FlexiBMS Lite MCU Flash memory map

End

Non-volatile parameter storage

4kB (pages 62 & 63) 0x0801 F000 - 0x0801 FFFF

New app image

60kB (pages 32-61) 0x0801 0000 - 0x0801 EFFF

Application

60kB (pages 2-31) 0x0800 1000 - 0x0800 FFFF

Bootloader

4kB (pages 0 & 1) 0x0800 0000 - 0x0800 0FFF

Start

STM32L433CB6 has 128kB total flash memory Memory organized as 2kB pages -> 64 pages of flash memory

Reserve 2 pages for non-volatile parameters.

Allows to never perform page erase before verifying that new values were written successfully

Bootloader behavior description:

Application loads new app image to the dedicated FLASH memory via USB COM port communication and verifies it's integrity.

Once successfully verified calls system reset and iniatilizes to bootloader at the start of Flash.

Bootloader checks flash memory at new app image address for values equal to 0xFFFFFFFF:

True (no data found): Jump to Application.

False (data found): Perform page erases for Application address. Copy data from New image address to Application address. Verify integrity. Perform page erases for new app image pages.

Jump to Application.
