

MC68HC16R1

Product Preview

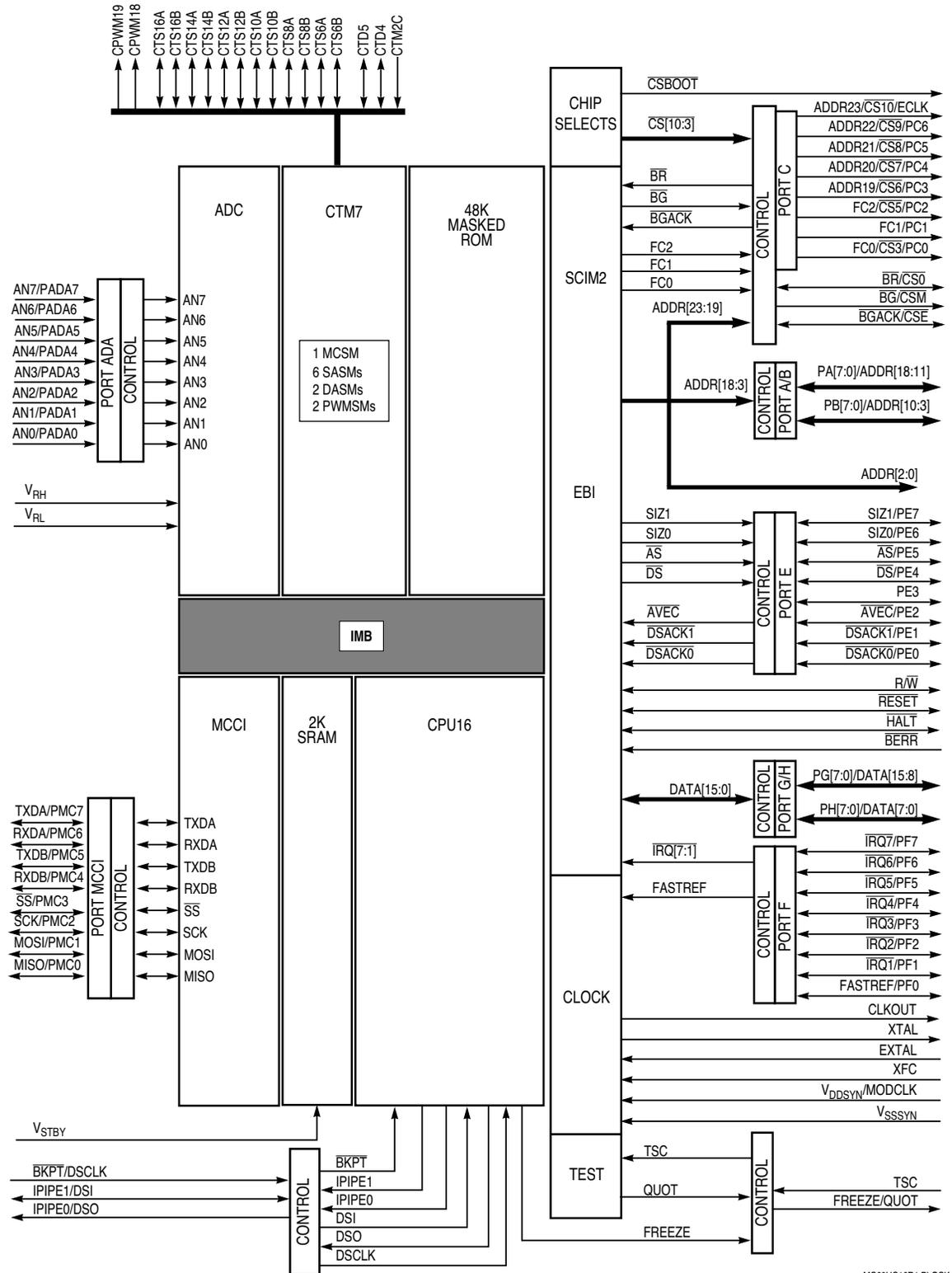
16-Bit Modular Microcontroller

Features

- Modular Architecture
- Central Processing Unit (CPU16)
 - 16-bit architecture
 - Full set of 16-bit instructions
 - Three 16-bit index registers
 - Two 16-bit accumulators
 - Control-oriented digital signal processing capability
 - Addresses up to 1 Mbyte of program memory; 1 Mbyte of data memory
 - Background debug mode
 - Fully static operation
- Single-Chip Integration Module (SCIM2)
 - Single-chip or expanded modes of operation
 - External bus support in expanded mode
 - Nine programmable chip-select outputs
 - Improved system clock based on either fast or slow reference clock
 - Watchdog timer, clock monitor, and bus monitor
 - Address and data bus provide 33 discrete I/O lines in single-chip mode
 - Enhanced reset controller
- 2-Kbyte Standby RAM (SRAM)
 - External standby voltage supply input for low-power standby operation
- Masked ROM Module (MRM)
 - 48-Kbyte array, accessible as bytes or words
- Analog-to-Digital Converter (ADC)
 - Eight channels, eight result registers
 - Eight automated modes
 - Three result alignment modes
- Multichannel Communication Interface (MCCI)
 - Two channels of enhanced SCI (UART)
 - One channel of SPI
- Configurable Timer Module (CTM7)
 - One 16-bit modulus counter submodule (MCSM)
 - Six single-action submodules (SASMs)
 - Two double-action submodules (DASMs)
 - Two pulse-width submodules (PWMSMs)
 - One external clock pin for modulus counters

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





MC68HC16R1 BLOCK

Figure 1 MC68HC16R1 Block Diagram

Motorola reserves the right to make changes without further notice to any products herein. Motorola makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does Motorola assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation consequential or incidental damages. "Typical" parameters which may be provided in Motorola data sheets and/or specifications can and do vary in different applications. All operating parameters, including "Typicals" must be validated for each customer application by customer's technical experts. Motorola does not convey any license under its patent rights nor the rights of others. Motorola products are not designed, intended, or authorized for use as components in systems intended for surgical implant into the body, or other applications intended to support or sustain life, or for any other application in which the failure of the Motorola product could create a situation where personal injury or death may occur. Should Buyer purchase or use Motorola products for any such unintended or unauthorized application, Buyer shall indemnify and hold Motorola and its officers, employees, subsidiaries, affiliates, and distributors harmless against all claims, costs, damages, and expenses, and reasonable attorney fees arising out of, directly or indirectly, any claim of personal injury or death associated with such unintended or unauthorized use, even if such claim alleges that Motorola was negligent regarding the design or manufacture of the part.

MCUinit, MCUasm, MCUdebug, and RTEK are trademarks of Motorola, Inc. MOTOROLA and ! are registered trademarks of Motorola, Inc. Motorola, Inc. is an Equal Opportunity/Affirmative Action Employer.

How to reach us:

USA/EUROPE/Locations Not Listed: Motorola Literature Distribution;

P.O. Box 5405, Denver Colorado 80217. 1-800-441-2447, (303) 675-2140

Mfax™: RMFAX0@email.sps.mot.com - TOUCHTONE (602) 244-6609, U.S. and Canada Only 1-800-774-1848

INTERNET: <http://Design-NET.com>

JAPAN: Nippon Motorola Ltd.; Tatsumi-SPD-JLDC,

6F Seibu-Butsuryu-Center, 3-14-2 Tatsumi Koto-Ku, Tokyo 135, Japan. 81-3-3521-8315

ASIA PACIFIC: Motorola Semiconductors H.K. Ltd.; 8B Tai Ping Industrial Park,

51 Ting Kok Road, Tai Po, N.T., Hong Kong. 852-26629298

Mfax is a trademark of Motorola, Inc.



MOTOROLA

MC68HC16R1PP/D

