# MOTOROLA SEMICONDUCTOR ECHNICAL DATA

### MC68HC11D3 MC68HC11D0

## Technical Summary 8-Bit Microcontroller

#### Introduction

The MC68HC11D3 and MC68HC11D0, high-performance microcontroller units (MCUs), are based on the MC68HC11E9 design. The chips offer high speed, low power consumption, multiplexed buses capable of running at up to 3 MHz, and a fully static design that allows operations at frequencies to dc. The Dx series comes from the same mask. The only difference between the units is whether the ROM has been tested and guaranteed.

The MC68HC11D3 and D0 are economical alternatives for applications in which the HC11 CPU is necessary, but where fewer peripheral functions and less memory are required. For detailed information on subsystems, programming, and the instruction set, refer to the *M68HC11 Reference Manual*, document number M68HC11 RM/AD.

#### **Features**

- MC68HC11 CPU
- Power Saving STOP and WAIT Modes
- 4K Bytes ROM (D3 Only)
- 192 Bytes On-Chip RAM (All Saved During Standby)
- 16-Bit Timer System
  - 3 Input Capture (IC) Channels/4 Output Compare (OC) Channels
  - Additional Channel; Software Selectable as Either Fourth IC or Fifth OC
- 8-Bit Pulse Accumulator
- Real-Time Interrupt Circuit
- Computer Operating Properly (COP) Watchdog System
- Synchronous Serial Peripheral Interface (SPI)
- Asynchronous Nonreturn to Zero (NRZ) Serial Communications Interface (SCI)
- 26 Input/Output (I/O) Pins
- 3 Input-Only Pins and 3 Output-Only Pins (1 Output-Only Pin in 40-Pin Package)
- Available in 44-Pin Plastic Leaded Chip Carrier (PLCC) and 40-Pin Plastic Dual In-Line Package (DIP)

#### Ordering Information

Package	Temperature	Description	Plastic
40-Pin DIP	-40° to + 85°C	BUFFALO ROM	MC68HC11D3P1
40-Pin DIP	-40° to + 85°C	No ROM	MC68HC11D0P
44-Pin PLCC	-40° to + 85°C	BUFFALO ROM	MC68HC11D3FN1
44-Pin PLCC	-40° to + 85°C	No ROM	MC68HC11D0FN

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

