

Documentation & Technical Specifications

The SkyNav GNSS Module provides a complete navigation solution, based on the best sensors on the market, while being fully compatible with the PixHawk standard and pinout.

Based on the uBlox NEO series of receivers, paired with a high-accuracy compass and optional barometer and designed for working on L1 + L5 bands, the SkyNav module family offers superior performance in GNSS-contested environments.

There are two versions of the SkyNav module:

- **SkyNav Standard** — our most optimized module for SWaP-C, for missions where cost is tight but performance is important.
- **SkyNav Pro RTK** — based on the uBlox F9P RTK receiver, where extreme centimeter-level accuracy is a must, without compromise.

We know how important a quick warm-start is, so we integrated an onboard backup battery — for getting a 3D-Fix in no time.

Specifications

Component	SkyNav Standard	SkyNav Pro RTK
GNSS Receiver	uBlox NEO-F10N	uBlox NEO-F9P
Compass	Isentek IST8310	PNI RM3100
Barometer	Bosch DPS368*	Bosch DPS368*
* The barometer feature is optional, and can be useful in cases where the flight stack is enclosed in a tight space without an air opening.		

Interfaces & Firmware

The module communicates via UART + I2C, and is supported on the following firmware platforms:

- ArduPilot
- PX4
- INAV
- BetaFlight*

* Only the Standard version is supported on Betaflight currently. Pro support is coming soon.

The pinout for our navigation module is compatible with the PixHawk / Cube standard, so the SkyNav module is completely plug & play if your vehicle is already wired to a compatible GPS (e.g., HERE2).

Pinout

SkyNav connects to the flight controller using a 6-pin JST-GH connector:

Pin	Signal	Function
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1 (V)	VCC	Supply Input
2 (R)	RX	GPS UART
3 (T)	TX	GPS UART
4 (C)	SCL	Baro + Compass I2C
5 (D)	SDA	Baro + Compass I2C
6 (G)	GND	Supply Input

If you'd like to use only the GPS receiver without the compass or baro, you can leave the I2C pins disconnected.

Dimensions

The dimensions for the Standard and the Pro modules are identical: **57.6 × 40 × 19.2 mm** (L×W×H).

Both modules weigh **27 g** (including enclosure).

Compass Orientation

The compass orientation is usually detected automatically, but in case you'd like to define it manually, this is the orientation of the compass — assuming the module is pointed towards the front of the vehicle and is aligned with the flight controller.

Module	Orientation 1	Orientation 2
SkyNav Standard (IST8310)	None	Pitch 180
SkyNav Pro (RM3100)	None	None

Manufacturing & NDAA Compliance

All of our hardware is 100% NDAA compliant, based on high-quality non-Chinese components. Every module goes through rigorous testing to ensure the best quality for our users.