

RP3-H

Designed specifically for use with our Nexus Helicopter Flybarless control unit and compatible with all CRSF/S.BUS enabled flight controllers the RP3-H ExpressLRS receiver comes with a built-in TCXO and an integrated housing design that makes the receiver tougher and ready to mount in modern helicopter frames. With the RP3-H receiver, you can get reliable, stable, and accurate signal reception, which enhances your flight experience and allows for superior performance even in demanding environments. The RP3-H also features an Ext-V telemetry input for compatibility with older ESCs that do not provide battery voltage telemetry via the control unit.

The RP3-H receiver uses the Skyworks SKY66112 power amplifier to increase telemetry performance, the PA provides up to 100mW of telemetry power, and antenna switching for antenna diversity. It is developed around the ESP8285 MCU and SX1281IMLRT RF Chip, offering Lora and FLRC 2.4GHz RF links that provide incredible range and low latency. Firmware updates can be done on your craft without the need to remove the receiver.

TCXO (temperature compensated crystal oscillator)

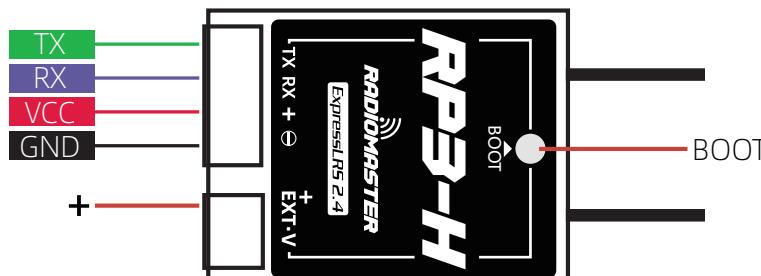
The TCXO ensures high stability and accuracy in frequency control, compensating for temperature variations. This results in consistent and reliable signal reception, even in extreme temperature conditions. It also reduces frequency drift over time, providing long-term frequency stability and preventing signal degradation. Click <https://www.expresslrs.org/hardware/crystal-frequency-error> to learn more about the TCXO.

RP3-H Specifications

- Item: RP3-H
- Type: ISM
- MCU: ESP8285
- RF Chip: SX1281
- Telemetry RF power: Max 100mW
- Antenna: 150mm 2.4GHz Antenna x2
- Frequency Range: 2402.4 - 2479.4MHz
- Maximum receive refresh rate: 500Hz / F1000Hz
- Minimum receiver refresh rate: 25Hz
- Working voltage: DC 4.5 - 8.4V
- Battery voltage detection range: DC 4.0 - 35V
- Weight: 5.1g (Including two antenna)
- Dimension: 28mm*24mm*8mm
- Firmware Version: ExpressLRS v3.3.1 pre-installed
- FW Target: RadioMaster RP3-H Diversity 2400 RX
- Bus interface: CRSF/S.Bus

RP3-H 技术参数

- 名称: RP3-H
- 类型: ISM
- 单片机: ESP8285
- 射频芯片: SX1281
- 射频功率: 最大100mW
- 天线: 2根 150mm 2.4GHz 天线
- 频率范围: 2402.4 - 2479.4MHz
- 最大接收刷新率: 500Hz/F1000Hz
- 最低接收刷新率: 25Hz
- 工作电压: DC 4.5 - 8.4V
- 电压检测范围: DC 4.0 - 35V
- 重量: 5.1g (含2个天线)
- 尺寸: 28mm*24mm*8mm
- 固件版本: 预装 ExpressLRS v3.3.1
- 固件目标: RadioMaster RP3-H Diversity 2400 RX
- 总线接口: CRSF/S.Bus


对频方法

- 1: 关闭遥控器
- 2: 重复给接收机上电三次, 接收机灯双闪, 表明接收机处于对频模式
- 3: 开启遥控器, 进入ExpressLRS的LUA操作界面, 选择到【BIND】，确认
- 4: 接收机灯常亮表明对频成功

Traditional Binding

For traditional binding, the binding phrase must be commented out in userDefines on the RX.

- 1: Power off your transmitter
- 2: Plug in and unplug your receiver three times
- 3: Make sure the LED is doing a quick double blink, which indicates the receiver is in bind mode
- 4: Use the [BIND] button on the ExpressLRS Lua script, which sends out a binding pulse
- 5: If the receiver has a solid light, it's bound!

	灯状态 Status light	工作状态 Meaning
接收机断开 Receiver disconnected	500毫秒的周期慢闪 Slow flash (500ms)	等待连接遥控器 Waiting for transmitter
对频模式 Bind mode	双闪 Double flash	接收机进入对频模式 Receiver in bind mode
模式匹配失败 Mode matching failed	三闪 Triple flash	接收机连接正常, 但是工作模式不匹配 Receiver functional, mode selection error
连接状态 Receiver connected	常亮 Solid	接收机正常工作 Receiver functional

For more information, please visit the ELRS website:

更多操作细节, 请参考ELRS官方网站: <https://www.expresslrs.org/2.0/>

FCC Warning

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. Any changes or modifications not expressly approved by the party responsible for compliance could

void the user's authority to operate the equipment. 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. This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.