

eMLID



REACH M+

RTK GNSS module for precise navigation and UAV mapping

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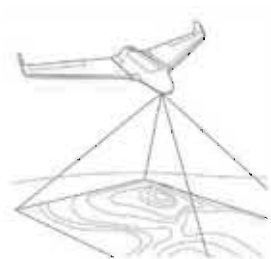
PPK system for UAV mapping. Centimeter accuracy without GCP

Reach M+ logs precise tracks and the exact moment when each photo is taken. This allows to create precise 3D models without complicated ground control preparations drastically simplifying the mapping process.

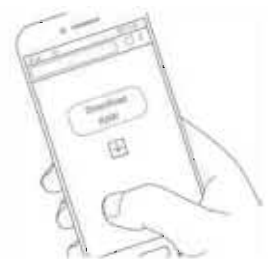
How does it work?



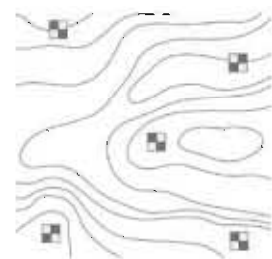
Reach M+ connects to the camera hot shoe port which is synced to the shutter.



Sub-microsecond accurate photo time marks are stored in a raw data RINEX log during the flight.



Download the RINEX logs from your airborne Reach module and a base station after the flight.



Use the free RTKLIB software to process RINEX files and get a list of precise photo coordinates.

Reach is used in drones of:



RTK positioning for navigation

When provided with corrections from the base station Reach M+ calculates coordinates with centimeter accuracy in real-time and streams them in industry standard format to your drone or any other device.

Correction input

RTCM2
RTCM3

Position output

NMEA0183
Plain text (XYZ, LLH)
ER3

Interfaces

Wi-Fi (802.11a/b/g/n)
Bluetooth (4.0/2.1 EDR)
USB, UART, Event



Mapping kit

Everything required to make your mapping system centimeter accurate

Includes:

Rover unit – Reach M+ with external antenna

Base unit – Rugged and battery-powered Reach RS +

Reach M+ specifications

MECHANICAL

Size:	56.4 x 45.3 x 14.6mm
Weight:	20 g
Operating temperature:	-20...+65 °C

GNSS

Signals:	GPS/QZSS L1, GLONASS G1, BeiDou B1, Galileo E1, SBAS
Update rate:	14 Hz GPS / 5 Hz GNSS
Tracking channels:	72
IMU:	9DOF

CONNECTIVITY

Interfaces:	USB, UART, Event
Wireless:	Wi-Fi (802.11a/b/g/n), Bluetooth (4.0/2.1 EDR)

ELECTRICAL

Input voltage on USB and DF13 connectors:	4.75–5.5 V
Antenna DC bias:	3.3 V
Average current consumption at 5 V:	200 mA

DATA

Solution input:	ERB, plain text, NMEA (RMC, GGA, GSA, GSV)
Correction input:	RTCM2, RTCM3
Internal storage:	8 GB
Logs:	RINEX2.X, RINEX3.X

POSITIONING

Static:	H: 5 mm + 1 ppm, V: 10 mm + 2 ppm
Kinematic:	H: 7 mm + 1 ppm, V: 14 mm + 2 ppm

For more information visit our website emlid.com