

EMLID

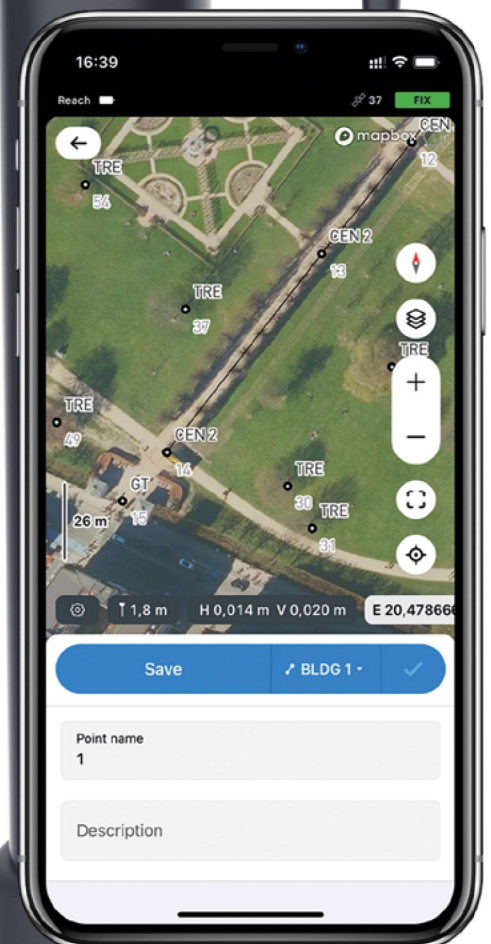
REACH RS3

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 10Hz
IMU		6DOF

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 5200 mAh, 7.2 V, 37.44 Wh
Charging	USB Type-C 5 V, 3 A

CONNECTIVITY

LoRa radio		Transmit and receive
	Frequency range	868/915 MHz
	Power	0.1 W
	Distance	Up to 8 km
UHF radio		Receive-only*
	Frequency range	410–470 MHz
	Protocol	TRIMTALK 450S**
	Modulation type	GMSK
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		802.11b/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

*Requires a 410-470 MHz antenna, sold separately
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