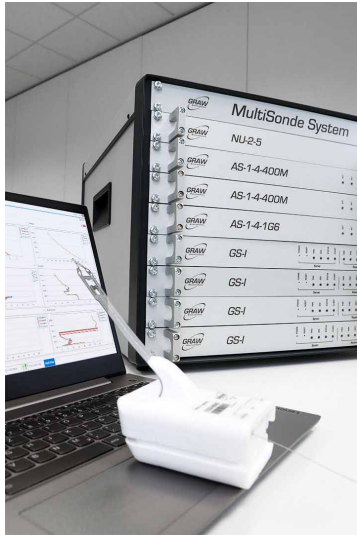


multiSonde system

Modular groundstation system in 19" rack with several GS-I sounding systems



Main benefits

- Simultaneous data reception from multiple radiosondes
- Scalability due to modular system architecture
- Redundant ethernet connections for high-reliability network integration
- Sounding data can be processed on multiple independent workstations
- Proven receiver technology with integrated embedded data pre-processor

Key specifications

Measurements	Temperature, humidity, wind, altitude and pressure (derived from GNSS)
Windfinding Technology	Multi-GNSS (L1; GPS, GLONASS and Beidou)
Transmitter	Synthesized 100 mW between 400,15-406 MHz, ETSI EN 302 054 compliant
Groundcheck	Cable dongle (optional wireless groundcheck interface) and connected grawMet software

Product description

The multiSonde racks are designed for users that require the ability to simultaneously receive data from multiple radiosondes in mission-critical environments. Standard configurations are 4 or 8 sounding channels as mobile or desktop installations and the system can be adapted for 2-16 sounding channels.

The multiSonde racks can be installed an unlimited distance away from launch site and sounding workstation. Sounding data is sent to one or multiple independent sounding workstations, allowing for redundancy and user specific data processing, as well as integrating raw data streams with the users own real-time processing systems

Features

Innovative system design

The radiosonde data is simultaneously transmitted to one or more independent sounding workstations in the network. This provides new levels of flexibility. Multiple sounding workstations with different applications can coexist and accommodate various and demanding user requirements. Radiosondes can be initialised beforehand via a dedicated workstation and their data can be processed independently by any sounding workstation within the network.

Customisation is key

The pre-configured variants include a 4-channel mobile installation, a 4-channel desktop installation as well as an 8-channel desktop installation. Multiple systems can work together to allow flexibility in supporting different applications or can be dispersed to different locations to further increase redundancy. All systems utilise redundant sounding systems, network and power connections, therefore the entire system is designed so that there is no single point of failure. This allows soundings to continue even in the event of unexpected outages. Customer specific setups can be scaled from 2-16+ simultaneous sounding channels to meet institutional requirements.

Reliability is core value

With its integrated industrial embedded PC and redundant network connections, the multiSonde system is designed for maximum reliability. Therefore, it can seamlessly be integrated into existing A/B networks with little effort. This also includes support for hot/hot or hot/cold fallback options for connected sounding workstations, as any sounding workstation can be used during any phase of the sounding.

One dedicated software for multiple soundings

Sounding workstations are equipped with graw-Met X, a dedicated solution for easy management of multiple simultaneous soundings. The workstation can receive the data from multiple sounding systems simultaneously. The tabs for each radiosonde can display graphical and tabular views and generate all reports that are available in grawMet X for each sonde. Multiple ascents can even be displayed side-by-side or on separate screens. Favourite feature allows easy access to frequently used views with just one click. A special multi-start panel summarises data from multiple radiosondes and provides a concise overview of all ascents.

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 paths, 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
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, 10 – 90 %RH non-condensing		
Storage conditions	-10 – 60 °C, 5 – 95 %RH non-condensing		
Cooling system	integrated cooling fan		
Degree of protection	IP20	IP44 (during transport)	IP20

Impressum/Disclaimer

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