

F150.FW: Bootloader design

This document describes the bootloader design

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Overview

The intent of this document is to:

- Define the bootloader design
- When it will jump into the application code
- or when it will jump into DFU

References

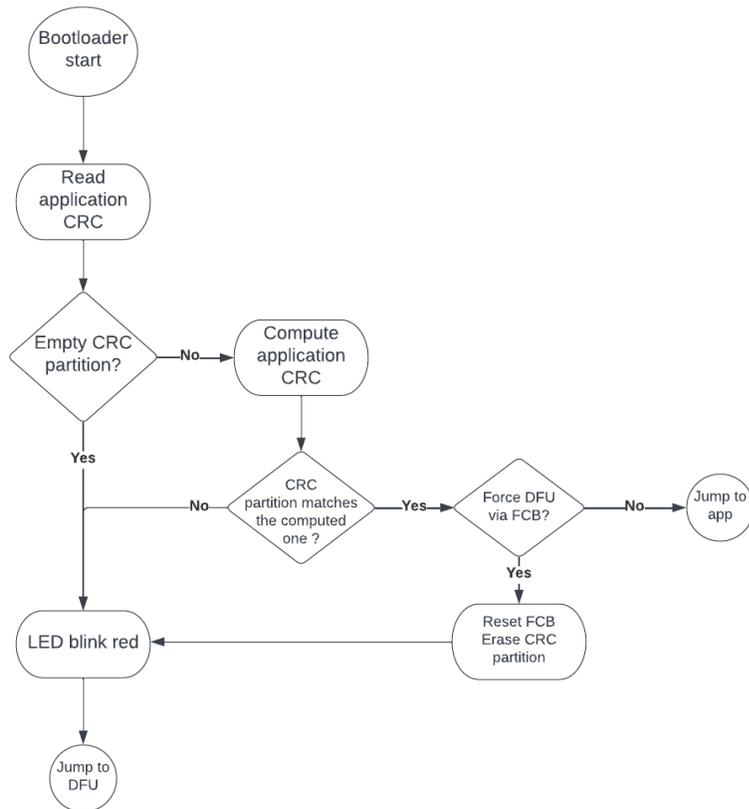
- TBD

Memory Map

Memory address	Partition Name	Size
0x08000000	Bootloader	32KB
0x08008000	CRC	4KB
0x08009000	Application	760KB

Bootloader design

Bootloader flow chart



Bootloader details

- *Bootloader start* state denotes a cold or warm reset.
- The LED will start blinking red fast
- The CRC partition contains:
 - A version name (major.minor.build)
 - The size of the application image
 - The CRC of the application image
- The bootloader will first verify if the CRC partition does, or does not, contain any valid data
- If the CRC partition is verified, the application CRC is computed and compared with the one stored in the CRC partition.
- If both CRC matches, the FCB is checked for a skip DFU jump
- If all test above passed their criteria, the bootloader will jump into the application code
- If any of the tests above fails, the bootloader will jump into the internal DFU