

C 500 Family

Type	max. Clock Rate (MHz)	ROM (Byte)	ROM Protection	RAM (Byte)	I/O Lines (Inputs only)	ADC-Inputs/Resolution	Timer/Counter (16-Bit)	Interrupt vectors/Levels	Serial I/O	FCAN 2.0B active	USB 1.0 Interface	PWM	Mul./Div. Unit	Data Pointers (16-Bit)	Hardware Power Down	Watch-dog Timer	Osc Watch-dog	Packaging	
C501G-L/-1R C501G-E	40	- / 8 k 8 k OTP	✓ ✓	256	32	-	3	6 / 2	USART	-	-	-	-	1	-	-	-	P-DIP-40 P-LCC-44 P-MQFP-44	Fully compatible with 80C52/C32 standard
C504-L/-2R C504-2E	40	- / 16 16 k OTP	✓ ✓	512	32	8 / 10	4	12 / 2	USART	-	-	6-ch	-	1	-	✓	✓	P-MQFP-44	CCU for DC motor control, Interrupt wakeable Power down
C513AO-L	16	-	-	512	32	-	3	7 / 2	USART + SSC	-	-	-	-	1	-	✓	✓	P-DIP-40	Enhanced Power Saving Modes; Low Power; EMC Optimised
C513AO-2R	16	16 k	-	512	32	-	3	7 / 2	USART + SSC	-	-	-	-	1	-	✓	✓	PLCC-44	
C513AO-2E	16	16 k OTP	✓	512	32	-	3	7 / 2	USART + SSC	-	-	-	-	1	-	✓	✓	P-MQFP-44	
C508-2R	20	32 k	✓	1280	48	8 / 10	3	19 / 4	USART	-	-	6-ch	-	8	-	✓	✓	P-SDIP-64	CCU for DC Motor Control, PLL (10 mHz ext. Clock), 2 Ports with 10 mA Sinking Current
C508-2E	20	32 k OTP	✓	1280	48	8 / 10	3	19 / 4	USART	-	-	6-ch	-	8	-	✓	✓	P-MQFP-64	
C505L-4E	20 ¹⁾	32 k OTP	-	512	46	8 / 10	3	12 / 4	USART	-	-	4-ch	-	8	-	✓	✓	P-MQFP-80	LCD Driver on-chip 128 segments; RTC with 32 kHz subclock
C505-L/-2R	20 ¹⁾	- / 16 k	✓	512	34	8 / 8	3	12 / 4	USART	-	-	4-ch	-	8	-	✓	✓	P-MQFP-44	Enhanced power saving modes; Low EMI, Interrupt wakeable Power down
C505C-L/-2R	20 ¹⁾	- / 16 k	✓	512	34	8 / 8	3	12 / 4	USART	✓	-	4-ch	-	8	-	✓	✓	P-MQFP-44	Enhanced power saving modes; Low EMI, Interrupt wakeable Power down
C505A-4E	20 ¹⁾	32 k OTP	✓	1280	34	8 / 10	3	12 / 4	USART	-	-	4-ch	-	8	-	✓	✓	P-MQFP-44	Enhanced power saving modes; Low EMI, Interrupt wakeable Power down
C505CA-4E	20 ¹⁾	32 k OTP	✓	1280	34	8 / 10	3	12 / 4	USART	✓	-	4-ch	-	8	-	✓	✓	P-MQFP-44	Enhanced power saving modes; Low EMI, Interrupt wakeable Power down
C515-L/-1R	24	- / 8 k	✓	256	56 (8)	Prog. REF 8 / 8	3	12 / 4	USART	-	-	4-ch	-	1	-	✓	✓	P-MQFP-80	Compatible with SAB 80C515
C515A-L/-4R	24	- / 32 k	✓	1280	56 (8)	8 / 10	3	12 / 4	USART	-	-	4-ch	-	1	✓	✓	✓	P-MQFP-80	Compatible with SAB 80C515A
C515C-L/-8R C515C-8E	10 ¹⁾	- / 64 k 64 k OTP	✓	2304	57 (8)	8 / 10	3	15 / 4	USART + SSC	✓	-	4-ch	-	8	✓	✓	✓	P-MQFP-80	Low Power, Low EMI
C517A-L/4R	24	- / 32 k	✓	2304	68 (12)	12 / 10	4	17 / 4	USART + UART	-	-	21-ch	✓	8	✓	✓	✓	P-MQFP-100	Compatible with SAB 80C517A
C509-L	16 ¹⁾	-	-	3328	64 (15)	15 / 10	5	19 / 4	USART + UART	-	-	29-ch	✓	8	✓	✓	✓	P-MQFP-100	CMOS/TTL Ports Bootstrap
C541U-1E	12 ¹⁾	8 k OTP	✓	256	32 / 30	-	2	7 / 2	SSC	-	HUBless	-	-	1	-	✓	✓	P-SDIP-52 / P-LCC-44	USB-Transceiver-on-chip;
SAB 80C515 SAB 80C535	20	8 k -	✓ -	256	56 (8)	Prog. REF 8 / 8	3	12 / 4	USART	-	-	4-ch	-	1	-	✓	-	P-LCC-68	
SAB 80C515A SAB 83C515A-5	18	- 32 k	- ✓	1280	56 (8)	8 / 10	3	12 / 4	USART	-	-	4-ch	-	1	✓	✓	✓	P-LCC-68	
SAB 80C517 SAB 80C537	16	8 k -	✓ -	256	68 (12)	Prog. REF 12 / 8	4	14 / 4	USART + UART	-	-	21-ch	✓	8	-	✓	✓	P-LCC-84	
SAB 80C517A SAB 83C517A-5	18	- 32 k	- ✓	2304	68 (12)	12 / 10	4	17 / 4	USART + UART	-	-	21-ch	✓	8	✓	✓	✓	P-LCC-84	

¹⁾ CPU-Clock

C 166 Family

Member of C166 Family	Type	max CPU Clock	Oscillator	Instruction Cycle Time	ROM/Flash/OT P/DRAM	RAM	Linear Address Space for Code/Data	I/O Lines	ADC Inputs Resolution	Timers/Counters (16-Bit)	Capture Compare Unit (Channels)	PWM (Outputs)	Interrupts Vectors/Levels	Serial I/O	Real Time Clock	CAN Interface 2.0B active	Hardware Power Down	Watchdog Timer	Osc Watchdog	On-Chip Bootstrap loader	Packaging		
C161	C161V-LM	20 MHz	Prescaler/ Direct Input	100 ns	-	1 KB	4 MB	63	-	3	-	-	14/16	USART + SSC	-	-	-	-	-	-	P-MQFP-80		
	C161K-LM					2 KB							20/16				✓						
	C161O-LM					2 KB							20/16				✓						
	C161OR-LM	25 MHz	PLL Prescaler/ Direct Input	80 ns	-	3 KB	8 MB	76	4/10 bit	5	-	-	27/16	USART + SSC + I ² C	✓	-	yes + Powers.	✓	-	✓	P-MQFP-100		
	C161PI-LM					3 KB											27/16					yes + Powers.	✓
	C161PI-LF					3 KB											27/16					yes + Powers.	✓
C163	C163-LF	20 MHz	PLL Prescaler/ Direct Input	100 ns	-	1 KB	16 MB	77	-	5	-	-	20/16	USART + SSP	-	-	✓	✓	-	-	P-TQFP-100		
	C163-L25F	25 MHz		80 ns	-																	76	21/16
	C163-16F25F	33 MHz		60 ns	128 KB Flash																	76	21/16
	C163-24D33F				192 KB DRAM																	76	21/16
C164	C164CI-LM	20 MHz	PLL Prescaler/ Direct Input	100 ns	-	4 KB	4 MB	59	8/10 bit	5	8	6	32/16	USART + SSC	✓	✓	yes + Powers.	✓	✓	✓	P-MQFP-80		
	C164CI-8EM				64 KB OTP	2 KB																	
	C164CI-4RM				32 KB ROM	4 KB																	
	C164CI-8RM				64 KB ROM																		
	C164CL-4RM				32 KB ROM																		
	C164SI-8RM				64 KB ROM																		
	C164CI-8RM				64 KB ROM	6 (red.)																6	
C165	C165-LM	20 MHz	PLL Prescaler/ Direct Input	100 ns	-	2 KB	16 MB	77	-	5	-	-	28/16	USART + SSC	-	-	✓	✓	-	✓	P-MQFP-100		
	C165-L25M	25 MHz		80 ns																	P-TQFP-100		
	C165-LF	20 MHz		100 ns																	P-MQFP-100		
	C165-L25F	25 MHz		80 ns																	P-TQFP-100		
80C166	80C166-M	20 MHz	Prescaler	100 ns	32 KB ROM	1 KB	256 KB	76	10/10 bit	7	16	-	32/16	2 x USART	-	-	✓	✓	-	✓	P-MQFP-100		
	83C166-5M		Prescaler/ Direct Input																				
	80C166W-M		Prescaler/ Direct Input																				
C167	C167S-4RM	20 MHz	PLL/ Prescaler/ Direct Input	100 ns	32 KB ROM	2 KB	16 MB	111	16/10 bit	9	32	4	56/16	USART + SSC	-	✓	-	-	-	-	P-MQFP-144		
	C167CR-LM	25 MHz			-	4 KB																	
	C167CR-L25M				80 ns																	-	
	C167CR-4RM				32 KB ROM																	11 KB	
	C167CR-16RM	128 KB ROM																					
	C167CS-LM	20 MHz			100 ns	-																11 KB	
	C167CS-4RM					32 KB ROM																	
	C167CS-32FM					256 KB Flash + 4 KB Data Flash																	

* in preparation