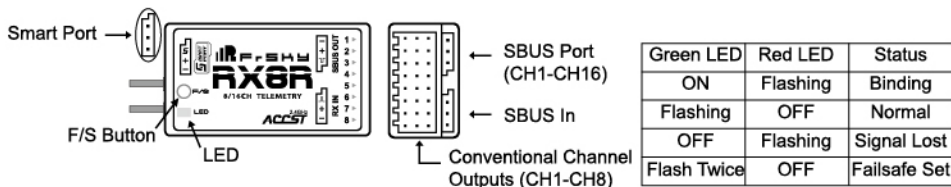


## Introduction

Thank you for purchasing FrSky RX8R 8/16ch full duplex telemetry receiver. In order to fully enjoy the benefits of this system, please read the instruction manual carefully and set up the device as described below.

## Overview



## Specifications

Dimension: 46.25 x 26.6 x 14.2mm (L x W x H)

Weight: 12.1g

Number of Channels: 16CH (1~8ch from conventional channel outputs, 1~16ch from SBUS port)

Or combine two RX8R to become a 16 channels receiver

With RSSI Output on Board: Analog 0~3.3V

Operating Voltage Range: 4.0~10V

Operating Current: 100mA@5V

Operating Range: full range (>1.5km)

Firmware Upgradeable

Compatibility: FrSky radios/transmitter modules in D8/D16 mode

Equipment Category: FHSS

Antenna Gain: ANT1#: 2dBi

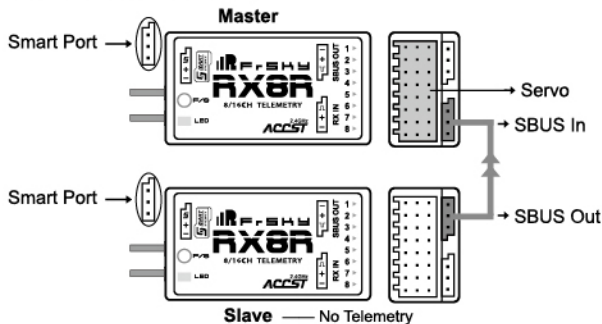
ANT2#: 2dBi

Type of Modulation: 2-FSK

RF Operating Frequency (ies): 2405.1-2474.1MHz

## What's New!

- More number of channels: 1~8ch from conventional channel outputs, 1~16ch from SBUS port, or combine two RX8R to become a 16 channels receiver
- Parallel two RX8R to become a 16 channel receiver
- With RSSI output: analog voltage output (0~3.3V)
- Smart Port enabled, realizing two-way full duplex transmission.
- Supports redundant transmission of two Tx modules in parallel



RX8R supports the redundancy function for the master and slave receivers. The master receiver receives SBUS signal from the slave receiver. When the master receiver goes into failsafe, the output signal from the slave receiver will be used until the master receiver works again.

### Notes:

1. When both the master and slave receivers go into failsafe, the failsafe signal from the master receiver will be output;
2. The slave receiver should be in no telemetry mode.



Smart Port (S. Port) is a signal wire full duplex digital transmission interface developed by FrSky Electronic Co., Ltd. All products enabled with Smart Port (including XJT module, RX8R receiver, new hub-less sensors, new Smart Dashboard, etc), serial port user data and other user input/output devices can be connected without limitations for numbers or sequences at a high transmission speed.

## Binding Procedure

Binding is the process of uniquely associating a particular receiver to a transmitter module. A transmitter module can be bound to multiple receivers (not to be used simultaneously). A receiver can only be bound to one transmitter module.

Follow the steps below to finish the binding procedure.

1. Turn on the transmitter while holding the F/S button on the module (please refer to the module instruction manual for switch positions). Release the button. The RED LED on the XJT module will flash, indicating the transmitter is ready to bind to the receiver.
2. Connect the battery to the receiver while holding the F/S button on the receiver. The RED LED on the receiver will flash, indicating the binding process is completed.
3. Turn off both the transmitter and the receiver.
4. Turn on the transmitter and connect the battery. The GREEN LED on the receiver indicates the receiver is receiving commands from the transmitter. The receiver/transmitter module binding will not have to be repeated, unless one of the two is replaced.

**Note: After binding procedure is completed, recycle the power and check if the receiver is really under control by linked transmitter.**

When combine two RX8R to become a 16CH receiver, you need to disable telemetry on either one of the two RX8R's. Refer to the two charts below for details.

Mode of RX8R	Telemetry	Channel Output	Jumped before Bind (signal pins)	F/S Button
D8	√	CH1~CH8	CH7 & CH8	connect the battery to any available channel output (no need to hold the F/S button on RX8R)
D16	x	CH1~CH8	CH3 & CH4	Connect the battery to any available channel output while holding the F/S button on RX8R.
D16	x	CH9~CH16	CH1 & CH2	
D16	√	CH9~CH16	CH1 & CH2, CH3 & CH4	
D16	√	CH1~CH8	No Jumper	

## Range Check

A pre-flight range check should be done before each flying session. Reflections from nearby metal fences, concrete buildings or trees can cause loss of signal both during range check and during the flight. Follow the steps below to perform the range check.

1. Place the model at least 60cm (two feet) above non-metal contaminated ground (e.g. on a wooden bench).
2. The receiver antennas should be separated in the model, and do not touch the ground.
3. The module antenna should be in a vertical position.
4. Turn on the transmitter and the receiver, press the F/S button on the XJT module for 4 seconds to enter range check mode, the RED LED will be off, GREEN LED will flash rapidly. The effective distance will be decreased to 1/30 (at least 30m).
5. Walk away from the model while simultaneously operating the controls on the transmitter to confirm all controls' normal operation.
6. Press the F/S button on the XJT module for 1~2 seconds to exit range check mode, RED LED will be back on, indicating normal operation is back.

## Failsafe

Failsafe is a useful feature in which all controls move to a preset position whenever the control signal is lost for a period of time. RX8R supports failsafe function for all channels. Follow the steps below to set failsafe positions for each channel:

1. Bind the receiver first and turn on both the transmitter and the receiver;
2. Move the controls to the desired failsafe position for all channels;
3. Press briefly the F/S button on the receiver (less than 1 second). The Green LED will flash twice, indicating the failsafe position has been set in the receiver.

To disable the failsafe function, re-bind the receiver.

Failsafe is recommended to set when system is firstly used, or receiver has been re-bound. Follow steps below to set failsafe.

Option-1. How to set failsafe to a user-determined state on lost signal:

- 1) Bind the receiver to the transmitter module first and turn on both the transmitter and the receiver;
- 2) Move the controls to desired failsafe position for all channels;
- 3) Press briefly the F/S button on the receiver and you are done.

Option-2. How to set failsafe for no pulses on lost signal:

- 1) Turn off the transmitter, power on the receiver, and then press briefly the F/S button on the receiver.

**Note: If failsafe is not set, failsafe default will hold last position before signal is lost. In this case, there exists risk that your model will fly away or cause injury.**

For more details, please check the complete manual for RX8R from [www.frsky-rc.com](http://www.frsky-rc.com) - Download – Manual.

Should you have other questions, please send e-mails to FrSky technical support [sales4tech@gmail.com](mailto:sales4tech@gmail.com).

## FCC Caution

### § 15.19 Labelling requirements.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

### § 15.21 Information to user.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

### § 15.105 Information to the user.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

## CE

The product may be used freely in these countries: Germany, UK, Italy, Spain, Belgium, Netherlands, Portugal, Greece, Ireland, Denmark, Luxembourg, Austria, Finland, Sweden, Norway and Iceland.

France: the law permits the emission band 2400 to 2483.5 MHz with the limitation of transmission power of 100 mW (reduced to 10 mW between 2454 and 2483.5 MHz for outdoor flying).

CE2200