



钛金系列 FPGA Selector Guide



35K to 1,000K
Logic Elements



10 Kb Embedded
RAM Blocks



DSP Blocks



PLLs



High-Voltage I/O
(HVIO)



High-Speed I/O
(HSIO)



MIPI D-PHY
2.5 Gbps



LPDDR4/4x
Controller & PHY



SerDes
16G/25.8G

钛金系列 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	LPDDR4/4x 2.6 Gbps	LPDDR4/4x 3.3 Gbps	16G SerDes	PCIe Gen4	25.8G SerDes	Temperature	Speed Grade	Ordering Code
Ti35	36,176	1.53	149	93	FBGA	100	–	61	3	–	–	–	–	–	–	C	3, 3L, 4, 4L	Ti35F100S3F2C3/3L/4/4L
																	I	3, 3L
					FBGA	225	23	140	4	–	–	–	–	–	–	C	3, 3L, 4, 4L	Ti35F225C3/3L/4/4L
																	I	3, 3L
Ti60	62,016	2.6	256	160	WLCSP	64	–	35	2	–	–	–	–	–	–	C	3	Ti60W64C3
					FBGA	100 (1)	–	61	3	–	–	–	–	–	–	C	3, 3L, 4, 4L	Ti60F100S3F2C3/3L/4/4L
																I	3, 3L	Ti60F100S3F2I3/3L
					FBGA	225	23	140	4	–	–	–	–	–	–	C	3, 3L, 4, 4L	Ti60F225C3/3L/4/4L
																I	3, 3L	Ti60F225I3/3L
					Ti90	92,534	6.88	671	336	FBGA	361	20	110	8	2 TX 2 RX	x16	–	–
I	4, 4L	Ti90M361I3/3L/4/4L																
8	2 TX 2 RX	–	x16	–										–	–	C	3, 3L, 4, 4L	Ti90J361C3/3L/4/4L
	I	4, 4L	Ti90J361I3/3L/4/4L															
400	74	200	8	–							–	–	–	–	–	C	3, 3L, 4, 4L	Ti90G400C3/3L/4/4L
																I	4, 4L	Ti90G400I3/3L/4/4L
484	27	116	8	4 TX 4 RX							–	–	–	–	–	C	3, 3L, 4, 4L	Ti90L484C3/3L/4/4L
				I							4, 4L	Ti90L484I3/3L/4/4L						
			8	4 TX 4 RX							x16	–	–	–	–	C	3, 3L, 4, 4L	Ti90M484C3/3L/4/4L
				I							4, 4L	Ti90M484I3/3L/4/4L						
529	48	210	8	4 TX 4 RX							–	x16 x32	–	–	–	C	3, 3L, 4, 4L	Ti90J484C3/3L/4/4L
				I							4, 4L	Ti90J484I3/3L/4/4L						
			8	–							x16	–	–	–	–	C	3, 3L, 4, 4L	Ti90F529C3/3L/4/4L
				I							4, 4L	Ti90F529I3/3L/4/4L						
529	48	210	8	–							–	x16 x32	–	–	–	C	3, 3L, 4, 4L	Ti90G529C3/3L/4/4L
				I							4, 4L	Ti90G529I3/3L/4/4L						

1. The Ti60 FPGA in the F100 pin package is a SIP that incorporates SPI flash and HyperRAM in addition to the Ti60 FPGA.

FPGA	LEs	RAM (Mbits)	RAM Blocks (10 Kb)	DSP Blocks	Package	Pins	HVIO	HSIO	PLLs	2.5G MIPI D-PHY	LPDDR4/4x 2.6 Gbps	LPDDR4/4x 3.3 Gbps	16G SerDes	PCIe Gen4	25.8G SerDes	Temperature	Speed Grade	Ordering Code
Ti120	123,379	9.18	896	448	FBGA	361	20	110	8	2 TX 2 RX	x16	-	-	-	-	C I	3, 3L, 4, 4L	Ti120M361C3/3L/4/4L Ti120M361I3/3L/4/4L
										2 TX 2 RX	-	x16	-	-	-	C I	3, 3L, 4, 4L	Ti120J361C3/3L/4/4L Ti120J361I3/3L/4/4L
										-	-	-	-	-	-	C I	3, 3L, 4, 4L	Ti120G400C3/3L/4/4L Ti120G400I3/3L/4/4L
										4 TX 4 RX	-	-	-	-	-	C I	3, 3L, 4, 4L	Ti120L484C3/3L/4/4L Ti120L484I3/3L/4/4L
						484	27	116	8	4 TX 4 RX	x16	-	-	-	-	C I	3, 3L, 4, 4L	Ti120M484C3/3L/4/4L Ti120M484I3/3L/4/4L
										4 TX 4 RX	-	x16 x32	-	-	-	C I	3, 3L, 4, 4L	Ti120J484C3/3L/4/4L Ti120J484I3/3L/4/4L
										-	x16	-	-	-	-	C I	3, 3L, 4, 4L	Ti120F529C3/3L/4/4L Ti120F529I3/3L/4/4L
										-	-	x16 x32	-	-	-	C I	3, 3L, 4, 4L	Ti120G529C3/3L/4/4L Ti120G529I3/3L/4/4L
						529	48	210	8	2 TX 2 RX	x16	-	-	-	-	C I	3, 3L, 4, 4L	Ti180M361C3/3L/4/4L Ti180M361I3/3L/4/4L
										2 TX 2 RX	-	x16	-	-	-	C I	3, 3L, 4, 4L	Ti180J361C3/3L/4/4L Ti180J361I3/3L/4/4L
										-	-	-	-	-	-	C I	3, 3L, 4, 4L	Ti180G400C3/3L/4/4L Ti180G400I3/3L/4/4L
										4 TX 4 RX	-	-	-	-	-	C I	3, 3L, 4, 4L	Ti180L484C3/3L/4/4L Ti180L484I3/3L/4/4L
Ti180	176,256	13.11	1,280	640	FBGA	361	20	110	8	4 TX 4 RX	-	-	-	-	-	C I	3, 3L, 4, 4L	Ti180M484C3/3L/4/4L Ti180M484I3/3L/4/4L
										4 TX 4 RX	x16	-	-	-	-	C I	3, 3L, 4, 4L	Ti180J484C3/3L/4/4L Ti180J484I3/3L/4/4L
										-	x16	-	-	-	-	C I	3, 3L, 4, 4L	Ti180F529C3/3L/4/4L Ti180F529I3/3L/4/4L
										-	-	x16 x32	-	-	-	C I	3, 3L, 4, 4L	Ti180G529C3/3L/4/4L Ti180G529I3/3L/4/4L
						484	27	116	8	2 TX 2 RX	x16	-	-	-	-	C I	3, 3L, 4, 4L	Ti180M361C3/3L/4/4L Ti180M361I3/3L/4/4L
										2 TX 2 RX	-	x16	-	-	-	C I	3, 3L, 4, 4L	Ti180J361C3/3L/4/4L Ti180J361I3/3L/4/4L
										-	-	-	-	-	-	C I	3, 3L, 4, 4L	Ti180G400C3/3L/4/4L Ti180G400I3/3L/4/4L
										4 TX 4 RX	-	-	-	-	-	C I	3, 3L, 4, 4L	Ti180L484C3/3L/4/4L Ti180L484I3/3L/4/4L
						529	48	210	8	4 TX 4 RX	x16	-	-	-	-	C I	3, 3L, 4, 4L	Ti180M484C3/3L/4/4L Ti180M484I3/3L/4/4L
										4 TX 4 RX	-	x16 x32	-	-	-	C I	3, 3L, 4, 4L	Ti180J484C3/3L/4/4L Ti180J484I3/3L/4/4L
										-	x16	-	-	-	-	C I	3, 3L, 4, 4L	Ti180F529C3/3L/4/4L Ti180F529I3/3L/4/4L
										-	-	x16 x32	-	-	-	C I	3, 3L, 4, 4L	Ti180G529C3/3L/4/4L Ti180G529I3/3L/4/4L



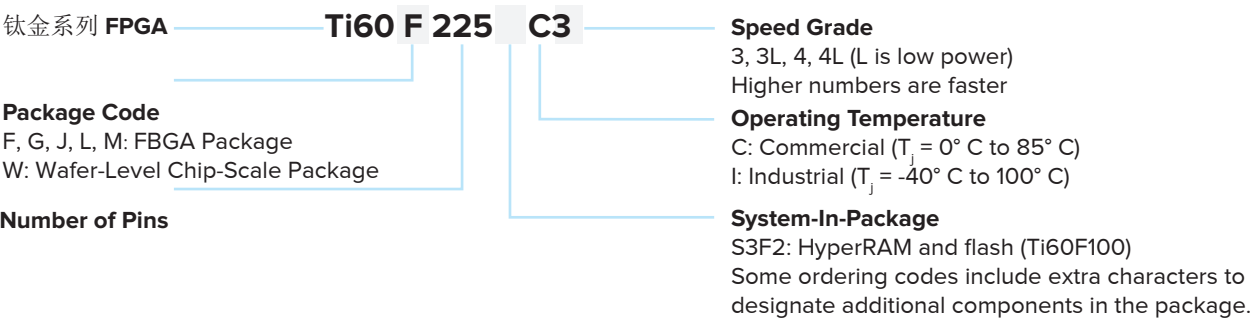
Package Dimensions

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

Package	Pitch	Dimensions (mm)
225-ball FBGA	0.65	10x10
361-ball FBGA	0.65	13x13

Package	Pitch	Dimensions (mm)
400-ball FBGA	0.8	16x16
484-ball FBGA	0.8	18x18
529-ball FBGA	0.8	19x19

Example Ordering Code



Product Longevity

At 易灵思 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 钛金系列 family of FPGAs in customer designs until at least 2037. Contact your local sales representative for more information on product life cycles.

