



# 8-bit Family



Type	Max. Clock Rate	Instruction Cycle Time	ROM / OTP / Flash (Byte)	E <sup>2</sup> -Prom (Byte)	RAM (Byte)	I/O Lines	ADC - Inputs/Max. Resolution	Timers/ Counters (16-Bit)	Interrupts vectors/ Levels	Serial I/O	FCAN 2.0B active	PWM	Mul./Div. Unit	Data Pointers (16-Bit)	Hardware Power Down	Wakeable Power Down Mode	Watch-dog Timer	Osc Watch-dog	Packaging		
C504-L/2R C504-2E	24MHz	500ns	- / 16K 16K OTP	-	512	32	8/10Bit	4	12 / 2	USART	-	7-ch	-	1	-	✓			P-MQFP-44	CCU for DC motor control, Interrupt	
C505A-4E	20MHz	300ns	32K OTP		1028	34	8/10Bit	3	12 / 4	USART	-	4-ch	-	8	-	✓			P-MQFP-44	Enhanced power saving modes; Low EMI	
C505CA-4E/4R/ 2R-L/-2R	20MHz	300ns	32K OTP/ROM 16KB ROM		1028	34	8/10Bit	3	12 / 4	USART	✓	4-ch	-	8	-	✓			P-MQFP-44 Bare Die	Enhanced power saving modes; Low EMI	
C505L-4E	20MHz	300ns	32K OTP		512	46	8/10Bit	3	12 / 4	USART	-	4-ch	-	8	-	✓			P-MQFP-80	LCD Driver on-chip 128 segments; RTC with 32kHz subclock	
C508-4R/-2R/-L C508-4E	20MHz	300ns	32/16KB 32K OTP		1280	48	8/10Bit	3	19 / 4	USART	-	11-ch	-	8	-	✓			P-MQFP-64 P-SDIP-64	CCU für CD motor control, PLL (10mHz ext. Clock), 2 Port with 10mA Sinking Current	
C509-L	16MHz	375ns	-		3328	64 (15)	15/10Bit	5	19 / 4	USART + UART	-	29-ch	✓	8	✓	-			P-MQFP-100	CMOS / TTL Ports Bootstrap-Loader	
C515C-L/-8R C515C-8E	10MHz	600ns	- / 64K 64K OTP		2304	57 (8)	8/10Bit	3	15 / 4	USART + SSC	✓	4-ch	-	8	✓	✓	✓	✓	P-MQFP-80	Low Power, Low EMI	
C515-L	24MHz	500ns	-		256	56 (8)	Prog. REF 8/8Bit	3	12 / 4	USART	-	4-ch	-	1	-	✓			P-LCC-68	Compatible with SAB 80C515	
C517A-L	18MHz	667ns	-		2304	68 (12)	12/10Bit	4	17 / 4	USART + UART	-	21-ch	✓	8	✓	✓			P-MQFP-80	Compatible with SAB 80C517A	
C868-1RG C868-1RR C868-1SG C868-1SR	40MHz	300ns	8K 8K 8K SRAM 8K SRAM		512	18	5/8Bit	3	14 / 3	UART	-	6+1ch	-	8	-	✓			P-DSO-28 (SMD) P-TSSOP-38 (SMD) P-DSO-28 (SMD) P-TSSOP-38 (SMD)	High sophisticated pulse generation unit (CAPCOM6E) for motor control and lamp ballast	
XC866	26,67 MHz	75/150 ns	12K Flash		4K	768	27	8/10Bit	3	14 / 4	UART SSC	-	6+1-ch.	-	2	-	✓			P-TSSOP-38	OnChip OSC, OnChip Vreg, Brown-out detection

Type	Max. CPU Clock	Oscillator	Instruction Cycle Time	3V	ROM / OTP / Flash	RAM	Linear Address Space for Code & Data	I/O Lines	ADC Inputs/ Max. Resolution	Timers / Counters (16-Bit)	Capture Compare Channels (excl. PWM)	Dedicated PWM	Interrupt Vectors / Priorities	Serial I/O	Real Time Clock	HDLC	CAN Interface 2.0B active	OCDS / JTAG	Hardware Power Down	Watch-dog Timer	Osc Watch-dog	On-Chip Boot/strap Loader	Packaging																																									
<b>C166 Family</b>																																																																
<b>C161</b>	C161CS/JC/JI-32R/L	20MHz	PLL / Prescaler / Direct Input	100ns	-	256KB ROM	10KB	16MB	93	12/10Bit	9	32	-	59/16x4	ASC + SSC + PC + J1850	✓	-	2xCAN	yes + Power Saving Modes	-	-	-	P-TQFP-128																																									
	C161 K-LM	20MHz	Prescaler / Direct Input	100ns	-	-	1KB	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-																																										
	C161O-LM/L25M	20/25MHz		100/80ns	2KB		4MB																63	3	20/16x4	ASC + SSC	-	-	-	✓	-	-	-	-	-	-	-	P-MQFP-80																										
	C161O-LM 3V	20MHz	PLL / Prescaler / Direct Input	100ns	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-																																									
	C161PH-LM / -L25M	20/25MHz		100/80ns	3KB																			8MB	76	4/10Bit	5	27/16x4	ASC + SSC + PC	✓	-	-	-	-	-	-	yes + Power Saving Modes	✓	✓	✓	P-MQFP-100																							
	C161PH-LF / -L25F	20MHz		100ns	✓																			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-																						
	C161PH-LM 3V			100ns	✓																																						2KB	16MB	63	-	30/16x4	ASC + SSC	✓	-	-	-	-	-	-	-	✓	-	-	P-MQFP-100				
	C161S-L25M	25MHz		80ns	-																			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-																						
	C161S-LM 3V	20MHz		100ns	✓																																						2KB	16MB	63	-	30/16x4	ASC + SSC	✓	-	-	-	-	-	-	-	✓	-	-	P-MQFP-80				
<b>C163</b>	C163-LF / -L25F	20/25MHz		PLL / Prescaler / Direct Input	100/80ns																			-	-	1KB	16 MB	77	-	5	-	-	20/16x4	ASC + SSP	-	-	-	✓	✓	-	-	P-TQFP-100																						
<b>C164</b>	C164CH-LM/L25M	20/25MHz	PLL / Prescaler / Direct Input	100/80ns	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-																																										
	C164CI-8EM/-8E25M																						64KB OTP	4KB	4 MB	59	8/10Bit	5	7-ch	32/16x4	ASC + SSC	✓	-	-	-	-	-	-	-	-	-	-	-	-																				
	C164CI-4RM/-4R25M																						32KB ROM																																									
	C164CI-8RM/-8R25M																						64KB ROM																																									
	C164CL-4RM/-4R25M																						32KB ROM																																									
	C164CL-8RM/-8R25M																						64KB ROM																																									
	C164SI-8RM/-8R25M																						32KB OTP																																									
	C164CM-4EF/-4E25F																						32KB ROM																																									
	C164CM-4RF/-4R25F																						2KB																						64KB	50	8/12Bit	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	C164SM-4RF/-4R25F																						32KB ROM																																									
	C164SV-2RF																						16KB OTP																						1KB	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>C165</b>	C165-LF 3V	20MHz	PLL / Prescaler / Direct Input	100ns	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-																																										
	C165-LF/L25F	20/25MHz		100/80ns	-																		2KB	16MB	77	-	-	-	-	-	-	-	-	-	-	-	-	-	-																									
	C165-LM 3V	20MHz		100ns	✓																																																											
	C165-LM/L25M	20/25MHz		100/80ns	-																		3KB	8MB	72	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-																								
	C165UTAH-LF	36MHz		55ns	-																																																											
C165H-LF	36MHz	55ns	-	56/16x4	ASC + SSC + IOM-z/PCM + USB	✓	4x HDLC channels	✓	yes + Power Saving Modes	✓	✓	✓	P-TQFP-144																																																			
<b>C167</b>	C167CR-LM	25MHz	PLL / Prescaler / Direct Input	80ns	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-																																										
	C167CR-L33M	33MHz		60ns	32KB ROM																		4 KB	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-																								
	C167CR-4RM	25MHz		80ns	128 KB ROM																																																											
	C167CR-16RM				-																																																											
	C167SR-LM	25MHz		80ns	-																		11KB	16MB	111	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-																								
	C167CS-LM	33MHz		60ns	32KB ROM																																																											
	C167CS-4RM				-																																																											
	C167CS-L33M	33MHz		60ns	-																		24/10Bit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-																								
	C167CS-4R33M	40MHz		50ns	32K ROM																																																											
	C167CS-L40M				-																																																											
	C167CS-4R40M	40MHz		50ns	-																		32K ROM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-																								
	C167CS-L16M 3V	16Mhz		125ns	✓																		-																																									
	<b>XC166 Family</b>																																																															
<b>XC161</b>	XC161CS-32F20F/-32F40F	20/40MHz	PLL / Prescaler / Direct Input	50/25ns	-	265k Flash	12KB	16MB	99	12/10Bit	9	32	-	74/16x8	2xASC + 2xSSC + PC	✓	-	TWINCAN	✓	yes + Power Saving Modes	✓	✓	✓	P-TQFP-144																																								
	XC161CJ-16F20F/-16F40F						128k Flash								8KB										2xASC + 2xSSC + PC + J1850																																							
<b>XC164</b>	XC164CM-8F20F/-8F40F	20/40MHz	PLL / Prescaler / Direct Input	50/25ns	-	64k Flash	6KB	16MB	47	14/10Bit	11	23	7-ch	75/16x8	2xASC + 2xSSC	✓	-	TWINCAN	✓	yes + Power Saving Modes	✓	✓	✓	P-TQFP-100																																								
	XC164CS-32F20F/-32F40F						128k Flash																		12KB																																							
	XC164CS-16F20F/-16F40F						128k Flash																		8KB																																							
	XC164CS-16R20F/-16R40F						128k ROM																																																									
	XC164CS-8F20F/-8F40F						64k Flash																		-																																							
	XC164CS-8R20F/-8R40F						64k ROM																																																									
<b>XC167</b>	XC167CI-32F20F/-32F40F	20/40MHz	PLL / Prescaler / Direct Input	50/25ns	-	256k Flash	12KB	16MB	103	16/10bit	11	32	7-ch	77/16x8	2xASC + 2xSSC + PC	✓	-	TWINCAN	✓	yes + Power Saving Modes	✓	✓	✓	P-TQFP-144																																								
	XC167CI-16F20F/-16F40F						128k Flash																		8KB																																							

