# SOLO analyzer firmware upgrade instructions

Please refer to our instructional videos for additional information at Divesoft's YouTube channel before you proceed with the update.

For the update itself, please follow the instructions below.

https://www.youtube.com/watch?v=ZT_2BThOMVA&list=PLNYQA6sEcbWJ2sK7PYg7HKOMFCAPF86IO&index=17&t=0s

https://www.youtube.com/watch?v=pvn9_4B2EH4&list=PLNYQA6sEcbWJ2sK7PYg7HKOMFCAPF86IO&index=16&t=0s

This update of SOLO analyzer can be done on Windows OS equipped devices only!

1. Download and install the FLIP program 3.4.7.112 for Windows that will be used for Firmware upload into your analyzer here:
   https://www.microchip.com/DevelopmentTools/ProductDetails/PartNO/FLIP

## Documents and Software

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⌄ Documents

~~FLIP 3.4.7.112 for Windows (Java Runtime Environment included)~~

FLIP 3.4.7.112 for Windows (requires Java Runtime Environment)

FLIP 3.2.1 for Linux x86 (require Java Runtime Environment)

FLIP 3.4.5 Release Notes

2. Download SOLO analyzer latest firmware (FW version 2.29a from 4<sup>th</sup> Feb. 2020) which is available at the bottom of this support page https://www.divesoft.com/en/products/analyzer-heo2/firmwares. Save the file with the latest FW on your desktop or other file in your PC and unzip.

Download file from here:



Unzip into a folder:
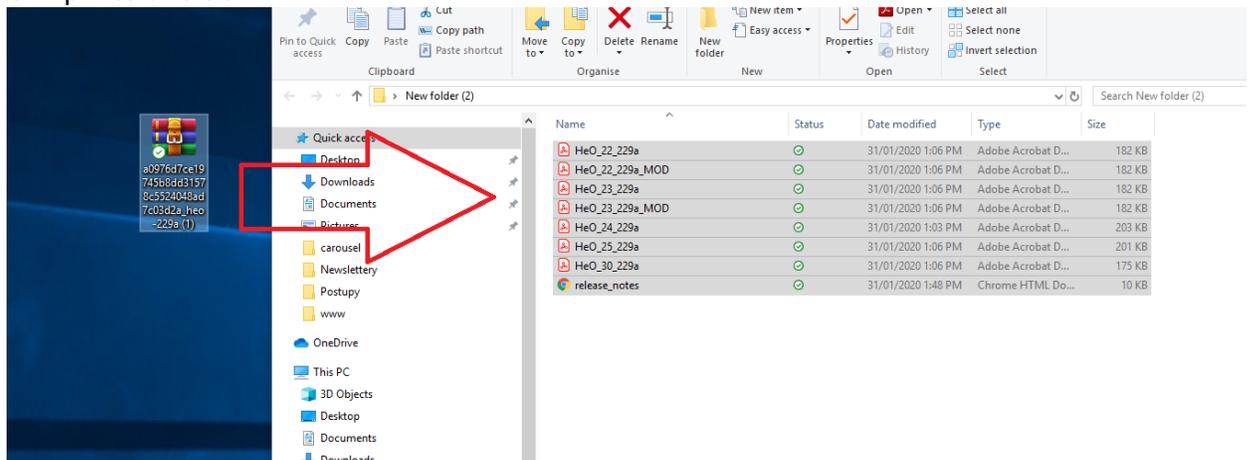
3. Determine Hardware (HW) and Firmware (FW) versions of your analyzer, these information can be viewed at the opening screen when the device is switched on. The display period can be extended by holding the ON/OFF button in the pressed position. The display will show information like this:

He/O2 analyzer
Divesoft
HW 3.0
FW 2.29 2020/01/31
SN 0002



4. POWER OFF your analyzer
5. Connect **powered OFF** analyzer to your computer using correct USB cable. You should hear a tone from your computer confirming the connection to the device. In all cases the analyzer firmware must NOT be running, display should remain blank.
6. Verify what port has been created for your analyzer please refer to **Windows Control Panel (or Start>search bar>Device Manager)> Device Manager> Ports (CM &LPT)**
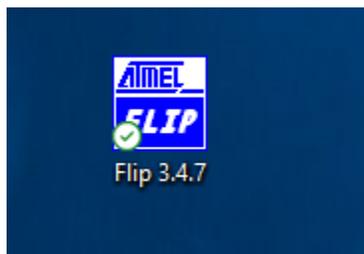
Verifying the port of analyzer:
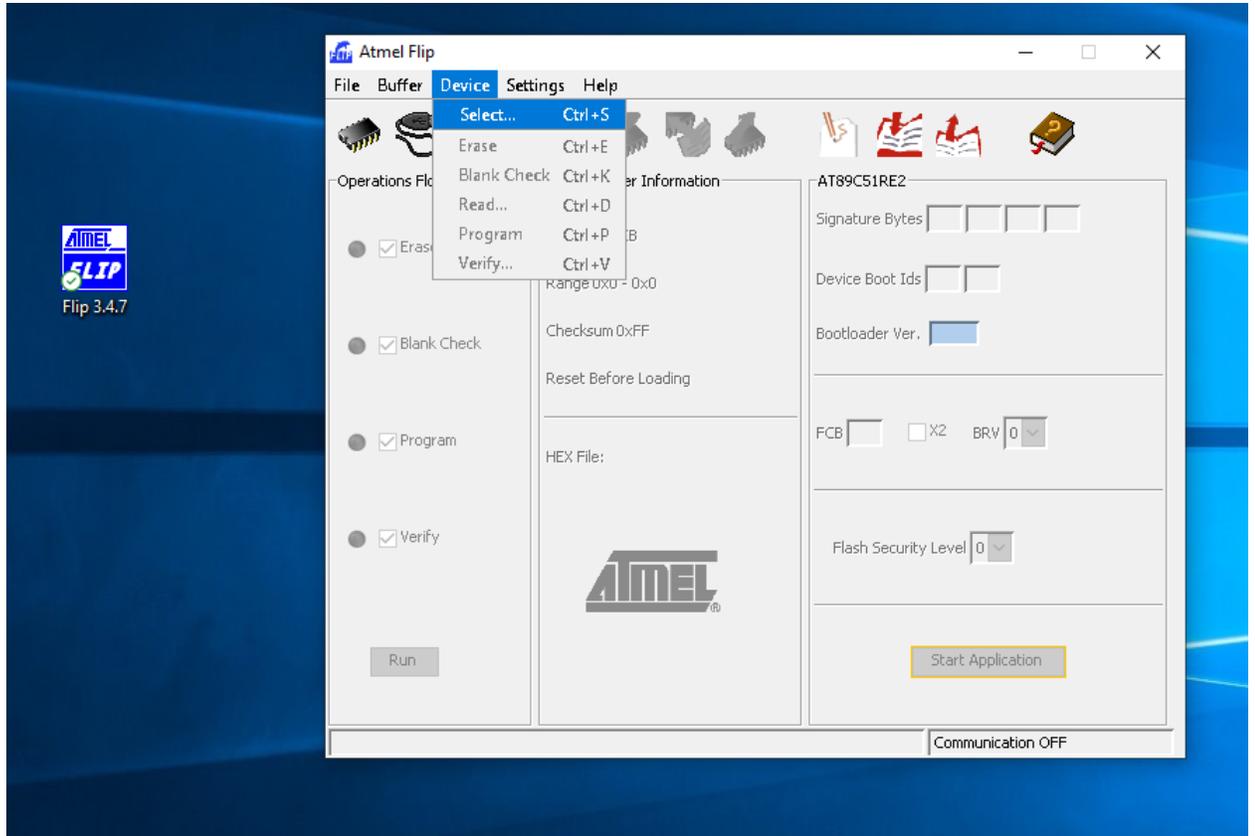Please note, the COM number may be different on your computer.
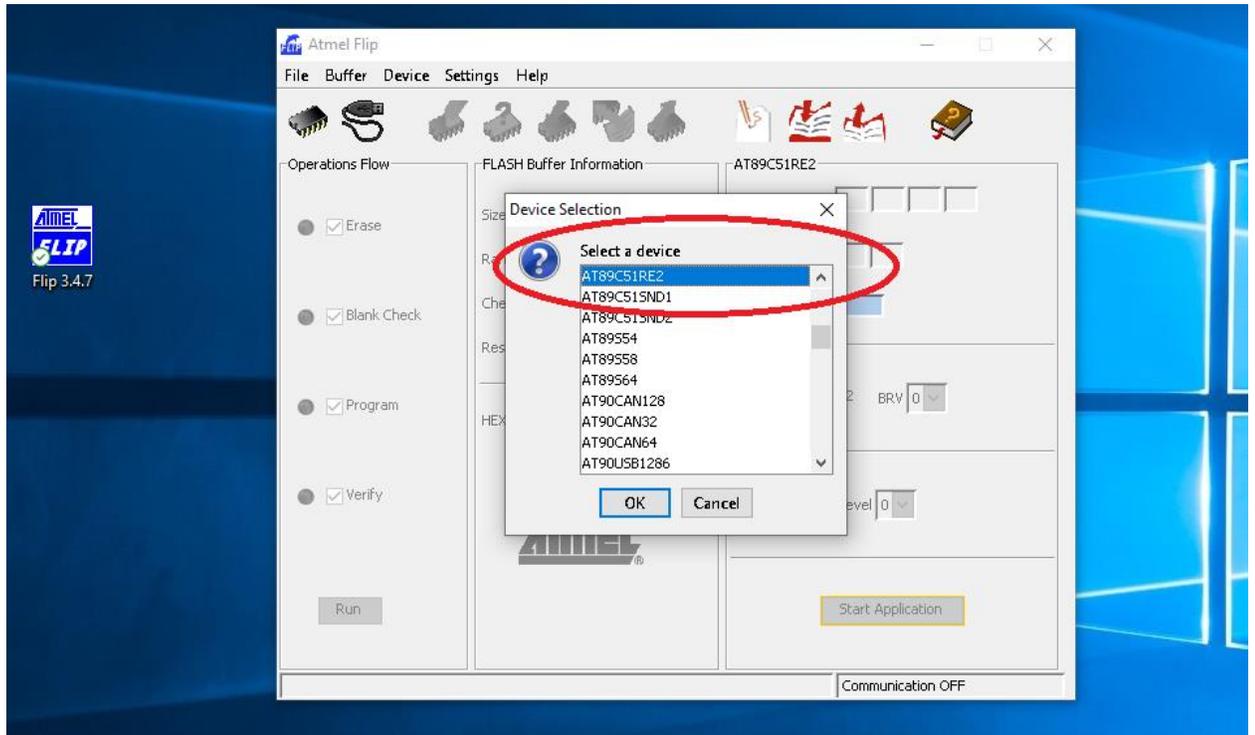Please remember the number of your COM for step: 8
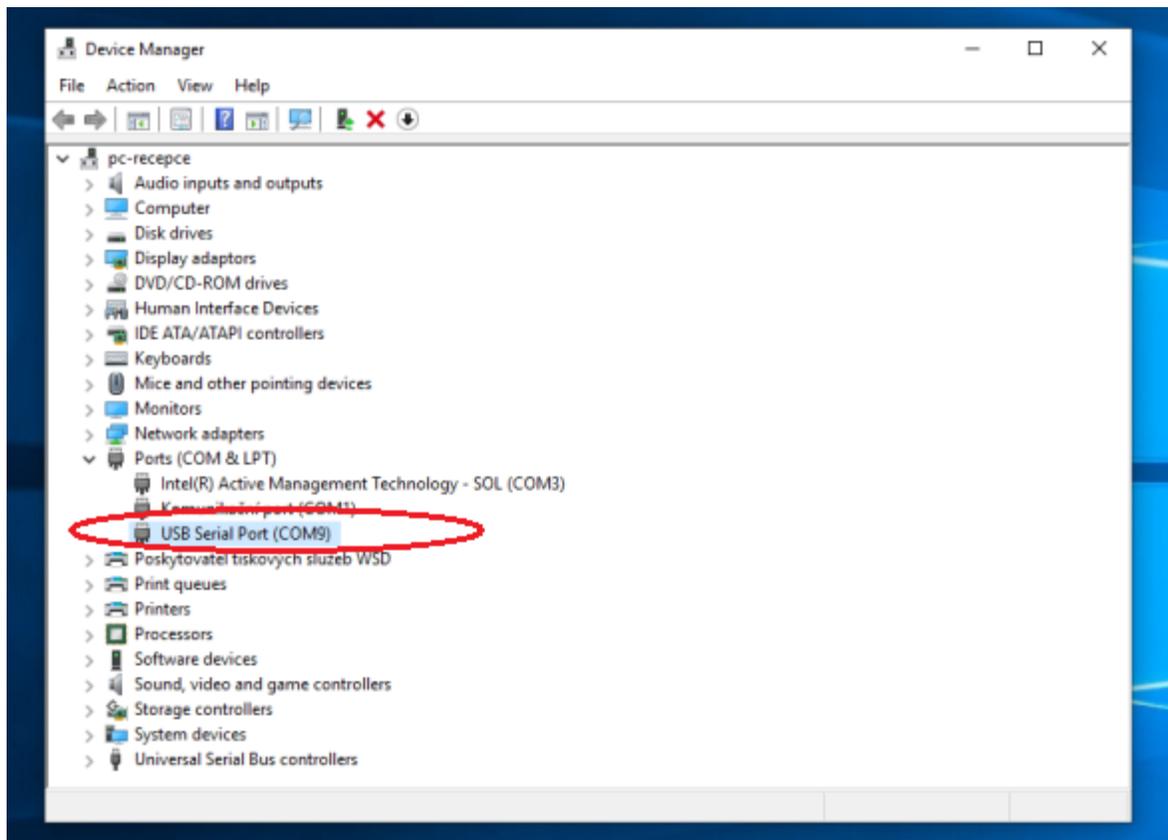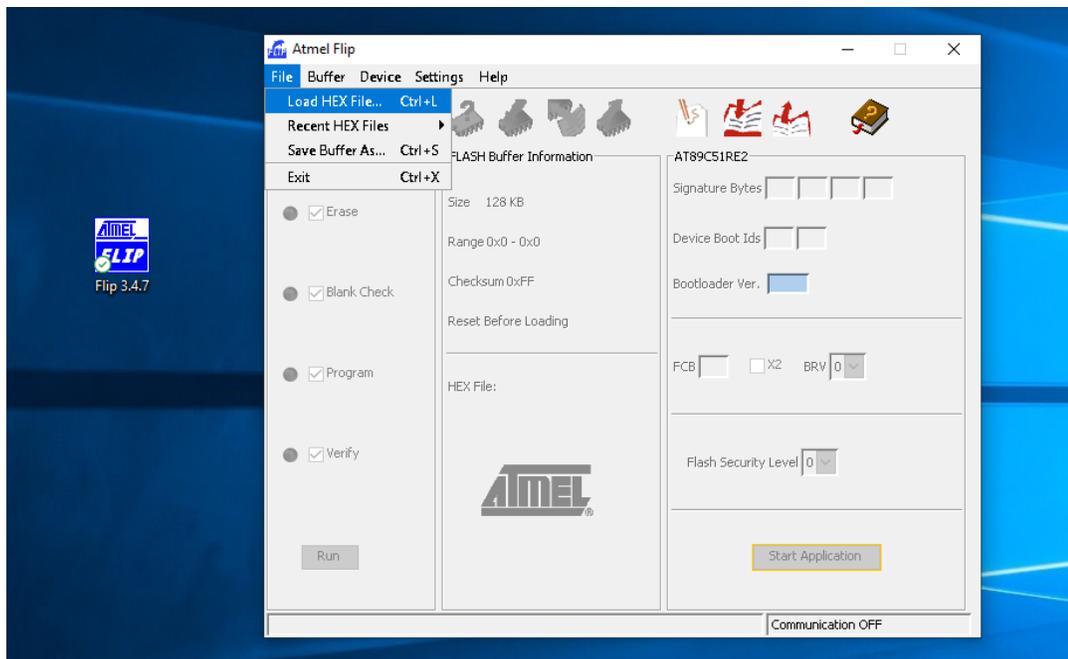


7. Start the FLIP program:



- Select from top tab menu: **Device**> **Select** and choose the processor/analyzer/device type.
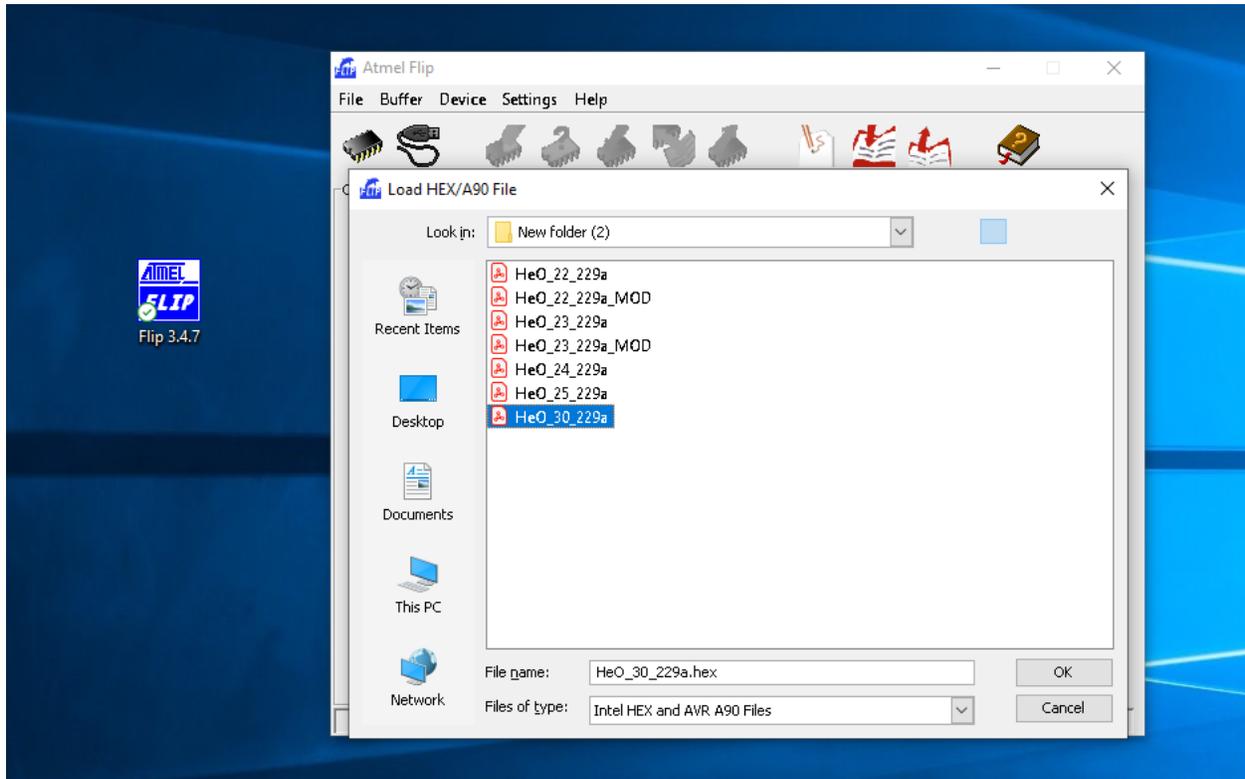
Click on **AT89C51RE2**

- Select from top tab menu **File** > **Load HEX File** and open file with the new firmware you saved to your desktop or other file on your PC.
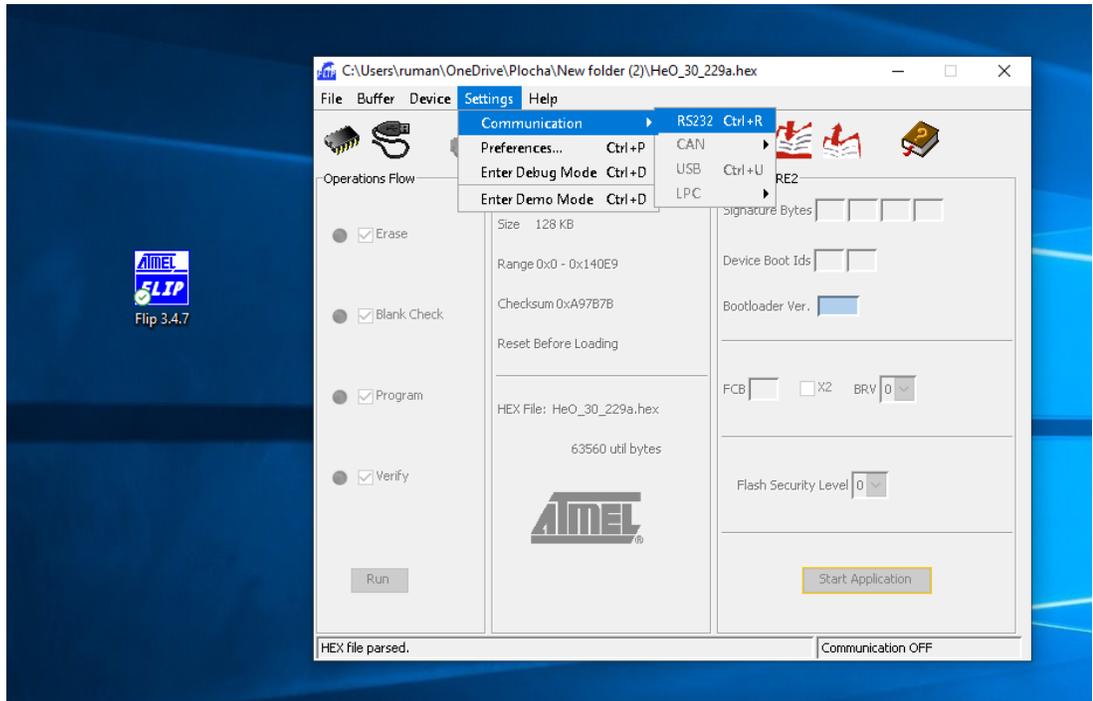
- Choose the correct **.hex** file for your analyzer version. Two digits in the name of the file will help you determine what device is it intended for.  23 = 2.3 / 24 = 2.4 / 30 = 3.0

8. Select from top tab menu **Settings** > **Communication** > **RS232**, select the correct COM port which was created by connecting to USB,
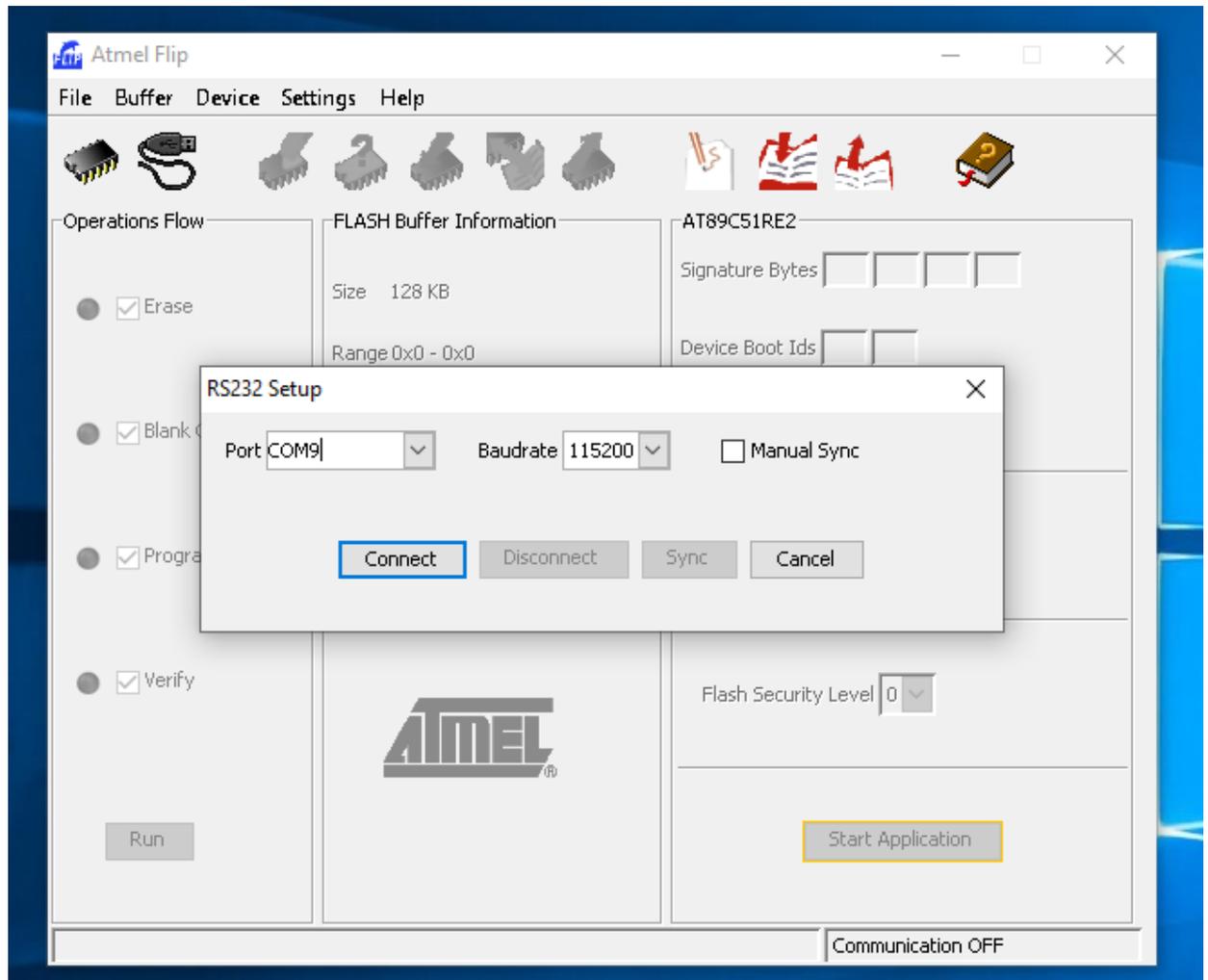
9. The FLIP window will show following information:
   Port: COMXXX
   Baudrate: 115200
   Manual Sync: "box unchecked"

10. At this point the Analyzer will need to be set into the Bootloader mode by doing following:

Hold MENU and CAL keys pressed and then press and hold the ON/OFF key all together. Then the MENU and CAL keys can be released but the ON/OFF key must remain pressed throughout the entire firmware update process! The screen will also remain off throughout the process.
You can refer to our video if you have trouble to get into the Bootloader mode:
https://www.youtube.com/watch?v=pvn9_4B2EH4&list=PLNYQA6sEcbWJ2sK7PYg7HKOMFCAPF86IO&index=15    (1:02)

11. Once the analyzer is in the Bootloader mode (screen will remain blank) and the ON/OFF is continually pressed you will select in FLIP program RS232 window > **Connect.** The RS232 window will collapse. Continue to hold ON/OFF button.



12. On the now available page press RUN button in lower left corner and let the FLIP program install the new FW. This process can take a while, please be patient and make sure you do not release the ON/OF button. If you do so, you'll need to restart the whole process and begin at point #1.

13. Keep the RS232 window open while the Flip program is running.
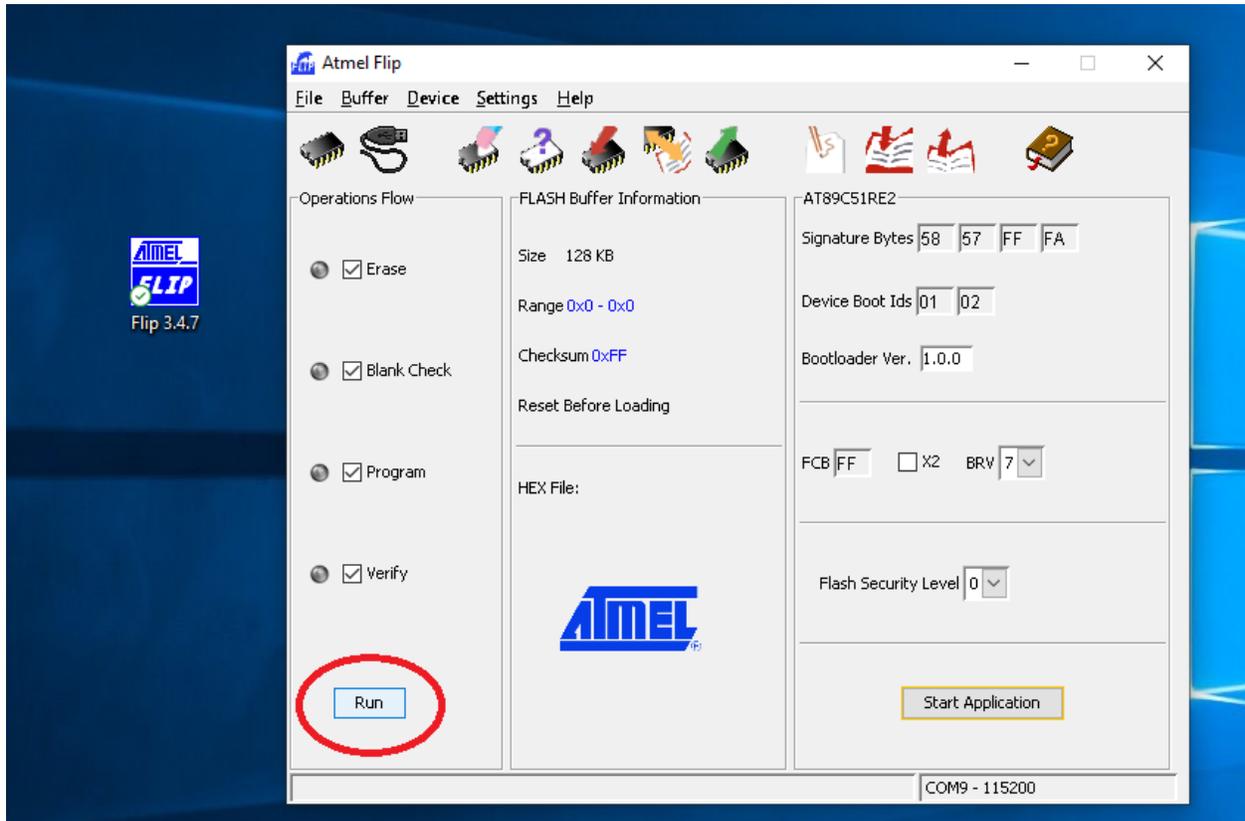
14. Once the installation is complete you will be able to turn on the analyzer and verify that the proper firmware has been installed.
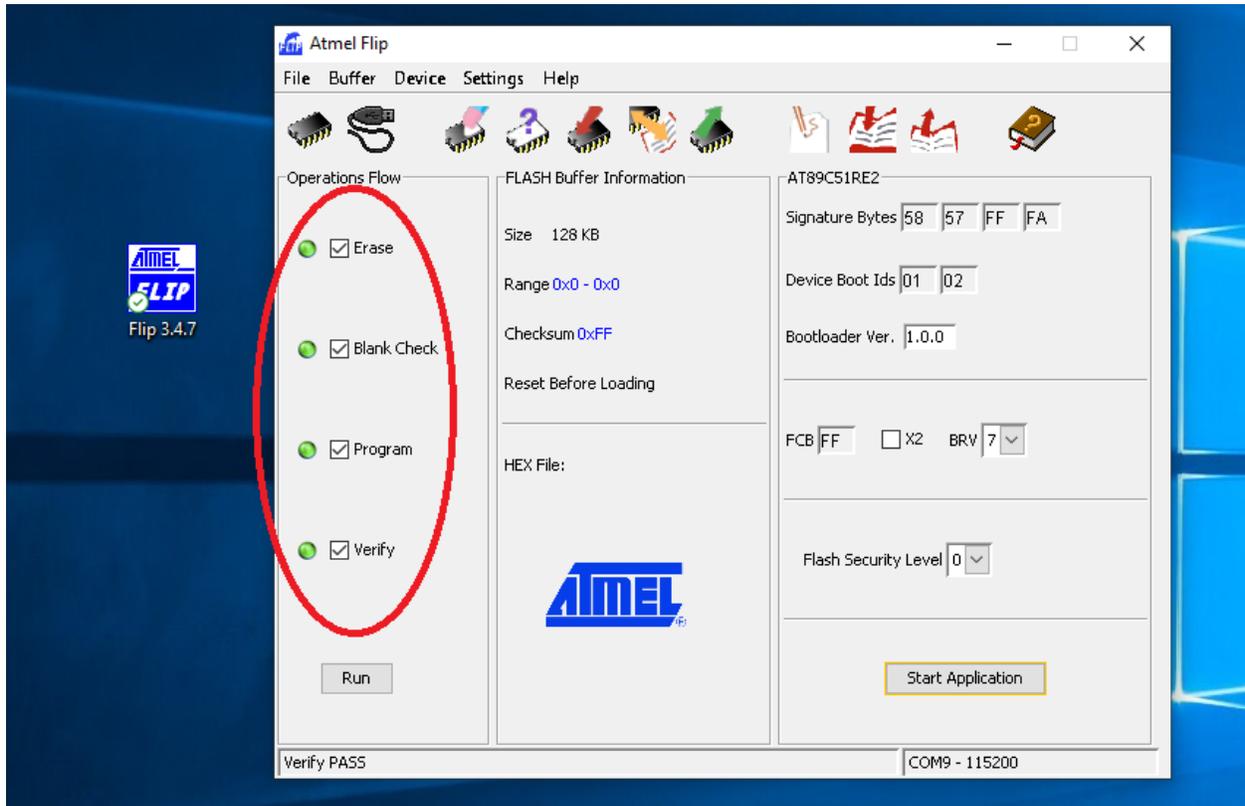
In the case of loading firmware intended for a different hardware version, the device will beep five times and shut itself down. In such case, repeat the procedure and load the correct FW version.

In case the download fails, and the device doesn't start (it's bricked), repeat the firmware download. Bricked device can also get into loading loop where it will continuously switch on and immediately off.

- In case the repeated connection with the analyzer fails or the device get bricked you will need to perform hard reset: press simultaneously ESC + down arrow + up arrow + OK

If you don't succeed in firmware download or the procedure seems excessively complicated, contact us on following email: info@divesoft.com for assistance.