# MPLAB® Analysis Tool Suite

## Summary

MPLAB® Analysis Tool Suite is a collection of analysis tools integrated into the MPLAB X Integrated Development Environment (IDE). It supports all our microcontrollers (MCUs), microprocessors (MPUs), digital signal controllers (DSCs) and CEC devices and offers a code coverage feature and a Motor Industry Software Reliability Association (MISRA®) check in the IDE. The code coverage feature provides visibility to the parts of your code that have been executed and works together any MPLAB XC Compiler, while the MISRA check in the IDE provides static code checking to ensure safe, secure, portable and reliable C code in embedded systems.

MPLAB Analysis Tool Suite is a licensed product that works in tandem with any MPLAB XC Compiler and available as Workstation and Network Server Licenses. These licenses come with 12 months of High Priority Access (HPA), which can be renewed annually.

## Advantages

### MISRA Check

#### Fully Integrated Into MPLAB X IDE

- Run static code analysis against MISRA C:2012 rule set to ensure high code quality
- Execute MISRA checker from MPLAB X Integrated Development Environment (IDE) menus (as part of a post-build step) or from the command line
- Check a single file or entire project
- View violations to the MISRA rules in output view and navigate to the affected source code location quickly and easily

#### Customizable MISRA Check Tab View

- Select or deselect application of specific MISRA rules for all files
- Add comments in code to disable a specific rule to a specific line of code
- Save or restore selection of applied rule sets
- Extend or update the applied rule checking using the custom Cppcheck path

### Custom Reports

- Create reports to document quality
- Create summary of rule violations with list of rules applied and checked
- Output reports in HTML or CSV

## Code Coverage

### Fully Integrated into MPLAB X IDE

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

### Configurable Summary View

- Dashboards that quickly indicate key metrics
- Sortable, collapsible list of statement and instruction coverage
- Display includes coverage percentage and number of executed and total lines

### Custom Reports

- Ability to output view and summary view information for source files
- User-selectable content
- HTML or CSV output formats

## Host System Requirements

The MPLAB Analysis Tool Suite requires Microsoft Windows® 10 or later, MacOS® or Linux® operating systems.

- MPLAB X IDE version 6.00 or higher and one of the following versions of MPLAB XC Compiler:
  - MPLAB XC8 v2.35
  - MPLAB XC16 v2.0* to be released soon
  - MPLAB XC32 v4.0

## Ordering Information

| Part Number | Description | Availability |
|---|---|---|
| SW006027-2 | MPLAB® Analysis Tool Suite Workstation License | Now |
| SW006027-2N | MPLAB Analysis Tool Suite Network Server License | Now |
| SW006027-2H | MPLAB Analysis Tool Suite HPA Workstation License | Now |
| SW006027-2NH | MPLAB Analysis Tool Suite HPA Network Server License | Now |

## 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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