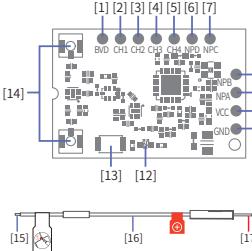


产品介绍 Introduction

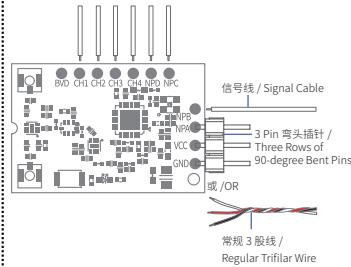
Emr 是一款采用 900M 老鹰协议持 8 个 PWM 通道信号输出的微型接收机。配备外置扣式双天线，支持单双向传输，设计小巧轻便，易于安装，支持 4 个 Newport 功能接口（Newport 接口可自定义输入或输出的信号类型：i-BUS2/S.BUS/i-BUS/PPM/EX S.BUS/EX i-BUS2 等）、支持 FRM304 等老鹰协议高频头。

Emr receiver adopts 900M Eagle protocol, using external two antennas and supporting single or bidirectional transmission. It is uniquely designed to install, and supports 4 Newport function interfaces (Newport interface can be customized to input or output signal type: i-BUS2/S.BUS/i-BUS/i-BUS/PPM/EX S.BUS/EX i-BUS2, etc.). The Emr receiver is compatible with Eagle Protocol RF modules, such as FRM304 RF module.

接收机概览 Receiver Overview



[1] BVD 线焊点	[6] NPD (信号端焊点)	[11] GND (电源负极焊点)	[16] FS-XC102 电
[2] CH1 (信号端焊点)	[7] NPC (信号端焊点)	[12] LED 灯	池电压检测线
[3] CH2 (信号端焊点)	[8] NPB (信号端焊点)	[13] 对码按键	[17] 接电池正极
[4] CH3 (信号端焊点)	[9] NPA (信号端焊点)	[14] 天线	
[5] CH4 (信号端焊点)	[10] VCC (电源正极焊点)	[15] 焊接头	



BVD 电压检测范围: 0~70V

BVD voltage detection range: 0~70V

! 请注意焊接完毕后，用新的热缩套管套住电路板，以防止使用过程中接触金属而造成短路！

! It should be noted that you use a new heat-shrinkable sleeve to cover the circuit board to prevent from contacting with metal, so as to avoid a short circuit !

产品规格 Product Specifications

- 产品型号: EMr
- 适配发射机: 支持 FRM304 高频头的发射机
- 适配模型: 固定翼、多轴、穿越机等
- PWM 通道数: 8
- 无线频率: 868MHz ISM/915MHz ISM
- 无线协议: Eagle
- 天线类型: 外置双天线 (ipex1 扣式天线)
- 输入电源: 3.5 ~ 9V/DC
- 数据输出: PWM/PPM/i-BUS2/S.BUS/i-BUS/EX i-BUS2/EX S.BUS
- 温度范围: -10°C ~ +60°C
- 湿度范围: 20%~95%
- 在线更新: 是
- 外形尺寸: 18*27*3.5mm
- 机身重量: 1.7g (不带天线)
- 认证: CE, FCC ID: 2A2UNEMR000000

- Product Model: EMr
- Compatible Transmitters: The Transmitter Supporting FRM304 RF Module
- Compatible Models: Fixed-wing aircraft, Multicopter, Racing Drones, etc.
- Number of PWM Channels: 8
- RF: 868MHz ISM/915MHz ISM
- 2.4G Protocol: Eagle
- Antenna: Two External Antennas(ipex1 Socket Antenna)
- Input Power: 3.5~9V/DC
- Data Output: PWM/PPM/i-BUS2/S.BUS/i-BUS/EX i-BUS2/EX S.BUS
- Temperature Range: -10°C ~ +60°C
- Humidity Range: 20%~95%
- Online Update: Yes
- Dimensions: 18*27*3.5mm
- Weight: 1.7g (Excluding Two Antennas)
- Certification: CE, FCC ID: 2A2UNEMR000000

对码 Binding

接收机支持双向对码和单向对码（双向对码完成后发射机将显示接收机回传的信息），因此对码前需先在发射机端设置单向或双向对码。如需对码接收机与发射机，对码步骤如下所述。

双向对码步骤：

1. 发射机选择双向通信，然后进入对码状态；
2. 本接收机支持两种方式进入对码状态：按键对码和通电后按键对码
 - 按键对码：按下接收机对码按键且同时接通接收机电源，接收机 LED 灯快闪表示进入对码状态，然后松开对码键；
 - 通电后按键对码：接收机通电后未与发射机通信过，长按对码键 3 秒，接收机 LED 灯快闪表示进入对码状态，然后松开对码键。
3. 接收机 LED 灯常亮，即对码成功。发射机对码成功后自动退出对码状态，对码完成；
4. 检查发射机、接收机是否正常工作。如需重新对码，请重复以上步骤。

单向对码步骤：

1. 发射机选择单向通信，然后进入对码状态；
2. 本接收机进入对码状态（进入对码状态的方式请参考双向对码时描述）；
3. 接收机 LED 灯变为慢闪后将发射机退出对码状态，此时接收机 LED 灯常亮，表示对码成功；
4. 检查发射机、接收机是否正常工作。如需重新对码，请重复以上步骤。

The receiver supports the two-way binding and one-way binding (the transmitter will display the information returned from the receiver after the two-way binding is finished). Therefore, you need to set the one-way or two-way binding on the transmitter side before the binding. If you need to bind the receiver with the transmitter, the steps are as follows.

Follow the steps below to bind in two-way binding:

1. Select [2 WAY] for RF standard of the transmitter, then put the transmitter into binding mode.
2. The receiver supports two ways to enter binding mode: BIND button binding, and BIND button binding after power-on.
 - BIND Button Binding: Press and hold the BIND button of the receiver while powering on the receiver, the LED of the receiver should be flashing, indicating that the receiver is in bind mode. Then release the BIND button.
 - BIND Button Binding After Power-on: The receiver has not been connected to the transmitter when it is powered on. Press and hold the BIND button for 3 seconds, the LED of the receiver should be flashing, indicating that the receiver is in bind mode. Then release the BIND button.
3. When the LED of the receiver is solid on, the binding process should be finished. The transmitter exits the binding mode automatically.
4. Check to make sure the transmitter and receiver functions are working correctly, repeat steps 1 to 4 (binding process) if any problems arise.

Follow the steps below to bind in one-way binding:

1. Select [1 WAY] for RF standard of the transmitter, then put the transmitter in binding mode.
2. Put the receiver into binding mode (Refer to the description above for entering binding mode).
3. After the receiver LED becomes slow flashing, then put the transmitter to exit the binding state. At this time, the receiver LED is solid on indicating the binding is successful.
4. Check to make sure the transmitter and receiver functions are working correctly, repeat steps 1 to 4 (binding process) if any problems arise.

功能介绍 Functions Description

本款 900M 接收机支持 868MHz 和 915MHz 两个频段，可与支持 FRM304 高频头的发射机搭配使用。

EMr 接收机支持 4 个 Newport 接口，Newport 接口输出协议类型可在发射机端设置。可根据实际选用的接收机将一个 Newport 接口输出协议类型设置为 EX.S.BUS 或 EX i-BUS2，再将此 Newport 接口与任意支持 i-BUS2、S.BUS 信号输出的接收机连接，通过设置即可实现信号冗余功能，提高通信质量。

注：仅支持将一个 Newport 接口的输出协议类型设置为 EX.S.BUS 或 EX i-BUS2。

This 900M receiver supports 868MHz and 915MHz bands, and can be used with transmitters supporting FRM304 RF Module.

The EMr receiver supports 4 Newport interfaces, and the output protocol type of the Newport interface can be set at the transmitter side. EX S.BUS or EX i-BUS2 can be set as the output protocol type of one Newport interface according to the actual receiver, and then connect this Newport interface with any receiver that supports i-BUS2 or S.BUS signal output, and then signal redundancy function can be worked through the setting to improve the communication quality.

Note: Only one Newport interface's output protocol type can be set to EX.S.BUS or EX i-BUS2.

固件更新 Firmware Update

本接收机固件更新需通过富斯遥控管家 (FlySkyAssistant) 完成 (仅 3.0 及以上版本支持, 富斯遥控管家固件可从官网 www.flsky-cn.com 获取)。可通过以下两种方式完成更新:

方式一: 先将发射机与接收机完成对码 (接收机 LED 灯常亮), 再将发射机与电脑连接, 然后在电脑端打开富斯遥控管家, 通过富斯遥控管家进行固件更新。

方式二: 先将发射机与电脑连接, 再参考如下方式使接收机进入强制更新状态 (接收机 LED 灯状态三闪一灭), 然后在电脑端打开富斯遥控管家完成固件更新 (强制更新完成后, 接收机指示灯由三闪一灭状态变为慢闪状态)。

进入强制更新状态的操作方式有如下两种方式:

- 按下对码按键, 上电 10 秒后指示灯三闪一灭, 松开对码按键;
- 先给接收机上电, 长按对码键 10 秒后指示灯三闪一灭, 松开对码按键。

The firmware of this receiver is updated through the FlyskyAssistant (Only version 3.0 or above is supported. The firmware of FlyskyAssistant is available on the Flysky official website). This receiver firmware update can be finished in two ways:

Mode I : After the binding between the transmitter and the receiver (the LED of the receiver is solid on), connect the transmitter to the computer, then open the FlyskyAssistant on the computer to update the firmware.

Mode II : Connect the transmitter to the computer. Then put the receiver to enter the forced update mode by referring to the following way (The LED of the receiver operates in three-flash-one-off mode repeatedly). Afterwards, open the FlyskyAssistant on the computer to update the firmware.

- Power on the receiver while pressing the BIND button for more than 10 seconds, until the LED works in three -flash-one-off mode repeatedly, then release the BIND button.
- Power on the receiver first, then press and hold the BIND button for more than 10 seconds, the LED works in three -flash-one-off mode repeatedly, then release the BIND button.

失控保护 Failsafe

失控保护功能用于在接收机失去信号不受控制后, 接收机按设置好的失控保护值进行通道输出以保护模型及人员安全。

本款接收机共支持三种失控保护模式: [无输出]、[保持] 和 [固定值]

[无输出] PWM 通道接口为无输出状态;

[保持] 输出失控前最后的通道值;

[固定值] 输出设置的通道值。

注:

1. 对于 PPM/i-BUS/S.BUS/i-BUS2 等总线信号类型不允许单个或其中几个通道为 [无输出] 模式, 通道设置为 [无输出] 模式时, 实际信号是保持最后输出值;
2. 因 S.BUS/i-BUS2 信号信息包含失控标志位, 各通道失控保护设置被失控标志位传达给后续设备, 若连接的设备支持失控标志位解析, 则失控后, 输出各通道设置的失控保护值;
3. 对于无失控标志位的信号 PPM/i-BUS, 支持设置失控时信号 [无输出] 模式。设置为 [无输出] 模式后, 不管各通道失控保护如何设置, 失控后各通道均为 [无输出] 模式。

The failsafe function is used to output the channel value according to the out-of-control protection value set by the user after the receiver loses its signal and is out-of-control to protect the model and personnel.

This receiver supports three failsafe modes: **No output**, **Hold**, and **Fixed value**.

No output No output for PWM interface.

Hold Keeps the last output value.

Fixed value Outputs the failsafe values set for each channel.

Notes:

1. For bus signal types such as PPM/i-BUS/S.BUS/i-BUS2, a single or several of these channels are not allowed to be in No output mode. The actual signal is held at the last output value when the channel is set to No output mode.
2. Because the S.BUS/i-BUS2 signal information contains failsafe flag bits, the failsafe settings of each channel are communicated to subsequent devices by the failsafe flag bits. If the connected devices support the failsafe flag bit analysis, the failsafe values set for each channel are output after out of control.
3. For the signal PPM/i-BUS without failsafe flag bits, it supports the setting of the signal to No output mode in case of out of control. After setting to No output mode, regardless of the setting of the failsafe of each channel, each channel will be in No output mode after out of control.



! 注意事项:

- 使用前必须确保本产品与模型安装正确，否则可能导致模型发生严重损坏。
- 关闭时，请务必先关闭接收机电源，然后关闭发射机。如果关闭发射机电源时接收机仍然在工作，将会导致遥控设备失控。失控保护设置不合理可能引起事故。
- 确保接收机安装在远离电机，电子调速器或电子噪声过多的区域。
- 接收机天线需远离导电材料，例如金属棒和碳物质。为了避免影响正常工作，请确保接收机天线和导电材料之间至少有1厘米以上的距离。
- 准备过程中，请勿连接接收机电源，避免造成不必要的损失。

! Attention:

- Make sure the product is installed and calibrated correctly, failure to do so may result in serious injury.
- Make sure the receiver's battery is disconnected before turning off the transmitter, failure to do so lead to lose control. Unreasonable setting of the Failsafe may cause accidents.
- Make sure the receiver is mounted away from motors, electronic speed controllers or any device that emits excessive electrical noise.
- Keep the receiver's antenna at least 1cm away from conductive materials such as carbon or metal.
- Do not power on the receiver during the setup process to prevent loss of control.

认证相关 Certification**FCC Compliance Statement**

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.

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

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.

EU DoC Declaration

Hereby, [ShenZhen FLYSKY Technology Co., Ltd.] declares that the Radio Equipment [EMr] is in compliance with RED 2014/53/EU. The full text of the EU DoC is available at the following internet address: www.flyskytech.com/info_detail/10.html

RF Exposure Compliance

This equipment complies with FCC/ISED RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

Environmentally friendly disposal

Old electrical appliances must not be disposed of together with the residual waste, but have to be disposed of separately. The disposal at the communal collecting point via private persons is for free. The owner of old appliances is responsible to bring the appliances to these collecting points or to similar collection points. With this little personal effort, you contribute to recycle valuable raw materials and the treatment of toxic substances.



FCC ID: 2A2UNEMR000000



微信公众号



Bilibili



Website



Facebook

Manufacturer: ShenZhen FLYSKY Technology Co., Ltd.

Address: 16F, Huafeng Building, No. 6006 Shennan Road, Futian District, Shenzhen, Guangdong, China

本说明书中的图片和插图仅供参考，可能与实际产品外观有所不同。产品设计和规格可能会有所更改，恕不另行通知。

Figures and illustrations in this manual are provided for reference only and may differ from actual product appearance. Product design and specifications may be changed without notice.

<http://www.flysky-cn.com>

Copyright ©2024 Flysky Technology Co., Ltd.

