

SILICON LABS Microcontrollers



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For quantities of 1000 and up, call for quote.

ULTRA LOW POWER MCU'S

The C8051F90x/1x is the industry's lowest power MCU, consuming as little as 160 µA/MHz in active mode and 10 nA in sleep mode with full memory retention. The C8051F90x/1x expands the award-winning C8051F92x/3x low power MCU product portfolio by offering lower memory devices with further power reduction and a higher resolution ADC. The C8051F90x/1x low power MCU family is fully software and hardware compatible with the C8051F92x/3x family and operates from 0.9 – 3.6 V to enable single cell battery designs.

MOUSER STOCK NO.	Silicon Labs Part No.	Package	MIPS (Peak)	Flash (KB)	RAM (bytes)	Digital Port I/O Pins	Interfaces				Analog Peripherals							Price Each			
							UART	I2C	SPI	EMIF	Internal Osc.	Timers	PCA Ch.	ADC	DAC	Temp Sensor	VREF	Comparators	1	25	100
634-C8051F901-GM	C8051F901-GM	QFN-24	25	8	768	16	Yes	Yes	2	No	2%	4 16-bit	6	10-bit	No	Yes	Yes	2			
634-C8051F901-GU	C8051F901-GU	QSOP-24	25	8	768	16	Yes	Yes	2	No	2%	4 16-bit	6	10-bit	No	Yes	Yes	2			
634-C8051F902-GM	C8051F902-GM	QFN-24	25	8	768	16	Yes	Yes	2	No	2%	4 16-bit	6	12-bit	No	Yes	Yes	2			
634-C8051F902-GU	C8051F902-GU	QSOP-24	25	8	768	16	Yes	Yes	2	No	2%	4 16-bit	6	12-bit	No	Yes	Yes	2			
634-C8051F911-GM	C8051F911-GM	QFN-24	25	16	768	16	Yes	Yes	2	No	2%	4 16-bit	6	10-bit	No	Yes	Yes	2			
634-C8051F911-GU	C8051F911-GU	QSOP-24	25	16	768	16	Yes	Yes	2	No	2%	4 16-bit	6	12-bit	No	Yes	Yes	2			
634-C8051F912-GM	C8051F912-GM	QFN-24	25	16	768	16	Yes	Yes	2	No	2%	4 16-bit	6	12-bit	No	Yes	Yes	2			
634-C8051F912-GU	C8051F912-GU	QSOP-24	25	16	768	16	Yes	Yes	2	No	2%	4 16-bit	6	12-bit	No	Yes	Yes	2			
634-C8051F920-GM	C8051F920-GM	QFN-32	25	32	4352	24	Yes	Yes	2	Yes	2%	4 16-bit	6	10-bit	No	Yes	Yes	2			
634-C8051F920-GQ	C8051F920-GQ	LQFP-32	25	32	4352	24	Yes	Yes	2	Yes	2%	4 16-bit	6	10-bit	No	Yes	Yes	2			
634-C8051F921-GM	C8051F921-GM	QFN-24	25	32	4352	16	Yes	Yes	2	No	2%	4 16-bit	6	10-bit	No	Yes	Yes	2			
634-C8051F930-GM	C8051F930-GM	QFN-32	25	64	4352	24	Yes	Yes	2	Yes	2%	4 16-bit	6	10-bit	No	Yes	Yes	2			
634-C8051F930-GQ	C8051F930-GQ	LQFP-32	25	64	4352	24	Yes	Yes	2	Yes	2%	4 16-bit	6	10-bit	No	Yes	Yes	2			
634-C8051F931-GM	C8051F931-GM	QFN-24	25	64	4352	16	Yes	Yes	2	No	2%	4 16-bit	6	10-bit	No	Yes	Yes	2			

The C8051F98x is the industry's lowest power MCU, consuming as little as 150 µA/MHz in active mode and 10 nA in sleep mode with full memory retention. The C8051F98x expands the award-winning C8051F92x/3x low power MCU product portfolio by offering lower memory devices with further power reduction. The C8051F98x low power MCU family is software and hardware compatible with the C8051F92x/3x, C8051F90x/1x and C8051F99x families.



For quantities of 500 and up, call for quote.

MOUSER STOCK NO.	Silicon Labs Part No.	Package	MIPS (Peak)	Flash (KB)	RAM (bytes)	Digital Port I/O Pins	Interfaces				Analog Peripherals							Price Each		
							UART	I2C	SPI	EMIF	Internal Osc.	Timers	PCA Ch.	ADC	DAC	Temp Sensor	VREF	Comparators	1	25
634-C8051F980-GM	C8051F980-GM	QFN-20	25	8	512	16	Yes	Yes	Yes	±2%	4 16-bit	3	12-bit	No	Yes	Yes	1			
634-C8051F981-GM	C8051F981-GM	QFN-20	25	8	512	16	Yes	Yes	Yes	±2%	4 16-bit	3	-----	No	Yes	Yes	1			
634-C8051F982-GM	C8051F982-GM	QFN-20	25	4	512	16	Yes	Yes	Yes	±2%	4 16-bit	3	10-bit	No	Yes	Yes	1			
634-C8051F983-GM	C8051F983-GM	QFN-20	25	4	512	16	Yes	Yes	Yes	±2%	4 16-bit	3	-----	No	Yes	Yes	1			
634-C8051F985-GM	C8051F985-GM	QFN-20	25	2	512	16	Yes	Yes	Yes	±2%	4 16-bit	3	-----	No	Yes	Yes	1			
634-C8051F986-GM	C8051F986-GM	QFN-24	25	8	512	17	Yes	Yes	Yes	±2%	4 16-bit	3	12-bit	No	Yes	Yes	1			
634-C8051F986-GU	C8051F986-GU	QSOP-24	25	8	512	17	Yes	Yes	Yes	±2%	4 16-bit	3	12-bit	No	Yes	Yes	1			
634-C8051F987-GM	C8051F987-GM	QFN-24	25	8	512	17	Yes	Yes	Yes	±2%	4 16-bit	3	-----	No	Yes	Yes	1			
634-C8051F987-GU	C8051F987-GU	QSOP-24	25	8	512	17	Yes	Yes	Yes	±2%	4 16-bit	3	-----	No	Yes	Yes	1			
634-C8051F988-GM	C8051F988-GM	QFN-24	25	4	512	17	Yes	Yes	Yes	±2%	4 16-bit	3	10-bit	No	Yes	Yes	1			
634-C8051F988-GU	C8051F988-GU	QSOP-24	25	4	512	17	Yes	Yes	Yes	±2%	4 16-bit	3	10-bit	No	Yes	Yes	1			
634-C8051F989-GM	C8051F989-GM	QFN-24	25	4	512	17	Yes	Yes	Yes	±2%	4 16-bit	3	-----	No	Yes	Yes	1			
634-C8051F989-GU	C8051F989-GU	QSOP-24	25	4	512	17	Yes	Yes	Yes	±2%	4 16-bit	3	-----	No	Yes	Yes	1			

SMART INTERFACE ICs

USB to UART Bridge

The CP210x single-chip USB-to-UART bridge converts data traffic between USB and UART formats. This chip can be connected to any UART to provide instantaneous USB connectivity. Software drivers are supplied free by Silicon Labs.



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MOUSER STOCK NO.	Silicon Labs Part No.	Package	EEPROM (bytes)	FIFO (bytes)	Digital Port I/O Pins	Serial Buses	Analog Peripherals				Price Each		
							Internal Osc.	VREG	RS485	Split VDDIO	1	25	100
634-CP2101-GM	CP2101-GM	QFN-28	512	1K	---	USB to UART Bridge	Yes	Yes	No	No			
634-CP2102-GM	CP2102-GM	QFN-28	1024	1K	---	USB to UART Bridge	Yes	Yes	No	No			
634-CP2103-GM	CP2103-GM	QFN-28	1024	1K	4	USB to UART Bridge	Yes	Yes	Yes	Yes			

SPI to I2C Expander

The CP2120 compact SPI-to-I2C bridge and general purpose port expander device can be easily added to a system to solve interface compatibility problems and add more GPIO when required.



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MOUSER STOCK NO.	Silicon Labs Part No.	Package	EEPROM (bytes)	FIFO (bytes)	Port I/O Pins	Serial Buses	Analog Peripherals		Price Each			
							Internal Osc.	VREG	1	25	100	
634-CP2120-GM	CP2120-GM	QFN-20	---	512	9	SPI to I2C Bridge	Yes	Yes				

Ethernet Controller ICs

The CP220x family is the industry's smallest single-chip Ethernet controller containing an integrated Media Access Controller (MAC) and Physical Layer (PHY). An Ethernet stack that will run on Silicon Labs MCUs is available for no charge.



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MOUSER STOCK NO.	Silicon Labs Part No.	Package	Flash (KB)	RAM (bytes)	Port I/O Pins	Parallel Host Interface	Parallel Host Interface Speed	LEDs	Temperature Range	Price Each		
										1	25	100
634-CP2200-GQ	CP2200-GQ	TQFP-48	8	2K	---	8-bit non-multiplexed EMIF	30 Mbps	Separate link and activity Combined link and activity	-40 to +85 -40 to +85			
634-CP2201-GM	CP2201-GM	QFN-28	8	2K	---	8-bit multiplexed EMIF	30 Mbps					

LCD Controllers

The CP240x extremely low power LCD controller devices can drive up to 128 LCD segments. These devices are easily interfaced with any microcontroller using SPI or I2C interfaces. A benefit to this approach is designers can select the best-fit MCU for the system and then add the CP240x to handle LCD requirements efficiently with respect to system size and power consumption.



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MOUSER STOCK NO.	Silicon Labs Part No.	Package	RAM (bytes)	LCD Segments	I/O Pins	Serial Buses	Analog Peripherals		Temperature Range	Price Each		
							Internal Osc.	Timers		1	25	100
634-CP2400-GM	CP2400-GM	QFN-48	256	128	36	SPI	Yes	2 16-bit	-40 to +85			
634-CP2400-GQ	CP2400-GQ	QFP-48	256	128	36	SPI	Yes	2 16-bit				
634-CP2401-GM	634-CP2401-GM	QFN-48	256	128	36	I2C	Yes	2 16-bit	-40 to +85			
634-CP2401-GQ	634-CP2401-GQ	QFP-48	256	128	36	I2C	Yes	2 16-bit				
634-CP2402-GM	634-CP2402-GM	QFN-32	256	64	20	SPI	Yes	2 16-bit	-40 to +85			
634-CP2403-GM	634-CP2403-GM	QFN-32	256	64	20	I2C	Yes	2 16-bit				