

Infineon Memory Solutions

Pairing Guide for Xilinx FPGAs

To simplify your development process and get you to market faster, Infineon collaborates with chipset manufacturers worldwide to ensure that our memory devices work with leading microprocessors, microcontrollers, SoCs and FPGAs. The program covers design validation and interoperability testing, and you will often find our devices on industry chipset reference designs.

AMD/Xilinx designs, manufactures, tests, and sells FPGA+SoC and FPGA products for a wide variety of applications in computing, communications, automotive, industrial, spatial, and other markets.

NOR Flash memory supported by Xilinx Vivado design suite¹⁾

Xilinx FPGA Part Num	Flash Density	QSPI NOR Part Num	Parallel NOR Part Num
Artix UltraScale+ ²⁾ Kintex UltraScale+ ²⁾ Virtex UltraScale+ ²⁾	128 Mb	S25FL128SAGMFIRxx	S29GL128P12TFxVy S29GL128S10TFxVy
	256 Mb	S25FL256SAGMFIRxx	S29GL256P12TFxVy S29GL256S10TFxVy
	512 Mb	S25FL512SAGMFIRxx S25HS512TDPxx	S29GL512S11TFxVy S29GL512T12TFxVy
	1 Gb		S29GL01GS11TFxVy S29GL01GT12TFxVy
	2 Gb	S25HS02GTDPBHxx	S70GL02GS12SFHxVy S70GL02GT12FHxVy
Artix 7 Kintex 7	64 Mb	S25FL064LABx	
	128 Mb	S25FL128LAGx S25FL128SAGx S25FL127SABx	S29GL128Px S29GL128Sx
	256 Mb	S25FL256LAGx S25FL256SAGx	S29GL256Px S29GL256Sx
	512 Mb	S25FL512SAGx	S29GL512Sx S29GL512Tx
	1 Gb		S29GL01GSx S29GL01GTx
	2 Gb	S25HS02GTDPBHxx	S70GL02GSx S70GL02GTx
Kintex UltraScale Virtex UltraScale	64 Mb	S25FL064LABx	
	128 Mb	S25FL128LAGx S25FL128SAGx S25FL127SABx	S29GL128Px S29GL128Sx
	256 Mb	S25FL256LAGx S25FL256SAGx	S29GL256Px S29GL256Sx
	512 Mb	S25FL512SAGx S25HS512TDPxx	S29GL512Sx S29GL512Tx
	1 Gb		S29GL01GSx S29GL01GTx
	2 Gb	S25HS02GTDPBHxx	S70GL02GSx S70GL02GTx
Virtex 7	128 Mb	S25FL128SAGx S25FL127SABx	S29GL128Px S29GL128Sx
	256 Mb	S25FL256SAGx S25FL256LAGx	S29GL256Px S29GL256Sx
	512 Mb	S25FL512SAGx	S29GL512Sx S29GL512Tx
	1 Gb		S29GL01GSx S29GL01GTx
	2 Gb	S25HS02GTDPBHxx	S70GL02GSx S70GL02GTx

1) Based on UG908 Vivado Design Suite User Guide v2023.2: Vivado Design Suite User Guide: Programming and Debugging (xilinx.com)

2) Artix UltraScale+, Kintex UltraScale+, Virtex UltraScale+ requires Flash with 1.8V Vi/o

PRODUCT BRIEF

NOR Flash memory supported by Xilinx Vivado design suite¹⁾

Xilinx FPGA Part Num	Flash Density	QSPI NOR Part Num	Parallel NOR Part Num
Spartan 7	64 Mb	S25FL064LABx	
	128 Mb	S25FL128LAGx S25FL128SAGx S25FL127SABx	
	256 Mb	S25FL256LAGx S25FL256SAGx	
	512 Mb	S25FL512SAGx	
	2 Gb	S25HS02GTDPBHxx	
Zynq 7000	64 Mb	S25FL064LABx	
	128 Mb	S25FL127SABx S25FL128SAGx	
	256 Mb	S25FL256SAGx	
	512 Mb	S25FL512SAGx	
	1 Gb	S70FL01GSAGx	
	2 Gb	S25HS02GTDPBHxx	
Zynq UltraScale+ MPSoC Zynq UltraScale+ RFSoc	128 Mb	S25FL128SAGx	
	256 Mb	S25FL256SAGx	
	512 Mb	S25FL512SAGx	
	1 Gb	S70FL01GSAGx	
	2 Gb	S25HS02GTDPBHxx	
Versal	128 Mb	S25FL127SABx S25FL128SAGx	
	256 Mb	S25FL256SAGx S25FL256LAGx	
	512 Mb	S25FL512SAGx	
	1 Gb	S70FL01GSAGx	
	2 Gb	S25HS02GTDPBHxx	

1) Based on UG908 Vivado Design Suite User Guide v2023.2: Vivado Design Suite User Guide: Programming and Debugging (xilinx.com)

2) Artix UltraScale+, Kintex UltraScale+, Virtex UltraScale+ requires Flash with 1.8V Vi/o

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

For implementations utilizing Xilinx FPGA/SoC solutions, relevant software patches for U-Boot and Linux MTD can be downloaded from the Infineon Toolbox. Patches for Infineon QSPI memory have been submitted and approved by the Linux and U-Boot communities. Please contact SDS-memoryecosystem@infineon.com for additional details.

HYPERRAM™ and HYPERFLASH™ Expansion Memory for Xilinx FPGAs

HYPERRAM and HYPERFLASH both implement the HYPERBUS™ 12-pin interface, a low-cost, low pin-count interface supporting up to 400MB/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 [Infineon website](#).

Synchronous SRAM Memory Supported by Xilinx FPGAs

Infineon provides a Synchronous SRAM Memory Controller that can be integrated as soft IP in supported Xilinx FPGAs.

Please contact your Xilinx representative for access to SRAM Memory Controller RTL IP.

PRODUCT BRIEF

Synchronous SRAM supported by Xilinx FPGA

Xilinx FPGA Part Num	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		

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 is a member of Xilinx's Partner Program.



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Warnings

Due to technical requirements, our products may contain dangerous substances. For information on the types in question, please contact your nearest Infineon Technologies office.

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