



Ti-Series FPGA Selector Guide

Ti-Series FPGAs are fabricated on a 16 nm process, delivering high performance with the lowest possible power and a small physical size. They feature the innovative Quantum® compute fabric that, with its enhanced compute capability, makes Ti-Series FPGAs ideal for embedded hardware acceleration applications. With a wide range of logic element (LE) densities from 35K to 1M, and compatibility with the Elitestek RISC-V SoCs, they can help you turn a tiny chip into an accelerated embedded compute system.

Ti-Series Family Features

35K to 1,000K Logic Elements	10 Kb Embedded RAM Blocks	DSP Blocks	PLLs	High-Voltage I/O (HVIO)	High-Speed I/O (HSIO)	Hardened RISC-V Block	MIPI D-PHY 2.5 Gbps	LPDDR4/4x Controller & PHY	Transceivers 16G/25.8G

Ti-Series Ordering Codes

You can use HSIO pairs for a various differential standards such as LVDS (1.5 Gbps), differential HSTL/SSTL, or MIPI RX and TX data/clock lanes (1.5 Gbps).

FPGA	LEs	RAM (Mbits)	RAM Blocks (10 Kb)	DSP Blocks	Package	Pins	HVIO	HSIO	PLLs	2.5G MIPI D-PHY	Hardened RISC-V Block	LPDDR4/4x	Transceivers	PCIe® Gen4	25.8G Transceivers	Temperature	Speed Grade	Ordering Code						
Ti35	36,176	1.53	153	93	FBGA	100 ⁽¹⁾	-	61	3	-	-	-	-	-	-	C	3, 3L, 4, 4L	Ti35F100C3/3L/4/4L						
																	3, 3L	Ti35F100S3F2C3/3L/4/4L						
						225	23	140	4	-	-	-	-	-	-	-	-	-	-	C	3, 3L, 4, 4L	Ti35F225C3/3L/4/4L		
																					3, 3L	Ti35F225I3/3L		
						256	27	142	4	-	-	-	-	-	-	-	-	-	-	-	-	C	3, 3L, 4, 4L	Ti35F256C3/3L/4/4L
																							3, 3L	Ti35F256I3/3L
Ti60	62,016	2.6	256	160	WLCSP	64	-	34	2	-	-	-	-	-	-	-	C	3	Ti60W64C3					
					FBGA	100 ⁽¹⁾	-	61	3	-	-	-	-	-	-	-	-	-	-	C	3, 3L, 4, 4L	Ti60F100C3/3L/4/4L		
																					3, 3L	Ti60F100S3F2C3/3L/4/4L		
						225	23	140	4	-	-	-	-	-	-	-	-	-	-	-	C	3, 3L, 4, 4L	Ti60F225C3/3L/4/4L	
																						3, 3L	Ti60F225I3/3L	
						256	27	142	4	-	-	-	-	-	-	-	-	-	-	-	-	C	3, 3L, 4, 4L	Ti60F256C3/3L/4/4L
																							3, 3L	Ti60F256I3/3L
						3																		Ti60F225Q3

1. The F100 pin package is available as a regular package as well as a SIP that incorporates SPI flash and HyperRAM in addition to the FPGA.

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FPGA	LEs	RAM (Mbits)	RAM Blocks (10 Kb)	DSP Blocks	Package	Pins	HVIO	HSIO	PLLs	2.5G MIPI D-PHY	Hardened RISC-V Block	LPDDR4/4x	Transceivers	PCIe® Gen4	25.8G Transceivers	Temperature	Speed Grade	Ordering Code			
Ti90	92,534	6.88	688	336	FBGA	361	20	110	8	2 TX 2 RX	-	x16	-	-	-	C	3, 3L,	Ti90J361C3/3L/4/4L			
																	4, 4L	Ti90J361I3/3L/4/4L			
						400	74	200	8	-	-	-	-	-	-	-	-	-	C	3, 3L,	Ti90G400C3/3L/4/4L
																				4, 4L	Ti90G400I3/3L/4/4L
						484	27	116	8	4 TX 4 RX	-	x16 x32	-	-	-	-	-	-	-	C	3, 3L,
4, 4L	Ti90J484I3/3L/4/4L																				
															Q	3	Ti90J484Q3				
529	48	210	8	-	-	x16 x32	-	-	-	-	-	-	-	C	3, 3L,	Ti90G529C3/3L/4/4L					
															4, 4L	Ti90G529I3/3L/4/4L					
Ti120	123,379	9.18	918	448	FBGA	361	20	110	8	2 TX 2 RX	-	x16	-	-	-	C	3, 3L,	Ti120J361C3/3L/4/4L			
																	4, 4L	Ti120J361I3/3L/4/4L			
						400	74	200	8	-	-	-	-	-	-	-	-	-	C	3, 3L,	Ti120G400C3/3L/4/4L
																				4, 4L	Ti120G400I3/3L/4/4L
						484	27	116	8	4 TX 4 RX	-	x16 x32	-	-	-	-	-	-	C	3, 3L,	Ti120J484C3/3L/4/4L
4, 4L	Ti120J484I3/3L/4/4L																				
														Q	3	Ti120J484Q3					
529	48	210	8	-	-	x16 x32	-	-	-	-	-	-	-	C	3, 3L,	Ti120G529C3/3L/4/4L					
															4, 4L	Ti120G529I3/3L/4/4L					
Ti135	133,844	9.95	972	486	FBGA	529	51	176	12	-	Quad Core	x16 x32	-	-	-	C	3, 3L,	Ti135C529C3/3L/4/4L			
																	4, 4L	Ti135C529I3/3L/4/4L			
Ti180	176,256	13.11	1,280	640	FBGA	361	20	110	8	2 TX 2 RX	-	x16	-	-	-	C	3, 3L,	Ti180J361C3/3L/4/4L			
																	4, 4L	Ti180J361I3/3L/4/4L			
						400	74	200	8	-	-	-	-	-	-	-	-	-	C	3, 3L,	Ti180G400C3/3L/4/4L
																				4, 4L	Ti180G400I3/3L/4/4L
						484	27	116	8	4 TX 4 RX	-	x16 x32	-	-	-	-	-	-	C	3, 3L,	Ti180J484C3/3L/4/4L
4, 4L	Ti180J484I3/3L/4/4L																				
														Q	3	Ti180J484Q3					
529	48	210	8	-	-	x16 x32	-	-	-	-	-	-	-	C	3, 3L,	Ti180G529C3/3L/4/4L					
															4, 4L	Ti180G529I3/3L/4/4L					
Ti200	198,288	14.75	1,440	720	FBGA	529	51	176	12	-	Quad Core	x16 x32	-	-	-	C	3, 3L,	Ti200C529C3/3L/4/4L			
																	4, 4L	Ti200C529I3/3L/4/4L			
Ti375	370,137	27.53	2,688	1,344	FBGA	529	51	176	12	-	Quad Core	x16 x32	-	-	-	C	3, 3L,	Ti375C529C3/3L/4/4L			
																	4, 4L	Ti375C529I3/3L/4/4L			

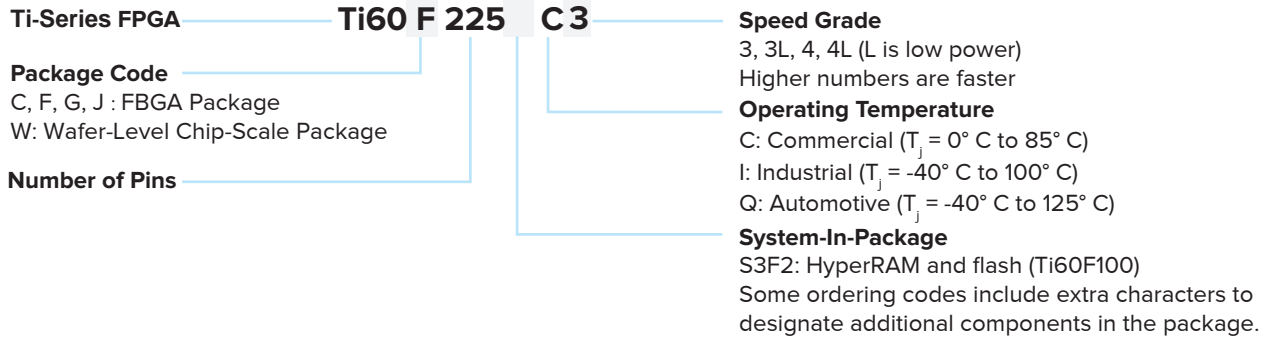
Package Dimensions

Package	Pitch	Dimensions (mm)
64-ball FBGA	0.4	3.5x3.4
100-ball FBGA	0.5	5.5x5.5
225-ball FBGA	0.65	10x10

Package	Pitch	Dimensions (mm)
256-ball FBGA	0.8	13x13
361-ball FBGA	0.65	13x13
400-ball FBGA	0.8	16x16

Package	Pitch	Dimensions (mm)
484-ball FBGA	0.8	18x18
529-ball FBGA	0.8	19x19

Example Ordering Code



Product Longevity

At Elitestek we are committed to supplying our customers with a stable supply of supported products throughout their product life cycle. We are committed to supporting our **Ti-Series** family of FPGAs in customer designs until at least 2037. Contact your local sales representative for more information on product life cycles.

