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Dane aktualne na dzień: 29-03-2024 09:11

Link do produktu: https://dronexpert.eu/betafpv-elrs-lite-tower-antenna-receiver-odbioornik-p-15216.html

BetaFPV ELRS Lite Tower Antenna Receiver odbioornik

Cena brutto	**59,12 zł**
Cena netto	**48,06 zł**
Dostępność	**Aktualnie niedostępny**
Kod producenta	**01070004_1**
Producent	**BetaFPV**

Opis produktu

BETAFPV Lite 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 speeds, latency, and range. This makes ExpressLRS one of the fastest RC links available while still offering long-range performance.

A ton of ExpressLRS items are available now!

Nano RX or Lite RX

What is the major difference between Nano receiver and Lite receiver?

Nano receiver (2.4G version) is the first and (so far) the only receiver with power amplifier (PA+LNA). It has 100mW telemetry output and better sensitivity when longer range. Lite receiver doesn't have a PA/LNA on them, so its telemetry power is as what the RF chip SX1280 came with 17mW.

Beside, Nano receiver comes with normal external Dipole T antenna. Lite receiver has SMD ceramic antenna and in theory it is not so long range.

High recommend the Nano receiver if the space is enough. On 65-85mm whoop drones with limited space and need light weight, Lite receiver is a better choice.

Tower Antenna or Flat Antenna

New lite receiver with a flat antenna features a **3mm** extra-thin board and 0.53g lightweight, which requires less assembly space on drones with limited space. Besides, solid flat antenna without irregular parts can withstand crashes, making the receiver not so fragile.

Whatever tower antenna or flat antenna, both versions perform well in control, range and stability, bringing a good flight experience to pilots. Below chart is the basic information for two antennas. It is shown that both antennas have almost the same performance in gain. However, the efficiency for flat antenna is better than tower antenna. In spite of that, tower antenna and flat antenna V1.1 can reach about 600 meters by equal conditions.

	Tower Antenna	Flat Antenna V1.1
Weight	0.47g	0.53g
Size	10mm*10mm*6mm	11mm*10mm***3mm**
Gain	3.3dBi	3.2dBi
Radio Efficiency	>70%	>80%
Return Loss	<-7	<-7
Recommend Drone	Whoop Drone	Whoop Drone
Range	About 600 meters	About 600 meters

Flat Antenna V1.0 & V1.1

The ELRS Lite Receiver flat antenna V1.1 is coming to see you again. Range issues and failsafe at around 100 meters have been resolved compared with V1.0. Now, the V1.1 flat antenna receiver can reach 600 meters with BETAFPV Moxon TX Antenna (using BETAFPV Nano TX module).

Previously, the flat antenna V1.0 led to the failsafe at around 100 meters with an RSSI of -95dBm of this receiver, which did not reach the expected range compared with the beta version. However, it works great for indoor whooping and racing.

For customers who bought this receiver before March 2022 and have issues with it, we will refund you or send you a new one that fixes range issues.

Please feel free to email support@betafpv.com and our support team will help you.

Specification

- Weight: 0.47g (with Tower SMD ceramic antenna), 0.53g (with Flat SMD ceramic antenna)
- Size: 10mm*10mm*6mm (Tower), 11mm*10mm***3mm** (Flat)
- MCU: ESP8285
- Telemetry power: 17mW
- Frequency bands (Nano receiver 2.4G version): 2.4GHz ISM
- Input voltage: 5V
- Antenna: Integrated SMD ceramic antenna

Diagram

Lite receiver with tower antenna 2.4G version diagram as shown below.

Lite receiver with flat antenna 2.4G version diagram as shown below.

Note: For orders before April 2022, the firmware version of the Lite receiver tower antenna or flat antenna v1.1 manufactured by our company is ELRS 2.0.0; ELRS Innovative team has officially released version 2.4.0. If you want to flash ELRS official firmware, please download the latest ExpressLRS-Configurator or read our manual for flashing it. Significantly, the TX module and receiver have to be in the same ELRS version, otherwise, the frequency cannot match successfully.

Download the latest ExpressLRS-Configurator.

Manual for flashing ExpressLRS official firmware.

Know More About ExpressLRS

ExpressLRS is an open-source RC link for RC applications. Everyone could find this project on Github or join the discussion in Facebook Group.

ExpressLRS is based on Semtech Lora SX127x or SX1280 hardware for RX and TX respectively. it aims to achieve the best possible link performance in both speeds, latency, and range. At 900 MHz a maximum of 200 Hz packet rate is supported. At 2.4 GHz a blistering 500Hz is currently supported with a custom OpenTX build. This makes ExpressLRS one of the fastest RC links available while still offering long-range performance.

More and more vendors start to support the ExpressLRS radio protocol in different parts, like radio transmitter with ELRS in stock, drone with built-in ELRS receiver, ELRS TX module for JR bay, or Nano bay. BETAFPV team take part in this project and provide a series of ExpressLRS components.

Configuration & Bind

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 Lite 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.

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.

The Lite receiver comes with offically major release V2.0.0 protocol and no Binding Phrase inlcuded. Lite receiver could enter binding status by power on/off three times.

- Plugin and unplug Lite 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.

Note: If you reflash firmware of the receiver with your own Binding Phrase, please make sure the TX module has the same Binding Phrase. The RF TX module and the receiver will bind automatically in this situation.

FAQ

BETAFPV ELRS Nano receiver user manual download. (use the same manual of Nano Receiver).

Package

- 1 * BETAFPV ELRS Lite receiver (tower antenna or flat antenna V1.1)
- 2 * Spare shrink tube
- 4 * 30awg silicon connection wires (1 black, 1 red, 1 white, 1 yellow)

or