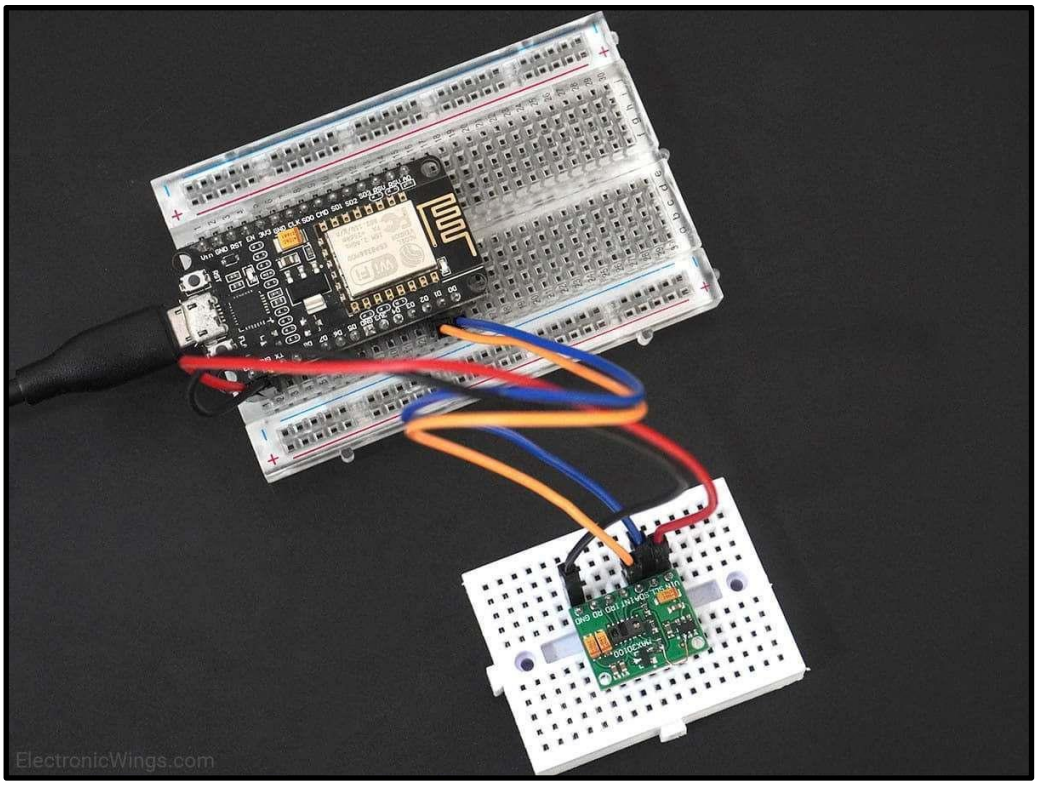
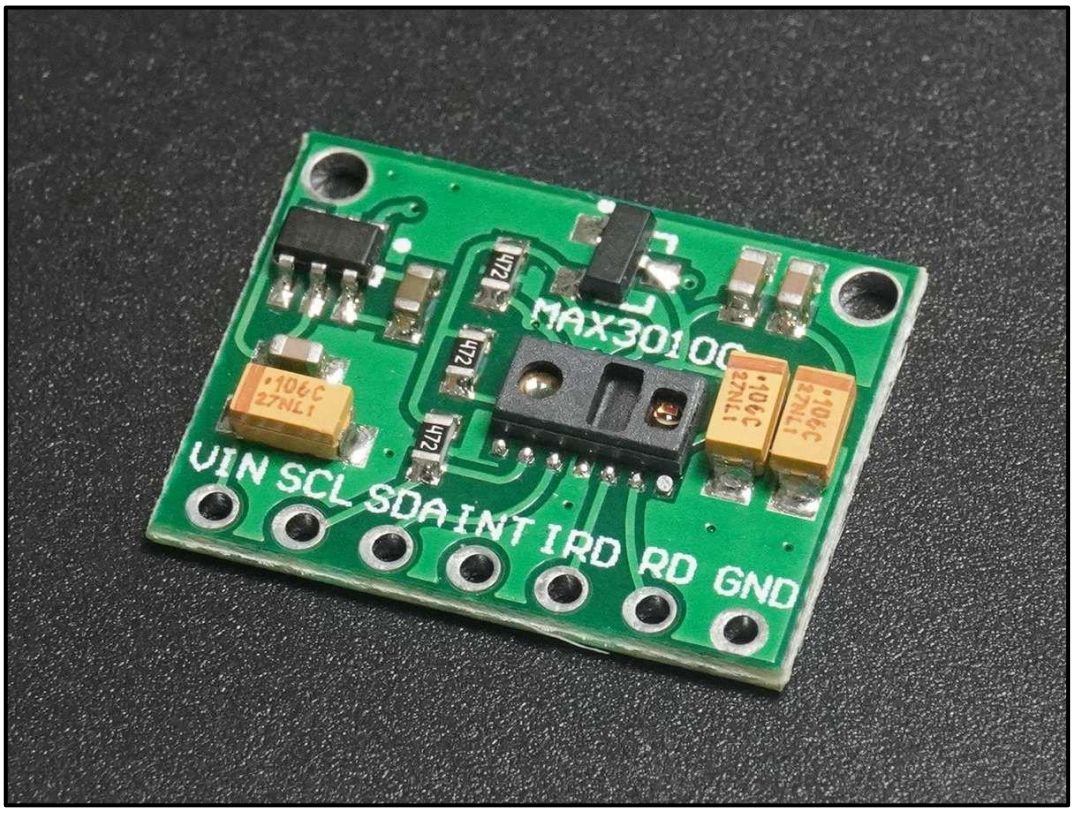
- **MAX30100 Pulse Oximeter Interfacing with NodeMCU**



❖ **Max30100**

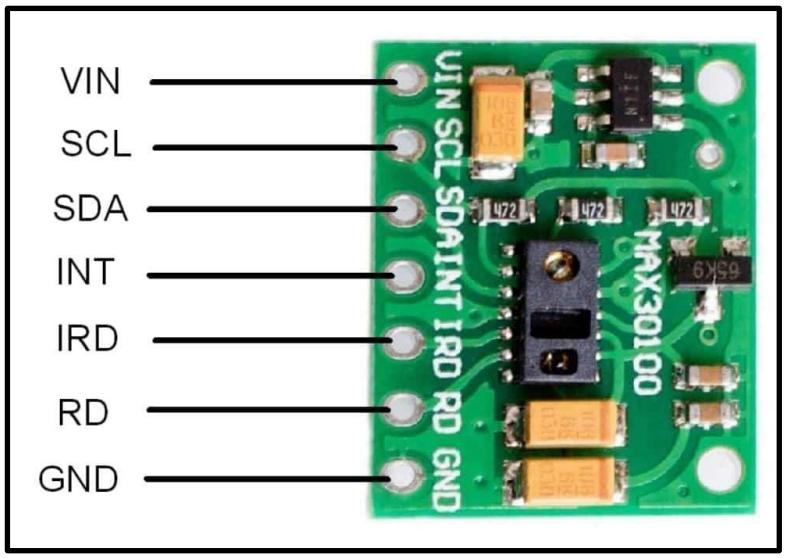


- **The MAX30100 Pulse Oximeter is a medical device that is used to measure blood oxygen saturation levels, heart rate, and pulse strength.**
- **It uses a non-invasive method to measure oxygen saturation levels in the blood.**
- **This module has a pair of LEDs (Light Emitting Diode) that emit a monochromatic red light at a wavelength of 660nm and infrared light at a wavelength of 940nm.**
- **As the photodiode emits light, it falls on the finger and gets absorbed by the oxygenated blood rest light is reflected through the finger and falls on the detector.**
- **The detector detects and processes the signals and gives the output.**
- **The MAX30100 sensor works on the I2C Serial Communication protocol.**

❖MAX30100 module Specification

- **Operating voltage of the module is 1.7V to 3.3V.**
- **Supply current of 1200uA.**
- **The operating temperature range of the module is -40C to +85C.**
- **LED Current range 0mA to 50 mA.**
- **LED Pulse width range from 200us to 1.6ms**

❖MAX30100 Sensor Pinout



❖MAX30100 Pin Description

1. **VIN: Power supply pin connects in the range of**
2. **GND: Connect to Supply ground.**
3. **SCL: Serial Clock pin for I2C Serial Communication.**
4. **SDL: Serial Data pin for I2C Serial Communication.**
5. **INT: Active Low Interrupt pin.**
6. **IRD: IR LED Cathode and LED Driver Connection pin.**
7. **RD: Red LED Cathode and LED Driver Connection pin.**

❖Connection

MAX30100 Sensor Pins	NodeMCU Pins
SCL	D1
SDA	D2
INT	D0
VCC	3V
GND	GND

❖Installing Required Libraries

You have to open Library manager in Arduino IDE and search for max30100. Install the MAX30100lib by OXullo Intersecans as shown below.

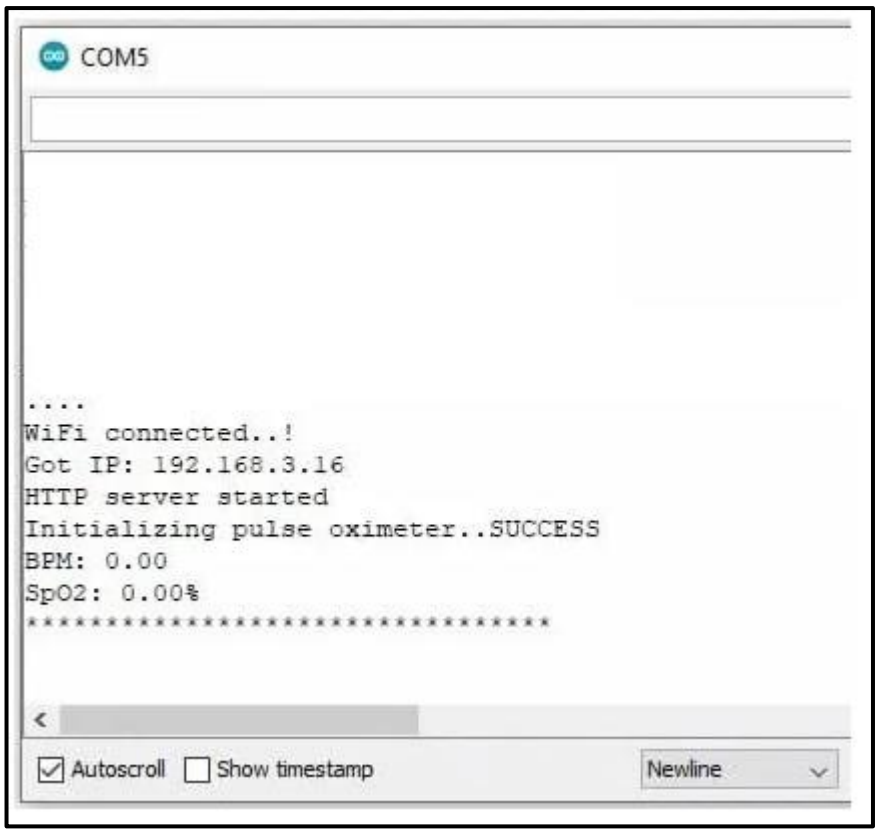
❖Code

Available at this directory:

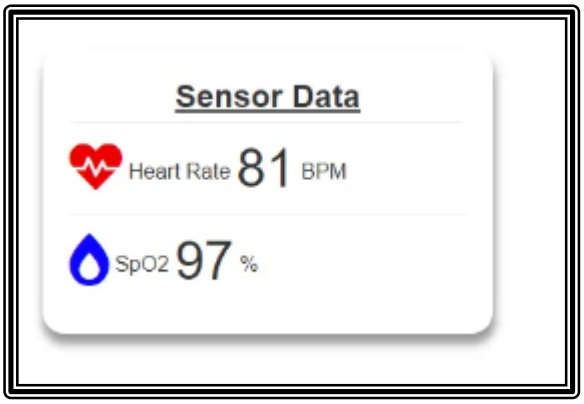
D:\nodeMcu\oximiter_max30100_interface

Name :- oximiter_max30100_interface.ino

❖Testing



➔ **Run on given ip address in you mobile or laptop which network is same**



Created By :

~AJAJ