

# SILICON LABS Microcontrollers

ROHS Compliant This product is RoHS compliant.



## AUTOMOTIVE MICROCONTROLLERS

Silicon Labs offers automotive customers a complete family of small footprint, high-performance, highly reliable mixed-signal mixed-signal MCUs, featuring:

- 50 MIPS 8051 CPU
- 24 MHz on-board oscillator (±0.5%) with clock multiplier
- 32-channel, 12-bit, 200 kbps ADC
- Up to 3 comparators
- -40 to +125°C Operating temperature range
- On-board Temperature Sensor

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	Silicon Labs Part No.	Package	MIPS (Peak)	Flash Mem. (KB)	RAM (bytes)	Digital Port I/O Pins	Communications					Analog Peripherals							Price Each				
							UART	I2C	SPI	CAN	LIN	Internal Osc.	Timers	PCA Ch.	ADC	DAC	Temp Sensor	VREF	Comparators	1	25	100	
634-C8051F500-IM	C8051F500-IM	QFN-48	50	64	4352	40	Yes	Yes	Yes	2.0	2.1	±0.5%	4	16-bit	6	12-bit	No	Yes	Yes	2	6.26	5.79	5.37
634-C8051F500-IQ	C8051F500-IQ	QFP-48	50	64	4352	40	Yes	Yes	Yes	2.0	2.1	±0.5%	4	16-bit	6	12-bit	No	Yes	Yes	2	6.33	5.86	5.43
634-C8051F501-IM	C8051F501-IM	QFN-48	50	64	4352	40	Yes	Yes	No	No	±0.5%	4	16-bit	6	12-bit	No	Yes	Yes	2	5.93	5.49	5.09	
634-C8051F501-IQ	C8051F501-IQ	QFP-48	50	64	4352	40	Yes	Yes	No	No	±0.5%	4	16-bit	6	12-bit	No	Yes	Yes	2	6.01	5.57	5.16	
634-C8051F502-IQ	C8051F502-IQ	QFP-32	50	64	4352	25	Yes	Yes	Yes	2.0	2.1	±0.5%	4	16-bit	6	12-bit	No	Yes	Yes	2	6.14	5.69	5.27
634-C8051F503-IM	C8051F503-IM	QFN-32	50	64	4352	25	Yes	Yes	Yes	No	No	±0.5%	4	16-bit	6	12-bit	No	Yes	Yes	2	5.36	4.96	4.60
634-C8051F503-IQ	C8051F503-IQ	QFP-32	50	64	4352	25	Yes	Yes	Yes	No	No	±0.5%	4	16-bit	6	12-bit	No	Yes	Yes	2	6.39	5.76	5.00
634-C8051F504-IM	C8051F504-IM	QFN-48	50	32	4352	40	Yes	Yes	Yes	2.0	2.1	±0.5%	4	16-bit	6	12-bit	No	Yes	Yes	2	5.89	5.45	5.05
634-C8051F504-IQ	C8051F504-IQ	QFP-48	50	32	4352	40	Yes	Yes	Yes	2.0	2.1	±0.5%	4	16-bit	6	12-bit	No	Yes	Yes	2	5.96	5.51	5.11
634-C8051F505-IM	C8051F505-IM	QFN-48	50	32	4352	25	Yes	Yes	No	No	±0.5%	4	16-bit	6	12-bit	No	Yes	Yes	2	5.57	5.16	4.78	
634-C8051F505-IQ	C8051F505-IQ	QFP-48	50	32	4352	40	Yes	Yes	No	No	±0.5%	4	16-bit	6	12-bit	No	Yes	Yes	2	5.63	5.21	4.83	
634-C8051F506-IM	C8051F506-IM	QFN-32	50	32	4352	25	Yes	Yes	Yes	2.0	2.1	±0.5%	4	16-bit	6	12-bit	No	Yes	Yes	2	5.30	4.91	4.55
634-C8051F506-IQ	C8051F506-IQ	QFP-32	50	32	4352	25	Yes	Yes	Yes	2.0	2.1	±0.5%	4	16-bit	6	12-bit	No	Yes	Yes	2	5.76	5.33	4.94
634-C8051F507-IM	C8051F507-IM	QFN-32	50	32	4352	25	Yes	Yes	No	No	±0.5%	4	16-bit	6	12-bit	No	Yes	Yes	2	5.00	4.63	4.29	
634-C8051F507-IQ	C8051F507-IQ	QFP-32	50	32	4352	25	Yes	Yes	No	No	±0.5%	4	16-bit	6	12-bit	No	Yes	Yes	2	5.45	5.05	4.68	
634-C8051F508-IM	C8051F508-IM	QFN-40	50	64	4352	33	Yes	Yes	Yes	2.0	2.1	±0.5%	4	16-bit	6	12-bit	No	Yes	Yes	2	6.10	5.64	5.23
634-C8051F508-IQ	C8051F508-IQ	QFN-40	50	64	4352	33	Yes	Yes	Yes	No	No	±0.5%	4	16-bit	6	12-bit	No	Yes	Yes	2	5.78	5.35	4.96
634-C8051F510-IM	C8051F510-IM	QFN-40	50	32	4352	33	Yes	Yes	Yes	2.0	2.1	±0.5%	4	16-bit	6	12-bit	No	Yes	Yes	2	5.72	5.30	4.91
634-C8051F511-IM	C8051F511-IM	QFN-40	50	32	4352	33	Yes	Yes	Yes	No	No	±0.5%	4	16-bit	6	12-bit	No	Yes	Yes	2	5.42	5.02	4.65
634-C8051F520A-IM	C8051F520A-IM	DFN-10	25	8	256	6	Yes	No	Yes	No	2.1	±0.5%	3	16-bit	3	12-bit	No	Yes	Yes	1	2.90	2.68	2.49
634-C8051F521A-IM	C8051F521A-IM	DFN-10	25	8	256	6	Yes	No	Yes	No	No	±0.5%	3	16-bit	3	12-bit	No	Yes	Yes	1	2.84	2.63	2.44
634-C8051F523A-IM	C8051F523A-IM	DFN-10	25	4	256	6	Yes	No	Yes	No	2.1	±0.5%	3	16-bit	3	12-bit	No	Yes	Yes	1	2.99	2.70	2.34
634-C8051F524A-IM	C8051F524A-IM	DFN-10	25	4	256	6	Yes	No	Yes	No	No	±0.5%	3	16-bit	3	12-bit	No	Yes	Yes	1	2.65	2.46	2.28
634-C8051F526A-IM	C8051F526A-IM	DFN-10	25	2	256	6	Yes	No	Yes	No	No	±0.5%	3	16-bit	3	12-bit	No	Yes	Yes	1	2.73	2.47	2.13
634-C8051F527A-IM	C8051F527A-IM	DFN-10	25	2	256	6	Yes	No	Yes	No	No	±0.5%	3	16-bit	3	12-bit	No	Yes	Yes	1	2.43	2.25	2.09
634-C8051F530A-IM	C8051F530A-IM	QFN-20	25	8	256	16	Yes	No	Yes	No	2.1	±0.5%	3	16-bit	3	12-bit	No	Yes	Yes	1	2.95	2.73	2.53
634-C8051F530A-IT	C8051F530A-IT	TSSOP-20	25	8	256	16	Yes	No	Yes	No	2.1	±0.5%	3	16-bit	3	12-bit	No	Yes	Yes	1	3.31	3.06	2.84
634-C8051F531A-IM	C8051F531A-IM	QFN-20	25	8	256	16	Yes	No	Yes	No	No	±0.5%	3	16-bit	3	12-bit	No	Yes	Yes	1	2.90	2.68	2.49
634-C8051F531A-IT	C8051F531A-IT	TSSOP-20	25	8	256	16	Yes	No	Yes	No	No	±0.5%	3	16-bit	3	12-bit	No	Yes	Yes	1	3.24	3.00	2.78
634-C8051F533A-IM	C8051F533A-IM	QFN-20	25	4	256	16	Yes	No	Yes	No	2.1	±0.5%	3	16-bit	3	12-bit	No	Yes	Yes	1	2.78	2.58	2.39
634-C8051F533A-IT	C8051F533A-IT	TSSOP-20	25	4	256	16	Yes	No	Yes	No	2.1	±0.5%	3	16-bit	3	12-bit	No	Yes	Yes	1	3.41	3.08	2.67
634-C8051F534A-IM	C8051F534A-IM	QFN-20	25	4	256	16	Yes	No	Yes	No	No	±0.5%	3	16-bit	3	12-bit	No	Yes	Yes	1	2.99	2.70	2.34
634-C8051F534A-IT	C8051F534A-IT	TSSOP-20	25	4	256	16	Yes	No	Yes	No	No	±0.5%	3	16-bit	3	12-bit	No	Yes	Yes	1	3.04	2.81	2.61
634-C8051F537A-IM	C8051F537A-IM	QFN-20	25	2	256	16	Yes	No	Yes	No	No	±0.5%	3	16-bit	3	12-bit	No	Yes	Yes	1	2.48	2.30	2.13
634-C8051F537A-IT	C8051F537A-IT	TSSOP-20	25	2	256	16	Yes	No	Yes	No	No	±0.5%	3	16-bit	3	12-bit	No	Yes	Yes	1	2.78	2.58	2.39
634-C8051F580-IM	C8051F580-IM	QFN-48	50	128	8448	40	2	Yes	Yes	2.0	2.1	±0.5%	6	16-bit	2x6	12-bit	No	Yes	Yes	3	8.53	7.90	7.32
634-C8051F580-IQ	C8051F580-IQ	QFP-48	50	128	8448	40	2	Yes	Yes	2.0	2.1	±0.5%	6	16-bit	2x6	12-bit	No	Yes	Yes	3	8.61	7.98	7.39
634-C8051F581-IM	C8051F581-IM	QFN-48	50	128	8448	40	2	Yes	Yes	No	No	±0.5%	6	16-bit	2x6	12-bit	No	Yes	Yes	3	8.11	7.51	6.96
634-C8051F581-IQ	C8051F581-IQ	QFP-48	50	128	8448	40	2	Yes	Yes	No	No	±0.5%	6	16-bit	2x6	12-bit	No	Yes	Yes	3	8.19	7.59	7.03
634-C8051F582-IQ	C8051F582-IQ	QFP-32	50	128	8448	25	2	Yes	Yes	2.0	2.1	±0.5%	6	16-bit	2x6	12-bit	No	Yes	Yes	3	8.40	7.78	7.21
634-C8051F583-IM	C8051F583-IM	QFN-32	50	128	8448	25	2	Yes	Yes	No	No	±0.5%	6	16-bit	2x6	12-bit	No	Yes	Yes	3	7.48	6.93	6.42
634-C8051F583-IQ	C8051F583-IQ	QFP-32	50	128	8448	25	2	Yes	Yes	No	No	±0.5%	6	16-bit	2x6	12-bit	No	Yes	Yes	3	7.97	7.38	6.84
634-C8051F584-IM	C8051F584-IM	QFN-48	50	96	8448	40	2	Yes	Yes	2.0	2.1	±0.5%	6	16-bit	2x6	12-bit	No	Yes	Yes	3	8.03	7.44	6.89
634-C8051F584-IQ	C8051F584-IQ	QFP-48	50	96	8448	40	2	Yes	Yes	2.0	2.1	±0.5%	6	16-bit	2x6	12-bit	No	Yes	Yes	3	8.09	7.49	6.94
634-C8051F585-IM	C8051F585-IM	QFN-48	50	96	8448	40	2	Yes	Yes	No	No	±0.5%	6	16-bit	2x6	12-bit	No	Yes	Yes	3	7.61	7.05	6.53
634-C8051F585-IQ	C8051F585-IQ	QFP-48	50	96	8448	40	2	Yes	Yes	No	No	±0.5%	6	16-bit	2x6	12-bit	No	Yes	Yes	3	7.66	7.09	6.57
634-C8051F586-IM	C8051F586-IM	QFN-32	50	96	8448	25	2	Yes	Yes	2.0	2.1	±0.5%	6	16-bit	2x6	12-bit	No	Yes	Yes	3	7.41	6.86	6.36
634-C8051F586-IQ	C8051F586-IQ	QFP-32	50	96	8448	25	2	Yes	Yes	2.0	2.1	±0.5%	6	16-bit	2x6	12-bit	No	Yes	Yes	3	7.90	7.32	6.78
634-C8051F587-IM	C8051F587-IM	QFN-32	50	96	8448	25	2	Yes	Yes	No	No	±0.5%	6	16-bit	2x6	12-bit	No	Yes	Yes	3	7.02	6.50	6.02
634-C8051F587-IQ	C8051F587-IQ	QFP-32	50	96	8448	25	2	Yes	Yes	No	No	±0.5%	6	16-bit	2x6	12-bit	No	Yes	Yes	3	7.47	6.92	6.41
634-C8051F588-IM	C8051F588-IM	QFN-40	50	128	8448	33	2	Yes	Yes	2.0	2.1	±0.5%	6	16-bit	2x6	12-bit	No	Yes	Yes	3	8.37	7.75	7.18
634-C8051F589-IM	C8051F589-IM	QFN-40	50	128	8448	33	2	Yes	Yes	No	No	±0.5%	6	16-bit	2x6	12-bit	No	Yes	Yes	3	7.94	7.35	6.81
634-C8051F590-IM	C8051F590-IM	QFN-40	50	96	8448	33	2	Yes	Yes	2.0	2.1	±0.5%	6	16-bit	2x6	12-bit	No	Yes	Yes	3	7.87	7.29	6.75
634-C8051F591-IM	C8051F591-IM	QFN-40	50	96	8448	33	2	Yes	Yes	No	No	±0.5%	6	16-bit	2x6	12-bit	No	Yes	Yes	3	7.44	6.89	6.38

## OTP-EPROM MICROCONTROLLERS

Silicon Laboratories OTP-EPROM family of MCUs is a high-performance solution for cost and space-sensitive applications. Pin compatible with Silicon Labs' Flash-based MCUs, these devices provide designers the flexibility to develop code in Flash and switch to low cost OTP versions for mass production.

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	Silicon Labs Part No.	Package	MIPS (Peak)	EEPROM Mem. (KB)	RAM (bytes)	Digital Port I/O Pins	Communications					Analog Peripherals							Price Each			
							UART	I2C	SPI	Internal Osc.	Timers	PCA Ch.	ADC	DAC	Temp Sensor	VREF	Comparators	VREG	1	25	100	
634-C8051T600-GM	C8051T600-GM	QFN-11	25	8	256	8	Yes	Yes	No	±2%	3	16-bit	3	10-bit	No	Yes	No	1	Yes	1.39	1.29	1.20
634-C8051T600-GS	C8051T600-GS	SOIC-14	25	8	256	8	Yes	Yes	No	±2%	3	16-bit	3	10-bit	No	Yes	No	1	Yes	1.39	1.29	1.20
634-C8051T602-GS	C8051T602-GS	SOIC-14	25	4	256	8	Yes	Yes	No	±2%	3	16-bit	3	10-bit	No</							