

		Spartan-3E				
Part Number		XA3S100E	XA3S250E	XA3S500E	XA3S1200E	XA3S1600E
Logic Resources	System Gates ⁽¹⁾	100K	250K	500K	1200K	1600K
	Slices ⁽²⁾	960	2,448	4,656	8,672	14,752
	Logic Cells	2,160	5,508	10,476	19,512	33,192
	CLB Flip-Flops	1,920	4,896	9,312	17,344	29,504
Memory Resources	Maximum Distributed RAM (Kbits)	15	38	73	136	231
	Block RAM Blocks	4	12	20	28	36
	Total Block RAM (Kbits)	72	216	360	504	648
Clock Resources	Digital Clock Managers (DCMs) – S3/DLLs – SIIE	2	4	4	8	8
I/O Resources	Maximum Single Ended I/Os	108	172	190	304	376
	Maximum Differential I/O Pairs	40	68	77	124	156
	I/O Standards Supported	LVTTTL, LVCMOS33, LVCMOS25, LVCMOS18, LVCMOS15, LVCMOS12, HSTL18 Class I, HSTL18 Class III, PCI 3.3V 32/64bit 33MHz, 3.3V, SSTL2 Class I, SSTL18 Class I, Bus LVDS, LVDS25, LVPECL25, Mini-LVDS25, RSDS25				
Embedded Hard IP Resources	DSP48A Slices	—	—	—	—	—
	Dedicated Multipliers	4	12	20	28	36
	Device DNA Security	—	—	—	—	—
Miscellaneous	Temperature Range ⁽⁴⁾	I, Q	I, Q	I, Q	I, Q	I, Q
	Speed Grade	-4	-4	-4	-4	-4
	RoHS (Pb-free)	Yes	Yes	Yes	Yes	Yes
	XA Released	Yes	Yes	Yes	Yes	Yes
Configuration	Configuration Memory Bits (Mbits)	0.6	1.4	2.3	3.8	6.0

Package	Area	Maximum User I/Os				
VQFP Packages (VQ): very thin QFP (0.5 mm lead spacing)						
VQG100	16 x 16 mm	66	66			
Chip Scale Packages (CP): wire-bond chip-scale BGA (0.5 mm ball spacing)						
CPG132	8 x 8 mm	83	92	92		
TQFP Packages (TQ): thin QFP (0.5 mm lead spacing)						
TQG144 ⁽⁵⁾	22 x 22 mm	108	108			
PQFP Packages (PQ): wire-bond plastic QFP (0.5 mm lead spacing)						
PQG208	30.6 x 30.6 mm		158	158		
FGA Packages (FT): wire-bond fine-pitch thin BGA (1.0 mm ball spacing)						
FTG256 ⁽⁵⁾	17 x 17 mm		172	190	190	
Chip Scale Packages (CS): wire-bond chip-scale BGA (0.8 mm ball spacing)						
CSG484	19 x 19 mm					
FGA Packages (FG): wire-bond fine-pitch BGA (1.0 mm ball spacing)						
FGG400	21 x 21 mm				304	304
FGG456	23 x 23 mm					
FGG484	23 x 23 mm					376
FGG676	27 x 27 mm					

Notes: 1. System Gates include 20%-30% of CLBs used as RAMs. 2. Each slice comprises two 4-input logic function generators (LUTs), two storage elements, wide-function multiplexers, and carry logic. 3. Integrated in the DSP48A slices (Advanced Multiply Accumulate element). 4. Temperature Range Automotive I (T_j = -40°C to +100°C); Automotive Q (T_j = -40°C to +125°C). 5. Spartan-3E is not offered in "G" (Pb-free) packages.