



BETA FPV 1873790 Nano Receiver 2.4GHz ISM 5V Input Voltage User Manual

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Nano Receiver User Manual



Welcome to ExpressLRS!

BETA FPV Nano receiver is based on the ExpressLRS project, an open-source RC link for RC applications. ExpressLRS aims to achieve the best possible link performance in both speed, latency, and range. This makes ExpressLRS one of the fastest RC links available while still offering long-range performance.

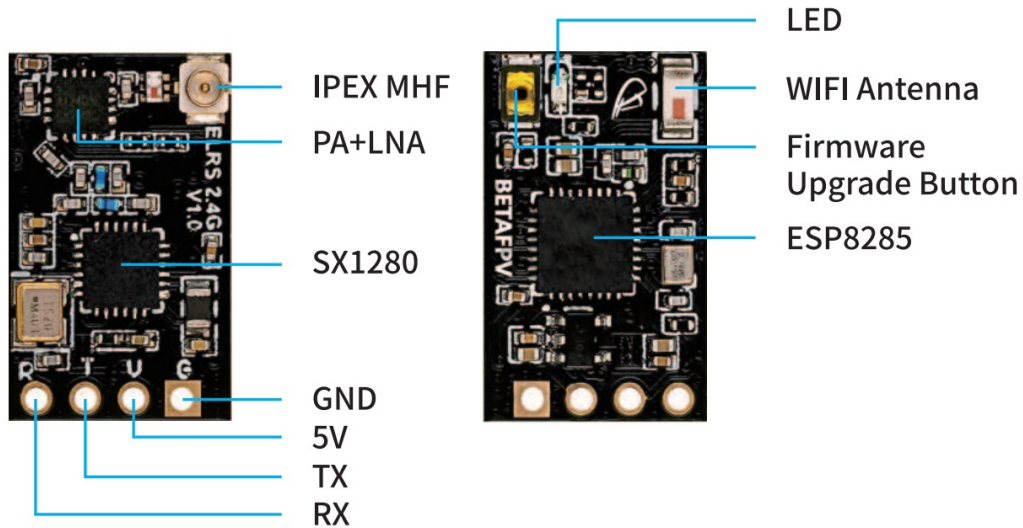
Github Project Link: <https://github.com/ExpressLRS>

Facebook Group: <https://www.facebook.com/groups/636441730280366>

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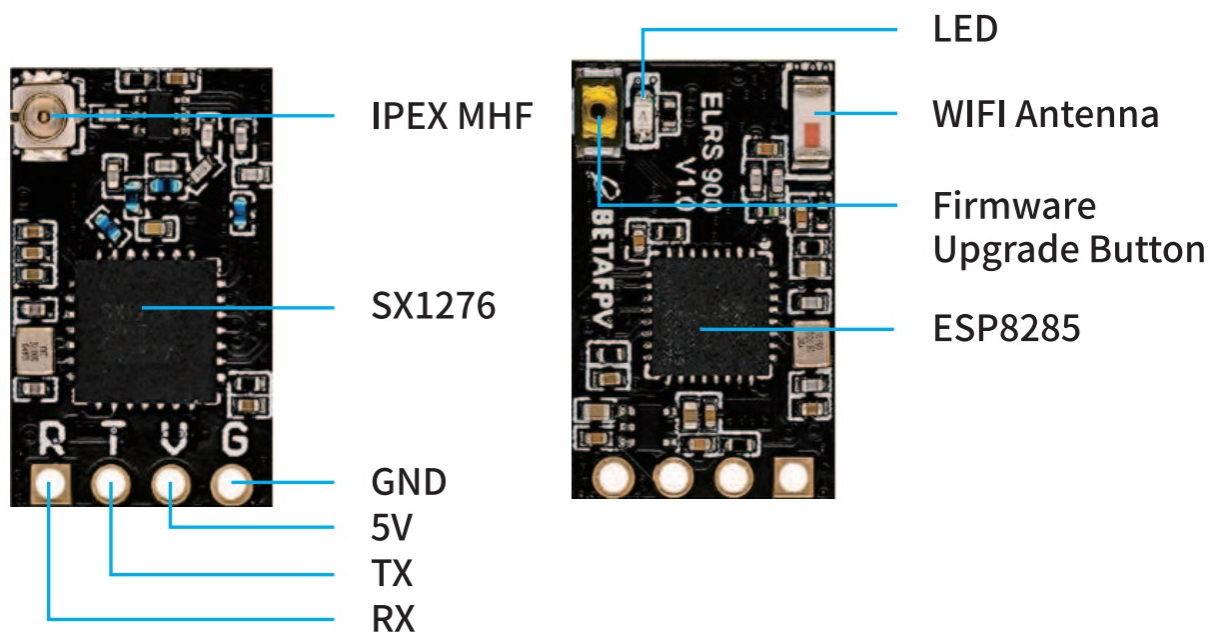
Specifications



- Weight: 0.7g (receiver only)
- Size: 12mm*19mm
- Telemetry power: 20dbm
- Frequency bands (Nano receiver 2.4G version): 2.4GHz ISM
- Frequency bands (Nano receiver 915MHz/868MHz version): 915MHz FCC/868MHz EU
- Input voltage: 5V
- Antenna connector: I PEX MHF

Nano receiver 2.4G version diagram as shown below.

Nano receiver 868MHz/915MHz version diagram as shown below.



Nano receiver LED status indication is shown below.

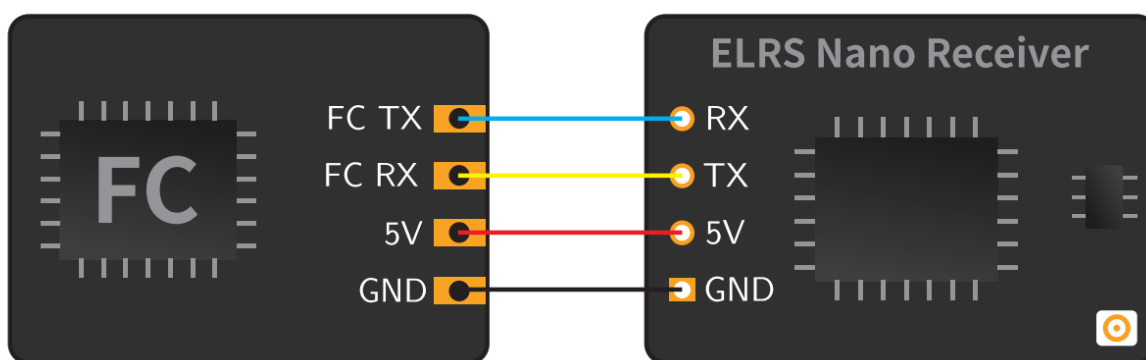
Indicator status	Meaning
Solide on	Connected successfully
Flash double quickly	Binding status
Flash slowly	Connection fail
Flash quickly	WIFI upgrade status

Basic Configuration

<https://github.com/ExpressLRS/ExpressLRS/wiki/OpenTX-andBetaflight-SetuD>

ExpressLRS uses the Crossfire serial protocol (AKA CRSF protocol) to communicate between the receiver and the flight controller board. So make sure your flight controller board supports the CRSF serial protocol. Next, we use the flight controller with Betaflight firmware to show how to set up the CRSF protocol.

The connection between the ELRS Nano receiver and the FC board is shown below.



Enable the corresponding UART (e.g. UART3 below) as a Serial Rx on Betaflight Configurator “Ports” tab.

Identifier	Configuration/MSP	Serial Rx
USB VCP	<input checked="" type="checkbox"/> 115200 ▼	<input type="checkbox"/>
UART1	<input type="checkbox"/> 115200 ▼	<input type="checkbox"/>
UART2	<input type="checkbox"/> 115200 ▼	<input type="checkbox"/>
UART3	<input type="checkbox"/> 115200 ▼	<input checked="" type="checkbox"/>

On the “Configuration” tab, select “Serial-based receiver” on the “Receiver” panel, and select “CRSF” as the protocol. Telemetry is optional here and will reduce your stick update rate due to those transmit slots being used for telemetry.

Receiver

Serial-based receiver (SPEKSAT,S ▼ Receiver Mode

Note:Remember to configure a Serial Port (via Ports tab) and choes a Serial Receiver Provider when using RX_SERIAL ferture

CRSF ▼ Serial Receiver Provider

Bind

Nano receiver could enter binding status by power on/off three times.

- Plugin and unplug nano receiver three times;
- Make sure the LED is doing a quick double blink, which indicates the receiver is in bind mode;
- Make sure the RF TX module or radio transmitter enter binding status, which sends out a binding pulse;
- If the receiver has a solid light, it's bound.

Note: Binding once and the receiver will store the binding information. Re-power and the connect successfully auto.



More Information

As the ExpressLRS project is still an infrequent update, please check BETA FPV Support (Technical Support -> ExpressLRS Radio Link) for more details and the newest manual.

<https://support.betafpv.com/hc/en-us>

- Newest user manual;
- How to upgrade the firmware;
- FAQ and troubleshooting.

Documents / Resources

 Nano Receiver User Manual  <small>Welcome to ExpressLRS!</small>	BETA FPV 1873790 Nano Receiver 2.4GHz ISM 5V Input Voltage [pdf] User Manual 1873790, Nano Receiver, 2.4GHz ISM 5V Input Voltage, 1873790 Nano Receiver 2.4GHz ISM 5V Input Voltage
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