

		CoolRunner-II Family					
Part Number		XC2C32A	XC2C64A	XC2C128	XC2C256	XC2C384	XC2C512
Logic Resources	System Gates	750	1,500	3,000	6,000	9,000	12,000
	Macrocells	32	64	128	256	384	512
	Product terms per Macrocell	56	56	56	56	56	56
Clock Resources	Global Clocks	3	3	3	3	3	3
	Product Term Clocks per Function Block	16	16	16	16	16	16
I/O Resources	Maximum I/O	33	64	100	184	240	270
	Input Voltage Compatible	1.5/1.8/2.5/3.3	1.5/1.8/2.5/3.3	1.5/1.8/2.5/3.3	1.5/1.8/2.5/3.3	1.5/1.8/2.5/3.3	1.5/1.8/2.5/3.3
	Output Voltage Compatible	1.5/1.8/2.5/3.3	1.5/1.8/2.5/3.3	1.5/1.8/2.5/3.3	1.5/1.8/2.5/3.3	1.5/1.8/2.5/3.3	1.5/1.8/2.5/3.3
Speed	Min. pin-to-pin Logic Delay (ns)	3.8	4.6	5.7	5.7	7.1	7.1
	Commercial Speed Grades (Fastest to Slowest)	-4, -6	-5, -7	-6, -7	-6, -7	-7, -10	-7, -10
	Industrial Speed Grades (Fastest to Slowest)	-6	-7	-7	-7	-10	-7 ⁽¹⁾ , -10

Package ⁽²⁾	Area ⁽³⁾	Maximum User I/Os					
QFN Packages (QFG): quad flat no-lead (0.5 mm lead spacing)							
QF32 ⁽⁴⁾	5 x 5 mm	21					
QF48 ⁽⁴⁾	7 x 7 mm		37				
VQFP Packages (VQ): very thin QFP (VQ44: 0.8 mm lead spacing, VQ100: 0.5 mm lead spacing)							
VQ44	12 x 12 mm	33	33				
VQ100	16 x 16 mm		64	80	80		
Chip Scale Packages (CS): wire-bond chip-scale BGA (0.8 mm ball spacing)							
CS48	7 x 7 mm						
CS144	12 x 12 mm						
CS280	16 x 16 mm						
Chip Scale Packages (CP): wire-bond chip-scale BGA (0.5 mm ball spacing)							
CP56	6 x 6 mm	33	45				
CP132	8 x 8 mm			100	106		
TQFP Packages (TQ): thin QFP (0.5 mm lead spacing)							
TQ100	16 x 16 mm						
TQ144	22 x 22 mm			100	118	118	
PQFP Packages (PQ): wire-bond plastic QFP (0.5 mm lead spacing)							
PQ208	30.6 x 30.6 mm				173	173	173
FGA Packages (FT): wire-bond fine-pitch thin BGA (1.0 mm ball spacing)							
FT256	17 x 17 mm				184	212	212
FBGA Packages (FG): wire-bond fine-line BGA (1.0 mm ball spacing)							
FG324	23 x 23 mm					240	270

- Notes:
- 7 speed grade only available in FT(G)256 package.
 - All packages available in Pb-free and RoHS6 compliant versions.
 - Area dimensions for lead-frame product are inclusive of the leads.
 - Only available in RoHS6 compliant and Halogen-free packages.
 - JTAG pins and port enable are not pin compatible in this package for this member of the family.