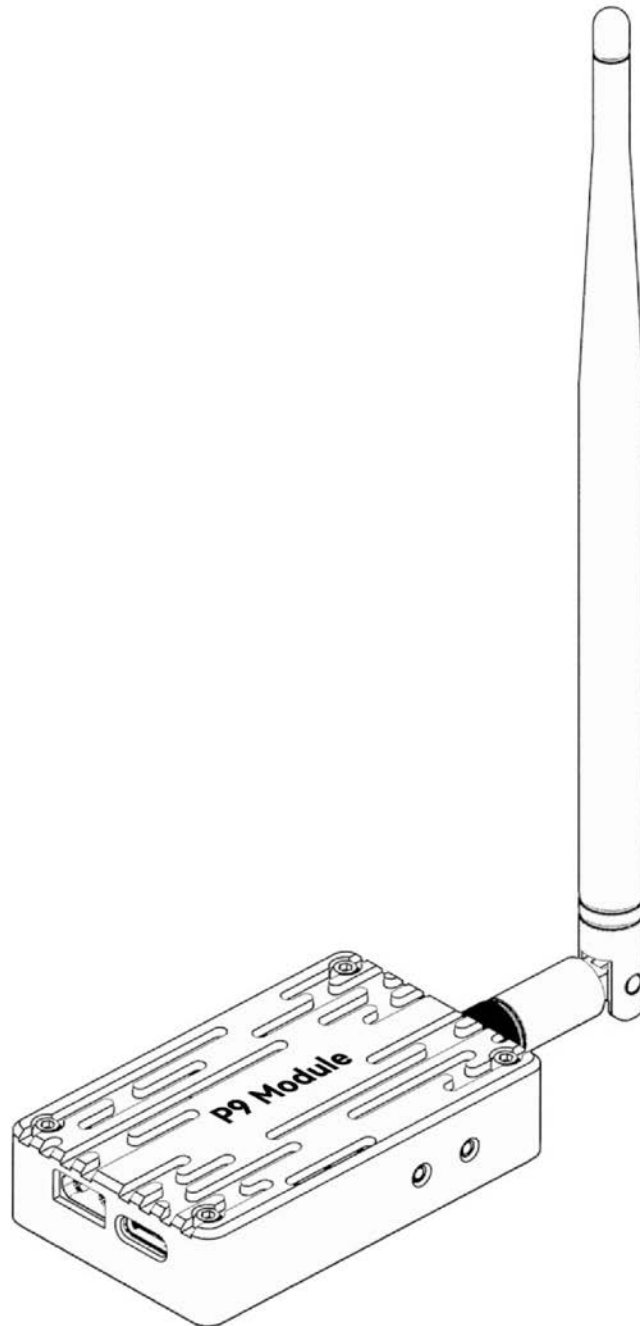# P9 Module User Manual

Latest Update: 2024-05-17

# Preface

Thank you for purchasing and using CUAV products.

If you have any suggestions and feedback on our products or services, please let us know. Press Ctrl and click blue text or mobile phone scan the QR code below to visit CUAV feedback form.



# Product Definition

### Indicator Light Definition

| Configuration mode | establish communication | Unmatched |
|---|---|---|
| ST Light: Red always on | Ground Unit<br>ST Light: pink flashing<br>RSSI lamp: always on<br>Sky Unit<br>ST Light: Green always on<br>RSSI Light: always on | Ground Unit<br>ST Light: Always bright<br>RSSI : lights off<br>Sky Unit<br>ST Light: Always bright<br>RSSI Light: Flashing |

### Button Definition

| RESET Button | Restart the P9 Module module |
|---|---|
| CONFIG Button | Pressing it alone is not defined. Press and hold the CONFIG and RESET Key at the same time. Release the RESET key first, and then release the CONFIG key to enter the configuration state. |

## Power Requirement

Mount the antenna to the P9 before connecting power. Both the sky terminal and the ground terminal need to use an independent power supply instead of obtaining power from the controller. Please ensure that the maximum output current of the power supply is >2.5A (3~6s battery is recommended).
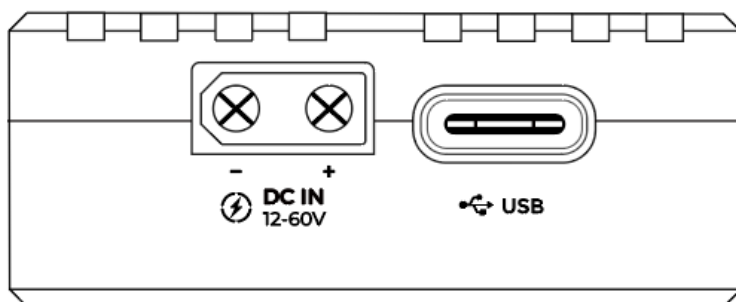


## Default Configuration

The default configuration of P9 is: link rate (276000), interface baud rate 57600, broadcast mode. Generally speaking, P9 is plug and play, you don't need to perform any configuration, just plug and play. If you need to modify the configuration, such as modifying the ID, setting point-to-multipoint, and relay mode, click the Configuration Guide,  to enter the CUAV docs for more information.

## Connect Controller

Use a special cable to connect the flight control interface [TELEM1]/[TELEM2] (some flight control interfaces are called Module), and the P9[Data] interface.
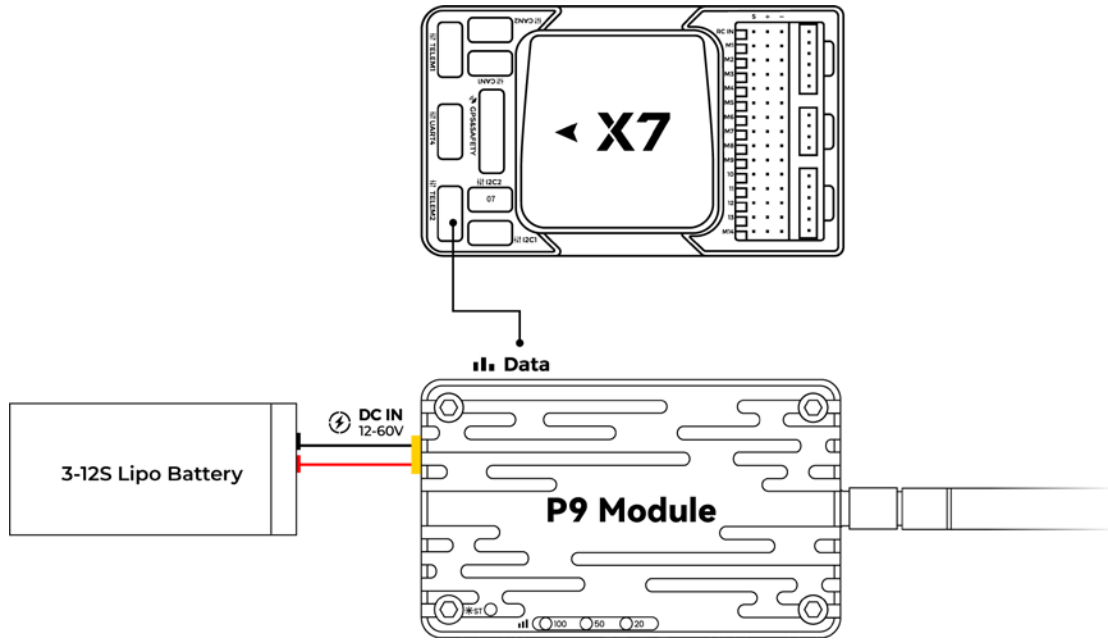
# Ground Station Connection

## Mission Planner

After connecting to the P9, select the correct port in the upper-right corner of the ground station, select 57600 baud rate, and click [CONNECT] to CONNECT to the ground station.

Port not recognized? After the P9 is connected, the mouse moves randomly and cannot communicate? Does the digital transmission indicator turn off and not work? For more information, please see FAQ]
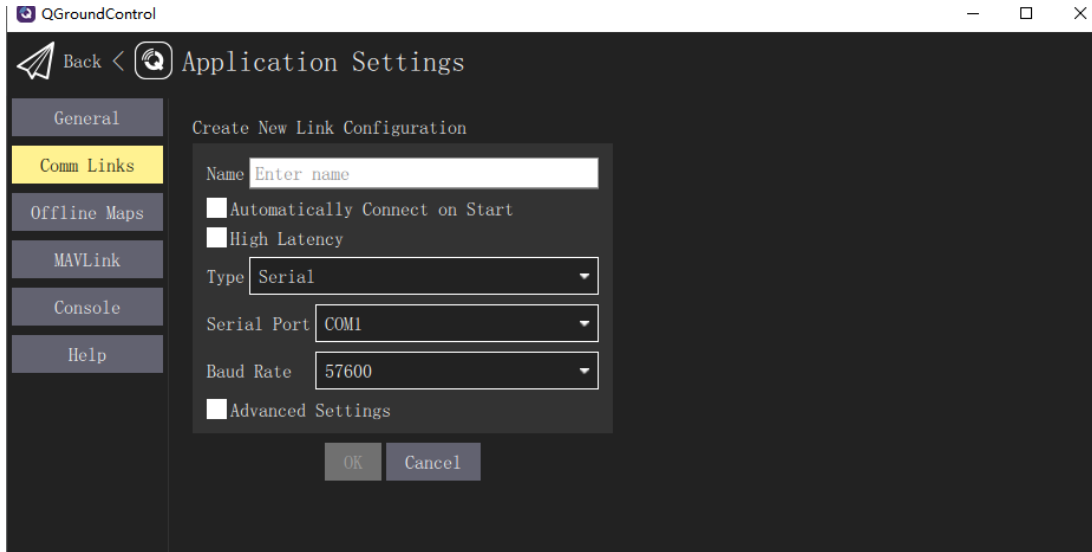
## QGroundControl

After data transmission is connected, open the QGroundControl and the ground station will automatically identify and connect. If it is not identified, you can manually add it as follows.
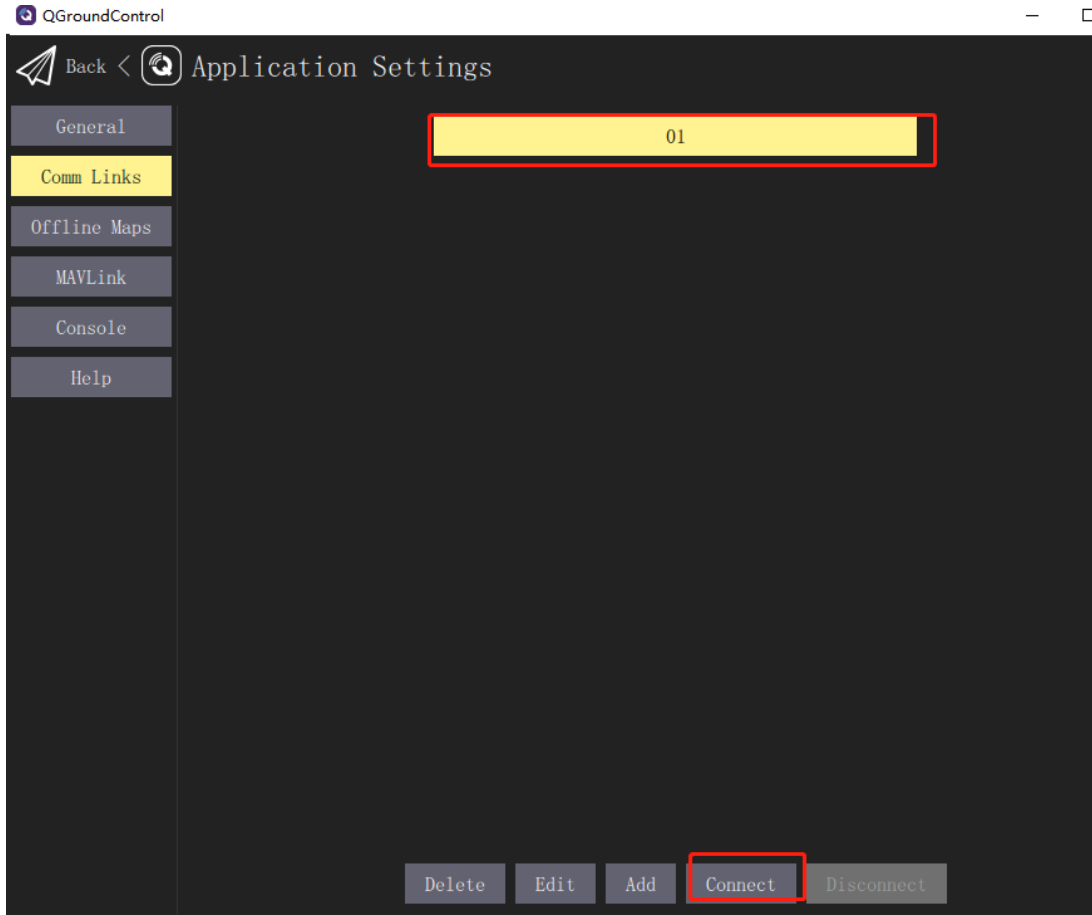
Click the icon in [QGroundControl]-[communication connection]-[add]
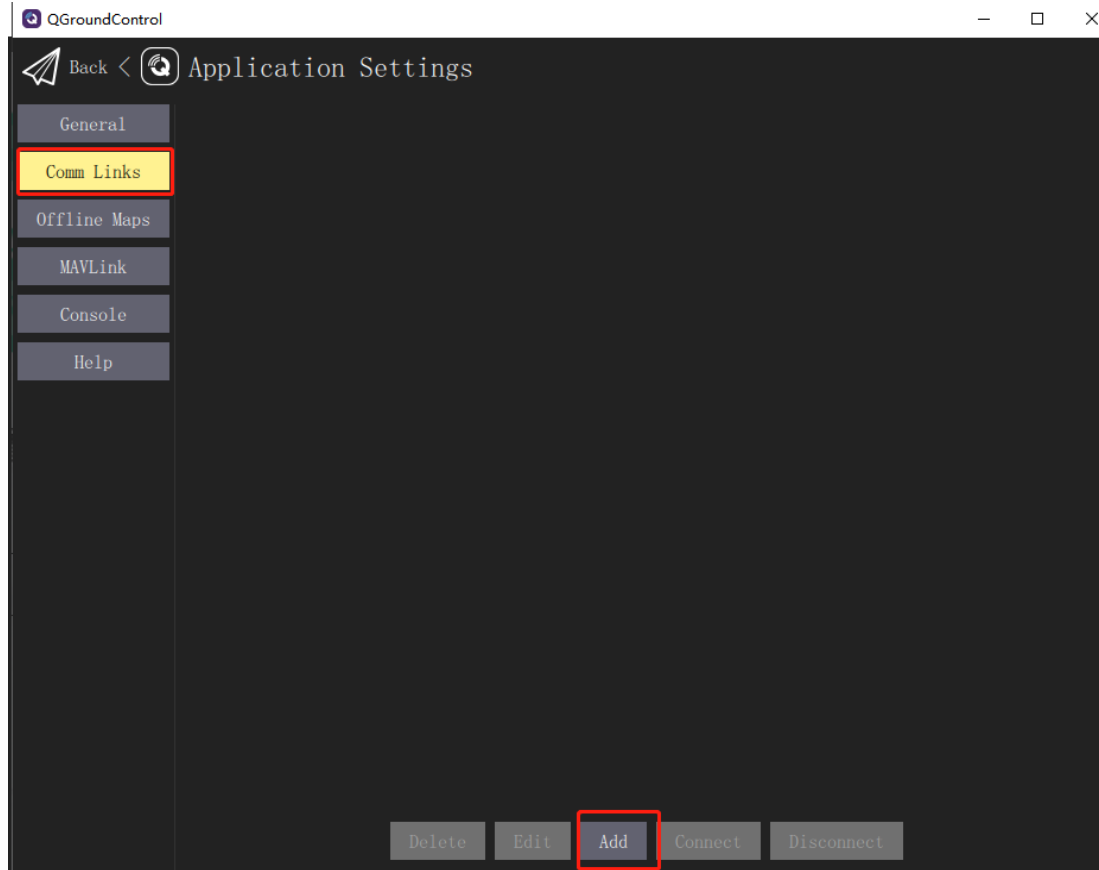


In the following interface, enter [name] [type] [serial port] and [baud rate], and click OK.

Select the connection you just added and Click Connect.



## Product Specifications

| Working frequency | 840~845MHz |
|---|---|

| | |
|---|---|
| Spreading Method | Frequency Hopping/Fixed Frequency, GMSK, 2GFSK, 4GFSK, QPSK |
| Forward Error Correction | Hamming, BCH, Golay, Reed-Solomon, Viterbi |
| Error Detection | 32 bits of CRC, ARQ |
| Range | Reference distance: 40km<br>(The transmission distance is different under different environments/configurations, please refer to actual use) |
| Sensitivity | -109dBM@115.2kbps<br>-108dBm@172.8kbps<br>-106dBm@230.4kbps |
| Transit power | 100mw~1000mw(20~30dBm) ;<br> default: 1000mW |
| Antenna gain | 3DBi |
| Link Rate | 345kbps Max |
| Baud rate | 300bps  to 230kbps(57600) |
| Operating Modes | Point-to-Point, Repeat Mode |
| Input voltage | 12V~60V |
| Input Current | >2.5A |
| Power consumption | Sleep: < 1mA (Future) Idle: 20mA<br>Rx: 45mA to 98mA<br>Tx Peak: 2A |
| Interface | Antenna: SMA inner needle<br>Serial:  GHR-06V-S<br>USB:  TYPE-C<br>Power: XT30PW-M |
| Operation Temperature | -40℃~85℃ |
| Weight | P9 module;:55g<br> Antenna:31g<br>Total: 86g |
| Size | 65mm×40mm×18mm |

# Packing List

The package list is for reference only. The details are displayed on your purchase page.

| Name | Sky Unit | Ground Unit | One Set |
|---|---|---|---|
| P9 Module | 1 | 1 | 2 |
| V5/X7 Series cable | 1 | - | 1 |
| Pixhack Data Cable | 1 | - | 1 |
| XT30-XT60 Power Cable | - | 1 | 1 |
| XT30 Single-End Power Cable | 1 | - | 1 |
| 840MHz Antenna | 1 | 1 | 2 |
| Type-C Cable | - | 1 | 1 |

# FAQ

**Port is not recognized after connected to the computer?**

Please install the Module driver。

**After connecting, the mouse moves and cannot communicate. What's the matter?**

Please power the Ground Unit first, and then power the sky Unit. If the data at the other end is transmitted to the USB when the USB is started, the computer will automatically install the Microsoft mouse driver.

**Sometimes the P9 indicator will turn off does not work?**

Please make sure that the maximum current input at the power port is greater than 2A; Otherwise, the P9 may be stopped; It is recommended that the ground unit use independent power supply instead of flight control power supply (connect V5 + flight control can not use independent power supply).

## Related Links

- 9 -

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