

Heart Rate Monitor

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Components

- MAX30102 Pulse and Blood Oxygen sensor
- CVS-2308 Buzzer/Speaker
- LED Indicator
- SSD1306 OLED Display
- Wires

Description

This project is a personal health monitoring system that displays heart rate and blood oxygen levels in real-time on an OLED display. It is powered by the MAX30102 sensor, which measures pulse, or beats per minute (BPM), allowing users to monitor their vital signs easily. The OLED display provides a clear and continuous visual output of the readings. The speaker and LED works with the MAX30102 sensor so when the pulse spikes, the speaker makes a short beep, and the LED turns on for that short time, simulating an ECG/Pulse monitor. The cloud functionality is showing the current pulse, which can be viewed at any time on an html based web page or the particle console.

Files

- lib folder contains:
 - OLED Adafruit Libraries
 - Adafruit_BusIO_RK
 - Adafruit_GFX_RK
 - Adafruit_SSD1306_RK
 - SparkFun MAX3010x Library
- main.cpp
 - In src folder
 - Flash to photon including libraries, etc.
- BPM_Viewer.html
 - For cloud viewing of BPM value

Circuit Diagram

