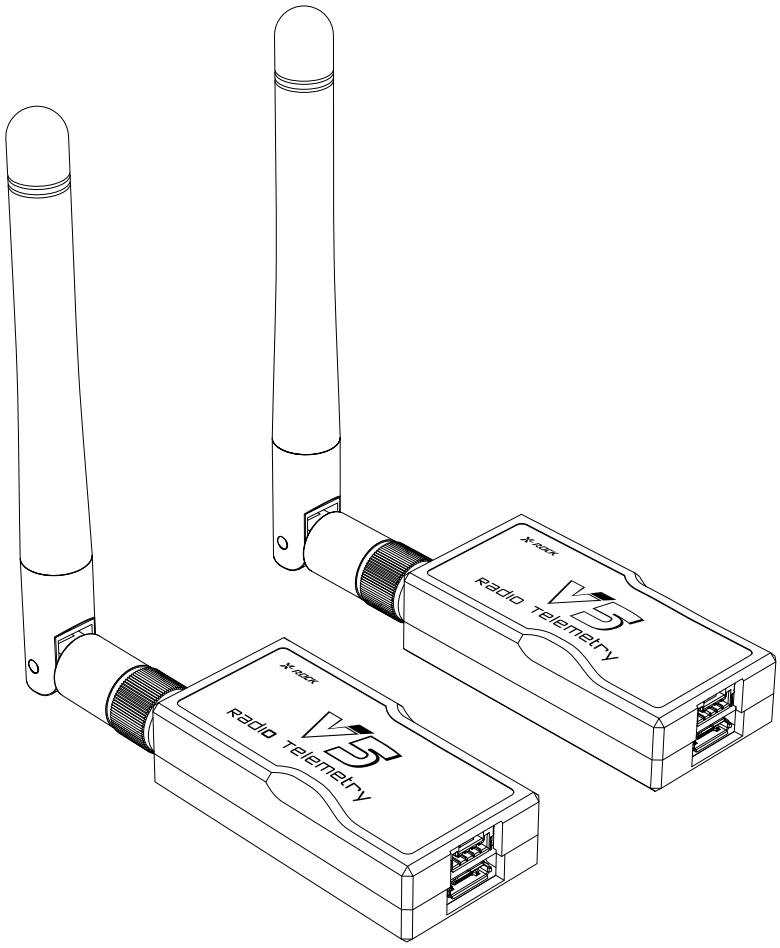
XROCK Radio V5

User Manual

V2.0 2019.9



Disclaimers and Warnings

Thank you for purchasing XROCK products.Carefully read the manual before using this product.

Users must comply with local radio transmission laws and regulations when using this product. In using this product, you hereby agree to this disclaimer and signify that you have understood all points completely. When assembling this product, follow all instructions carefully. The manufacturer and seller assume no liability for any damage or injury arising from the use of this product.

Please visit the XROCK Radio V5 page on www.xrocklink.com regularly to keep up with product information, technical updates and manual corrections. Information in this manual is subject to change without notice in line with product upgrades and updates.

If there is any insoluble problem occurring, please seek help from the authorized distributor by XROCK or XROCK customer service.

Content

Profile

A XROCK Radio V5 (comprises of an air module and a ground module) is a wireless communication module designed for real time data exchange between open source autopilot (such as APM, PX4, PIXHAWK) and ground station. As it has features of small size, low power consumption, high data rate, stable performance, strong anti-interference ability and far communication distance, it can bring users more involved flight experience.

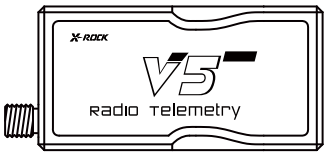
The air module is the telemetry while ground module is the other telemetry when the radio telemetry sends autopilot data. The air module receives it from the autopilot, modulates and transmits it to ground module wirelessly. Ground module demodulates it and sends signals to ground station monitor to display by USB cable.

Download and install Mission Planner or DroidPlanner ground station applications to your laptop when first to use. Ground module can connect to laptop by USB cable. The ground station monitor can display autopilot data in real time when air module connects to autopilot and ground module connects to the ground station.

In the Box

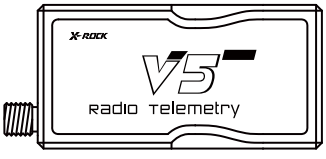
Ground Module×1

It connects with your mobile devices by Bluetooth or USB cable. Mobile devices use it to contact with the autopilot, send order and receive flight data.



Air Module×1

It connects with the autopilot by the corresponding connecter cable. The autopilot communicates with ground module using it, sends flight data and receives orders.

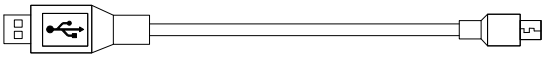


Antenna ×2

It is used to connect with port of air module and ground module.

Micro-USB Cable ×1

It is used to connect the module to mobile devices, to communicate, set parameter and charge, etc.



4-Pins GH to 6-Pins Molex Connector Cable×1

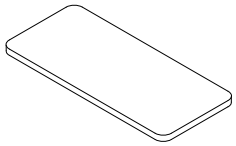
It is used to connect air module with APM/PX4 .

4-Pins GH to 6-Pins GH Connector Cable×1

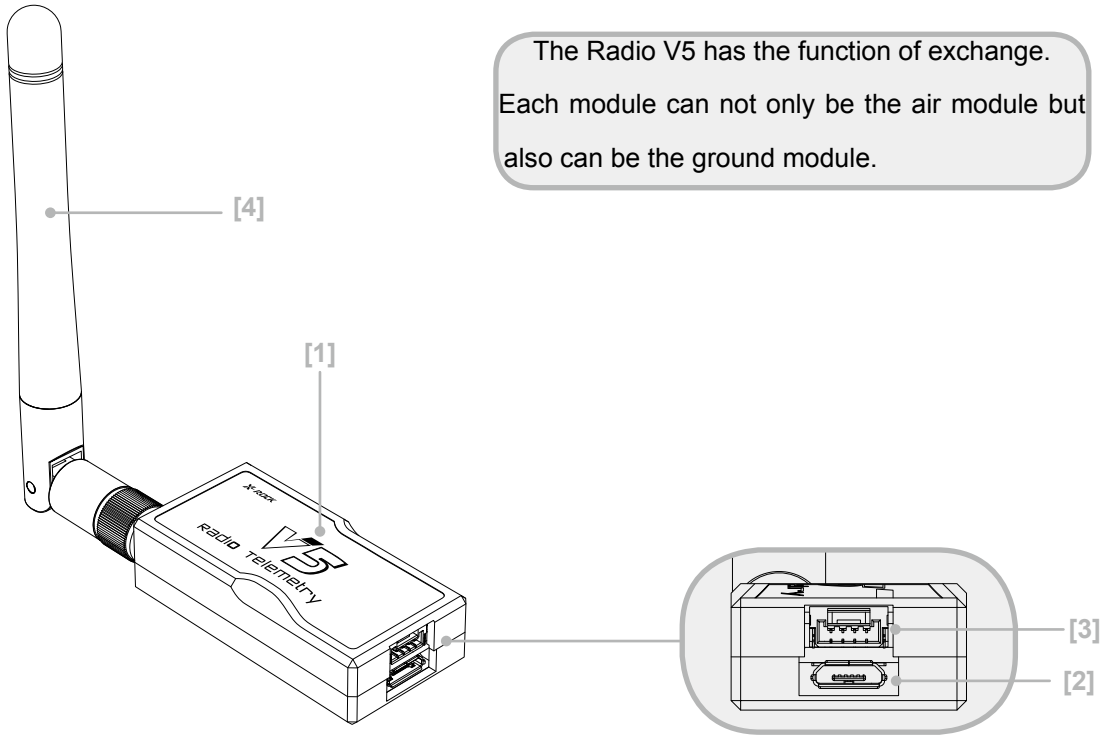
It is used to connect air module with Pixhawk .

Double-sided Tape×2

Double-sided tape can be used to fix the radio telemetry.



Introduction



The Radio V5 has the function of exchange. Each module can not only be the air module but also can be the ground module.

[1] Condition Indicator

Show the connection condition between air module and ground module.

Indicator	Descriptions	Instruction
	Green LED Solid	Connection is successful
	Green LED Blinking	Connection is failed
	Red LED Solid	Firmware is updating

[2] Micro-USB Port

Connect the mobile device and set parameter.

[3] 4PIN Port

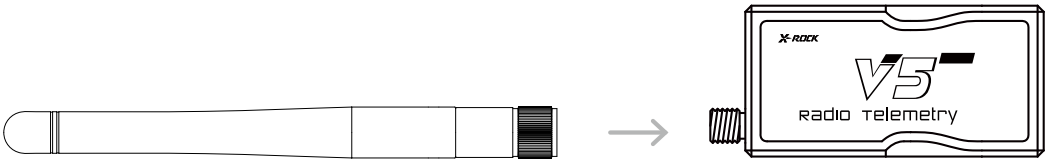
Connect the autopilot.

[4] Antenna

Send and receive signals.

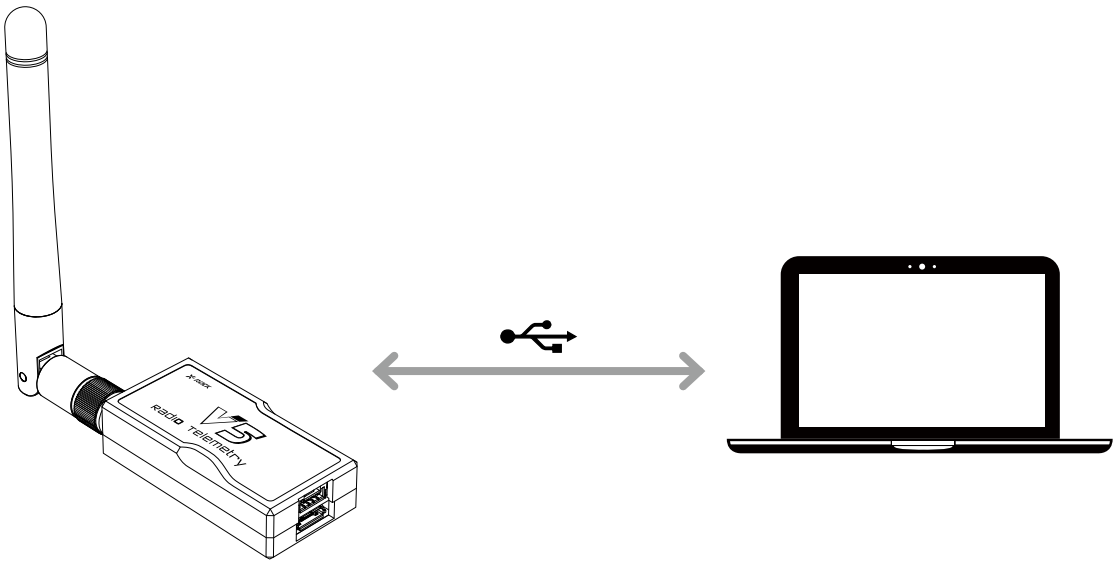
Installation

Install Antennas



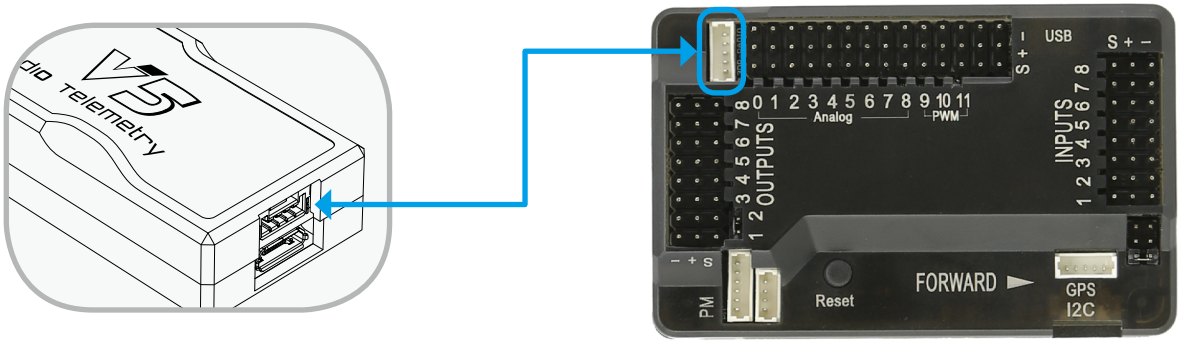
- You must install the antenna before the power is on,avoiding damaging the circuits.
- You must use the antenna of designated type. Do not use antenna of other types.
- Put the antenna at a condition of no obstructing, avoiding shortening the communication distance, even cutting down the communication.
- Do not remove antennas after installing it, avoiding damaging the module.

Connect to Mobile Device

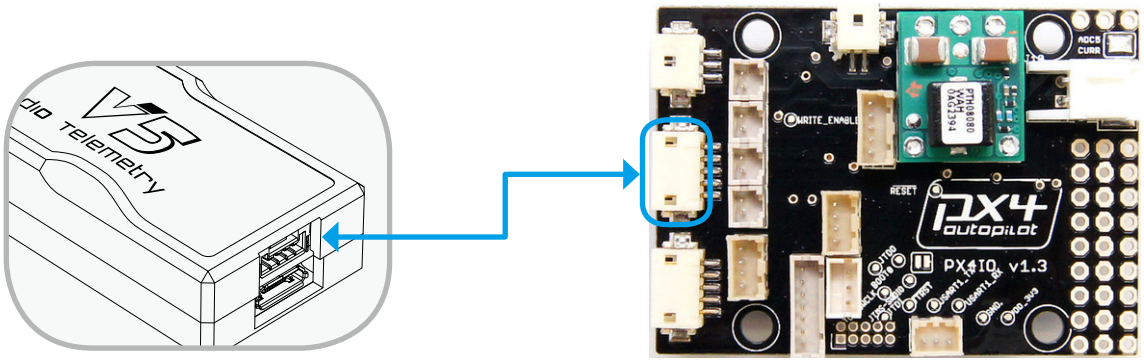


Use Micro-USB cable to connect ground module and a laptop loaded with ground station.You need to download the latest version of RTB BOX drive on the XROCK official website.

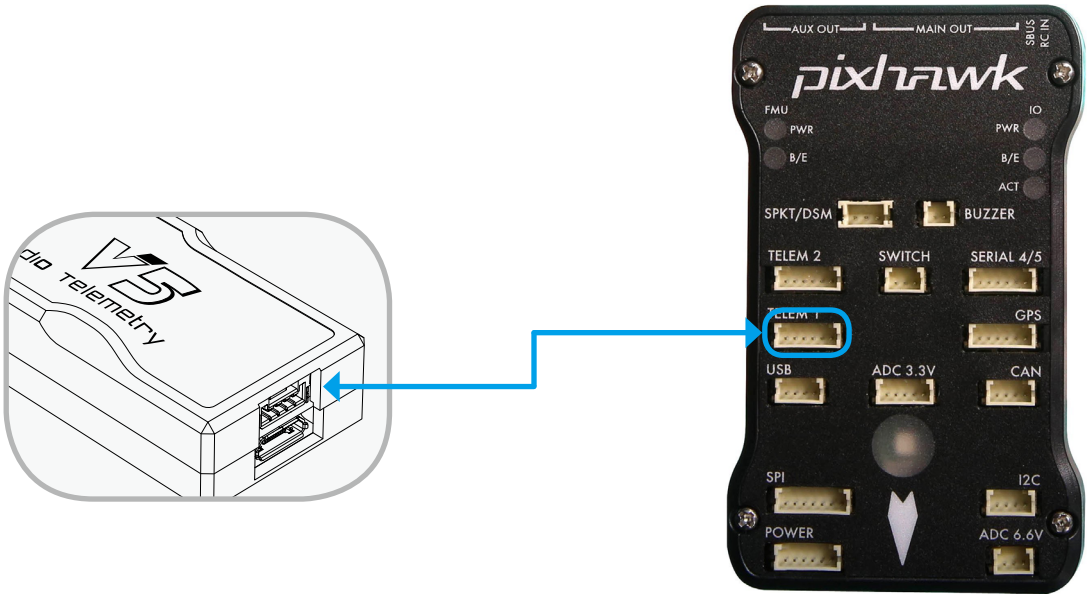
Connect to Autopilot



⚠ Connect to the APM telemetry port using the 4-to-5-pin cable.

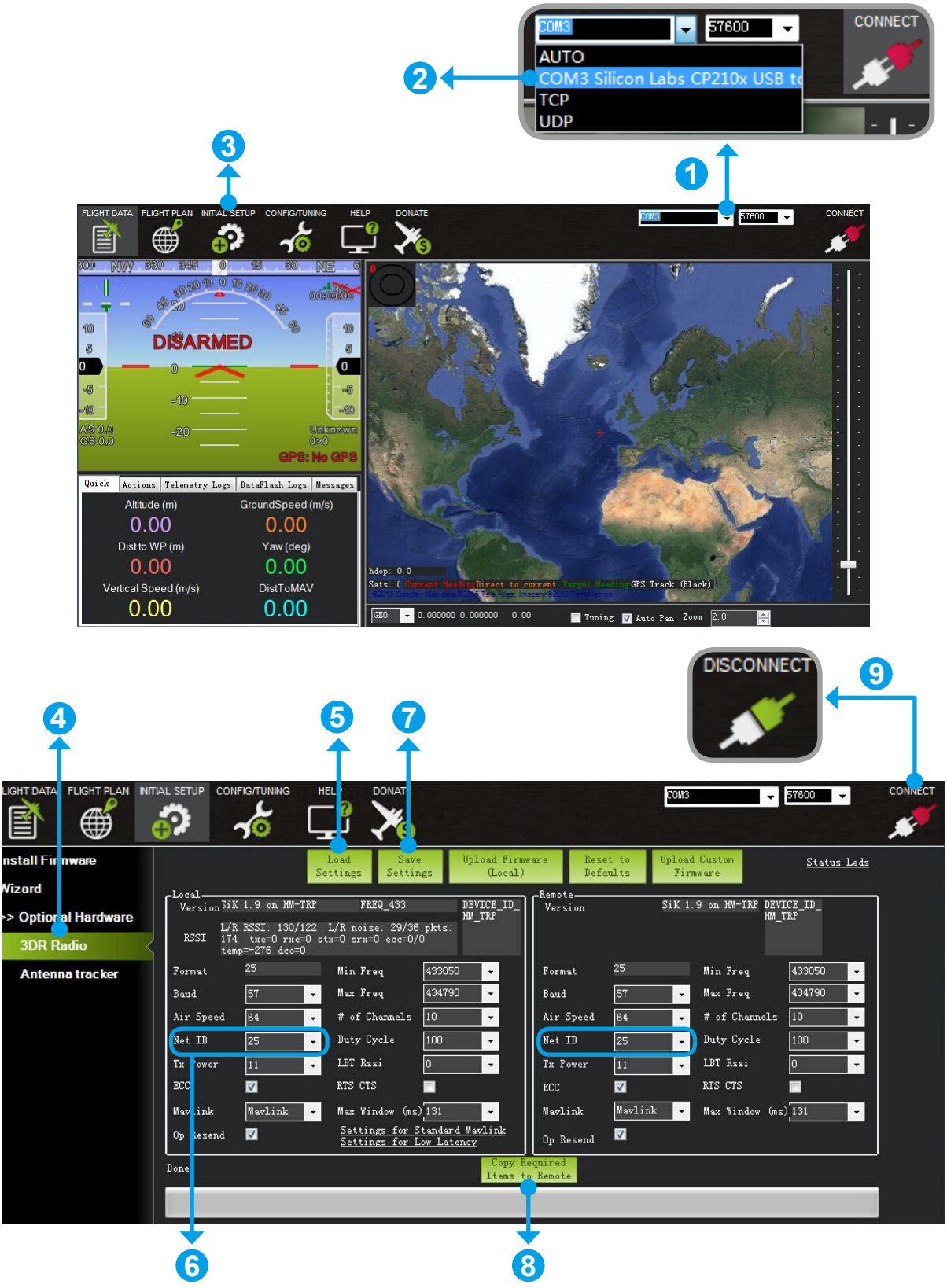


⚠ Connect to the PX4 I/O telemetry port using the 4-to-5-pin cable.



⚠ Connect to the Pixhawk telemetry port using the 4-to-6-pin cable.

Settings



- After installing the module , operate the Mission Planner according to the picture.
- For several radio telemetries working concurrently, make sure your Net IDs will not conflict.
- After setting all the parameters, select Connect, and air-to-ground data link can be realized.

Specifications

Performance Parameters	
Type	XROCK Radio V5
Communication Distance	≤5000m
Working Frequency	433MHz or 915MHz
Maximum Transmitted Power	1000mW
Baud Rate	57600 (default)
Physical Parameters	
Operating Temperature	-10℃ ~60℃
Operating Humidity	10% RH ~ 90% RH (non-condensing)
Dimension (no antenna)	49mm(L)×25mm(W)×13mm(H)
Weight (no antenna)	12g
Power Requirements	
Working Voltage	5.0V~5.5V DC
Emission Current	150mA@30 dBm
Receiving Current	25mA

The content is subject to change.

Download the latest version of manual from the official website.

If there is any insolveable problem, seek help by calling the customer helpline: **+86 1525-7072-135**.
If there is any question about this manual, please send mails to contact XROCK: **superwei@xrocklink.com**.