

VISION

STM32 bootloader

We are going to develop a bootloader and a high-level bootloader utility program (flasher) for the STM32.

In combination they will be able to safely transfer program data to the STM32 microcontroller in a way that is easy for the end user. This is necessary in order to send the new program to the end user if an update is needed (for example, after finding bugs or releasing a new version of the program), but we don't want to show the program to anyone (there may be secret information in the program and, of course, we want to protect all the intellectual property). Also transmission of secret data from STM32 to the software dev team might be required.

We need to make 2 things: a program for the PC where the end user can choose a file with a new version of the program and then send it to the STM32. Then STM32 receives the program and stores it in the flash memory. For security reasons the transferred program is encrypted (it will be decrypted by the bootloader on the STM32 chip. Also the high-level program will be able to upload the bootloader to the device (for the updates to devices that don't have it yet). The bootloader will protect the flash memory from being read and written to via the default STM32 programming interface.

The end user will have to just drag and drop the bootloader/program file to the utility program on their PC, choose the upload options (i.e. the interface that is used) and everything else will be handled for them.

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