Features

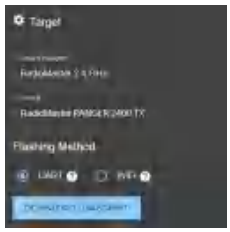
Rugged CNC Case
High efficiency cooling system
OLED Display
Wifi and Bluetooth support
Built in Accelerometer
Packet rates up to F-1000Hz
Directional Nav key and customizable shortcut buttons
Up to 1 Watt Power output
Futaba CRSF Cable included
* Packet rates over 500hz requires EdgeTX 2.7.1 or later

How to update Firmware

Please install ELRS configurator follow
https://www.expresslrs.org/3.0/quick-start/installing-configurator/

Important note on the ExpressLRS LUA Script

You must ensure you are using the Correct matching version of the ExpressLRS Lua script with your Module. When updating the Firmware on your module also take the time to ensure your LUA script on the radio is also updated. In the ExpressLRS configurator click the "Download LUA Script" button to download the newest script. The .LUA file you download should be copied to /SCRIPTS/TOOLS directory of the SD card on your handset. Previous versions of the script can be erased from your SD card if no longer needed.



Module Firmware Update

Step 1: Connect Ranger via usb-cable to PC, then open ELRS-configurator.
Step 2: Select target
Device Category: RadioMaster 2.4 Ghz
Device: RadioMaster Ranger
Step 3: please follow option below
https: //www.expresslrs.org/3.0/quick-start/firmware-options/
Step 4: click BUILD & FLASH , wait flash finished.

Important note on Radio Firmware

For the best performance and compatibility we recommend using EdgeTX 2.7.1 or later with your Ranger ExpressLRS Module. EdgeTX and ExpressLRS have been working together to ensure compatibility and support for the latest features.
Visit http://edgetx.org/ to learn more. The Best way to update your radio is with EdgeTX Buddy found here: https://buddy.edgetx.org/

Specifications

Regulatory Domain: ISM2400
MCU:ESP32(main),ESP8285(aux, as ESP backpack)
RF chip: SX1281IMLTRT
Frequency Range: 2400 MHz to 2480 MHz
Maximum receiver refresh rate: 500Hz/F-1000Hz
Minimum receiver refresh rate: 25Hz
RF Output Power: 30dBm for FCC, 20dBm for CE
JR standard 5pin socket
Nano standard 8pin socket
Built-in RGB Lights
Built-in OLED screen
G-sensor support
XT30 Power supply voltage: DC 6V ~ 16.8V
Weight: 155 grams (with antenna)
Dimension: 90*51*24mm

How to bind

Ranger module require ELRS V3.0.0 or later. Please ensure your receiver is using V3.0.0 or later first.
There are two ways to bind with RX.

Bind by Ranger

1: Long press Ranger 5-way button, then press up/down to "BIND" menu, press right to enter.
2: Re-power 3 times your ELRS RX, make sure it on bind mode (LED double blink).
3: Press middle button to bind.

Bind by Radio LUA

1: Enter radio ELRS LUA
2: Re-power 3 times your ELRS RX, make sure it on bind mode (LED double blink).
3: Press "Bind" on LUA menu.

Bind with Bindphrase

Learn more here https://www.expresslrs.org/3.0/quick-start/binding/

How to install the module in your radio

How and when to use your Moxon or T-Antenna

Type: MOXON
The Moxon directional antenna is intended for long range and has a more narrow field of operation. It is important to keep the Moxon antenna pointed in the general direction of your aircraft.
Antenna polarization: vertical/horizontal polarization
Type: T-Antenna
The T-Antenna is an omnidirectional antenna. It is intended for short to medium range and is suitable for most conditions.
Antenna polarization: vertical/horizontal polarization

How to use Futaba CRSF cable

Please make sure your Futaba radio fw can support CRSF function.
https://futabausa.com/product-support/software-downloads/
Follow futaba manual to select servo test port to CRSF.
Connect Ranger via CRSF cable.
Connect a XT30 2s-3s lipo battery to Ranger.

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.
The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.

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.
-