**Boot loader that does not erase user flash**

**Replace Kinetis K64 boot loader.**

This is the link for the boot loader is in the ExtendedData folder

This application note describes how to replace the existing boot loader that already exists in the kinetis k64 micro controller.

Please connect the USB to the k64 tower board and into your computer.

You should see that there is another disk append to your computer with the name MBED

If you don’t see it and windows does not find the drivers for it, you can download it from here:

<https://developer.mbed.org/handbook/Windows-serial-configuration>

While installing driver, any driver, and your hardware need to be disconnect.

After installing, plug in the USB cable again and now windows should find your device and show you’re the new disk on key driver.

The MBED lets you just drag and drop you’re the new firmware (as binary) into the disk and it will do the magic of replacing the firmware as easy.

The kinetis K64 comes with a boot loader that erases the flash completely before it replaces the new firmware.

In our project, and RND stage, we will still use the MBED.

In order to store host user data , like calibration, presets and more, we need to replace the MBED boot loader to different firmware that DOES NOT ERASE THE ENTIRE FLASH, but overwrite only the code that the actual firmware is target to.

Steps to replace the boot loader:

Hold the reset button in one hand, and in the other hand, unplug and plug again the USB to the tower board.

This operation will boot up the board in BOOTLOADER mode.

You should see that now the name of the Additional driver (let’s assume it is D driver)

It is now BOOTLOADER.

If it is, just drag and drop the above bin file into the drive.

Once complete, unplug the USB cable and plug it again (NOW WITHOUT HOLDING THE RESET)

You should work normal now when updating firmware.

Just drag and drop any new firmware you have into the MBED disk drive.

How to check that the new boot loader does not erase user data?

Once you have stored data, user data into the flash , download new firmware and read back data and all other user data.

You will see that now, your data was not erased any more and it still persist in flash.

The MBED protocol works only with bin file and not ELF file, so the output from the RND team should be BIN file (need to change the setting in the Kinetis design studio)