FORA GNSS
ADVANTAGES OF A LEADER

e-survey

eDMR1

INTEGRATED GNSS MONITORING RECEIVER



Independently designed and developed by eSurvey GNSS, the eSurvey eDMR1 features high stability, high reliability, and simple operation. It solves the problems of high cost and high deployment consumption of traditional GNSS monitoring equipment. It can be applied to monitoring the displacement and deformation of geological disasters and reservoir dams, etc., and provide all-weather high-quality monitoring results.

The eDMR1 can collect data by simultaneously connecting to multiple sensors, like rainfall sensor, water level sensor, seepage, seepage pressure sensor, camera, etc., and transmit all collected data. It owns strong edge computing capability and supports local front-end static solutions. Benefiting from the built-in warning model based on multi-parameter calculation and analysis, it can realize front-end multi-parameter intelligent calculation, analysis, and warning forecast in situations, like extreme weather, no public network, etc.



High Static Accuracy

Horizontal accuracy can be up to ±2.5 mm+0.5 ppm and vertical accuracy can be up to ±5 mm+0.5 ppm.

Multiple Communication Mode

It supports 4G, LoRa, Wi-Fi, RS485 and RJ45.

High Reliability

Protection level is IP68. Built-in large-capacity lithium battery which can support 25 hours continuous working in case of abnormal power outage.

Impressive Memory Storage

It owns internal 32GB on-board memory, which can store data more than 2 years. And its memory can be expanded to 512GB with an external memory card.

Independent Front-end Solution

With the built-in embedded solution engine, the eDMR1 can complete the dynamic and static solution. The solution results can directly access to the RTU/monitoring platform.

External Sensors

It supports monitoring sensors with RS485 modbus protocol to provide power and network for sensors. Support RTK function triggering through integrated MEMS.

Product Specification



eDMR1

INTEGRATED GNSS MONITORING RECEIVER

GNSS	
Satellites tracking	■ GPS: L1C/A,L2P,L5 ■ BDS: B1I,B2I,B3I,B1C,B2a ■ GLONASS: G1, G2 ■ Galileo: E1, E5a, E5b ■ QZSS: L1,L2,L5
Channels	1408
Static	■ H: ± (2.5 mm + 0.5 ppm) RMS ■ V: ± (5 mm + 0.5 ppm) RMS
RTK	■ H: ± (8 mm + 1 ppm) RMS ■ V: ± (15 mm + 1 ppm) RMS
Correction data	RTCM3.2
Update rate	20 Hz
Antenna	■ Integrated design ■ Built-in antenna with choke

System Configuration	
Operating system	Linux
CPU	1Ghz high performance processor
Memory	■ Built-in 32GB on-board storage ■ Expandable 512GB memory card

Communication	
Wireless communication	4G, Wi-Fi, Bluetooth, LoRa
Wired communication	RS485, RJ45
Remote control	Remote configuration, diagnosis and positioning tracking
2-pin	Charge and connect to external power
7-pin	Connect to sensors by RS485
SIM card slot	Nano SIM card

Electrical Performance	
Battery	Built-in 10200 mAh lithium battery for continuous work for more than 25 hours
Power Supply	9 ~ 15 V Rated input: 12 VDC, 2 A

Solution	
Mode	■ Local front-end solution ■ Server background solution ■ RTK real-time solution
Times	Support conventional and encrypted monitoring

Physical	
Protection level	IP68
Dimension	Φ222*186.5mm
Weight	2.35kg
Indicators	Power, Satellite, 4G, WiFi
Operating temperature	-30°C ~ +70°C
Storage temperature	-40°C ~ +85°C
Humidity	99% non-condensing
Material	Magnesium-aluminum alloy

Others	
External sensors	Support monitoring sensors with RS485 modbus protocol to provide power and network for sensors.
Mounting	Standard inch 5/8 connection nut installation
MEMS	Integrated MEMS acceleration sensor
Size	Φ222*186.5mm