

# MPLAB

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**MPLAB** is a proprietary freeware [integrated development environment](#) for the development of [embedded applications](#) on [PIC](#) and [dsPIC microcontrollers](#), and is developed by [Microchip Technology](#).<sup>[1][2][3][4][5][6][7][8]</sup>

MPLAB X is the latest edition of MPLAB, and is developed on the [NetBeans](#) platform.<sup>[9][10]</sup> MPLAB and MPLAB X support project management, code editing, debugging and programming of Microchip 8-bit PIC and AVR (including ATMEGA) microcontrollers, 16-bit PIC24 and dsPIC microcontrollers, as well as 32-bit SAM (ARM) and PIC32 (MIPS) microcontrollers.<sup>[11][12][13]</sup>

MPLAB is designed to work with MPLAB-certified devices such as the [MPLAB ICD 3](#) and [MPLAB REAL ICE](#), for programming and debugging PIC microcontrollers using a [personal computer](#). [PICKit](#) programmers are also supported by MPLAB.

MPLAB X supports automatic code generation with the MPLAB Code Configurator and the MPLAB Harmony Configurator plugins.

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## MPLAB X<sup>[edit]</sup>

### MPLAB X IDE



<b><a href="#">Developer(s)</a></b>	<a href="#">Microchip Technology</a>
<b><a href="#">Stable release</a></b>	5.30 <sup>[14]</sup> / October 29, 2019; 3 months ago
<b>Written in</b>	<a href="#">Java (programming language)</a>
<b><a href="#">Operating system</a></b>	<a href="#">Microsoft Windows</a> , <a href="#">Mac OS X</a> , <a href="#">Linux</a> <sup>[14]</sup>

<b><u>License</u></b>	<a href="#">Proprietary EULA</a>
<b>Website</b>	<a href="#">MPLAB X Homepage</a>

MPLAB X is the latest version of the MPLAB IDE built by [Microchip Technology](#), and is based on the open-source [NetBeans](#) platform. MPLAB X supports editing, debugging and programming of Microchip 8-bit, 16-bit and 32-bit [PIC microcontrollers](#).

MPLAB X is the first version of the IDE to include cross-platform support for [Mac OS X](#) and [Linux](#) operating systems, in addition to [Microsoft Windows](#).

MPLAB X supports the following compilers:

- MPLAB XC8 — C compiler for 8-bit PIC and AVR devices<sup>[11][15]</sup>
- MPLAB XC16 — C compiler for 16-bit PIC devices<sup>[15]</sup>
- MPLAB XC32 — C/[C++](#) compiler for 32-bit MIPS-based PIC32 and ARM-based SAM devices<sup>[11][15]</sup>
- HI-TECH C — C compiler for 8-bit PIC devices (discontinued)<sup>[16]</sup>
- [SDCC](#) — open-source C compiler<sup>[17]</sup>

## MPLAB 8.x<sup>[edit]</sup>

<b>MPLAB IDE</b>	
	
<b><u>Developer(s)</u></b>	<a href="#">Microchip Technology</a>
<b><u>Stable release</u></b>	8.92 <sup>[18]</sup> / July 23, 2013; 6 years ago
<b>Written in</b>	<a href="#">C++</a>
<b><u>Operating system</u></b>	<a href="#">Microsoft Windows</a>
<b><u>License</u></b>	<a href="#">Proprietary EULA</a>

**Website**

[www.microchip.com/mplabx](http://www.microchip.com/mplabx)

MPLAB 8.x is the last version of the legacy MPLAB IDE technology, custom built by [Microchip Technology](#) in Microsoft [Visual C++](#). MPLAB supports project management, editing, debugging and programming of Microchip 8-bit, 16-bit and 32-bit [PIC microcontrollers](#). MPLAB only works on [Microsoft Windows](#). MPLAB is still available from Microchip's archives, but is not recommended for new projects.<sup>[18]</sup>

MPLAB supports the following compilers:<sup>[18]</sup>

- MPLAB MPASM Assembler
- MPLAB ASM30 Assembler
- MPLAB C Compiler for PIC18
- MPLAB C Compiler for PIC24 and dsPIC DSCs
- MPLAB C Compiler for PIC32
- HI-TECH C