

# CX-3800G

## Gantry Cargo X-ray System



### Performance

Throughput:	Up to 20 trucks (18 m or 59 ft in length) per hour
Resolution (single wire):	1.0 mm (18 AWG), best 1.5 mm (14 AWG), guaranteed
Penetration (steel):	270 mm (10.6 in), best 200 mm (7.9 in), guaranteed
Contrast sensitivity:	2% plate, best (2 mm plate behind 100 mm of steel) 4% wire, best (4 mm diameter wire behind 100 mm steel)

### Physical Specifications

Overall length:	Varies with operational requirements
Overall width:	8.5 m (27.8 ft)
Overall height:	6.0 m (19.6 ft)

### Tunnel Dimensions

Tunnel scan size:	5.0 m H (16.4 ft), 2.8 m W (9.2 ft)
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Multiple scans are automatically separated into individual images

### Power

Power supply:	85 kW (can be provided by diesel engine generator)
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### Operator Control Center

Air-conditioned and self-contained ISO container outfitted with image analyst workstations

### Scan Control

Type:	Electric
Speed:	0.13 m/s (0.43 ft/s), 0.2 m/s (0.66 ft/s), 0.4 m/s (1.33 ft/s)

### Environment

Operating temperature:	-28° C (-20° F) to 55° C (131° F)
Storage:	-30° C (-22° F) to 55° C (131° F)
Humidity:	96%, non-condensing (precipitation will not impact system operation)
Materials:	Corrosion resistant

### Safety

- Meets applicable compliance standards set forth in U.S. Code of Federal Regulations, 21 CFR 1020.40 for cabinet X-ray systems
- Safety interlocks for scan speed, gantry position, e-stops, wireless boundary
- Meets applicable U.S. and European regulatory requirements for radiation safety
- Designed for compliance with UL and CE requirements
- Visual and audible warning systems when X-ray is in use
- Radiation dosage less than 0.1 mR/hr (1.0  $\mu$ Sv/hr) average in driver's cab, operator control room, and outside operating perimeter
- Radiation dosage to cargo less than 2.5 mR (25  $\mu$ Sv) typical
- Wireless infrared (IR) perimeter fence (option)
- Emergency stops in key areas
- Automatic collision avoidance systems (option)



## X-RAY SYSTEM

### Source

- 3.8 MeV Linatron M3 wide-angle linear accelerator with low-leakage head

### Detector Array

- 4 mm detector elements, scintillating crystal and photodiodes with electronics designed for extremely high signal-to-noise ratio

## IMAGING SYSTEM

### Inspection Workstations

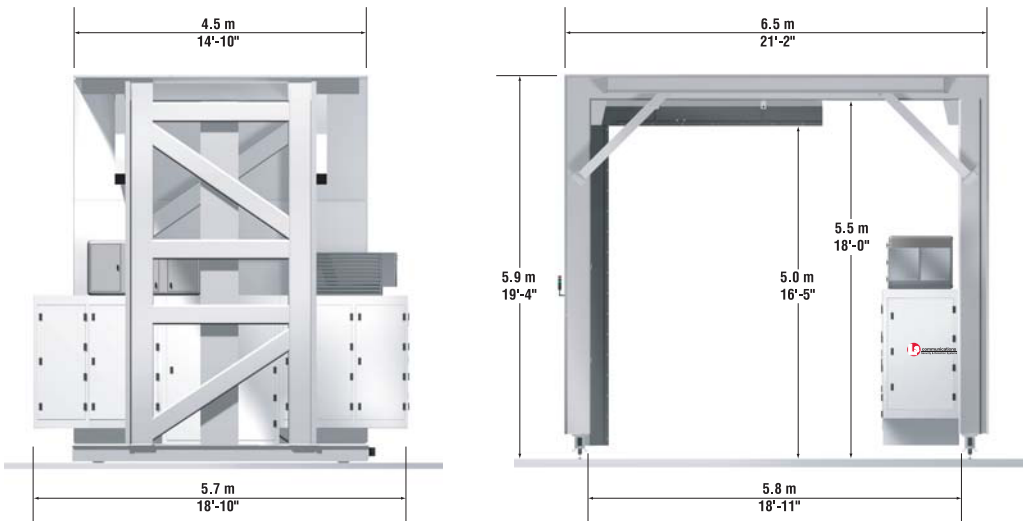
- 16-bit imaging
- High-performance Intel processors
- Image analyst workstation with 24-inch LCD flat panel display monitor (1920 x 1200 pixel)
- 17-inch LCD flat panel manifest display monitor
- Windows-based analyst workstation software
- Image archiving
- Color printer

### Image Analysis

- Pseudo-color, contrast, edge enhancement, gray-level mapping
- Log and square root mapping
- Variable zoom, fit to screen
- Histogram equalization
- Marking of suspicious areas, including voice annotation
- DeepScan imaging algorithm

### Options

- Cold climate package to -30° C (-22° F)
- Wireless communication for image transfer, diagnostics, and remote viewing
- Remote and/or second image analyst workstation
- Color document scanner
- Radiation and neutron detection



Although the system can operate without shielding, the footprint of the gantry is considerably reduced if installed within a shielded building. This is particularly important in areas such as ports where land (real estate) is at a premium. Housing the gantry within a shielded building has the further advantages of increasing protection from the elements and further enhancing the physical security of the unit. Building specifications will vary from project to project. L-3 Communications will work with approved civil engineers and construction companies to produce the optimum solution.



**communications**  
Security & Detection Systems

### L-3 Communications Security and Detection Systems

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