Connection manual

In order to make a correct use of the application, the user will have to have the following components:

- 1x computer with the VisualStudio program and the PIO extension
- 1x ST Core F767ZI
- 1x Power cable
- 1x TinkerKit adapter plate! Mega Shield Sensor.
- 1x Joystick
- 5x LEDs
- 1x Button
- 8x Cables

1. Preparation of the code:

Go to https://github.com/cescft/practica1str and clone the repository to get the latest version of the code.

Once you have downloaded it, make sure you open it with the VisualStudio program where you have previously installed the PIO extension.

2. Preparation of the Nucleo:

Connect the Mega Shield Sensor to the Core as indicated in its own manual.

We connect one end of the cable to each of the external components, i.e. the button, the LEDs and two to the joystick. If you look closely, you'll see that the Josystick's connection pins are marked with a Y and an X. This will be important later on, keep that in mind.

Each of the LEDs represents a cardinal point (north, south, east, west), you are free to decide what you assign to which of these points. The remaining LED will be an indicator.

Connect the other end of the cables to the TinkerKit! Mega Shield Sensor in the following way to get correct results:

Component	TinkerKit PIN! Shield Sensor
LED North	O0
LED South	O1
LED East	O3

LED West	O2
LED Indicator	O4
Button	I2
Joystick Y	I0
Joystick X	I1

To make sure that the components are properly connected and working properly, we can look at the back of each of the components. A green LED will be lit in case everything works correctly once we connect the board to the computer.

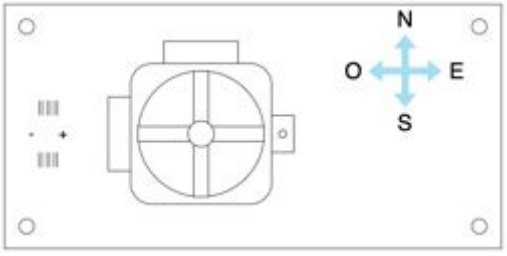
3. Code execution:

To compile and execute the code, click on the arrow button (see reference B01). If everything has been compiled and sent correctly, you will not see any error messages in the console. Error messages appear in red.

To view the execution console with the results, press the plug-in button (see reference B02). On this console, the results obtained will be printed periodically.

4. Functioning:

For a correct operation of the application the Joystick has to be oriented as follows:



The button is used to activate and deactivate the data reading via the joystick. Whenever it is off, the indicator LED is on.