

	Usable Gates (K)	Logic Gates	System Gates (see note 1)	Logic Cells (see note 2)	Total CLBs	Total Flip-Flop	Max. I/O	Max. RAM Bits	Config. Memory (K Bits)	XC1700 Serial PROM Req.
<b>XC4000EX Family - 5 Volt</b>										
<b>.5µm Triple Layer Metal Process</b>										
XC/XQ4028EX	18-50	28K	50K	2,432	1,024	2,560	256	32.8K	668	XC1701
XC4036EX	22-65	36K	65K	3,078	1,296	3,168	288	41.5K	833	XC1701
<b>XC4000XLA Family - 3.3 Volt</b>										
<b>Advanced .35µm Five Layer Metal Process</b>										
XC/XQ4013XLA	10-30	13K	30K	1,368	576	1,536	192	18.4K	393	XC17512L
XC4020XLA	13-40	20K	40K	1,862	784	2,016	224	25.1K	522	XC17512L
XC4028XLA	18-50	28K	50K	2,432	1,024	2,560	256	32.8K	668	XC1701L
XC/XQ4036XLA	22-65	36K	65K	3,078	1,296	3,168	288	41.5K	833	XC1701L
XC4044XLA	27-80	44K	80K	3,800	1,600	3,840	320	51.2K	1,015	XC1701L
XC4052XLA	33-100	52K	100K	4,598	1,936	4,576	352	62.0K	1,215	XC1702L
XC/XQ4062XLA	40-130	62K	130K	5,472	2,304	5,376	384	73.8K	1,434	XC1702L
XC4085XLA	55-180	58K	180K	7,448	3,136	7,168	448	100.4K	1,925	XC1702L
<b>XC4000XV Family - 2.5 Volt</b>										
<b>.25µm Five Layer Metal Process</b>										
XC40110XV	75-200	110K	220K	9,728	4,096	8,704	448	131.1K	2,488	XC1704L
XC40150XV	100-300	150K	300K	12,312	5,184	11,520	448	165.9K	3,373	XC1704L
XC40200XV	130-400	200K	400K	16,758	7,056	15,456	448	225.8K	4,551	XC1704L & XC17512L
XC40250XV	160-500	250K	500K	20,102	8,464	18,400	448	270.9K	5,434	XC1704L & XC1702L
<b>Spartan Family - 5 Volt and 3.3 Volt (XL)</b>										
<b>Advanced .5µm &amp; .35µm (XL) Process</b>										
XCS05/XL	2-5	3K	5K	238	100	360	80	3.2K	54	XC17505 (XL)
XCS10/XL	3-10	5K	10K	466	196	616	112	6.3K	95	XC17510 (XL)
XCS20/XL	7-20	10K	20K	950	400	1,120	160	12.8K	179	XC17520 (XL)
XCS30/XL	10-30	13K	30K	1,368	576	1,536	192	18.4K	249	XC17530 (XL)
XCS40/XL	13-40	20K	40K	1,862	784	2,016	224	25.1K	330	XC17540 (XL)
<b>Virtex Family - 2.5 Volt</b>										
XCV50	20-50	20K	50K	1,728	384	1,536	180	57K	559	XC1701L
XCV100	30-100	30K	100K	2,700	600	2,400	180	79K	781	XC1701L
XCV150	45-150	45K	150K	3,888	864	3,456	260	104K	1,041	XC1701L
XCV200	60-200	60K	200K	5,292	1,176	4,704	284	133K	1,336	XC1702L
XCV300	80-300	80K	300K	6,912	1,536	6,144	316	164K	1,752	XC1702L
XCV400	130-400	130K	400K	10,800	2,400	9,600	404	236K	2,546	XC1704L
XCV600	185-600	185K	600K	15,552	3,456	13,824	500	319K	3,608	XC1704L
XCV800	250-800	250K	800K	21,168	4,704	18,816	512	416K	4,715	XC1704L & XC1701L
XCV1000	330-1M	330K	1M	27,648	6,144	24,576	612	524K	6,128	XC1704L & XC1702L

QPRO™ High-Reliability QML Products	Usable Gates (K)	Logic Gates	System Gates (see note 1)	Logic Cells (see note 2)	Total CLBs	Total Flip-Flop	Max. I/O	Max. RAM Bits (K)	Config. Memory (K Bits)	XC/XQ SPROM Req.
<b>XQ4000EX Family - 5 Volt</b>										
<b>.5µm Triple Layer Metal Process</b>										
XQ4005E	3-9	5	9	466	196	616	112	6.3	9.5	XC17256D
XQ4010E	7-20	10	20	950	400	1,120	160	12.8	178	XC17256D
XQ4013E	10-30	13	30	1,368	576	1,536	192	18.4	248	XC17256D
XQ4025E	15-45	25	45	2,432	1,024	2,560	256	32.7	422	XC17256Dx2
XQ4028EX	18-50	28	50	2,432	1,024	2,560	256	32.7	422	XC17256Dx2
<b>XC4000XL Family - 3.3 Volt</b>										
<b>Advanced .35µm Five Layer Metal Process</b>										
XQ4013XL	10-30	13	30	1,368	576	1,536	192	18.4	393	XQ1701L
XQ4036XL	22-65	36	65	3,078	1,296	3,168	288	41.5	833	XQ1701L
XQ4062XL	40-130	62	130	5,472	2,304	5,376	384	73.8	1,434	XQ1701Lx2 or XQ1704L
XQ4085XL	55-180	85	180	7,448	3,136	7,168	448	100.4	1,925	XQ1701Lx2 or XQ1704L
<b>Virtex Family - 2.5 Volt</b>										
<b>.25µm Five Layer Metal Process</b>										
XQV100	30-100	30	100	2,700	600	2,400	180	79	781	XQ1701L
XQV300	80-300	80	300	6,912	1,536	6,144	316	164	1,751	XQ1701Lx2 or XQ1704L
XQV600	185-600	185	600	15,552	3,456	13,824	500	319	3,608	XQ1704L
XQV1000	330-1M	330	1M	27,648	6,144	24,576	512	524	6,128	XC1704Lx2

Macrocells	Max. I/O	Pin-to-Pin Delay (ns)
<b>XC9500 Family - 5 Volt CPLDs</b>		
XC9536	36	34
XC9572	72	72
XC95108	108	108
XC95144	144	133
XC95216	216	166
XC95288	288	192
<b>XC9500XL Family - 3.3 Volt CPLDs</b>		
XC9536XL	36	36
XC9572XL	72	72
XC95144XL	144	117
XC95288XL	288	192

Speed Grade Options		
	Slowest	Fastest
XC4000EX	-4	-2
XC4000XLA	-09	-07
XC4000XV	-09	-07
Virtex	-4	-6
Spartan	-3	-4
SpartanXL	-4	-5
XQ4005X	-4	-4
XQ4000XL	-3	-3

Serial PROM Package Options									
	Density	PD8	S08	V08	PC20	S020	VQ44	3 Volt	5 Volt
XC1736E	36K	Y	Y	Y	Y				Y
XC1765E (EL)	65K	Y	Y	Y	Y			Y (EL)	Y
XC17128E (EL)	128K	Y		Y	Y			Y (EL)	Y
XC17256E (EL)	256K	Y		Y				Y (EL)	Y
XC17512L	512K	Y			Y	Y		Y	
XC1701	1M	Y			Y	Y			Y
XC/XQ1701L	1M	Y			Y	Y		Y	
XC1702L	2M						Y	Y	
XC1704L	4M						Y	Y	
XC17505	54K	Y		Y					Y
XC17505XL	55K	Y		Y				Y	
XC17510	95K	Y		Y					Y
XC17510XL	96K	Y		Y				Y	
XC17520	178K	Y		Y					Y
XC17520XL	179K	Y		Y				Y	
XC17530	248K	Y		Y					Y
XC17530XL	249K	Y		Y				Y	
XC17540	329K	Y				Y			Y
XC17540XL	331K	Y				Y		Y	

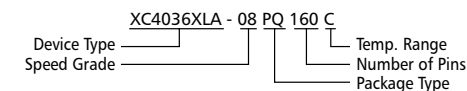
Serial PROM Package Options				
	Density	DD8	CC44	S020
XC17256D	256K	Y	-	-
XQ1701L	1M	-	Y	Y
XQ1704L	4M	-	Y	Y

Notes:

1. System Gates include 20-30% of CLBs used as RAM
2. A Logic Cell is defined as a 4 input LUT and a Register

Ordering Information for FPGAs / CPLDs

Example:



## FPGA / CPLD Package Options and User I/O

XC4000EX (5 Volt) FPGAs			XC4000XLA (3.3 Volt) FPGAs							XC4000XV (2.5 Volt) FPGAs				Spartan™ (5V, XL 3.3V) FPGAs					XC9500 (5 Volt) CPLDs					XC9500XL (3.3 Volt) CPLDs				Virtex™ (2.5 Volt)																			
	XC4028EX	XC4036EX	XC4013XLA	XC4020XLA	XC4028XLA	XC4036XLA	XC4044XLA	XC4052XLA	XC4062XLA	XC4085XLA	XC40110XV	XC40150XV	XC40200XV	XC40250XV	XC505/XL	XC510/XL	XC520/XL	XC530/XL	XC540/XL	XC9536	XC9572	XC95108	XC95144	XC95216	XC95288	XC9536XL	XC9572XL	XC95144XL	XC95288XL	XCV50	XCv100	XCv150	XCv200	XCv300	XCv400	XCv600	XCv800	XCv1000									
I/Os	256	288	192	224	256	288	320	352	384	448	448	448	448	80	112	160	192	224	34	72	108	133	166	192	36	72	117	192	192	240	288	336	384	480	576	672	768										
<b>PLCC Packages</b>																																															
44																				34	34					34	34																				
84														61	61						69	69																									
<b>CSP Packages</b>																																															
48																				34						36	38																				
144																												117		94	94																
<b>PQFP / HQFP Packages</b>																																															
100																				72	81	81																									
160			129	129	129	129	129	129	129	129											108	133	133																								
208	160		160	160	160	160	160	160	160	160						160	169	169																													
240	193	193	192	193	193	193	193	193	193	193	193	193																																			
304	256	256			256	256	256	256	256	256																																					
<b>VQFP Packages</b>																																															
44																				34																											
64																										36	52																				
100														77	77	77	77																														
<b>TQFP / HTFP Packages</b>																																															
100																				72	81	81																									
144																112	113	113																													
<b>CBFP Packages</b>																																															
228	192																																														
<b>BGA Packages</b>																																															
256			192	205	205													192	205																				180	180	180	180					
352	256	288			256	288	289	289	289	289	289	289	289	289																											180	180	180	180			
432		288				288	320	352	352	352	352	352	352	352																												260	260	260	260		
560								352	384	448	432	432	432	432																														316	316	316	316
<b>PGA Packages</b>																																															
299	256																																														
411		288																																													
559											448	448																																			
<b>FinePitch BGA</b>																																															
256																																															
456																																															
600																																															
680																																															

Available Now
  Available Q199

XC4000XLA Available Sept. (XC4013, XC4062 (HQ2400))  
 Remainder available Q4

SpartanXL available Q4

XC9500XL Available Oct. (X9536XL, XC9572XL, XC95144XL)  
 XC95288XL Available Q199