

## Asset Tracker

A real-time GPS tracker that logs and sends location data to a cloud platform or a mobile app. You can track the movement of a vehicle, a pet, or even a person.

## Geofencing

Set up geofencing zones, and when the GPS module detects that the M5Stick has entered or exited a specific area, trigger notifications or alerts. For example, you can receive an alert when your pet leaves your backyard.

## Navigation Device

Build a handheld navigation device that uses GPS data to provide directions to a specific destination. Display maps and turn-by-turn directions on the M5Stick screen. You can preload maps or access online mapping services.

# M5Stick CPlus+GPS

## Location Data Logger

a device that logs GPS data at regular intervals and stores it in onboard memory or sends it to a server. You can later analyze the data to track travel routes, speed, or even environmental conditions at specific locations.

## Emergency Locator Beacon

Create a compact emergency locator beacon that can send GPS coordinates to search and rescue teams when activated. It can be a valuable safety device for outdoor enthusiasts.

### Plan A

M5Stick C Plus when combined with a GPS module can create various interesting IoT projects. Here are a few project ideas using M5Stick C Plus and GPS:

## Fitness Tracker

Design a fitness tracker that logs and displays workout routes, distance, and speed. You can include additional sensors like heart rate monitors to make it a comprehensive fitness device.

## Soil Moisture Monitor

Measure the moisture in soil and similar materials. higher moisture that is in the soil means the better the conductivity between the two so that the sensor will result in a lower resistance, and a higher SIG out. Earth Moisture Sensor Unit Analog and Digital Output

## Air Quality Monitor

Measures various VOC (volatile organic compounds) and H2 in the air. It can be programmed to detect TVOC (total volatile organic compounds) and eCO2 (equivalent carbon dioxide reading)Concentration measurement.TVOC/eCO2 Gas Sensor Unit (SGP30).

## Robot Obstacle Avoidance

To apply in robotics obstacle avoidance, fluid level detection, and other applications that require you to perform measurements. Ultrasonic Distance Unit I2C (RCWL-9620).

## Heart Rate Tracker

Measure blood oxygen and heart rate. The device is based on the MAX30102 pulse oximetry and heart-rate monitor biosensor module. M5StickC Heart Rate Hat (MAX30102).

## Weather Station

Combine GPS data with weather information to create a portable weather station. You can use the GPS to determine the exact location where weather data is recorded. Display temperature, humidity, pressure, and other weather data on the M5 screen. ENV IV Unit with Temperature Humidity Air Pressure Sensor (SHT40+BMP280).

## Airborne Particle Detection

Measures various VOC (volatile organic compounds) and H2 in the air. It can be programmed to detect TVOC (total volatile organic compounds) and eCO2 (equivalent carbon dioxide reading)Concentration measurement.TVOC/eCO2 Gas Sensor Unit (SGP30).

M5+?

### Plan B

We can add a third module or sensor to implement from a different set of projects. Here are project ideas that involve a third sensor from a different category.