

MOTOROLA
SEMICONDUCTOR
TECHNICAL DATA**MC68HC05SC24***Product Preview***Secure 8-bit microcomputer with EEPROM**

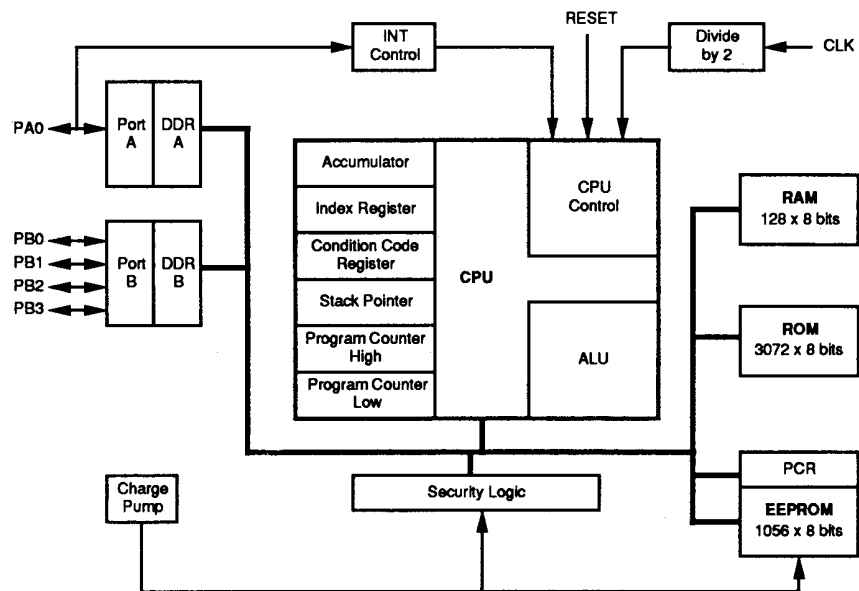
The MC68HC05SC24 microcomputer (MCU) is a member of Motorola's family of single-chip MCUs designed specifically for incorporation into smart card and embedded conditional access applications. It is based on the industry-standard M68HC05 low-power HCMOS core and gives access to the powerful instruction set of this widely used family of devices. Because it has been designed from the outset as a member of the Motorola Smart Card portfolio, it has been possible to provide the MC68HC05SC24 with all the desired functionality together with on-chip security features, in an area of less than 15mm² (3.4 mm x 4.1 mm).

The MC68HC05SC24 will be available in die-on-wafer form, 8-pin and 6-pin SCAM modules, and 16-pin DIL and 20-pin SOIC packages. Software and hardware development will be fully supported on Motorola's PC platform system (PCIME).

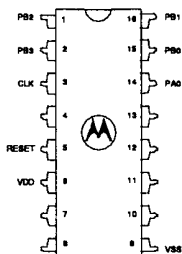
The main hardware and software features of the MC68HC05SC24 are listed below:

- HCMOS technology – fully static operation
- 8-bit architecture including the MC68HC05C4 MCU core
- Power saving WAIT and very low power STOP modes
- 128 bytes of on-chip RAM
- 3072 bytes of on-chip USER ROM
- 1040 bytes of on-chip USER EEPROM (16 bytes not programmable in USER mode)
- On-chip charge pump for EEPROM programming
- 5 bidirectional I/O lines – ISO standard (ISO 7816/3) I/O port plus additional 4-bit I/O port
- External maskable interrupt on ISO standard (ISO 7816/3) I/O port
- 2.5 MHz internal operating frequency at 5 MHz clock frequency (-30°C to +70°C)
- Power-up detection
- Low voltage and low frequency detection circuitry
- Security logic
- Full use of standard M68HC05 instruction set
- 8 bits x 8 bits unsigned multiply instruction
- Memory mapped I/O
- True Bit Manipulation
- Addressing Modes with Indexed Addressing for Tables
- Bond pad layout conforms to ISO Standard ISO 7816/2

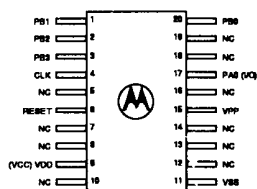




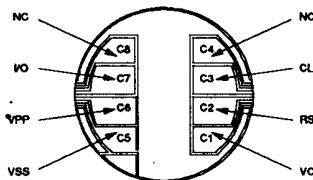
Block Diagram



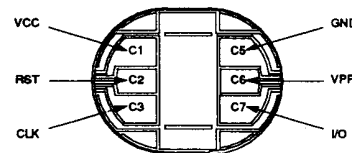
**16-pin dual-in-line
(DIL)**



**20-pin small outline
(SOIC)**



**8-contact
SCAM module**



**6-contact
SCAM module**

ISO standard contacts

DESIGN DETAILS AND ORDERING INFORMATION

For further details on this product and other products suitable for Smart Card, Conditional Access and Coupler applications please contact your local Motorola Sales Office.

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