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 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

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