Product brief

Infineon Memory Solutions

Pairing guide for Xilinx FPGAs

NOR Flash memory supported by Xilinx Vivado Design Suite [1]

Xilinx FPGA part number	Flash density	QSPI NOR part number	Parallel NOR part number
Artix 7 Kintex 7 Kintex UltraScale Kintex UltraScale+ Virtex UltraScale Virtex UltraScale+	64 Mb	S25FL064LABx	
	128 Mb	S25FL128LAGx S25FL128SAGx S25FL127SABx	S29GL128PVx S29GL128SVx
	256 Mb	S25FL256LAGx S25FL256SAGx	S29GL256PVx S29GL256SVx
	512 Mb	S25FL512SAGx	S29GL512SVx S29GL512TVx
	1 Gb		S29GL01GSVx S29GL01GTVx
	2 Gb		S70GL02GSVx S70GL02GTVx
Virtex 7	128 Mb	S25FL128SAGx S25FL127SABx	S29GL128PVx S29GL128SVx
	256 Mb	S25FL256SAGx S25FL256LAGx	S29GL256PVx S29GL256SVx
	512 Mb	S25FL512SAGx	S29GL512SVx S29GL512TVx
	1 Gb		S29GL01GSVx S29GL01GTVx
	2 Gb		S70GL02GSVx S70GL02GTVx
Spartan 7	64 Mb	S25FL064LABx	
	128 Mb	S25FL128LAGx S25FL128SAGx S25FL127SABx	
	256 Mb	S25FL256LAGx S25FL256SAGx	
	512 Mb	S25FL512SAGx	
Zynq 7000	64 Mb	S25FL064LABx	
	128 Mb	S25FL127SABx S25FL128SAGx	
	256 Mb	S25FL256SAGx	
	512 Mb	S25FL512SAGx	
	1 Gb	S70FL01GSAGx	
Zynq UltraScale+ MPSoC Zynq UltraScale+ RFSoC	128 Mb	S25FL127SABx S25FL128SAGx	
	256 Mb	S25FL256SAGx S25FL256LAGx	
	512 Mb	S25FL512SAGx	
	1 Gb	S70FL01GSAGx	
Versal	128 Mb	S25FL127SABx S25FL128SAGx	
	256 Mb	S25FL256SAGx S25FL256LAGx	
	512 Mb	S25FL512SAGx	
	1 Gb	S70FL01GSAGx	

1) Based on UG908 Vivado Design Suite user guide v2020.2: Vivado Design Suite user guide: programming and debugging (xilinx.com)

NOR Flash Memory supported by Xilinx FPGA/SoCs with U-Boot or Linux MTD

For Xilinx FPGA/SoC implementations based on U-Boot or Linux MTD, patches for Infineon QSPI Flash (including SEMPER™ QSPI) have been submitted and approved by U-Boot and Linux communities. Additional useful patches for Infineon QSPI Flash can be downloaded from the Infineon website. Please contact MS_Ecosystem@infineon.com for additional details.

Synchronous SRAM memory supported by Xilinx FPGA

Infineon provides a Synchronous SRAM memory controller that can be integrated as soft IP in supported Xilinx FPGAs. Please request access to your customized SRAM memory controller RTL IP through MS_Ecosystem@infineon.com

HYPERRAM™ and HYPERFLASH™ expansion memory for Xilinx FPGAs

HYPERRAM™ and HYPERFLASH™ both implement the HYPERBUS™ 12-pin interface, a low-cost, low pincount interface supporting up to 400 MB/s. These devices are ideal for use as a frame buffer. Infineon provides a HYPERBUS™ memory controller that can be integrated as soft IP in supported Xilinx FPGAs for both HYPERRAM™ and HYPERFLASH™ implementations. Please request access to HYPERBUS™ memory controller RTL IP on the Xilinx website.

Infineon and Xilinx

Infineon and Xilinx collaborate to provide robust solutions that simplify your design process. Xilinx is a Preferred Partner in Infineon's Partner Ecosystem program, and Infineon (Cypress) is a member of Xilinx's Partner Program.

Infineon
Preferred Partner

Synchronous SRAM supported by Xilinx FPGA

Xilinx FPGA part number	Sync SRAM density	QDR-II+	QDR-II+ eXtreme	QDR-IV
Virtex UltraScale Kintex UltraScale Kintex UltraScale + Zynq UltraScale +	72 Mb		CY7C2565XV18 CY7C2563XV18 CY7C2564XV18 CY7C2562XV18	
	144 Mb	CY7C1645KV18 CY7V1643KV18 CY7C2644KV18 CY7C2642KV18		CY7C4141KV13 CY7C4121KV13 CY7C4142KV13 CY7C4122KV13
Virtex 7	18 Mb	CY7C2163KV18 CY7C2165KV18		
	36 Mb	CY7C2263KV18 CY7C2265KV18	CY7C2264XV18 CY7C2262XV18	
	72 Mb	CY7C1565KV18 CY7C15632KV18 CY7C25652KV18 CY7C25442KV18	CY7C2564XV18 CY7C2562XV18	
	144 Mb	CY7C2665KV18 CY7C2663KV18		
Kintex 7	18 Mb	CY7C2163KV18 CY7C2165KV18		
	36 Mb	CY7C2263KV18 CY7C2265KV18	CY7C2264XV18 CY7C2262XV18	
	72 Mb	CY7C1565KV18 CY7C15632KV18 CY7C25632KV18 CY7C25652KV18 CY7C25442KV18		