

MPLAB® ICD 5 In-Circuit Debugger and Programmer



Summary

The MPLAB® ICD 5 In-Circuit Programmer and Debugger offers advanced connectivity and power options for developers of designs based on PIC®, AVR® and SAM devices and dsPIC® Digital Signal Controllers (DSCs). It debugs and programs with the powerful and easy-to-use graphical user interface of MPLAB X Integrated Development Environment (IDE). This next-generation tool offers a variety of capabilities and features that you would normally find in more expensive products to speed up your development and reduce your debug time.

It supports Fast Ethernet and Power over Ethernet Plus (PoE+) for power and Ethernet connectivity for debugging and programming, which enables remote development and isolates your application from environmental conditions.



Advantages

- **Convenient, flexible and easy to power up**
 - PoE+ (IEEE® 802.3at) offers convenient and flexible option to power up the debugger/programmer and deliver power to the target
 - USB Type-C® cable interface makes it easy to connect to a PC
- **Faster, more feature-rich development experience**
 - High-Speed USB 2.0 host PC interface with USB speed of 480 Mbps for faster data transfer rates
 - Ethernet connectivity supporting speeds up to 100 Mbps
 - Wired/DHCP/APIAP IP addressing
 - Static IP addressing
- **Remote development and isolation from environmental conditions**
 - Ethernet communication for debugging and programming allows you to:
 - Access target remotely, with the debugger and target in one location and the PC in another location
 - Isolate your application as needed by placing target in a controlled environment separate from the PC
- **Rapid software development using CI/CD system**
 - Debugger/programmer enables Continuous integration/Continuous Delivery (CI/CD) over Ethernet via hardware in the loop
 - MPLAB X IDE CI/CD wizard makes it easy to set up your system for Jenkins or Docker programs
- **Optimizes designs for power**
 - Power monitoring allows you to optimize your design's power consumption
 - Captures power data, such as current and voltage values
 - Works with MPLAB Data Visualizer, which graphically analyzes power data
- **Cuts debug time**
 - Support for instrumented trace via the Arm® Serial Wire Debug (SWD) interface
 - Flexible options allow you to choose from a variety of debugging and programming interfaces
 - Adapter boards available that are compatible with Arm® ecosystem connectors
 - Also support JTAG, SWD, ICSP programming capability protocols
- Wide target voltage ranges from 1.2V to 5.5V

Supported Products

The MPLAB ICD 5 In-Circuit Debugger and Programmer supports all PIC, AVR and SAM MCUs, dsPIC DSCs and SAM MPUs. The firmware will be updated regularly to add support for new devices. View the latest release notes located within MPLAB X IDE to see the most current list of devices supported. Visit www.microchip.com/MPLAB for more information.

Host System Requirements

- Available USB 2.0 port
- Microsoft Windows® 10 or later, macOS® and Linux® operating systems
- MPLAB X IDE version 6.10 or later

Ordering Information

Part Number	Description	Availability
DV164055	MPLAB® ICD 5 In-Circuit Debugger Kit: One MPLAB ICD 5 In-Circuit Programmer/Debugger One USB cable One adapter board and cables	Now

Other Development Tools from Microchip

Part Number	Development Tool	Description
AC102015	Debugger Adapter Board	This adapter board provides Arm® ecosystem connectors supports JTAG, SWD, ICSP protocols
SW006023-FSN	MPLAB® XC32 PRO Functional Safety Compiler Network Server License	TÜV SÜD-certified compiler license package that supports 32-bit PIC® and SAM MCUs and 32-bit MPUs
SW006023-3	MPLAB XC32 C/C++ PRO Compiler Workstation License	C/C++ compiler license for 32-bit PIC and SAM MCUs