

Microcontroller Pocket Guide

Issue 2014

Product Type	Max Clock Frequency (MHz)	Program Memory (KByte)	SRAM (incl. Cache) (KByte)	Co-Processor	Digital I/O Lines	Number of ADC Channels	Timed I/O Channels (PWM, Capture)	External Bus Interface	CAN Nodes	Ethernet	Communication Interfaces	Temperature Ranges	Packages	Additional Features/Remarks
C500 Family														
C505CA-4EM/-LM	20	0	1.25	–	34	8	4	N	1	N	1x USART	F, B, K	PG-MQFP-44	OTP, ROM less
C505CA-2/-4RM	20	16/32	1.25	–	34	8	4	N	1	N	1x USART	F, B, K	PG-MQFP-44	ROM
C515C-8EM	10	64	2.25	–	49	8	4	N	1	N	1x USART, 1x SSC	F, B, K	PG-MQFP-80	OTP
XC800 A-Family (Automotive)														
XC82x-Series														
XC822MT-1FRA	24	2–4	0.5	–	17	4	4	N	–	N	1x UART, 1x SSC, LIN	F, K	PG-TSSOP-16	
XC83x-Series														
XC836MT	24	4–8	0.5	VC	25	8	4	N	–	N	1x UART, 1x SSC, LIN	F, K	PG-TSSOP-28	
XC86x-Series														
XC866-1FRA	26.67	4–16	0.75	–	27	8	4	N	–	N	1x UART, 1x SSC	F, K, A, L	PG-TSSOP-38	
XC866L-1FRA	26.67	4–16	0.75	–	27	8	4	N	–	N	1x UART, LIN BSL, 1x SSC	F, K, A, L	PG-TSSOP-38	
XC87x-Series														
XC874[CM][LM][CLM]	27	52–64	3.0	[VC]	48	8	10	Y	[2]	N	2x UART, 1x SSC, LIN	F, K	PG-VQFN-48	
XC878[CM][LM][CLM]	27	52–64	3.0	[VC]	48	8	10	Y	[2]	N	2x UART, 1x SSC, [LIN]	F, K, X	PG-LQFP-64	
XC88x-Series														
XC886[LM][CM][CLM]	24	24–32	1.75	[VC]	34	8	4	N	[2]	N	2x UART, [LIN BSL], [1x SSC]	F, K, A, L	PG-TQFP-48	
XC888[LM][CM][CLM]	24	24–32	1.74	[VC]	48	8	4	N	[2]	N	2x UART, [LIN BSL], [1x SSC]	F, K, [A], [L]	PG-TQFP-64	
XC800 I-Family (Industrial and Multi Market)														
XC82x-Series														
XC822[T]	24	2–4	0.5	–	13	4	4	N	–	N	1x UART, 1x SSC, I ² C	X, F	PG-TSSOP-16	[TP]
XC822M[T]-1FRI	24	4	0.5	MDU	13	4	4	N	–	N	1x UART, 1x SSC, I ² C	F, K, X	PG-TSSOP-16	[TP]
XC83x-series														
XC836[M][T]	24	4–8	0.5	[VC]	25	8	4	N	–	N	1x UART, 1x SSC, I ² C	F	PG-TSSOP-28	HCP, [TP]
XC86x-Series														
XC866	26.67	4–16	0.75	–	27	8	4	N	–	N	1x UART, 1x SSC	F, K	PG-TSSOP-38	
XC87x-Series														
XC878[C][M]	27	52–64	3.0	[VC]	48	8	10	Y	[2]	N	2x UART, 1x SSC	F, K	PG-TQFP-64	
XC88x-Series														
XC886[C][M]	24	24–32	1.75	[VC]	34	8	4	N	[2]	N	2x UART, 1x SSC	F, K	PG-TSSOP-48	
XC888[C][M]	24	24–32	1.75	[VC]	48	8	4	N	[2]	N	2x UART, 1x SSC	F, K	PG-TSSOP-64	
CIC-Family (Companion IC)														
CIC61508	26.67	–	0.25	–	–	–	–	N	–	N	Safety signature watchdog	K	PG-TSSOP-38	ROM, Flash

[] = Optional features
HCP = High Current Pads
MDU = Multiply Divide Unit
LIN BSL = LIN Bootstrap Loader

SSC = Synchronous Serial Channel
TP = Touchpad Library in ROM
VC = Vector Computer (MDU + CORDIC)

A = -40/+140°C
B = 0/+70°C
F = -40/+85°C
K = -40/+125°C
L = -40/+150°C
X = -40/+105°C

Product Type	Max Clock Frequency (MHz)	Program Memory (KByte)	SRAM (incl. Cache) (KByte)	Co-Processor	Digital I/O Lines	Number of ADC Channels	Timed I/O Channels (PWM, Capture)	External Bus Interface	CAN Nodes	Ethernet	Communication Interfaces	Temperature Ranges	Packages	Additional Features/Remarks
C166 Family														
C161														
C161CS-32RF/LF	25	256/-	10	-	93	12	32	Y	2	N	2x ASC, 1x SSC, 1x I ² C, J1850	B, F, K	PG-TQFP-128	ROM/-less
C1610/K/S-LM/-L25M/3V	20/25	-	2/1/2	-	63	-	-	Y	-	N	1x ASC, 1x SSC	B, F	PG-MQFP-80	ROM less
C161PI-LM/-L25M/3V	20/25	-	3	-	76	4	-	Y	-	N	1x ASC, 1x SSC, 1x I ² C	B, F	PG-MQFP-100	ROM less
C161PI-LF/-L25F/3V	20/25	-	3	-	76	4	-	Y	-	N	1x ASC, 1x SSC, 1x I ² C	B, F	PG-TQFP-100	ROM less
C164														
C164CI/CL-8EM/-8E25M/-8RM/-8R25M	20/25	64	4	-	59	8	12	Y	1	N	1x ASC, 1x SSC	F, K	PG-MQFP-80	OTP/ROM
C164CI-LM/-L25M/3V	20	-	4	-	59	8	12	Y	1	N	1x ASC, 1x SSC	F, K	PG-MQFP-80	ROM less
C164SI-8RM/-8R25M	20/25	64	4	-	59	8	12	Y	-	N	1x ASC, 1x SSC	F, K	PG-MQFP-80	ROM
C164CM-4RF/EF	20	32	2	-	50	8	16	Y	1	N	1x ASC, 1x SSC	F, K	PG-TQFP-64	ROM/OTP
C164SM/SV-2RF/-4RF	20	16/32	1/2	-	50	8	16	Y	-	N	1x ASC, 1x SSC	K	PG-TQFP-64	ROM
C165														
C165-LF/-L25F/3V	20/25	-	2	-	77	-	-	Y	-	N	1x ASC, 1x SSC	B, F	PG-TQFP-100	ROM less
C165-LM/-L25M/3V	20/25	-	2	-	77	-	-	Y	-	N	1x ASC, 1x SSC	B, F	PG-MQFP-100	ROM less
C167														
C167SR-LM	25	-	4	-	111	16	36	Y	-	N	1x UART, 1x SSC	F, B, K	PG-MQFP-144	ROM less
C167CR-4RM/-16RM/-LM/-L33M	25/33	-	4	-	111	16	36	Y	1	N	1x UART, 1x SSC	F, B, K	PG-MQFP-144	ROM less
C167CS-L16M/-LM/-L33M/-L40M 3V	16/25/33/40	-	11	-	111	24	36	Y	2	N	1x UART, 1x SSC	F, B, K	PG-MQFP-144	ROM less
C167CS-4RM/-4R40M	25/40	32	11	-	111	24	36	Y	2	N	1x USART, 1x SSC	F, B, K	PG-MQFP-144	ROM
XC166 Family														
XC164CM														
XC164CM	40	64-128	6-8	MAC	47	14	20	Y	2	N	2x ASC, 2x SSC	F, K	PG-TQFP-64	
XC164CI														
XC161CI	40	128	8	MAC	99	12	32	Y	2	N	2x ASC, 2x SSC, 1x SDLM, 1x I ² C, J1850	F, K	PG-TQFP-144	
XC164CS														
XC164CS	40	128-256	8-12	MAC	79	14	36	Y	2	N	2x ASC, 2x SSC	F, K	PG-TQFP-100	
XC167CI														
XC167CI	40	128-256	8-12	MAC	103	16	36	Y	2	N	2x ASC, 2x SSC, 1x I ² C	F, K	PG-TQFP-144	
XE166 Real Time Signal Controller for Industrial and Multi Market														
Classic Series – Alpha Line														
XE164x	66/80	768	24-82	MAC	75	11-16	30-37	Y	0-4	N	4-6x USIC	F, K	PG-LQFP-100	
XE167x	66/80	768	28-82	MAC	118	16-24	30-44	Y	0-5	N	4-6x USIC	F, K	PG-LQFP-144	
U Series – Compact Line														
XE160x	40/66	32-64	8	MAC	28	8	15	N	-	N	2x USIC	F, K	PG-TSSOP-38	
XE161x	40/66	64	8	MAC	33	10	15	N	-	N	2x USIC	F, K	PG-VQFN-48	
L Series – Econo Line														
XE161x	66/80	128-160	12	MAC	33	10	21	N	1	N	4x USIC	F, K	PG-VQFN-48	
XE162x	66/80	96-160	12	MAC	48	19	21	N	2	N	4x USIC	F, K	PG-LQFP-64	
N Series – Value Line														
XE162xN	80	128-320	18-34	MAC	40	9	23	Y	0-2	N	6x USIC	F, K	PG-LQFP-64	
XE164xN		128-320	18-34	MAC	75	11-16	30	Y	0-2	N	4-6x USIC	F, K	PG-LQFP-100	
M Series – Base Line														
XE162xM	80	384-576	24-50	MAC	40	9	23	N	0-2	N	6x USIC	F, K	PG-LQFP-64	
XE164xM	80	384-576	26-50	MAC	76	11-16	30-37	Y	0-4	N	4-6x USIC	F, K	PG-LQFP-100	
XE167xM	80	384-576	34-50	MAC	119	16-24	30-44	Y	0-6	N	4-8x USIC	F, K	PG-LQFP-144	
H Series – High Line														
XE167xH	100	1024-1600	138	MAC	98-118	24	60	Y	6	N	10x USIC	F, K	PG-LQFP-144	
XE169xH	100	1024-1600	138	MAC	98-118	30	60	Y	6	N	10x USIC	F, K	PG-LQFP-176	

ASC = Asynchronous Serial Channel

B = 0/+70°C

MAC = Multiply-Accumulate-Unit (DSP)

F = -40/+85°C

SDLM = Serial Data Link Module

K = -40/+125°C

SSC = Synchronous Serial Channel

USIC = ASC, SPI, I²C, I²S

Product Type	Max Clock Frequency (MHz)	Program Memory (KByte)	SRAM (incl. Cache) (KByte)	Co-Processor	Digital I/O Lines	Number of ADC Channels	Timed I/O Channels (PWM, Capture)	External Bus Interface	CAN Nodes	Ethernet	Communication Interfaces	Temperature Ranges	Packages	Additional Features/Remarks
XC2200 for Body Applications														
U-Series														
XC2210U	40	32-64	8	MAC	28	7	17	Y	-	N	1x USIC	F, K	PG-TSSOP-38	
XC2220U	40	32-64	8	MAC	33	10	17	Y	-	N	1x USIC	F, K	PG-VQFN-48	
L-Series														
XC2224L	66	96-160	12	MAC	33	10	23	Y	2	N	2x USIC	F, K	PG-VQFN-48	
XC2234L	66	96-160	12	MAC	49	19	24	Y	2	N	2x USIC	F, K	PG-LQFP-64	
N-Series														
XC2238N	80	192-320	34	MAC	38	9	22	Y	6	N	4x USIC	F, K	PG-LQFP-64	
XC2268N	80	192-320	34	MAC	76	16	32	Y	6	N	6x USIC	F, K	PG-LQFP-100	
M-Series														
XC2237M	80	448-832	50	MAC	38	9	22	Y	6	N	6x USIC	F, K	PG-LQFP-64	
XC2267M	80	448-832	50	MAC	76	16	32	Y	6	N	8x USIC	F, K	PG-LQFP-100	
XC2287M	80	448-832	50	MAC	119	24	44	Y	6	N	8x USIC	F, K	PG-LQFP-144	
I-Series														
XC2269I	128	1088	90	MAC	76	19	32	Y	6	N	10x USIC, 2x FlexRay	F, K	PG-LQFP-100	
XC2289I	128	1088	90	MAC	118	28	44	Y	6	N	10x USIC, 2x FlexRay	F, K	PG-LQFP-144	
H-Series														
XC2289H	100	1600	138	MAC	119	24	44	Y	4	N	10x USIC, 2x FlexRay	F, K	PG-LQFP-144	
XC2299H	100	1600	138	MAC	150	30	66	Y	6	N	10x USIC, 2x FlexRay	F, K	PG-LQFP-176	
XC2300 for Safety Applications														
A-Series														
XC2336A	40	448-832	50	MAC	38	9	24	Y	2	N	4x USIC	F, K	PG-LQFP-64	
XC2365A	80	448-832	50	MAC	76	16	24	Y	3	N	6x USIC	F, K	PG-LQFP-100	
XC2387A	80	448-832	50	MAC	119	24	32	Y	3	N	6x USIC	F, K	PG-LQFP-144	
B-Series														
XC2336B	80	320	34	MAC	38	9	20	Y	2	N	4x USIC	F, K	PG-LQFP-64	
XC2365B	80	192-320	18-34	MAC	76	16	24	Y	3	N	6x USIC	F, K	PG-LQFP-100	
C-Series														
XC2388C	100	1088-1600	138	MAC	119	24	32	Y	4	N	10x USIC, 2x FlexRay	F, K	PG-LQFP-144	
D-Series														
XC2321D	80	96-160	12	MAC	33	10	23	Y	2	N	2x USIC	F, K	PG-VQFN-48	
XC2331D	80	96-160	12	MAC	49	19	24	Y	2	N	2x USIC	F, K	PG-LQFP-64	
E-Series														
XC2368E	128	576-1088	90	MAC	75	16	32	Y	3	N	6x USIC, 2x FlexRay	F, K	PG-LQFP-100	
XC2388E	128	576-1088	90	MAC	118	24	32	Y	3	N	8x USIC, 2x FlexRay	F, K	PG-LQFP-144	
S-Series														
XC2310S	66	32-64	8	MAC	28	7	17	Y	-	N	1x USIC	F, K	PG-TSSOP-38	
XC2320S	66	32-64	8	MAC	33	10	17	Y	-	N	1x USIC	F, K	PG-VQFN-48	
XC2700 for Powertrain Applications														
2-Series														
XC2712X	40	64	8	MAC	28	7	17	Y	-	N	2x USIC	K	PG-TSSOP-38	
XC2722X	40	64	8	MAC	33	10	17	Y	-	N	2x USIC	K	PG-VQFN-48	
3-Series														
XC2723X	66	160	12	MAC	33	10	23	Y	2	N	2x USIC	K	PG-VQFN-48	
XC2733X	66	160	12	MAC	49	19	24	Y	2	N	2x USIC	K	PG-LQFP-64	
4-Series														
XC2734X	80	320	34	MAC	38	9	20	Y	2	N	4x USIC	K	PG-LQFP-64	
XC2764X	80	320	34	MAC	76	16	24	Y	2	N	4x USIC	K	PG-LQFP-100	
5-Series														
XC2765X	80	576-832	50	MAC	76	16	37	Y	2	N	4x USIC	K	PG-LQFP-100	
XC2785X	80	576-832	50	MAC	119	24	44	Y	2	N	4x USIC	K	PG-LQFP-144	
7-Series														
XC2787X	100	1600	138	MAC	119	24	60	Y	2	N	6x USIC	K	PG-LQFP-144	
XC2797X	100	1600	138	MAC	150	30	60	Y	2	N	6x USIC	K	PG-LQFP-176	
8-Series														
XC2768X	128	1088	90	MAC	76	19	32	Y	2	N	10x USIC, 2x FlexRay	K	PG-LQFP-100	
XC2788X	128	1088	90	MAC	118	28	44	Y	2	N	10x USIC, 2x FlexRay	K	PG-LQFP-144	

MAC = Multiply-Accumulate-Unit (DSP) F = -40/+85°C
 USIC = ASC, SPI, I²C, I²S K = -40/+125°C

Product Type	Max Clock Frequency (MHz)	Program Memory (KByte)	SRAM (incl. Cache) (KByte)	Co-Processor	Digital I/O Lines	Number of ADC Channels	Timed I/O Channels (PWM, Capture)	External Bus Interface	CAN Nodes	Ethernet	Communication Interfaces	Temperature Ranges	Packages	Additional Features/Remarks
XMC1000 Microcontroller for Industrial and Multi Market powered by ARM® Cortex™-M0 Processor														
XMC1100 Series														
XMC1100-T016	32	8-64	16	-	14	6	4	N	-	N	2x USIC	F, X	PG-TSSOP-16	
XMC1100-T038	32	16-64	16	-	34	12	4	N	-	N	2x USIC	F, X	PG-TSSOP-38	
XMC1100-Q024	32	8-64	16	-	22	8	4	N	-	N	2x USIC	F	PG-VQFN-24	
XMC1100-Q040	32	16-64	16	-	35	12	4	N	-	N	2x USIC	F	PG-VQFN-40	
XMC1200 Series														
XMC1201-T038	32	16-200	16	-	34	12	6	N	-	N	2x USIC	F	PG-TSSOP-38	LEDTS
XMC1201-Q040	32	16-200	16	-	35	12	6	N	-	N	2x USIC	F	PG-VQFN-40	LEDTS
XMC1202-T016	32	16-32	16	-	14	6	11	N	-	N	2x USIC	X	PG-TSSOP-16	2x Comparator, BCCU
XMC1202-T028	32	16-32	16	-	26	10	13	N	-	N	2x USIC	X	PG-TSSOP-28	3x Comparator, BCCU
XMC1202-Q024	32	16-32	16	-	22	8	13	N	-	N	2x USIC	X	PG-VQFN-24	3x Comparator, BCCU
XMC1202-Q040	32	16-32	16	-	35	12	13	N	-	N	2x USIC	X	PG-VQFN-40	3x Comparator, BCCU
XMC1300 Series														
XMC1301-T016	32	8-16	16	-	14	6	12	N	-	N	2x USIC	F, X	PG-TSSOP-16	2x Comparator, CCU8 special purpose timer, POSIF
XMC1301-T038	32	8-32	16	-	34	12	20	N	-	N	2x USIC	F, X	PG-TSSOP-38	3x Comparator, CCU8 special purpose timer, POSIF
XMC1301-Q024	32	8-16	16	-	22	8	20	N	-	N	2x USIC	F	PG-VQFN-24	3x Comparator, CCU8 special purpose timer, POSIF
XMC1301-Q040	32	8-32	16	-	35	12	29	N	-	N	2x USIC	F	PG-VQFN-40	3x Comparator, CCU8 special purpose timer, POSIF
XMC1302-T016	32	8-32	16	MATH	14	6	12	N	-	N	2x USIC	X	PG-TSSOP-16	2x Comparator, CCU8 special purpose timer, POSIF, BCCU
XMC1302-T038	32	16-200	16	MATH	33	12	29	N	-	N	2x USIC	X	PG-TSSOP-38	3x Comparator, CCU8 special purpose timer, POSIF, BCCU
XMC1302-Q024	32	16-64	16	MATH	22	8	20	N	-	N	2x USIC	F, X	PG-VQFN-24	3x Comparator, CCU8 special purpose timer, POSIF, BCCU
XMC1302-Q040	32	16-128	16	MATH	35	12	29	N	-	N	2x USIC	X	PG-VQFN-40	3x Comparator, CCU8 special purpose timer, POSIF, BCCU

ASC = Asynchronous Serial Channel

BCCU = Brightness and Color Control unit for LED lighting

CCU = Capture Compare Unit

EVR = Embedded Voltage Regulator

FPU = Floating Point Unit

FS DEV = Full Speed Device

FS OTG = Full Speed On To Go

LEDTS = Unit for LED display and capacitive touch control

LS = Lock Step

MATH = Peripheral for CORDIC and division operations: CORDIC (24-bit) and Divide (32-bit) at 64MHz

MLI = Micro Link Interface

MMC = Multi Media Card

PCP = Peripheral Control Processor

PSIS = Peripheral Sensor Interface

POSIF = Motor Position Interface

QSPI = Queued Serial Peripheral Interface

SDIO = SD Card Interface with Input/Output

SENT = Single Edge Nibble Transmission

SSC = Synchronous Serial Channel

F = -40/+85°C

K = -40/+125°C

X = -40/+105°C

Product Type	Max Clock Frequency (MHz)	Program Memory (KByte)	SRAM (incl. Cache) (KByte)	Co-Processor	Digital I/O Lines	Number of ADC Channels	Timed I/O Channels (PWM, Capture)	External Bus Interface	CAN Nodes	Ethernet	Communication Interfaces	Temperature Ranges	Packages	Additional Features/Remarks
XMC4000 Microcontroller for Industrial and Multi Market powered by ARM® Cortex™-M4 Processor														
XMC4100 Series														
XMC4100-F64	80	128	20+1	FPU	35	9	31	N	2	N	4x USIC, USB FS DEV	F, K	PG-LQFP-64	POSIF, LETDS, 12-bit 2 channel DAC
XMC4100-Q48	80	128	20+1	FPU	21	8	21	N	2	N	4x USIC, USB FS DEV	F, K	PG-VQFN-48	POSIF, LETDS, 12-bit 2 channel DAC
XMC4104-F64	80	64–128	20+1	FPU	35	9	31	N	0	N	4x USIC	F, K	PG-LQFP-64	POSIF, LETDS, 12-bit 2 channel DAC
XMC4104-Q48	80	64–128	20+1	FPU	21	8	21	N	0	N	4x USIC	F, K	PG-VQFN-48	POSIF, LETDS, 12-bit 2 channel DAC
XMC4108-Q48	80	64	20+1	FPU	21	8	21	N	1	N	4x USIC	K	PG-VQFN-48	POSIF, 12-bit 2 channel DAC
XMC4200 Series														
XMC4200-F64	80	256	40+1	FPU	35	9	31	N	2	N	4x USIC, USB FS DEV	F, K	PG-LQFP-64	POSIF, LETDS, 12-bit 2 channel DAC
XMC4200-Q48	80	256	40+1	FPU	21	8	21	N	2	N	4x USIC, USB FS DEV	F, K	PG-VQFN-48	POSIF, LETDS, 12-bit 2 channel DAC
XMC4400 Series														
XMC4400-F100	120	256–512	80+4	FPU	55	18	46	N	2	Y	4x USIC, USB FS OTG	F, K	PG-LQFP-100	POSIF, LETDS, 12-bit 2 channel DAC
XMC4400-F64	120	256–512	80+4	FPU	31	9	29	N	2	Y	4x USIC, USB FS OTG	F, K	PG-LQFP-64	POSIF, LETDS, 12-bit 2 channel DAC
XMC4402-F100	120	256	80+4	FPU	55	18	46	N	2	N	4x USIC, USB FS OTG	F, K	PG-LQFP-100	POSIF, LETDS, 12-bit 2 channel DAC
XMC4402-F64	120	256	80+4	FPU	31	9	29	N	2	N	4x USIC, USB FS OTG	F, K	PG-LQFP-64	POSIF, LETDS, 12-bit 2 channel DAC
XMC4500 Series														
XMC4500-E144	120	1024	160+4	FPU	91	26	74	Y	3	Y	6x USIC, USB FS OTG, SDIO/SD/MMC	F, X	PG-LFBGA-144	POSIF, LETDS, 12-bit 2 channel DAC
XMC4500-F100	120	768–1024	160+4	FPU	55	18	44	N	3	Y	6x USIC, USB FS OTG, SDIO/SD/MMC	F, K	PG-LQFP-100	POSIF, LETDS, 12-bit 2 channel DAC
XMC4500-F144	120	1024	160+4	FPU	91	26	74	Y	3	Y	6x USIC, USB FS OTG, SDIO/SD/MMC	F, K	PG-LQFP-144	POSIF, LETDS, 12-bit 2 channel DAC
XMC4500-F144	120	768	160+4	FPU	91	26	74	N	3	Y	6x USIC, USB FS OTG, SDIO/SD/MMC	F, K	PG-LQFP-144	POSIF, LETDS, 12-bit 2 channel DAC
XMC4502-F100	120	768	160+4	FPU	55	18	44	N	3	N	6x USIC, USB FS OTG, SDIO/SD/MMC	F, K	PG-LQFP-100	POSIF, LETDS, 12-bit 2 channel DAC
XMC4504-F100	120	512	160+4	FPU	55	18	44	N	0	N	6x USIC, USB FS OTG, SDIO/SD/MMC	F, K	PG-LQFP-100	POSIF, LETDS, 12-bit 2 channel DAC
XMC4504-F144	120	512	160+4	FPU	91	26	74	Y	0	N	6x USIC, USB FS OTG, SDIO/SD/MMC	F, K	PG-LQFP-144	POSIF, LETDS, 12-bit 2 channel DAC

ASC = Asynchronous Serial Channel

BCCU = Brightness and Color Control unit for LED lighting

CCU = Capture Compare Unit

EVR = Embedded Voltage Regulator

FPU = Floating Point Unit

FS DEV = Full Speed Device

FS OTG = Full Speed On To Go

HSSL = High Speed Serial Link

LEDTS = Unit for LED display and capacitive touch control

LS = Lock Step

MATH = Peripheral for CORDIC and division operations: CORDIC (24-bit) and Divide (32-bit) at 64MHz

MLI = Micro Link Interface

MMC = Multi Media Card

MSC = Micro Second Channel

PCP = Peripheral Control Processor

PSI5 = Peripheral Sensor Interface

POSIF = Motor Position Interface

QSPI = Queued Serial Peripheral Interface

SDIO = SD Card Interface with Input/Output

SENT = Single Edge Nibble Transmission

SSC = Synchronous Serial Channel

USIC = ASC, SPI, I²C, I²S

F = -40/+85°C

K = -40/+125°C

X = -40/+105°C

Product Type	Max Clock Frequency [MHz]	Program Memory [KByte]	SRAM (incl. Cache) [KByte]	Co-Processor	Digital I/O Lines	Number of ADC Channels	Timed I/O Channels (PWM, CAPCOM, GPTA)	External Bus Interface	CAN Nodes	Ethernet	Communication Interfaces	Temperature Ranges	Packages	Additional Features/Remarks
TriCore™ Microcontroller for Industrial and Multi Market														
AUDO – Future Family														
TC1767-256F133	133	2000	128	FPU, PCP	88	36	80	N	2	N	2x ASC, 2x SSC, 1x MSC, 1x MLI	K	PG-LQFP-176	
TC1797-512F180	180	4000	224	FPU, PCP	221	48	118	Y	4	N	2x ASC, 2x SSC, 2x MSC, 2x MLI	K	PG-BGA-416	
AUDO-MAX – Family														
TC1724N-192F80	80	1500	152	FPU, PCP	95	28	77	N	3	N	2x ASC, 4x SSC, 1x MSC, 1x MLI	K	PG-LQFP-144	EVR
TC1728N-192F133	133	1500	152	FPU, PCP	127	36	94	N	3	N	2x ASC, 4x SSC, 1x MSC, 1x MLI	K	PG-LQFP-176	EVR
TC1782F-320F180	180	2500	152	FPU, PCP	86	36	80	N	3	N	2x ASC, 4x SSC, 1x MSC, 1x MLI	K	PG-LQFP-176	
TC1784F-320F180	180	2500	152	FPU, PCP	139	36	122	Y	3	N	2x ASC, 4x SSC, 1x MSC, 1x MLI	K	PG-LFBGA-292	
TC1791F-512F240	200	3000	320	FPU, PCP	144	48	100	N	4	N	2x ASC, 4x SSC, 2x MSC, 2x MLI, 8x SENT	K	PG-LFBGA-292	
TC1793F-512F270	270	4000	320	FPU, PCP	235	44	140	Y	4	N	2x ASC, 4x SSC, 2x MSC, 2x MLI, 8x SENT	K	PG-BGA-416	
TC1798F-512F300	300	4000	320	FPU, PCP	252	72	138	Y	4	N	2x ASC, 4x SSC, 2x MSC, 2x MLI, 8x SENT	K	PG-BGA-516	
TriCore™ Microcontroller for Automotive Applications														
AUDO – Next Generation Family														
TC1762-1128F	66–80	1000	52	FPU	81	32	48	N	2	N	2x ASC, 1x SSC, 1x MSC, 1x MLI	K	PG-LQFP-176	
TC1766-192F80HL	80	1500	108	FPU, PCP	81	32	48	N	2	N	2x ASC, 2x SSC, 1x MSC, 2x MLI	K	PG-LQFP-176	
TC1796-256F150E	150	2000	256	FPU, PCP	123	44	126	Y	4	N	2x ASC, 2x SSC, 2x MSC, 2x MLI	K	PG-BGA-416	
AUDO – Future Family														
TC1736-128F80HL	80	1000	48	FPU	70	24	53	N	2	N	2x ASC, 2x SSC, 1x MSC, 1x MLI	K	PG-LQFP-144	
TC1767-256F	80–133	2000	128	FPU, PCP	88	36	80	N	2	N	2x ASC, 2x SSC, 1x MSC, 1x MLI	K	PG-LQFP-176	
TC1797-512F180E	180	4000	224	FPU, PCP	221	48	118	Y	4	N	2x ASC, 2x SSC, 2x MSC, 2x MLI	K	PG-BGA-416	
AUDO-MAX – Family														
TC1724N-192F80HR	80	1500	152	FPU, PCP	95	28	77	N	3	N	2x ASC, 4x SSC, 1x MSC, 1x MLI	K	PG-LQFP-144	EVR
TC1728N-192F133HR	133	1500	152	FPU, PCP	127	36	94	N	3	N	2x ASC, 4x SSC, 1x MSC, 1x MLI	K	PG-LQFP-176	EVR
TC1782N-256F133HR	133	2000	176	FPU/PCP	86	36	80	N	3	N	2x ASC, 3x SSC, 1x MSC, 1x MLI, 2x FlexRay	K	PG-LQFP-176	
TC1782F-320F180HR	180	2500	176	FPU/PCP	86	36	80	N	3	N	2x ASC, 3x SSC, 1x MSC, 1x MLI, 2x FlexRay	K	PG-LQFP-176	
TC1784F-320F180EL	180	2500	176	FPU/PCP	126	36	122	Y	3	N	2x ASC, 3x SSC, 1x MSC, 1x MLI, 2x FlexRay	K	PG-LFBGA-292-2	
TC1791F-512F240EP	240	4000	288	FPU/PCP	144	48	100	N	4	N	2x ASC, 4x SSC, 2x MSC, 2x MLI, 8x SENT, 2x FlexRay	K	PG-LFBGA-292	
TC1793F-512F270EF	270	4000	288	FPU/PCP	221	44	112	Y	4	N	2x ASC, 4x SSC, 2x MSC, 2x MLI, 8x SENT, 2x FlexRay	K	PG-LBGA-416	
TC1798F-512F300EP	300	4000	288	FPU/PCP	252	72	138	Y	4	N	2x ASC, 4x SSC, 2x MSC, 2x MLI, 8x SENT, 2x FlexRay	K	PG-BGA-516	
AURIX™ – Family														
TC233LP-32F200	200	2048	192	FPU	54	24	40	N	6	N	2x FlexRay, 4x QSPI, 2ASC, 4x SENT	K	PG-TQFP-100	EVR, Single core with LS
TC234LP-32F200	200	2048	192	FPU	96	24	40	N	6	N	2x FlexRay, 4x QSPI, 2ASC, 4x SENT	K	PG-TQFP-144	EVR, Single core with LS
TC237LP-32F200	200	2048	192	FPU	96	24	40	N	6	N	2x FlexRay, 4x QSPI, 2ASC, 4x SENT	K	PG-LFBGA-292	EVR, Single core with LS
TC275T-64F200	200	4000	472	FPU	112	60/6 DS	110	N	4	Y	2x FlexRay, 4x QSPI, 4x ASC, 1x I ² C, 10xSent, 3x PSi5, 1x HSSL, 2x MSC	K	PG-LQFP-176	EVR, Triple core with LS
TC277T-64F200	200	4000	472	FPU	151	60/6 DS	134	N	4	Y	2x FlexRay, 4x QSPI, 4x ASC, 1x I ² C, 10xSent, 3x PSi5, 1x HSSL, 2x MSC	K	PG-LFBGA-292	EVR, Triple core with LS

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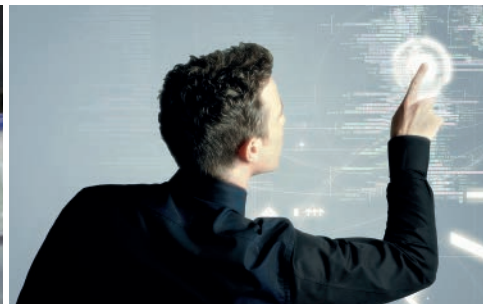
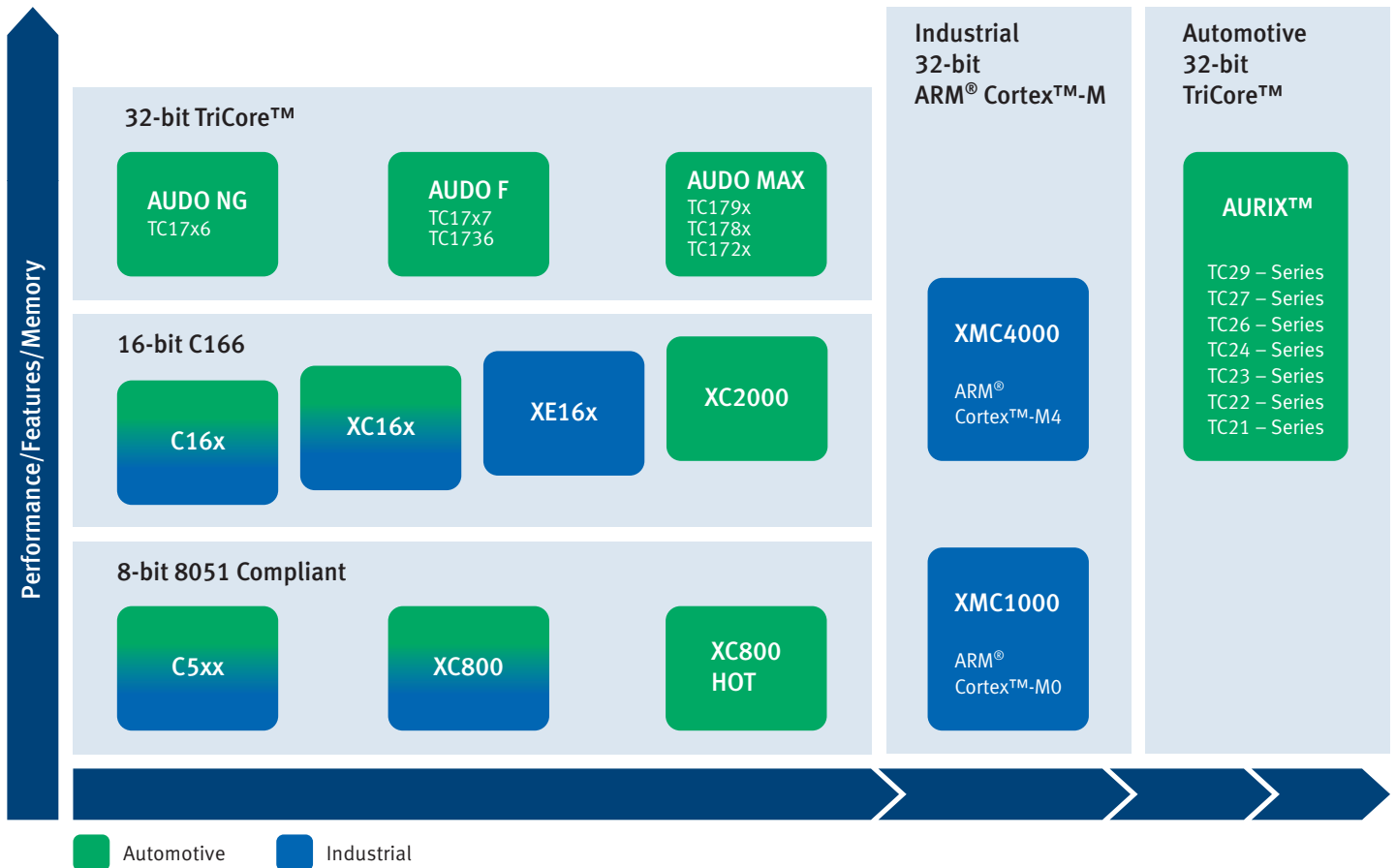
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SSC = Synchronous Serial Channel

F = -40/+85°C
K = -40/+125°C
X = -40/+105°C

Voltage Regulators

Microcontroller Family	Input Voltage [V]	Input Current (max.) [mA]	Voltage Regulator
XC8xx	5.0 ... 3.3	20	IFX20001/IFX24401/IFX2931/IFX25001/IFX21401/IFX4949
XE166/XC2000	1.5 and 3.3 or 5.0	100	IFX25401/IFX24401/IFX2931/IFX4949
TriCore™	1.5 ... 3.3	>400	IFX27001/IFX8117/IFX91041/IFX80471/IFX25001/IFX1117
XMC4000 series	3.3	300	IFX1763/IFX544xx/IFX90121
XMC1000 series	1.8 ... 5.5	<100	IFX544xx/IFX542xx/IFX4949/IFX2931/IFX25001

Infineon Microcontrollers



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