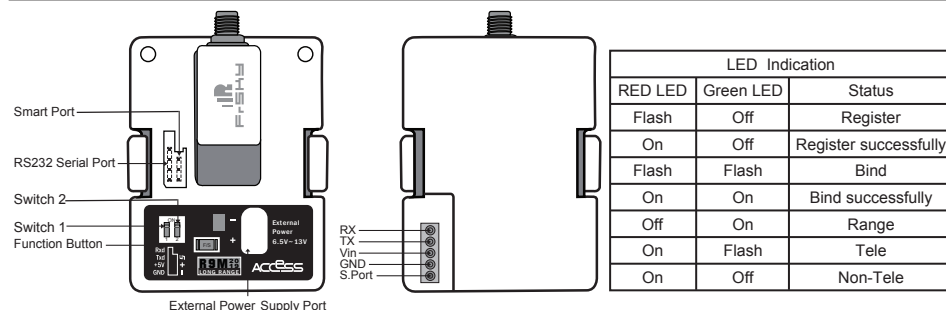


## Introduction

Thank you for purchasing FrSky R9M 2019 telemetry module. FrSky R9M 2019 radio control system is FrSky long range system which works in 900MHz. The R9M 2019 module offers 4 switchable RF power outputs so you can choose the appropriate power for different flight situations. In order to fully enjoy the benefits of this system, please read the instruction manual carefully and set up the device as described below.

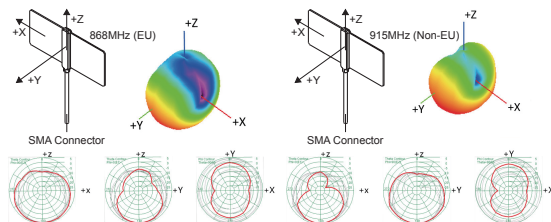
## Overview



\* If the module is connected to both an external power and a transmitter, it will automatically be powered by the one with highvoltage.

## Zipp9 (868MHz) / Zipp9 (915MHz) Antenna

Recommended 900MHz optional high-gain antenna for achieving higher performance and further range.



## Specifications

- Vin Voltage Range: DC 6.5V~13V
- External Power Supply: DC 6.5V~13V
- Telemetry Interface: Smart Port
- Upgrade Interface: Smart Port
- ACCESS Protocol
- RF Operating Frequency: 915MHz

### about the output power and operating current :

	Non-LBT Version				Range Check
RF Power	10mW	100mW	500mW	100mW~1W (Self-adaptive)	0.001mW
Operating voltage/current	7.2V@120mA	7.2V@160mA	7.2V@270mA	7.2V@360mA	7.2V@50mA
Numbers of channel	16CH				/
Compatibility	R9 ACCESS series and TD series				/



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.

## Features

- Long range, low latency and high precision RC system
- 4 Optional RF power
- Smart Port enabled and support telemetry data transmission

## Registration & Automatic binding (Smart Match)

With the FrSky ACCESS protocol, the transmitter/transmitter module can bind receiver without using the "F/S" button.

Follow the step below to finish the Registration & binding procedure:

1. Put the transmitter/transmitter module into [Reg] status.

1.1 For Taranis X9D Plus 2019 as an example, turn on the transmitter, go to the MENU-MODEL SETUP-PAGE 2, choose External RF-Mode R9M ACCESS, then select [Register].

1.2 For Horus X10 Express as an example, turn on the transmitter, go to the MODEL- EXT MODULE, Turn on the EXTERNAL RF, choose MODE [R9M ACCESS], then select STATE [REGISTER].

2. Connect the battery to the receiver while holding the F/S button on the receiver. The RED LED and GREEN LED on the receiver will be on, indicating into the [Reg] status. Select [ENTER] on the transmitter, The RED LED and GREEN LED on the receiver will flash, and the transmitter displays [Registration ok].

3. Turn off the receiver.

4. Move the cursor to select the receiver 1 [Bind].

5. Connect the battery to the receiver, the GREEN LED on the receiver will be on, indicating into the [Bind] status. Select the RX, the GREEN LED on the receiver will keep lit, the RED LED will flash, and the transmitter displays [Bind successful].

6. The transmitter exit [Bind], the receiver GREEN LED will flash, RED LED will be off, indicating working normally.

**Note: After binding procedure is completed, resupply the power and check if the receiver is truly communicating with the transmitter.**

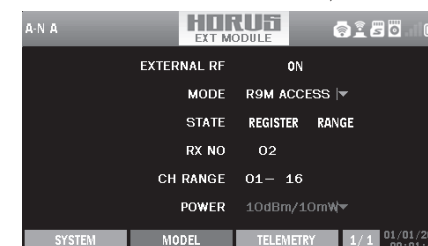
## How to set RF power

-- For Taranis Series transmitters, turn on the transmitter, go to the MENU-MODEL SETUP-PAGE2. Select the RF Power.



Module options R9M  
Power 10dBm(10mW)

-- For Horus Series transmitters, turn on the transmitter, go to the MODEL and choose the EXT MODULE, Select the Power.



## 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. Normally, the RSSI is about 45-50 at 150m in range check mode.

- Place the model at least 60cm (two feet) above non-metal contaminated ground (e.g on a wooden bench). The receiver antenna should be in vertical position.
- For Taranis X9D Plus 2019 as an example, turn on the transmitter and the receiver, go to: MODEL/SETUP/External RF Mode R9M ACCESS/Range.
- For Horus X10 Express as an example, turn on the transmitter and the receiver, go to: MDL/RF SYSTEM/External RF (ON)/STATE (RANGE).

## How to Set Failsafe mode (on the transmitter)

There are 3 failsafe modes: No Pulse, Hold, Custom

- No Pulse: on loss of signal the receiver produces no pulses on any channel. To use this type, select it in the menu and wait 9 seconds for the failsafe to take effect.
- Hold: the model will maintain the last position after the signal is lost. To use this type, select it in the menu and wait 9 seconds for the failsafe to take effect.
- Custom: the customized position of each individual channel. The model will move to the pre-set position after the signal is lost. Move the cursor to "Set" and press ENTER, you will see FAILSAFE SETTING screen below. Move the cursor to the channel you want to set failsafe on, and press ENTER. When moving the corresponding sticks or switches, you will see the channel bar moving. Move the channel bar to the place you want for failsafe and long press ENTER to finish the setting. Wait 9 seconds before the failsafe takes effect.

**Note: If failsafe is not set, the model will hold the last position after signal is lost, thus it may fly away or cause injury.**

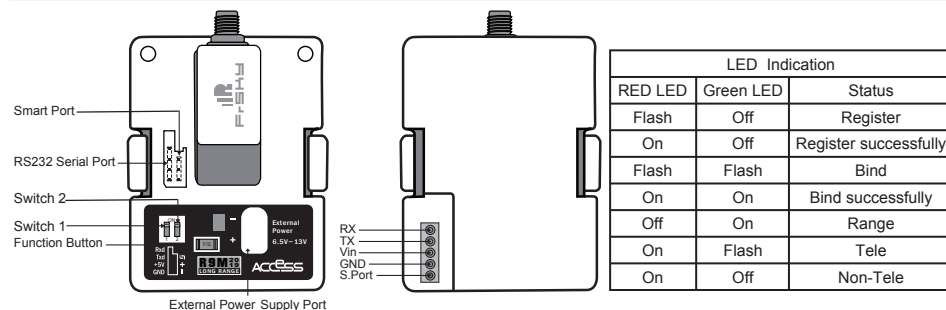
More information please refer to the introduction manual for transmitter.

FrSky is continuously adding features and improvements to our products. To get the most from your product, please check the download section of the FrSky website [www.frsky-rc.com](http://www.frsky-rc.com) for the latest update firmware and manuals

## Introduction

Thank you for purchasing FrSky R9M 2019 telemetry module. As Frsky long range system works in 868MHz, it offers two modes by way of adapting to different flight situations. In order to fully enjoy the benefits of this system, please read the instruction manual carefully and set up the device as described below.

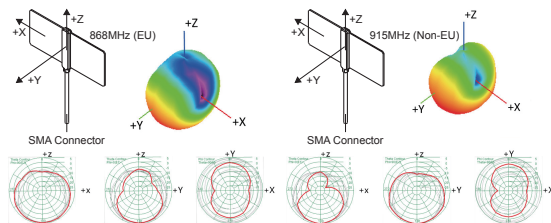
## Overview



\* If the module is connected to both an external power and a transmitter, it will automatically be powered by the one with highvoltage.

## Zipp9 (868MHz) / Zipp9 (915MHz) Antenna

Recommended 900MHz optional high-gain antenna for achieving higher performance and further range.



## Specifications

- Vin Voltage Range: DC 6.5V~13V
- External Power Supply: DC 6.5V~13V
- Telemetry Interface: Smart Port
- Upgrade Interface: Smart Port
- ACCESS Protocol
- RF Operating Frequency: 868MHz

about the output power and operating current :

	LBT Version			Range Check
RF Power	25mW	500mW	200mW	0.001mW
Operating voltage/current	7.2V@140mA	7.2V@400mA	7.2V@325mA	7.2V@50mA
Numbers of channel	16CH			/
Compatibility	R9 ACCESS series and TD series			/



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.

## Features

- Long range, low latency and high precision RC system
- Telemetry (25mW) /No Telemetry (500mW/200mW) mode
- Smart Port enabled and support telemetry data transmission

FrSky Electronic Co., Ltd.

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Add: F-4, Building C, Zhongxiu Technology Park, No.3 Yuanxi Road, Wuxi, 214125, Jiangsu, China Technical Support: [sales4tech@gmail.com](mailto:sales4tech@gmail.com)

## Registration & Automatic binding (Smart Match)

With the FrSky ACCESS protocol, the transmitter/transmitter module can bind receiver without using the "F/S" button.

Follow the step below to finish the Registration & binding procedure:

- Put the transmitter/transmitter module into [Reg] status.
  - For Taranis X9D Plus 2019 as an example, turn on the transmitter, go to the MENU-MODEL SETUP-PAGE 2, choose External RF-Mode R9M ACCESS, then select [Register].
  - For Horus X10 Express as an example, turn on the transmitter, go to the MODEL- EXT MODULE, Turn on the EXTERNAL RF, choose MODE [R9M ACCESS], then select STATE [REGISTER].
- Connect the battery to the receiver while holding the F/S button on the receiver. The RED LED and GREEN LED on the receiver will be on, indicating into the [Reg] status. Select [ENTER] on the transmitter, The RED LED and GREEN LED on the receiver will flash, and the transmitter displays [Registration ok].
- Turn off the receiver.
- Move the cursor to select the receiver 1 [Bind].
- Connect the battery to the receiver, the GREEN LED on the receiver will be on, indicating into the [Bind] status. Select the RX, the GREEN LED on the receiver will keep lit, the RED LED will flash, and the transmitter displays [Bind successful].
- The transmitter exit [Bind], the receiver GREEN LED will flash, RED LED will be off, indicating working normally.

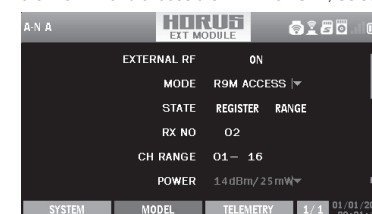
**Note:** After binding procedure is completed, resupply the power and check if the receiver is truly communicating with the transmitter.

## How to switch Telemetry (25mW) or No Telemetry (500mW/200mW)

-- For Taranis Series transmitters, turn on the transmitter, go to the MENU-MODEL SETUP-PAGE2. Select the RF Power.



-- For Horus Series transmitters, turn on the transmitter, go to the MODEL and choose the EXT MODULE, Select the Power.



**Note:**

- The 2 modes both conform to the CE standard.
- The receiver should be rebound after switching the modes between Telemetry (25mW) and No Telemetry (200mW/500mW).

## 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. Normally, the RSSI is about 45-50 at 150m in range check mode.

- Place the model at least 60cm (two feet) above non-metal contaminated ground (e.g on a wooden bench). The receiver antenna should be in vertical position.
- For Taranis X9D Plus 2019 as an example, turn on the transmitter and the receiver, go to: MODEL/SETUP/External RF Mode R9M ACCESS/Range.
- For Horus X10 Express as an example, turn on the transmitter and the receiver, go to: MDL/RF SYSTEM/External RF (ON)/STATE (RANGE).

## How to Set Failsafe mode (on the transmitter)

There are 3 failsafe modes: No Pulse, Hold, Custom

- No Pulse: on loss of signal the receiver produces no pulses on any channel. To use this type, select it in the menu and wait 9 seconds for the failsafe to take effect.
- Hold: the model will maintain the last position after the signal is lost. To use this type, select it in the menu and wait 9 seconds for the failsafe to take effect.
- Custom: the customized position of each individual channel. The model will move to the pre-set position after the signal is lost. Move the cursor to "Set" and press ENTER, you will see FAILSAFE SETTING screen below. Move the cursor to the channel you want to set failsafe on, and press ENTER. When moving the corresponding sticks or switches, you will see the channel bar moving. Move the channel bar to the place you want for failsafe and long press ENTER to finish the setting. Wait 9 seconds before the failsafe takes effect.

**Note:** If failsafe is not set, the model will hold the last position after signal is lost, thus it may fly away or cause injury.

More information please refer to the introduction manual for transmitter.

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