

Datasheet MultiSonde System



- Multiple simultaneous soundings
- Standardised 19" rack design
- System redundancy as out-of-the-box feature
- IP network communication
- Mobile variant available
- Fully scalable and modular
- Compatible with all GRAW radiosondes
- Dual IF Software Defined Radio Receiver
- Integrated GNSS module
- Antenna diversity



GRAW MultiSonde System

GRAW MultiSonde System

Modular design – the MultiSonde System is a customisable rack-based upper air sounding system. Our new 19" GS-I is purpose-designed for this system using the proven sounding technology from our well-established GS-E. This allows for maximum reliability when performing multiple soundings simultaneously. The new MultiSonde system is compatible with all GRAW radiosondes and pilotsondes.

Scalable, high-performance infrastructure – multiple MultiSonde Systems can be connected to multiple workstations by a standard IP network. This way we achieve maximum reliability and can scale the systems exactly to our customers' needs without compromising functionality in any way.

Flexible deployment – the MultiSonde Mobile version is protected by a durable polymer housing with splash and dust protection during transport. The Mobile version has the same functionality and features as its Desktop counterpart.

GS-I

Autonomous core component – our GS-I combines an SDR radio receiver with an embedded computer into an independent processing and communication device. Each receiver can switch between two antennas based on the current signal strength.

GRAWMET X

Concurrent and concise visualisation – several radiosondes can be monitored by any number of sounding workstations via GRAWMET X. The 1 Hz data transmission allows for fast and near real-time monitoring and analysis. As with our established GRAWMET, the visualisation offers a rapid overview of current events, measurement data, receiver information, the status of weather messages and the quality of the data reception.

Technical Data

Operational capabilities / Scope of application

General	
Operating system	Windows® 10 professional or newer for sounding workstation
Service availability	> 99%
Receiving range	> 250 km, no altitude restrictions
Software	GRAWMET X
Frequency range	400 – 406 MHz
Tuning steps	20 kHz
Sampling rate	1 Hz
Status information	frequency, signal strength, GNSS status
Meteorological data	raw data (PTU, Wind)

Redundancy	
Mains	independent A/B power path, each path powers half of the receivers
Network	fully redundant
Telemetry	two separate antenna inputs

Interfaces / Connections

Radio interfaces	
Antenna Input:	N-Type for telemetry (2x) TNC-Type for station GNSS each with 12 V (DC) / 200mA amplifier power supply
Antenna Thru:	N-Type for telemetry (2x) TNC-Type for station GNSS
GNSS repeater	SMA output

Data transmission to network	
Network connection	etherCON CAT.6a (compatible with RJ45)
Supported standards	10/100/1000BASE-T
Workstation connections	up to 16 concurrent connections to each receiver

Site and installation conditions

Standard configuration	Desktop	Mobile	Installation
Concurrent soundings	4		8
Mains	PowerCon True1 TOP Inlet/Outlet combination, lockable and fused		
Mains power supply	110 V (AC) to 240 V (AC), 50 – 60 Hz		
Power consumption	< 100 Watt		< 200 Watt
Product dimensions	520 mm x 420 mm x 650 mm	719 mm x 566 mm x 978 mm	800 mm x 800 mm x 1200 mm
Weight	44 kg	64 kg	190 kg

Environmental properties	Desktop	Mobile	Installation
Operating conditions	0 – 40 °C, < 90 %RH non-condensing		
Storage conditions	-10 – 60 °C, < 90 %RH non-condensing		
Cooling system	integrated cooling fan		
Degree of protection	IP20	IP44 (during transport)	IP20



4-channel desktop



4-channel mobile



8-channel installation