



REACH RS2

Multi-band RTK GNSS receiver with centimeter precision

For surveying, mapping and navigation.

Comes with a mobile app.



Reach RS2 survey kit

Two Reach RS2 receivers for surveying in RTK and PPK modes

Two full packages, each includes:

- Reach RS2 unit
- Carry case with a strap
- Radio antenna
- USB-C cable

Reach RS2 specifications

MECHANICAL

Dimensions	126x126x142 mm
Weight	950 g
Temperature	-20...+65 °C
Ingress protection	IP67 water- and dustproof

GNSS

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

CONNECTIVITY

UHF 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		802.11 b/g/n
Bluetooth		4.0/2.1 EDR
Ports		RS-232, USB-C

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-C 5 V 2 A

DATA

Position output	NMEA, LLH/XYZ
Corrections	NTRIP, VRS, RTCM3
Data logging	RINEX at update rate up to 20 Hz
Internal storage	16 GB

POSITIONING

Precision	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
IMU		9DOF

Key features

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 60km in RTK, and 100 km in PPK mode.

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. Reach RS2 can charge from a USB wall charger or a power bank over USB-C.

PPP support

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

Engineered to be tough

Reach RS2 is designed to work even in the most challenging environments.

-20°C...+65°C

Tested in conditions that simulate coldest winters and hottest summers.

IP67

RS2 is waterproof up to 1m depth. Connectors are safely protected from water and dust with silicone plugs.

Polycarbonate body

Rugged 5/8" mount

Covered with elastomer



SIM

RS-232

5/8" mount

USB-C

LoRa radio

Surveying with ReachView

Intuitive software for data collection is available for Android and iOS. With ReachView, you can collect and stakeout points and control your Reach RS2 unit. Set up a base station, log RINEX data, configure NMEA output—everything in one app.

Point collection

Create projects and save points with custom name and description. Set rules for data quality. Data collection is fast and intuitive, because ReachView is designed to feel like most popular map apps.

Export

DXF, CSV, GeoJSON, ESRI Shapefile

Stakeout

ReachView guides you like a navigator. On 50 cm distance from a point app's interface turns into bullseye view. Move the receiver to align bubbles on the screen, and when it turns green—you are on the point.

Import

CSV, DXF, GeoJSON

Logging

Record raw data, position and base correction logs. 16 GB of internal storage, 160 days of logging at 1 Hz.

Log formats

RINEX2.X, RINEX3.X

Base and rover for RTK and PPK

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.

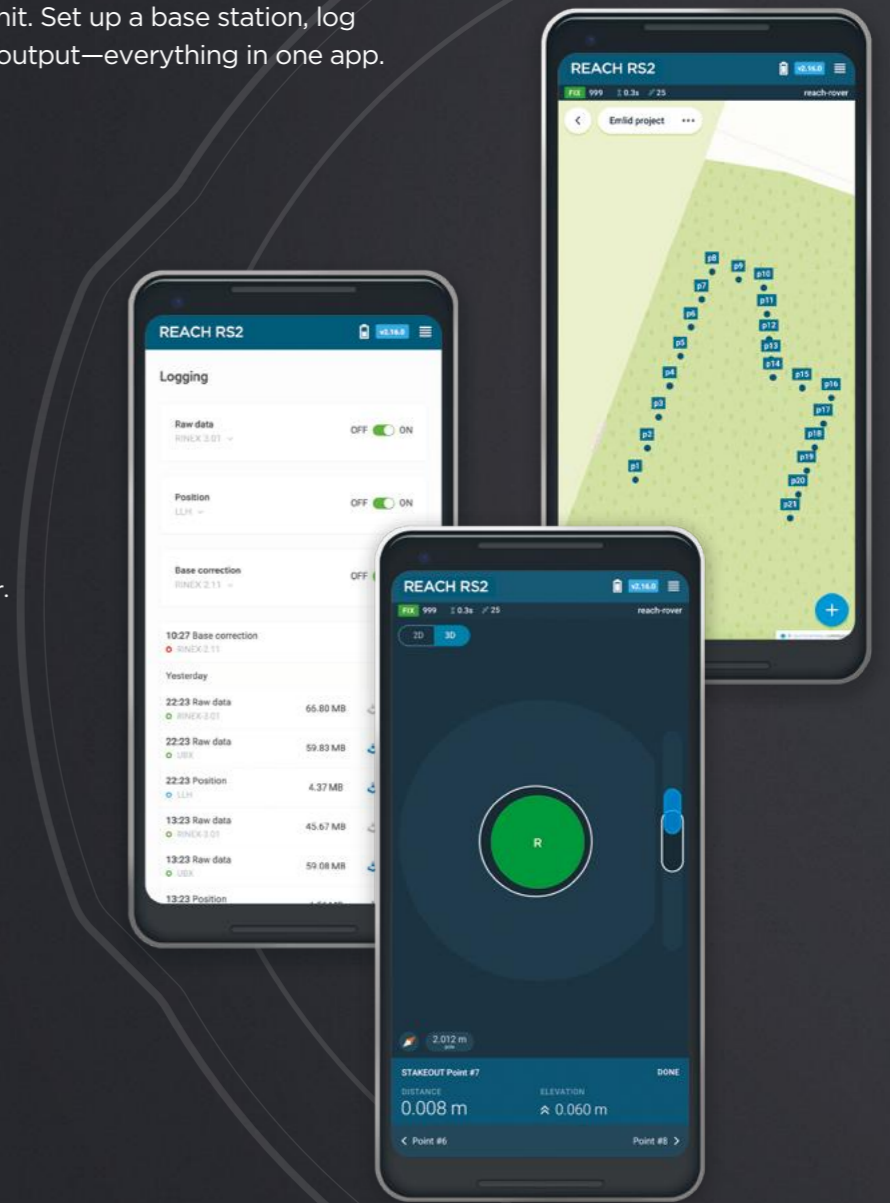
Solution formats:

NMEA, ERB, plain text.

Base station mode

Use 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. RS2 works with any amount of rovers and is compatible with Reach RS+ and M+.

Compatible with any receiver that supports RTCM3 and NTRIP. External radios are supported over RS-232.





For survey and navigation with centimeter accuracy

Reach RS+ can deliver centimeter-accurate coordinates over multiple wireless or wired channels making it a universal tool for all kinds of precision-demanding applications.

Base station

Use Reach RS+ to set up your own base station. Stream corrections over the network via NTRIP/TCP or LoRa radio. Record base logs for post-processing.

Correction format: RTCM3.
Log format: RINEX.

Point collection

With Reach RS+ you can create survey projects to manage data collection. When working in the field each point is assigned a custom name and offset. Results can be downloaded from the project list.

Exporting formats: CSV, DXF, GeoJSON and ESRI Shapefile

Point stakeout

Point Stakeout feature available in the app allows you to import a list of points of interest. Follow the app's guidance to reach the exact spot.

Importing formats: DXF, GeoJSON and ESRI Shapefile.

Machinery guidance

Reach RS+ is able to provide precise coordinates over Bluetooth/Wi-Fi to your tablet with a lightbar navigation app. RS232 interface allows to connect Reach RS+ directly to an autosteer system.

Solution formats: NMEA, ERB, plain text.
Compatible apps: MachineryGuide, AgriBus-Navi, Efarmer.

ReachView app

Sleek and intuitive software that turns any smartphone into an advanced field controller for Reach RS+.



Helps with setup

Easily configure correction input, solution output, update rate and satellite systems in use. Manage Wi-Fi and Bluetooth connections.



Status monitoring

ReachView shows current satellite signal strength, constellation visibility forecast, your location on a map and much more.



Surveying tools

Built-in tools for data collection. Record geolocations with specified accuracy. Import and export in industry standard formats.



Log management

Logs are automatically recorded in internal memory. View a list of the logs and download them using the ReachView app.

What's inside

Multi-system support

GPS, GLONASS, BeiDou, Galileo, QZSS, SBAS

Dual-feed antenna

With tight phase center variation

Long range radio

LoRa 868/915 MHz for reliable connection on distances up to 8 km

30 hours battery

LiFePO4 battery, USB charging, external 5-40V input

8 GB of storage

Built-in memory for logs

Field-ready

Rugged casing

Tough polycarbonate shell is specially crafted to protect Reach RS+ from falling and everyday wear.

IP67 certified

Sealed enclosure makes Reach RS+ water- and dustproof allowing it to work in any weather.

-20...+65°C

Industrial grade components ensure smooth operation no matter what the season is.

ReachView is available on:



Ihr Emlid-Partner mit Erfahrung im Bereich GIS, mobiles GIS und Vermessung
TOPO graphics GmbH <http://www.topographics.de>