

IoT Development Kit (IDK) SigFox Shield Bring-up Test

Equipment Needed

Baseboard with jumpers, Windows® PC with minimum 1 USB port, installed Java JRE/JDK v.8u101 or higher, Windows 7, 8 or 10 Operating System, mini USB cable, installed IDK IDE v3.4 or higher, SigFox shield, RF antenna.

Procedure

1. Connect the J6, J32 and J33 jumpers on the SigFox shield as shown below. Connect the RF antenna.

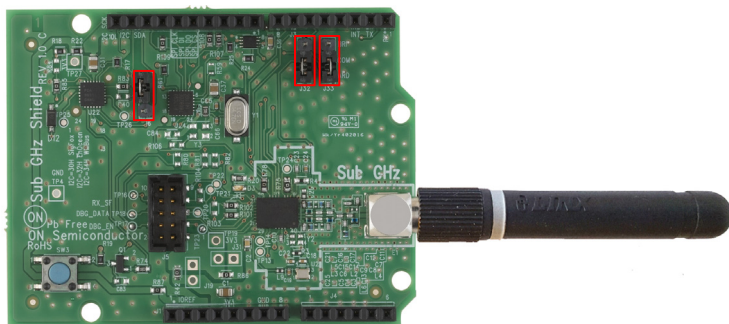


Figure 1. Step 1

2. Check the sticker on the bottom of the Sigfox Shield for the Device ID and PAC number. You will need to note both of them, as they are required for the registration in the Sigfox Backend cloud service.

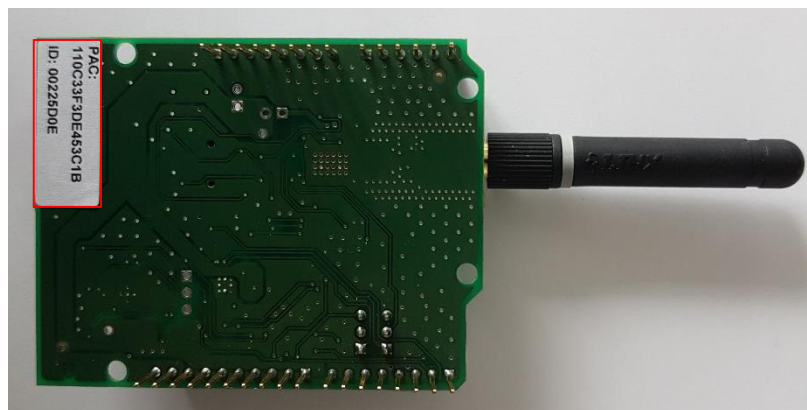


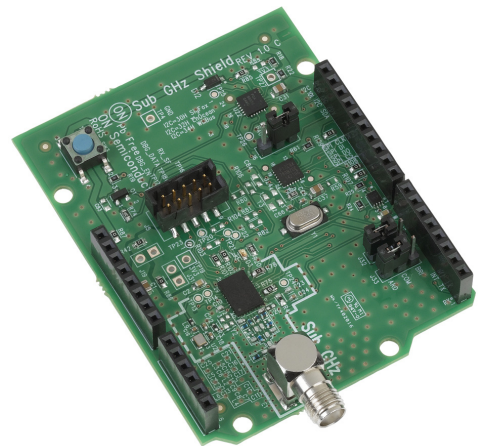
Figure 2. Step 2



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APPLICATION NOTE



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3. Connect the Sigfox Shield onto the baseboard over the Arduino headers. Connect the mini USB cable to the baseboard and computer.

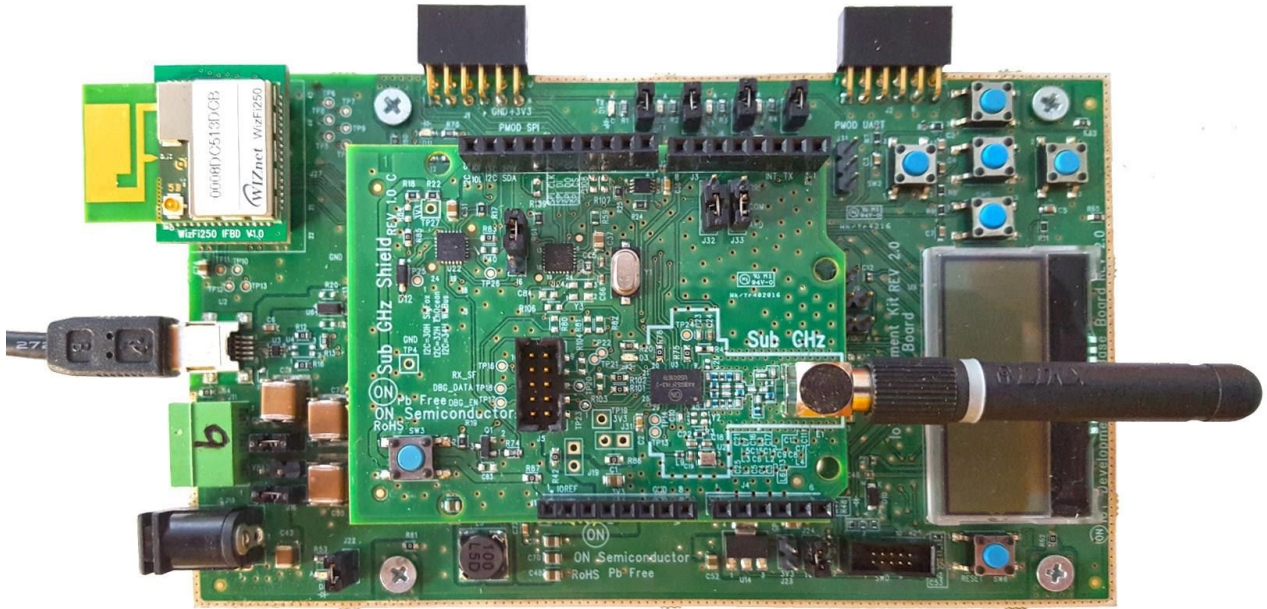


Figure 3. Step 3

4. Open the IDK software by clicking on the IDK icon in the start menu or via the IDK icon on your desktop.

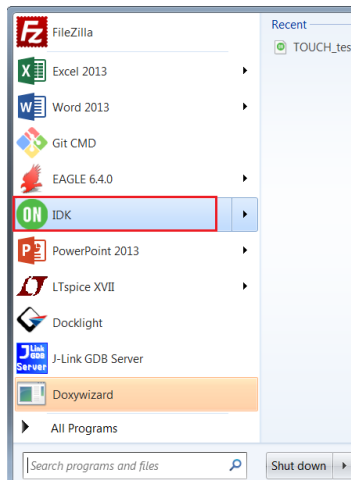


Figure 4. Step 4

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5. Once the IDE environment is opened, left-click on *Examples* → *Simple* and choose Sigfox (AX8052F143_SFX).

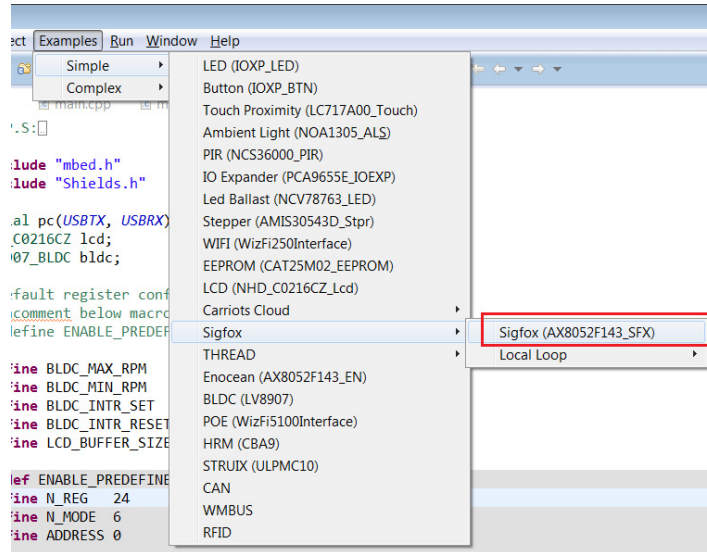


Figure 5. Step 5

6. The code structure of the example appears on the left under Project Explorer, named AX8052F143_SFX. A small red cross may appear close to the name of the project. This is due to indexing that has to be rebuilt. In order to remove the red cross, right-click on the AX8052F143_SFX, go to Index and left-click on Rebuild. It disappears after a few seconds.

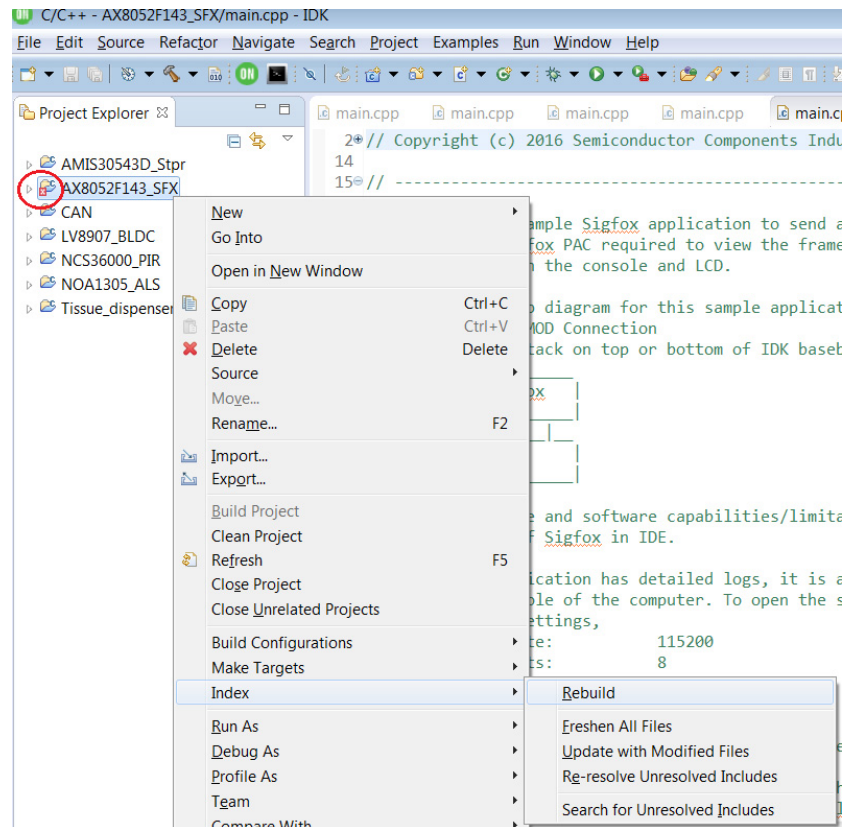


Figure 6. Step 6

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7. Double click on the *AX8052F143_SFX* and the code structure will open.

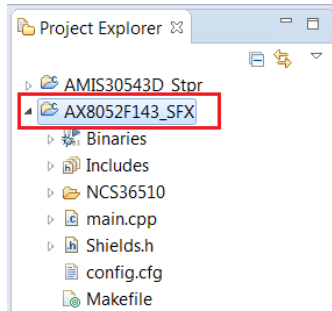


Figure 7. Step 7

8. Double click on *config.cfg*. Once the file opens, you will need to rewrite the COM port number. You can find the COM port number of the baseboard inside the window's device manager.

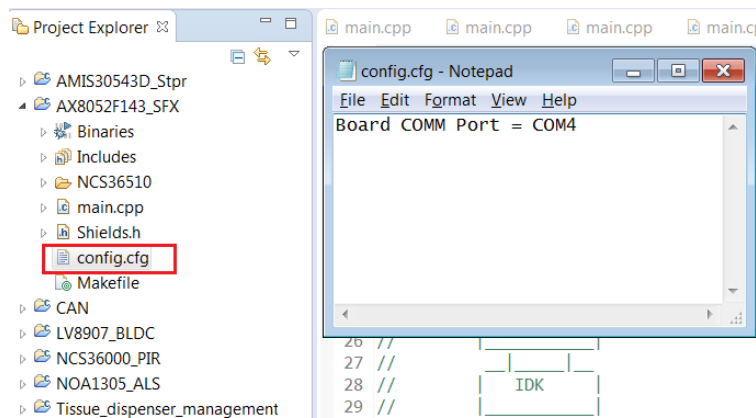


Figure 8. Step 8

9. Change COM4 to the COM port number of your baseboard. Close the *config.cfg* window and save the configuration.

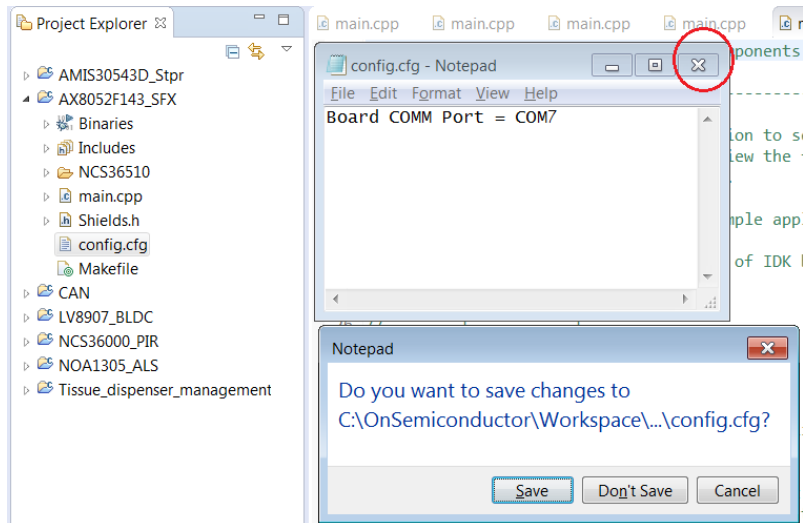


Figure 9. Step 9

10. Go to: <https://backend.sigfox.com/activate/ON>, select your region and follow the instructions to link the device to your own Sigfox account.

- Go to <https://backend.sigfox.com> and log in with your account credentials. Click on the *Device* tab at the top of the page. A new window, which shows your registered devices will be opened:

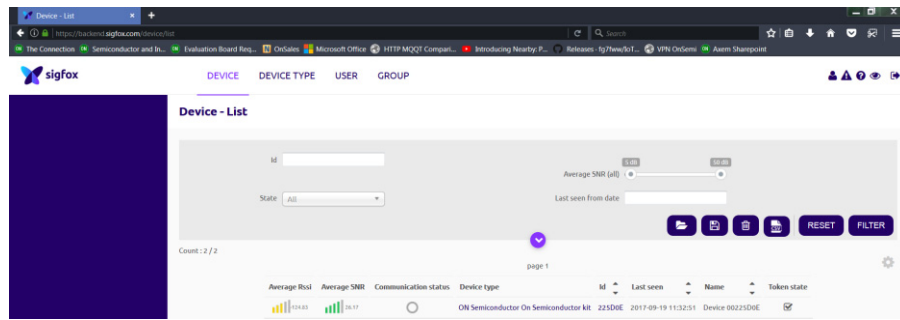


Figure 10. Step 11

- Click on the ID (in this example 225D0E). A new menu on the left hand side will appear. Select *Messages*. In the main window, you will see all the messages from your Sigfox Evaluation Board, which will be received by the Sigfox Backend.

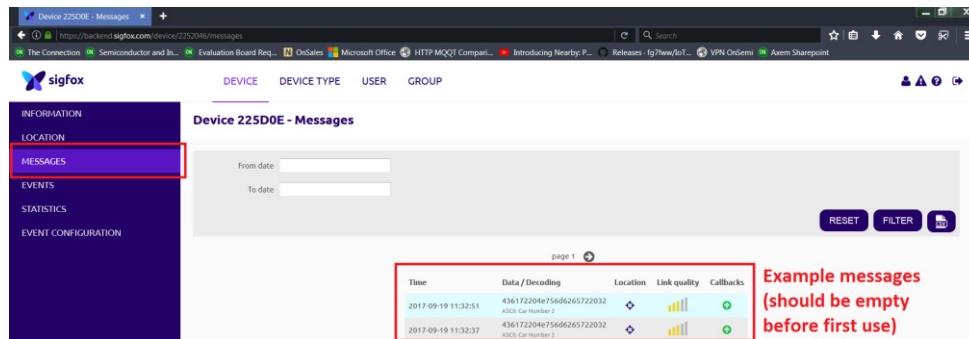


Figure 11. Step 12

- To start sending messages to the Sigfox Backend return to the IDK, right-click on *AX8052F143_SFX* and then left-click on *Build Project*.

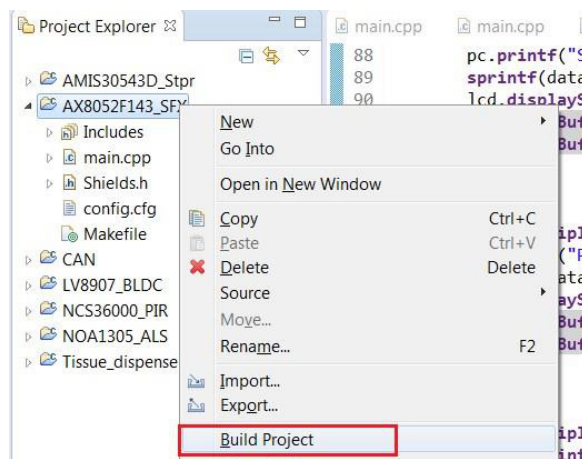


Figure 12. Step 13

- Left-click on the project *AX8052F143_SFX*.

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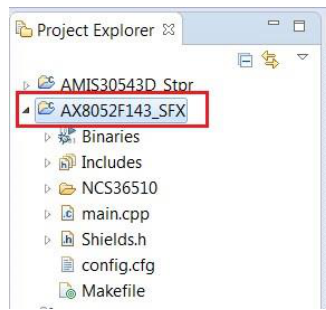


Figure 13. Step 14

15. Then, left-click on the green ON icon to flash the Baseboard. The command prompt window will open and a countdown will start.

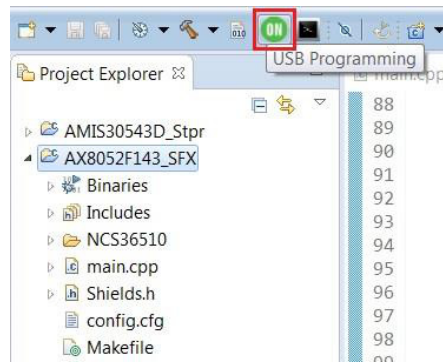


Figure 14. Step 15

16. Push the RESET button on the baseboard according to the picture below.



Figure 15. Step 16

17. Once the RESET button is pushed, programming of the baseboard will start. After the programming is finished, the command window asks you to push the RESET button again. Check your Sigfox Backend webpage of step 11 for new messages.

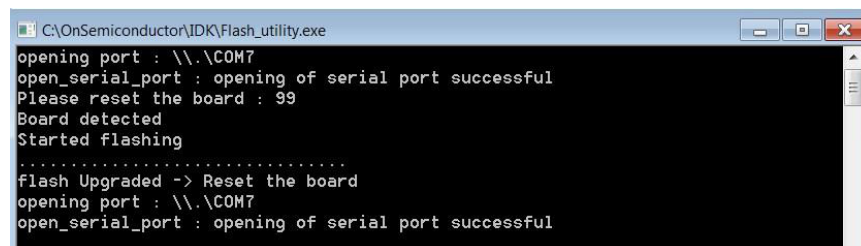


Figure 16. Step 17

18. To display an ASCII interpretation of your message go to the main Sigfox Backend webpage www.backend.sigfox.com and click on *Device Type*, then left click on the attribute *None* and select *Edit*.

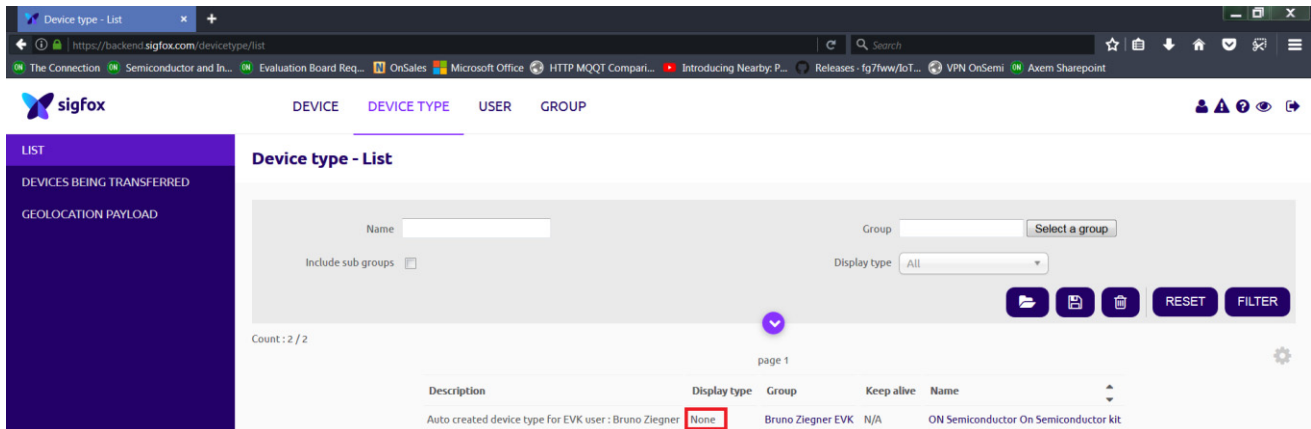



Figure 17. Step 18

19. In the *Payload display* section, select *Display in ASCII* as the *Payload parsing*.

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