Microchip's Integrated Development Environments

Summary

Microchip has two great ways to develop applications for PIC®, AVR® and SAM microcontrollers (MCUs), dsPIC Digital Signal Controllers (DSCs); MPLAB® X Integrated Development Envinronment (IDE) and MPLAB Xpress. MPLAB X is a powerful, full-featured IDE that runs on a workstation. MPLAB Xpress is a feature-focused, cloud-based IDE well suited for newer developers and quick prototyping.

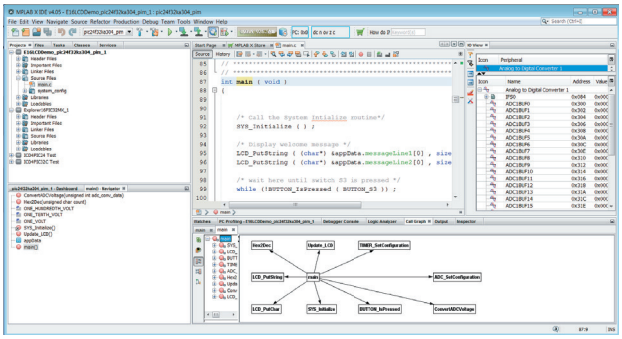
MPLAB X Integrated Development Environment

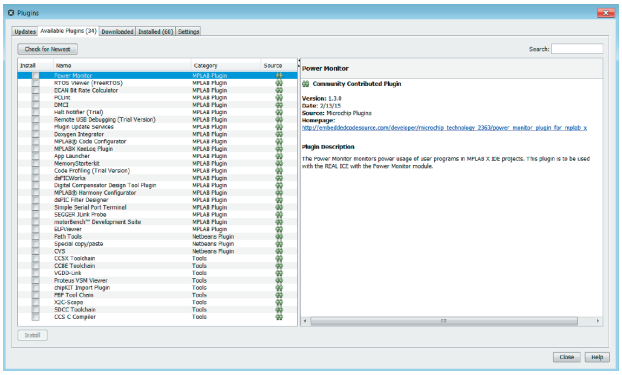
MPLAB X IDE is a free software program that runs on a PC (Windows®, Mac OS X® and Linux®) to develop applications for Microchip's PIC, AVR and SAM MCUs and dsPIC DSCs. It is called an Integrated Development Environment, because it provides a single integrated "environment" to develop code for embedded microcontrollers.

MPLAB X IDE brings many changes to Microchip's microcontroller development tool chain. Unlike previous versions of the MPLAB IDE which were developed completely in-house, MPLAB X IDE is based on the open source NetBeans IDE from Oracle. Taking this path has allowed the addition of many frequently requested features quickly and easily, while also providing a much more extensible architecture to bring you more features in the future.

Features

- "One Click" make, program, debug/execute operation
- Call graph for navigating complex code
- Support for multiple configurations within your projects
- Support for multiple compiler versions with your projects
- IO View for displaying, controlling GPIO
- Runtime Watch to monitor variables during code execution
- Xplained board detection
- Plug-in support
- Live parsing
- Hyperlinks for fast navigation to declarations and includes
  - Live code templates support
  - Built-in source code control
  - Auto-completion
  - Change tracking
  - Macro expansions
- Login to mySoftware account for easy license management





MPLAB® Xpress Cloud-Based IDE

MPLAB Xpress Cloud-Based IDE is an online development environment that contains the most popular features of our award-winning MPLAB X IDE. This simplified and distilled application is a faithful reproduction of our desktop-based program, which allows you to easily transition between the two environments.

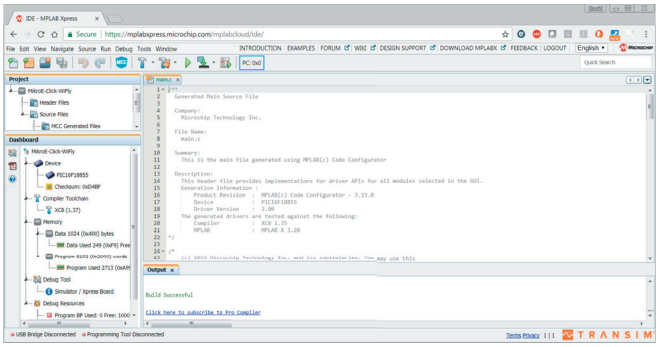
MPLAB Xpress is a perfect starting point for new users of PIC MCU—no downloads, no machine configuration and no waiting to get started on your system development. MPLAB Xpress incorporates the latest version of MPLAB Code Configurator, which enables you to automatically generate initialization and application C code for 8-bit and 16-bit PIC MCUs and dsPIC DSCs using a graphical interface and pin map.

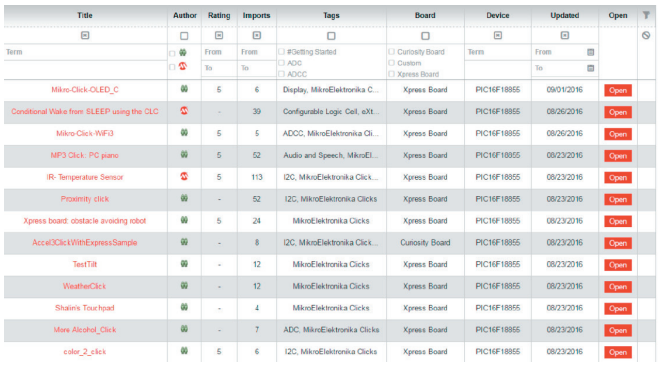
With massive amounts of storage available, you can store your current projects in the Cloud. The Community feature allows you to share your ideas with others, or gain inspiration from the shared code repository. Best of all, MPLAB Xpress IDE is free and can be accessed from any Internet-connected PC or Mac, anywhere in the world.

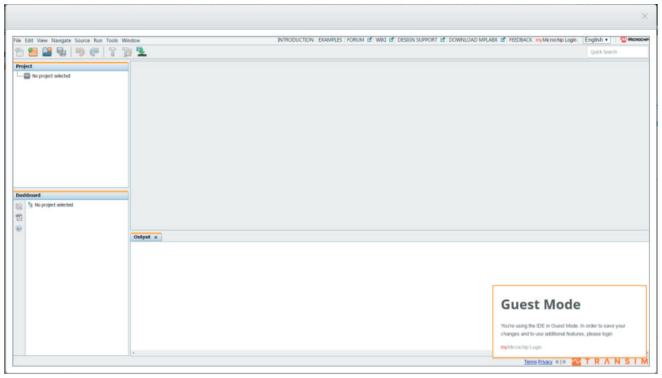
Supported Hardware

- MPLAB Xpress evaluation boards
- Curiosity development boards
- Explorer 16/32 Development Board
- MPLAB PICkit™ 4

	MPLAB® X IDE	MPLAB Xpress
CPUs		
8-, 16- and 32-bit PIC® MCUs	✓	✓
Compilers		
XC8, XC16, XC32	✓	✓
Debuggers		
PICkit™ On Board	✓	✓
MPLAB PICkit 4/Debugger	✓	✓
MPLAB ICD 4 In-Circuit Debugger	✓	–
MPLAB Snap	✓	
Configurators		
MPLAB Code Configurator	✓	✓
MPLAB Harmony Configurator	✓	–
Libraries		
MPLAB Harmony	✓	–
Microchip Library of Applications	✓	–
Residence	Local	Cloud
Revision	Installed	Latest
Dev Boards	All	3
Cost	Free	







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