	Usable Gates (K)	Logic Gates	System Gates (see note 1)	Logic Cells (see note 2)	Total Cells	Total Flip-Flops	Max. I/O Package	Max. RAM Bits	Config. Memory (K Bits)	XC17V00 Serial PROM Family
XC4000EX Family - 5 Volt										.5Aaaaaaaaaum Triple Layer Metal Process
XC4028EX	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
XC4000XLA Family - 3.3 Volt										Advanced .35µm Five Layer Metal Process
XC4013XLA	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
XC4036XLA	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
XC4062XLA	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
XC4000XV Family - 2.5 Volt										.25µm Five Layer Metal Process
XC4010XV	75-200	110K	220K	9,728	4,096	8,704	432	131.1K	2,488	XC1704L
XC4015XV	100-300	150K	300K	12,312	5,184	11,520	448	165.9K	3,373	XC1704L
XC4020XV	130-400	200K	400K	16,758	7,056	15,456	432	225.8K	4,551	XC1704L & XC17512L
XC4025XV	160-500	250K	500K	20,102	8,464	18,400	448	270.9K	5,434	XC1704L & XC1702L
Spartan Family - 5 Volt and 3.3 Volt (XL)										Advanced .5µm & .35µm (XL) Process
XCS05XL	2-5	3K	5K	238	100	360	77	3.2K	54	XC17S05 (XL)
XCS10XL	3-10	5K	10K	466	196	616	112	6.3K	95	XC17S10 (XL)
XCS20XL	7-20	10K	20K	950	400	1,120	160	12.8K	179	XC17S20 (XL)
XCS30XL	10-30	13K	30K	1,368	576	1,536	192	18.4K	249	XC17S30 (XL)
XCS40XL	13-40	20K	40K	1,862	784	2,016	224	25.1K	330	XC17S40 (XL)
Virtex - 2.5 Volt										
XCV50	20-50	20K	50K	1,728	384	1,536	180	57K	559	XC1701L
XCV100	30-100	30K	100K	2,700	600	2,400	196	79K	781	XC1701L
XCV150	45-150	45K	150K	3,888	864	3,456	260	104K	1,040	XC1701L
XCV200	60-200	60K	200K	5,292	1,176	4,704	284	133K	1,335	XC1702L
XCV300	80-300	80K	300K	6,912	1,536	6,144	324	164K	1,751	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	510	416K	4,715	XC1704L & XC1701L
XCV1000	330-1M	330K	1M	27,648	6,144	24,576	510	524K	6,127	XC1704L & XC1702L

QPRO™ High-Reliability QML Products	Usable Gates (K)	Logic Gates	System Gates (see note 1)	Logic Cells (see note 2)	Total Cells	Total Flip-Flops	Max. I/O Package	Max. RAM Bits (K)	Config. Memory (K Bits)	XC17V00 Serial PROM Family
XC4000EX Family - 5 Volt										.5Aaaaaaaaaum Triple Layer Metal Process
XC4005E	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	XC17526Dx2
XQ4028EX	18-50	28	50	2,432	1,024	2,560	256	32.7	422	XC17256Dx2
XC4000XL Family - 3.3 Volt										Advanced .35Aaaaaaaaaum Five Layer Metal Process
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
XQ4085XL	55-180	85	180	7,448	3,136	7,168	448	100.4	1,925	XQ1701Lx2
XC4000XL Family - 3.3 Volt										.25Aaaaaaaaaum Five Layer Metal Process
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	
XQV1000	330-1M	330	1M	27,648	6,144	24,576	512	524	6,128	

	Macrocells	Max. I/O	Pin-to-Pin Delay (ns)
XC9500 Family - 5 Volt CPLDs			
XC9536	36	34	5
XC9572	72	72	7.5
XC95108	108	108	7.5
XC95144	144	133	7.5
XC95216	216	166	10
XC95288	288	192	10
XC9500XL Family - 3.3 Volt CPLDs			
XC9536XL	36	36	4
XC9572XL	72	72	5
XC95144XL	144	117	5
XC95288XL	288	192	6
XC9500XV Family - 2.5 Volt CPLDs			
XC9536XL	36	36	3.5
XC9572XL	72	72	4
XC95144XL	144	117	4
XC95288XL	288	192	5

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

Serial PROM Package Options	Density	PD8	SO8	VO8	PC20	SO20	VO44	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			Y (EL)	Y
XC17512L	512K	Y			Y	Y		Y	
XC1701	1M	Y			Y	Y			Y
XC1701L	1M	Y			Y	Y		Y	
XC1702L	2M						Y	Y	
XC1704L	4M						Y	Y	
XC1736	36K	Y		Y					Y
XC1765	65K	Y		Y				Y	
XC1765L	65K	Y		Y					Y
XC1765EL	65K	Y		Y				Y	
XC17128	128K	Y		Y				Y	
XC17128L	128K	Y		Y					Y
XC17128EL	128K	Y		Y				Y	
XC17256	256K	Y		Y				Y	
XC17256L	256K	Y		Y					Y
XC17256EL	256K	Y		Y				Y	
XC17512	512K	Y		Y				Y	
XC17512L	512K	Y		Y					Y
XC17512EL	512K	Y		Y				Y	

Speed Grade Options	Density	DD8	CC44	SO20
XC17256D	256K	Y	-	-
XC1701L	1M	-	Y	Y
XC1704L	4M	-	Y	Y

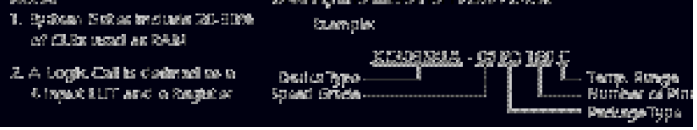
Notes:

1. System Gates includes 20-30% of CLBs used as RAM

2. A Logic Cell is defined as a 4-input LUT and a Register

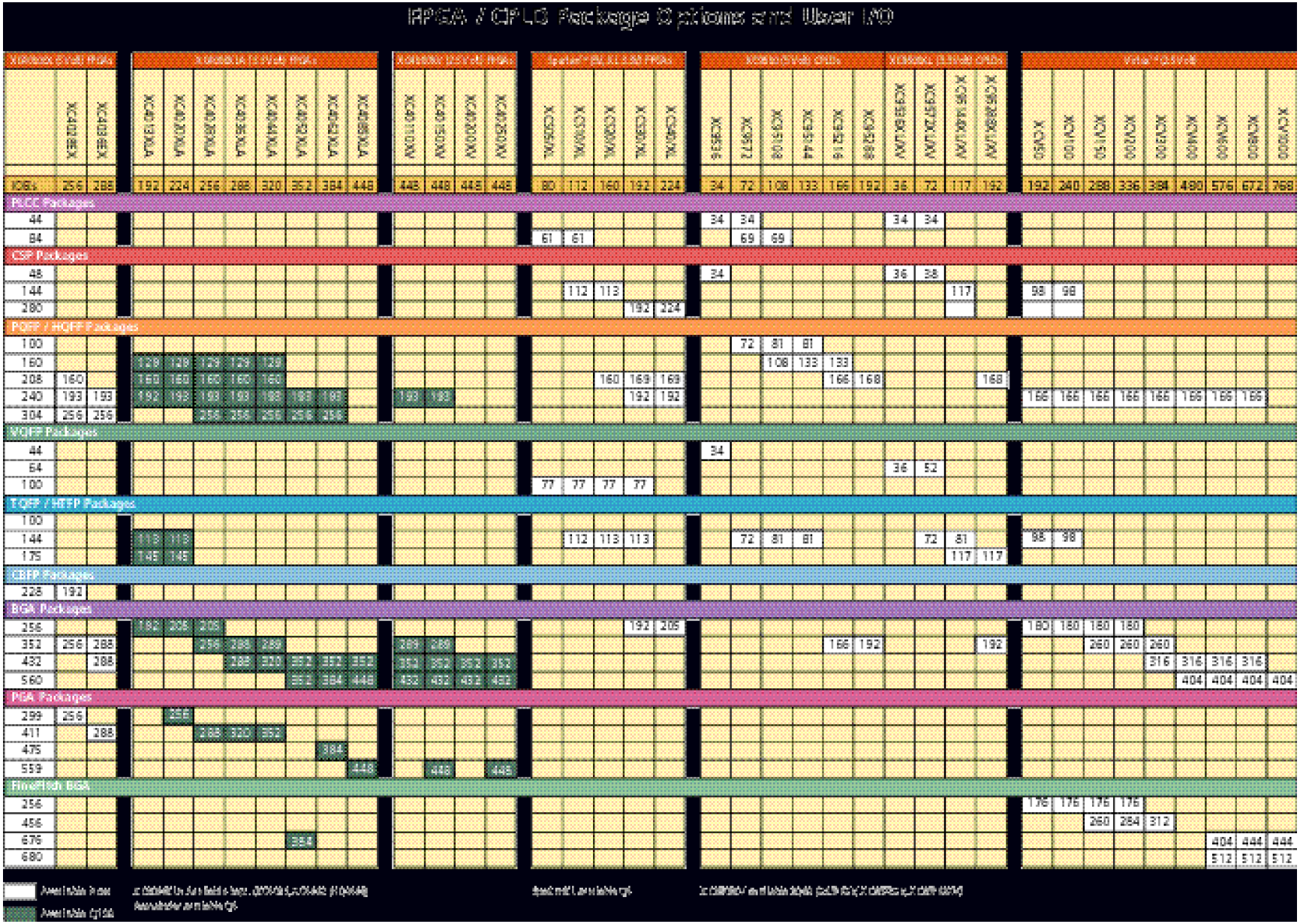
Ordering Information for 1765x / 256Kb

Example:



FPGA / CPLD Packages Options and User I/O

	XC4028EX	XC4036EX	XC4013XLA	XC4020XLA	XC4028XLA	XC4036XLA	XC4044XLA	XC4052XLA	XC4062XLA	XC4085XLA	XC4010XV	XC4015XV	XC4020XV	XC4025XV	XC3020XL	XC3030XL	XC3020XL	XC3030XL	XC3040XL	XC9536	XC9572	XC95108	XC95144	XC95216	XC95288	XC9536XL/XV	XC9572XL/XV	XC9564XL/XV	XC9588XL/XV	XCV50	XCV100	XCV150	XCV200	XCV300	XCV400	XCV600	XCV800	XCV1000
IOBs	256	288	192	224	256	288	320	352	384	448	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
PLCC Packages																																						
44																				34	34					34	34											
84															61	61					69	69																
CSP Packages																																						
48																				34						36	38											
144																112	113											117		98	98							
280																		192	224																			
PQFP / HQFP Packages																																						
100																					72	81	81															
160			129	129	129	129	129															108	133	133														
208	160		160	160	160	160	160										160	169	169					166	168				168									
240	193	193	192	193	193	193	193	193	193		193	193						192	192											166	166	166	166	166	166	166	166	
304	256	256			256	256	256	256	256																													
VQFP Packages																																						
44																				34																		
64																										36	52											
100															77	77	77	77																				
TQFP / HFFP Packages																																						
100																																						
144			113	113												112	113	113			72	81	81				72	81		98	98							
175			145	145																								117	117									
CBFP Packages																																						
228	192																																					
BGA Packages																																						
256			192	205	205													192	205											180	180	180	180					
352	256	288			256	288	289				289	289												166	192				192			260	260	260				
432		288				288	320	352	352	352	352	352	352	352																				316	316	316	316	
560								352	384	448	432	432	432	432																					404	404	404	404
PGA Packages																																						
299	256			256																																		
411		288			288	320	352																															
475									384																													
559										448		448		448																								
FinePitch BGA																																						
256																														176	176	176	176					
456																																260	284	312				
676								384																												404	444	444
680																																				512	512	512

Available in use

Available Q168