



A Leading Provider of Microcontrollers & Analog Semiconductors

Product Number: SW006013
MPLAB C Compiler for dsPIC DSCs

The MPLAB® C Compiler for dsPIC DSCs is a full-featured ANSI compliant C compiler for the Microchip 16-bit devices: dsPIC30F and dsPIC33F. MPLAB C is fully compatible with Microchip's MPLAB Integrated Development Environment (IDE), allowing source level debugging with the MPLAB REAL ICE™ Emulator, MPLAB ICD 2 In-Circuit Debugger and MPLAB SIM Simulator.

Features

- ANSI compliant with standard, math, memory, data conversion and math libraries
- Generates relocatable object modules for enhanced code reuse
- Optimized to generate as much as 30% less code than other 16-bit MCU compilers
- Strong support for in-line assembly when total control is absolutely necessary
- Peripheral library for quick coding using Microchip device peripherals
- Allows code and data to be located at absolute addresses
- Supports advanced code size optimizations
- Support for DSP accumulator registers from the C language
- Support for DSP intrinsics (functions) from the C language. DSP intrinsics map directly to native dsPIC assembly language instruction
- Free unrestricted Student Edition of the C compiler

MPLAB C Student Edition

The Compiler Student Edition is free! It is full-featured for the first 60 days. After 60 days only optimization level 1 can be enabled in the compiler. The compiler will continue to function after 60 days, but code size may increase. There are no restrictions on the use of this C compiler (see license text for details).

Upgrade

Use this to upgrade a previous installation of MPLAB C Compiler. Upgrades may include tools (compiler, assembler, etc.), documentation, and device support files.

Device Update

Use this installer to add new and/or improved device support to a previous installation of the MPLAB C Compiler. Device support may include header files, linker scripts, and libraries, but will not include tools (compiler, assembler, etc.). Device updates are matched to a specific version but may be installed on top of any compiler with the same major version number. In these circumstances, build-time warning messages will remind you of the mismatched support files.

Patch for 16-bit Write Functions

Modifications have been made to the 16-bit MPLAB C libraries for the self-programming routines `_write_flash16` and `_write_flash24` in the libraries `libpic30-coff.a` and `libpic30-elf.a`. Previously, these routines did not implement a workaround for the device ID errata that affects some members of the dsPIC33F and PIC24H device families.

To correct this, download, unzip and add the source file in “Patch for 16-bit FLASH Writes” to the project from the downloads section below. These corrected functions will be included in the libraries of v3.12 of the MPLAB C Compiler for PIC24 MCUs and dsPIC DSCs (scheduled for release in January).

Note: The corrected functions were released with v3.10 (B), but were missing in v3.11 and v3.11 (B)