MPLAB® Code Coverage

Summary

The MPLAB® Code Coverage tool is an easy way to measure code coverage. Simply enable the feature in MPLAB X Integrated Development Envinronment (IDE) and build, program, test your application and read the Microcontroller (MCU). The MPLAB Code Coverage tool quickly displays which lines of code have executed and which ones have not. Unlike other solutions, it runs untethered and self-contained so no need to add clumsy cabling or fragile wires. With minimal impact to code size (<1%) and execution speed, testing can be completed in a single execution pass, avoiding expensive test hardware with a larger MCU. Powerful, intuitive tools permit quick navigation of coverage results within MPLAB X IDE for smooth transitions between test suite development and analysis. Summary views offer configurable dashboards of critical results. Custom reports can be generated in HTML and CSV formats with selectable content to meet your specific quality certification needs. MPLAB Code Coverage builds confidence in your application testing process without the hassle.

MPLAB Code Coverage is a licensed product that works in tandem with any MPLAB XC C compiler, either with an MPLAB XC PRO license or not. With an MPLAB Code Coverage license, code coverage percentage, analytical and navigational tools, dashboards, summaries and reports are provided inside MPLAB X IDE.

Fully integrated into MPLAB X IDE, the tool seamlessly integrates into the developer's project. Unique colors indicate which lines of source code have been executed. Intuitive navigation tools can quickly dive into files and functions to find unexecuted code. Configurable dashboards instantly update after the MCU is read to show how well testing meets your specific quality metrics. Summary Views provide lists of statement and instruction coverage. They also show coverage percentage, number of lines covered and total lines for each function in the source file. Reports can be customized with user-selectable content to show what's covered and what's not and can be exported in CVS or HTML formats to align with your quality process requirements.

Advantages

Runs Untethered

- No bulky cables or fragile wires
- No hardware modifications needed

Minimal Impact to Program Memory and Execution Speed

- Adds <1% typically to code size
- Full analysis can be done in a single execution pass

Fully Integrated Into MPLAB X IDE

- Source code lines highlighted to show which lines executed or not
- Navigation tools quickly move between files and functions

Configurable Summary View

- Dashboards quickly indicate key metrics
  - Sortable, collapsible list of statement and instruction coverage
  - Coverage percentage
  - Number of executed and total lines

Custom Reports

- Output source files view and summary view information
- User-selectable content
- Multiple output formats; HTML or CSV

MPLAB XC Compiler Compatible

- One license works for any MPLAB XC Compiler, with or without an MPLAB XC PRO license
- Available as a workstation license

Cost Effective

- Better performance, simpler solution at a fraction the cost of competitor offerings
- Perpetual license with free version upgrades

www.microchip.com/mplab/codecoverage

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Products Supported

The MPLAB Code Coverage supports PIC®, AVR® and SAM MCUs and dsPIC® Digital Signal Controllers (DSCs) through MPLAB X IDE and the product's respective compiler, MPLAB XC8, MPLAB XC16 or MPLAB XC32. For the most current list of supported parts, review the latest release notes located in MPLAB XC Compiler and MPLAB X IDE directories.
Visit www.microchip.com/mplab/compilers or www.microchip.com/mplabx to download free of charge.

Host System Requirements

Microsoft Windows® 7 or later, MacOS® and Linux® operating systems

Ordering Information

Part Number	Description	Availability
SW006026-COV	MPLAB® Code Coverage	Now

MPLAB Code Coverage is available as a download from Microchip Purchasing and Client Services (microchip.com/purchase) or as a hardcopy license from any of Microchip's distributor partners.

Other Development Tools from Microchip

Part Number	Description	Comments
SW006021-FS	MPLAB® XC8 Functional Safety Compiler License	Supports 8-bit PIC® and AVR® MCUs
SW006022-FS	MPLAB XC16 Functional Safety Compiler License	Supports 16-bit PIC MCUs and dsPIC® DSCs
SW006023-FS	MPLAB XC32 Functional Safety Compiler License	Supports 32-bit PIC and SAM MCUs
SW006021-2	MPLAB XC8 PRO Workstation License	Supports 8-bit PIC and AVR MCUs
SW006022-2	MPLAB XC16 PRO Workstation License	Supports 16-bit PIC MCUs and dsPIC DSCs
SW006023-3	MPLAB XC32 PRO Workstation License	Supports 32-bit PIC and SAM MCUs

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