LPCXpresso IDE latest release: 8.1.4

To download installers for all platforms, please visit:
http://www.nxp.com/lpcxpresso
Current Release

**LPCXpresso 8.1.4 (build 606)**
Mid-March 2016

Changes in this release include:

- Fixed issue with some debugger writes to memory silently failing

Previous releases

**LPCXpresso 8.1.2 (build 603)**
March 2016

Changes in this release include:

- Fixed issue with IDE failing to boot debug Linkserver on certain non-English Windows variants
- Fixed issue triggering GDB to occasionally crash when debugging interrupt handlers
- Upgraded Eclipse to Mars SR2 (4.5.2) and CDT 8.8.1

**LPCXpresso 8.1.0 (build 597)**
February 2016

Changes in this release include:

- Upgraded GNU tools to ARM launchpad GCC 5
- Added support for LPC5411x devices
- Updated LPC-Link2 CMSIS-DAP firmware, providing probe serial number support and additional power measurement functionality
- Support for debugging via multiple LPC-Link2 probes concurrently using the latest CMSIS-DAP probe firmware
- All Cortex-M debug connections are now made via Redlink LinkServer
- Project wizard mechanism updated to add -fno-common compiler option and -print-memory-usage linker option to new projects
- IDE no longer compares Freemarker linker script with a linker script created by the pre-LPCXpresso IDE v7.90 linker script generator
- Makefile projects now correctly save MCU settings, including memory configuration and flash drivers (required for debugging)
- "Average Power" view added to complement existing "Power Measurement Tool" view (for use with latest CMSIS-DAP firmware on LPCXpressoV3 boards)
- Fixed issue with GUI / command-line flash programmer when programming images with certain complex layouts
LPCXpresso IDE latest release: 8.1.4

- Fixed issue when connecting in attach mode to LPC18xx/LPC43xx projects that use the Generic SPIFI flash driver
- Old SPIFI flash drivers for LPC18xx/LPC43xx removed and replaced by copies of the Generic SPIFI driver
- Documentation restructured, splitting the old User Guide up into several manuals
- Resolved issues with LPC-Link1 booting on Mac OS X 10.11 El Capitan. The use of Mac OS X 10.11.3 or later is recommended
- LPC-Link2 Redlink firmware is no longer provided or supported. Use the default CMSIS-DAP firmware instead
- "Red Trace" (SWO Trace via Red Probe+) is no longer supported. Use SWO Trace via LPC-Link2 instead

LPCXpresso 8.0.0 (build 526)
November 2015

Changes in this release include:

- Upgraded Eclipse to Mars SR1 / CDT 8.8 (plus Java 1.8)
- Upgraded GNU tools to ARM launchpad GCC 4.9 update 3
- Support for multiple flash drivers within a single project
- Generic SPIFI flash driver source project debug build fixed so that it will execute on parts with internal flash (and less RAM)
- SWO ITM Trace Console View added to provide printf support via ITM Stimulus Port 0
- Fixed an issue triggering error dialogs when the "Terminate All" option was used for non-multicore debug sessions
- Updated Redlink server/CMSIS-DAP LPC-Link2 firmware to support ISP reset of target MCU (requires target hardware support)
- Restart button now enabled on Mac OS X by default
  - Note: Restart workaround on Mac OS X (due to an issue with GDB) may leave an unknown "thread" in the debug view - hit terminate again to remove this.
- Last release to support LPC-Link2 Redlink firmware. Use the default CMSIS-DAP firmware instead
- Last release to support "Red Trace" (SWO Trace via Red Probe+). Use SWO Trace via LPC-Link2 instead

LPCXpresso 7.9.2 (build 493)
September 2015

Changes in this release include:

- Various fixes and improvements for Freemarker linker script templates:
  - Fixed link templates for LPC29xx and LPC3xxx
  - Added '__base...' symbols for each memory region
  - Fixed reporting of template errors in headless builds
- Corrected base address of SRAM2 block for LPC1517/47
- Fixed issue with multicore symbols being defined by the IDE for non-multicore parts in some circumstances
- Improved handling of debug termination to allow target to clean up
- Instruction trace and SWO trace updated to avoid conflicts when both are trying to use DWT comparators
LPCXpresso IDE latest release: 8.1.4

- SCT code generation updated to support latest LPCOpen register names
- Fixed rare issue with creating activation serial number on Linux hosts
- The use of LPC-Link2 Redlink firmware is now deprecated, and support will be removed in a future LPCXpresso IDE release. Use the (now default) CMSIS-DAP firmware instead
- The use of "Red Trace" (SWO Trace via Red Probe+) is now deprecated, and support will be removed in a future LPCXpresso IDE release. Use SWO Trace via LPC-Link2 instead

LPCXpresso 7.9.0 (build 455)
July 2015

Changes in this release include:

- Initial support for Windows 10
- Upgraded GNU tools to ARM launchpad GCC 4.9 update 2
- New Generic SPIFI flash driver mechanism, which will autoconfigure based on SPIFI device detected in target system
- Enhanced managed linker script template mechanism
  - Known as Freemarker linker script templates
  - Simplifies projects which relocate code from Flash to RAM
- Support for generating LPC MCU vector table checksums directly in the image, using the startup file and linker script
- "Active Config" is now the default for the indexer
- Fixes to Multicore projects
  - Fixed data sections placement
  - Slave image now has bss and noinit sections removed, as they are not required
- Fixed an issue that was preventing MTB trace with LPC82x parts
- Extended CMSIS-DAP JTAG support (for Cortex-M parts) to include Keil ULINK2/ULINK-ME probes

LPCXpresso 7.8.0 (build 426)
June 2015

Changes in this release include:

- New SWO Interrupt Trace Graph and Table views (Pro Edition only)
- LPC-Link2 will now soft-boot with CMSIS-DAP rather than Redlink firmware by default
- Improved selection of JTAG vs SWD connections - requires launch configurations to be recreated
- Fixed an issue with flash programming occasionally failing to initialize or complete
- Fixed an issue with debugging of LPC11A parts through LPC-Link2
- Fixed a problem with semihosting output for C++ projects
- Fixed an issue with reading and displaying unaligned data from the target
- Fixed an issue with making an attach-only debug connection
- Fixed an IDE hang if resuming a debug session mid-way through editing a peripheral register
- Performance improvements when displaying registers
- Optimized display of Peripherals when editing fields or registers
o It is now possible to add miscellaneous command-line options to the GUI flash programming dialog
o Fixed an issue with the reset target option not working when flash programming an AXF file
o Added path when disambiguating Launch Configurations
o Wizards now generate liblinks.xml 'smart update' file in library projects, which will still work after a project is renamed
o Code generated by LPCOpen project wizards now calls SystemCoreClockUpdate() in all cases, not just when linking to a board library
o For multicore-capable systems an LPCOpen project wizard-generated main.c now only calls Board_Init() for a master core and not for slaves.
o LPC43xx wizards now generate code using new-style multicore defines
o Fixed an issue with SymbolViewer not being able to display source for C++ symbols
o De-cluttered the toolbar by removing the duplicate quickstart toolbar (this can be re-enabled using the User Interface Enablement preferences)

LPCXpresso 7.7.2 (build 379)
March 2015

Changes in this release include:

o Added support for LPC18Sxx and LPC43Sxx parts
o Upgraded Eclipse to Luna SR2 (4.4.2) and CDT 8.6
o Added Technology Preview of SWO Trace support with LPC-Link2 (Redlink)
o Further major improvements to Flash Download performance
o Added "Terminate, Build and Debug" Quickstart button
o SPIFI flash drivers now check for recognised parts
o CMSIS-DAP support extended to allow multi-core and JTAG debug connections (where supported by probe implementation)
o Fixed issue with managed linker script for multi-core projects which caused misalignment of slave data section
o Added support for M4 multi-core projects to use HardABI floating point variant
o Redlib realloc() fixed to handle heap memory becoming exhausted
o The LPCXpresso54102 board Power measurement tool is now included

LPCXpresso 7.6.2 (build 326)
February 2015

Changes in this release include:

o Fixed managed linker scripts for GCC 4.9 NewlibNano library names
o Stopped tracking project selection in Symbol Viewer
o Added toolbar button for hide/show Red Trace views. Note that a restart of LPCXpresso is required after showing these views before Red Trace can be used.
o Fixed problem with MCU settings not being saved if changed by using the Quickstart Panel's Edit project settings button
o Display target chip and core type alongside executable name in Debug View
LPCXpresso 7.6.0 (build 321)
January 2015

Changes in this release include:

- Upgraded GNU tools to ARM launchpad GCC 4.9
- Significantly improved flash programming performance across all Cortex-M targets and debug probes
- Support for additional SPIFI flash parts based on latest LPCSPIFI Library v1.03
- Added new Symbol Viewer feature to display the symbols in an object/library/executable
- Redlink firmware enhanced to improve performance and provide bridging capabilities similar to latest CMSIS-DAP
- Managed linker scripts now contain start and end symbols for all data and bss sections
- Improved highlighting of changed registers when single stepping
- Change colors of stub console messages - dark yellow for warnings and green for information
- Added support for m0 small-multiplier
- Redlib now implements single precision fmodf() in math.h
- Redlib free() will now coalesce with any consecutive free blocks
- Fixed problem with assembler -D option when selecting No library headers
- Fixed issue with Memory Configuration Editor when merging memory blocks during import
- Fixed issue with semihosting SEEK operation (affecting Redlib and Newlib fseek()) always resetting to the start of the file
- Fixed linker script generation for Internal builder
- Fixed display of second core index for LPC5410x part (from 16->1)
- Fixed Build All Projects if no project selected
- Fixed target connection sequence to avoid timeout when downloading very large applications

LPCXpresso 7.5.0 (build 254)
November 2014

Changes in this release include:

- Upgraded Eclipse to 4.4.1 ('Luna SR1') and CDT to v8.5.0.
- Upgraded GNU tools to ARM launchpad GCC 4.8 update 3.
- Added support for LPC5410x devices.
- Default optimisation level reverted to -O0 (rather than -Og) for Debug builds.
- LPC18/43 project wizards now provide access to Memory Configuration Editor.
- Add ability to Merge memory configurations and join contiguous memory blocks in Memory Configuration Editor.
- Enhanced link-time-optimisation (LTO) options.
- Disable "Set library type" on projects where it is not applicable.
- Added a default workspace location for Linux.
- Redlib string.h functions extended to include implementations of (non-ANSI-standard) strcasecmp() and strncasecmp().
- Fixed very rare cause of hard fault in Redlib malloc().
- Prevented changing Peripheral registers while target is running.
- Fixed a problem preventing debug display of arrays within a structure within a union.
o Fixed issue with viewing of byte-sized peripheral registers, such as CM3/CM4 NVIC priority registers.
o Fixed issue with writing to byte-sized variables/registers.

**LPCXpresso 7.4.0 (build 229)**
September 2014

Changes in this release include:

- Support for LPC82x family.
  - Press release
- Upgraded to latest Eclipse release (4.4 'Luna') and CDT 8.4.
  - This fixes a number of display problems with complex datastructure variables.
  - Several improvements have been made to the Opcode display in the disassembly view. Opcodes can be displayed by right-clicking in the disassembly view margin and selecting 'Show Opcodes'.
  - Eclipse Luna requires Java 7, which is installed on all platforms in the 'jre' subdirectory. This is independent of the 'System' Java installation, which is not affected.
- Disabled inline editing of the Pre/Post build steps and forced editing via a dialog.
- Peripherals displayed in Memory View now display hexadecimal, decimal, and binary in hover for 'numeric' values.
- Tidied up the toolbar to remove little-used buttons (which are still available in the Quickstart panel).
- Added new preprocessor defines for multicore projects.
- LPCOpen Project wizards will now prepopulate the chip library name where possible.
- Cleaned up inconsistencies in various Redlib header files.
- Redlib memcpy and related functions now avoid use of unaligned LDR/STR instructions on Cortex-M3/M4.
- Fixed various single-precision Redlib math.h functions.
- Fixed a peripheral problem with LPC11U6x/11E6x GPIO word registers.
- LPCOpen code bundles are now shipped inside the Examples subdirectory, though users are recommended to check LPCware.com for the latest versions.
- Absolute rather than relative paths are now used in the debugger for breakpoints by default for new workspaces.
- The default make command is now 'make -r', which should reduce build times, particularly on Windows.
- Added new Quick Settings menu for changing a project's FP type.
- Fixed a flash programming issue for LPC15x7 parts.
- Fixed a flash programming issue for certain LPC21xx/22xx parts.
- Updated SPIFI flash drivers based on LPCOpen 'LPCSPIFI' library to use v0.07, adding drivers for more SPIFI devices.
- Improved support for the 'Dark' Theme.
- Now possible to modify the start address of the heap without modifying linker scripts/templates.
- Mac OS X 10.7 (Lion) is no longer an officially supported platform. LPCXpresso may continue to work on Mac OS X 10.7, but this can no longer be guaranteed. LPCXpresso is no longer tested on Mac OS X 10.7.
LPCXpresso 7.3.0 (build 186)
July 2014

Changes in this release include:

- Upgraded GNU tools to ARM launchpad GCC 4.8 update 2
- Run->Debug As... now works correctly for MCU targets
- Fix problem that caused CMSIS-DAP to not be available for some targets
- Correctly terminate Redlink Server after using the Flash Utility
- Updated LPC15xx startup code generated by new project wizards to match interrupt handler names used by LPCOpen.
- LPC43xx M0 startup code no longer references systick (which is only implemented on M4 cpu in LPC43xx MCUs, not M0 cpus).
- Fixed issue with LPC43xx (Cortex-M0 basic) wizards failing to create startup file.
- Quickstart Debug button now respects the build setting in the launch configuration
- Additional LPC18/43 SPIFI flash drivers supplied, based on LPCOpen lpcspifilib.
- C Library memory allocator no longer checks new heap end against current stack pointer.
- New "boot_link1" and "boot_link2" scripts available on all platforms for downloading probe firmware from command line.
- Peripheral rendering "Refresh" option now forces re-read from target.
- Peripheral register fix for LPC15xx GPIO port word pin registers.

LPCXpresso 7.2.0 (build 153)
May 2014

Changes in this release include:

- Improvements to reliability of Redlink server connections
- Add __MULTICORE_type pre-processor symbol to compiler for multicore projects
- Project wizards now place default main() into projname.c rather than main.c
- On Mac OS X, prevent occasional hang during Debug Probe discovery
- On Windows, the debug drivers are now built with Visual Studio 2013 to increase compatibility with latest version of Windows.
- Remove crt_directory.xml to build parts database dynamically at runtime

LPCXpresso 7.1.1 (build 125)
April 2014

This is a bug fix release that solves a problem found in the initial release of v7.1.0. Fixed in this release are:

- Fix problem affecting LPC-Link2 debug connections to Cortex-M0+ cores
- Fix regression preventing debugging with CMSIS-DAP
- Fix for a Red State UI regression which prevented users from graphically adding an output pin to a signal
LPCXpresso 7.1.0 (build 122)
April 2014

Changes in this release include:

- Upgraded IDE to Kepler SR2 and CDT 8.3
- Upgraded GNU tools to ARM launchpad GCC 4.8 update 1
- Fixed problem with C/C++ indexer being disabled on startup
- Further reliability improvements with LPC-Link2 connections
- Default optimisation level is now -Og for Debug builds
- Improvements to Create Binary option to allow multiple commands (for example checksum the created binary)
- Improved NVIC/SCB peripheral displays
- Added preference to display peripheral registers with leading zeroes
- Added preference for the array “chunk” size in variable and expression views
- Fixed issue with instruction trace when restart carried out
- Redlib limits.h updated for when compiler configured to treat unspecified chars as signed (instead of default of unsigned)
- Redlib now implements integer only version of vprintf() as well as floating point compatible version
- The wrench overlay icon is now correctly displayed on a file/folder with local build settings
- Prevent a Redlink Server debug session on a target that is already being debugged
- Updated RAMFUNC definitions provided by cr_section_macros.h

Note: Due to the imminent discontinuation of support by Microsoft, **Windows XP is no longer an officially supported platform**. LPCXpresso may continue to work on Windows XP but this can no longer be guaranteed. LPCXpresso is no longer tested on Windows XP.

LPCXpresso 7.0.2 (build 102)
March 2014

**Note** - there is a known issue with the indexer in v7.0.2. This can be fixed by a simple change to a configuration file.

Changes in this release include:

- Fixed problem with setting breakpoints on Windows with source paths containing spaces
- Fixed problem with Memory Configuration editor losing changes
- Debugging of LPC12xx and LPC11A02/LPC11A04 are now supported with LPC-Link2
- Improved reliability of LPC-Link2 when downloading large images
- SCT code generator version updated to 2.6: switched from using register names that are undocumented on some parts, e.g. CAP_L[0] to CAP[0].L.
  - Users should regenerate their SCT code
- Managed linker script support for placing specific functions into RAM
- Fixed display of memory if first displayed when target is executing
**LPCXpresso 7.0.0 (build 92)**  
February 2014  
Major new release with features including:

- Support for latest NXP MCUs (including LPC1500)
- New release of the GNU compilers – v4.8.3.
  - Includes new ‘general’ optimization level, -Og. This new optimization level, aims at providing fast compilation, a superior debugging experience and reasonable runtime performance.
  - Adds Link Time Optimization (LTO). This allows all the different compilation units that make up a single executable to be optimized as a single module (not suitable for debugging).
  - Inclusion of a new small-footprint variant of the Newlib C and C++ library, known as NewlibNano. Use of this library can result in significantly smaller code size, especially of C++ applications.
  - [Note that further details on the use of these new options can be found in the compiler documentation that is provided in the IDE help system.]
- New release of the base Eclipse IDE – Kepler (v4.3).
- The Managed Linker script mechanism has been extended to support the features of new GNU compiler.
- ‘New project’ wizards can now invoke import wizards directly to allow importing of library projects required in creating of new project.
- gdbserver debug connections enabled -> Enables use of Segger J-Link.

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**LPCXpresso v6**

**LPCXpresso 6.1.4 (build 194)**  
January 2014  
Changes in this release include:

- Added support for LPC11U6x. For more information see:
  - Press release
  - [Links to datasheet / user manual](#)
  - LPCXpresso11U68 board
- Fixed profile and interrupt trace on LPC13xx (12-bit ADC) parts
- Fixed regression introduced in 6.1.2 where a wizard-generated dual-core slave startup file failed to compile
- Removed display of CRP option in the wizard for creating dual-core slave apps
- Fixed various file resource leaks in the IDE; ensure temporary files are cleaned up on exit
- Fixed linker script generation for LPC1102/1104
- Startup files fixed for various parts to prevent name mangling issues in C++ projects
- Corrected flash driver references for certain LPC11A, LPC11E, LPC11xxLV parts
- Redlink connections now display correct debug protocol in debug log
- In project wizards, LPCOpen wizards are listed first if available
- LPCOpen project wizards for LPC13xx, LPC175x_6x, LPC177x_8x, LPC407x_8x now provided
LPCXpresso IDE latest release: 8.1.4

- LPCOpen packages can now be browsed from the Import Project page
- CGU related updates to LPC18/43 CMSIS driver libraries
- (Windows) Rebuilt version of make provided
- (Linux) Added new udev rules for CMSIS-DAP probes

LPCXpresso 6.1.2 (build 177)
December 2013
Changes in this release include:

- Added support for LPC11x37H parts including support for IOHandler. For more information see:
  - LPC11x37H Press Release
  - IOHandler Information
  - LPCXpresso11U37H board
- Added LPCOpen V2 project wizards for LPC18 and LPC43 families
- Fixed issue where not all slaves were displayed in the linker properties of a MultiCore project
- Added missing breakpoint/watchpoint menu items while debugging in the Develop perspective
- Fixed issue where Watchpoints not trapping with Redlink
- Fixed issue where Hard fault not trapped / VectPC updated with Redlink
- Fixed issue with Cycle count registers broken on LPC43xx using an LPC-Link2
- Fixed failure of LPC12 project wizards to set "__DISABLE_WATCHDOG" symbol
- On Windows 8, use the LPC-Link1 WinUSB driver instead of HID

LPCXpresso 6.1.0 (build 164)
Late October 2013
Changes in this release include:

- Introduced Red Trace SWV support for Red Probe+
- Fixed issue connecting to a third core when debugging LPC4370
- Extended range of prebuilt LPC18/43 SPIFI flash drivers
- Fixed problem with Watchpoints not being cleared
- Corrected debug startup with Red Probe+ when more than one FTDI-based device is present
- Fixed possible null pointer exception after editing memory configuration
- Fixed lost highlight when using keyboard to scroll through MCU selection
- (Windows) Updated dfu-util/libusb to support additional USB3 hubs

LPCXpresso 6.0.4 (build 159)
Early October 2013
Changes in this release include:

- Added support for ULink-2 CMSIS-DAP interface
- Fixed display of C++ global variables in Expression view
- Prevents use of JTAG for CMSIS-DAP connections (it is not currently supported)
- Added missing launch shortcut preventing display of correct launch config in Run/Debug Settings dialog
- Stopped display of debug probes when deleting JTAG configuration
- Fixed display of multiple debug probes reported by Redlink Server
LPCXpresso IDE latest release: 8.1.4

- "Quickstart->Build all" now works when no projects are selected
- Fixed problem with memory configurations not being stored correctly
- Fixed Redlib problem with free() of null pointer
- Added c++0x and gnu++0x C++ compiler dialect options

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** Latest version of LPCXpresso IDE: v8.1.4 **
http://www.nxp.com/lpcxpresso

Visit the LPCXpresso FAQs at https://community.freescale.com/community/lpc/lpc-faqs
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