

# simpleRTK2B - Starter Kit MR

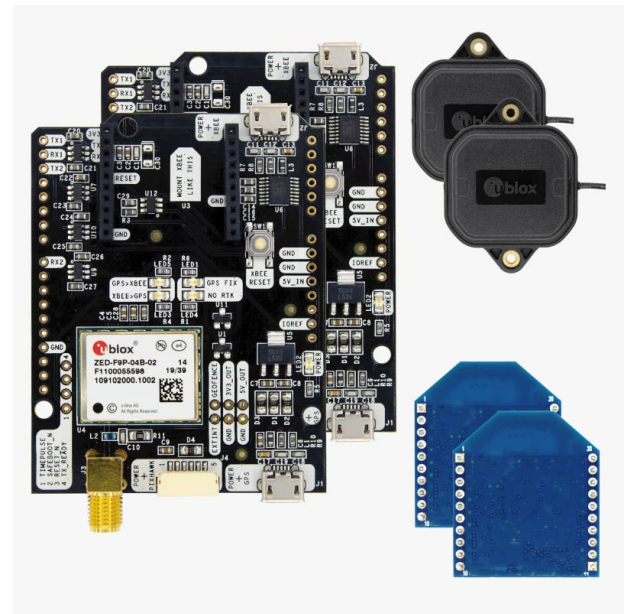
Includes:

- 2 simpleRTK2B Budget boards (ZED-F9P)
- 2 Radio Modules MR (Medium Range)
- 2 u-blox GNSS Multiband antenna ANN-MB-00 (IP67) with cable
- Base and Rover preconfiguration



More info about the product!

simpleRTK2B - Starter Kit MR has several different configurations to provide you with flexibility:



**SKU**

AS-STARTKIT-MR-L1L2-NH-00

**Variation Name**

Without headers

## Description

The simpleRTK2B - Starter Kit MR (Medium Range) allows simple and fast evaluation of Dual Band GNSS (GPS/Galileo/Glonass/Beidou) RTK technology, based on u-blox ZED-F9P module.

[RTK technology](#) introduces the concept of a "Rover" and a "Base Station". By using a data stream from the base station, the rover can output its relative position with cm level accuracy in clear sky environments.

One of the known problems of Single Band RTK is its convergence time of more than 60 seconds. Dual Band technology reduces this time below 10 seconds, increasing substantially the availability of cm-level accuracy.

This is the recommended Starter Kit for your line of sight projects. The kit includes 2 boards with base and a rover functionality. The included radio modules will let you send RTK corrections up to 1200m. If you need a longer range or multi-rover capabilities, check out our [Starter Kit LR](#).

The kit comes pre-configured, but if you need a custom configuration with special needs, make sure to add in the shopping cart our [Configuration Service](#).

Good to know:

- This product is not suitable for multirover configuration, check our LR kit if you are interested in this feature.
- This product is recommended if you want to evaluate u-blox ZED-F9P.
- The included radio modules will let you send RTK corrections up to 1200m in [perfect RF-line-of-sight](#). If you need a longer range, check out our [Starter Kit LR](#).

## Specifications

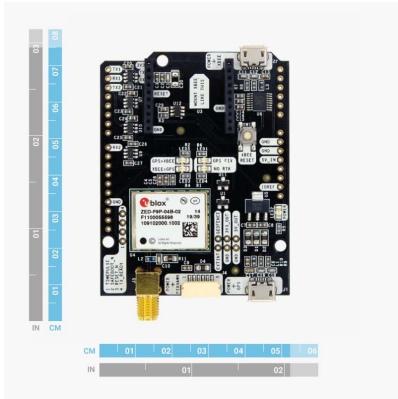
### ZED-F9P features

- Centimeter level precision
  - <1cm with a base station up to 35km
  - <1cm with NTRIP up to 35km
  - <4cm with SSR corrections
  - <1.5m in standalone mode
  - <0.9m standalone with SBAS coverage
- Update rate
  - Default: 1Hz
  - With maximum performance: up to 10Hz
  - With reduced performance: up to 20Hz
- Multi band: L1, L2 and E5b support
- Multifrequency and Multiconstellation:
  - GPS: L1C/A L2C
  - GLONASS: L1OF L2OF
  - Galileo: E1-B/C E5b
  - BeiDou: B1I B2I
  - QZSS: L1C/A L2C
  - SBAS: WAAS, EGNOS, MSAS, GAGAN and SouthPAN
- Start-up times:
  - First position fix: 25 seconds (cold), 2 seconds (hot)
  - First RTK fix: 35 seconds (cold)
- RAW data output in UBX format
- Base and Rover functionality
- Operating temperature Range: -40 to +85deg
- Documentation: RED, RoHS

### MR radio features

- Communication: Unidirectional Point-to-Point (maximum 1 rover)
- Frequency: ISM 2.4 GHz
- Output power: 6.3 mW (8 dBm)
- Range in line of sight:
  - Urban: 250 meters
  - Rural: 600 meters
  - Rural with complete RF line of sight: 1'200 meters
- Antenna type: internal
- Operating temperature Range: -40 to +85deg
- Documentation: RED, RoHS, FCC, IC

## Image Gallery



# Pinout

**TOP VIEW**

Description	Name	Description
ZED-F9P TX1 IOREF level	TX1	
ZED-F9P RX1 IOREF level	RX1	
XBee TX/ZED-F9P RX2 IOREF level	TX2	
XBee RX/ZED-F9P TX2 IOREF level	RX2	
Ground	<b>GND</b>	<b>GND</b> Must connect to GND
		<b>GND</b> Must connect to GND
		<b>5V_IN</b> 4.5-5.5V optional input voltage
		<b>IOREF</b> 1.8-5V, defines voltage of TX/RX

## Documentation

User Guide	<a href="https://www.ardusimple.com/mr-lr-kit-hookup-guide/#unboxing">https://www.ardusimple.com/mr-lr-kit-hookup-guide/#unboxing</a>
Antenna Installation Guide	<a href="https://www.ardusimple.com/gps-gnss-antenna-installation-guide/">https://www.ardusimple.com/gps-gnss-antenna-installation-guide/</a>
Configuration files	<a href="https://www.ardusimple.com/configuration-files/">https://www.ardusimple.com/configuration-files/</a>

simpleRTK2B - Starter Kit MR includes free basic technical support. Contact [info@ardusimple.com](mailto:info@ardusimple.com) for more information.

Data and descriptions in this document are subject to change without notice. Product photos and pictures are for illustration purposes only and may differ from the real product appearance.