Quick Start.

Import the projects

Build the RA6\_boot project

Build the RA6\_primary\_L project (Bootable configuration)

A screenshot of a computer

AI-generated content may be incorrect.

Build the RA6\_update\_L project (Bootable configuration)

Connect the debugger to the RA6M4 EK.

Navigate to the tools folder and execute the erase\_qspi\_all.bat script. This will take more than a minute. Erases the entire 32meg from the QSPI.

Examine the RA6\_boot Debug startup.

A screenshot of a computer

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Note that we load the symbols from the elf, but the signed binary (application only part) to the proper offset in memory. Then the resources are loaded at 0x600000 (QSPI base)

Use a UART<->USB adapter connected to PMOD1.

Debug RA6\_boot and resume twice.

A screenshot of a computer

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Tera Term should prompt Press SW1. Press SW1 to continue the bootloader.

A screenshot of a computer program

AI-generated content may be incorrect.

Now open another tera term and connect to the UART that has now enumerated once the application is running. As soon as you do you will see this:

A screenshot of a computer

AI-generated content may be incorrect.

The RESOURCE FILE FOR PRIMARY message is stored in the QSPI in the primary application and has been placed there by the startup of the debugging.

Press reset on the board.

A screenshot of a computer program

AI-generated content may be incorrect.

You’re prompted to press SW1 again. Press it and verify it still boots the primary application.

A screen shot of a computer

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Navigate to the tools folder and run the upload\_update.bat file.

After this, the update file is loaded into the MCUboot region of the QSPI.

A side effect is that the MCU is reset.

Press SW1 to continue the bootload process:

Note that the application is updated, as indicated by the Start of update application, and there are 2 LEDs blinking. However, the resources are still the old ones

(STILL WORKING ON THAT PART…..)

Now press the reset button and then SW1 when prompted.

Notice that the system did a REVERT and swapped back to the original application.

This is the proper behavior because the update application has not validated itself yet

(STILL WORKING ON THAT TOO)

The bootloader verifies the image and jumps to it.