The LPCXpresso IDE is a comprehensive, highly-integrated Eclipse-based IDE software development toolchain for NXP LPC microcontrollers based on Cortex-M, ARM7, and ARM9 cores. It features the industry standard GNU toolchain with our own optimized C libraries, and the latest version of Eclipse with many ease-of-use and Microcontroller specific enhancements to simplify development with NXP LPC microcontrollers. NXP is continually updating the LPCXpresso IDE to make sure the latest advances from ARM's compiler development team and the Eclipse Foundation are available for your LPC projects. Being based on Eclipse, the LPCXpresso IDE also allows plugins to support an ever-growing set of specialist tools.

The LPCXpresso IDE is available for 32-bit and 64-bit versions of Windows, popular versions of Linux. and Apple Mac OS X

LPCXpresso Free and Pro Editions

LPCXpresso IDE development tools are free to download and use for LPC customers. Two Editions are available, Free and Pro, differing by code size, some trace features, and support.

The Free Edition supports application code size up to 256 kB, while technical support is provided by LPCXpresso community forums hosted on lpcware.com. The Pro Edition includes unlimited code size, all trace features, and expert email support from NXP engineers.

The LPCXpresso IDE Pro version also includes:

- Enhanced trace and profiling features

- One year of email-based support from NXP engineers in addition to free Forum-based support

- Simple upgrade and activation: buy and activate a Pro license within your installed LPCXpresso IDE, no additional downloads are required.

All IDE versions include the following features:

Complete C/C++ integrated development environment

- Eclipse-based IDE with many ease-of-use enhancements

- Can be enhanced with many Eclipse plugins

- Built-in CVS source control; GIT, Subversion, TFS, and others are available for download

- Command-line tools included for integration into build, test, and manufacturing systems

- Industry-standard GNU toolchain, including C and C++ compilers, assembler, and linker, including converters for SREC, HEX, and binary

Fully featured debugger supporting JTAG and SWD

- Built-in flash programming

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- High-level and instruction-level debug

- Views of CPU registers and on-chip peripherals

- Support for multiple devices on JTAG scan-chain

- Device-specific support for LPC Cortex-M-, ARM7-, and ARM9-based MCUs

Library and Project support

- Redlib: a size-optimized, small-footprint embedded C library unique to LPCXpresso

- Fully featured and size-optimized versions of Newlib C and C++ libraries

- Full support for LPCOpen libraries (stacks, drivers, middleware, etc.), which includes Cortex Microcontroller Software Interface Standard (CMSIS)

- Linker scripts automatically generated for correct placement of code and data into Flash and RAM

- Device-specific startup code and initialization provided

- No assembler required with Cortex-M based MCUs

Trace and profiling (for evaluation boards and LPC-Link2 debug probes)

- Instruction-level debugging via Embedded Trace Buffer (ETB) on LPC4300 and LPC1800 family devices, and Micro Trace Buffer (MTB) for LPC microcontrollers based on Cortex M0+

- Instruction profiling and Interrupt tracing

- Data watch tracing(A single data watch on Free Edition, up to 4 on Pro Edition)

Red State: State machine designer and code generator

- Graphically design your state machines

- Generates standard C code

- Supports state configurable timer/PWM (SCTimer/PWM) and software state machines

Power measurement tool for LPCXpresso54100 family

- Graphical power measurement and data download for LPCXpresso54102 and LPC54102 Sensor Processing/Motion Solution kit

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