## Less heavy lifting for heavy-duty screening environments

The PX-231 X-ray system is the ideal choice for busy facilities that need to screen non-palletized freight in diverse sizes, from small parcels and packages to large cartons containing computer equipment or other hardware components.

With a low conveyor belt that is less than 12 inches (300 mm) from the ground, the PX-231 eases the burden of personnel loading heavy objects–facilitating rapid screening while reducing risk of injury and damage to goods. Additionally, the system's compact footprint is well suited to space-constrained environments.

The PX-231 offers all the advantages of L-3 technology, including high-quality imaging, the industry's most user-friendly operator interface, and networking capabilities. The result is consistently fast, accurate, and efficient screening and detection of weapons, narcotics, explosives, and other threats and contraband.



**APPLICATIONS**

- Threat detection
- Manifest & declaration verification
- Contraband detection
- Theft prevention
- Regulatory compliance/inspection

**COMPLIANCE**

- ISO 9001, CE, EUR 1
- Radiation Safety: U.S (21CFR1020.40)
- Film: Ten passes of ISO 1600/33DIN high-speed photographic film
- Operational: U.S. FAA Standards, "Use of X-ray Systems" (Federal Standards 14 CFR 108.17 and 14 CFR 129.26)

## The Operator Interface:
### Simplicity Redefined

L-3's patented operator interface provides a simple, flexible, and powerful way for users to control the system and make maximum use of imaging information. Ergonomically designed to promote rapid learning and ease of use, the interface combines three-button conveyor control with a touch-sensitive pad that allows continuous heads-up operation using icons displayed on the viewing screen.

## Superior Imaging:
### See What You've Been Missing

Effective screening starts with advanced imaging capabilities. The PX-231 dual-energy folded detector array includes 1536 diodes, delivering high-resolution images in a medium-to-large-size X-ray screening solution.

Based on research by the International Commission on Illumination (CIE), PX-231 incorporates Transparent Color™, L-3's innovative image processing technique. This unique imaging approach combines the science of the human eye's response to color and the display characteristics of a CRT monitor. With Transparent Color™, operators can interpret threat objects with a much higher degree of confidence due to the crisp, clear, and robust color images that are now possible.
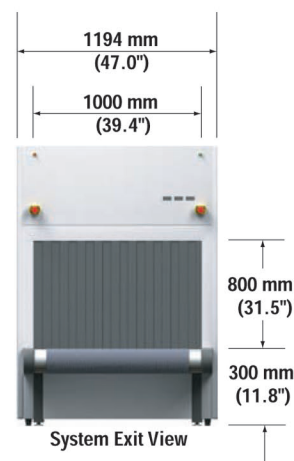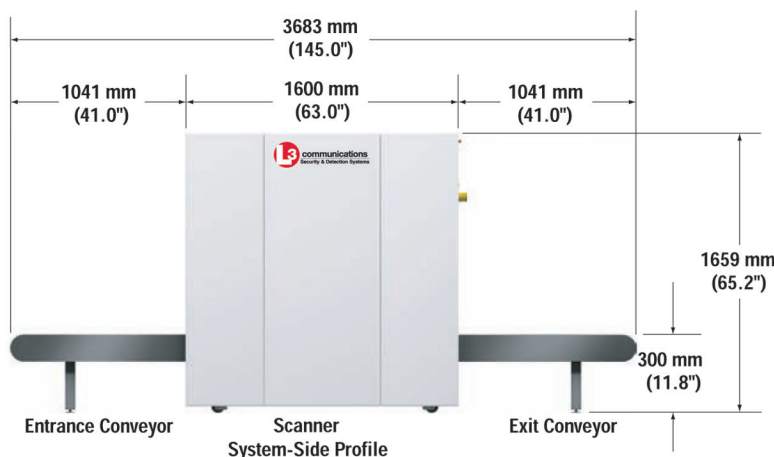
## Networking:
### Connecting the Dots

Operating on a Windows® platform, the networked PX-231 allows data and images to be accessed in real time by a centralized supervisor workstation. This enables one person to perform key tasks for multiple units, including: second-level screening of suspect objects, centralized monitoring of operators' performance using the Threat Image Projection feature, and administration of all PX systems on the network. The result is that oversight of screening and administrative operations can be streamlined, and costs can be kept in check.

## Operational Flexibility:
### Go Configure

The PX-231 system can be tailored to meet a range of needs.

• Easy customization of software-based controls and tools allows the system to be adapted to diverse operational requirements and evolving security challenges.

• With a variable-height conveyor, the PX-231 can be deployed in different configurations.

• Bidirectional operation allows the system to be incorporated, without modification, into environments that require two-way screening, such as mailrooms and loading docks.



3683 mm (145.0")
1041 mm (41.0")
1600 mm (63.0")
1041 mm (41.0")
1659 mm (65.2")
300 mm (11.8")

Entrance Conveyor     Scanner     Exit Conveyor
System-Side Profile

1194 mm (47.0")
1000 mm (39.4")
800 mm (31.5")
300 mm (11.8")

System Exit View

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

## Operator Tools:

### Focus on What Matters Most

Numerous features enhance the operator's ability to readily identify and examine suspect objects and detect the subtle but telling details that indicate a true threat, such as the wires associated with explosive devices.

• With diverse image analysis tools, operators can more easily distinguish between organic and inorganic materials and objects having a similar appearance. Image enhancement tools provide varied methods for optimizing images to more readily spot possible threats.

• The Operator Assist option compares scanned objects to data on known threats and highlights suspect items for further examination.

• Threat Image Projection (TIP) inserts fictitious threat images at periodic intervals and tracks operator responses, allowing supervisors to assess the effectiveness of screening operations–and motivating operators to stay alert.

• An Image Archive option supports storage of up to 20,000 images, with image retention determined by user-defined expiration dates or on a first-in, first-out basis.

## Features

### Imaging Features

• Continuously variable contrast adjustment
• Tri-material discrimination
• Pseudo color imaging
• Zoom 2X - 16X or continuous zoom to 64X
• Edge enhancement
• High/low penetration mode
• Reverse video
• Organic/inorganic stripping
• Transparent Color™
• Best image resolution in its class

### Standard Features

• Uninterruptible power supply (UPS) and input line filter
• Patented, heads-up operator display interface with touch pad control
• Configurable operator interface
• Single 17" color monitor
• Remote desktop operator display

### Optional Features

• Single 22" color monitor
• 1.0 m entry/exit conveyor
• Threat Image Projection (TIP)
• Operator Assist® (OA)
• Image Archiving (IA)
• External UPS
• Color printer

## SPECIFICATIONS:

### GENERAL

Dimensions: 1600 mm (63.0") L x 1659 mm (65.2") H x 1194 mm (47.0") W

Length with Conveyors: 3683 mm (145.0")

Tunnel Opening: 1000 mm (39.4") W x 800 mm (31.5") H

Conveyor Height: 300 mm (11.8")

Power Requirements: 100-240 VAC ±10% 50/60 Hz ±1% 1.0 KVA max

Conveyor Speed: 230 mm per second (9.05" per second)

Conveyor Capacity: 136 kg (300 lb)

### X-RAY

Voltage: 160 kVp constant potential tube

Duty Cycle: 100%

Cooling: sealed oil bath

Beam Orientation: vertically downward

X-ray Sensor: 1536 photo diodes in folded array (L-shaped) configuration

### PHYSICAL SPECIFICATIONS

Weight (Uncrated): approx 1136 kg (2500 lb)

Weight (Crated): approx 1397 kg (3074 lb)

Construction: steel frame and panels on casters

### ENVIRONMENTAL

Operating Temperature: 0°C to 40°C (32°F to 104° F)

Storage Temperature: -20°C to 50°C (-4°F to 122°F)

Humidity: 95% non-condensing

Airborne Noise Level: <70dB (A)

### IMAGING AND PERFORMANCE

Resolution: 36 AWG guaranteed, 40 AWG typical

Penetration: 27 mm of steel guaranteed

Contrast Sensitivity: 4096 gray level stored

Video Resolution: 1280 x 1024/24 bits

Video Display: 17" SVGA high-resolution, flicker-free display

Computer Processor: Intel Pentium®

### 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 compared to maximum of 0.5 mR/hr permitted by the Federal Standard.

### OPERATIONAL STANDARDS

Complies with published International Standards including the U.S. Federal Aviation Administration Standards, *"Use of X-ray Systems"* (Federal Standards 14 CFR 108.17 and 14 CFR 129.26).

### FILM SAFETY

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

### DESIGN POLICY

L-3 Communications Security and Detection Systems reserves the right to change specifications in the course of continuous improvement. Specifications are provided for reference only and actual equipment may differ slightly from the description given. Typical dimensions are within ± 5% of nominal values.