Product brief

ModusToolbox™ Software and Tools
Easy. Reliable. Modern.

ModusToolbox™ is what you need to get started with the IoT. It is a collection of easy-to-use software and tools enabling rapid development of Infineon MCUs, covering applications from embedded sense and control to wireless and cloud-connected systems using AIROC™ Wi-Fi, AIROC™ Bluetooth® and AIROC™ Wi-Fi and Combo devices.
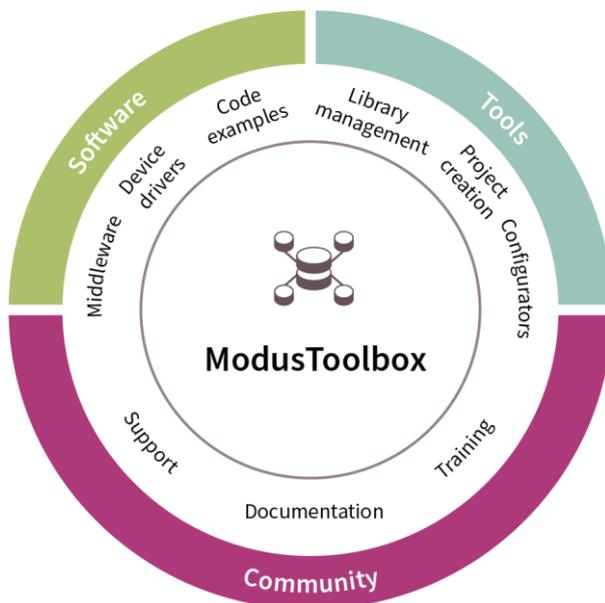
With ModusToolbox, you don't have to choose between closed, proprietary flows that struggle to keep pace with modern innovations and open platforms that fail to support the unique features and value of their target device.

ModusToolbox is the "best of both worlds" platform that delivers a wonderful development experience, increased productivity, and feature-rich, bullet-proof applications.

ModusToolbox was built to make your life easier and more efficient by removing development barriers and allowing you to deliver quality products to market faster.

Key benefits

› Flexible and easy-to-use software development kit with prebuilt best-performing functionalities
› Seamless combination of reusable code and applications
› Rich solution toolset allowing software developers to be more efficient, remove development barriers and deliver quality products to market faster
› Reduce the risk of errors, improve interoperability by leveraging world-class, ready-to-use software components, code and applications
› Infineon is a trusted partner for 8 of the top 10 IoT companies
› More than 3 billion IoT chips sold

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We've worked hard to make sure you have a great experience using ModusToolbox, and it's the run-time software that delivers the real value to your application. Everything – board support packages, peripheral APIs, middleware and code examples - is hosted on Github and provided under an open source license. You can learn about the software by browsing the documentation in every library before you even install the tools.

Easy development with middleware libraries and configurators

ModusToolbox middleware makes it easy to access to the unique value of Infineon devices: the configurators and tuners make setting up the underlying hardware easy, simple and error-free. This combination of technologies provides a highly optimized implementation and intuitive programming interface to Infineon's key technology areas. ModusToolbox includes:

> **Cloud connectivity** - Native support for AIROC™ Wi-Fi, full network stack, and built-in support for leading cloud platforms.
> **Device security** - PSA and PKCS#11 libraries enable access to secure services provided by the Cortex-M0+ core in dual-core PSoC 64 Secure MCUs.
> **Network security** - TLS is built into the ModusToolbox connectivity libraries and made easy to use with a secure socket API.
> **Low power assist** - Low power assist filters unnecessary wakeup events from the network on the connectivity device to keep the host MCU asleep and optimize power consumption.
> **CapSense** - The gold standard for mechanical button replacement, providing unmatched SNR and a self-calibrating baseline sensitivity algorithm.
> **Coexistence** – ModusToolbox automatically balances the bandwidth load between Wi-Fi and Bluetooth communications using the Serial Enhanced Coexistence Interface.
> **Bluetooth** - AIROC™ Bluetooth is the industry's most widely-used stack supporting Classic, Low Energy and Bluetooth Mesh operations.
> **Machine learning** - Software workflow for optimizing and deploying ML models, enabling rapid model benchmarking and validation and application-optimized Neural Net kernels.

ModusToolbox is all about making life easier for developers. From project creation to product deployment, ModusToolbox has labor-saving tools and utilities that form a complete development environment which can be integrated into established development flows or swapped out for preferred alternatives.

Technical support and useful resources

> Download the latest ModusToolbox
> View code examples in the ModusToolbox GitHub Repository
> Join the Cypress Developer Community to access online documentation, online videos, regular live developer trainings and more.

Please note!

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Additional information

For further information on technologies, our products, the application of our products, delivery terms and conditions and/or prices, please contact your nearest Infineon Technologies office (www.infineon.com).

Warnings

Due to technical requirements, our products may contain dangerous substances. For information on the types in question, please contact your nearest Infineon Technologies office.

Except as otherwise explicitly approved by us in a written document signed by authorized representatives of Infineon Technologies, our products may not be used in any life-endangering applications, including but not limited to medical, nuclear, military, life-critical or any other applications where a failure of the product or any consequences of the use thereof can result in personal injury.