

An interactive approach to product development -

MCUinit™ Initialization Tool

The MCUinit initialization tool is a graphical environment for generating MCU startup code, editing registers, and accessing on-line reference manuals. This graphical software program simplifies and speeds creation of initialization software for M68HC12, M68HC16, and M68300 MCUs.

The MCUinit initialization tool supports the following microcontrollers:

M68HC12A4, M68HC16X1, M68HC16Y1,
M68HC916Y1, M68HC916Y3, M68HC16Z1,
M68HC16Z2, M68306, M68307, M68331,
M68332, M68F333, M68334, and M68360.

Using the simple point-and-click graphical user interface, you can initialize and debug configuration registers for intermodule bus peripherals. MCUinit can be used as a stand-alone initialization code generator or it can operate as a register editor when connected to Motorola's MMDS1632 Modular Development System.

The MCUinit initialization tool targets the requirements analysis, coding, and debugging aspects of product development. It allows you to work at different levels of detail and generates the initialization code in C or assembly language. The code is fully commented for maintenance purposes and you can add your own comments.

The MCUinit initialization tool applies automated rules and algorithms taken from the MCU and module reference manuals to ensure proper initialization – making code creation faster and less error-prone than hand coding.

The MCUinit initialization tool makes initializing Motorola's advanced microcontrollers easy. It provides on-line help, rule checking, and the capability to save and retrieve sessions. Full on-line help includes the MCUinit initialization tool user's manual, Motorola application notes, and supported MCU and module reference manuals. You may save a session to be recalled for future use, write functions to expand the MCUinit initialization tool functionality, or check work-in-progress using RuleChecker.

Features

- *Module-specific dialogs*
- *Field-level register editing*
- *Interactive memory map*
- *Live connection to an emulator*
- *On-line MCU and module reference manuals via a CD-ROM*
- *Guided Tour*
- *RuleChecker*

PRODUCT OVERVIEW

The MCUinit initialization tool makes using Motorola microcontrollers easy. There are several different aspects of our initialization tool to aid you in a variety of ways. These range from full on-line help to providing rule checking on the requested user actions (on-line help includes the MCUinit initialization tool user's manual). You may also save a session to be recalled for future use, write functions to expand the initialization tool functionality, or view Motorola application notes. Listed below are short explanations of MCUinit initialization tool key features.

Help System

All of the reference manuals for the supported parts have been incorporated into the initialization tool hypertext help system. This includes not only the device manuals, but also the manual for each internal peripheral. Finding relevant information is simplified with context sensitive help, and with hyper text links between topics.

MCU and Module Setup

The MCUinit initialization tool lets you easily configure the initialization of a device by using standard graphical controls. These controls let you take an almost "fill in the blank" approach to initialization.

Register Editing

The MCUinit initialization tool supports configuration of registers at the bit level by providing register lists, at both the module and MCU level. Double click on the register you want to display and a dialog lets you see the register and edit each field.

RuleChecker

The validity of MCU initialization operations is verified by RuleChecker. It checks a variety of rules in order to avoid mistakes during setup. The RuleChecker watches each input and compares it to both the current system state and a list of special rules. If it detects a possible conflict, it warns you. You can override or disable the RuleChecker.

Code Generation and MMDS1632 Support

There are two different "backends" supported by The MCUinit initialization tool. The first; the initialization tool generates code, either MASM compatible assembly, or ANSI compatible C for each appropriate user action, including comments, and a header file of defines or equates for the register addresses. The second option is to run the initialization tool while connected to an MMDS1632 so MCU changes are incorporated immediately. The initialization tool also reads values from the MMDS1632, and updates the module dialogs to reflect the current status of the module. This provides you with a graphical representation of the current MCU status.

Macro Extension Language (MEL)

The Macro Extension Language (MEL) provides the means for extending The MCUinit initialization tool functionality to deal with your particular needs. You can use the MEL C-like syntax to create new MEL functions and scripts to solve unique problems.

Graphical User Interface Windows

The MCUinit initialization tool is a graphical tool consisting of a central window and additional dialogs which provide access to specific functions. The central window is the starting point, and consists of three parts: a menu bar, a tool bar, and a status line.

Guided Tour

The Guided Tour feature leads you through an initialization sequence. In addition to a text description of the action required, the Guided Tour also brings up the correct dialog.

SPECIFICATIONS SUMMARY

The tables below summarize the MCUinit initialization tool specifications and minimum host PC requirements.

MCUinit Initialization Tool Host Requirements

Characteristic	Specifications
Host PC	486-based PC or higher
Operating System	DOS 6.0 or later Windows 3.1 or later
Memory	8MB RAM
Disk Storage	Hard disk drive - 10MB to install basic application plus 30MB to install on-line reference manuals
CD-ROM	The initialization tool software and on-line manuals are supplied on CD-ROM
Monitor	16 color VGA (640 x 480)
Input/Output	RS232-C serial port

ORDERING INFORMATION

The MCUinit initialization tool Part Numbers

Product	Host	Part Number
MCUinit Initialization Tool (Version 3.0)	IBM-compatible PC	M68FMSINITBDX30

WARRANTY INFORMATION

Motorola provides a one year limited warranty.

CUSTOMER SUPPORT

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