

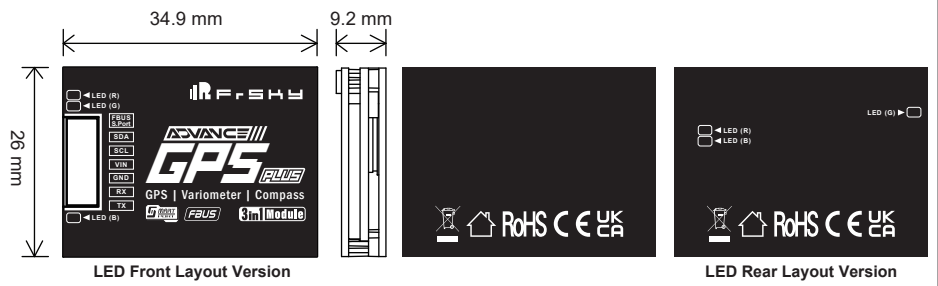
Introduction

FrSky has enhanced the performance and capability of the original sensor line, resulting in the development of the new ADVANCE (ADV) series sensors. All ADV sensors fully support FBUS protocol and they are also S.Port compatible. With the FBUS protocol, the ADV sensors can be seamlessly paired with the FBUS capable receiver which further simplifies model builds.

The ADV series GPS sensor provides accurate time synchronization with GPS satellites, working with the integrated "Auto adjust from GPS" function into the ETHOS system, this ensures the radio and its telemetry are all in sync with an accurate time system, ensuring telemetry data is in sync with UTC time. The GPS sensor can also provide telemetry such as altitude, position, speed, etc, which can be read on the radio in real-time.

The GPS ADV Plus version supports two working modes. In addition to functioning as a sensor that provides telemetry data directly to the receiver via S.Port/FBUS, the module can also connect to the flight controller functioning with I2C port and serial port. With the aid of its built-in sensors (such as variometer and compass), the flight controller can obtain real-time altitude and heading information to perform various precise navigation tasks.

Overview



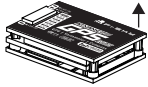
Specifications

- Dimension: 34.9×26×9.2mm (L×W×H)
- Weight: 12g
- Operational Voltage: DC 4 -10V
- Current Draw: 60mA@5V
- Operating Temperature: -40°C~85°C
- Data Rate: 10Hz
- Time to Fix: 29s cold start
- Speed Accuracy: Approx 0.05m/s
- Sensitivity: -166dBm
- Antenna: Built-in Soldered
- Position Accuracy: Approx 2.0m CEP
- Operation Limits: Dynamics 4g / Altitude 80,000m / Velocity 500m/s (via the built-in GPS)
- Compatible with FBUS / S.Port protocol
- Barometer Model: SPL06
- Magnetometer Model: IST8310/IST8308

LED Status Indication

LED Types	LED Status	Working Mode Description
Red LED	Flash slowly	Connection via the port in S.Port mode
	Flash normally	Connection to the Flight Controller using I2C port and serial port
	Flash quickly	Connection via the port in FBUS mode
Green LED	Lit solid	Module is powered properly
Blue LED	Flash normally	Satellite aquired

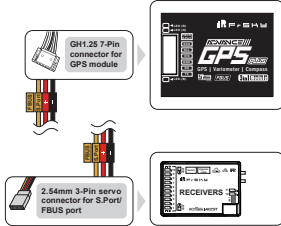
Setup in Different Modes



Installation:

To ensure the module operates under optimal signal conditions, install it as shown in the illustration, with the **label side facing upward**

A Connection via the S.Port/FBUS port to the device

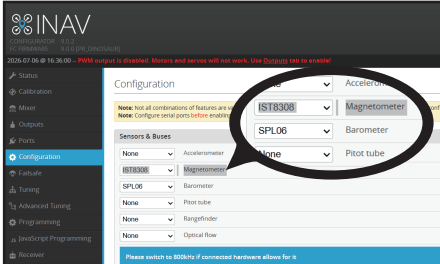
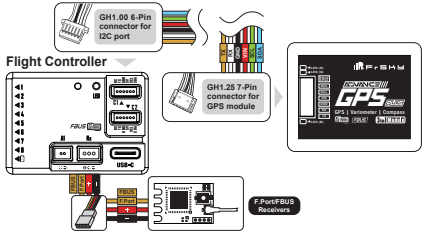


Telemetry Data

[Model] ▷ [Telemetry]

Altitude	Altitude data from the integrated variometer sensor.
VSpeed	Vertical Speed data from the integrated variometer sensor.
GPS	Coordinates data from the integrated GPS module.
GPS alt	Altitude data from the integrated GPS module.
GPS Speed	Ground speed data from the integrated GPS module.
GPS clock	GPS Time via the integrated GPS module.

B Connection via the I2C port and serial port to the device



Model and Add ID of Integrated Sensors of Module

- Barometer Model: SPL06
Barometer ID: 0x76
- Magnetometer Model: IST8310
Magnetometer ID: 0x0e
- Magnetometer Model: IST8308
Magnetometer ID: 0x0c

Note: When using the sensor module with the flight controller configurator tool, please select the corresponding Magnetometer and barometer models according to the hardware version to ensure the module functions properly.

⚠ Note: When using the GPS ADV Plus module, do not connect both the receiver to the S.Port/FBUS interface and the flight controller to the I2C (SDA, SCL, etc.) and serial interface at the same time, as this may cause data conflicts and abnormal operation.

Parameter settings

[System] > [Device Config] > [Sensors] > [GPS]

Physical ID	When multiple device are used simultaneously, each device must be assigned a unique ID.
Application ID	When using the same type of sensors from different devices simultaneously, each device must be assigned a unique application ID to avoid conflicts.
GPS Position data rate	Setting Range: 0.1s ~ 1s. Users can configure it according to the required data refresh rate.
GPS Altitude data rate	Setting Range: 0.1s ~ 1s. Users can configure it according to the required data refresh rate.
GPS Speed data rate	Setting Range: 0.1s ~ 1s. Users can configure it according to the required data refresh rate.
GPS Clock data rate	Setting Range: 0.1s ~ 1s. Users can configure it according to the required data refresh rate.

[System] > [Device Config] > [Sensors] > [Variometer]

Altitude data rate	Setting Range: 0.1s ~ 1s. Users can configure it according to the required data refresh rate.
Vario data rate	Setting Range: 0.1s ~ 1s. Users can configure it according to the required data refresh rate.