Micron® Flash Memory Support for Intel® FPGA Platforms

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

		Code and Data Storage					Configuration		
		SPI NOR		NAND		e.MMC	SPI NOR[1]	Parallel NOR[2]	NAND[2]
Micron Flash	Family	MT25QL	MT25QU	MT29F		MTFC	MT25Q	MT28EW	MT29F
	Density	128Mb-1Gb	128Mb-2Gb	1Gb–32Gb		2GB–128GB	128Mb–2Gb	128Mb–1Gb	1Gb
	Voltage	3V	1.8V	3V	1.8V	3V	1.8V or 3V	1.8V, 3V	1.8V, 3V
	Read Speed	Up to 133 MHz	166 MHz	Asynch		4.41/4.51/5.0/5.1 SDR/DDR 52 MHz, HS200, HS400	166/133 MHz	Random Access 75ns/70ns	Read Cycle Time 20ns
	Width	x1, x2, x4		x8		x1, x4, x8	x1, x2, x4	x8, x16	x8
	Temperature/Grade	Industrial, Automotive				Automotive, Industrial, Wireless	Industrial, Automotive		
	Packages	S08W, S016, DFN, BGA		TSOP, BGA		100/153/169-ball BGA	S08W, S016, DFN, BGA	TSOP, BGA	
Intel FPGA Family	**Intel® Agilex™**								
	Intel Agilex FPGA						Ⓟ		
	Intel Agilex SoC		Ⓟ		Ⓟ	Ⓟ	Ⓟ		
	Stratix®								
	Intel Stratix 10 FPGA						✔	✔	✔
	Intel Stratix 10 SoC		✔		✔[3,4]	✔	✔	✔	
	Stratix V FPGA						✔	✔	✔
	Arria®								
	Intel Arria 10 FPGA						✔	✔	✔
	Intel Arria 10 SoC		✔		✔[4]	✔			
	Arria V FPGA						✔	✔	✔
	Arria V SoC	✔		✔[4]	✔[4]	✔			
	Cyclone®								
	Intel Cyclone 10 FPGA						✔	✔	✔
	Cyclone V FPGA						✔	✔	✔
	Cyclone V SoC	✔	✔	✔[4]	✔[4]	✔			

Please verify exact configuration and specification with your Intel or Micron representative. Ⓟ Pending validation. 1. Active or passive configuration; see Note 2 for passive configuration details. 2. Passive configuration only; PFL + CPLDs (Max II and Max V devices). 3. Also supports x16. 4. On-die ECC disabled.

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Micron® DRAM Memory Support for Intel® FPGA Platforms

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		DDR4	DDR3	DDR3L[1]	DDR2	LPDDR2	LPDDR3	RLDRAM®3	RLDRAM®2
Micron DRAM	Family	MT40A	MT41J	MT41K	MT47	MT42	MT52	MT44	MT49
	Density	8Gb/16Gb	1Gb, 2Gb, 4Gb	1Gb, 2Gb, 4Gb/8Gb	1Gb, 2Gb	512Mb, 1Gb, 2Gb, 4Gb, 8Gb, 16Gb	8Gb, 16Gb, 32Gb	576Mb, 1Gb	288Mb, 576Mb
	Voltage (Core)	1.2V	1.5V	1.35V/1.5V	1.5V	1.2V		1.35V	1.8V
	Speed[2]	625–1600 MHz	400–1066 MHz	400–1066 MHz	200–533 MHz	333–400 MHz	800–933 MHz	800–1066 MHz	300–533 MHz
	Width	x8, x16				x32		x18, x36	
	Temperature/Grade	Commercial, Industrial, Automotive					Wireless (-30°C to 85°C)	Commercial, Industrial	
	Packages/Modules	UDIMM, RDIMM, LRDIMM, SODIMM, BGA				BGA, PoP		BGA	
Intel FPGA Family	**Intel® Agilex™**								
	Intel Agiliex FPGA	Ⓟ						Ⓟ	
	Intel Agilex SoC	Ⓟ						Ⓟ	
	Stratix®								
	Intel Stratix 10 FPGA	✔[3]	✔[3]	✔[3]				✔	
	Intel Stratix 10 SoC	✔	✔	✔				✔	
	Stratix V FPGA		✔	✔	✔			✔	✔
	Arria®								
	Intel Arria 10 FPGA	✔[3]	✔[3]	✔[3]		✔	✔	✔	
	Intel Arria 10 SoC	✔	✔	✔				✔	
	Arria V FPGA		✔		✔	✔			✔
	Arria V SoC			✔	✔	✔			
	Cyclone®								
	Intel Cyclone 10 FPGA		✔	✔			✔		
	Cyclone V FPGA		✔	✔	✔	✔			
	Cyclone V SoC			✔	✔				
	MAX®								
	MAX 10		✔	✔	✔	✔			

Please verify exact configuration and specification with your Intel or Micron representative. Ⓟ Pending validation. 1. DDR3L is 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. 2. The maximum memory speed is dependent on the maximum frequency supported by the FPGA family. See the FPGA family data sheet for the maximum speeds. 3. x4 width supported.

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