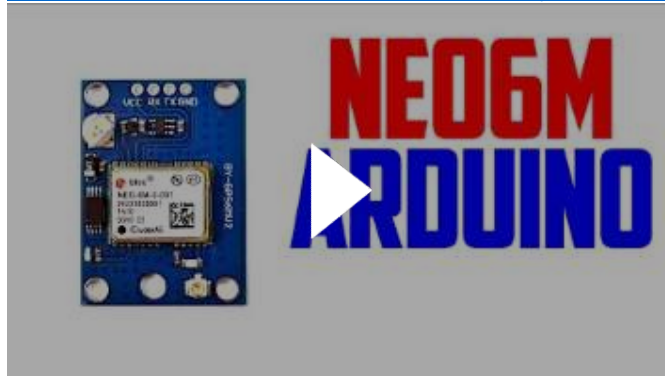# Smart ambulance with mqtt -- references

24 February 2024   21:48

References:

GPS Details:

How to use NEO 6M GPS Module with Arduino | Ublox NEO6M GPS Module

Heart Rate and Oxygen for MAX30102:
https://lastminuteengineers.com/max30102-pulse-oximeter-heart-rate-sensor-arduino-tutorial/

General Description

The MAX30102 is an integrated pulse oximetry and heart-rate monitor module. It includes internal LEDs, photodetectors, optical elements, and low-noise electronics with ambient light rejection. The MAX30102 provides a complete system solution to ease the design-in process for mobile and wearable devices.

The MAX30102 operates on a single 1.8V power supply and a separate 5.0V power supply for the internal LEDs. Communication is through a standard I2C-compatible interface. The module can be shut down through software with zero standby current, allowing the power rails to remain powered at all times.

Applications

- Wearable Devices
- Fitness Assistant Devices

Benefits and Features

- Heart-Rate Monitor and Pulse Oximeter Sensor in LED Reflective Solution
- Tiny 5.6mm x 3.3mm x 1.55mm 14-Pin Optical Module
  - Integrated Cover Glass for Optimal, Robust Performance
- Ultra-Low Power Operation for Mobile Devices
  - Programmable Sample Rate and LED Current for Power Savings
  - Low-Power Heart-Rate Monitor (< 1mW)
  - Ultra-Low Shutdown Current (0.7µA, typ)
- Fast Data Output Capability
  - High Sample Rates
- Robust Motion Artifact Resilience
  - High SNR
- -40°C to +85°C Operating Temperature Range

Traffic Management References:

Smart ambulance with intelligence traffic signals|| #iot#smartambulance

433MHz RF Tx & Rx details :
https://lastminuteengineers.com/433mhz-rf-wireless-arduino-tutorial/