# 68HC908JB8

The Motorola 68HC908JB8 provides designers with a highly integrated 8-bit FLASH microcontroller (MCU) solution. The 68HC908JB8 builds on the success of the 68HC05 family by offering a code compatible migration path to higher performance FLASH MCUs. With the on-chip Universal Serial Bus (USB) module, the 68HC908JB8 is ideal for PC peripheral applications.
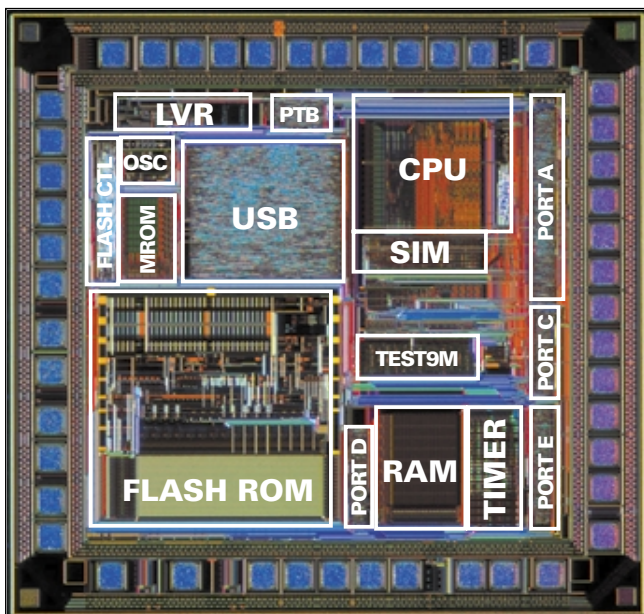
Features

- 8,192 bytes of in-system programmable FLASH memory
- FLASHwire technology — a single wire interface for in-circuit programming which does not require high voltage for mode entry
- Selectable FLASH security feature
- 256 bytes of user RAM
- 4 V to 5.5 V nominal operating voltage
- High-performance 68HC08 CPU core
  - Code compatible with 68HC05
  - 3 MHz internal operating frequency
- 6 MHz crystal/ceramic clock input
- Power-saving Stop and Wait modes

- Peripheral modules
  - Computer Operating Properly (COP) watchdog
  - Full Universal Serial Bus Specification 1.1 low-speed functions:
    - 1.5 Mbps data rate
    - On-chip 3.3 V regulator
    - Endpoint 0 with 8-byte transmit buffer and 8-byte receive buffer
    - Endpoint 1 with 8-byte transmit buffer
    - Endpoint 2 with 8-byte transmit buffer and 8-byte receive buffer
  - Dual-channel, 16-bit timer with input capture, output compare, PWM modes, and external clock input (TCLK) option
- Memory-mapped I/O registers
- Up to 37 bi-directional input/output (I/O) lines, including:
  - 13 or 10 shared-function I/O pins, depending on package
  - 24, 8, or 2 dedicated I/O pins, depending on package
  - 8 keyboard interrupts on port A, on all packages
  - 10 mA direct drive for normal LED on 6 pins
  - 25 mA direct drive for infrared LED on 2 pins
  - 10 mA high current drive for PS/2 connection on 2 pins (with USB module disabled)
- Internal pullups to V_{DD} on RESET and IRQ pins
- 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

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- Specific features of MC68HC908JB8 in 28-pin are:
  - Port B not available
  - Port C is only one bit: PTC0
  - Port D is only 7 bits: PTD0—PTD6
  - Port E is 5 bits: PTE0—PTE4; 2-channel TIM module with TCLK input option
- Specific features of MC68HC908JB8 in 20-pin are:
  - Port B not available
  - Port C is only one bit: PTC0
  - Port D is only one bit: PTD0/1; pad PTD0 and PTD1 are bonded together to a single pin PTD0/1
  - Port E is only 3 bits: PTE1, PTE3, a PTE4; single-channel TIM module without TCLK input option
- Hyper-text linked on-line databook:
  - MC68HC908JB8/D

- Cost effective, full-featured development tools that support programming in-circuit debug, simulation, and in-circuit emulation
- Package options
  - 20-pin DIP package
  - 28-pin SOIC package
  - 44-pin QFP package

Production Order Numbers

- MC68HC908JB8JP: 20-pin DIP, 0 to +70°C
- MC68HC908JB8ADW: 28-pin SOIC, 0 to +70°C
- MC68HC908JB8FB: 44-pin QFP, 0 to +70°C

Comprehensive Development Support

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

EASY TO ORDER KITS		RESALE*
M68ICS08JB	JB Programmer/in-circuit debug kit	$295
KITMMEVS08JB	Cost-effective real-time in-circuit emulator	$1450
KITMMDS08JB	High performance real-time in-circuit emulator kit	$3950

INDIVIDUAL DEVELOPMENT TOOL COMPONENTS		RESALE*
M68MMDS0508	High performance emulator	$2950
M68MMPFB0508	MMEVS platform board	$395
M68EM08JB8	Emulation module daughter board	$495
M68CBL05C	Low noise flex-cable	$120
M68TC08JB8P20	20-pin DIP target head adapter	$100
M68TC08JB8P28 + M68DIP28SOIC	28-pin SOIC target head adapter	$135
M68TC08JB8FB44	44-pin QFP target head adapter	$100

PROGRAMMING TOOLS		RESALE*
M68SPGMR08	Serial programmer	$250
M68PA08JB8P20	20-pin DIP adapter for serial programmer	$425
M68PA08JB8DW28	28-pin SOIC adapter for serial programmer	$300
M68PA08JB8FB44	44-pin QFP adapter for serial programmer	$425

*All prices are manufacturer's suggested resale.

This product incorporates SuperFlash ® technology licensed from SST.

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