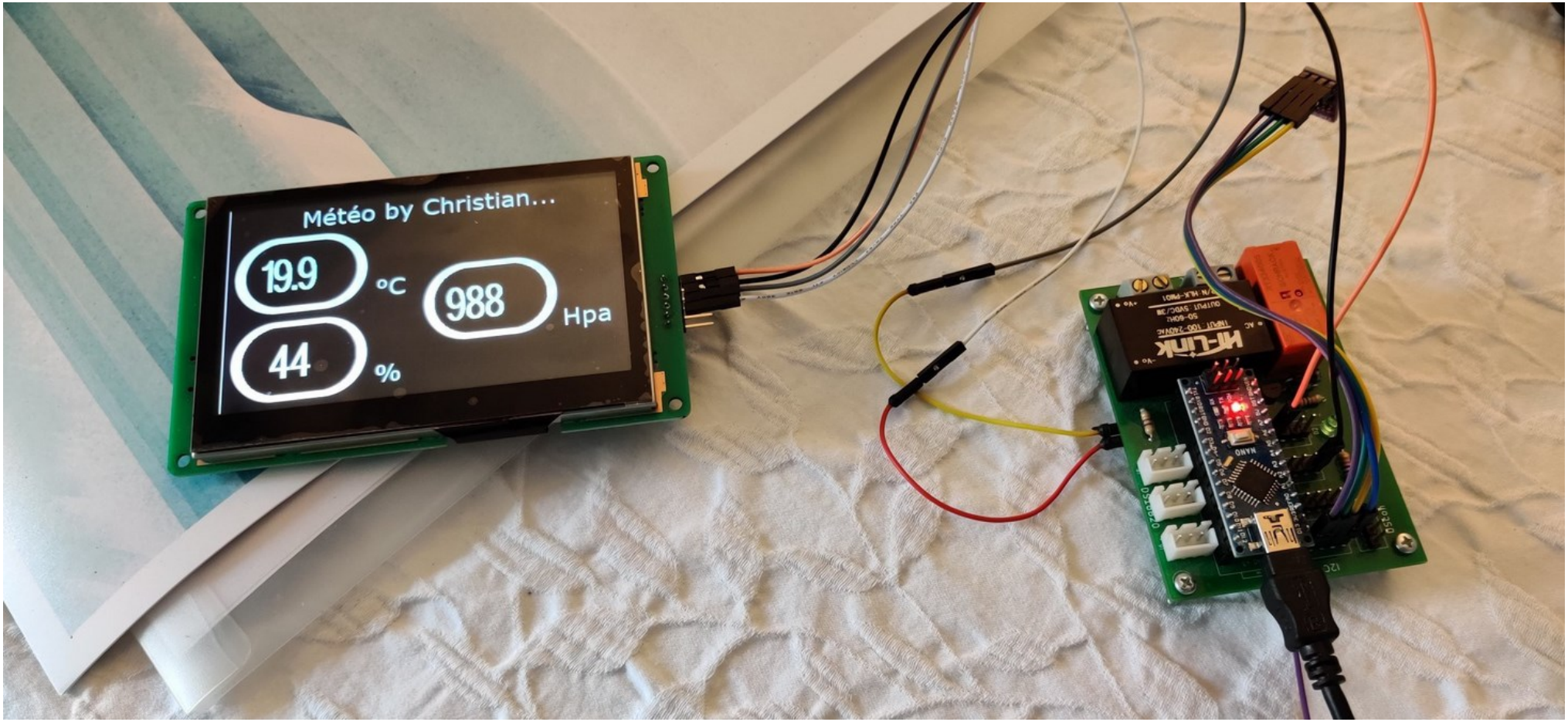
Display temperature, humidity and pressure very simply with costless and powerful DWIN display and ARDUINO compatible board !



Powerful DGUS tool to design smart and efficients displays !

Display stores quite everything, communicates with arduino board with RS232 115k speed.

In this document, i wont explain the design part with DGUS.

You have all files in zip to simply copy, upload programs to display and arduino, power on and… enjoy !

List of material

1. DWIN display (for this project, 480x272, ref DMG48270C043)

DWIN store link : https://www.aliexpress.com/store/1101578880?spm=a2g0o.detail.100005.1.b6ba2886o5ZarQ

2. BME280 I2C sensor (Aliexpress or Amazon, lots od stores)

3. Any ARDUINO compatible board (Nano, Uno, ESP8266,ESP32, Nodemcu,…)

IMPORTANT : the board must have +5V supply output for display !

I also designed a set of 3 ARDUINO boards DIY IOT/sensors oriented, you can find and buy PCB and all informations at

https://www.pcbway.com/project/member/shareproject/?bmbno=19CB62A2-E910-4E

List of tools

1. Micro SD card, FAT formatted (4Go maxi)
2. Reader/writer SD card / USB
3. ARDUINO IDE for programming

Programming…

1. Unzip DWIN BME280

    - You can find DWIN_BME280.ino (for arduino programming)

    Set by default to Nodemcu board (choose your board)

    Upload program

    - Test1 dwin folder (contains DWIN_SET folder, to be copied to SD card)

2. Copy DWIN_SET folder on SD card root
3. Switch off DWIN display, insert SD card
4. Power on the display; the upload begins until END displays
5. Power off the display, take off the SD card
6. Power on the display, you shoul see interface, waiting for sensor informations
7. Let’s wire all this !!

Wiring display, sensor to the arduino or diy board ...

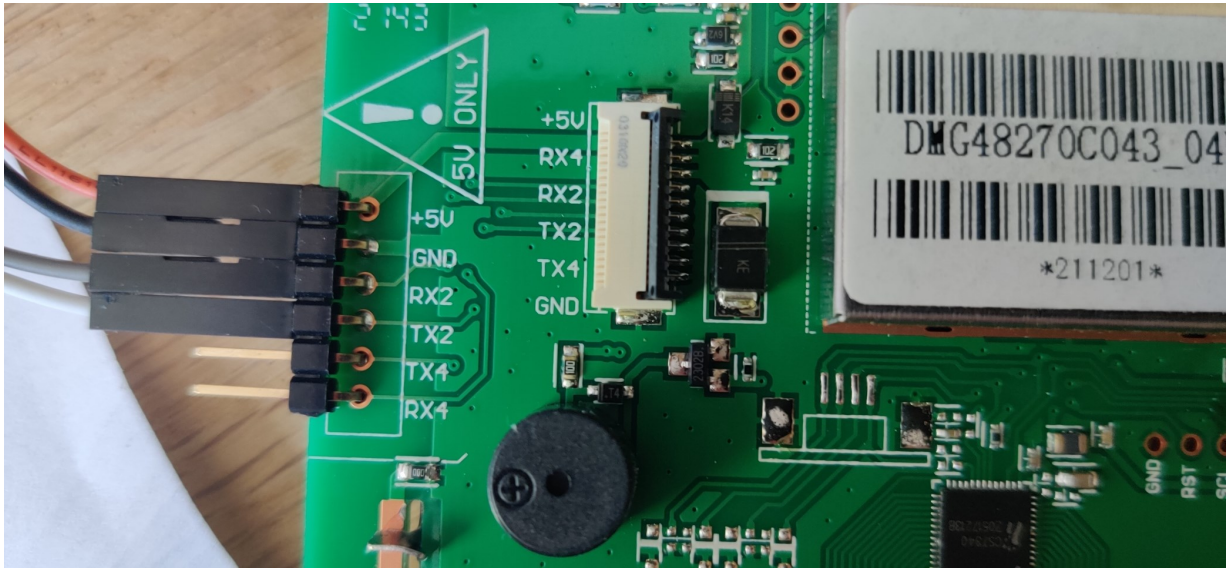
Pinout of display

Pin 1 : +5V

Pin 2 : Ground

Pin3 : RX (to TX arduino)

Pin 4 : TX (to RX arduino)



Wiring display, sensor to the arduino or diy board ...

Pinout of diy board **NodeMCUexp_v1 board**

Display

TX pin (to RX display pin 3)

RX pin (to TX display pin 4)

Gnd pin 4 J3 connector (to Gnd display pin 2)

+5V pin 1 J3 connector (to +5V display pin 1)

Sensor BME280 :

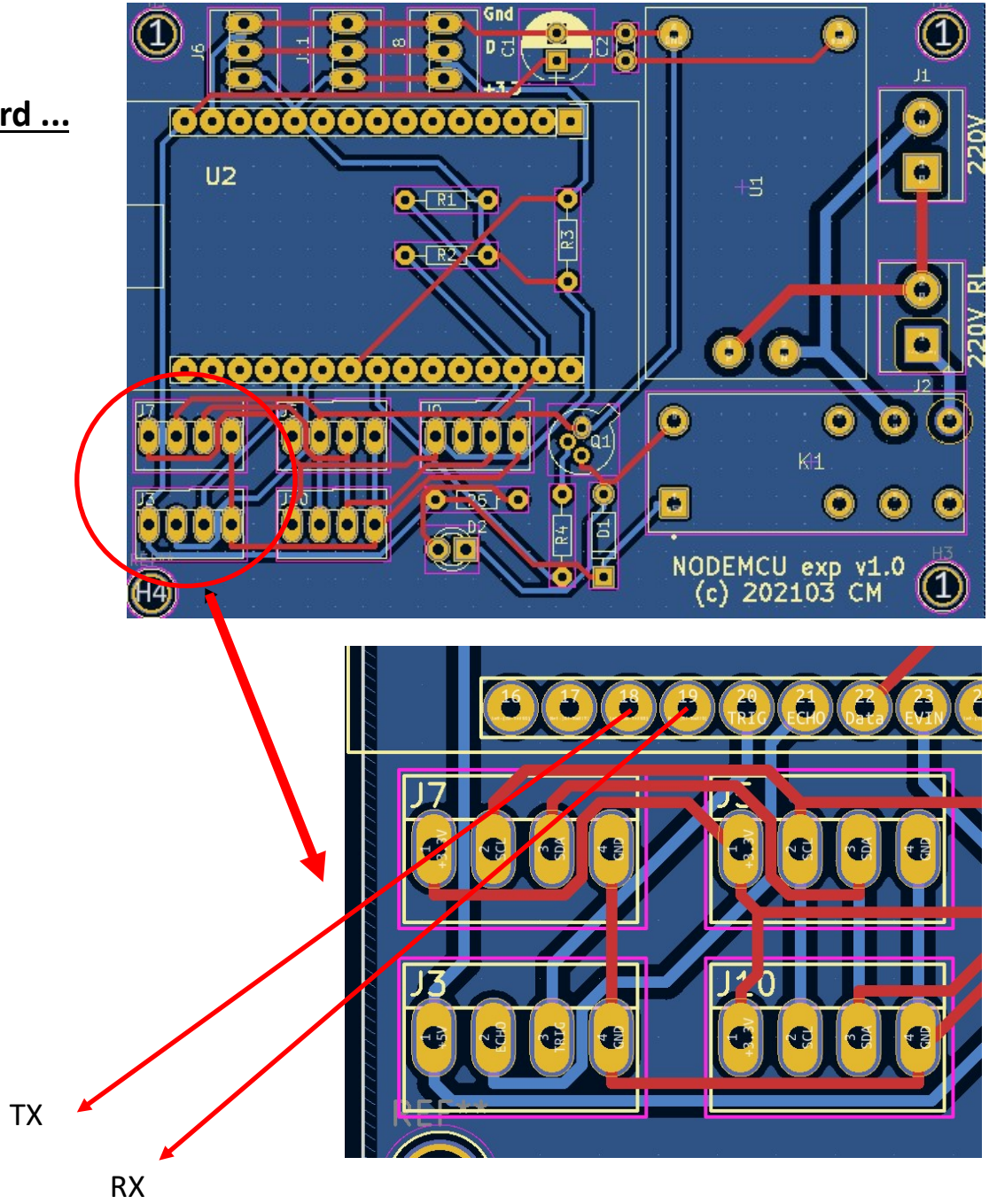
J7 connector

VIN : J7 pin 1

Gnd : J7 pin 4

SCL : J7 pin 2

SDA : J7 pin 3



Wiring display, sensor to the arduino uno board ...

Display

TX pin (to RX display pin 3)

RX pin (to TX display pin 4)

Ground pin (to Gnd display pin 2)

+5V pin 1 J3 connector (to +5V display pin 1)

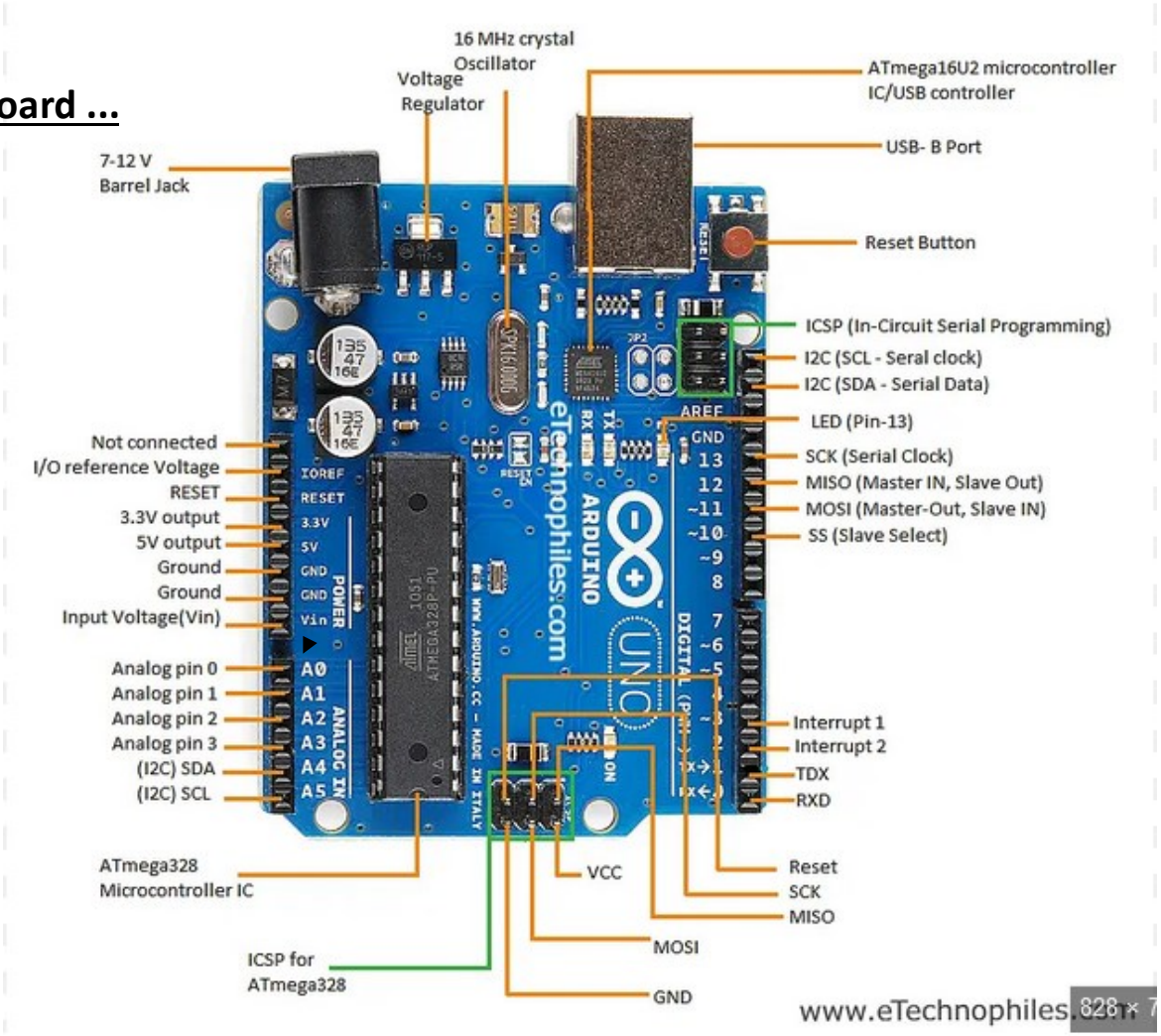
Sensor BME280 :

VIN : +3.3V arduino

Gnd : Gnd arduino

SCL : I2C SCL arduino

SDA : I2C SDA arduino



Everithing is wired … Power on and enjoy!

Useful links

DWIN displays : https://www.aliexpress.com/store/1101578880?spm=a2g0o.detail.100005.1.b6ba2886o5ZarQ

PCBway DIY arduino boards : https://www.pcbway.com/project/member/shareproject/?bmbno=19CB62A2-E910-4E