

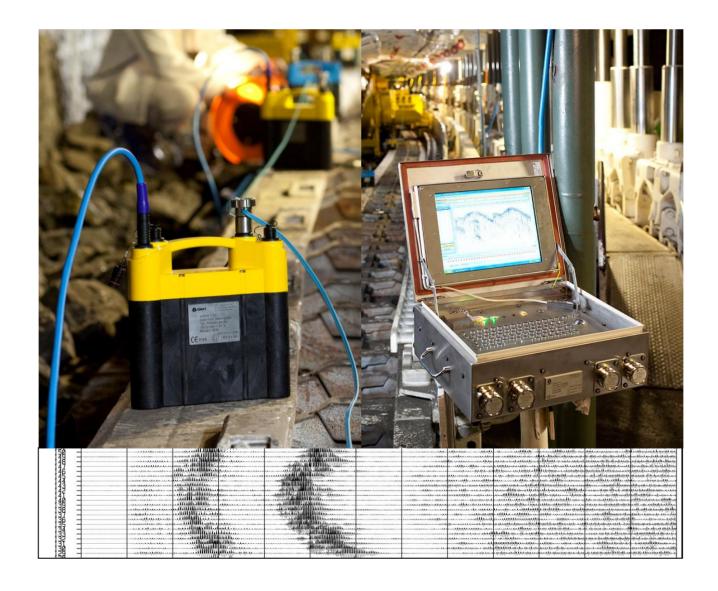
# **SUMMIT II Ex**

## The Intrinsically Safe Seismic System!

SUMMIT II Ex is the only intrinsically safe seismic exploration system worldwide. It is specialised for use in potentially explosive underground environments like for instance in coal mines. The system is based on the SUMMIT II Plus Technology and allows flexible layout configuration for any underground application like in-seam seismics, underground tomography and borehole applications.

# Specialised for Underground Seismic Exploration!

- Optimised for seismic surveys in mines through its ATEX certification
- Fast and Easy setup with unique snap-on technology
- Extremely robust but lightweight casing
- Supreme service via rapid reaction support hotline



#### **Technical Specifications** 1/48, 1/32, 1/16, 1/8, 1/4, 1/2, 1, Sample Interval 2, 4, 8 ms Record Length 0.5 K samples, ..., 120 K samples Preamp Gain 0 dB, 20 dB or 40 dB A/D Converter 24 bit delta sigma technology Maximum Input 2.0 Volt RMS Signal 5.6 Volt peak to peak Input Impedance 20 kOhm Instantaneous ≥ 120 dB @ 2 ms sampling Dynamic Range System Input Noise Less than 0.2 $\mu V$ RMS @ 2 ms Crosstalk Rejection ≥ 112 dB (between channels) **Total Harmonic** ≤ 0.0008 % Distortion Common Mode ≥ 100 dB Rejection Typical 1 % Gain Accuracy (between all channels) Time Accuracy Typical 5 ppm (between all channels) **Power Supply** Built-in accumulator **Dimensions** 26.5 x 23.5 x 7.6 cm Weight 2.7 kg

Analogue Anti-Alias Filter	7.2 kHz 6 dB/octave
Analogue Low-Cut Filter	1 Hz 6 dB/octave
Digital Anti-Alias Filter	0.8 x Nyquist
Rejection at Nyquist Frequencies	-120 dB
Pass Band Ripple	+/- 0.05 dB
Built-In Test Functions	-Sine wave - Pulse - Instrument noise - Geophone step - Sweep transfer - Auto correlation - Cross correlation
System Check	- Battery status - Equivalent input noise - Total harmonic distortion - Instantaneous dynamic range - Common mode rejection - Cross talk - Time accuracy
Geophone Check	<ul><li>Impedance</li><li>Damping</li><li>Natural frequency</li><li>Noise</li></ul>

Subject to technical changes

Environmental Specifications	
Operation Temperature	-20°C to + 70°C
Humidity Range	0 – 95 %
Case	Solid waterproof housing

### **Overall System Performance and Flexibility**

Typical Shot Cycling Time

- 10 seconds @ 1 ms sampling rate, 2 K trace length with 256 channels inclusive data storage

Mobile System Control

Via easy to handle portable ATEX certified computer

Power Supply

- Via internal accumulator

Connectors

- Geophone or string connector
- Snap-on connector for variable line position

Line Length

- Unlimited by using Repeater Units every 250 m Cross Lines
  - Realised by Repeater Units deploying as Cross or Distribution Units

**DMT GmbH & Co. KG** Exploration & Geosurvey

Am Technologiepark 1 45307 Essen, Germany

Phone +49 201 172-1970 Fax +49 201 172-1971 info.summit@dmt.de www.summit-system.de TÜV NORD GROUP