Product Specifications

TAS2 (Tunnel Alert System) Micro-seismic Analytical Monitor

Overview

The TAS2 (Tunnel Alert System) is the second generation of SureWave Technology's unique micro-seismic monitoring instrumentation. The TAS2 is specifically designed for the detection of all seismic activity associated with the creation of tunnels. The TAS2 will also detect seismic signals associated with the use of a tunnel including footsteps and the movement of material within the tunnel.

This is a wide area system capable of monitoring up to 0.5KM from a single system. In addition the proprietary IP can "see through" surrounding seismic activity often many times larger from that generated from the tunnel activity. The system is proven to depths of 300 Meters and surface distance of 500 Meters, in reality tunnels will be between 5 and 30 Meters deep – giving a surface detection distance of up to 500 Meters depending on activity.

All tunnel activity usually occurs over extended periods of time and will produce large numbers of individual seismic events. The system will calculate the mean position of these events giving the user an accurate location of the tunnel normally well within the tunnel's width to enable accurate drilling if required.

TAS2 will operate fully automatically in a remote location without user intervention once set up. Data can be remotely monitored via any IP or other wireless system. The remote location monitors the data using a standard web browser. Data is typically a site image which is updated by the system in near real time (10 seconds) showing all detected activity with an icon to identify the activity source.
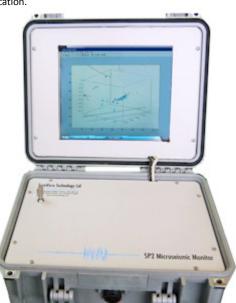
The system is supplied in the following configuration:

Tri-axial sensors positioned either as rapid deployment or permanent mounted to give accurate location.

Features

- Portable – for rapid deployment, or permanent installation
- Multi-channel seismic inputs (6, 9 or 12 channels)
- Unique proprietary intellectual property "Sees through background noise"
- Extreme dynamic range up to 130dB
- Stable embedded platform using Microsoft Windows™ operating system
- Built in 12 inch backlit TFT monitor with touch screen technology
- Powerful user interface software makes the TAS2 effortless to use
- Multiple sensor heads cover a wide area up to 1 KM
- Full remote monitoring via wired or Wi-Fi* network connection
- Tough and rugged design. IP67 (with lid closed)
- Designed and manufactured in the UK

Requires a USB Wi-Fi adaptor or Wi-Fi bridge when using on Wireless networks.

Available Models

TAS2/6	TAS base unit with 6 monitoring channels
TAS2/9	TAS base unit with 9 monitoring channels
TAS2/12	TAS base unit with 12 monitoring channels

Portable systems are supplied with intelligent charger battery pack and battery pack interconnecting cable.
Fixed systems will require a permanent power supply of 12V DC @ 2.5A and 24V DC @ 200mA.

Specifications (when used with TS1 family of sensors)

OS Platform	Microsoft™ Embedded Windows XP™
Display	12" diagonal, 16.8million colour TFT with touch screen
Power Ports	1x 12V charge input, 1x 24V battery pack input
Sensor Ports	Block A, Block B, Block C* and Block D*
External Ports	2x USB 1.1 and 1x CAT5e Ethernet
Dynamic Range	Up to 130dB
Power Supply	Internal 12V 7AH battery with 12V charging cable and external 24V battery pack with built in intelligent charger If powered externally 12V DC @ 2.5A and 24V DC @ 200mA
Dimensions	412 x 330 x 175mm
Weight	198Ibs (90 kg) Full system with three sensors, cables / reels, Battery pack and accessories.

Block C only available on the 9 and 12 channel version. Block D only available on the 12 channel version.

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