

REACH RS2

Multi-band RTK GNSS receiver with centimeter precision

Gets fix in seconds

Reach RS2 gets fixed solution in just seconds and maintains robust performance even in challenging conditions. Centimeter accuracy can be achieved on distances over 60 km in RTK, and 100 km in PPK mode.

GPS, GLONASS, BeiDou, Galileo, QZSS and SBAS
L1OF, L2OF, L1C/A, L2C, E1B/C, E5b, B1I B2I

PPP support

RINEX raw data logs are compatible with OPUS, CSRS-PPP, AUSPOS, and other PPP services so you can now get centimeter-precise results in any place on Earth. Process RINEX files in an online service and get position with absolute accuracy.

Built-in 3.5G modem

Reach RS2 features a power-efficient 3.5G HSPA modem with 2G fallback and global coverage. Now corrections can be accessed or broadcasted over NTRIP independently, without relying on Internet connection on your phone.

22 hours on 1 charge

Up to 22 hours of autonomous work when logging data and up to 16 hours as a 3G rover, even in cold weather—no more need to carry spare batteries with you. Reach RS2 can charge from a USB wall charger or a power bank over USB-C.

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Base station mode

Use Reach RS2 to set up your own base station. Stream corrections over the network via NTRIP/TCP or LoRa radio, record base logs for post-processing. Reach RS2 works with any amount of rovers and is compatible with Reach RS+ and M+.

Compatible with other receivers

Any receiver that supports RTCM3 and NTRIP. External radios are supported over RS-232.

Real-time navigation

Reach RS2 can send precise coordinates over Bluetooth or Wi-Fi to your tablet with a lightbar navigation app. RS-232 interface allows to connect Reach RS2 directly to an autosteer system.

Compatible apps

MachineryGuide, AgriBus-Navi, Efarmer, Agripilot.

Solution formats

NMEA, ERB, plain text.



Specifications Emlid RS2

Mechanical

- Dimensions 126x126x142 mm
- Weight 950 g
- Operating t° -20...+65 $^{\circ}$ C
- Ingress protection IP67

Electrical

- Autonomy 16 hrs as 3.5G RTK rover, 22 hrs logging
- Battery LiFePO4 6400 mAh, 6.4 V
- External power input 6–40 V
- Charging USB Type-C 5 V, 2 A
- Certification FCC, CE

Positioning

- Static H: 4 mm + 0.5 ppm
V: 8 mm + 1 ppm
- PPK H: 5 mm + 0.5 ppm
V: 10 mm + 1 ppm
- RTK H: 7 mm + 1 ppm
V: 14 mm + 1 ppm
- Convergence time ~5 s typically

Connectivity

- LoRa radio
- Frequency range 868/915 MHz
- Power 0.1 W
- Distance Up to 8 km
- 3.5G modem
- Regions Global
- Bands Quad-band, 850/1900, 900/1800 MHz
- SIM card Nano-SIM
- Wi-Fi 802.11a/b/g/n
- Bluetooth 4.0/2.1 EDR
- Ports RS-232, USB Type-C

Data

- Corrections NTRIP, RTCM3
- Position output NMEA, LLH/XYZ
- Data logging RINEX with events with update rate up to 20 Hz
- Internal storage 16 GB
160+ days of logging at 1 Hz

GNSS

- Signal tracked GPS/QZSS L1C/A, L2C
GLONASS L1OF, L2OF
BeiDou B1I, B2I
Galileo E1-B/C, E5b
SBAS L1C/A
- Number of channels 184
- Update rates 20 Hz GPS / 5 Hz GNSS
- IMU 9DOF