



Microcontroller Pocket Guide

16/32-bit Microcontroller

XC2000 Family - 16/32-bit Microcontrollers for Automotive Applications

XC2200 for Body Applications

0-Series													
XC226x	66	448-768	34-82	MAC	75-118	8-16	32-44	yes	2-5	up to 6xUSIC / 2xSPI, 2xLIN	F,K	PG-LQFP-100	
XC228x	66	448-768	34-82	MAC	75-118	24	44	yes	5	up to 6xUSIC	F,K	PG-LQFP-144	
U-Series													
XC2210U	40	32-64	8	MAC	28	7	17	yes	-	1xUSIC	F,K	PG-TSSOP-38	
XC2220U	40	32-64	8	MAC	33	10	17	yes	-	1xUSIC	F,K	PG-VQFN-48	
L-Series													
XC222xL	40	96-160	12	MAC	33	10	23	yes	-	2xUSIC	F,K	PG-VQFN-48	
XC222xL	40	96-160	12	MAC	33	10	23	yes	2	2xUSIC	F,K	PG-VQFN-48	
XC223xL	40	96-160	12	MAC	49	19	24	yes	-	2xUSIC	F,K	PG-LQFP-64	
XC223xL	40	96-160	12	MAC	49	19	24	yes	2	2xUSIC	F,K	PG-LQFP-64	
N-Series													
XC223xN	40	192	34	MAC	38	9	22	yes	1-6	4xUSIC	F,K	PG-LQFP-64	
XC226xN	40-80	192-320	34	MAC	76	16	32	yes	1-6	6xUSIC	F,K	PG-LQFP-100	
M-Series													
XC223xM	40-80	448-832	50	MAC	38	9	22	yes	6	6xUSIC	F,K,H	PG-LQFP-64	
XC226xM	80	448-832	50	MAC	76	16	32	yes	1-6	8xUSIC	F,K	PG-LQFP-100	
XC228xM	80	448-832	50	MAC	119	24	44	yes	1-6	8xUSIC	F,K	PG-LQFP-144	
I-Series													
XC226xI	128	1088	90	MAC	76	19	32	yes	6	10xUSIC, 2xFlexRay	F,K	PG-LQFP-100	
XC228xI	128	1088	90	MAC	118	28	44	yes	6	10xUSIC, 2xFlexRay	F,K	PG-LQFP-144	
H-Series													
XC228xH	100	1600	138	MAC	119	24	44	yes	4	10xUSIC, 2xFlexRay	F,K	PG-LQFP-144	
XC229xH	100	1600	138	MAC	150	30	66	yes	6	10xUSIC, 2xFlexRay	F,K	PG-LQFP-176	

XC2300 for Safety Applications

0-Series													
XC2365	66	576	50	MAC	75	16	24	yes	3	6xUSIC	F,K	PG-LQFP-100	
XC2387	66	576	50	MAC	118	24	32	yes	3	6xUSIC	F,K	PG-LQFP-144	
A-Series													
XC2336A	40	448-576	50	MAC	38	9	24	yes	2	4xUSIC	F,K	PG-LQFP-64	
XC2363A	80	448-832	50	MAC	76	16	20	yes	2	2xUSIC	F,K	PG-LQFP-100	
XC2364A	80	448-832	50	MAC	76	16	24	yes	2	4xUSIC	F,K	PG-LQFP-100	
XC2365A	80	448-832	50	MAC	76	16	24	yes	3	6xUSIC	F,K	PG-LQFP-100	
XC2387A	80	448-832	50	MAC	119	24	32	yes	3	6xUSIC	F,K	PG-LQFP-144	
B-Series													
XC2336B	80	320	34	MAC	38	9	20	yes	2	4xUSIC	F,K	PG-LQFP-64	
XC236xB	80	192-320	18-34	MAC	76	8	20	yes	2	2-6xUSIC	F,K	PG-LQFP-100	
C-Series													
XC238xC	100	1.088	137-138	MAC	119	24	32	yes	4	10xUSIC, 2xFlexRay	F,K	PG-LQFP-144	
D-Series													
XC232xD	66	96-160	12	MAC	33	10	23	yes	0-2	2xUSIC	F,K	PG-LQFP-48	
XC233xD	66	96-160	12	MAC	49	19	24	yes	0-2	2xUSIC	F,K	PG-LQFP-64	
E-Series													
XC236xE	128	576-1.088	90	MAC	75	16	24	yes	2	6xUSIC, 2xFlexRay	F,K	PG-LQFP-100	
XC238xE	128	576-1.088	90	MAC	118	24	32	yes	3	6-8xUSIC, 2xFlexRay	F,K	PG-LQFP-144	
S-Series													
XC2310S	40	64	8	MAC	28	7	17	yes	-	1 x USIC	F,K	PG-TSSOP-38	
XC2320S	40	64	8	MAC	33	10	17	yes	-	1 x USIC	F,K	PG-VQFN-48	

XC2700 for Powertrain Applications

2-Series													
XC2712X	40	64	8	MAC	28	7	17	yes	-	2xUSIC	K	PG-TSSOP-38	
XC2722X	40	64	8	MAC	33	10	17	yes	-	2xUSIC	K	PG-VQFN-48	
3-Series													
XC2723X	66	160	12	MAC	33	10	23	yes	2	2xUSIC	K	PG-VQFN-48	
XC2733X	66	160	12	MAC	49	19	24	yes	2	2xUSIC	K	PG-LQFP-64	
4-Series													
XC2734X	80	320	34	MAC	38	9	20	yes	2	4xUSIC	K	PG-LQFP-64	
XC2764X	80	320	34	MAC	76	16	24	yes	2	4xUSIC	K	PG-LQFP-100	
5-Series													
XC2765X	80	576-832	50	MAC	76	16	37	yes	2	4xUSIC	K	PG-LQFP-100	
XC2785X	80	576-832	50	MAC	119	24	44	yes	2	4xUSIC	K	PG-LQFP-144	
6-Series													
XC2766X	66	768	50	MAC	75	16	37	yes	2	6 xUSIC	K	PG-LQFP-100	
XC2786X	66	768	50	MAC	118	24	44	yes	2	6 xUSIC	K	PG-LQFP-144	
7-Series													
XC2787X	100	1600	138	MAC	119	24	60	yes	2	6xUSIC	K	PG-LQFP-144	
XC2797X	100	1600	138	MAC	150	30	60	yes	2	6xUSIC	K	PG-LQFP-176	
8-Series													
XC2768X	128	1088	90	MAC	76	19	32	yes	2	10xUSIC, 2xFlexRay	K	PG-LQFP-100	
XC2788X	128	1088	90	MAC	118	28	44	yes	2	10xUSIC, 2xFlexRay	K	PG-LQFP-144	

32-bit Microcontroller

XMC4000 for Industrial and Multi-Markets

XMC4500 Series													
XMC4500-F100x1024 AA	120	1024	160	FPU	55	18	50	yes	3	6xUSIC, Ethernet 10/100 Mbits/s, USB	F,K	PG-LQFP-100	EVR
XMC4500-F100x768 AA	120	768	160	FPU	55	18	50	yes	3	6xUSIC, Ethernet 10/100 Mbits/s, USB	F,K	PG-LQFP-100	EVR
XMC4502-F100x768 AA	120	768	160	FPU	55	18	50	yes	3	6xUSIC, USB	F,K	PG-LQFP-100	EVR
XMC4504-F100x512 AA	120	512	128	FPU	55	18	50	yes	-	6xUSIC	F,K	PG-LQFP-100	EVR
XMC4500-F144x1024 AA	120	1024	160	FPU	91	26	83	yes	3	6xUSIC, Ethernet 10/100 Mbits/s, USB	F,K	PG-LQFP-144	EVR
XMC4500-F144x768 AA	120	768	160	FPU	91	26	83	yes	3	6xUSIC, Ethernet 10/100 Mbits/s, USB	F,K	PG-LQFP-144	EVR
XMC4500-E144F1024 AA	120	1024	160	FPU	91	26	83	yes	3	6xUSIC, Ethernet 10/100 Mbits/s, USB	F	PG-LFBGA-144	EVR

TriCore™ for Industrial and Multi-Markets

TC11xx Family													
TC1167-126F133HL	133	1000	128	FPU, PCP	88	36	80	no	2	2xASC, 2xSSC, 1xMSC, 1xMLI	F	PG-LQFP-176	
TC1197-256F180E	180	2000	224	FPU, PCP	221	48	118	yes	4	2xASC, 2xSSC, 2xMSC, 2xMLI	K	PG-BGA-416	
TC1197-512F180E	180	4000	224	FPU, PCP	221	48	118	yes	4	2xASC, 2xSSC, 2xMSC, 2xMLI	K	PG-BGA-416	
AUDO-MAX – Family													
TC1724N-192F80HR	80	1500	152	FPU, PCP	95	28	77	no	3	2xASC, 4xSSC, 1xMSC, 1xMLI	K	PG-LQFP-144	EVR
TC1728N-192F133HR	133	1500	152	FPU, PCP	127	36	94	no	3	2xASC, 4xSSC, 1xMSC, 1xMLI	K	PG-LQFP-176	EVR
TC1782N-320F180HR	180	2500	152	FPU, PCP	86	36	80	no	3	2xASC, 4xSSC, 1xMSC, 1xMLI	K	PG-LQFP-176	
TC1784N-320F180EL	180	2500	152	FPU, PCP	139	36	122	yes	3	2xASC, 4xSSC, 1xMSC, 1xMLI	K	PG-LFBGA-292	
TC1791N-384F200EP	200	3000	320	FPU, PCP	144	48	100	no	4	2xASC, 4xSSC, 2xMSC, 2xMLI, 8xSENT	K	PG-LFBGA-292	
TC1793N-512F270EF	270	4000	320	FPU, PCP	235	44	140	yes	4	2xASC, 4xSSC, 2xMSC, 2xMLI, 8xSENT	K	PG-BGA-416	
TC1798N-512F300EP	300	4000	320	FPU, PCP	252	72	138	yes	4	2xASC, 4xSSC, 2xMSC, 2xMLI, 8xSENT	K	PG-BGA-516	

TriCore™ for Automotive Applications

TC1762-128F66HL	66	1000	52	FPU	81	32	48	no	2	2xASC, 1xSSC, 1xMSC, 1xMLI	K	PG-LQFP-176		
TC1762-128F80HL	80	1000	52	FPU	81	32	48	no	2	2xASC, 1xSSC, 1xMSC, 1xMLI	K	PG-LQFP-176		
TC1766-192F80HL	80	1500	108	FPU, PCP	81	32	48	no	2	2xASC, 2xSSC, 1xMSC, 2xMLI	K	PG-LQFP-176		
TC1796-256F150E	150	2000	256	FPU, PCP	123	44	126	yes	4	2xASC, 2xSSC, 2xMSC, 2xMLI	K	PG-BGA-416		
AUDO – Future Family														
TC1736-128F80HL	80	1000	48	FPU	70	24	53	no	2	2xASC, 2xSSC, 1xMSC, 1xMLI	K	PG-LQFP-144		
TC1767-256F80HL	80	2000	128	FPU, PCP	88	36	80	no	2	2xASC, 2xSSC, 1xMSC, 1xMLI	K	PG-LQFP-176		
TC1767-256F133HL	133	2000	128	FPU, PCP	88	36	80	no	2	2xASC, 2xSSC, 1xMSC, 1xMLI	K	PG-LQFP-176		
TC1797-512F180E	180	4000	224	FPU, PCP	221	48	118	yes	4	2xASC, 2xSSC, 2xMSC, 2xMLI	K	PG-BGA-416		
AUDO-MAX – Family														
TC1724N-192F80HR	80	1500	152	FPU, PCP	95	28	77	no	3	2xASC, 4xSSC, 1xMSC, 1xMLI	K	PG-LQFP-144	EVR	
TC1728N-192F133HR	133	1500	152	FPU, PCP	127	36	94	no	3	2xASC, 4xSSC, 1xMSC, 1xMLI	K	PG-LQFP-176	EVR	
TC1782N-256F133HL	133	2000	176	FPU, PCP	86	36	80	no	3	2xASC, 3xSSC, 1xMSC, 1xMLI, 2xFlexRay	K	PG-LQFP-176		
TC1782F-320F180HL	180	2500	176	FPU, PCP	86	36	80	no	3	2xASC, 3xSSC, 1xMSC, 1xMLI, 2xFlexRay	K	PG-LQFP-176		
TC1784F-320F180EL	180	2500	176	FPU, PCP	126	36	122	yes	3	2xASC, 3xSSC, 1xMSC, 1xMLI, 2xFlexRay	K	PG-LFBGA-292-2		
TC1791F-384F200EP	200	3000	288	FPU, PCP	144	48	100	no	4	2xASC, 4xSSC, 2xMSC, 2xMLI, 8xSENT, 2xFlexRay	K	PG-LFBGA-292		
TC1791F-512F240EP	240	4000	288	FPU, PCP	144	48	100	no	4	2xASC, 4xSSC, 2xMSC, 2xMLI, 8xSENT, 2xFlexRay	K	PG-LFBGA-292		
TC1793F-512F270EB	270	4000	288	FPU, PCP	221	44	112	yes	4	2xASC, 4xSSC, 2xMSC, 2xMLI, 8xSENT, 2xFlexRay	K	PG-LBGA-416		
TC1798F-512F300EP	300	4000	288	FPU, PCP	252	72	138	yes	4	2xASC, 4xSSC, 2xMSC, 2xMLI, 8xSENT, 2xFlexRay	K	PG-BGA-516		
Part No.	Package	Pin Count	Speed	Core	Cache	Memory	IO	Temp	Ext	Conn	Core	Test	Package	Address

Product Type	Core Performance & Features													Temperature Ranges ³⁾	Packages	Additional Features/Remarks ⁴⁾
	Max Clock Frequency (MHz)	Program Memory (Kbyte)	SRAM (incl. Cache) (Kbyte)	Co-Processor ⁵⁾	Digital I/O Lines	Number of ADC Channels	Timed I/O Channels (PWM, CAP, COM, GPR)	External Bus Interface	CAN Nodes	Communication Interfaces ⁶⁾						
C500 Family																
C505CA-4EM	20	0	1.25	-	34	8	4	no	1	1xUSART	F,B,K	PG-MQFP-44	OTP			
C505CA-2/-4RM	20	16/32	1.25	-	34	8	4	no	1	1xUSART	F,B,K	PG-MQFP-44	ROM			
C505CA-LM	20	0	1.25	-	34	8	4	no	1	1xUSART	F,B,K	PG-MQFP-44	ROM less			
C515C-8EM	10	64	2.25	-	49	8	4	no	1	1xUSART, 1xSSC	F,B,K	PG-MQFP-80	OTP			
XC800 A-Family (Automotive)																
XC82x-Series																
XC822MT-1FRA	24	4	0.5	-	17	4	4	no	-	1xUART, 1xSCC, LIN	F,K	PG-TSSOP-16				
XC83x-Series																
XC836MT-1FRA	24	4	0.5	VC	25	8	4	no	-	1xUART, 1xSCC, LIN	F,K	PG-TSSOP-28				
XC836MT-2FRA	24	8	0.5	VC	25	8	4	no	-	1xUART, 1xSCC, LIN	F,K	PG-TSSOP-28				
XC86x-Series																
XC866-1FRA	26.67	4	0.75	-	27	8	4	no	-	1xUART, 1xSCC	F,K,A,L	PG-TSSOP-38				
XC866L-1FRA	26.67	4	0.75	-	27	8	4	no	-	1xUART, LIN BSL, 1xSCC	F,K,A,L	PG-TSSOP-38				
XC866-2FRA/RRA	26.67	8	0.75	-	27	8	4	no	-	1xUART, 1xSCC	F,K,A,L	PG-TSSOP-38				
XC866L-2FRA/RRA	26.67	8	0.75	-	27	8	4	no	-	1xUART, LIN BSL, 1xSCC	F,K,A,L	PG-TSSOP-38				
XC866-4FRA/RRA	26.67	16	0.75	-	27	8	4	no	-	1xUART, 1xSCC	F,K,A,L	PG-TSSOP-38				
XC866L-4FRA/RRA	26.67	16	0.75	-	27	8	4	no	-	1xUART, LIN BSL, 1xSCC	F,K,A,L	PG-TSSOP-38				
XC87x-Series																
XC874-13FVA	27	52	3	-	48	8	10	yes	-	2xUART, 1xSCC	F,K	PG-VQFN-48				
XC874CM-13FVA	27	52	3	VC	48	8	10	yes	2	2xUART, 1xSCC	F,K	PG-VQFN-48				
XC874LM-13FVA	27	52	3	VC	48	8	10	yes	-	2xUART, 1xSCC, LIN	F,K	PG-VQFN-48				
XC874CLM-13FVA	27	52	3	VC	48	8	10	yes	2	2xUART, 1xSCC, LIN	F,K	PG-VQFN-48				
XC874-16FVA	27	64	3	-	48	8	10	yes	-	2xUART, 1xSCC	F,K	PG-VQFN-48				
XC874CM-16FVA	27	64	3	VC	48	8	10	yes	2	2xUART, 1xSCC	F,K	PG-VQFN-48				
XC874LM-16FVA	27	64	3	VC	48	8	10	yes	-	2xUART, 1xSCC, LIN	F,K	PG-VQFN-48				
XC874CLM-16FVA	27	64	3	VC	48	8	10	yes	2	2xUART, 1xSCC, LIN	F,K	PG-VQFN-48				
XC878-13FFA	27	52	3	-	48	8	10	yes	-	2xUART, 1xSCC	F,K,X	PG-LQFP-64				
XC878CM-13FFA	27	52	3	VC	48	8	10	yes	2	2xUART, 1xSCC	F,K,X	PG-LQFP-64				
XC878LM-13FFA	27	52	3	VC	48	8	10	yes	2	2xUART, 1xSCC, LIN	F,K,X	PG-LQFP-64				
XC878-16FFA	27	64	3	-	48	8	10	yes	-	2xUART, 1xSCC	F,K,X	PG-LQFP-64				
XC878CM-16FFA	27	64	3	VC	48	8	10	yes	2	2xUART, 1xSCC	F,K,X	PG-LQFP-64				
XC878LM-16FFA	27	64	3	VC	48	8	10	yes	-	2xUART, 1xSCC, LIN	F,K,X	PG-LQFP-64				
XC878CLM-16FFA	27	64	3	VC	48	8	10	yes	2	2xUART, 1xSCC, LIN	F,K,X	PG-LQFP-64				
XC88x-Series																
XC886-6FFA/RRA	24	24	1.75	-	34	8	4	no	-	2xUART, 1xSCC	F,K,A,L	PG-TQFP-48				
XC886-8FFA/RRA	24	32	1.75	-	34	8	4	no	-	2xUART, 1xSCC	F,K,A,L	PG-TQFP-48				
XC886LM-6FFA/RRA	24	24	1.75	VC	34	8	4	no	-	2xUART, LIN BSL, 1xSCC	F,K,A,L	PG-TQFP-48				
XC886LM-8FFA/RRA	24	32	1.75	VC	34	8	4	no	-	2xUART, LIN BSL, 1xSCC	F,K,A,L	PG-TQFP-48				
XC886CM-6FFA/RRA	24	24	1.75	VC	34	8	4	no	2	2xUART, 1xSCC	F,K,A,L	PG-TQFP-48				
XC886CM-8FFA/RRA	24	32	1.75	VC	34	8	4	no	2	2xUART, 1xSCC	F,K,A,L	PG-TQFP-48				
XC886CLM-6FFA/RRA	24	24	1.75	VC	34	8	4	no	2	2xUART, LIN BSL, 1xSCC	F,K,A,L	PG-TQFP-48				
XC886CLM-8FFA/RRA	24	32	1.75	VC	34	8	4	no	2	2xUART, LIN BSL, 1xSCC	F,K,A,L	PG-TQFP-48				
XC888-6FFA/RRA	24	24	1.75	-	48	8	4	no	-	2xUART, 1xSCC	F,K,A,L	PG-TQFP-64				
XC888-8FFA/RRA	24	32	1.75	-	48	8	4	no	-	2xUART, 1xSCC	F,K,A,L	PG-TQFP-64				
XC888LM-6FFA/RRA	24	24	1.75	VC	48	8	4	no	-	2xUART, LIN BSL, 1xSCC	F,K,A,L	PG-TQFP-64				
XC888LM-8FFA/RRA	24	32	1.75	VC	48	8	4	no	-	2xUART, LIN BSL, 1xSCC	F,K,A,L	PG-TQFP-64				
XC888CM-6FFA/RRA	24	24	1.75	VC	48	8	4	no	2	2xUART, 1xSCC	F,K	PG-TQFP-64				
XC888CM-8FFA/RRA	24	32	1.75	VC	48	8	4	no	2	2xUART, 1xSCC	F,K	PG-TQFP-64				
XC888CLM-6FFA/RRA	24	24	1.74	VC	48	8	4	no	2	2xUART, LIN BSL, 1xSCC	F,K	PG-TQFP-64				
XC888CLM-8FFA/RRA	24	32	1.75	VC	48	8	4	no	2	2xUART, LIN BSL, 1xSCC	F,K	PG-TQFP-64				
XC800 I-Family (Industrial and Multi-Markets)																
XC82x-Series																
XC822-0FRI	24	4	0.5	-	13	4	4	no	-	1xUART, 1SSC, I2C	X	PG-TSSOP-16				
XC822-1FRI	24	4	0.5	-	13	4	4	no	-	1xUART, 1SSC, I2C	F	PG-TSSOP-16				
XC822T-0FRI	24	2	0.5	-	13	4	4	no	-	1xUART, 1SSC, I2C	F	PG-TSSOP-16	TP			
XC822T-1FRI	24	4	0.5	-	13	4	4	no	-	1xUART, 1SSC, I2C	F	PG-TSSOP-16	TP			
XC822M-1FRI	24	4	0.5	MDU	13	4	4	no	-	1xUART, 1SSC, I2C	F,K,X	PG-TSSOP-16				
XC822MT-1FRI	24	4	0.5	MDU	13	4	4	no	-	1xUART, 1SSC, I2C	F	PG-TSSOP-16	TP			
XC824M-1FGI	24	4	0.5	MDU	17	4	4	no	-	1xUART, 1SSC, I2C	F,K,X	PG-DSO-20				
XC824MT-1FGI	24	4	0.5	MDU	17	4	4	no	-	1xUART, 1SSC, I2C	F	PG-DSO-20	TP			
XC83x-Series																
XC835MT-2FGI	24	8	0.5	VC	21	4	4	no	-	1xUART, 1SSC, I2C	F	PG-DSO-24	TP, HCP			
XC836T-2FRI	24	8	0.5		25	8	4	no	-	1xUART, 1SSC, I2C	F	PG-TSSOP-28	TP, HCP			
XC836M-1FRI	24	4	0.5	VC	25	8	4	no	-	1xUART, 1SSC, I2C	F	PG-TSSOP-28	HCP			
XC836M-2FRI	24	8	0.5	VC	25	8	4	no	-	1xUART, 1SSC, I2C	F	PG-TSSOP-28	HCP			
XC836-2FRI	24	8	0.5	-	25	8	4	no	-	1xUART, 1SSC, I2C	F	PG-TSSOP-28	HCP			
XC836MT-2FRI	24	8	0.5	VC	25	8	4	no	-	1xUART, 1SSC, I2C	F	PG-TSSOP-28	TP, HCP			
XC85x-Series																
XC858CA-9FFI	27	36	3	-	48	8	10	yes	2	2xUART, 1SSC	F	PG-TQFP-64				
XC858CA-13FFI	27	52	3	-	48	8	10	yes	2	2xUART, 1SSC	F	PG-TQFP-64				
XC858CA-16FFI	27	64	3	-	48	8	10	yes	2	2xUART, 1SSC	F	PG-TQFP-64				
XC86x-Series																
XC864-1FRI	-	-	-	-	13	4	4	no	-	1xUART, 1xSSC	F,K	PG-TSSOP-20				
XC866-2FRI	26.67	8	0.75	-	27	8	4	no	-	1xUART, 1xSSC	F,K	PG-TSSOP-38				
XC866-1FRI																