

# Overview

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The DroneCAN H-RTK F9P is the latest differential high-precision GNSS positioning system from Holybro. This system provides multi-band RTK with fast convergence times and reliable performance, concurrent reception of GPS, GLONASS, Galileo and BeiDou, and a fast update rate for highly dynamic and high volume applications with centimeter-accuracy. It has adopted the DroneCAN protocol for communication.

With the adoption of the DroneCAN Protocol, it has up to an 8 Hz navigation update rate, upgradeability, noise immunity, real-time features, and is more robust than UART due to its increased resistance to electromagnetic interference. It does not occupy any serial port of the flight controller, and multiple CAN devices can be connected to the same CAN bus via a hub.

The DroneCAN-F9P uses a u-blox F9P module, a BMM150 compass, and a tri-colored LED indicator. It is equipped with either the STM32G4 processor running at 170 MHz with 512 KByte Flash or 96KByte RAM or the [NXP S32K14 processor](#) with 1MB Flash and 128 KB RAM. Compatible with the open source *Pixhawk* series flight controller with both PX4 & Ardupilot Firmware

## Features

We have designed two models of DroneCAN H-RTK F9P for you to choose, each with different form factor and antenna design to meet different customer needs.

### **DroneCAN F9P Rover**




The Rover model has a flatter profile and stronger water resistance. It uses a dual band patch antenna and comes with an integrated cable to connect to the CAN bus. It excels in spaces where there are few obstructions.


### **DroneCAN F9P Helical**

This model uses a helical antenna, which has slightly better performance in space with obstructions than the Rover version. The antenna of this module can either be attached to the module directly

or connected via a SMA cable, giving you the ultimate flexibility. It also has a UART2 port exposed, allowing you to do YAW/Heading (aka moving baseline).

This model can be used either on the rover (aircraft) or as a base station. However, when used as Base Station, RTK communicate with the Ground Control Station via USB, so the DroneCAN protocol is not used. You can consider using the standard H-RTK Helical Base model as Base Station.

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“  *[Image — to be added]* ”

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