

REACH RS2+

Datasheet



Key features

- Tracks GPS/QZSS L1C/A, L2C; GLONASS L1OF, L2OF; BeiDou B1I, B2I; Galileo E1-B/C, E5b
- Fast RTK convergence
- Multi-feed antenna with multipath rejection
- 868/915 MHz LoRa modem for up to 8 km connectivity
- Global LTE modem
- 22 hours on 1 charge
- NTRIP and VRS support, works with RTCM3
- Logs RINEX at update rate up to 10 Hz
- 16 GB of internal storage
- IP67, water and dustproof

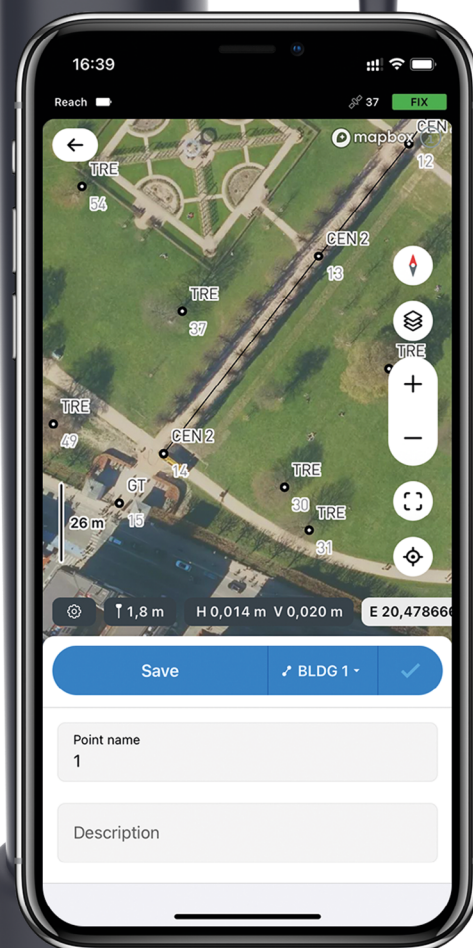
REACH RS3

Datasheet



Key features

- High precision IMU
 - RTK + 2 mm + 0.3 mm/°
 - Immune to magnetic disturbances
- Dual-band radio
 - 868/915 MHz LoRa to receive and transmit corrections
 - 450 MHz UHF to receive corrections
- Tracks GPS/QZSS, GLONASS L1, L2; BeiDou B1, B2; Galileo E1, E5
- Global LTE modem
- NTRIP and RTCM3 to send and receive corrections
- 18 hrs with tilt compensation
- Li-Ion battery, USB Type-C charging
- Comes with the Emlid Flow app



REACH RS3

Technical specifications

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	
Tilt compensation	RTK + 2 mm + 0.3 mm/°	
Signals	GPS/QZSS L1C/A, L2C, GLONASS L1OF, L2OF, BeiDou B1I, B2I, Galileo E1-B/C, E5b	
Number of channels	184	
Update rate	Up to 10 Hz	
IMU	6DOF	

CONNECTIVITY

LoRa radio	Transmit and receive	
	Frequency range	868/915 MHz
	Power	0.1 W
UHF radio	Distance	Up to 8 km
	Receive-only	
	Frequency range	410–470 MHz
LTE modem	Protocol	TRIMTALK 450S*
	Modulation type	GMSK
	Regions	Global
Wi-Fi	Bands	FDD-LTE: 1, 2, 3, 4, 5, 7, 8, 12, 13, 18, 19, 20, 26, 28, 66 TD-LTE: 38, 40, 41 UMTS (WCDMA/FDD): 1, 3, 2, 4, 5, 6, 8, 19 Quad-band, 850/1900, 900/1800 MHz
	SIM card	Nano-SIM
	802.11b/g/n	
Bluetooth	4.0/2.1 EDR	
Ports	RS-232, USB Type-C	
Protocols	Corrections	NTRIP, RTCM3
	Position output	NMEA, LLH/XYZ
Data logging	RINEX, NMEA, LLH/XYZ, UBX	
Internal storage	16 GB	

*TRIMTALK is a trademark of Trimble Inc.

MECHANICAL

Dimensions	126 x 126 x 142 mm
Weight	950 g
Operating temperatures	-20 to +65 °C
Ingress protection	IP67

ELECTRICAL

Autonomy	18 hrs as an RTK rover with tilt compensation, 22 hrs of logging
Battery	Li-Ion 5200mAh, 7.2V, 37.44Wh
Charging	USB Type-C 5V, 3A



EMLID SOFTWARE AND SERVICES



Emlid Studio

Easy-to-use free software to simplify your post-processing workflow.



Emlid Flow

Mobile app for land surveyors. Available for iOS and Android.



Emlid NTRIP Caster

Stream corrections to your RTK GNSS receivers over the internet.

YOUR LOCAL DEALER

Contact details:

REACH RS2+

Technical specifications

POSITIONING

Precision	Static	H: 4 mm+0.5 ppm V: 8mm+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	
Signal tracked	GPS/QZSS L1C/A, L2C, GLONASS L1OF, L2OF, BeiDou B1I, B2I, Galileo E1-B/C, E5b	
Number of channels	184	
Update rates	Up to 10 Hz	
IMU	9DOF	

CONNECTIVITY

UHF LoRa radio	Frequency range	868/915 MHz
	Power	0.1 W
	Distance	Up to 8 km
LTE modem	Regions	Global
	Bands	FDD-LTE: 1, 2, 3, 4, 5, 7, 8, 12, 13, 18, 19, 20, 26, 28, 66 TD-LTE: 38, 40, 41 UMTS (WCDMA/FDD): 1, 3, 2, 4, 5, 6, 8, 19 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 Type-C	
Data Protocols	Corrections	NTRIP, RTCM3
	Position output	NMEA, LLH/XYZ
Data logging	RINEX at update rate up to 10 Hz	
Internal storage	16 GB	

MECHANICAL

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

ELECTRICAL

Autonomy	16 hrs as LTE RTK rover,
Battery	LiFePO4 6400 mAh, 6.4 V
External power input	6–40 V
Charging	USB-C 5 V 2 A

COMMUNICATIONS AND DATA STORAGE

- 9PIN port: RS-232, PPS, Event
- USB OTG
- Internal LTE modem:
 - LoRa technology
 - Reliable link on up to 8 km baseline
 - Transmit power up to 100 mW
 - Configurable 862–1020 MHz carrier
- Internal LTE modem
 - Global
 - Quad-band, 850/1900, 900/1800 MHz
- Built-in short-range Wi-Fi 802.11 b/g/n, WEP, WPA, WPA2 encryption
- Built-in short-range Bluetooth 4.0/2.1 EDR
- Data storage 16 GB internal memory
- Raw logs in RINEX, UBX
- External Radio Modem connectivity over RS-232/USB OTG
- RTCM 3.x input and output over Wi-Fi, Bluetooth, LoRa, USB, RS-232, NTRIP
- NMEA 0183, ERB output over Wi-Fi, Bluetooth, USB, RS-232
- ReachView 3 app for iOS and Android for configuration and surveying



YOUR LOCAL DEALER

