HEXWAVE™ By: Liberty Defense

Walkthrough Detection of Concealed Weapons and Threats

The HEXWAVE™ system processes people quickly and effectively, providing touchless screening at the checkpoint or perimeter for enhanced protection, a layered defense, and a better experience.

The HEXWAVE portal scans for all types of concealed threats on person – non-metallic as well as metallic threats like 3D printed guns and improvised explosives.
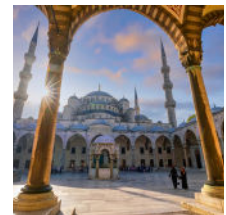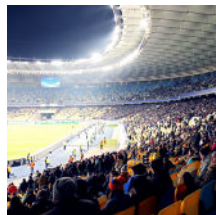
- **Touchless, seamless, high throughput** flow (700+ ppl/hr)
- **Metallic and non-metallic threats detected** including liquid, powder, and plastic explosives, 3D printed ghost guns, etc.
- **No required divestment** of benign items like cell phones, keys, wallets, jackets, steel toe boots, or other clothing
- **Real-time automatic** go/no-go decision for operator indicating type and location of threat
- Maintains **personal privacy** and no images are seen or stored
- **Portable, flexible, cost-effective** deployment. Can be used indoors/outdoors (covered), attended/unattended, inside/outside of the checkpoint
- **Millimeter wave** technology is proven safe and effective for people screening
- Video-rate **3D imaging powered by AI** delivers enhanced threat detection
- **Switchable AI algorithms** for operational flexibility and threat levels
- Software updates provide **future proofing** to incorporate emerging threats and new requirements
- **Integrates Smart IoT** functionality for connectivity to existing security systems (VMS, access control)

FRICTIONLESS PROTECTION

The HEXWAVE system provides a layered defense to ensure safe, touchless, advanced detection in many applications and venues types.

- Sports Venues
- Entertainment Venues
- Casinos
- Hotels
- Tourist Attractions
- Shopping Malls
- Office Buildings
- School Campuses
- Places of Worship
- Distribution Centers
- Government Buildings
- Air and Sea Ports

FEATURES and SPECIFICATIONS

Open Design
No overhead structure, no floor cabling between panels. Wireless setup configurable

Alarm Indicator
Threat indication at exit. Audible alarms optional

Depth Camera
Auto-triggered by person walking through (no operator intervention)

Pacing Indicators
Proceed/Wait indication at entrance

Barrier Integration
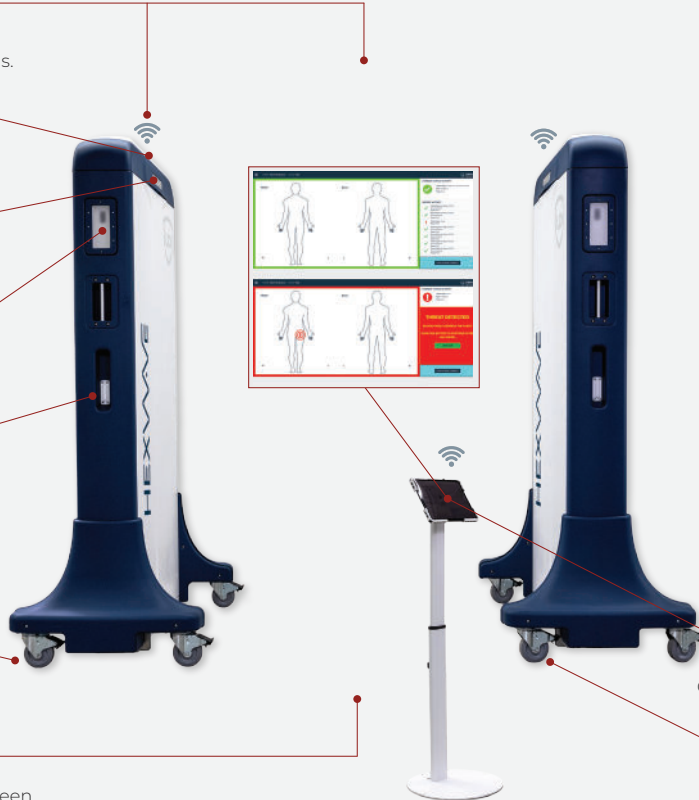Retractable barrier belt integration

Power
Power is required to each HEXWAVE device

Mobile
Wheels and handle holds allow for relocation. Wheels lockable

Walk-Thru Spacing
Easily adjust the distance between the devices, ADA wheelchair compliant

Enhanced Detection
Powered by 3D video rate imaging and AI deep learning to capture and process ~400,000 datapoints per image

Safe
Uses millimeter wave, low power radar and emits non-ionizing radiation, much less than cell phones and Wi-Fi

Connected
Smart IoT functionality for connectivity to existing security systems (VMS, access control)

Dashboard
Supports data analytics and reporting

Future Proof
Over the air AI algorithm updates for threat updates and software upgrades

Automatic Alerts
Gives operators a clear go/no-go decision, location of threat, and visible/audible alerts

Flexible
Portable/Fixed deployment, indoors and outdoors (under cover)

THREAT ALERTS
METALLIC and NON-METALLIC

IEDs
Plastic
Liquid
Powder explosives

RIFLES

SHOTGUNS

HANDGUNS
Full-size
Compact
Sub-compact
3D printed/ghost

KNIVES
Ceramic
Plastic
Metal

NO DIVESTING

PHYSICAL SPECIFICATIONS

Panel Height – 1.86 m (73.3")

Panel Width – .91 m (36")

Panel Depth – .23 m (9.1")

Base Width – 1.11 m (43.8")

Base Depth – .66 m (26.1")

Weight – each panel is 140 lbs (63kg)

Wheelbase locks for stability

Optimal panel placement – 1.5 m (72") apart

CONNECTIVITY

Ethernet (IEEE 802.3)

WIFI (IEEE 802.11 a/b/g/n/ac)

System supports open standards for cyber security

ENVIRONMENTAL DATA

Unaffected by proximity to EMI or metal

Power Supply:
100 to 264 VAC, 47 to 63 Hz, 2000 VA

Operating Temperature:
5°F to 95°F/ -15°C to 35°C

Storage Temperature:
-30°F to 150°F/ -34.4°C to 65.5°C

Relative Humidity:
5 to 95% (without condensation)

CERTIFICATION AND COMPLIANCE

Compliant with applicable FCC regulatory standards

Compliant with applicable industry standards*

Compliant with applicable electromagnetic Standards on Human Exposure and Pacemaker Safety*

Compliant with applicable International Standards for electrical safety and EMC*

* in progress