

QL-ScanShield

QUAKELOGIC

HANDHELD BACKSCATTER X-RAY IMAGING SYSTEM



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Handheld Backscatter X-Ray Imaging System



SEE THROUGH SURFACES, EXPOSE CONCEALED THREATS

The QL-ScanShield is a portable handheld backscatter X-ray imaging system engineered for rapid, non-destructive detection of concealed threats. Built for law enforcement, border security, customs, corrections, and critical-infrastructure teams, it delivers high-resolution real-time single-sided imaging without access to both sides of the target. A 140 kV generator, integrated Full HD touchscreen, wireless image transfer, and lightweight 3.9 kg body enable fast field deployment and reliable contraband detection.

- Single-sided backscatter imaging inspects vehicles, walls, and containers from one side, eliminating the need for rear detector placement and reducing setup time.
- Integrated 7-inch Full HD touchscreen with wireless transfer streams live images to tablets and phones, keeping operators mobile and situationally aware.
- Multiple radiation safety interlocks, dual-trigger activation, and low-dose design protect operators during repeated field inspections without compromising throughput.
- Hot-swappable dual-battery system delivers up to 6 hours of continuous operation, sustaining extended checkpoint and patrol deployments without downtime.

STANDARD FEATURES »

- 140 kV X-Ray Generator
- 7-inch Full HD Touchscreen
- Single-Sided Imaging
- Fast/Standard/Fine Modes
- Dual Laser Positioning
- Automatic Image Enhancement
- Wi-Fi Image Transfer
- Bluetooth Interface
- USB Communication
- Android Operating System
- 64 GB Internal Memory
- Automatic System Calibration
- Radiation Safety Interlock
- Dual-Trigger Activation
- Emission Warning Indicators
- Two Lithium-Ion Batteries
- Hot-Swappable Batteries
- Automatic Sleep Mode
- User Authentication
- Heavy-Duty Transport Case

Key Features

- 140 kV high-performance X-ray generator with adjustable output up to 8 W produces high-resolution backscatter images across dense and organic materials.
- Single-sided inspection captures concealed threats without rear detector positioning, enabling scans of walls, tires, and structural voids in confined spaces.
- Fast, Standard, and Fine scanning modes let operators trade speed for detail, optimizing each scan to the inspection task at hand.
- Integrated 7-inch Full HD 1080P color touchscreen provides on-device image review, playback, and measurement without external hardware in the field.
- Wi-Fi, Bluetooth, and USB interfaces stream real-time images to computers, tablets, and phones for remote review and rapid team coordination.
- Dual laser positioning system aligns each scan accurately, while automatic image optimization enhances contrast for faster, more confident threat interpretation.
- Integrated radiation safety interlocks, dual-trigger activation, and automatic emission shutdown keep operators protected during repeated low-dose field scanning.
- Android-based operating system with 64 GB internal memory stores more than 10,000 scan images with archive management, zoom, and export functions.
- Lightweight 3.9 kg ergonomic design with rechargeable lithium-ion batteries supports single-user handheld operation across long patrol and checkpoint shifts.

PRODUCT FEATURES

X-Ray Source

140 kV high-performance generator · Adjustable output up to 8 W · Low-dose radiation design

Imaging

High-resolution real-time backscatter · Single-sided inspection capability · Fast, Standard, Fine scan modes · Optional transmission imaging

Display & Interface

7-inch Full HD 1080P touchscreen · Android-based operating system · Multilingual graphical interface

Connectivity

Wi-Fi image transfer · Bluetooth communication · USB data communication

Image Processing

Automatic optimization and enhancement · Pseudo-color, inverse, window level · Zoom, measurement, playback, export

Data & Storage

64 GB internal memory minimum · More than 10,000 stored images · Archive management and export

Power

Rechargeable lithium-ion batteries · Two batteries supplied, hot-swappable · Up to 6 hours continuous operation

Safety

Radiation safety interlock system · Dual-trigger X-ray activation · Visual and audible emission warnings · Automatic emission shutdown

For more information about the features, specifications, and available configurations of the QL-ScanShield, please contact QuakeLogic.

MACHINE CONFIGURATION

COMPONENT	CONFIGURATION
X-Ray Generator	140 kV high-performance source
Output Power	Adjustable up to 8 W
Imaging Mode	Single-sided backscatter, real-time
Scan Modes	Fast, Standard, Fine
Display	7-inch Full HD 1080P color touchscreen
Operating System	Android-based
Connectivity	Wi-Fi, Bluetooth, USB
Internal Memory	64 GB minimum
Positioning	Dual laser alignment system
Power Source	Dual rechargeable lithium-ion, hot-swappable
Enclosure Rating	IP54 or better
Operation	Single-user handheld

CAPACITY

SPECIFICATION	VALUE
Scanning Speed	5.9-11.8 in/s (150-300 mm/s)
Maximum Scan Time	30 seconds
Steel Penetration	0.28 in (7 mm) steel equivalent
Image Storage	More than 10,000 scan images
Continuous Operating Time	Up to 6 hours
Batteries Supplied	Two rechargeable lithium-ion
Internal Memory	64 GB minimum
Display Resolution	Full HD 1080P
System Weight	8.6 lb (3.9 kg)

OPTIONAL FEATURES & ACCESSORIES

TRANSMISSION IMAGING MODULE

Adds optional transmission X-ray imaging for two-sided inspection tasks, complementing backscatter detection where object access permits.

EXTENDED BATTERY KIT

Additional rechargeable lithium-ion batteries and charger extend continuous field deployment beyond the standard six-hour operating window.

RUGGED TRANSPORT CASE

Lockable heavy-duty transport and storage case protects the system and accessories during transit and rapid field deployment.

OPERATOR TRAINING PACKAGE

Structured training covering image interpretation, safe operating procedures, and radiation safety documentation for certified field operators.

TECHNICAL SPECIFICATIONS

SPECIFICATION	DESCRIPTION
System Type	Portable handheld backscatter X-ray imager
X-Ray Generator	140 kV high-performance
X-Ray Output Power	Adjustable up to 8 W
Imaging Technology	Real-time backscatter, single-sided
Scan Modes	Fast, Standard, Fine
Transmission Imaging	Optional
Display	7-inch Full HD 1080P color touchscreen
Operating System	Android-based
Wireless Transfer	Wi-Fi
Communication Interfaces	Bluetooth, USB
Internal Memory	64 GB minimum
Image Capacity	More than 10,000 images
Positioning	Dual laser alignment
Scanning Speed	5.9–11.8 in/s (150–300 mm/s)
Maximum Scan Time	30 seconds
Steel Penetration	0.28 in (7 mm) steel equivalent
System Calibration	Automatic

SPECIFICATION	DESCRIPTION
Image Enhancement	Automatic optimization
Image Functions	Pseudo-color, inverse, brightness, contrast, window level, mosaic
Operating Functions	Acquisition, playback, archive, zoom, measurement, export
System Weight	8.6 lb (3.9 kg)
Dimensions	11.5 × 9.0 × 7.5 in (293 × 228 × 190 mm)
Operation	Single-user handheld
Battery System	Rechargeable lithium-ion, two supplied
Battery Configuration	Hot-swappable
Continuous Operating Time	Up to 6 hours
Power Management	Integrated, automatic sleep mode
Operating Temperature	–4 to +140 °F (–20 to +60 °C)
Storage Temperature	–13 to +158 °F (–25 to +70 °C)
Operating Humidity	5–90% non-condensing
Ingress Protection	IP54 or better
Safety Features	Interlock, dual-trigger, auto shutdown, warnings
Access Control	User authentication and permissions
Interface Languages	Multilingual

QL-ScanShield

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About QuakeLogic:

QuakeLogic Inc. is a California-based engineering and technology company providing innovative, reliable, high-quality solutions to customers worldwide.

Our Commitment

We are committed to quality, innovation, and customer satisfaction – building lasting partnerships through reliable solutions and dependable support.

