How to Update FGA Logger Firmware

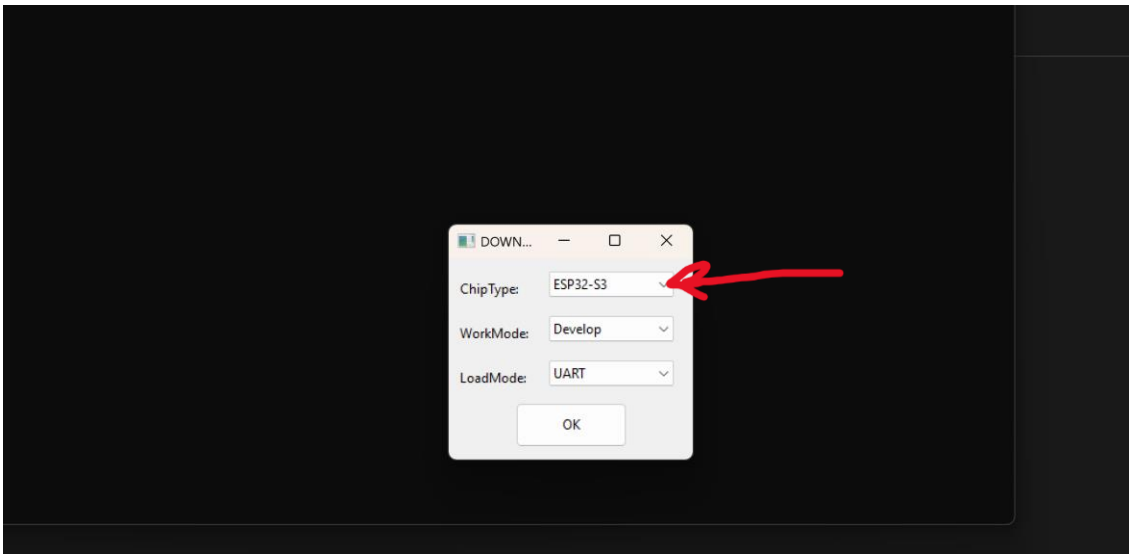
What You Need / Prerequisites

- 1 × FGA DATA Logger
- 1 × PC running Windows 7 (64-bit) or Windows 10
- Flash Download Tool installed on the PC (click to download)
- Download Latest Firmware (click to download)
- USB-C cable

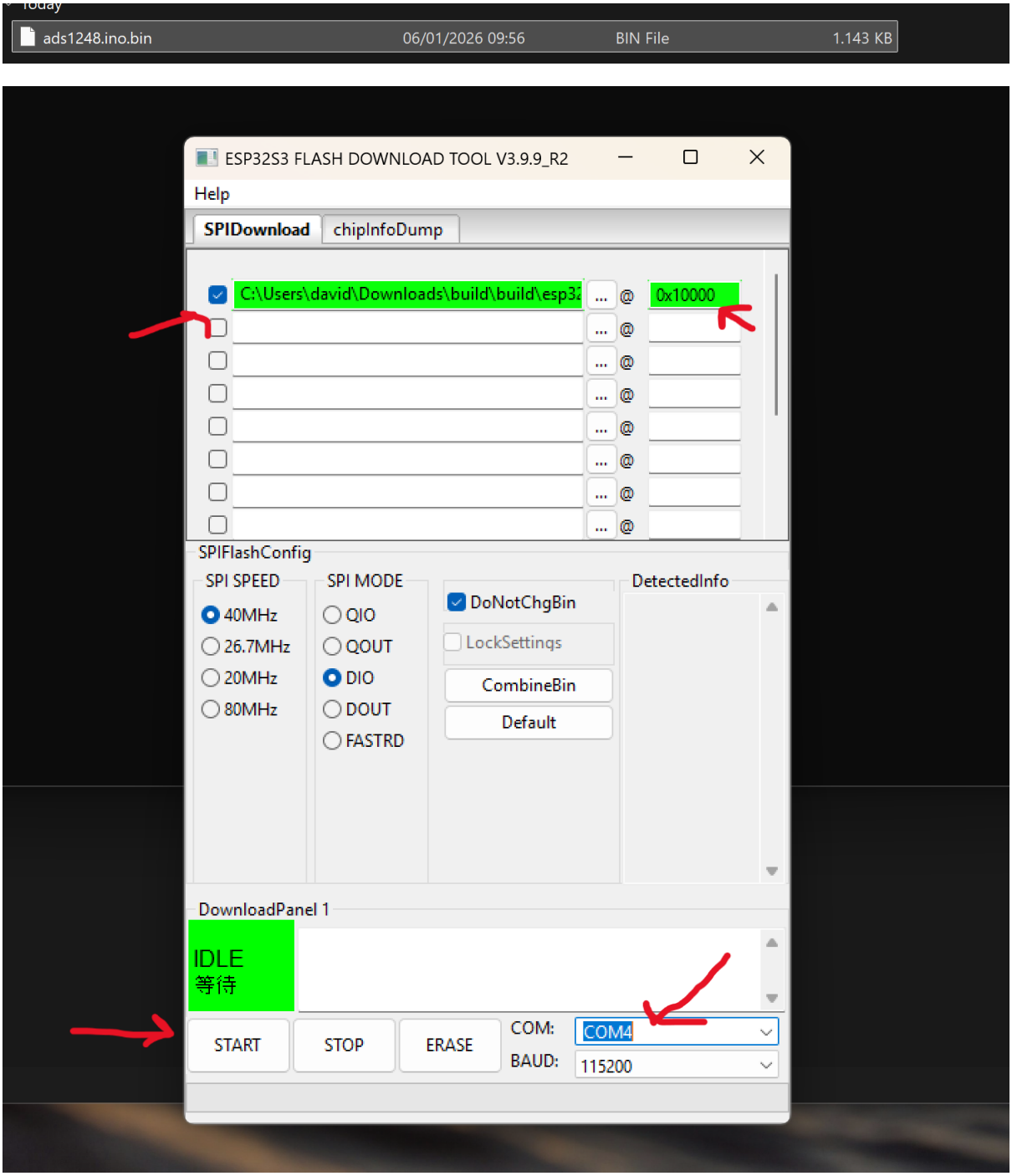
1.) Connect logger with PC using USB C cable to USB Serial Port

2.) Upload Sensor module firmware.

1a.) Run the Flash Download Tool and select ESP32-S3 as the Chip Type



2b.) Select the latest `ads1248.ino.bin` file (the name may differ, but `ino.bin` should be the same), set the address to **0x10000**, select the **COM port**, then click **START**.



When the update finishes, disconnect the device. The firmware update will be complete.

Now you need to apply calibration parameters to FG Logger.

1.) Make sure SD card is FAT32 formatted

2.) Make sure there is config.txt file on the SD card with calibration parameters content.

Copy and Paste this values in the .txt file

S1_X_OFFSET=10000

S1_X_GAIN=1.0

S1_Y_OFFSET=-10000

S1_Y_GAIN=1.0

S1_Z_OFFSET=0

S1_Z_GAIN=0.5

S2_X_OFFSET=40

S2_X_GAIN=1.4

S2_Y_OFFSET=50

S2_Y_GAIN=1.5

S2_Z_OFFSET=60

S2_Z_GAIN=1.6

3.) Hold multifunctional button and power device ON. LEDs will indicate that SD card configuration has been loaded by lighting on/off in sequence.

4.) Serial console will output information with parameters value that were red from SD card – this is a validation that procedure succeeded.

Config: reading from SD card config.txt found. Input 1: Offset(x,y,z): 0, 0, 0 Gain(x,y,z): 1.00000000, 1.00000000, 1.00000000 Input 2: Offset(x,y,z): 0, 0, 0 Gain(x,y,z): 1.00000000, 1.00000000, 1.00000000
Timestamp_ms,B1x_nT,B1y_nT,B1z_nT,B1v_nT,B2x_nT,B2y_nT,B2z_nT,B2v_nT,Lat_deg, Lon_deg,Alt_m,SIV,Fix,HDOP_m 9648,64555.26,-23249.89,2992.34,68679.64,109.97,-1852.41,2666.81,3248.91,0.0000000,0.0000000,0.000,0,0,0.00 Notice that calibration parameters are stored permanently into FG logger device.