

MPLAB® C Compiler for PIC24 MCUs No Longer Available



Part Number: SW006014

The MPLAB® C Compiler for PIC24 MCUs is a full-featured ANSI compliant C compiler for the Microchip PIC24 family of 16-bit devices. MPLAB C is a 32-bit Windows® console application as well as a fully integrated component of 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.

16-Bit Language Tools Libraries

Included in the download of the MPLAB compiler are support libraries including Standard C library, DSP Library and math functions in the Fixed Point Math Library and Floating Point Math Library.

Fixed Point Math Library

The I/Q Fixed Point Math Library provides a set of speed optimized functions for the most common digital signal processing applications. This library provides significant performance savings over equivalent functions coded in C and allows developers to dramatically shorten their development time. The I/Q math library provides mathematical functions useful in a variety of applications ranging from motor control, digital power control, digital signal processing and general purpose real-time control using fractional data types. The function formats provided in the library are in Q15 (1.15) and Q16 (15.16) representations. The I/Q math library includes over 65 general-purpose functions composed of twenty eight functions supporting Q15 math and thirty seven functions supporting Q16 math. The IQ math library includes a common library for dsPIC3x and PIC24 cores and an optimized library for dsPIC exclusively taking advantage of the native architectural features. The IQ math functions are callable from both 'C' and Assembly. Detailed information on this library can be found on the Fixed Point Math Library for PIC24H and dsPIC page.

Floating Point Math Library

The IEEE-754 Compliant Floating Point Math Library is the compiled version of the math library that is distributed with the highly optimized, ANSI-compliant MPLAB® C Compiler. It contains advanced single and double-precision floating-point arithmetic and trigonometric functions from the standard C header file <math.h>. The library delivers small program code size and data size, reduced cycles and high accuracy. Detailed information on this library can be found on the Floating Point Math Library for PIC24H and dsPIC page.

Features

Package Contents

- 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
- Free unrestricted Evaluation Version of the C compiler

Documentation & Software

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