

USB flash update PROCEDURE STEP BY STEP

Contents

1	Introduction.....	2
2	Steps.....	3
3	COMMON PROBLEMS DURING THE FW UPDATE:	8

1 Introduction

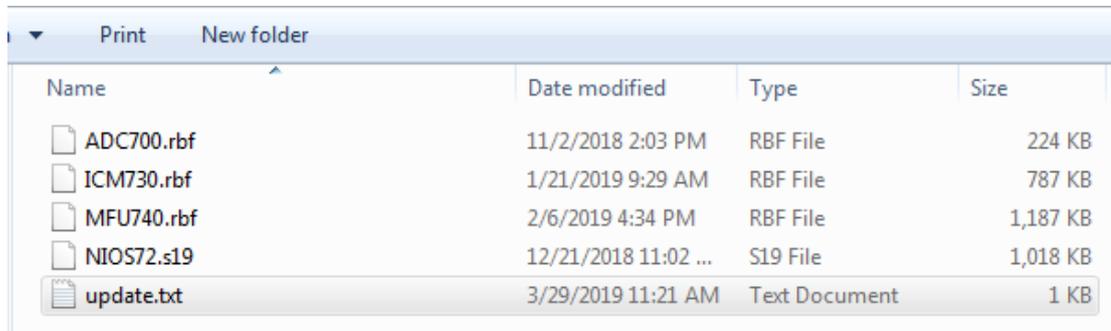
This document describes step by step the USB flash firmware/software update procedure for ACU system.

It is important to know that ONLY GSI authorized USB flash can be used for this purpose. In order to get one of them, please ask the ACU team [acu-support@gsi.de].

Before going on in details how to make a SW/FW update via USB flash, please be sure to know of which modules the ACU system is made of and which are the USI connections involved. The standard ACU setting is made of one MFU, one ADC and one ICM connected respectively on USI 0 module 0, USI 1 module 1 and USI 3 module 1.

2 Steps

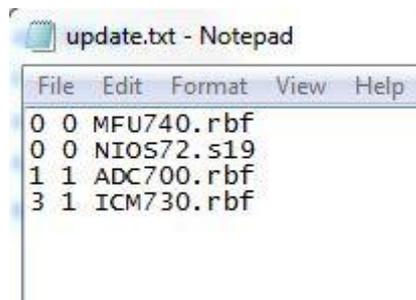
1. Fill the USB flash: the USB flash content can be divided in three topologies:
 - update.txt file
 - FW files (in .rbf format)
 - SW file (in .s19 format)



Name	Date modified	Type	Size
ADC700.rbf	11/2/2018 2:03 PM	RBF File	224 KB
ICM730.rbf	1/21/2019 9:29 AM	RBF File	787 KB
MFU740.rbf	2/6/2019 4:34 PM	RBF File	1,187 KB
NIOS72.s19	12/21/2018 11:02 ...	S19 File	1,018 KB
update.txt	3/29/2019 11:21 AM	Text Document	1 KB

Figure 1:USB flash content

The update.txt file contains a list of FW and SW file names with the relative USI and module numbers. It is used to correlate the FW/SW file with the ACU module:



```

update.txt - Notepad
File Edit Format View Help
0 0 MFU740.rbf
0 0 NIOS72.s19
1 1 ADC700.rbf
3 1 ICM730.rbf
  
```

Figure 2: update.txt content

In the example above, the MFU FW (MFU740.rbf) is connected to the USI number 0 module 0, the NiosII SW (NIOS72.s19) always to the USI number 0 module 0 (because the NiosII is implemented in the MFU), the ADC FW (ADC700.rbf) to the USI1 module 1 and the ICM FW to the USI 3 module 1.

Please note that the update.txt file content above is just an example to better explain how to properly write your update.txt file.

The FW and SW files can be directly downloaded from our [Wiki web site](#).

Please note that only .rbf and .s19 files are useful for the USB flash update procedure (don't download the .jic files).

The files download can be done directly on the USB flash and after that a files renaming is necessary.

The new file name can't be longer than 8 symbols (without the extension) and has to match with the one specified in the update.txt file.

A suggested name for the FW files is made of three letters to identify the module and 3 numbers to identify the FW version:

From
MultiFunctionUnit_SE_Rel_T_160223_D_060219_V_7_4_0_H_drodomon.rbf
to
MFU740.rbf

The SW file name is almost the same:

from
MFU_Flash_cfi_flash_APP.s19
to
NIOS72.s19

If the procedure described above is not clear or too much complicated, it is always possible to ask for the USB flash data content directly to the ACU team [acu-support@gsi.de].

2. Connect the USB flash to the MFU and push briefly the incremental button.

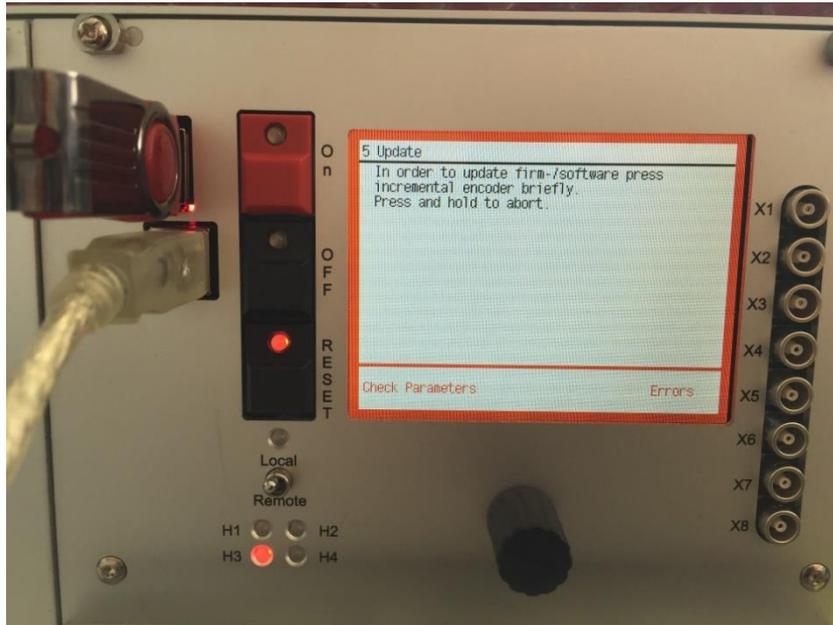


Figure 3: Update starting window

After that the update procedure starts following the order specified in the update.txt file.
Below there are some pictures related to the update.txt file used as example above:

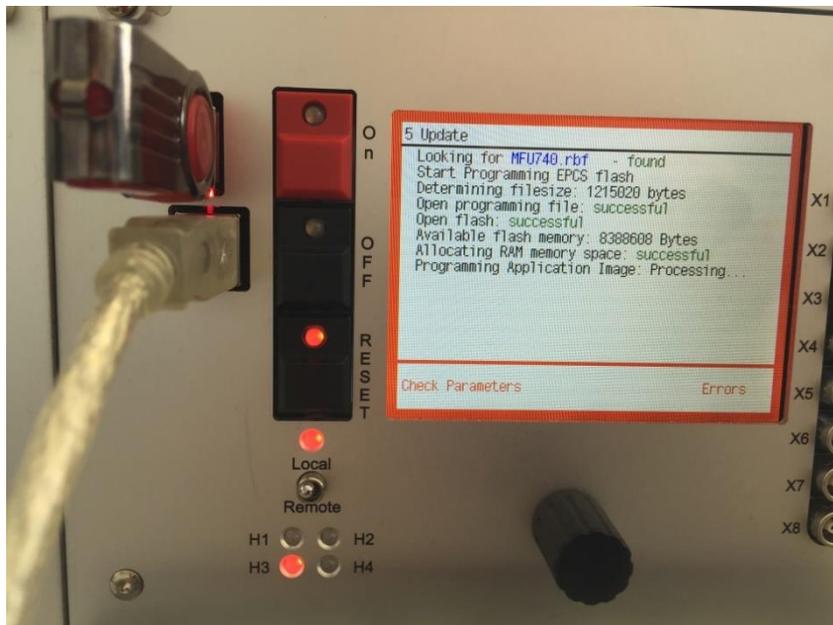


Figure 4:MFU FW update

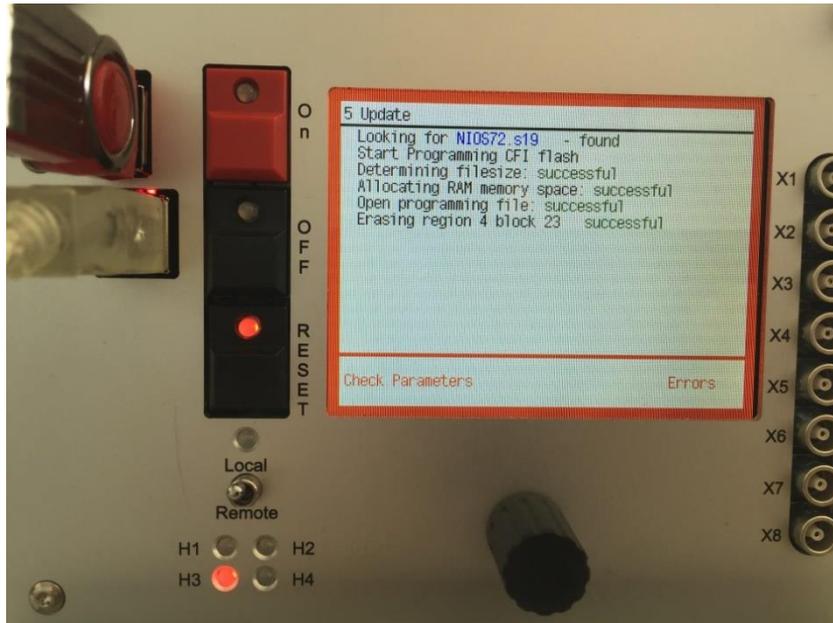


Figure 5: NIOS SW update

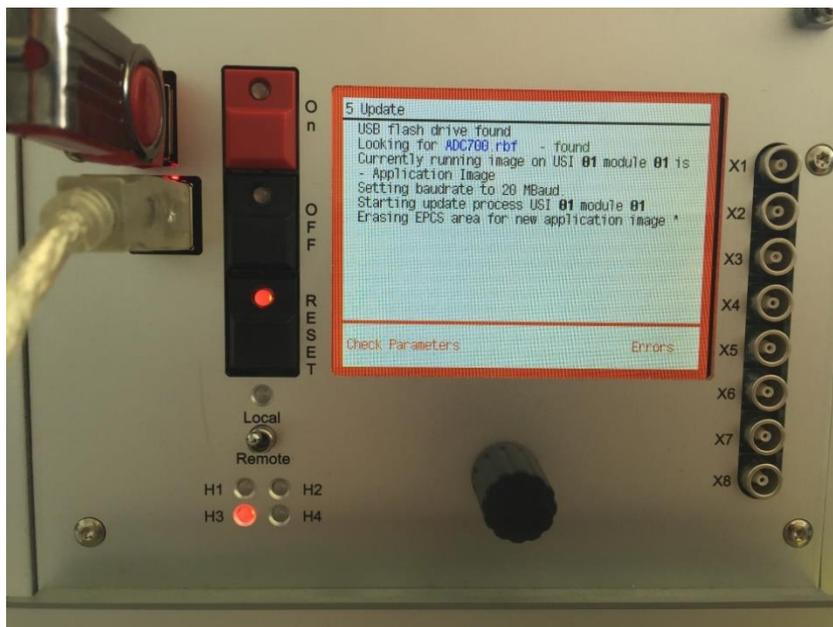


Figure 6: ADC FW update

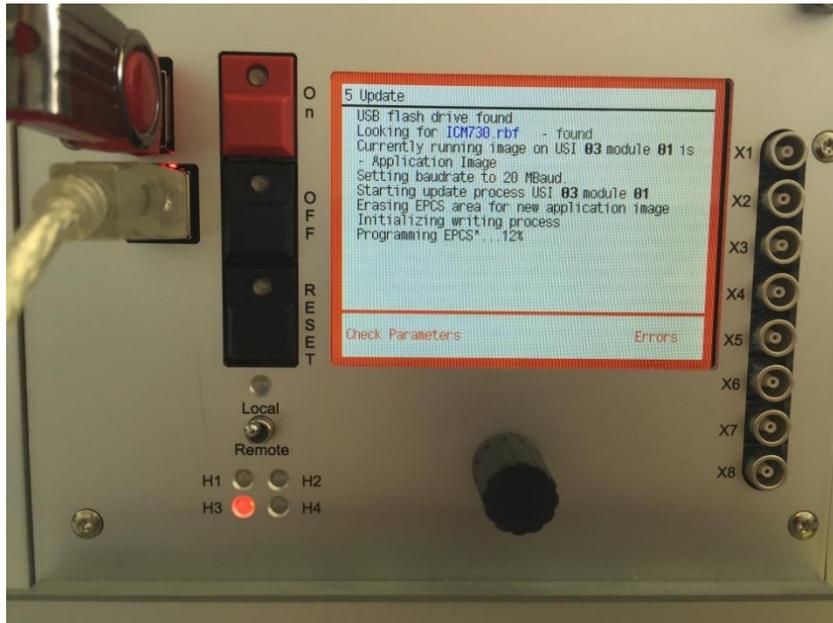


Figure 7: ICM FW update

When the update procedure is completed, it is necessary a system power off and on in order to load the new FW/SW downloaded.

3 COMMON PROBLEMS DURING THE FW UPDATE:

If during the FW/SW update there is an error, it will be displayed on the TFT screen.

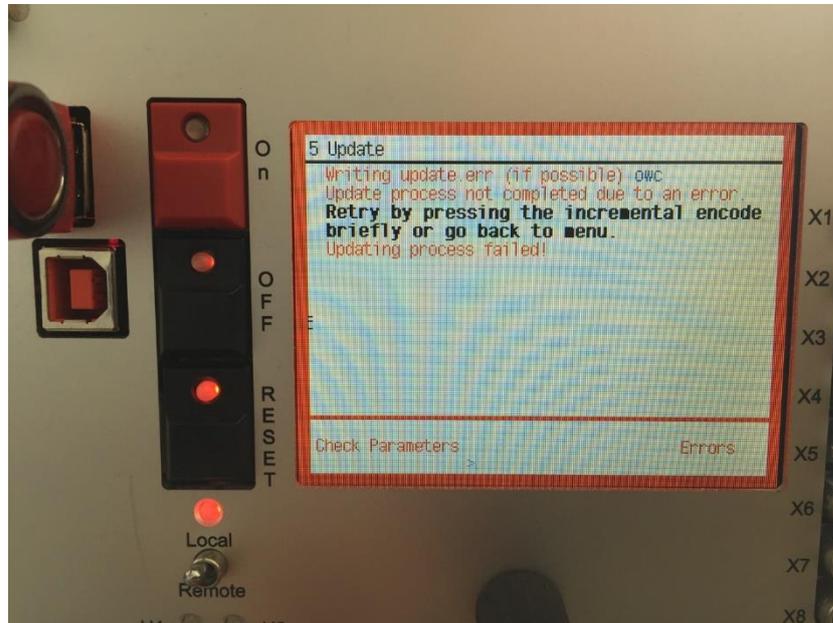


Figure 8: Update failed

Please turn off and on the system and try again. If also the second attempt will fail, turn off the system, disconnect the USB flash from the ACU, connect to a PC and send via E-Mail the automatic generated file inside the USB (UPDATE.ERR) to the ACU team [acu-support@gsi.de].