
Next-generation IDE for your RISC-V Product in 20 Minutes

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Agenda

- Who needs an IDE
 - Own or commercial
 - Yet another IDE
 - PlatformIO
 - Integration Guide
-

Who needs IDE?

Engineers

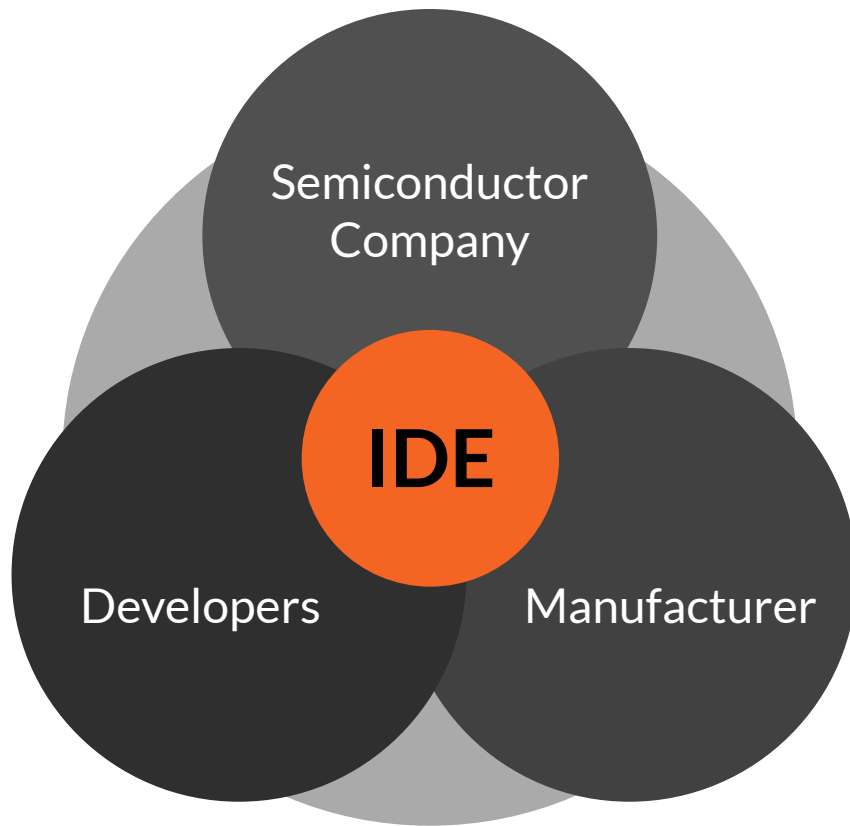
- **Hardware**
Base Integration
- **Embedded**
HAL, SDK, Application
- **Non-professional**
Makers, Students

Manufacturers

- **Hardware**
Boards, Modules
- **Software**
BSP, Framework, SDK, Libraries
- **Tools**
Debug probes

Chip Vendors

- **Hardware**
IP Core, Chips, Dev-Kits
- **Software**
BSP, Framework, SDK
- **Updates**
Software, Examples, Configuration
- **Trainings**
Tutorials, Webinars



What is common?

Create Own IDE or use Commercial?

		Own	Commercial	Why Own IDE?
1	Free	✓	✗	<ul style="list-style-type: none">• Open source, transparent, secure• No trial version and restrictions• Free for commercial using
2	Democracy	✓	✗	<ul style="list-style-type: none">• Any OS , any Editor• Native products integration• 3rd Party SDKs and Toolchains
3	Management	✓	✗	<ul style="list-style-type: none">• Release management• Instant feedback and communication• Secure updates
4	Effortless	✗	✓	<ul style="list-style-type: none">• 6+ months• \$100K - \$1M• High Risk

Yet another IDE?

01	Code. Build. Debug.	<ul style="list-style-type: none">• Which editor?• Which build system?• Which debug probes? Emulators?
02	Portability	<ul style="list-style-type: none">• Operating systems• Hybrid configuration• Reproducibility
03	Integration	<ul style="list-style-type: none">• Boards, SDKs, Libraries• CI & CD Services• Static Code Analyzers, Unit Testing
04	Adoption	<ul style="list-style-type: none">• Build community• Enterprise market• Tutorials
05	Cost	<ul style="list-style-type: none">• Development & Marketing• Maintenance & Technical Support• Time to Market

PlatformIO

A new generation ecosystem
for embedded development

~~Yet another IDE?~~ No, PlatformIO!

01

Code. Build. Debug.

- Over 10+ IDEs and Editors
- SCons with backends for Make, CMake, ...
- Disassembly, Peripheral Registers, Emulator

02

Portability

- All popular operating systems
- Hybrid configurations
- Full reproducibility

03

Integration

- Boards, SDKs, Libraries
- CI & CD Services
- Static Code Analyzers, Remote Unit Testing

04

Adoption

- The largest embedded community
- Trusted by global innovators
- Video tutorials, examples, use cases

05

Cost

- **FREE** (just dev/platform integration)
- Maintenance & technical support
- **1-3 weeks** time to market



PlatformIO Integration Guide

1. **Development Platform** → *platform.json, dependencies*
 2. **Build & Upload Scripts** → *pure Python, based on PlatformIO Core and SCons APIs*
 3. **Board Configuration** → *building, uploading, debugging*
 4. **Cross-platform Packages** → *compiler, upload tool, emulator, debug server*
 5. **Publishing** → *PlatformIO Registry, JFrog Bintray CDN.*
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Developers love PlatformIO

- Over 2,000,000 downloads
- 5,000+ stars on Github
- 750+ boards and dev/kits
- 30+ dev/platforms and architectures
- 150+ countries over the globe
- **The most rated** extension on Microsoft Marketplace

*“After I discovered PlatformIO. I have never looked back. It is true open source development platform, not for only selected brands like others”,
- Community*

You make the best product



We make developers happy!
