

PlatformIO is an open source ecosystem for IoT development

Cross-platform build system and library manager. Continuous and IDE integration. Arduino, ESP8266 and ARM mbed compatible.

- **PlatformIO IDE** - The next-generation integrated development environment for IoT. C/C++ Intelligent Code Completion and Smart Code Linter for the super-fast coding. Multi-projects workflow with Multiple Panes. Themes Support with dark and light colors. Built-in Terminal with [PlatformIO Core](#) and support for the powerful Serial Port Monitor. All advanced instruments without leaving your favorite development environment.
- **Development Platforms** - Embedded and Desktop development platforms with pre-built toolchains, debuggers, uploaders and frameworks which work under popular host OS: Mac, Windows, Linux (+ARM)
- **Embedded Boards** - Rapid Embedded Programming, IDE and Continuous Integration in a few steps with PlatformIO thanks to built-in project generator for the most popular embedded boards and IDE
- **Library Manager** - Hundreds Popular Libraries are organized into single Web 2.0 platform: list by categories, keywords, authors, compatible platforms and frameworks; learn via examples; be up-to-date with the latest version

Atmel AVR & SAM, Espressif, Freescale Kinetis, Nordic nRF51, NXP LPC, Silicon Labs EFM32, ST STM32, TI MSP430 & Tiva, Teensy, Arduino, mbed, libOpenCM3, etc.

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Embedded Development. *Easier Than Ever.*

- Colourful command-line output
- [IDE Integration](#) with *Arduino, Atom, CLion, Eclipse, Emacs, Energia, Qt Creator, Sublime Text, Vim, Visual Studio*
- Cloud compiling and [Continuous Integration](#) with *AppVeyor, Circle CI, Drone, Shippable, Travis CI*
- Built-in [Serial Port Monitor](#) and configurable build -flags/-options
- Pre-built toolchains, [Frameworks for the Development Platforms](#)

Smart Build System. *Fast and Reliable.*

- Reliable, automatic dependency analysis and detection of build changes

- Improved support for parallel builds
- Ability to share built files in a cache
- Lookup for external libraries which are installed via [Library Manager](#)

The Missing Library Manager. *It's here!*

- Friendly Command-Line Interface
- Modern [Web 2.0 Library Search](#)
- Library dependency management
- Automatic library updating
- It runs on Windows, Mac OS X, and Linux (+ARM).

For further details, please refer to [What is PlatformIO? How does it work?](#)

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Configuration

- platformio.ini
 - Dynamic variables
 - Section `[platformio]`
 - Section `[env:NAME]`
 - Examples
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 - General
 - Building
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Instruments

- Development Platforms
 - Embedded
 - Platform `atmelavr`
 - Platform `atmelsam`
 - Platform `espressif32`
 - Platform `espressif8266`
 - Platform `freescalekinetis`
 - Platform `intel_arc32`
 - Platform `lattice_ice40`
 - Platform `microchippic32`
 - Platform `nordicnrf51`
 - Platform `nxplpc`
 - Platform `siliconlabsefm32`
 - Platform `ststm32`
 - Platform `teensy`
 - Platform `timp430`
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 - Desktop
 - Platform `native`
 - Platform `linux_arm`
 - Platform `linux_i686`
 - Platform `linux_x86_64`
 - Platform `windows_x86`
- Embedded Boards
 - 4DSYSTEMS
 - 96Boards
 - Adafruit
 - Aiyarafun
 - April Brother

- [Arduboy](#)
- [Arduino](#)
- [Armstrap](#)
- [Atmel](#)
- [BBC](#)
- [BQ](#)
- [BitWizard](#)
- [CQ Publishing](#)
- [Delta](#)
- [Digilent](#)
- [Digistump](#)
- [Doit](#)
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- [ESPert](#)
- [ESPino](#)
- [Electronic SweetPeas](#)
- [Elektor Labs](#)
- [Embedded Artists](#)
- [Engduino](#)
- [EnviroDIY](#)
- [Espotel](#)
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- [FPGAwards](#)
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- [Fubarino](#)
- [GHI Electronics](#)
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- [Intel](#)
- [JKSoft](#)
- [Lattice](#)
- [LeafLabs](#)
- [LightUp](#)
- [Linino](#)
- [LowPowerLab](#)
- [MakerAsia](#)
- [McuDude](#)
- [Microduino](#)
- [Micromint](#)
- [MikroElektronika](#)
- [MultiTech](#)
- [NGX Technologies](#)
- [NXP](#)
- [NodeMCU](#)

- Noduino
 - Nordic
 - Olimex
 - OpenBCI
 - OpenEnergyMonitor
 - Outrageous Circuits
 - PONTECH
 - PanStamp
 - Pinoccio
 - Pololu Corporation
 - Punch Through
 - Quirkbot
 - RFduino
 - Raspberry Pi
 - RedBearLab
 - RepRap
 - SODAQ
 - ST
 - SainSmart
 - Samsung
 - Sanguino
 - SeeedStudio
 - Semtech
 - Silicon Labs
 - Smeshlink
 - Solder Splash Labs
 - SparkFun
 - SparkFun Electronics
 - SweetPea
 - Switch Science
 - TI
 - Teensy
 - ThaiEasyElec
 - TinyCircuits
 - UBW32
 - WEMOS
 - WeMos
 - Wicked Device
 - chipKIT
 - element14
 - makerlab.mx
 - u-blox
 - ublQio
 - y5 design
- Frameworks

- Framework `arduino`
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- Custom Platform & Board
 - Custom Development Platform
 - Packages

- Manifest File `platform.json`
- Build Script `main.py`
- Installation
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- Custom Embedded Board
 - JSON Structure
 - Installation
 - Examples

PlatformIO Plus

- PIO Remote™
 - Features
 - Technology
 - Quick Start
 - User Guide (CLI)
 - `platformio account`
 - `platformio remote`
- Unit Testing
 - Demo
 - Test Types
 - Desktop
 - Embedded
 - Test Runner
 - Local
 - Remote
 - Design
 - Workflow
 - API
 - User Guide (CLI)
 - `platformio test`
 - `platformio remote test`
 - Test “Blink” Project
 - Project structure
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 - Test results
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Library Manager

- Quickstart
 - Project dependencies
- User Guide
 - Usage
 - Options

- Demo
- Commands
- Library Dependency Finder (LDF)
 - Storage
 - Dependency Finder Mode
 - Compatibility Mode
 - C/C++ Preprocessor conditional syntax
- library.json
 - `name`
 - `description`
 - `keywords`
 - `authors`
 - `repository`
 - `version`
 - `license`
 - `downloadUrl`
 - `homepage`
 - `export`
 - `frameworks`
 - `platforms`
 - `dependencies`
 - `examples`
 - `build`
- Creating Library
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Integration

- Cloud & Standalone IDE
 - Cloud IDE
 - Standalone IDE
- Continuous Integration
 - AppVeyor
 - Circle CI
 - Drone
 - Shippable
 - Travis CI

Miscellaneous

- Articles about us
 - 2017

- [2016](#)
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 - [2014](#)
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 - [Troubleshooting](#)
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Built with [Sphinx](#) using a theme provided by [Read the Docs](#).