
STEVAL-ILL075V1 and STEVAL-ISA164V1 firmware update procedure

Introduction

This user guide provides instructions on how to change/upgrade the firmware loaded in the STEVAL-ILL075V1 or STEVAL-ISA164V1 evaluation board.

The STEVAL-ILL075V1 and STEVAL-ISA164V1 evaluation boards provide a platform for evaluating the STLUX385A and STNRG388A digital controllers, respectively.

The firmware is loaded on the boards through a serial line. The STSW-STLUXDEV01.zip file includes all the programs required to upload the new firmware to either the STEVAL-ILL075V1 or the STEVAL-ISA164V1 board. The firmware is the same for all devices in the STLUX and STNRG digital controller families.

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1 Firmware upgrade procedure

To install the firmware, unzip the STSW-STLUXDEV01.zip file to a dedicated directory, and perform the following steps:

1. Connect the the evaluation board to the PC using a Mini-USB cable. This will prompt the PC to install the appropriate driver (only when connecting a board for the first time). If the automatic procedure does not start or cannot find the correct driver, contact your IT services.
2. Identify the COM port number to which the evaluation board is connected (see [Section 2: "Finding the COM port"](#) in this document for details).
3. Double-click on the "Program_UsingBL.bat" file.
4. A DOS shell will start. Type the COM port number identified in step 2. In this example, the number is "34".
5. Push and hold the reset button on the evaluation board.
6. Release the reset button and immediately type one character on the PC keyboard. These two actions must be performed in sequence in less than 1 second (release reset + type a character, in this order).
7. The download procedure will start automatically.

The result is shown in [Figure 1](#). The word "OK" should appear to indicate successful completion of the downloading and verification procedure. At this point the FW on the evaluation board is updated to the latest release. Type any character to close the batch window.

If there is an error during any of the initialization phases, a message will appear in the DOS window and the user should reset the device (step 5 in the procedure above). If the serial port number is invalid or busy, another message will appear and the batch file window will close.

Figure 1: Batch file output

```

C:\Windows\system32\cmd.exe
This is the STLUX-STNRG serial loader batch file
-----
Please enter your COM number: 34
1- Press and HOLD the reset button ...
2- Release the reset button and press any key on the PC keyboard
   (within one second from releasing the button)
Press any key to continue . . .
Opening Port [OK]
Activating device [OK]

DOWNLOADING ...

downloading page 0 00x 8000 size 1.00(KB) [OK]
downloading page 1 00x 8400 size 1.00(KB) [OK]
downloading page 2 00x 8800 size 1.00(KB) [OK]
downloading page 3 00x 8C00 size 1.00(KB) [OK]
downloading page 4 00x 9000 size 1.00(KB) [OK]
downloading page 5 00x 9400 size 1.00(KB) [OK]
downloading page 6 00x 9800 size 1.00(KB) [OK]
downloading page 7 00x 9C00 size 1.00(KB) [OK]
downloading page 8 00x A000 size 1.00(KB) [OK]
downloading page 9 00x A400 size 1.00(KB) [OK]
downloading page 10 00x A800 size 0.39(KB) [OK]

VERIFYING ...

verifying page 0 00x 8000 size 1.00(KB) [OK]
verifying page 1 00x 8400 size 1.00(KB) [OK]
verifying page 2 00x 8800 size 1.00(KB) [OK]
verifying page 3 00x 8C00 size 1.00(KB) [OK]
verifying page 4 00x 9000 size 1.00(KB) [OK]
verifying page 5 00x 9400 size 1.00(KB) [OK]
verifying page 6 00x 9800 size 1.00(KB) [OK]
verifying page 7 00x 9C00 size 1.00(KB) [OK]
verifying page 8 00x A000 size 1.00(KB) [OK]
verifying page 9 00x A400 size 1.00(KB) [OK]
verifying page 10 00x A800 size 0.39(KB) [OK]

Your code is running...
Press any key to continue . . .
  
```

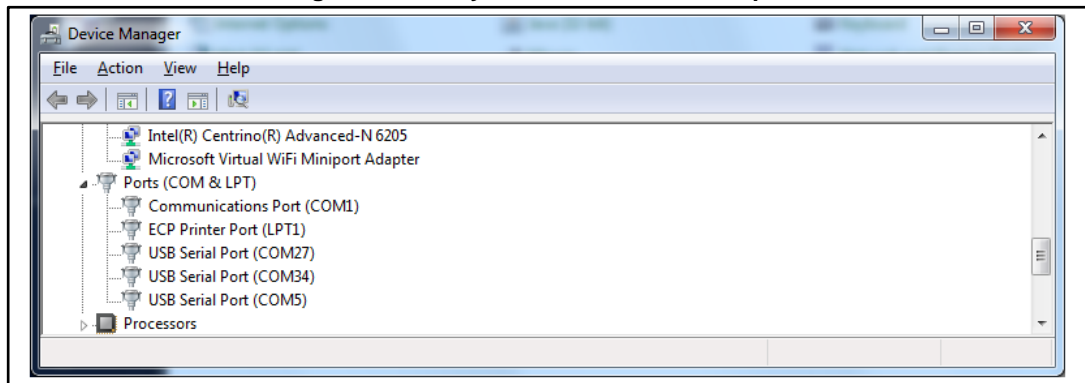
2 Finding the COM port

To upload the FW to the evaluation board, it is necessary to identify the correct serial port number. To find it, open the “Control Panel->System->Device Manager->Ports” and note the new serial port that appears when the Mini-USB cable is connected to the evaluation board and the PC. [Figure 2](#) shows a possible result.

If there is more than one serial line connected on the PC, to identify the correct number disconnect and reconnect the Mini-USB cable. The correct port will disappear and reappear.

In this example, the correct serial port is COM34.

Figure 2: Identify the correct serial COM port



3 Supporting material

Evaluation boards

- STEVAL-ILL075V1 evaluation board for STLUX385A
- STEVAL-ISA164V1 evaluation board for STNRG388A

Documentation (available on www.st.com)

- Data brief: STEVAL-ILL075V1 (STLUX385A evaluation board)
- Data brief: STEVAL-ISA164V1 (STNRG388A evaluation board)
- Application note AN4656: Boot loading procedure for STLUX™ and STNRG™ digital controllers

4 Revision history

Table 1: Document revision history

Date	Version	Changes
12-Apr-2017	1	Initial release.

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