

LPC540xx/LPC54S0xx Flashloader Release Notes

1 Overview

These are the release notes for the LPC540xx/LPC54S0xx Flashloader. For additional information and getting started instructions, check [Getting Started](#) section of this document.

The device Flashloader is an application that is loaded into the internal RAM of the device. The Flashloader is designed to work as a second stage bootloader for this device. It detects communication on one of the supported peripherals (USB-HID or UART), downloads a user application, and writes the application to external serial NOR device. The Flashloader is initially loaded by MfgTool which then helps in programming the flash.

This release includes the PC-hosted blhost application. This blhost is used for downloading user-application to flash device in both development and production phase while device is running flashloader application and connected to PC Host.

2 Development tools

The device Flashloader was compiled and tested with following development tools.

Firmware projects:

- IAR Embedded Workbench for ARM® v8.30.1
- KEIL MDK5.26 with corresponding device pack
- MCUXpresso IDE v10.3

Host projects:

- Microsoft Visual Studio® Professional 2015 for Windows® OS Desktop
- Microsoft Visual Studio C++ Redistributable for Visual Studio 2015 (vc_redist_x86.exe)
- Apple Xcode® v9.2 (for tools).
- Linux® OS GNU Compiler (GCC) v5.4.0, libstdc++6, libudev-dev, libc6, and libgcc1 for the Linux build.
- Linux OS tools have been tested on Ubuntu 16.04 LTS (GLIBC v2.23).
- Apple Mac® OS host tools have been tested on MacOS High Sierra v10.13.3.

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3 System requirements

System requirements are based on the requirements for the development tools and the MfgTool application. The recommended PC configuration is 2 GHz processor, 2 GB RAM, and 2 GB free disk space.

Windows OS applications like MfgTool requires installation of Visual C++ redistributable 2013 or greater.

To make the MfgTool work, the device needs to be connected to PC via a USB hub. Sometimes, an extra USB hub is required if all the USB ports on the PC are USB root hub ports.

4 Target requirements

This release of the Flashloader supports the following platforms:

- LPCXpresso54018
- LPCXpresso54S018

There are no specific requirements for the hardware other than what the board requires to operate.

5 Release contents

Table 1 describes the release contents

Table 1. Release contents

Deliverable	Location
Host binaries and utilities	<sdk_package>/middleware/mcu-boot/bin/Tools blhost application is under <sdk_package>/middleware/mcu-boot/bin/Tools/blhost folder elftosb application is under <sdk_package>/middleware/mcu-boot/bin/Tools/elftosb folder
Documentation	<sdk_package>/middleware/mcu-boot/doc
Flashloader release	<sdk_package>/boards/<board>/bootloader_examples/flashloader
Tools build projects	<sdk_package>/middleware/mcu-boot/tools/tools..

6 Getting started

See the getting started document, Getting Started with LPC540xx/LPC54S0xx Flashloader User's Guide.

7 Features

For downloading an application, the Flashloader supports the following communication interfaces:

- USB-HID

Flashloader supports PUF keystore preparation and download via blhost.exe interface. Check [Getting Started](#) document for detailed instructions.

8 Host tools

The bootloader release contains the binaries for the following PC-based host tool:

- blhost: command line debug tool called by MfgTool to program the application. It is available for Windows, Linux, and Mac operating systems
- elftosb: command line tool to generate SB file which is used by blhost command *receive-sb-file <file>*

9 Revision history

This is the first revision of the document.

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