



CUTTING EDGE CUSTOMS INSPECTION

The HXR-Railroad Container Scanner is a high-energy portal designed for screening railcars and shipping containers at seaports, border crossings, and cargo centers. The portal is fully automated and can process up to 400 railcars per hour. Its precision software allows for industry best imaging at high throughput speeds.

The system is powered by a powerful linear accelerator generator capable of penetrating up to 340 mm (13.4") of steel. Its clear, high-resolution images make it easy for operators to identify threats and verify manifests, while its rugged construction ensures cost-effective operation.

The HXR-Railroad Container Scanner supports a host of peripheral systems allowing for extensive customizations that augment its screening objectives. Peripheral integrations offer critical inspection benefits. Integrations may include, while not limited to: container readers, radiation portal monitors, railcar number reader and centralized command centers.

Proudly manufactured in the United States to the highest quality standards, the HXR-Railroad Container Scanner ruggedized design can withstand harsh climates found at ports of entry around the world.

PRODUCT HIGHLIGHTS

340 mm Steel Penetration

High Resolution Image

Throughput: 400+ Railcars
Per Hour

Fully-Automated System



HXR-Railroad Container Scanner

TOMORROW'S TECHNOLOGY FOR TODAY'S SECURITY™

GENERAL SPECIFICATIONS

Overall Length	20m (65.6ft)
Overall Width	13m (42.7ft)
Overall Height	11m (36.1ft)
Scanning Speed:	5 km/hour (3.1 mph) Nominal 25 km/hour (15.5 mph) Capable
Throughput ² :	400+ Railcars/hour
Scanning Dimensions:	10 m (W) x 6.15 m (H)

TECHNICAL

Steel Penetration:	340 mm Typical, 320 Standard
Wire Resolution in Air:	2 mm

X-RAY GENERATOR & IMAGE PERFORMANCE

Source:	Linac
Energy:	4 MeV / 6 MeV
Beam Direction:	Horizontally Sideward

COMPUTER & VIDEO

Platform:	Windows® OS
Display Type:	Dual 28" Flat Panel Color Monitors; One 34" WQHD Monitor
Display Resolution:	4K Resolution

ENVIRONMENTAL

Operating Temperature:	-30°C to 55°C / -22°F to 131°F
Storage Temperature:	-30°C to 60°C / -22°F to 140°F
Humidity:	Up to 95% non-condensing

ELECTRICAL

System Power:	380 VAC, 60Hz, Three Phase 40kVA
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HEALTH & SAFETY

Radiation dose at exclusion zone boundary:	0.5 µSv in any one hour
Shielded radiation exclusion zone:	Site specific
Radiation dose to crew:	Less than 0.25 µSv in any one hour
Radiation dose to cargo:	Less than 20 µSv per scan

In compliance with ANSI N43.17 for screening of personnel with x-rays. In compliance with ICRP 103, Paragraph 2 of Article 13 of EU Council Directive 96/29/EURATOM, and United States EPA public exposure limits. In compliance with United States FDA and WHO food screening limits. Typical radiation leakage is 0.003 mSv to cargo and 0.06 µSv to the cab (drivers).

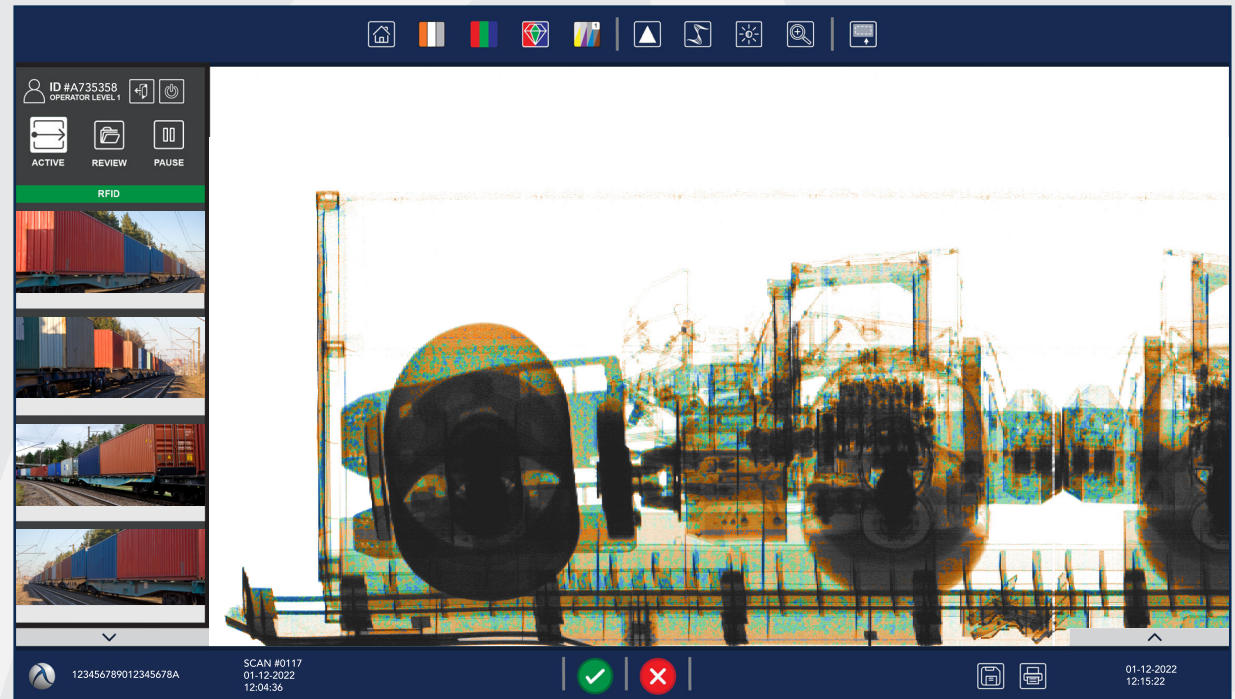


STANDARD FEATURES

Scan in both directions	Continuous Zoom Up to 64x
Black/White Imaging	Image Annotation
Picture Perfect	Print Image Capable
Pseudo Color	Multi-Tier Accessibility
Reverse Monochrome	Network Ready
Material Discrimination:	Real-Time Self Diagnostics
1) 2 Color (Organic/Metal)	CCTV Camera System
2) 3 Color (Organic/Metal/High-Z)	Inspection Workstation
Auto Image Archiving	Operator Workstation
Image Review	Speedometer
Management System	Railcar Counter
Manual Bitmap Archive	

OPTIONAL FEATURES³

Higher Archiving Capacity	Additional Analyst Workstations
Local Language	Container Plate Reader
Radioactive Material Detector	Custom Paint
RFID Scanner	Environmental Kit
	Inspection Office
	Operator Training
	Radiation Meter
	Railcar Number Reader
	Peripheral Equipment ⁴ :
	Container Readers
	Radiation Portal Monitors
	License Plate Readers
	Centralized Command Center



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ISO 9001 & ISO 14001: Certified

¹Dimensions of the system may vary depending on customization. Dimensions do not include shield walls.

²Throughput is an estimated railcar count. Actual throughput will depend on system and site configuration.

³Optional features may affect lead time, price, and weight of system. Please contact your Astrophysics Sales Representative for more information.

⁴Not an exhaustive list, please contact your Astrophysics Sales Representative for more information.

Due to continued product research and development, Astrophysics Inc. reserves the right to amend all technical specifications without prior notice.