



# Microcontrollers



## 8-Bit

This XC800 family of 8-bit microcontrollers offer a wide selection of products, combining a high performance 8051 core with on-chip Flash and ROM memory as well as a powerful mix of peripherals such as an enhanced CAPCOM6 (CC6), CAN, LIN and 10 bit ADC.

Based on the 8051 the C505CA enhances the C500 family of 8-bit microcontrollers by providing 32KByte of OTP or 16/32 KByte of ROM, 256 Byte of RAM, 1 KByte of XRAM, Controller Area Network (CAN) Version 2.0B, an asynchronous/synchronous serial interface and highly accurate 10-bit Analog to Digital Converter integrated on chip.

Max. Clock Rate (MHz)	ROM/OTP Flash (Byte)	Data Flash EEPROM (Byte)	RAM (Byte)	I/O Lines	ADC-Inputs/Max. Res. (Bit)	Timers/Counters (16 Bit)	Serial I/O	CAN 2.0B Active	On-Chip Oscillator	On-Chip Voltage Regulator	PWM	Package	Digi-Key Part No.	Price Each		Infineon Part No.
														1	25	
20	32K OTP/ROM	—	1028	34	8/10	3	USART	✓	✓	✓	4-ch	MOFP-44	SAB-C505CA-4EMCAIN-ND	20.55	18.50	SAB-C505CA-4EM CA
20	32K OTP/ROM	—	1028	34	8/10	3	USART	✓	✓	✓	4-ch	MOFP-44	SAF-C505CA-4EMCAIN-ND	21.58	19.42	SAF-C505CA-4EM CA
20	—	—	1028	34	8/10	3	USART	✓	✓	✓	4-ch	MOFP-44	SAF-C505CA-LMCAIN-ND	14.07	12.67	SAF-C505CA-LM CA
10	64K OTP	—	2304	57	8/10	3	USART+SSC	✓	✓	✓	4-ch	MOFP-80	SAF-C515C-8EMCAIN-ND	24.75	20.90	SAF-C515C-8EM CA
26.67	8K Flash	up to 4K	768	27	8/10	3	UART, SSC	—	✓	✓	3+1-ch	TSSOP-38	SAF-XC866-2FRIBCINCT-ND▲	5.60	4.46	SAF-XC866-2FRI BC
26.67	8K Flash	up to 4K	768	27	8/10	3	UART, SSC	—	✓	✓	3+1-ch	TSSOP-38	SAF-XC866-2FRIBCINTR-ND0	5513.47/3,000		SAF-XC866-2FRI BC
26.67	16K Flash	up to 4K	768	27	8/10	3	UART, SSC	—	✓	✓	3+1-ch	TSSOP-38	SAF-XC866-4FRIBCINCT-ND▲	6.94	5.52	SAF-XC866-4FRI BC
26.67	16K Flash	up to 4K	768	27	8/10	3	UART, SSC	—	✓	✓	3+1-ch	TSSOP-38	SAF-XC866-4FRIBCINTR-ND0	6836.74/3,000		SAF-XC866-4FRI BC
20	32K OTP/ROM	—	1028	34	8/10	3	USART	✓	✓	✓	4-ch	MOFP-44	SAK-C505CA-4EMCAINCT-ND▲	26.30	23.02	SAK-C505CA-4EM CA
20	32K OTP/ROM	—	1028	34	8/10	3	USART	✓	✓	✓	4-ch	MOFP-44	SAK-C505CA-4EMCAINTR-ND0	10684.83/1,000		SAK-C505CA-4EM CA
26.67	8K Flash	up to 4K	768	27	8/10	3	UART, SSC	—	✓	✓	3+1-ch	TSSOP-38	SAK-XC866-2FRIBCINCT-ND▲	5.88	4.68	SAK-XC866-2FRI BC
26.67	8K Flash	up to 4K	768	27	8/10	3	UART, SSC	—	✓	✓	3+1-ch	TSSOP-38	SAK-XC866-2FRIBCINTR-ND0	5789.18/3,000		SAK-XC866-2FRI BC
26.67	16K Flash	up to 4K	768	27	8/10	3	UART, SSC	—	✓	✓	3+1-ch	TSSOP-38	SAK-XC866-4FRIBCINCT-ND▲	6.91	5.50	SAK-XC866-4FRI BC
26.67	16K Flash	up to 4K	768	27	8/10	3	UART, SSC	—	✓	✓	3+1-ch	TSSOP-38	SAK-XC866-4FRIBCINTR-ND0	6807.55/3,000		SAK-XC866-4FRI BC
24	32K Flash	up to 8K	1792	48	8/10	4	2xUART, SSC	MultiCAN w/2 Nodes	✓	✓	3+1-ch	TQFP-64	SAK-XC888CM-8FFAABINCT-ND▲	5.90	4.60	SAK-XC888CM-8FFA AB
24	32K Flash	up to 8K	1792	48	8/10	4	2xUART, SSC	MultiCAN w/2 Nodes	✓	✓	3+1-ch	TQFP-64	SAK-XC888CM-8FFAABINTR-ND0	8533.43/1,900		SAK-XC888CM-8FFA AB
24	32K Flash	up to 8K	1792	48	8/10	4	2xUART, SSC	MultiCAN w/2 Nodes	✓	✓	3+1-ch	TQFP-64	SAK-XC888CM-8FFAACINCT-ND▲	11.52	9.87	SAK-XC888CM-8FFA 5V AC
24	32K Flash	up to 8K	1792	48	8/10	4	2xUART, SSC	MultiCAN w/2 Nodes	✓	✓	3+1-ch	TQFP-64	SAK-XC888CM-8FFAACINTR-ND0	8313.83/1,900		SAK-XC888CM-8FFA 5V AC

▲ Cut Tape    ◊ Tape and Reel

## Starter Kits / Evaluation Boards

<b>B158-H8576-X-0-7600IN-ND</b>	XC866 Easy Kit: Mini Evaluation Kit with XC866 .....	\$116.41	<b>KIT_XC866_EKIN-ND</b>	XC866/888 CLM Easy Kit: Mini Evaluation Kit .....	\$116.41
<b>B158-H8548-X-0-7600IN-ND</b>	XC866 Starter Kit: Full Evaluation Board with XC866 .....	\$332.94	<b>B158-H8743-X-X-7600IN-ND</b>	XC866/888 CLM Starter Kit: Full Evaluation Board .....	\$332.94

## 16-Bit

Infineon's C166 Family, with pipelined 16-bit core architecture and optimized real-time embedded control peripherals, offers a wide range of performance variations. •C161: Cost optimized CPU and peripheral set control •C164: Lower pin count and price with excellent PWM capabilities and CAN apps •C165: Processor-oriented microcontroller with basic peripheral

set •C167: High-end 16-bit microcontroller with on-chip CAN. The XC164CM series is the new family of enhanced 16-bit microcontroller XC166 which offers impressive DSP performance and advanced interrupt handling combined with a powerful integrated peripheral set, high performance and reliable on-chip Flash memory

Max. CPU Clock (MHz)	Oscillator	3V	ROM/OTP/Flash (Byte)	RAM (Byte)	I/O Lines	ADC-Inputs/Max. Res. (Bit)	Timers/Counters (16-Bit)	Serial I/O	Real Time Clock	CAN Interface 2.0B Active	Package	Digi-Key Part No.	Price Each		Infineon Part No.	
													1	25		
25	PLL/Prescaler/Direct Input	—	256K Flash	2K	93	12/10	5	ASC+SSC	✓	—	CAN	TQFP-128	SAB-C161CS-LFCAIN-ND	40.06	33.83	SAB-C161CS-LF CA
25	Prescaler/Direct Input	—	—	2K	63	—	5	ASC+SSC	—	—	—	MOFP-80	SAB-C1610-LMHAIN-ND\$	14.35	12.92	SAB-C1610-LM HA
25	PLL/Prescaler/Direct Input	—	—	2K	76	4/10	5	ASC+SSC	✓	—	—	TQFP-100	SAB-C161PI-LFCAINCT-ND▲	17.86	15.63	SAB-C161PI-LF CA
25	PLL/Prescaler/Direct Input	—	—	2K	76	4/10	5	ASC+SSC	✓	—	—	TQFP-100	SAB-C161PI-LFCAINTR-ND0	10155.60/1,400		SAB-C161PI-LF CA
25	PLL/Prescaler/Direct Input	—	—	4K	111	16/10	9	UART+SSC	✓	CAN	—	MOFP-144	SAB-C167CR-LMHAIN-ND	30.32	25.61	SAB-C167CR-LM HA+
20	PLL/Prescaler/Direct Input	—	—	10K	93	12/10	9	ASC+SSC+IPC+J1850	✓	2 x CAN	—	TQFP-128	SAF-C161CS-LFCAINCT-ND▲	44.81	41.72	SAF-C161CS-LF CA
20	PLL/Prescaler/Direct Input	—	—	10K	93	12/10	9	ASC+SSC+IPC+J1850	✓	2 x CAN	—	TQFP-128	SAF-C161CS-LFCAINTR-ND0	19698.88/1,000		SAF-C161CS-LF CA
20	Prescaler/Direct Input	✓	—	1K	63	—	3	ASC+SSC	—	—	—	MOFP-80	SAF-C161K-LM3VHAINCT-ND▲	20.63	18.05	SAF-C161K-LM 3V HA
20	Prescaler/Direct Input	✓	—	1K	63	—	3	ASC+SSC	—	—	—	MOFP-80	SAF-C161K-LM3VHAINTR-ND0	7286.98/850		SAF-C161K-LM 3V HA
20	Prescaler/Direct Input	—	—	1K	63	—	3	ASC+SSC	—	—	—	MOFP-80	SAF-C161K-LMHAIN-ND	14.44	13.00	SAF-C161K-LM HA
25	Prescaler/Direct Input	—	—	2K	63	—	5	ASC+SSC	—	—	—	MOFP-80	SAF-C1610-L25MHAINCT-ND▲	19.84	17.36	SAF-C1610-L25M HA
25	Prescaler/Direct Input	—	—	2K	63	—	5	ASC+SSC	—	—	—	MOFP-80	SAF-C1610-L25MHAINTR-ND0	7008.53/850		SAF-C1610-L25M HA
20	Prescaler/Direct Input	✓	—	2K	63	—	5	ASC+SSC	—	—	—	MOFP-80	SAF-C1610-LM3VHAINCT-ND▲	19.84	17.36	SAF-C1610-LM 3V HA
20	Prescaler/Direct Input	✓	—	2K	63	—	5	ASC+SSC	—	—	—	MOFP-80	SAF-C1610-LM3VHAINTR-ND0	7008.53/850		SAF-C1610-LM 3V HA
20	Prescaler/Direct Input	—	—	2K	63	—	5	ASC+SSC	—	—	—	MOFP-80	SAF-C1610-LMHAINCT-ND▲	19.09	16.71	SAF-C1610-LM HA
20	Prescaler/Direct Input	—	—	2K	63	—	5	ASC+SSC	—	—	—	MOFP-80	SAF-C1610-LMHAINTR-ND0	6743.88/850		SAF-C1610-LM HA
25	PLL/Prescaler/Direct Input	—	—	3K	76	4/10	5	ASC+SSC+IPC	✓	—	—	TQFP-100	SAF-C161PI-L25FCAINCT-ND▲	19.69	17.23	SAF-C161PI-L25F CA
25	PLL/Prescaler/Direct Input	—	—	3K	76	4/10	5	ASC+SSC+IPC	✓	—	—	TQFP-100	SAF-C161PI-L25FCAINTR-ND0	11196.82/1,400		SAF-C161PI-L25F CA
25	PLL/Prescaler/Direct Input	—	—	3K	76	4/10	5	ASC+SSC+IPC	✓	—	—	MOFP-100	SAF-C161PI-L25MCAINCT-ND▲	20.78	18.19	SAF-C161PI-L25M CA
25	PLL/Prescaler/Direct Input	—	—	3K	76	4/10	5	ASC+SSC+IPC	✓	—	—	MOFP-100	SAF-C161PI-L25MCAINTR-ND0	4383.18/500		SAF-C161PI-L25M CA
20	PLL/Prescaler/Direct Input	✓	—	3K	76	4/10	5	ASC+SSC+IPC	✓	—	—	TQFP-100	SAF-C161PI-LF3VCAINCT-ND▲	19.69	17.23	SAF-C161PI-LF 3V CA
20	PLL/Prescaler/Direct Input	—	—	3K	76	4/10	5	ASC+SSC+IPC	✓	—	—	TQFP-100	SAF-C161PI-LF3VCAINTR-ND0	11196.82/1,400		SAF-C161PI-LF 3V CA
20	PLL/Prescaler/Direct Input	—	—	3K	76	4/10	5	ASC+SSC+IPC	✓	—	—	TQFP-100	SAF-C161PI-LFCAINCT-ND▲	18.75	16.41	SAF-C161PI-LF CA
20	PLL/Prescaler/Direct Input	—	—	3K	76	4/10	5	ASC+SSC+IPC	✓	—	—	TQFP-100	SAF-C161PI-LFCAINTR-ND0	10663.74/1,400		SAF-C161PI-LF CA
20	PLL/Prescaler/Direct Input	✓	—	3K	76	4/10	5	ASC+SSC+IPC	✓	—	—	MOFP-100	SAF-C161PI-LM3VCAINCT-ND▲	20.78	18.19	SAF-C161PI-LM 3V CA
20	PLL/Prescaler/Direct Input	✓	—	3K	76	4/10	5	ASC+SSC+IPC	✓	—	—	MOFP-100	SAF-C161PI-LM3VCAINTR-ND0	4383.18/500		SAF-C161PI-LM 3V CA
20	PLL/Prescaler/Direct Input	—	—	3K	76	4/10	5	ASC+SSC+IPC	✓	—	—	MOFP-100	SAF-C161PI-LMCAINCT-ND▲	19.80	17.33	SAF-C161PI-LM CA
20	PLL/Prescaler/Direct Input	—	—	3K	76	4/10	5	ASC+SSC+IPC	✓	—	—	MOFP-100	SAF-C161PI-LMCAINTR-ND0	4177.10/500		SAF-C161PI-LM CA
25	PLL/Prescaler/Direct Input	—	—	2K	63	—	5	ASC+SSC	✓	—	—	MOFP-80	SAF-C161S-L25MAAINCT-ND▲	10.49	9.00	SAF-C161S-L25M AA
25	PLL/Prescaler/Direct Input	—	—	2K	63	—	5	ASC+SSC	✓	—	—	MOFP-80	SAF-C161S-L25MAAINTR-ND0	3503.80/850		SAF-C161S-L25M AA
20	PLL/Prescaler/Direct Input	✓	—	2K	63	—	5	ASC+SSC	✓	—	—	MOFP-80	SAF-C161S-LM3VAAINCT-ND▲	10.49	9.00	SAF-C161S-LM 3V AA
20	PLL/Prescaler/Direct Input	—	—	2K	63	—	5	ASC+SSC	✓	—	—	MOFP-80	SAF-C161S-LM3VAAINTR-ND0	3503.80/850		SAF-C161S-LM 3V AA
25	PLL/Prescaler/Direct Input	—	64K OTP	4K	59	8/10	5	ASC+SSC	✓	CAN	—	MOFP-80	SAF-C164CI-8E25MDBIN-ND	33.26	28.09	SAF-C164CI-8E25M DB
20	PLL/Prescaler/Direct Input	—	64K OTP	4K	59	8/10	5	ASC+SSC	✓	CAN	—	MOFP-80	SAF-C164CI-8EMCBINCT-ND▲	40.73	37.92	SAF-C164CI-8EM CB
20	PLL/Prescaler/Direct Input	—	64K OTP	4K	59	8/10	5	ASC+SSC	✓	CAN	—	MOFP-80	SAF-C164CI-8EMCBINTR-ND0	15518.51/850		SAF-C164CI-8EM CB
20	PLL/Prescaler/Direct Input	—	64K OTP	4K	59	8/10	5	ASC+SSC	✓	CAN	—	MOFP-80	SAF-C164CI-8EMDBINCT-ND▲	40.73	37.92	SAF-C164CI-8EM DB
20	PLL/Prescaler/Direct Input	—	64K OTP	4K	59	8/10	5	ASC+SSC	✓	CAN	—	MOFP-80	SAF-C164CI-8EMDBINTR-ND0	15518.51/850		SAF-C164CI-8EM DB
20	PLL/Prescaler/Direct Input	—	32K OTP	2K	50	8/12	5	ASC+SSC	✓	CAN	—	TQFP-64	SAF-C164CM-4EFABINCT-ND▲	31.33	27.42	SAF-C164CM-4EF AB
20	PLL/Prescaler/Direct Input	—	32K OTP	2K	50	8/12	5	ASC+SSC	✓	CAN	—	TQFP-64	SAF-C164CM-4EFABINTR-ND0	24186.49/1,900		SAF-C164CM-4EF AB
25	PLL/Prescaler/Direct Input	—	—	2K	77	—	5	ASC+SSC	—	—	—	TQFP-100	SAF-C165-L25FAINCT-ND▲	31.92	27.93	SAF-C165-L25F HA
25	PLL/Prescaler/Direct Input	—	—	2K	77	—	5	ASC+SSC	—	—	—	TQFP-100	SAF-C165-L25FAINTR-ND0	18151.95/1,400		SAF-C165-L25F HA
25	PLL/Prescaler/Direct Input	—	—	3K	72	—	5	ASC+SSC								

Max. CPU Clock (MHz)	Oscillator	3V	ROM/OTP/Flash (Byte)	RAM (Byte)	I/O Lines	ADC Inputs/Max. Res. (Bit)	Timers/Counters (16-Bit)	Serial I/O	Real Time Clock	CAN Interface 2.0B Active	Package	Price Each		Infinion Part No.
												1	25	
25	PLL/Prescaler/Direct Input	—	—	3K	72	—	5	ASC+SSC	—	—	MOFP-100	SAF-C165-L25MHAINTR-ND	7279.47/500	SAF-C165-L25M HA
20	PLL/Prescaler/Direct Input	✓	—	2K	77	—	5	ASC+SSC	—	—	TOFP-100	SAF-C165-LF3VHAINCT-ND	31.92 27.93	SAF-C165-LF 3V HA
20	PLL/Prescaler/Direct Input	—	—	2K	77	—	5	ASC+SSC	—	—	TOFP-100	SAF-C165-LF3VHAINTR-ND	18151.95/1,400	SAF-C165-LF 3V HA
20	PLL/Prescaler/Direct Input	—	—	2K	77	—	5	ASC+SSC	—	—	TOFP-100	SAF-C165-LFHAINCT-ND	31.03 27.15	SAF-C165-LF HA
20	PLL/Prescaler/Direct Input	—	—	2K	77	—	5	ASC+SSC	—	—	TOFP-100	SAF-C165-LFHAINTR-ND	17645.99/1,400	SAF-C165-LF HA
20	PLL/Prescaler/Direct Input	✓	—	2K	77	—	5	ASC+SSC	—	—	MOFP-100	SAF-C165-LM3VHAINCT-ND	30.21 28.14	SAF-C165-LM 3V HA
20	PLL/Prescaler/Direct Input	✓	—	2K	77	—	5	ASC+SSC	—	—	MOFP-100	SAF-C165-LM3VHAINTR-ND	7032.69/500	SAF-C165-LM 3V HA
20	PLL/Prescaler/Direct Input	—	—	3K	72	—	5	ASC+SSC	—	—	MOFP-100	SAF-C165-LMHAINCT-ND	29.67 27.62	SAF-C165-LM HA
20	PLL/Prescaler/Direct Input	—	—	3K	72	—	5	ASC+SSC	—	—	MOFP-100	SAF-C165-LMHAINTR-ND	6904.98/500	SAF-C165-LM HA
20	PLL/Prescaler/Direct Input	—	32K Flash	4K	47	14	7	2xASC+2xSSC	✓	TwinCAN	MOFP-64	SAF-XC164CM-4F20FAAINCT-ND	18.69 16.36	SAF-XC164CM-4F20F AA
20	PLL/Prescaler/Direct Input	—	32K Flash	4K	47	14	7	2xASC+2xSSC	✓	TwinCAN	TOFP-64	SAF-XC164CM-4F20FAAINTR-ND	14429.99/1,900	SAF-XC164CM-4F20F AA
40	PLL/Prescaler/Direct Input	—	32K Flash	4K	47	14	7	2xASC+2xSSC	✓	TwinCAN	TOFP-64	SAF-XC164CM-4F40FAAINCT-ND	18.63 17.18	SAF-XC164CM-4F40F AA
40	PLL/Prescaler/Direct Input	—	32K Flash	4K	47	14	7	2xASC+2xSSC	✓	TwinCAN	TOFP-64	SAF-XC164CM-4F40FAAINTR-ND	15151.47/1,900	SAF-XC164CM-4F40F AA
40	PLL/Prescaler/Direct Input	—	64K Flash	6K	47	14	7	2xASC+2xSSC	✓	TwinCAN	TOFP-64	SAF-XC164CM-8F20FAAINCT-ND	19.31 16.90	SAF-XC164CM-8F20F AA
40	PLL/Prescaler/Direct Input	—	64K Flash	6K	47	14	7	2xASC+2xSSC	✓	TwinCAN	TOFP-64	SAF-XC164CM-8F20FAAINTR-ND	14902.50/1,900	SAF-XC164CM-8F20F AA
40	PLL/Prescaler/Direct Input	—	64K Flash	6K	47	14	7	2xASC+2xSSC	✓	TwinCAN	TOFP-64	SAF-XC164CM-8F40FAAINCT-ND	20.27 17.74	SAF-XC164CM-8F40F AA
40	PLL/Prescaler/Direct Input	—	64K Flash	6K	47	14	7	2xASC+2xSSC	✓	TwinCAN	TOFP-64	SAF-XC164CM-8F40FAAINTR-ND	15647.45/1,900	SAF-XC164CM-8F40F AA
20	PLL/Prescaler/Direct Input	—	32K Flash	4K	47	14	7	2xASC+2xSSC	✓	TwinCAN	TOFP-64	SAF-XC164GM-4F20FAAINCT-ND	18.13 15.87	SAF-XC164GM-4F20F AA
20	PLL/Prescaler/Direct Input	—	32K Flash	4K	47	14	7	2xASC+2xSSC	✓	TwinCAN	TOFP-64	SAF-XC164GM-4F20FAAINTR-ND	13997.00/1,900	SAF-XC164GM-4F20F AA
20	PLL/Prescaler/Direct Input	—	32K Flash	4K	47	14	7	2xASC+2xSSC	✓	TwinCAN	TOFP-64	SAF-XC164GM-4F40FAAINCT-ND	19.04 16.67	SAF-XC164GM-4F40F AA
20	PLL/Prescaler/Direct Input	—	32K Flash	4K	47	14	7	2xASC+2xSSC	✓	TwinCAN	TOFP-64	SAF-XC164GM-4F40FAAINTR-ND	14696.99/1,900	SAF-XC164GM-4F40F AA
20	PLL/Prescaler/Direct Input	—	64K Flash	6K	47	14	7	2xASC+2xSSC	✓	TwinCAN	TOFP-64	SAF-XC164GM-8F20FAAINCT-ND	18.73 16.39	SAF-XC164GM-8F20F AA
40	PLL/Prescaler/Direct Input	—	64K Flash	6K	47	14	7	2xASC+2xSSC	✓	TwinCAN	TOFP-64	SAF-XC164GM-8F20FAAINTR-ND	14455.43/1,900	SAF-XC164GM-8F20F AA
40	PLL/Prescaler/Direct Input	—	64K Flash	6K	47	14	7	2xASC+2xSSC	✓	TwinCAN	TOFP-64	SAF-XC164GM-8F40FAAINCT-ND	19.66 17.21	SAF-XC164GM-8F40F AA
40	PLL/Prescaler/Direct Input	—	64K Flash	6K	47	14	7	2xASC+2xSSC	✓	TwinCAN	TOFP-64	SAF-XC164GM-8F40FAAINTR-ND	15178.15/1,900	SAF-XC164GM-8F40F AA
20	PLL/Prescaler/Direct Input	—	32K Flash	4K	47	—	7	2xASC+2xSSC	✓	TwinCAN	TOFP-64	SAF-XC164KM-4F20FAAINCT-ND	17.59 15.40	SAF-XC164KM-4F20F AA
20	PLL/Prescaler/Direct Input	—	32K Flash	4K	47	—	7	2xASC+2xSSC	✓	TwinCAN	TOFP-64	SAF-XC164KM-4F20FAAINTR-ND	13577.34/1,900	SAF-XC164KM-4F20F AA
40	PLL/Prescaler/Direct Input	—	32K Flash	4K	47	—	7	2xASC+2xSSC	✓	TwinCAN	TOFP-64	SAF-XC164KM-4F40FAAINCT-ND	18.47 16.17	SAF-XC164KM-4F40F AA
40	PLL/Prescaler/Direct Input	—	32K Flash	4K	47	—	7	2xASC+2xSSC	✓	TwinCAN	TOFP-64	SAF-XC164KM-4F40FAAINTR-ND	14256.10/1,900	SAF-XC164KM-4F40F AA
20	PLL/Prescaler/Direct Input	—	64K Flash	6K	47	—	7	2xASC+2xSSC	✓	TwinCAN	TOFP-64	SAF-XC164KM-8F20FAAINCT-ND	18.17 15.90	SAF-XC164KM-8F20F AA
20	PLL/Prescaler/Direct Input	—	64K Flash	6K	47	—	7	2xASC+2xSSC	✓	TwinCAN	TOFP-64	SAF-XC164KM-8F20FAAINTR-ND	14021.45/1,900	SAF-XC164KM-8F20F AA
40	PLL/Prescaler/Direct Input	—	64K Flash	6K	47	—	7	2xASC+2xSSC	✓	TwinCAN	TOFP-64	SAF-XC164KM-8F40FAAINCT-ND	19.07 16.69	SAF-XC164KM-8F40F AA
40	PLL/Prescaler/Direct Input	—	64K Flash	6K	47	—	7	2xASC+2xSSC	✓	TwinCAN	TOFP-64	SAF-XC164KM-8F40FAAINTR-ND	14722.93/1,900	SAF-XC164KM-8F40F AA
20	PLL/Prescaler/Direct Input	—	32K Flash	4K	47	—	7	2xASC+2xSSC	✓	—	TOFP-64	SAF-XC164LM-4F20FAAINCT-ND	16.71 14.63	SAF-XC164LM-4F20F AA
20	PLL/Prescaler/Direct Input	—	32K Flash	4K	47	—	7	2xASC+2xSSC	✓	—	TOFP-64	SAF-XC164LM-4F20FAAINTR-ND	12898.34/1,900	SAF-XC164LM-4F20F AA
40	PLL/Prescaler/Direct Input	—	32K Flash	4K	47	—	7	2xASC+2xSSC	✓	—	TOFP-64	SAF-XC164LM-4F40FAAINCT-ND	17.55 15.36	SAF-XC164LM-4F40F AA
40	PLL/Prescaler/Direct Input	—	32K Flash	4K	47	—	7	2xASC+2xSSC	✓	—	TOFP-64	SAF-XC164LM-4F40FAAINTR-ND	13543.26/1,900	SAF-XC164LM-4F40F AA
20	PLL/Prescaler/Direct Input	—	64K Flash	6K	47	—	7	2xASC+2xSSC	✓	—	TOFP-64	SAF-XC164LM-8F20FAAINCT-ND	17.26 15.10	SAF-XC164LM-8F20F AA
20	PLL/Prescaler/Direct Input	—	64K Flash	6K	47	—	7	2xASC+2xSSC	✓	—	TOFP-64	SAF-XC164LM-8F20FAAINTR-ND	13320.46/1,900	SAF-XC164LM-8F20F AA
40	PLL/Prescaler/Direct Input	—	64K Flash	6K	47	—	7	2xASC+2xSSC	✓	—	TOFP-64	SAF-XC164LM-8F40FAAINCT-ND	18.12 15.86	SAF-XC164LM-8F40F AA
40	PLL/Prescaler/Direct Input	—	64K Flash	6K	47	—	7	2xASC+2xSSC	✓	—	TOFP-64	SAF-XC164LM-8F40FAAINTR-ND	13986.82/1,900	SAF-XC164LM-8F40F AA
20	PLL/Prescaler/Direct Input	—	32K Flash	4K	47	14	7	2xASC+2xSSC	✓	—	TOFP-64	SAF-XC164SM-4F20FAAINCT-ND	17.76 15.54	SAF-XC164SM-4F20F AA
20	PLL/Prescaler/Direct Input	—	32K Flash	4K	47	14	7	2xASC+2xSSC	✓	—	TOFP-64	SAF-XC164SM-4F20FAAINTR-ND	13708.25/1,900	SAF-XC164SM-4F20F AA
40	PLL/Prescaler/Direct Input	—	32K Flash	4K	47	14	7	2xASC+2xSSC	✓	—	TOFP-64	SAF-XC164SM-4F40FAAINCT-ND	18.65 16.32	SAF-XC164SM-4F40F AA
40	PLL/Prescaler/Direct Input	—	32K Flash	4K	47	14	7	2xASC+2xSSC	✓	—	TOFP-64	SAF-XC164SM-4F40FAAINTR-ND	14393.93/1,900	SAF-XC164SM-4F40F AA
20	PLL/Prescaler/Direct Input	—	64K Flash	6K	47	14	7	2xASC+2xSSC	✓	—	TOFP-64	SAF-XC164SM-8F20FAAINCT-ND	18.34 16.05	SAF-XC164SM-8F20F AA
20	PLL/Prescaler/Direct Input	—	64K Flash	6K	47	14	7	2xASC+2xSSC	✓	—	TOFP-64	SAF-XC164SM-8F20FAAINTR-ND	14157.30/1,900	SAF-XC164SM-8F20F AA
20	PLL/Prescaler/Direct Input	—	64K Flash	6K	47	14	7	2xASC+2xSSC	✓	—	TOFP-64	SAF-XC164SM-8F40FAAINCT-ND	19.26 16.86	SAF-XC164SM-8F40F AA
40	PLL/Prescaler/Direct Input	—	64K Flash	6K	47	14	7	2xASC+2xSSC	✓	—	TOFP-64	SAF-XC164SM-8F40FAAINTR-ND	14864.95/1,900	SAF-XC164SM-8F40F AA
20	PLL/Prescaler/Direct Input	—	64K OTP	4K	59	8/10	5	ASC+SSC	✓	CAN	MOFP-80	SAK-C164CI-8EMDBIN-ND	34.93 29.50	SAK-C164CI-8EM DB
20	PLL/Prescaler/Direct Input	—	64K OTP	4K	59	8/10	5	ASC+SSC	✓	CAN	MOFP-80	SAK-C164CI-8EMCIBIN-ND	33.26 28.09	SAK-C164CI-8EM DB
20	PLL/Prescaler/Direct Input	—	64K OTP	4K	59	8/10	5	ASC+SSC	✓	CAN	MOFP-80	SAK-C164CI-8EMDBIN-ND	33.26 28.09	SAK-C164CI-8EM DB
20	PLL/Prescaler/Direct Input	—	32K OTP	2K	50	8/12	5	ASC+SSC	✓	CAN	TOFP-64	SAK-C164CM-4EFABINCT-ND	30.29 28.21	SAK-C164CM-4EF AB
20	PLL/Prescaler/Direct Input	—	32K OTP	2K	50	8/12	5	ASC+SSC	✓	CAN	TOFP-64	SAK-C164CM-4EFABINTR-ND	25305.19/1,900	SAK-C164CM-4EF AB
25	PLL/Prescaler/Direct Input	—	128K Flash	2K	111	16/10	9	ASC+SSC	—	CAN	MOFP-144	SAK-C167CR-LMHAIN-ND	27.56 23.28	SAK-C167CR-LM HA+
40	PLL/Prescaler/Direct Input	—	32K Flash	8K	111	24/10	9	ASC+SSC	✓	CAN	MOFP-144	SAK-C167CS-L40MCAIN-ND	43.99 37.15	SAK-C167CS-L40M CA+
25	PLL/Prescaler/Direct Input	—	32K Flash	8K	111	24/10	9	ASC+SSC	✓	CAN	MOFP-144	SAK-C167CS-LMCAIN-ND	37.22 31.43	SAK-C167CS-LM CA+
20	PLL/Prescaler/Direct Input	—	128K Flash	2K	111	16/10	9	ASC+SSC	—	CAN	MOFP-144	SAK-C167SR-LMHAIN-ND	39.99 33.77	SAK-C167SR-LM HA+
20	PLL/Prescaler/Direct Input	—	32K Flash	4K	47	14	7	2xASC+2xSSC	✓	TwinCAN	TOFP-64	SAK-XC164CM-4F20FAAINCT-ND	20.00 17.51	SAK-XC164CM-4F20F AA
20	PLL/Prescaler/Direct Input	—	32K Flash	4K	47	14	7	2xASC+2xSSC	✓	TwinCAN	TOFP-64	SAK-XC164CM-4F20FAAINTR-ND	15440.22/1,900	SAK-XC164CM-4F20F AA
40	PLL/Prescaler/Direct Input	—	32K Flash	4K	47	14	7	2xASC+2xSSC	✓	TwinCAN	TOFP-64	SAK-XC164CM-4F40FAAINCT-ND	21.00 18.38	SAK-XC164CM-4F40F AA
40	PLL/Prescaler/Direct Input	—	32K Flash	4K	47	14	7	2xASC+2xSSC	✓	TwinCAN	TOFP-64	SAK-XC164CM-4F40FAAINTR-ND	16212.09/1,900	SAK-XC164CM-4F40F AA
20	PLL/Prescaler/Direct Input	—	64K Flash	6K	47	14	7	2xASC+2xSSC	✓	TwinCAN	TOFP-64	SAK-XC164CM-8F20FAAINCT-ND	20.66 18.08	SAK-XC164CM-8F20F AA
20	PLL/Prescaler/Direct Input	—	64K Flash	6K	47	14	7	2xASC+2xSSC	✓	TwinCAN	TOFP-64	SAK-XC164CM-8F20FAAINTR-ND	15945.58/1,900	SAK-XC164CM-8F20F AA
40	PLL/Prescaler/Direct Input	—	64K Flash	6K	47	14	7	2xASC+2xSSC	✓	TwinCAN	TOFP-64	SAK-XC164CM-8F40FAAINCT-ND	21.69 18.98	SAK-XC164CM-8F40F AA
40	PLL/Prescaler/Direct Input	—	64K Flash	6K	47	14	7	2xASC+2xSSC	✓	TwinCAN	TOFP-64	SAK-XC164CM-8F40FAAINTR-ND	16742.90/1,900	SAK-XC164CM-8F40F AA
40	PLL/Prescaler/Direct Input	—	256K Flash	12K	79	14	11	2xASC+2xSSC	✓	TwinCAN	TOFP-100	SAK-XC164CS-32F40FB-AINCT-ND	40.67 37.87	SAK-XC164CS-32F40F BB-A
40	PLL/Prescaler/Direct Input	—	256K Flash	12K	79	14	11	2xASC+2xSSC	✓	TwinCAN	TOFP-100	SAK-XC164CS-32F40FB-AINTR-ND	25030.70/1,400	SAK-XC164CS-32F40F BB-A
66	PLL/Prescaler/Direct Input	✓	768K Flash	2K	75	16/10	5	6xSPI+LIN+UART</						

**32-Bit**

The TriCore™ is the first unified, single-core, 32-bit microcontroller-DSP architecture optimized for real-time embedded systems. The TriCore Instruction Set Architecture (ISA) combines the real-time capability of a microcontroller, the computational power of a DSP, and the high performance/price features of a RISC load/store architecture, in a compact re-programmable core.

**C**

Max. CPU Clock (MHz)	FPU	MMU	PCP	SRAM (Byte)	ROM/OTP/Flash/eDRAM (Byte)	I/O Lines	CAN	Package	Digi-Key Part No.	Price Each		Infiniteon Part No.
										1	25	
100	✓	✓	—	144K	—	72	—	LBGA-208	SAF-TC1100-L100EB-GBBINCT-ND▲	35.72	33.26	SAF-TC1100-L100EB-G BB
100	✓	✓	—	144K	—	72	—	LBGA-208	SAF-TC1100-L100EB-GBBINTR-ND◊	15702.77/1,000		SAF-TC1100-L100EB-G BB
150	✓	✓	—	144K	—	72	—	LBGA-208	SAF-TC1100-L150EB-GBBINCT-ND▲	38.22	35.59	SAF-TC1100-L150EB-G BB
150	✓	✓	—	144K	—	72	—	LBGA-208	SAF-TC1100-L150EB-GBBINTR-ND◊	16801.95/1,000		SAF-TC1100-L150EB-G BB
100	✓	✓	—	144K	—	72	MultiCAN	LBGA-208	SAF-TC1115-L100EB-GBBINCT-ND▲	38.21	35.58	SAF-TC1115-L100EB-G BB
100	✓	✓	—	144K	—	72	MultiCAN	LBGA-208	SAF-TC1115-L100EB-GBBINTR-ND◊	16801.19/1,000		SAF-TC1115-L100EB-G BB
150	✓	✓	—	144K	—	72	MultiCAN	LBGA-208	SAF-TC1115-L150EB-GBBINCT-ND▲	42.02	39.13	SAF-TC1115-L150EB-G BB
150	✓	✓	—	144K	—	72	MultiCAN	LBGA-208	SAF-TC1115-L150EB-GBBINTR-ND◊	18473.86/1,000		SAF-TC1115-L150EB-G BB
100	✓	✓	—	144K	—	72	MultiCAN	LBGA-208	SAF-TC1130-L100EB-GBBINCT-ND▲	44.96	41.86	SAF-TC1130-L100EB-G BB
100	✓	✓	—	144K	—	72	MultiCAN	LBGA-208	SAF-TC1130-L100EB-GBBINTR-ND◊	19766.84/1,000		SAF-TC1130-L100EB-G BB
150	✓	✓	—	144K	—	72	MultiCAN	LBGA-208	SAF-TC1130-L150EB-GBBINCT-ND▲	49.43	46.03	SAF-TC1130-L150EB-G BB
150	✓	✓	—	144K	—	72	MultiCAN	LBGA-208	SAF-TC1130-L150EB-GBBINTR-ND◊	21734.03/1,000		SAF-TC1130-L150EB-G BB
66	✓	—	—	48K	1M Flash	81	—	LQFP-176	SAF-TC1161-128F66HLAAIN-ND	30.60	25.85	SAF-TC1161-128F66HL AA
66	✓	—	—	48K	1M Flash	81	MultiCAN	LQFP-176	SAF-TC1162-128F66HLAAIN-ND	32.40	27.37	SAF-TC1162-128F66HL AA
80	✓	—	✓	80K	1.5M Flash	81	—	LQFP-176	SAF-TC1165-192F80HLAAIN-ND	37.08	31.32	SAF-TC1165-192F80HL AA
80	✓	—	✓	80K	1.5M Flash	81	MultiCAN	LQFP-176	SAF-TC1166-192F80HLAAIN-ND	38.89	32.84	SAF-TC1166-192F80HL AA

▲ Cut Tape ◊ Tape and Reel

**Starter Kits**

**B158-H8690-X-0-7600IN-ND** Full Starter Kit for TC116X ..... \$621.86

**B158-H8539-G2-X-7600IN-ND** Full Starter Kit for TC176X ..... \$815.30

**B158-H8537-G2-X-7600IN-ND** Full Starter Kit for TC179X ..... \$815.30



**PK51 Professional Developer's Kit**

The PK51 Professional Developer's Kit for the 8051 microcontroller family supports all 8051 derivatives including new devices with extended memory and instruction sets. On-chip peripherals and other key features of the 8051 are easy to access with the PK51 Professional Developer's Kit.

**PK51-ND** ..... \$3295.00

**CA51 Compiler Kit**

The CA51 Compiler Kit for the 8051 microcontroller family supports all 8051 derivatives including classic devices and IP cores from companies like Analog Devices, Atmel, Cypress Semiconductor, Dallas Semiconductor, Infineon, Intel, NXP, Silicon Labs, STMicroelectronics, Texas Instruments, and Winbond. On Chip peripherals and other key features of the 8051 are easy to access with the CA51 Compiler Kit.

**CA51-ND** ..... \$1895.00

**RealView® Microcontroller Development Kit**

The RealView Microcontroller Development Kit (MDK) supports ARM7, ARM9, and Cortex-M3 technology-based microcontrollers from Analog Devices, Atmel, Freescale, Luminary, NXP, OKI, Samsung, Sharp, STMicroelectronics, and Texas Instruments.

**MDK-ARM-ND** ..... \$4895.00

**RealView® Real-Time Library**

The RealView Real-Time Library is a collection of tightly-coupled libraries that are designed to solve the real-time and communication challenges of embedded systems based on ARM powered MCU devices. It also includes several drivers that interface the RTX Real-Time with various communication interfaces.

**RTL-ARM-ND** ..... \$4195.00

**MCBXC88x Evaluation Board**

The MCBXC88x Evaluation Board introduces you to the Infineon XC88x microcontroller family and allows you to create and test working programs for this 8051-based architecture. The CAN interface, analog input (via potentiometer), and eight LED's (on Port 3) make this board a great starting point for your next 8051 project.

**MCBXC88x-ND** ..... \$149.00

**MCBXC167 Evaluation Board**

The MCBXC167 Evaluation Board introduces you to the Infineon XC16x microcontroller family and allows you to create and test working programs for this advanced architecture. The board connects to your PC using the serial port (for Flash download) or the OCDS interface (for program debug using Keil ULINK USB-JTAG Adapter and the µVision IDE and Debugger).

**MCBXC167-BASIC-ND** ..... \$149.00

**MCBSTR7 Evaluation Board**

The MCBSTR7 Evaluation Board introduces you to the STMicroelectronics STR710 ARM family and allows you to create and test working programs for this advanced architecture. The board connects to your PC using the serial port (for Flash download) or the JTAG interface (for program debug using Keil ULINK USB-JTAG Adapter and the µVision IDE and Debugger).

**MCBSTR7-ND** ..... \$149.00

**MCBSTR9 Evaluation Board**

The MCBSTR9 Evaluation Board introduces you to the STMicroelectronics ARM9 family and allows you to create and test working programs for this advanced architecture. The board connects to your PC using the JTAG interface (for program debug using Keil ULINK USB-JTAG Adapter and the µVision IDE and Debugger). It provides serial (RS-232), CAN, Ethernet, and USB interfaces as well as eight LEDs, analog input (via potentiometer) and several push buttons.

**MCBSTR9-ND** ..... \$229.00

**MCBx51 Evaluation Board**

The MCBx51 single-board computer is an evaluation board that supports numerous 8051-compatible and 251-compatible devices. The MCBx51 allows you to investigate the capabilities of the 8051 and 251 and create real working programs with the Keil development tools. The MCBx51 works with any 44-pin 8051-compatible or 251-compatible device.

**MCBx51-ND** ..... \$295.00

**MCB950 Evaluation Board**

The MCB950 Evaluation Board is a versatile, flexible prototype board for the NXP P89LPC952 microcontroller family. It includes the Keil µVision LPC Development Studio which allows you to create and debug programs that program into the on-chip Flash ROM using FlashMagic.

**MCB950-ND** ..... \$129.00

**ULINK USB-JTAG Adapter**

The ULINK USB Interface Adapter connects your PC's USB port to your target hardware (via JTAG or OCDS) and allows you to debug embedded programs running on target hardware.

**ULINK2-ND** ..... \$395.00

**Digi-Reel®** Most SMT cutdown parts are available on a Digi-Reel®. For Digi-Reel part number, change 1-ND to 6-ND or CT-ND to DKR-ND. See Digi-Key® Services on page 2 for additional information.

**More Product Available Online: [www.digkey.com](http://www.digkey.com)**