

MOTOROLA
SEMICONDUCTOR
TECHNICAL DATA

MC68HC11E9
MC68HC11E1
MC68HC11E0

Technical Summary
8-Bit Microcontrollers

Introduction

The MC68HC11E9, MC68HC11E1, and MC68HC11E0 high-performance microcontroller units (MCUs) are based on the M68HC11 Family. These high speed, low power consumption chips have multiplexed buses and a fully static design. The chips can operate at frequencies from 3 MHz to dc. The three MCUs are created from the same masks; the only differences are the value stored in the CONFIG register and whether or not the ROM or EEPROM is tested and guaranteed.

For detailed information about specific characteristics of these MCUs, refer to the *M68HC11 Reference Manual*, document number M68HC11 RM/AD.

Features

- M68HC11 CPU
- Power Saving STOP and WAIT Modes
- 12 KBytes of ROM
- 512 Bytes of On-Chip EEPROM with Block Protect
- 512 Bytes of On-Chip RAM (All Saved During Standby)
- 16-Bit Timer System
 - Three Input Capture (IC) Channels
 - Four Output Compare (OC) Channels
 - One Additional Channel, Software Selectable as Fourth IC or Fifth OC
- 8-Bit Pulse Accumulator
- Real-Time Interrupt Circuit
- Computer Operating Properly (COP) Watchdog Circuit
- Synchronous Serial Peripheral Interface (SPI)
- Asynchronous Nonreturn to Zero (NRZ) Serial Communications Interface (SCI)
- 8-Channel 8-Bit Analog-to-Digital (A/D) Converter
- 38 General-Purpose Input/Output (I/O) Pins
 - 15 Bidirectional I/O Pins
 - 11 Input-Only Pins, 11 Output-Only Pins
- Available in 52-Pin Plastic Leaded Chip Carrier (PLCC)

This document contains information on a new product. Specifications and information herein are subject to change without notice.

MOTOROLA 1990



MC68HC11Ex Family Members

Device Number	ROM	EEPROM	RAM	CONFIG*	Comments
MC68HC11E9	12K	512	512	\$0F	Family built around this device
MC68HC11E1	0	512	512	\$0D	ROM disabled
MC68HC11E0	0	0	512	\$0C	ROM and EEPROM disabled

*Motorola programs these CONFIG register values before shipment.

Ordering Information

Package	Temperature	CONFIG	Description	MC Order Number
PLCC	-40° to +85°C	\$0F	BUFFALO ROM	MC68HC11E9FN1
(FN Suffix)	-40° to +105°C	\$0F	BUFFALO ROM	MC68HC11E9VFN1
	-40° to +125°C	\$0F	BUFFALO ROM	MC68HC11E9MFN1
	-40° to +85°C	\$0D	No ROM	MC68HC11E1FN
	-40° to +105°C	\$0D	No ROM	MC68HC11E1VFN
	-40° to +125°C	\$0D	No ROM	MC68HC11E1MFN
	-40° to +85°C	\$0C	No ROM, No EEPROM	MC68HC11E0FN

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