

# MPLAB® IDE Integrated Development Environment

## Now Supporting dsPIC Devices

### Summary

MPLAB IDE gives PICmicro® and dsPIC® MCU users the flexibility to edit, compile and debug from a single user interface

MPLAB Integrated Development Environment (IDE) is a development platform for the Microchip Technology PICmicro and dsPIC microcontroller (MCU) families. Designed for use with the Microsoft Windows® operating environment, MPLAB IDE offers an easy-to-use common user interface for the Microchip development tools suite.

MPLAB IDE includes the following components:

- MPASM™ Assembler
- MPLAB ASM30 Assembler for dsPIC30F
- MPSIM™ software simulator
- MPSIM 30 software simulator for dsPIC30F
- MPLINK™ linker
- MPLAB LINK30 linker for dsPIC30F
- Source Level Debugger
- On-line Help
- Project and set-up wizards
- Project Manager
- Visual Device Initializer
- Programmer's Editor
- Drivers for hardware tools (as listed in the Tools Supported section)

The MPLAB IDE desktop provides the development environment and tools for developing and debugging application as a project, providing a common user interface for different development and debugging modes. The MPLAB IDE environment enables an engineer to:

- Write, build and debug source code
- Automatically locate errors in source files for editing
- Debug with breakpoints
- Single-step the program with software simulator, in-circuit debugger or in-circuit emulator
- View variables in watch windows
- Program code with a PICKit™ 1, PICSTART® Plus or PROMATE® II programmers
- Find quick answers to questions using the MPLAB IDE on-line help

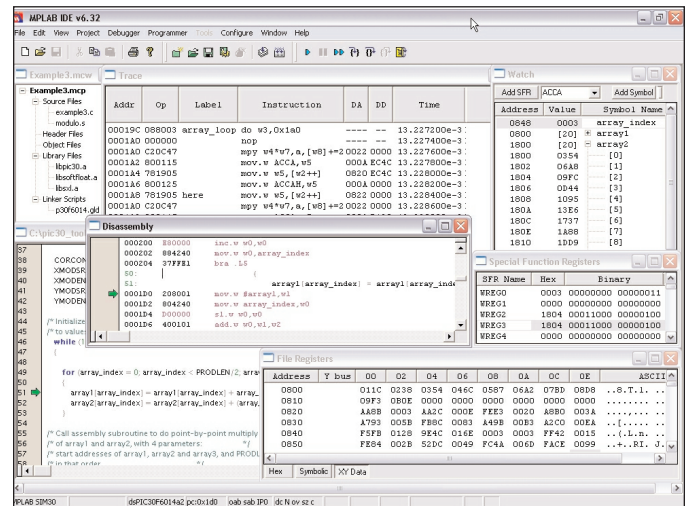
### Features

#### MPLAB Project Manager

- Organizes the different files that comprise the application under one "Project"
- Creates a project
- Adds, edits or debugs source code file in a project
- Interfaces with version control systems
- Builds object files and downloads code to the emulator or in-circuit debugger and device programmers with a mouse click
- Controls the build of multiple source files from MPASM, MPLAB ASM30, MPLAB C18, MPLAB C30 compilers, and third-party tools, precompiled libraries and object files, and linker scripts

#### Source Level Debugging

- Simple and powerful
- Auto alignment of breakpoints after source code modification
- Mouse-over variable inspection
- Drag and drop variables to watch windows
- Right mouse click menus for breakpoints and editor functions



#### Source Level Debugging (Continued)

- Watch local and global variables, structures and arrays
- Mixed source code/disassembly view
- Directly editable data windows
- Customizable data displays
- Flash memory and RAM/register watchpoints
- Automatic single-stepping "animate" feature

#### MPLAB Visual Device Initializer – NEW

- Configures the entire processor graphically
- Generates code usable in Assembly or C programs
- Does extensive error checking on assignments and conflicts on pins, memories and interrupts

#### MPLAB SIM/MPLAB SIM30 Software Simulators

- Discrete-event simulator integrated into the MPLAB IDE features debug capabilities including unlimited breakpoints, trace, examine/modify registers, watch variables and timestamp
- Simulates the core functions and some peripherals of the PICmicro and dsPIC MCUs

#### MPLAB Editor

- Full-featured, color-coded, language-sensitive programmer's editor
- Supports international Unicode characters

#### MPASM/MPLAB ASM30 Assembler

- Has full-featured macro capabilities, conditional assembly and several source and listing formats
- Generates various object code formats to support Microchip development tools and third-party programmers

#### MPLINK/MPLAB LINK30 Linker

- Combines multiple input object modules generated by Microchip C17, C18, C30 compilers or MPASM, MPLAB ASM30 assemblers into a single executable file
- Generates the symbolic information for debugging with MPLAB IDE



**MICROCHIP**

Development Systems

Microchip Technology Incorporated

## Tools Supported

- MPLAB C17 Compiler for PIC17C PICmicro Family
- MPLAB C18 Compiler for PIC18C/F PICmicro Family
- MPLAB C30 Compiler for dsPIC30F MCU Family
- MPLAB ICD 2 In-Circuit Debugger
- MPLAB ICE 2000 In-Circuit Emulator
- MPLAB ICE 4000 In-Circuit Emulator
- PICkit 1 Flash Starter Kit
- PICSTART Plus Low-Cost Programmer
- PROMATE II Programmer
- MPLAB PM3 Programmer

## Host System Requirements

- PC-compatible system with an Intel Pentium® class or higher processor, or equivalent
- A minimum of 16 MB RAM
- A minimum of 40 MB available hard drive space
- Microsoft Windows® 98 Second Edition, Windows 2000 or Windows XP

## Part Numbers and Ordering Information:

MPLAB IDE Integrated Development Environment		
Part Number	Description	Availability
SW007002	MPLAB IDE Integrated Development Environment	Now

Download from the Microchip web site: [www.microchip.com](http://www.microchip.com)

Development Tools from Microchip	
MPLAB® IDE	Integrated Development Environment (IDE)
MPASM™ Assembler	Universal PICmicro macro-assembler
MPLINK™ Linker/MPLIB™ Librarian	Linker/Librarian
MPLAB C17	C compiler for PIC17CXXX MCUs
MPLAB C18	C compiler for PIC18CXXX MCUs
MPLAB SIM Simulator	Software Simulator
MPLAB ICD 2	In-Circuit Debugger
MPLAB ICE 2000	Full-featured modular in-circuit emulator
PICSTART® Plus Programmer	Entry-level development kit with programmer
PRO MATE® II Device Programmer	Full-featured, modular device programmer
KEELOQ® Evaluation Kit	Encoder/Decoder evaluator
KEELOQ Transponder Evaluation Kit	Transmitter/Transponder evaluator
microID™ Developer's Kit	125 kHz and 13.56 MHz RFID development tools
MCP2510 CAN Developer's Kit	MCP2510 CAN evaluation/development tool

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