Freescale's 8-bit Product Summary
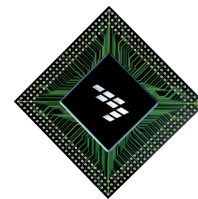
Q4 2007
freescale.com/8bit

8-bit Development Tools

Demonstration Boards (DEMO):
Demonstration boards are cost-effective development tools that allow users to program and debug application code with basic I/O functions and peripherals. Designers save on design time and costs with these demo boards targeted at specific HC(S)08/RS08 MCUs. CodeWarrior® Development Studio for HC(S)08/RS08, Special Edition is included along with the board.

MON08 Multilink (USBMULTILINK08E):
The MON08 Multilink is a cost-effective development tool for all HC08 MCUs, and provides in-circuit debugging and programming through the standard MON08 serial debug/breakpoint interface. CodeWarrior Development Studio for HC(S)08/RS08, Special Edition is included along with the MON08 Multilink.

BDM Multilink (USBMULTILINKBDME):
The BDM Multilink is a cost-effective development tool for RS08, HCS08 and HCS12 MCUs, and provides real-time, in-circuit flash programming, emulation and debugging through the BDM interface. CodeWarrior Development Studio for RS08, HC(S)08 and HC(S)12, Special Edition is included along with the BDM Multilink.
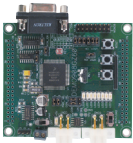
Evaluation Boards (EVB):
Evaluation boards allow users to program and debug advanced application code with expanded I/O functions and peripherals. HC(S)08 EVBs may include advanced features including zero insertion force (ZIF) sockets, LCDs and large prototype areas. CodeWarrior Development Studio for RS08, HC(S)08 and HC(S)12, Special Edition is included along with the board.

Freescale Semiconductor's In-Circuit Emulator (FSICE):
The Freescale Semiconductor In-Circuit Emulator (FSICE) is a high-performance emulator system for HC08 MCUs. In addition to incorporating the debug features of traditional emulators, the FSICE system adds advanced features such as the USBMULTILINK08E cable for in-circuit flash programming, Ethernet interface for remote debugging and a real-time bus analyzer. The kit consists of the FSICE base station, the corresponding MCU emulator module (EM), all the cables and adapters needed and CodeWarrior Development Studio for HC(S)08/RS08, Special Edition.

Cyclone Pro (CYCLONEPROE):
Cyclone Pro provides all the capabilities of the USBMULITLINKBDME and USBMULTILINK08E plus USB/Ethernet serial interfaces. In addition, the Cyclone Pro has the ability to function as a stand-alone programmer with push buttons and LEDs to control operations. Cyclone Pro is the universal debugging and real-time emulation tool for all RS08, HC(S)08 and HC(S)12 MCUs. CodeWarrior Development Studio for HC(S)08/RS08 and HC(S)12, Special Edition is included along with Cyclone Pro.

CodeWarrior Development Studio for HC(S)08/RS08 Special Edition:
CodeWarrior Development Studio is a comprehensive special edition tool set for fast and easy MCU development. This tool suite provides the capabilities required by every engineer in the development cycle to exploit the capabilities of the RS08 and HC(S)08 architectures. Some of the features include project manager for up to 32 files, full-chip simulation, flash programming and ProcessorExpert™ technology, which provides automatic C-code generation for most HC(S)08 on-chip peripherals.

USB Mini Board for Freescale's Low-End 8-bit Microcontrollers (USBSPYDER08):
To aid fast and easy development for embedded systems engineers working on our low-end microcontrollers, Freescale has developed the cost-effective, high-performance USB debug tool—the USBSPYDER08. With the USBSPYDER08 you can spy into your application software, debug 8 leg 8-bit microcontrollers before you have your application board and kill bugs in your application software. This complete package delivers a cost-effective, yet powerful way to develop your products and speed time to market.

Learn More: For more information about these Freescale products, please visit **www.freescale.com/8bit.**

www.BDTIC.com/Freescale/

freescale™
semiconductor

Freescale's 8-bit Product Summary

Device	Flash	RAM	USB	ADC Channels 10-bit	8-bit	SCI (UART)	ESCI	SPI	I²C	ACMP	Timer	Clock Type	DFN/QFN	QFP/LQFP	TSSOP	SOIC	DIP	DEMO	EVB	FSICE	Applications/Additional Features *All RS08, S08 and HC08 Products Include COP, LVI, POR and KBI	Price
General-Purpose Products																						
HCS08 and RS08 Families																						
MC9S08AW60	60 KB	2 KB		16		2		√	√		6 + 2-ch.	ICG w/FLL	48	64, 44				√			High integration, flash programmable to 5V	$4.19
MC9S08AW32	32 KB	2 KB		16		2		√	√		6 + 2-ch.	ICG w/FLL	48	64, 44				√			High integration, flash programmable to 5V	$3.38
MC9S08AW16	16 KB	1 KB		16		2		√	√		4 + 2-ch.	ICG w/FLL	48	64, 44				√			High integration, flash programmable to 5V	$2.98
MC9S08GB60A	60 KB	4 KB		8		√		√	√		3 + 5-ch.	ICG		64				√	√		High performance, flash programmable down to 1.8V	$3.95
MC9S08GT60A	60 KB	4 KB		8		√		√	√		2 + 2-ch.	ICG	48	44			42	√	√		High performance, flash programmable down to 1.8V	$3.65
MC9S08GB32A	32 KB	2 KB		8		√		√	√		3 + 5-ch.	ICG		64				√	√		High performance, flash programmable down to 1.8V	$2.95
MC9S08GT32A	32 KB	2 KB		8		√		√	√		2 + 2-ch.	ICG	48	44			42	√	√		High performance, flash programmable down to 1.8V	$2.75
MC9S08QG8	8 KB	512B		8		√		√	√	√	2-ch., MTIM	ICS	8, 16, 24		16	8	16	√			High performance, low voltage, small package	$0.99
MC9S08QG4	4 KB	256B		8		√		√	√	√	2-ch., MTIM	ICS	8, 16, 24		16	8	16, 8	√			High performance, low voltage, small package	$0.89
MC9RS08KA2	2 KB	62B								√	MTIM	ICS	6			8	8	√			Ultra-low end, new RS08 core for small MCUs	$0.52
MC9RS08KA1	1 KB	62B								√	MTIM	ICS	6			8	8	√			Ultra-low end, new RS08 core for small MCUs	$0.43
MC9S08GT16A	16 KB	2 KB		8		√		√	√		3 + 2-ch.	ICG	48, 32	44			42	√	√		High performance, flash programming down to 1.8V	$2.39
MC9S08GT8A	8 KB	1 KB		8		√		√	√		3 + 2-ch.	ICG	48, 32	44			42	√			Flash programming down to 1.8V, small package	$2.19
MC9S08QD4	4 KB	256B		4							2 + 3-ch.	ICS				8	8	√			Low-end, flash programmable to 5V	$0.69
MC9S08QD2	2 KB	128B		4							2 + 3-ch.	ICS				8	8	√			Low-end, flash programmable to 5V	$0.65
MC9S08LC60	60 KB	4 KB		8 (12-bit)		√		2	√	√	2 x 2-ch.	ICG w/FLL		80, 64				√			Integrated Liquid Crystal Display (LCD) driver with high segment count	$3.70
MC9S08LC36	36 KB	2.5 KB		8 (12-bit)		√		2	√	√	2 x 2-ch.	ICG w/FLL		80, 64				√			Integrated Liquid Crystal Display (LCD) driver with high segment count	$3.40
MC9S08QE128	128 KB	8 KB		24 (12-bit)		2		2	2	2	1 + 6-ch., 2 + 3-ch.	ICS	48	80, 64, 44				√	√		Ultra-low-power S08 device with 1.8V to 3.6V op range	$3.69
MC9S08QE64	64 KB	4 KB		24 (12-bit)		2		2	2	2	1 + 6-ch., 2 + 3-ch..	ICS	48	80, 64, 44, 32				√	√		Ultra-low-power S08 device with 1.8V to 3.6V op range	$2.69
Application-Specific Products																						
HCS08 Family																						
MC9S08RD60	60 KB	2 KB				√					2-ch.	OSC				28	28	√			Remote control, carrier modulator timer	$4.85
MC9S08RG60	60 KB	2 KB				√		√		√	2-ch.	OSC		44, 32				√			Remote control, carrier modulator timer	$5.05
MC9S08RD32	32 KB	2 KB				√					2-ch.	OSC				28	28	√			Remote control, carrier modulator timer	$3.85
MC9S08RG32	32 KB	2 KB				√		√		√	2-ch.	OSC		44, 32				√			Remote control, carrier modulator timer	$4.05
MC9S08RD16	16 KB	1 KB				√					2-ch.	OSC				28	28	√			Remote control, carrier modulator timer	$3.05
MC9S08RE16	16 KB	1 KB				√				√	2-ch.	OSC	48	44, 32				√			Remote control, carrier modulator timer	$3.20
MC9S08RD8	8 KB	1 KB				√					2-ch.	OSC				28	28	√			Remote control, carrier modulator timer	$2.15
MC9S08RE8	8 KB	1 KB				√					2-ch.	OSC		44, 32				√			Remote control, carrier modulator timer	$2.25
HC08 Family																						
MC908JW32	32 KB	1 KB	2.0					√			2-ch.	PLL	48	48						√	USB	$3.15
MC908MR32	32 KB	768B		10		√		√			2 + 4-ch.	PLL		64		56				√	Motor control, 6-ch., 12-bit PWM	$6.05
MC908LJ24	24 KB	768B		6		√		√	√		2-ch.	PLL		80, 64						√	LCD	$4.90
MC908LK24	24 KB	768B		6		√		√	√		2-ch.	PLL		80, 64						√	LCD	$4.60
MC908EY16	16 KB	512B		8			√	√			2 + 2-ch.	PLL		32						√	Auto/industrial communication	$3.95
MC908JB16	16 KB	384B	1.0, 1.1			√					2 + 2-ch.	PLL		32	28, 20					√	USB	$1.81
MC908MR16	16 KB	768B		10		√		√			2 + 4-ch.	PLL		64		56				√	Motor control, 6-ch., 12-bit PWM	$4.50
MC908LJ12	12 KB	512B		6		√					2-ch.	PLL		64, 52						√	LCD	$4.17
MC908JB12	12 KB	384B	1.0, 1.1			√					2 + 2-ch.	PLL			28, 20					√	USB	$1.64
MC908JB8	8 KB	256B	1.1								2 + 2-ch.	OSC		44	28, 20		20			√	USB, ROM available	$1.47
MC908EY8	8 KB	384B		8			√	√			2 + 2-ch.	PLL		32						√	Auto/industrial communication	$2.50
MC908MR8	8 KB	256B		7		√					2 + 2-ch.	PLL		32		28	28			√	Motor control, 6-ch., 12-bit PWM	$3.60
MC908LV8	8 KB	512B		6							2-ch.	OSC		52						√	LCD	$3.00
MC908QL4	4 KB	128B		6							2-ch.	OSC			16	16		√		√	Auto/industrial communication, SLIC (LIN)	$2.19
MM908E626	16 KB	512B		8		√		√			2 + 2-ch.	ICG				54				√	Stepper moter, integrated Vreg, LIN, PHY, 4 half-bridge	$5.34
MM908E625	16 KB	512B		8		√		√			2 + 2-ch.	ICG				54				√	Lighting, integrated Vreg and LIN PHY, KBI	$5.12
MM908E624	16 KB	512B		8		√		√			2 + 2-ch.	ICG				54				√	Motor control, integrated Vreg and LIN PHY, KBI	$3.41
MM908E621	16 KB	512B		8							2 + 2-ch.	ICG				54					Integrated quad half-bridge and triple high-side, LIN	$5.99