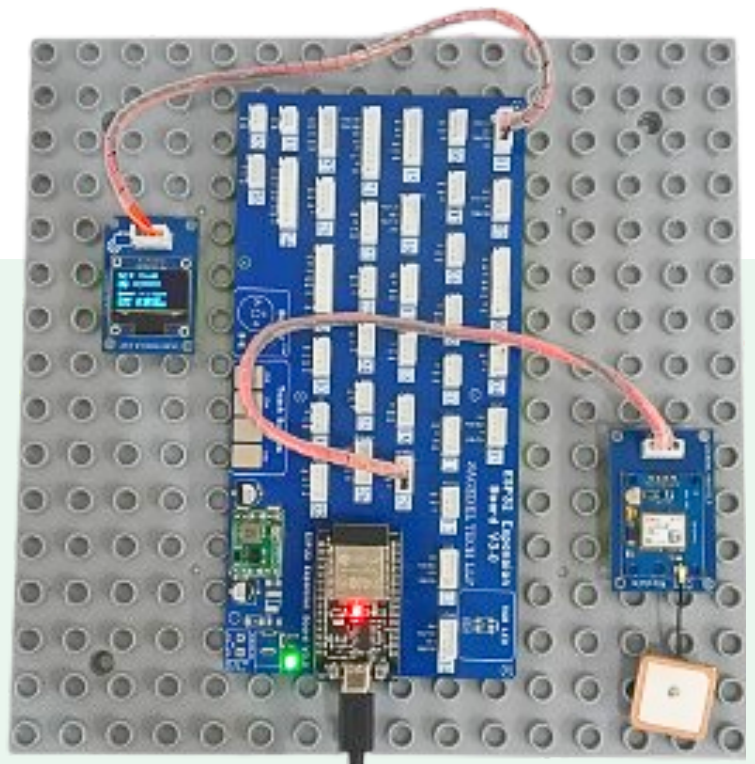


GPS LOCATION FINDER

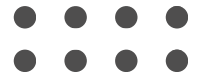
GPS Location Finder — Real-Time Coordinate Tracking Module

2026



GPS LOCATION FINDER

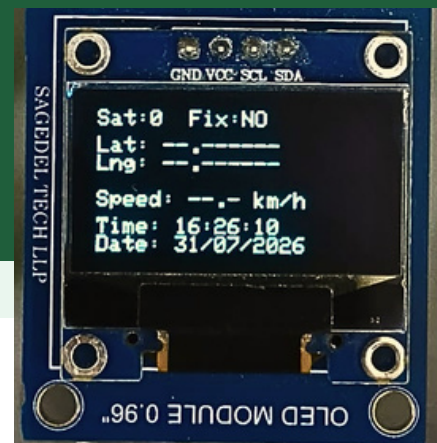
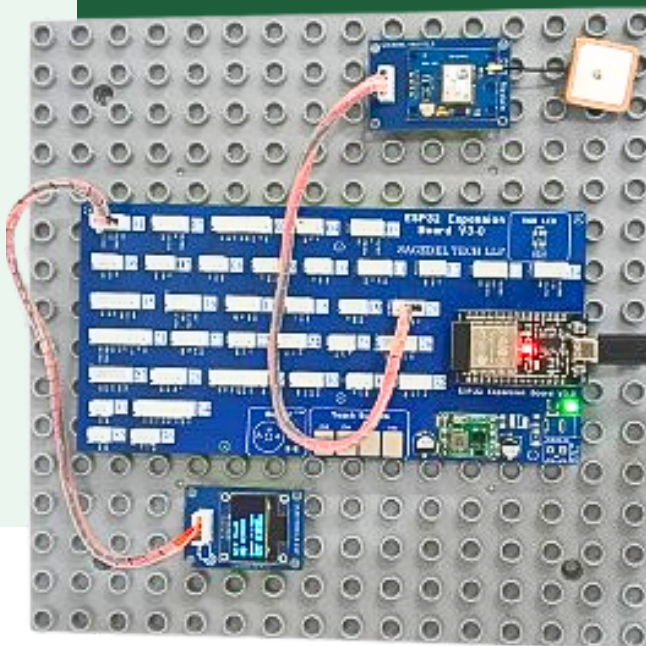
Objective:

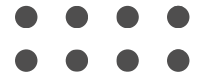


Learn how to connect a positioning module to a microcontroller to continuously acquire real-time location data, enabling accurate tracking and course correction without human control.

What it Does:

The GPS location finder keeps track of the current position and checks it against the planned route, sending correction signals to the microcontroller so it can stay on course.

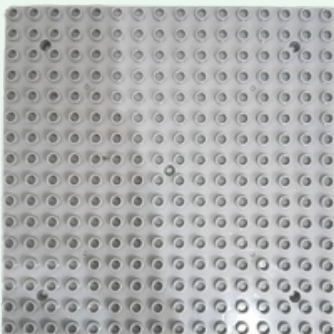




Modules & Components used:



ESP32 Expansion Board



Bread Board



OLED Module



GPS Module



JST Cables



USB Cable

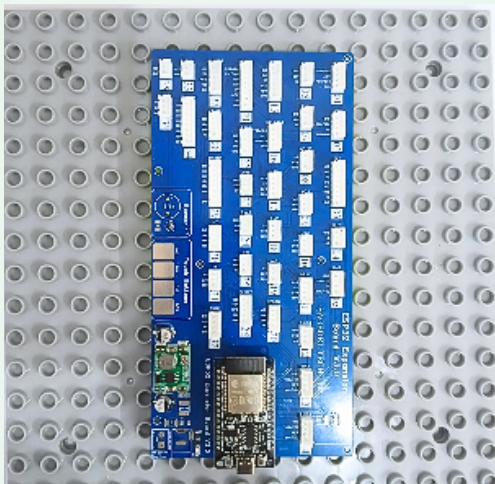
Step-by-Step Assembly & Connections



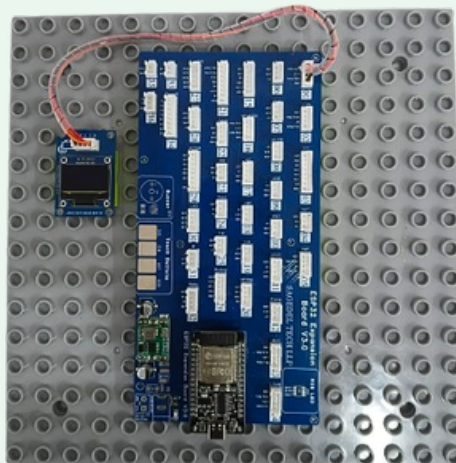
Step 1: Mount the ESP32 Expansion Board onto the Lego baseplate and secure it firmly in position.

Step 2: Connect the OLED display to **Port No. 1** using the connector, and mount the GPS antenna next to it on the baseplate.

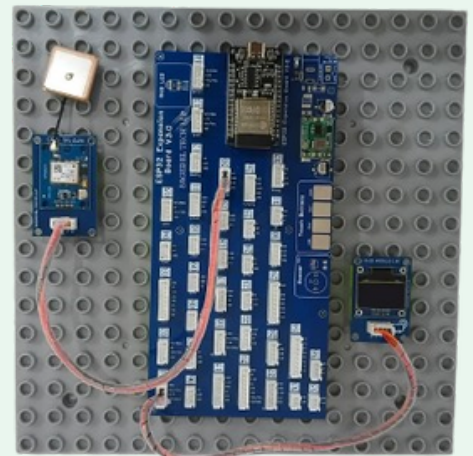
Step 3: Connect the GPS module to **Port No. 20** using connector, and mount it at the top corner of the baseplate.



Step 1:

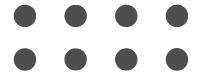


Step 2:

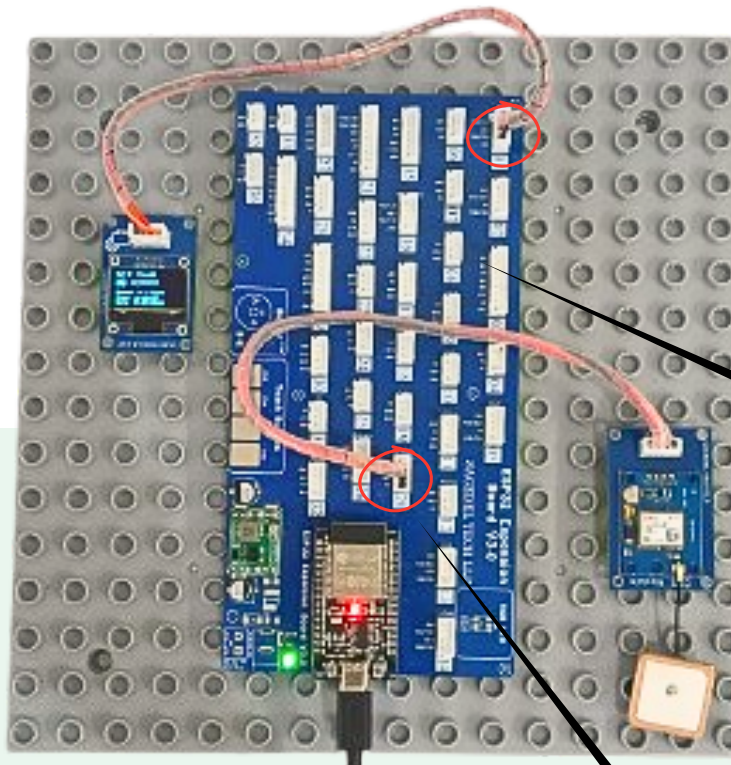


Step 3:

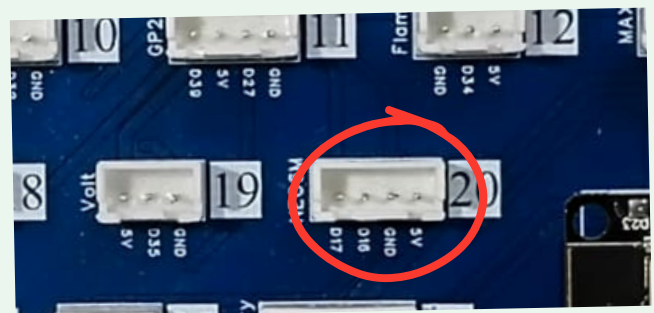
Specific Port Connections



- **OLED Module** → Connect it to **Port No. 1**
- **GPS Module** → Connect it to **Port No. 20**

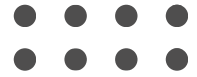


Connect the OLED Module to Port No. 1

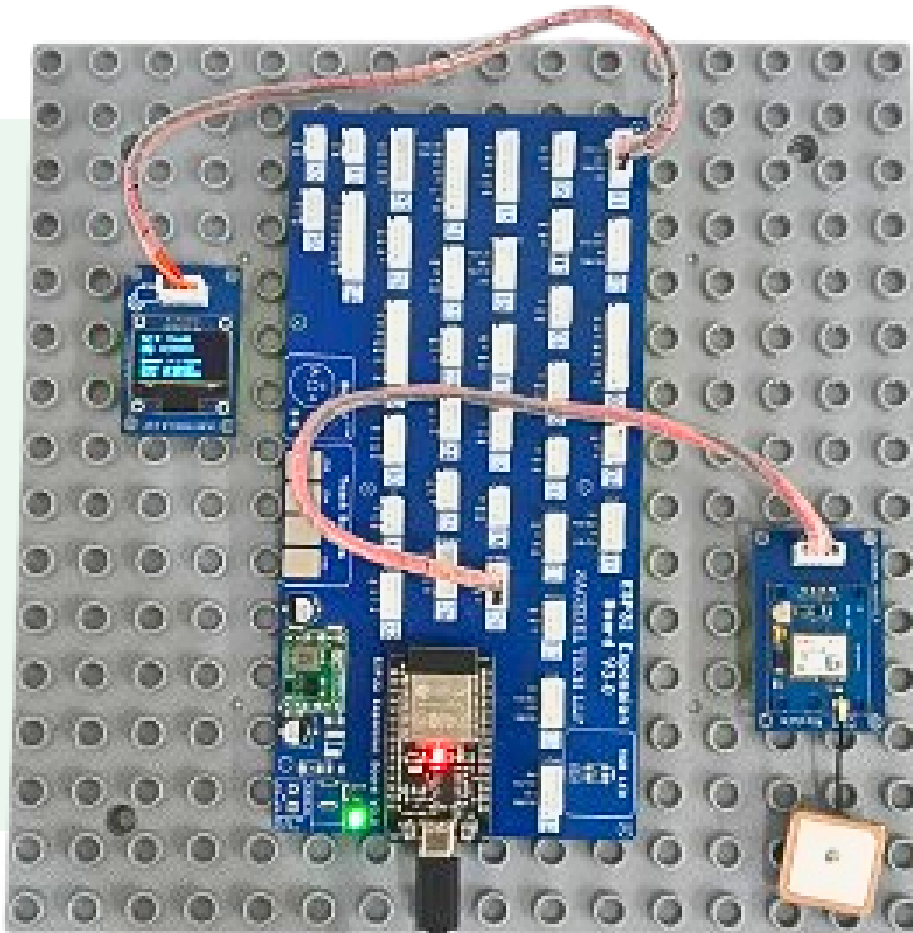


Connect the GPS Module to Port No. 20

Final Cable Management



- Bundle all loose wires neatly using spiral wraps or cable ties, keeping them secured flat against the baseplate.



Calibration:

Power on the board and calibrate the GPS module by allowing it to acquire satellite signals until a stable coordinate lock is achieved; verify the OLED display is correctly showing the live output/status.