

EXPLOSCAN™

Hand-Held Explosives Trace and
Vapor Detector



EXPLOSCAN™ Stops Them First

EXPLOSCAN™ is a hand-held and ruggedized explosives and improvised materials detector capable of trace particle and vapor detection.

EXPLOSCAN™ provides security professionals with the latest detection capabilities uniquely developed to address global terrorism with specific operational requirements such as extreme temperatures, wind, rain, sand, drop and shock. These enhanced capabilities enable to address an expanded customer base to include airports, ports and border control, law enforcement and critical infrastructure – in other words, security personnel who require a robust, lightweight and a highly reliable system.

Feature Highlights

- HF-QCM nanotechnology sensors
- Hand-held (850 gr. with battery included)
- No radioactive source
- High-throughput sampling
- Fast warm-up time
- Self-calibration
- Fast decontamination
- Easy-to-operate
- Low cost-of-ownership

Market Applications

- Aviation Security
- Customs & Border Control
- Air Cargo Screening
- Sea Ports
- Rail & Mass Transit
- Police & Law Enforcement
- Critical Infrastructure
- Military & Defense
- Hotels & Shopping Malls

HF-QCM Nanotechnology Sensors

The patented High-Frequency Quartz Crystal Microbalance sensors detect and identify a wide range of substances with great accuracy and speed. The HF-QCM sensors are successfully integrated in the EXPLOSCAN™ with a unique design of a sensor matrix coated with selective polymers.

The detection and identification of target materials is based on the piezoelectric effect where changes in mass affect the resonating frequency of the HF-QCM sensors by the adsorption of foreign molecules on their selective coatings. The changes in frequency are accurately detected and measured.

Efficient Sample Collection

The EXPLOSCAN™ was designed with portability and flexibility in mind. It offers to analyse the sample in the point-of-screening in real-time; with a secure attachment to a breathable carry-on vest.

Trace Particles Sampling: Reusable sampling swabs are swiped across a surface and then inserted into the detector for analysis. Typical surfaces include baggage, cargo, vehicles, clothes, tickets, passports and ID cards.

Vapor Samples Collection: A battery operated Vapor Sampler draws vapors into a sampling swab, which is then inserted into the detector for analysis. Applications include car trunks, luggage, freight, containers and air cargo screening.

User-Friendly Interface

Sample analysis and results require minimal interpretation, so operators may concentrate on obtaining an efficient sample. The EXPLOSCAN™ onboard processor automatically handles all data logging, including time, date, and sample analysis for each alarm. A complete history of saved data and alarm files can be viewed, analyzed, downloaded and printed at any time.

Operational Advantages

- The HF-QCM sensors are green and safe; and do not contain any radioactive source
- HF-QCM enables enhanced explosives and improvised materials
- Expandable threat libraries are available to accommodate unique user requirements
- Self-calibration and automatic cleaning mechanism enables a short clear down time after an alarm
- Proven and reliable operation in dusty, humid, and high-traffic areas

Ease-of-Use

- Threat detection and substance identification
- Touch screen menus on a graphical user interface can be easy to learn and operate
- Software upgrades are easy to install
- Local language options available
- Three default user levels (Operator, Supervisor and Service Manager) for greater access control

Portable

- Lightweight (850 gr. with battery) and supplied with two batteries to enable ongoing security operations
- Breathable vest enables to secure the EXPLOSCAN™ and its accessories to the operator

Cost Effective

- Helps reduce capital investments by providing a single portable and reliable solution for explosives and IED detection
- Patented sampling swabs help to reduce consumables costs
- Automatic self-diagnostics software to reduce maintenance downtime



Sampling Electronic Items



Surface Swiping



Optional Vapor Sampler

Technical Specifications

Sensor Technologies	High-Frequency Quartz Crystal Microbalance Sensors (HF-QCM) No gas carrier. No radioactive source
Sample Collection	Trace Particles and Vapors
Trace Particles Sample Collection	Sample collection and surface swipe of trace particles with sampling swabs
Vapor Samples Collection	Vapor sample collection with a portable and battery operated vapor sampler; supplied with two types of Sampling Probes and a DC charger
Explosives Detected	Military and plastic explosives, including: TNT, C4, RDX, Semtex, PETN, Detasheet and others Improvised and homemade explosives, including: TATP, HMTD, Urea Nitrate, Ammonium Nitrate and others Propellants and Taggants, including: Black and Smokeless powder, EGDN and others Additional explosives upon expandable threat library
Sensitivity	Particle: low nanogram (ng) range Vapor: low parts per million (ppm) range
False Alarm	Less than 2%
Warm-Up Time	Less than 60 seconds
Analysis Time	Between 7 to 15 seconds
Alarm Type	Audio and visual, with substance identification
Display	3.5" Color TFT touchscreen LCD display
Multi-Language Support	English, French, Spanish, Italian, Portuguese, German, Polish, Russian, Chinese, Korean, Japanese, Arabic and others
Data Storage	Unlimited data logging, including time, date, sample analysis, and system status
Data Transfer	Micro USB Port, Optional Bluetooth and Wi-Fi
Battery	12V rechargeable Lithium-Ion battery with 6 hours of field operations
Weight	850 gr. Including battery
Dimensions	(L x W x H): 7.78" x 3.50" x 2.78" (19.75 x 8.89 x 7.05 cm)
Operating Temperature Range	14°F to 131°F (-10°C to + 55°C), less than 95% relative humidity, non-condensing
Hardened Specifications	Wind, rain, shock and 1 meter (3') drop resistance, ability to operate in wind conditions
Carrying Vest	Supplied with a black, breathable vest enabling the secure attachment of the detector to vest; and the carrying of the Vapor Sampler and associated sampling probes
Certification	CE Mark and EMC Certification ISO 9001:2015 Manufacturing Standards

ADVANCED SENSOR TECHNOLOGIES

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