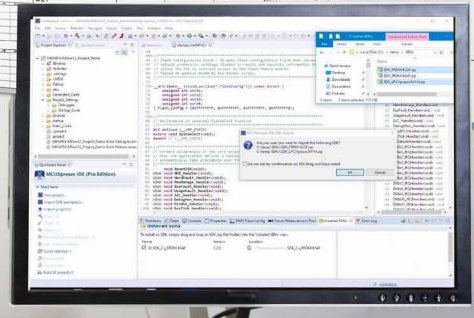




Product Launch



Unified tool suite for embedded software development

MCUXpresso Software and Tools for NXP's Arm® Cortex®-M-Based MCUs

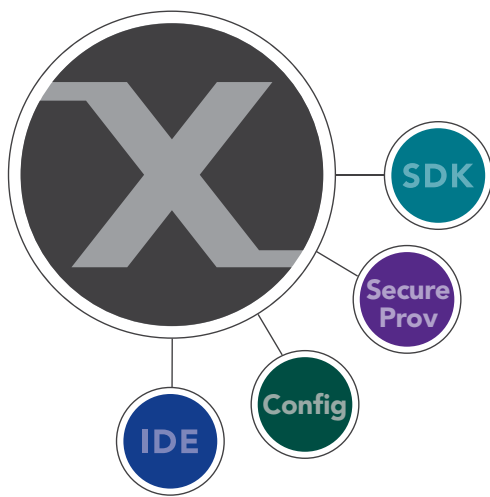
The MCUXpresso SDK, IDE, secure provisioning and configuration tools help speed up development time with high-quality software and tools for general purpose, crossover and Bluetooth™ Arm Cortex-M-based MCUs from NXP.

NXP's MCUXpresso software and tools offer comprehensive development solutions designed to optimize, ease and help accelerate embedded system development of applications based on Arm® Cortex®-M core devices from NXP, including its general purpose, crossover and Bluetooth MCUs.

The common set of MCUXpresso software and tools offers designers a high-quality and flexible toolset and software framework that includes:

- ▶ An open-source **software development kit (SDK)** built specifically for your processor and evaluation board selections
- ▶ An easy-to-use **integrated development environment (IDE)** with integrated configuration tools for creating, building and debugging and optimizing your application
- ▶ A comprehensive suite of system **configuration tools**, including pins, clocks, peripherals, trusted execution environment and device startup, with easy project updating and code generation
- ▶ A **programming and secure provisioning tool** for certificate and key management, secure image preparation, and device provisioning and programming

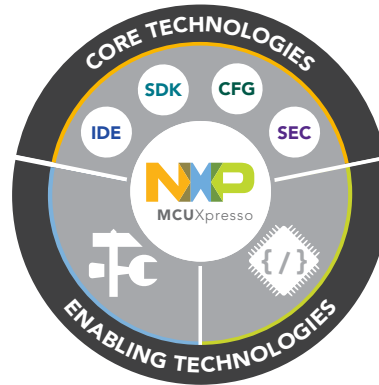
MCUXpresso SOFTWARE AND TOOLS



MCUXpresso ECOSYSTEM

A cohesive approach shared across the MCUXpresso SDK, IDE, secure provisioning tool, and configuration tools brings inherent compatibility. The configuration tools, SEC tool and SDK offer the same synergistic development flow when using select third-party partner IDEs.

Augmented by enabling tools and software technologies from NXP and its lead partners, MCUXpresso provides enhanced efficiency from evaluation through product development to production and deployment.



MCUXpresso SDK

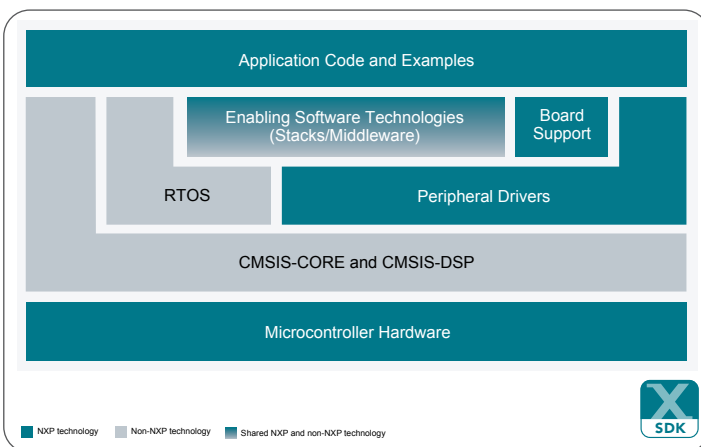


Created as a software framework and reference for application development with NXP's Arm Cortex-M-based MCUs, MCUXpresso SDK includes production-grade software with integrated RTOS (optional), integrated enabling software technologies (stacks and middleware) from NXP and its partners, reference software and more. Underscoring our commitment to high quality, the MCUXpresso SDK is MISRA-compliant and checked with Coverity® static analysis tools. SDK packages are available in custom downloads based on user selections of MCU, evaluation board and optional software components. In addition to working well with the MCUXpresso IDE, the MCUXpresso SDK also supports and provides example projects for IAR, Keil®, and GCC with Cmake.

Learn more at

www.nxp.com/mcuxpresso/sdk

MCUXpresso SDK



MCUXpresso IDE

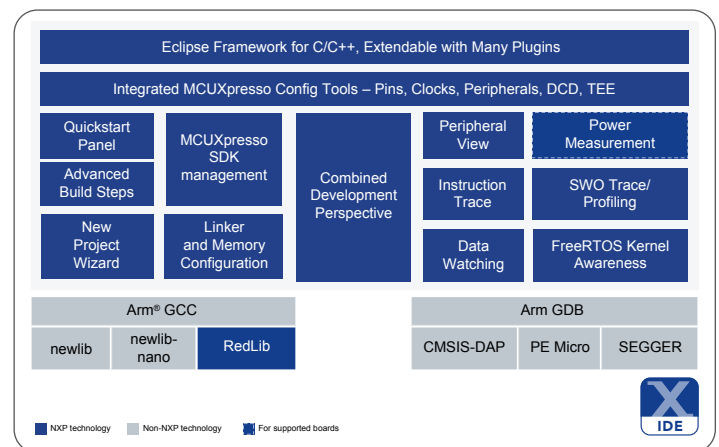


The GNU and Eclipse-based MCUXpresso IDE provides developers with an easy-to-use development environment for general purpose, crossover and Bluetooth Arm Cortex-M-based MCUs from NXP. Full-featured and not limited by code size, MCUXpresso IDE provides an intuitive and powerful interface for professional editing, compiling and debugging at no cost. The MCUXpresso IDE offers integrated configuration tools, profiling, power measurement on supported boards, GNU tool integration and library, multicore-capable debugger, profiling, trace functionality and more. MCUXpresso IDE debug connections support Freedom, Tower®, LPCXpresso, i.MX RT EVK and custom development boards with widely popular commercial debug probes including OpenSDA probes and LPC-Link2 from NXP, PE Micro probes and SEGGER J-Link.

Learn more at

www.nxp.com/mcuxpresso/ide

MCUXpresso IDE



MCUXpresso CONFIG TOOLS

Offered as a suite of evaluation and configuration tools, MCUXpresso Config Tools greatly simplify the task of MCU and driver configuration, from initial evaluation to production.



The Config Tools provide pin, clock and peripheral configuration and generate initialization C code for use within MCUXpresso SDK projects. Additional tools are enabled on supported devices, such as the trusted execution environment (TEE) tool for Cortex-M33-based microcontrollers, and device configuration data (DCD) and SEMC memory configuration and validation tools for i.MX RT crossover MCUs.

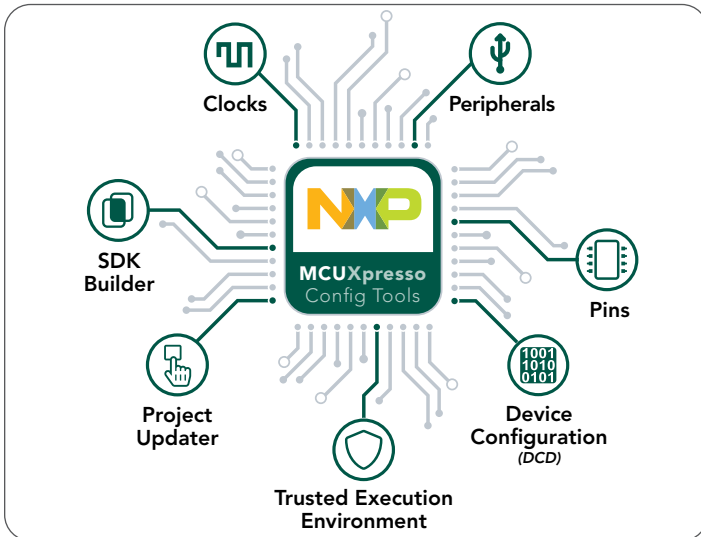
The configuration tools are available directly within the MCUXpresso IDE as Config Tool perspectives, enabling seamless project updates and the coordination of peripheral drivers and device package selections.

The MCUXpresso Config Tools can also be downloaded standalone for use with IAR and Keil IDE projects, or for use independent of a toolchain project. The standalone MCUXpresso Config Tools enable easy project updating to the project directory structure and SDK example cloning for use with third-party IDEs and toolchains.

Learn more at

www.nxp.com/mcuxpresso/config

MCUXpresso CONFIG TOOLS



Get Started:

www.nxp.com/mcuxpresso

Join the MCUXpresso community: <https://community.nxp.com/community/mcuxpresso>

Professional Support & Services: www.nxp.com/services

MCUXpresso SECURE PROVISIONING TOOL



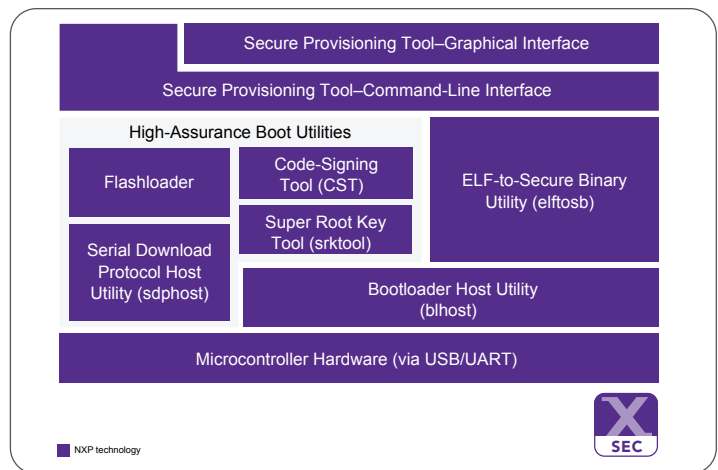
The MCUXpresso secure provisioning tool (SEC) enables programming and secure provisioning through certificate and key management, secure image preparation, and device provisioning and programming. The MCUXpresso SEC offers a GUI-based application aimed at simplifying the generation and provisioning of bootable executables on NXP MCUs. It is built upon existing security enablement utilities and takes advantage of the breadth of programming interfaces provided by the BootROM capabilities on security-focused devices.

The graphical interface provides an intuitive image preparation flow, making it simple to prepare and flash secure applications and program fuses and OTP memory, while providing access to command line instructions to underlying utilities for offline scripting. The underlying utilities available as part of the MCUXpresso SEC application are the MCU bootloader host application (blhost) and ELF-to-Secure binary conversion tool (elftosb), as well as high-assurance boot specific utilities, including the serial download protocol host application (sdphost) and code-signing tool (CST) with super root key generation (srktool). Advanced scripting can be achieved using the command-line interface. Users can customize even more advanced secure provisioning flows by modifying scripts that the tool generates.

Learn more at

www.nxp.com/mcuxpresso/secure

MCUXpresso SECURE PROVISIONING TOOL



www.nxp.com/mcuxpresso

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Document Number: MCUXPRESSOFS REV 5