ACX™ 6.4 Automated Checkpoint X-ray System

SECURITY DETECTION
METAL DETECTORS X-ray MACHINES

First automated explosives detection system for checkpoint screening.

The ACX 6.4 Automated Checkpoint X-ray System brings the power and performance once reserved for hold baggage systems to checkpoint screening, without sacrificing throughput. Blending L-3's proven advanced technology explosives detection with high-clarity imaging, the ACX 6.4 offers enhanced checkpoint security capabilities that easily integrate into your current security operations and footprint.

The affordable ACX 6.4 scans bags, briefcases, backpacks, packages, and other small to medium-sized, hand-carried objects with simultaneous X-ray imaging and advanced explosives detection technology. It automatically pinpoints explosives and other potential threats, allowing operators to respond quickly and appropriately. Available in three conveyor lengths and with an optional automated bin return system (BRS), the versatile ACX 6.4 accommodates diverse space requirements and strengthens security while raising the efficiency and convenience of checkpoint security for both operators and the public.

Monitor included but not shown

APPLICATIONS

- Automated explosives detection
- Weapons detection
- Contraband detection
- Theft prevention
- Regulatory compliance/inspection

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Advanced Technology:

Instantaneous, Automatic Explosives Detection

The ACX 6.4 uses dual-energy X-ray technology to measure the mass, density, effective atomic number (Z_{eff}) and other physical characteristics of concealed objects. Borrowing the advanced technology (AT) detection algorithms from L-3's hold baggage screening systems to analyze the data, the system automatically alerts operators to a suspicious item by placing a box around a detailed image of the object on the monitor.

The rapid and accurate performance of L-3's advanced technology contributes to greatly enhanced security with high throughput and low false alarm rates.

Imaging Excellence:

Get the Whole Picture

Pinpointing subtle details can make the all difference in accurately identifying and eliminating true security threats. The ACX 6.4 with a dedicated X-ray imaging subsystem that includes a fine-pitch photodiode array delivers the highest resolution available in its class. A full suite of L-3 exclusive user-friendly programmable image enhancement tools allow screeners to readily examine questionable objects and quickly determine the presence of true threats.

- Patented TRI-MAT imaging discriminates between organic/inorganic materials and metallic objects.
- Innovative "Slide and See" continuous contrast adjustment capability lets screeners emphasize an object's smallest details, regardless of density.
- Unique Best Image First™ feature automatically selects and presents the optimal view, enhancing throughput by reducing repetitive image adjustments.
- Exclusive Transparent Color™ allows analysts to see greater detail, even in cluttered images, maximizing threat identification and resolution while minimizing operator fatigue.
- The user-programmable ACX 6.4 Image Archive stores up to 20,000 images.

Whether zooming in for a closer look or highlighting areas of interest with color overlays, user programmable image enhancement tools allow screeners to capture the best possible image.

Networking:

Bringing It All Together

The fully networkable ACX 6.4 streamlines decentralized and remote monitoring, reporting, and system management to help keep operational costs in line. Supervisors with appropriate network privileges can access and control any scanner or workstation on the LAN to send and receive images, TIP images, configuration settings, operator reports, diagnostics, and operational metrics. This network capability has been designed to exceed current and emerging network requirements.

ACX shown in long conveyor configuration with optional high-speed exit conveyor, roller tables and bin return system

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L-3's patented operator interface (remote console option shown) combines 3-button conveyor control with a touch-sensitive pad that allows continuous heads-up operation using icons displayed on the viewing screen

Power and Performance:

Reliability at Your Fingertips

The ACX 6.4 offers operational flexibility and delivers an array of unique features that give operators the information they need to hold or clear suspicious items.

- Automatic, highly reliable, explosives and contraband detection.
- Proven image analysis tools allow operators to easily distinguish between organic and inorganic materials and objects having a similar appearance but different chemical composition.
- User-friendly image enhancement tools, including continuously adjustable contrast, sharpening, and color overlay, make it easy to optimize images for maximum detection capability.
- Threat Image Projection (TIP) option inserts fictitious threat images at periodic intervals and tracks operator responses, motivating operators to stay alert and allowing supervisors to assess the effectiveness of screening operations.
- Conveyor available in short, medium, and long lengths to accommodate varied space requirements.
- Free-standing Bin Return System (option), available in modular, one-meter sections, automates the bin return process and contributes to higher throughput rates and screening efficiency.

Features

Imaging Features

- Continuously variable contrast adjustment
- Tri-material discrimination
- Transparent Color™
- Best Image First™
- Organic/inorganic stripping
- Metallic item removal
- Pseudo-color overlay
- True 32-bit color processing
- Edge enhancement
- Zoom 2X – 16X or continuous zoom to 64X
- Reverse video
- Threat alert
- Density alert

Standard Features

- Compact design
- Uninterruptible power supply (UPS) and input line filter
- Medium conveyor length (2236 mm / 88")
- Patented heads-up operator display interface with touch pad control
- Entry/exit tunnel shrouds
- Configurable operator interface
- 19" flat-panel, color monitor
- Operator Assist® (OA)
- Image Archiving (IA)
- Side-mounted operator interface
- Infrared operator-proximity sensor
- Network ready

Optional Features

- 21" color monitor
- Operator-proximity sensor footmat
- Roller tables and slide tables in modular 0.5 m and 1.0 m lengths
- Innovative bin return system in modular 1.0 m lengths
- Message display center
- Conveyor length options: short (1700 mm / 67"), long (3030 mm / 119")
- High-speed exit conveyor (requires long conveyor option)
- Threat Image Projection (TIP)
- External UPS
- Color printer
- Remote operator interface (5 m, 30 m, and 100 m)
- Ruggedized Mobility Kit (RMK): 152.4 mm (6") locking shock-absorbed wheels, system tie-down/hold-down points. Typically used with short conveyor
- Network Supervisor
- Network TIP server

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Specifications

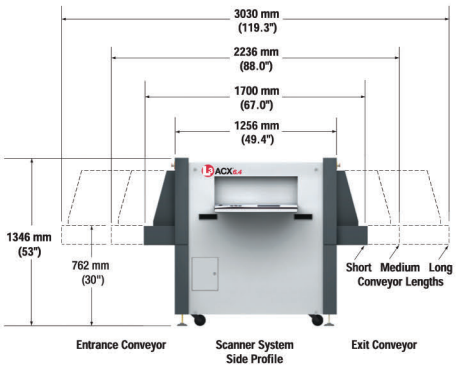
Tunnel Opening:	640 mm (25.2") wide x 430 mm (16.9") high
Conveyor Height:	762-812 mm (30" to 32")
Power Requirements:	1Ø 100-240 VAC ±10% 50/60 Hz ±1% 1.0 KVA max
Conveyor Speed:	0.22 m per sec +2/-8% @ 50 Hz 0.26 m per sec +2/-8% @ 60 Hz
Conveyor Capacity:	100 kg (220 lbs)

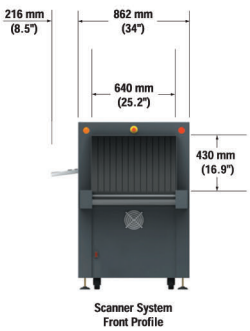
X-ray Source

Voltage:	150 kV constant potential tube
Duty Cycle:	100%
Cooling:	Sealed oil bath
Beam Orientation:	Vertically upward
Detector Configuration:	1152 photodiodes in L-shaped array

Physical Specifications

Height:	1346 mm (53")
Width:	862 mm (34")
Length:	Short conveyor: 1700 mm (67") Medium conveyor: 2236 mm (88") Long conveyor: 3030 mm (119.3")
Weight:	640 kg (1411 lbs) approximate weight with medium conveyor





Environmental

Operating Temperature:	0° to 40° C (32° to 104° F)
Storage Temperature:	-20° to 50° C (-4° to 122° F)
Humidity:	0 to 95%, non-condensing
Airborne Noise Level:	<70 dB (A)

Imaging and Performance (Preliminary)

Wire Resolution: typical	38 AWG guaranteed, 40 AWG
Penetration:	32 mm of steel
Contrast Sensitivity:	4096 gray level stored
Display Monitor:	19" flat panel Optional 21" CRT
Computer Processor:	Intel Pentium®
Throughput:	>750 bags/hour (continuous mode) >400 bags/hour (2 level screening)

Radiation Safety

All L-3 Communications Security and Detection Systems' X-ray systems are certified to be in full compliance with all radiation safety requirements and external emissions limits as specified in the United States Code of Federal Regulations, Title 21, Section 1020.40 (21CFR1020.40) that apply to our products. Typical leakage radiation is less than 0.1 mR/hr.

Operational Standards

Complies with the U.S. Code of Federal Regulations:
- FAA 14 CFR 108.17 Use of X-ray Systems
- FAA 14 CFR 108.20 Use of Explosive Detection Systems
- FAA 14 CFR 129.26 Use of X-ray System
- CDRH 21 CFR 1020.40 Cabinet X-ray Systems

UL/CSA NRTL certification to UL 61010-1 and CE compliant.

Complies with CDRH (FDA) requirements, including all labeling requirements.

Film Safety: Ten passes of ISO 1600/33DIN high-speed photographic film.