

FLYSKY FRM303 Multi-Function High Performance RF Module Instruction Manual

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Introduction

FRM303 is a multi-function high performance RF module in compliance with the AFHDS 3 third generation automatic frequency hopping digital system protocol. It features an external replaceable single antenna, support of bi-directional transmission, three power supply methods, support of voltage alarm function in case of external power supply, and support of inputting PPM, S.BUS and UART signals. In the PPM and S.BUS signals, it supports settings of binding, model switching (automatic search of a receiver), receiver interface protocol setting and failsafe

Overview

1. SMA Antenna Connector
2. Type-C USB Port
3. LED
4. Five-way Key
5. Three-position Power Switch(Int/Off/Ext)
6. Signal Interface
7. XT30 Power Supply Interface(Ext)
8. Location Holes of the Adapter
9. Screw Holes for Fixing the Adapter(M2)

FGPZ01 Adapter Compatible with PL18

1. Screw holes for Fixing the FGPZ01 Adapter and TX(M3)
2. Screws for Fixing the FGPZ01 Adapter and the RF Module
3. RF Connector of the FGPZ01 Adapter
4. Cable for Connecting the FGPZ01 Adapter and the RF Module
5. M3 Screws for Fixing the FGPZ01 Adapter to TX

6. The FGPZ01 Adapter

FGPZ02 Adapter Compatible with JR RF Module

1. Solts for Fixing the FGPZ02 Adapter
2. The FGPZ02 Adapter
3. RF Connector of the FGPZ02 Adapter
4. Cable for Connecting the FGPZ02 Adapter and the RF Module
5. M2 Screws for Fixing the FGPZ02 Adapter to the RF Module

FGPZ03 Adapter Compatible with Stealth I/O Module

1. Solts of he FGPZ03 Adapter for Fixing the RF Module
2. The FGPZ03 Adapter
3. RF Connector of the FGPZ03 Adapter
4. Cable for Connecting the FGPZ03 Adapter and the RF Module
5. Screws holes for Fixing the FGPZ03 Adapter to TX

Several Cables Connecting Signal Connector of FRM303

1. To Connect the Signal Interface of the FRM303 RF Module
2. FUTABA Trainer Interface(FS-XC501 Cable)
3. S Terminal Connector Interface(FS-XC502 Cable)
4. 3.5MM Audio Head (FS-XC503 Cable)
5. Servo Interface (FS-XC504 Cable)
6. DIY Interface (FS-XC505 Cable)
7. To Connect to XT30 Interface of FRM303
8. Battery Interface (FS-XC601 Cable)

SMA Antenna Adapter

Note: If it is difficult to install the antenna due to the transmitter structure, you can use this SMA antenna adapter to make the antenna installation more convenient.

1. 45-degree SMA Antenna Adapter
2. SMA Antenna Interface Protection Cap
3. FS-FRA01 2.4G Antenna
4. Mounting Aid Ratchet

Specifications

- **Product Name:** FRM303
- **Adaptive Devices** PPM: Devices that can output standard PPM signals, such as FS-TH9X, FS-ST8, FTr8B receiver; S.BUS: Devices that can output standard S.BUS signals, such as FS-ST8, FTr8B receiver; Closed Source Protocol-1.5M UART: PL18; Open Source Protocol-1.5M UART: EL18; Open source protocol-115200 UART: Devices that can output open source protocol-115200 UART signal .

- **Adaptive Models:** Fixed-wing aircraft, racing drones, relays, etc.
- **Number of Channels:** 18
- **Resolution:** 4096
- **RF:** 2.4GHz ISM
- **2.4G Protocol** AFHDS 3
- **Maximum Power** < 20dBm (e.i.r.p.) EU
- **Distance:** > 3500m (Air distance without interference)
- **Antenna:** External single SMA antenna Outer-screw-inner-pin
- **Input Power:** XT30 Interface: 5~28V/DC Signal Interface: 5~10V/DC USB Port: 4.5~5.5V/DC
- **USB Port:** 4.5~5.5V/DC
- **Working Current:** 98mA/8.4V(External power supply) 138mA/5.8V (Internal power supply) 135mA/5V(USB)
- **Data Interface:** PPM, UART and S.BUS
- **Temperature Range:** -10°C ~ +60°C
- **Humidity Range:** 20% ~ 95%
- **Online Update:** Yes
- **Dimensions:** 75*44*15.5mm(Excluding antenna)
- **Weight 65g(Excluding** antenna and adapter
- **Certifications:** CE, FCC ID:2A2UNFRM30300

Basic functions

Introduction to Switches and Keys

Three-position power switch: This switch allows you to switch the power supply way of the RF module: internal power supply (Int), power-off (Off), and external power supply (Ext). The external power supply is realized through the XT30 interface.

Five-way key: Up, Down, Left, Right and Center.

The functions of the Five-way key are described below. It should be noted that a key is not valid when the input signal is recognized as a serial signal.

Note: In the key operations, if you hear a “Click”, it indicates that the action is valid. And the key operation is not cyclic

Power Supply of RF Module

The RF module can be powered in three modes: Type-C interface, and internal power supply or XT-30 external power supply

- Powering through the Type-C interface is the first priority. In the power supply through the Type-C interface, the RF module is not off when you switch the power in case of internal power supply or external power supply.
- In the internal power supply or external power supply (instead of power supply through the Type-C interface), the RF module will restart when you switch the power.


When you remotely control a device, please do not use Type-C interface to supply power to the RF module to avoid losing control of the device. When the RF module is powered by Type-C interface, the RF module will automatically reduce the output power to avoid damage to the USB interface of the connected device. After the

power is reduced, the remote control distance will be shortened.

External Voltage Alarm

When the RF module is powered by a lithium battery connected through XT-30 interface for a long time, a voltage alarm function provided in the RF module will remind you of replacing the battery in time. When the RF module is powered on, the system automatically detects the power supply voltage and identifies the number of battery sections and the alarm voltage value according to the voltage. When the system detects that the battery voltage is lower than the corresponding alarm value, it will report an alarm. The specific table is as follows

Documents / Resources

	FLYSKY FRM303 Multi-Function High Performance RF Module [pdf] Instruction Manual FRM303, FRM303 Multi-Function High Performance RF Module, Multi-Function High Performance RF Module, High Performance RF Module, RF Module, Module
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References

-  [Flysky](#)