V	1.8V	2.5V	1.35V	1.8V	1.1V	1.2V	1.2V
	Speed	526–1600 MHz	300–1066 MHz	125–533 MHz	77–200 MHz	200–1066 MHz	175–533 MHz	10–2133 MHz	10–933 MHz	10–533 MHz
	Width	x4 ¹ , x8, x16	x4 ¹ , x8, x16	x8, x16	x8, x16	x18, x36	x18, x36	x32	x32, x64	x16, x32
	Density	8Gb, 16Gb	1Gb, 2Gb, 4Gb, 8Gb	512Mb, 1Gb, 2Gb	256Mb, 512Mb	576Mb, 1.125Gb	288Mb, 576Mb	8Gb, 16Gb, 32Gb	8Gb, 16Gb, 32Gb	512Mb–16Gb
	Modules	UDIMM, RDIMM, LRDIMM, SODIMM				–	–	–	–	–
Xilinx FPGA Family	ACAP									
	Versal™	✓				✓		✓		
	Xilinx Zynq® UltraScale+™ MPSoC/RFSoc									
	Processing System	✓	✓					✓ ⁵	✓	
	Programmable Logic	✓	✓			✓	✓		✓	
	Xilinx Zynq-7000 SoC ²									
	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		✓	✓						✓
	Spartan®-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. ⓘ Pending characterization 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. 5. Supports 1.1V Vddq for LPDDR4 1600 MHz only.

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