GM2.6 -D1013 CERTIMUS, A SEISMIC STATION OPTIMIZED FOR RAPID DEPLOYMENT IN RUGGED TERRAIN M. Balon¹, P. Hill¹, S. Mohr¹ and N. Watkiss¹ Guralp Systems Limited, Reading, UK. www.guralp.com

1. INTRODUCTION

Operators of broadband seismic stations in hostile locations, are restricted in experiment design and deployment time-frames by the significant constraints of seismic instrumentation such as: strict requirements on tilt tolerance and associated performance compromises; fixed frequency responses; unfriendly interfaces; slow data downloads and; power-hungry systems.

The new, compact Certimus - offers the same level of performance as traditional force-balance broadband seismometers - but with advanced features that make it ideally suited to rapid deployments in the field, where environmental factors present real challenges to the operators.

2. KEY FEATURES

With a +/-90 degrees tilt tolerance and adjustable long period corner, Certimus is the ideal instrument for difficult to access locations. Installation integrity can be checked easily before leaving the site; Stateof-Health and live waveforms can be viewed either via Bluetooth, LCD screen or Web Interface.

Certimus is a low power seismic station with an Ultra-Low Power mode (<300mW) for power-constrained, stand-alone installations.

This reduces the cost and logistical weight of additional equipment such as solar panels or batteries.

- > Easy network and system configuration via the Certimus webpage
- > Use of environmental sensors for station SoH and 3D positioning
- > Internally held calibration values and response parameters
- > Easy array management for EEW and large-n studies
- Files are recorded in industry standard miniSEED format for simple and universal data download and management

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Certimus offers the broadband seismometer and can be deployed in

The 1s and 10s modes adaptability to quick deployments thanks to a shorter settling time.

4. PORTABILITY GÜVÜ MOBILE APP

Connects to the Certimus via Bluetooth to give the user a quick overview of the station's SoH and a live stream of the 3 seismic channels. The user can also have access to these features and to the network configuration menu using the optional touchscreen LCD.

SURFACE STORAGE MODULE

Data can be quickly retrieved from the Surface Storage Module where an SD card is mounted, without the need to disturb the installation.

PORTABLE POWER MODULE

This light compact rechargeable battery pack includes a charger controller which is suitable for direct connection with solar panels. It powers the Certimus for 6 weeks making it the perfect portable rapid response solution.

FIELD DEPLOYMENT BACK-PACK

The Certimus and it's accessories can be packed into a robust, lightweight case that can be carried to the most inaccessible areas. Quality seismic data is made available swiftly from anywhere, anytime.

By combining customer feedback with expertise in traditional force balance seismic sensors and the latest electronic, mechanical and communication technologies Güralp has developed Certimus. With its unique versatility - ultra low power and unprecedented tilt tolerance together with a great low-noise performance – Certimus answers the evergrowing need for robust, easy to deploy stations. From vault to volcano, it can be seamlessly implemented into any network and will be easily managed by operators, regardless of experience. Fieldwork, instrument pool management and station/network design will be greatly improved, all the while maintaining high data quality standards.











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Power Out

External Power Pack

Charge Input