Datasheet - Programming & Sensors

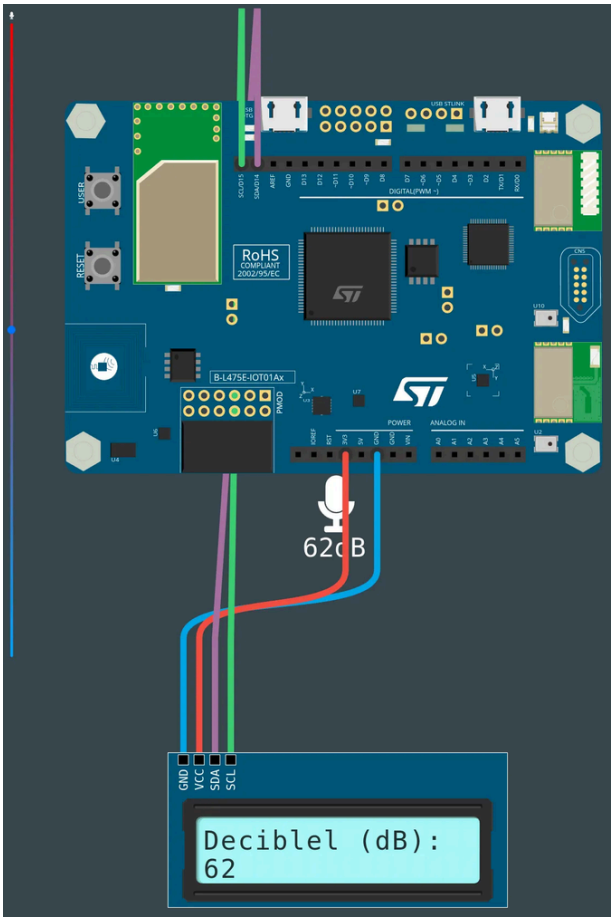
Displaying data on a screen

Wiring and Using a Programming board

Connecting the screen

To connect the LCD display, use the I2C bus according to the following convention:

- Black: GND
- Rouge : VCC (5V)
- Violet: SDA (D14)
- Vert : SCL (D15)



Resources :
https://fr.wikipedia.org/wiki/I2C
https://fr.wikipedia.org/wiki/Serial_Peripheral_Interface
https://www.sparkfun.com/qwiic
https://learn.adafruit.com/introducing-adafruit-stemmaqt/what-is-stemma-qt

Connecting the board to the computer

Using your USB cable, connect the board to the computer via the ST-LINK micro-USB connector (top right of the board).

If the connection is successful, a new drive named DIS_L4IOT will appear on the computer.

This reader is used to program the board by simply copying a binary file.

Opening MakeCode

Access the Let's Steam MakeCode editor. On the home page, create a new project by clicking "New Project." Give your project a meaningful name other than "Untitled," then launch the editor. Resource: makecode.lets-steam.eu

Installing extensions

After creating your new project, you will see the default "ready to use" screen and you will need to install an extension.

You'll find the black ADVANCED button at the bottom of the block groups column. Clicking it will open additional groups. At the bottom, you'll see a gray box labeled EXTENSIONS. Click it.

In the list of available extensions, easily locate the lcd_i2c extension used for this activity. This extension allows you to display data on a screen. If it doesn't appear directly, use the search tool. Select the desired extension; a new group of blocks will then appear on the main screen.

Use and understand the code

Here is the Javascript code used to program an STM32 board to regularly collect the microphone sound level.

```
lcd_i2c.initScreen()
lcd_i2c.setCursor(0, 0);
lcd_i2c.ShowString("Decibel (dB):")

forever(function () {
lcd_i2c.setCursor(0, 1);
lcd_i2c.ShowNumber(input.decibel());
lcd_i2c.ShowString("   ");
pause(200)
})
```

Programming the board

In the MakeCode JavaScript editor, copy and paste the code provided in the previous section. If you haven't already done so, name your project and click the Upload button. Then copy the binary file to the DIS_L4IOT drive and wait for the board to finish flashing.

Run, modify, play

Your program will run automatically every time you save or reset the board (by pressing the RESET button).