

EMLID



REACH RS+

Datasheet

Key features

- High performance dual-feed antenna with large ground plane
- Cross-platform ReachView app for configuration and surveying
- 868/915 MHz LoRa for up to 8 km connectivity
- Broad connectivity: Wi-Fi, Bluetooth, RS-232, USB
- Logs RINEX at update rate up to 14 Hz
- IP67
- 30 hours on 1 charge
- FCC and CE certified

REACH RS +

Technical specifications

72 channel. Signals tracked	GPS/QZSS: L1C/A, GPS/QZSS: L1C/AGLONASS: L10F, Galileo: E1, BeiDou (COMPASS): B1, SBAS
Positioning Rates	1 Hz, 2 Hz, 5 Hz, 10 Hz, and 14 Hz (GPS only)

POSITIONING PERFORMANCE

Static GNSS surveying

Single Baseline <30 km	
Horizontal	5 mm + 1 ppm RMS
Vertical	10 mm + 2 ppm RMS

Real Time Kinematic surveying

Single Baseline <10 km	
Horizontal	7 mm + 1 ppm RMS
Vertical	14 mm + 2 ppm RMS
RTK TFF	1 to 2 minutes

Post Processed Kinematic surveying

Single Baseline <10 km	
Horizontal	7 mm + 1 ppm RMS
Vertical	14 mm + 2 ppm RMS

Specified in open sky view, optimal conditions and when following standard survey practices. Precision depends on satellite geometry, obstruction, EMI and multipath.

HARDWARE

Physical

Dimensions (LxWxH)	145 mm x 145 mm x 85 mm
Weight	0.69 kg (1.52 lbs) with internal battery

Environmental

Operating t.	-20° C to +65° C (-4° F to +149° F)
Storage t.	-40° C to +75° C (-40° F to +167° F)
Humidity	100%, condensing
Ingress Protection	IP67 dustproof, protected from temporary immersion to depth of 1 m (3.28 ft)

Electrical

Charging	Micro-USB
External power input	rugged connector, 6-40 V
Battery	LiFePO4 3.2V, 30.72 Wh
Operating time on internal battery	30 hours

COMMUNICATIONS AND DATA STORAGE

- 9PIN port – RS-232, PPS, Event
- USB OTG
- Internal Radio Modem:
 - LoRa technology
 - Reliable link on up to 19 km baseline
 - Transmit power up to 100 mW
 - Configurable 863-928 MHz carrier
- 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 8 GB internal memory
- Raw logs in RINEX, UBX
- External Radio Modem connectivity over RS-232/USB OTG
- External Cellular Modem connectivity over USB OTG
- RTCM 2.x, RTCM 3.x input over Wi-Fi, Bluetooth, LoRa, USB, RS-232, NTRIP, external cellular modem. VRS (RTN) supported
- RTCM 3.x output over Wi-Fi, Bluetooth, LoRa, USB, RS-232, NTRIP, external cellular modem
- NMEA-0183, ERB output over Wi-Fi, Bluetooth, LoRa, USB, RS-232, external cellular modem

CERTIFICATIONS

1999/5/EC R&TTE, 2014/35/EU LVD
and 2014/30/EU EMC



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