

# DUOSCAN™

Desktop Explosives and  
Narcotics Trace and Vapor Detector



## DUOSCAN™ Stops Them First

DUOSCAN™ is a ruggedized explosives, improvised materials and narcotics detector capable of trace particle and vapor detection.

DUOSCAN™ provides security professionals with the latest dual-mode detection capabilities uniquely developed to address global terrorism and drug trafficking 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
- Lightweight (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 DUOSCAN™ 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 DUOSCAN™ 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 DUOSCAN™ 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.



Carry-on Items Sampling



Checked Baggage Sampling

## Operational Advantages

- The HF-QCM sensors are green and safe; and do not contain any radioactive source
- HF-QCM enables enhanced explosives, improvised materials, narcotics and contraband detection
- Switching between explosives to narcotics mode is immediate
- 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 can be easy to install
- Local language options available
- Three default user levels (Operator, Supervisor and Service Manager) for greater access control

## Cost Effective

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



Docking Station & Accessories

## Technical Specifications

<b>Sensor Technologies</b>	High-Frequency Quartz Crystal Microbalance Sensors (HF-QCM) No gas carrier. No radioactive source
<b>Sample Collection</b>	Trace Particles and Vapors
<b>Trace Particles Sample Collection</b>	Sample collection and surface swipe of trace particles with sampling swabs
<b>Vapor Samples Collection</b>	Vapor sample collection with a portable and battery operated vapor sampler; supplied with two types of Sampling Probes and a DC charger
<b>Operating Modes</b>	Explosives only, Narcotics only Simultaneous Explosives/Narcotics
<b>Explosives Detected</b>	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
<b>Narcotics Detected</b>	Heroin, Cocaine, Amphetamine, Methamphetamine, MDA, THC, LSD, Ecstasy Additional narcotics available upon expandable threat library
<b>Sensitivity</b>	Particle: low nanogram (ng) range Vapor: low parts per million (ppm) range
<b>False Alarm</b>	Less than 2%
<b>Warm-Up Time</b>	Less than 60 seconds
<b>Analysis Time</b>	Between 7 to 15 seconds
<b>Alarm Type</b>	Audio and visual, with substance identification
<b>Display</b>	3.5" Color TFT touchscreen LCD display
<b>Multi-Language Support</b>	English, French, Spanish, Italian, Portuguese, German, Polish, Russian, Chinese, Korean, Japanese, Arabic and others
<b>Data Storage</b>	Unlimited data logging, including time, date, sample analysis, and system status
<b>Data Transfer</b>	Micro USB Port, Optional Bluetooth and Wi-Fi
<b>Printer</b>	Optional evidence printout via remote printer
<b>Input Voltage</b>	96-265VAC, 50-60Hz with 110/220V DC charger
<b>Battery</b>	12V rechargeable Lithium-Ion battery with 6 hours of field operations
<b>UPS</b>	Optional UPS - Input 230V, 50Hz
<b>Weight</b>	850 gr. Including battery
<b>Dimensions</b>	(L x W x H): 7.78" x 3.50" x 2.78" (19.75 x 8.89 x 7.05 cm)
<b>Operating Temperature Range</b>	14°F to 131°F (-10°C to + 55°C), less than 95% relative humidity, non-condensing
<b>Hardened Specifications</b>	Wind, rain, shock and 1 meter (3') drop resistance, ability to operate in wind conditions
<b>Trolley</b>	Optional adjustable workstation with locking wheels
<b>Certification</b>	CE Mark and EMC Certification ISO 9001:2015 Manufacturing Standards

## ADVANCED SENSOR TECHNOLOGIES

### Corporate Headquarters

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