

FREESCALE Microcontrollers



HCS12 AND HCS12X FAMILY - 16-BIT MCUS

* Development Kit Part No. DEMO9S12NE64E
 † Development Kit Part No. DEMO9S12XD7512E

RoHS Compliant This product is RoHS compliant.



For quantities greater than listed, call for quote.

MOUSER STOCK NO.	Freescale Part No.	Package	Internal RAM (Byte)	Internal Flash (Byte)	EEPROM (Byte)	ADC	Serial Interface Type	Bus Freq. (MHz) (Max)	I/O Pins	Timer Channels	Supply Voltage (V) (Typ)	Price Each			
												1	25	100	
S12E Family - General Purpose, 3 Volts with D/A															
841-MC9S12E256MPVE	MC9S12E256MPVE	LQFP-112	16000	256000	---	10-bit/16-ch	I2C, SCI, SPI	25	90	16,158	5	15.71	14.79	12.01	
841-MC9S12E128CFUE	MC9S12E128CFUE	QFP-80	8000	128000	---	10-bit/16-ch	SCI, SPI, CAN	25	58	16,158	5	11.56	10.88	10.08	
841-MC9S12E128MFUE	MC9S12E128MFUE	QFP-80	8000	128000	---	10-bit/16-ch	I2C, SCI, SPI	25	58	16,158	5	12.72	11.97	9.73	
841-S9S12G128F0MLF	S9S12G128F0MLF	LQFP-48	8000	128000	4000	10-bit/16-ch	CAN, SCI, SPI	25	40	-	3.13-5.5	4.30	4.07	3.73	
841-S9S12G128F0VLF	S9S12G128F0VLF	LQFP-48	8000	128000	4000	10-bit/12-ch	CAN, SCI, SPI	25	40	-	3.13-5.5	4.52	3.72	3.50	
841-S9S12G128F0CLF	S9S12G128F0CLF	LQFP-48	8000	128000	4000	10-bit/12-ch	CAN, SCI, SPI	25	40	-	3.13-5.5	5.39	3.91	3.81	
841-S9S12G128F0MLL	S9S12G128F0MLL	LQFP-100	8000	128000	4000	10-bit/12-ch	CAN, SCI, SPI	25	86	-	3.13-5.5	6.48	4.88	4.79	
841-S9S12G128F0CLL	S9S12G128F0CLL	LQFP-100	8000	128000	4000	10-bit/12-ch	CAN, SCI, SPI	25	86	-	3.13-5.5	5.11	4.81	3.90	
841-S9S12G128F0MLH	S9S12G128F0MLH	LQFP-64	8000	128000	4000	10-bit/12-ch	CAN, SCI, SPI	25	54	-	3.13-5.5	6.15	4.81	4.66	
841-S9S12G128F0VLH	S9S12G128F0VLH	LQFP-64	8000	128000	4000	10-bit/12-ch	CAN, SCI, SPI	25	54	-	3.13-5.5	5.86	4.98	4.60	
841-S9S12G128F0CLH	S9S12G128F0CLH	LQFP-64	8000	128000	4000	10-bit/12-ch	CAN, SCI, SPI	25	54	-	3.13-5.5	4.34	3.74	3.66	
841-S9S12G96F0CLF	S9S12G96F0CLF	LQFP-48	8000	96000	3000	10-bit/12-ch	CAN, SCI, SPI	25	40	-	3.13-5.5	4.58	3.32	3.22	
841-S9S12G96F0MLF	S9S12G96F0MLF	LQFP-48	8000	96000	3000	10-bit/12-ch	CAN, SCI, SPI	25	40	-	3.13-5.5	4.79	3.49	3.38	
841-S9S12G96F0VLF	S9S12G96F0VLF	LQFP-48	8000	96000	3000	10-bit/12-ch	CAN, SCI, SPI	25	40	-	3.13-5.5	4.56	3.88	3.58	
841-S9S12G96F0CLH	S9S12G96F0CLH	LQFP-64	8000	96000	3000	10-bit/12-ch	CAN, SCI, SPI	25	54	-	3.13-5.5	5.16	3.75	3.64	
841-S9S12G96F0VLH	S9S12G96F0VLH	LQFP-64	8000	96000	3000	10-bit/12-ch	CAN, SCI, SPI	25	54	-	3.13-5.5	4.73	4.02	3.71	
841-S9S12G96F0MLL	S9S12G96F0MLL	LQFP-100	8000	96000	3000	10-bit/12-ch	CAN, SCI, SPI	25	86	-	3.13-5.5	5.83	4.99	4.60	
841-S9S12G96F0VLL	S9S12G96F0VLL	LQFP-100	8000	96000	3000	10-bit/12-ch	CAN, SCI, SPI	25	86	-	3.13-5.5	4.92	4.19	3.86	
841-S9S12G96F0CLL	S9S12G96F0CLL	LQFP-100	8000	96000	3000	10-bit/12-ch	CAN, SCI, SPI	25	86	-	3.13-5.5	3.63	3.13	3.00	
841-MC9S12E64CFUE	MC9S12E64CFUE	QFP-80	4000	64000	---	10-bit/16-ch	SCI, SPI, CAN	25	58	16,158	5	10.33	9.72	7.90	
841-MC9S12E64CPVE	MC9S12E64CPVE	LQFP-112	4000	64000	---	10-bit/16-ch	SCI, SPI, CAN	25	90	16,158	5	10.83	10.19	8.28	
841-MC9S12E64MFUE	MC9S12E64MFUE	QFP-80	4000	64000	---	10-bit/16-ch	I2C, SCI, SPI	25	58	16,158	5	11.34	10.67	8.67	
841-MC9S12E32CFUE	MC9S12E32CFUE	QFP-80	2000	32000	---	10-bit/16-ch	I2C, SCI, SPI	25	58	16,158	5.5	10.08	7.30	7.20	
841-MC9S12E256CPVE	MC9S12E256CPVE	LQFP-112	-	-	---	10-bit/16-ch	SCI, SPI, CAN	25	-	-	-	14.28	13.44	10.92	
S12GC Family - Low Cost, Low Pin Count															
841-MC9S12GC128MFUE	MC9S12GC128MFUE	QFP-80	4000	128000	---	10-bit/8-ch	SCI, SPI	25	58	86	3.3, 5.5	14.55	12.16	12.00	
841-MC9S12GC96MFAE	MC9S12GC96MFAE	LQFP-48	4000	96000	---	10-bit/8-ch	SCI, SPI	25	29	86	3.3, 5.5	10.55	9.93	8.07	
841-MC9S12GC96MFUE	MC9S12GC96MFUE	QFP-80	4000	96000	---	10-bit/8-ch	SCI, SPI	25	58	86	3.3, 5.5	11.86	10.61	9.98	
841-MC9S12GC64MFAE	MC9S12GC64MFAE	LQFP-48	4000	64000	---	10-bit/8-ch	SCI, SPI	25	29	86	3.3, 5.5	10.50	9.88	8.02	
841-MC9S12GC64MFUE	MC9S12GC64MFUE	QFP-80	4000	64000	---	10-bit/8-ch	SCI, SPI	25	58	86	3.3, 5.5	11.46	8.29	8.19	
841-MC9S12GC16MFAE	MC9S12GC16MFAE	LQFP-48	2000	16000	---	10-bit/8-ch	SCI, SPI	25	29	86	3.3, 5.5	7.49	5.42	5.35	
S12H Family - LCD/H-Bridge Drivers with CAN															
841-MC9S12H256VFVE	MC9S12H256VFVE	LQFP-144	12000	256000	4000	10-bit/16-ch	CAN 2.0A/B, IIC, SCI, SPI	16	115	8	5	24.21	22.79	18.53	
841-MC9S12H128VFVE	MC9S12H128VFVE	LQFP-144	6000	131072	4096	10-bit/8-ch	CAN 2.0A/B, I2C, SCI, SPI	16	99	8	5	20.91	19.68	15.99	
*S12NE Family - Single Chip with 10/10 Base-t with Integrated MAC and PHY															
841-MC9S12NE64CPVE	MC9S12NE64CPVE	LQFP-112	8000	64000	---	10-bit/8-ch	Ethernet, I2C, SCI, SPI	25	-	-	3.35	13.27	12.49	10.15	
841-MC9S12NE64VTUE	MC9S12NE64VTUE	TQFP-80	8000	64000	---	10-bit/8-ch	Ethernet, IIC, SCI, SPI	25	-	-	3.35	12.57	11.83	9.63	
S12UF Family - USB 2.0															
841-MC9S12UF32PUE	MC9S12UF32PUE	LQFP-100	3584	32768	---	---	SCI, USB 2.0	30	75	8	5	8.26	7.77	6.32	
S12XA Family															
841-MC9S12UF32PUE	MC9S12UF32PUE	LQFP-100	3584	32768	---	---	SCI, USB 2.0	30	75	8	5	8.26	7.77	6.32	
†S12XD Family															
841-MC9S12XDP512MAG	MC9S12XDP512MAG	LQFP-144	32000	512000	4000	10-bit/24-ch, 10-bit/16-ch	SCI, SPI, I2C, CAN 2.0A/B	40	119	84	3.15, 5.5	22.62	21.28	19.48	
841-MC9S12XDP512MAL	MC9S12XDP512MAL	LQFP-112	32000	512000	4000	10-bit/16-ch, 10-bit/8-ch	SCI, SPI, I2C, CAN 2.0A/B	40	91	84	3.15, 5.6	22.21	20.90	16.98	
841-MC9S12XDT512MAA	MC9S12XDT512MAA	QFP-80	20000	512000	4000	10-bit/8-ch	SCI, SPI, I2C, CAN 2.0A/B	40	59	84	3.3, 5.5	21.18	19.93	16.19	
841-MC9S12XDT512MAL	MC9S12XDT512MAL	LQFP-112	20000	512000	4000	10-bit/16-ch, 10-bit/8-ch	SCI, SPI, I2C, CAN 2.0A/B	40	91	84	3.3, 5.5	21.40	20.14	16.36	
841-MC9S12XD256MAA	MC9S12XD256MAA	QFP-80	14000	256000	4000	10-bit/8-ch	SCI, SPI, I2C, CAN 2.0A/B	40	59	84	5.5	17.35	16.32	15.12	
841-MC9S12XD256MAA	MC9S12XD256MAA	QFP-80	16000	256000	4000	10-bit/8-ch	SCI, SPI, I2C, CAN 2.0A/B	40	59	84	3.3, 5.5	18.15	17.08	13.88	
841-MC9S12XD256MAG	MC9S12XD256MAG	LQFP-144	16000	256000	4000	10-bit/24-ch, 10-bit/16-ch	SCI, SPI, I2C, CAN 2.0A/B	40	91	84	3.3, 5.5	19.59	16.39	16.17	
841-MC9S12XD256MAL	MC9S12XD256MAL	LQFP-112	16000	256000	4000	10-bit/16-ch, 10-bit/8-ch	SCI, SPI, I2C, CAN 2.0A/B	40	91	84	3.3, 5.5	18.37	17.29	14.05	
S12XE Family															
841-MC9S12XEP768CAL	MC9S12XEP768CAL	LQFP-112	48000	768000	4000	12-bit/16-ch	SCI, SPI, I2C, CAN	50	91	8	5	19.22	18.09	14.67	
841-MC9S12XEG128MAA	MC9S12XEG128MAA	QFP-80	12000	128000	2000	12-bit/8-ch	SCI, SPI, I2C, CAN	50	59	8	5	9.99	9.50	9.31	
841-MC9S12XEP100CAG	MC9S12XEP100CAG	LQFP-144	64000	100000	4000	12-bit/24-ch	SCI, SPI, I2C, CAN	50	119	8	5	20.41	19.21	15.60	
841-MC9S12XEP100MAG	MC9S12XEP100MAG	LQFP-144	64000	100000	4000	12-bit/24-ch	SCI, SPI, I2C, CAN	50	119	8	5	22.45	21.13	17.15	
841-MC9S12XEP100MAL	MC9S12XEP100MAL	LQFP-112	64000	100000	4000	12-bit/16-ch	SCI, SPI, I2C, CAN	50	91	8	5	22.17	20.87	16.94	

COLDFIRE® MCF51CN128 FAMILY - 32-BIT ETHERNET MCUS

Freescale's new MCF51CN128 Ethernet MCUs are low-cost, low-power, high-performance devices designed for developers who want to add Ethernet connectivity to their commercial and industrial applications.

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	Freescale Part No.	Package	Internal RAM (Byte)	Internal Flash (Byte)	Serial Interface Type	Bus Freq. (MHz) (Max.)	ADC	Timer Channels	I/O Pins	Price Each		
										1	25	100
841-MCF51CN128CGT	MCF51CN128CGT	QFN-48	24	128	SCI, SPI, I2C	25	12-bit/12-ch	3	38	5.67	5.33	3.34
841-MCF51CN128CLH	MCF51CN128CLH	LQFP-64	24	128	SCI, SPI, I2C	25	12-bit/12-ch	3	54	6.07	5.71	3.57

COLDFIRE® MCF51EM FAMILY - 32-BIT RISC MICROCONTROLLERS

The MCF51EM256/128 devices offer a flexible LCD controller, RTC with tamper detection, and dual 128K/64K blocks of FLASH for robust field firmware updates. Combine this with an accessible Poly-Phase Reference Design and a fully functional DEMOEM board and you have all the ingredients of a turnkey electrical metering solution with customized silicon designed specifically for the electrical metering market.

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	Freescale Part No.	Package	Internal RAM (Byte)	Internal Flash (Byte)	ADC	Serial Interface Type	Supply Voltage (V) (Max)	Price Each		
								1	25	100
841-MCF51EM256CLK	MCF51EM256CLK	LQFP-80	16 KB	256KB	4x16bit	SCI, SPI, I2C	1.8 to 3.6	9.11	8.30	7.49
841-MCF51EM128CLK	MCF51EM128CLK	LQFP-80	8 KB	128KB	4x16bit	SCI, SPI, I2C	1.8 to 3.6	6.78	6.38	4.51
841-MCF51EM256CLL	MCF51EM256CLL	LQFP-100	16K	256K	4x16bit	SCI, SPI, I2C	-0.3 to 4.0	6.48	5.88	4.67
841-MCF51EM128CLL	MCF51EM128CLL	LQFP-100	8K	128K	4x16bit	SCI, SPI, I2C	-0.3 to 4.0	7.25	6.83	5.31