

FREESCALE Kinetis Series, Flexis™ and 8-Bit MCUs



This product is RoHS compliant.

KINETIS SERIES ARM CORTEX-M4 MICROCONTROLLERS (CONT.)

Kinetis K60 - Ethernet Crypto MCUs

- Serial Interface Type: UART, SPI, I2C, I2S, CAN, USB, Ethernet
- Touch Sensing Interface
- Memory Protection Unit (MPU)
- Watchdog OSC/Timer
- Real-Time Clock
- Analog Comparator
- Supply Voltage: 1.71 to 3.6V



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For quantities greater than listed, call for quote.

MOUSER STOCK NO.		Package	Core Operating Freq. Max (MHz)	Internal Flash (KB)	Internal RAM (KB)	A/D Converter (bits/channels)	D/A Converter (bits)	I/O Pins	Price Each		
Mfr.	Mfr. Part No.								1	25	50
841	—MK60DN512ZVLQ10	LQFP-144	100	512	128	16/44	12	100	10.46	9.39	8.43
841	—MK60DN512ZVMD10	MAP-144	100	512	128	16/44	12	100	12.88	12.13	9.45
841	—MK60DX256ZVLL10	LQFP-100	100	512	64	16/35	12	66	9.70	9.10	8.50
841	—MK60DX256ZVLQ10	LQFP-144	100	512	64	16/44	12	100	9.88	8.74	7.93
841	—MK60DN256ZVLL10	LQFP-100	100	256	64	16/2	12	66	9.39	8.00	7.74
841	—MK60DN256ZVLQ10	LQFP-144	100	256	64	16/2	12	100	12.81	10.92	10.56
841	—MK60DN512VLQ10	LQFP-144	100	512	128	16/2	12	100	16.38	13.96	13.50
841	—MK60DN512VMD10	MAPBGA-144	100	512	128	16/2	12	100	16.47	14.04	13.58
841	—MK60DN512ZVLL10	LQFP-100	100	512	128	16/2	12	66	10.28	9.31	8.28
841	—MK60DX256VLQ10	LQFP-144	100	256	64	16/2	12	100	13.18	12.47	11.81

FLEXIS QE FAMILY

The Flexis QE series hosts Freescale's new ultra-low-power technology that reduces power consumption while meeting your target performance needs. The Flexis devices also share common sets of peripherals and development tools to deliver the ultimate in migration flexibility. The MC9S08QE128 (8-bit) and MCF51QE128 (32-bit) devices are available to maximize your performance while minimizing your power and allowing easy migration and development. The QE family, comprised of a pin-compatible 8-bit and 32-bit device duo, is the first family in the Flexis series.



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MOUSER STOCK NO.		Package	Internal Flash (Bytes)	Internal RAM (Bytes)	Serial Interface Type	Bus Freq.(MHz)	Timer Channels	Supply Voltage (Max.)	I/O Pins	ADC	Price Each			
Mfr.	Mfr. Part No.										1	25	50	100
S08QE 8-Bit Low Power MCUs														
841	—MC9S08QE4CTG	TSSOP 16	4000	256	SCI, I2C, SPI	10	2	1.8 to 3.6	12	10-bit/8-ch	1.61	1.41	1.25	1.08
841	—MC9S08QE4CWJ	SOIC 20W	4000	256	SCI, I2C, SPI	10	3	1.8 to 3.6	16	12-bit/10-ch	1.61	1.41	1.25	1.08
841	—MC9S08QE8CLC	32 LQFP	8K	512	SCI, I2C, SPI	10	3, 3	3.6	26	12-bit/10-ch	1.81	1.60	1.54	1.42
841	—MC9S08QE8CWJ	20 SOIC	8K	512	SCI, I2C, SPI	10	3, 3	3.6	16	12-bit/10-ch	1.81	1.60	1.54	1.42
841	—MC9S08QE8CTG	16 TSSOP	8K	512	SCI, I2C, SPI	10	2, 2	3.6	12	10-bit/8-ch	1.75	1.62	1.55	1.32
841	—MC9S08QE8CPG	16 PDIP	8K	512	SCI, I2C, SPI	10	2, 2	3.6	12	10-bit/8-ch	1.75	1.62	1.55	1.32
841	—MC9S08QE16CLD	LQFP 44	16K	1K	SPI, SCI, I2C	25	3, 6	3.6	34	12-bit/10-ch	2.40	2.20	2.00	1.88
841	—MC9S08QE64CLC	LQFP 32	64K	4K	SPI, SCI, I2C	25	3, 6	3.6	26	12-bit/10-ch	3.28	3.02	2.68	2.35
841	—MC9S08QE64CLH	LQFP64	64K	4K	SCI, I2C, SPI	20, 50	3, 3, 6	3.6	54	12-bit/22-ch	3.61	3.11	2.97	2.75
841	—MC9S08QE128CLH	LQFP64	128K	8K	SCI, I2C, SPI	20, 50	3, 3, 6	3.6	54	12-bit/22-ch	3.97	3.38	3.25	3.10
841	—MC9S08QE128CLK	LQFP 80	128K	8K	SCI, I2C, SPI	20, 50	3, 3, 6	3.6	70	12-bit/24-ch	4.06	3.73	3.38	2.93
MCF51QE 32-Bit Low Power MCUs														
841	—MCF51QE128CLK	LQFP 80	128K	8K	SCI, I2C, SPI	20, 50	3, 3, 6	3.6	70	12-bit/24-ch	5.76	5.42	4.41	3.39
841	—MCF51QE128CLH	LQFP64	128K	8K	SCI, I2C, SPI	20, 50	3, 3, 6	3.6	54	12-bit/20-ch	5.56	5.23	4.24	3.27
841	—MCF51QE32LH	LQFP64	32K	8K	SCI, I2C, SPI	20, 50	3, 3, 6	3.6	54	12-bit/20-ch	3.89	3.66	2.97	2.65
841	—MCF51QE32CLH	LQFP64	32K	8K	SCI, I2C, SPI	20, 50	3, 3, 6	3.6	54	12-bit/20-ch	4.26	4.00	3.09	2.51

RS08 - REDUCED INSTRUCTION SET S08 CORE MICROCONTROLLERS

The RS08 core is a reduced version of the S08 central processing unit (CPU) that has been specifically designed for small pin-count devices with under 16KB memory. Thirty percent smaller than the S08 CPU, it is more efficient and cost-effective for simple electro-mechanical devices that are migrating to fully solid-state electronic operation or portable devices that have evolved into smaller or even disposable versions.



RoHS Compliant

◆ Surface Mount Device

For quantities greater than listed, call for quote.

MOUSER STOCK NO.		Development Kit Part No.	Package	Internal RAM (Byte)	Internal FLASH (Byte)	Timer Channels	Bus Frequency (MHz)	Supply Current (Max.)	I/O Pins	Operating Temperature	Price Each			
Mfr.	Mfr. Part No.										1	25	50	100
◆ 841	—MC9RS08KA1CDB	DEMO9RS08KA2	QFN-D 6	63	1k	1	10	5600mA	2	-40°C to 85°C	.71	.58	.55	.421
841	—MC9RS08KA1CPC	DEMO9RS08KA2	PDIP 8	63	1k	1	10	5600mA	4	-40°C to 85°C	.75	.70	.656	.442
◆ 841	—MC9RS08KA1CSC	DEMO9RS08KA2	SOIC 8	63	1k	1	10	5600mA	4	-40°C to 85°C	.71	.67	.624	.421
◆ 841	—MC9RS08KA2CDB	DEMO9RS08KA2	QFN-D 6	63	2k	1	10	5600mA	2	-40°C to 85°C	.75	.70	.66	.44
841	—MC9RS08KA2CPC	DEMO9RS08KA2	PDIP 8	63	2k	1	10	5600mA	4	-40°C to 85°C	.69	.65	.632	.464
◆ 841	—MC9RS08KA2CSC	DEMO9RS08KA2	SOIC 8	63	2k	1	10	5600mA	4	-40°C to 85°C	.68	.60	.54	.442
841	—MC9RS08KA4CPG	DEMO9RS08KA8	PDIP 16	126	4000	2	10	-	14	-40°C to 85°C	1.18	1.05	.976	.813
841	—MC9RS08KA4CPJ	DEMO9RS08KA8	PDIP 20	126	4000	2	10	-	18	-40°C to 85°C	1.26	1.19	1.10	.756
841	—MC9RS08KA4CTG	DEMO9RS08KA8	TSSOP 16	128	4k	1, 2	10	5mA	14	-40°C to 85°C	1.18	1.05	.976	.813
◆ 841	—MC9RS08KA4CWJ	DEMO9RS08KA8	SOIC 16W	126	4000	2	10	-	14	-40°C to 85°C	1.18	1.05	.976	.813
◆ 841	—MC9RS08KA4CPJ	DEMO9RS08KA8	SOIC 20W	126	4000	2	10	-	18	-40°C to 85°C	1.26	1.19	1.10	.756
841	—MC9RS08KA8CPG	DEMO9RS08KA8	PDIP 16	254	8000	2	10	-	14	-40°C to 85°C	1.17	1.10	1.00	.691
841	—MC9RS08KA8CPJ	DEMO9RS08KA8	PDIP 20	254	8000	2	10	-	18	-40°C to 85°C	1.85	1.14	1.04	.984
◆ 841	—MC9RS08KA8CWJ	DEMO9RS08KA8	SOIC 16W	254	8000	2	10	-	14	-40°C to 85°C	1.18	1.05	.976	.813
◆ 841	—MC9RS08KA8CWJ	DEMO9RS08KA8	SOIC 20W	254	8000	2	10	-	18	-40°C to 85°C	1.85	1.14	1.04	.984

HCS08 - CORE MICROCONTROLLERS

High-performance and low power, the HCS08 does not sacrifice performance to provide low power 1.8V operation.

HCS08 Features - Multiple power management modes, including a 20 nanoamp (nA) power-down mode

- A zero-component auto-wakeup from "stop" to help reduce costs and reduce power to 0.7 microamp (µA) - Up to 40MHz CPU/20MHz bus at 2.1V and 16MHz CPU/8MHz bus at 1.8V
- A programmable internal clock generator with temperature and voltage compensation (typical drift < 2%) designed for reliable communications, fast start up and reduced system cost

- In-application reprogramming and data storage via third-generation 0.25µ flash technology
- High integration including four serial communication ports, up to 8 timer/PWMs, and an 8-channel 10-bit analog-to-digital converter specified down to 1.8V



RoHS Compliant

S08AW Family - General Purpose 5-Volt Automotive/Industrial

◆ Surface Mount Device

For quantities greater than listed, call for quote.

MOUSER STOCK NO.		Development Kit Part No.	Package	Internal RAM (Byte)	Internal FLASH (Byte)	Serial Interface Type	Timer Channels	Bus Freq. (MHz)	Supply Voltage (V)(Max.)	I/O Pins	ADC	Price Each			
Mfr.	Mfr. Part No.											1	25	50	100
◆ 841	—MC9S08AW16CFGE	DEMO9S08AW60E	LQFP 44	1k	16k	I2C, SCI, SPI	4, 2	20	5.5	34	10-bit/8-ch	3.58	3.36	3.12	2.30
841	—MC9S08AW16MFUE	DEMO9S08AW60E	QFP 64	1000	16000	SPI, SCI, I2C	4, 2	20	5.5	54	10-bit/16-ch	6.33	4.04	4.01	3.80
◆ 841	—MC9S08AW32CFDE	DEMO9S08AW60E	QFN 48	2k	32k	I2C, SCI, SPI	4, 2	20	5.5	38	10-bit/12-ch	3.88	3.37	2.72	2.39
841	—MC9S08AW32CFGE	DEMO9S08AW60E	LQFP 44	2k	32k	I2C, SCI, SPI	4, 2	20	5.5	34	10-bit/8-ch	4.53	4.26	3.83	2.66
◆ 841	—MC9S08AW32CFUE	DEMO9S08AW60E	QFP 64	2k	32k	I2C, SCI, SPI	4, 2	20	5.5	54	10-bit/16-ch	4.16	3.78	3.15	2.55
◆ 841	—MC9S08AW32CFUE	DEMO9S08AW60E	LQFP 64	2k	32k	I2C, SCI, SPI	4, 2	20	5.5	54	10-bit/16-ch	4.16	3.78	3.15	2.55
◆ 841	—MC9S08AW32MFGE	DEMO9S08AW60E	LQFP 44	2K	32K	SPI, SCI, I2C	4, 2	20	5.5	34	10-bit/8-ch	4.97	4.68	4.32	2.92
841	—MC9S08AW32VFGE	DEMO9S08AW60E	LQFP 44	32K	2K	I2C, SCI, SPI	4, 2	20	5.5	34	10-bit/8-ch	4.75	4.47	3.63	2.79
◆ 841	—MC9S08AW48CFUE	DEMO9S08AW60E	QFP 64	2k	48k	I2C, SCI, SPI	6, 2	20	5.5	54	10-bit/16-ch	4.92	4.45	3.72	3.13
◆ 841	—MC9S08AW48CFUE	DEMO9S08AW60E	LQFP 64	2k	49152	I2C, SCI, SPI	6, 2	20	5.5	54	10-bit/8-ch	6.35	5.64	5.22	4.35
◆ 841	—MC9S08AW60CFDE	DEMO9S08AW60E	QFN 48	2048	60k	I2C, SCI, SPI	6, 2	20	5.5	38	10-bit/12-ch	5.02	4.52	3.80	3.08
841	—MC9S08AW60CFGE	DEMO9S08AW60E	LQFP 44	2k	60k	I2C, SCI, SPI	6, 2	20	5.5	34	10-bit/8-ch	4.86	4.38	3.68	2.98
841	—MC9S08AW60CFUE	DEMO9S08AW60E	QFP 64	2k	60k	I2C, SCI, SPI	6, 2	20	5.5	54	10-bit/16-ch	5.30	4.78	4.01	3.25
◆ 841	—MC9S08AW60CFUE	DEMO9S08AW60E	LQFP 64	2k	60k	I2C, SCI, SPI	6, 2	20	5.5	54	10-bit/16-ch	5.30	4.78	4.01	3.25