

ESP-IDF GPS LOGGER MANUAL

Device parameters

Storage space: SD card (suggested Kingston Canvas Select Plus 32GB MicroSD HC)

GPS: Beitian BE-220/Be-280(Ublox M10), BK-220/BK-280(Ublox M9)

Processor: 240MHz Espressif ESP32

Flash Memory: 4MB

Display

Display: 2.13-inch 250x122 pixel EPD.

Usage

GPS Logger has two modes: GPS and WIFI (settings).

GPS Function

Main Window for GPS mode is Speed. Stats window will be shown only when there are **stats** available.

In GPS Init Window there can see device parameters like GPS **model** and GPS configured **Frequency**.

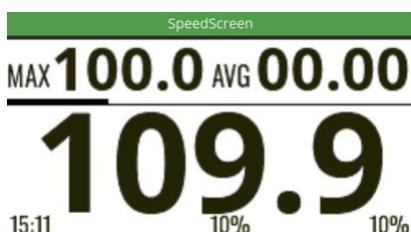
1) Gps init



2) Stats

Screen1			
AVG	123.90	10S	109.09
AVG	123.90	10S	109.09
AVG	123.90	10S	109.09

1) Speed



WIFI mode

WIFI mode will display **ipv4 address**, for device connect (10.10.10.1), also WIFI **SSID** (ESP23AP). WIFI password is not known.

Push button

Button functions

- 1) **One click:**
 - a. Change Speed window upper row views when Speed window active
 - b. Change Stats window views when Stats window active
- 2) **Double click:** working when Ground Speed is less than 3,6km/h. Circle windows in GPS mode: Init, Speed, Stats.
- 3) **Long Press 2sec:** shut down device.
- 4) **Long Press 5sec:** change mode: GPS – WIFI
- 5) **Long Press 10sec:** restart device.

Computer connectivity

Connect device to computer

For connect device to computer using WIFI connection following steps required

- 1) Switch device to WIFI mode (hold down push button for 5sec).
- 2) Connect computer WIFI card to device SSID (ESP23AP).
- 3) Open address <http://10.10.10.1/> from computer Web Browser.

Download device data

GPS Logger can log data in formats like UBX, SBP, GPX and GPY. UBX and SBP are more known. Log formats can be configured from Web Browser “Settings” view.

To download data there should be computer connected to device network (Connect device to computer).

Then select menu “Files” from Web Browser and click file for download.

Device configuration

Device can be configured via WIFI network from computer Web Browser.

To configure device there should be computer connected to device network (Connect device to computer).

Then select menu “Files” from Web Browser and change values as needed. Every field will save after change and hit “enter” for text fields or select item from dropdown menus.

Firmware update

Firmware update can be uploaded to device from computer Web Browser.

To upload firmware device there should be computer connected to device network (Connect device to computer).

Then select menu "Firmware update" from Web Browser, upload firmware file (extension .bin) from computer via file select field and Upload button. After firmware upload and restart there is new version of firmware up and running.