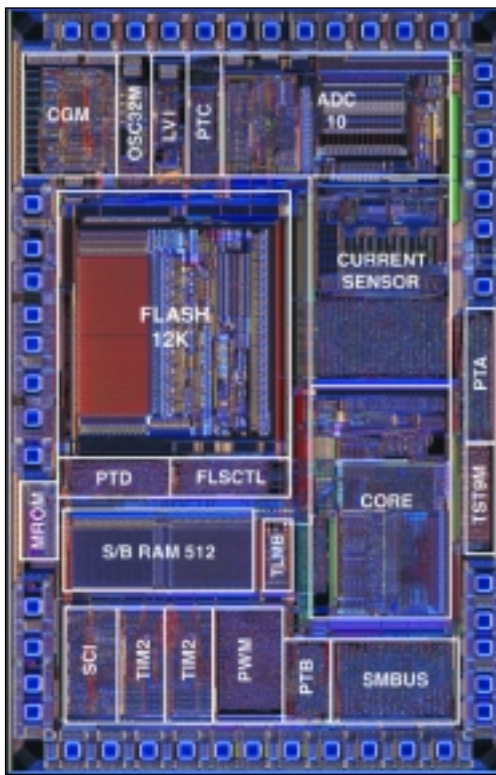


68HC908SR12

The Motorola 68HC908SR12 provides designers with a highly integrated 8-bit FLASH microcontroller (MCU) solution. The 68HC908SR12 builds on the success of the 68HC05 family by offering a code compatible migration path to higher performance FLASH MCUs. With the on-chip analog module, the 68HC908SR12 is ideal for smart battery/charger applications.

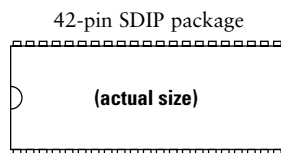


Features

- 12,288 bytes of in-system programmable FLASH memory
 - 68HC08SR12 - 12,288 bytes of ROM
- FLASHwire technology – a single wire interface for in-circuit programming which does not require high voltage for mode entry
- Selectable FLASH security feature
- 512 bytes of user RAM
- 5V nominal operating voltage
- 3V low-power operating voltage
- High-performance 68HC08 CPU core
 - Code compatible with 68HC05
 - 8MHz internal operating frequency at 5V
 - 4MHz internal operating frequency at 3V
- Power-saving Stop and Wait modes
- Peripheral modules
 - Computer Operating Properly (COP) watchdog
 - SCI asynchronous serial communications port
 - Full duplex operation
 - 32 programmable baud rates
 - Interrupt driven operation
 - 8-bit or 9-bit character length
 - Dual 16-bit, 2-channel timers with input capture, output compare, and PWM modes
 - Timebase module with eight user selectable periodic real-time interrupts
 - 3-channel 8-bit 125kHz PWM with independent counters and automatic phase control
 - Dual-channel multi-master IIC bus (SMBus version 1.0/1.1 compatible)
 - 14-channel 10-bit analog-to-digital converter with autoscan mode for four channels (11 channels for 42-pin package)
 - Analog module with:
 - Temperature sensor for -20 to $+70^{\circ}$ C
 - Current sensor with programmable amplifier
- Memory-mapped I/O registers
- 31 bi-directional input/output (I/O) lines, including: (29 lines for 42-pin package)
 - Open-drain output on four I/O pins
 - Direct LED drives on 11 I/O pins
 - Keyboard scan with selectable interrupts on eight I/O pins
- Two dedicated analog input pins
- Multiple clock options
 - RC oscillator
 - 32kHz crystal oscillator and on-chip PLL
 - External clock
- Internal pullups to V_{DD} on RESET and IRQ1 pins
- Selectable internal pullup to V_{DD} on IRQ2 pin

68HC908SR12

- Vectored interrupts
 - Selectable sensitivity on external interrupt (edge- and level-sensitive or edge-sensitive only)
 - External interrupt mask bit and acknowledge bit
- Illegal address reset
- Illegal opcode reset
- Low Voltage Inhibit with optional reset
- V_{DD} / V_{SS} pins adjacent for easy bypass capacitor
- Hyper-text linked on-line databook:
 - MC68HC908SR12/D
- Cost effective, full-featured development tools that support programming in-circuit debug, simulation, and in-circuit emulation
- Package options



42-pin SDIP package
70mil pitch
1.45in x 0.55in body
(70mil x 600mil pin centers)

48-pin LQFP package



(actual size)
7mm x 7mm body
0.5mm pitch

Production Order Numbers

- MC68HC908SR12CB: 42-pin SDIP, -40 to +85° C
- MC68HC908SR12MB: 42-pin SDIP, -40 to +125° C
- MC68HC908SR12CFA: 48-pin LQFP, -40 to +85° C
- MC68HC908SR12MFA: 48-pin LQFP, -40 to +125° C

Sample Pack Order Numbers*

- KXC908SR12CB
- KXC908SR12MB
- KXC908SR12CFA
- KXC908SR12MFA

*In the future, the prefix of the sample pack order numbers will be changing from KXC to KMC.

Comprehensive Development Support

Broad third party software and hardware support – see our web site at <http://www.mcu.motps.com>

EASY TO ORDER KITS

		RESALE*
M68ICS08SR	SR Programmer/in-circuit debug kit	\$295
KITMMEVS08SR12	Cost-effective real-time in-circuit emulator	\$1450
KITMMDS08SR12	High performance real-time in-circuit emulator kit	\$3950

INDIVIDUAL DEVELOPMENT TOOL COMPONENTS

		RESALE*
M68MMDS0508	High performance emulator	\$2950
M68MMPFB0508	MMEVS platform board	\$395
M68EML08SR12	Emulation module daughter board	\$495
M68CBL05B	Low noise flex-cable	\$120
M68CBL05C	Low noise flex-cable	\$120
M68TB08SR12B42	42-pin SDIP target head adapter	\$175
M68TC08SR12FA48	48-pin LQFP target head adapter	\$175

*All prices are manufacturer's suggested resale.

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