ZKX6040 P3D

X-Ray Inspection System With 3D Perspective Technology & Computer Vision Analytics

Overview

ZKTeco's ZKX6040 P3D X-ray inspection system uses the 3D perspective technology and computer vision analytics to improve the baggage screening efficiency.

Designed for optimal security screening, the ZKX6040 P3D features a 600mm (W) x 400mm (H) tunnel opening and an integrated dual-camera system that tracks passengers and baggage.This X-ray inspection system streamlines the inspection of carry-on bags, parcels, and personal items in important checkpoints like customs and stadiums.

ZKX6040 P3D x-ray inspection system works with the ZKBio SIS security management platform and is powered by computer vision analytics, the system achieves over 90% threat detection accuracy. The comprehensive image processing tools and built-in operator training modules help operators to identify threats and maintain inspection performance.

Standard Features

Comprehensive Image Processing:

- 3D perspective visualization
- Multi-angle viewing options
- Material discrimination (organic/inorganic)
- Suspicious organics enhancement (Z789)
- Real-time image processing with 64× zoom

Advanced Detection Capabilities:

- Multi-energy discrimination with 4-color imaging
- Computer vision-driven threat detection
- Density Threshold Alert (DTA)
- Threat Image Projection (TIP)
- Dual-camera passenger tracking system

Intelligent System Integration:

- ZKBio SIS platform management software
- Walk-through metal detector integration
- Fingerprint authentication
- Input/output roller tables

Enhanced Security Management:

- Real-time passenger-baggage correlation
- Automated image and video capture
- Biometric data linkage
- Quick retrieval of inspection records
- Comprehensive audit trail capability

Image Enhancement Functions:

- Perfect View (PV)
- High/Low Penetration modes
- Dynamic scanning
- Inverse viewing
- Pseudo-color display
- Brightness adjustment

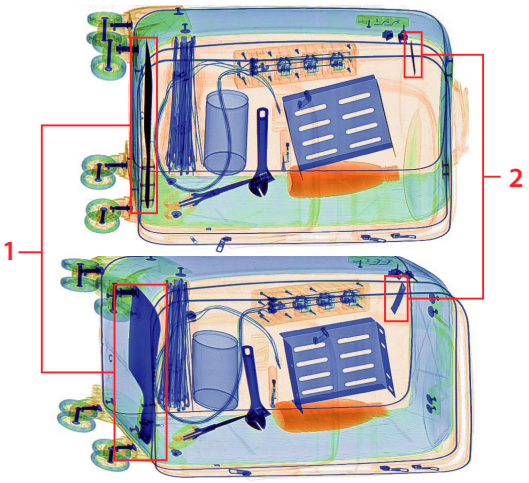
Advanced 3D Perspective Technology

ZKX6040 P3D implements 3D perspective imaging technology for security threat detection. The scanning capability generates multi-dimensional views, surpassing traditional 2D imaging limitations by:

- Rendering comprehensive object visualization.
- Eliminating angular blind spots. (e.g. concealed knives and blades are more readily identifiable)
- Providing depth perception.
- Enabling volumetric analysis.

2D

2D perspective X-ray screening image of baggage items



3D

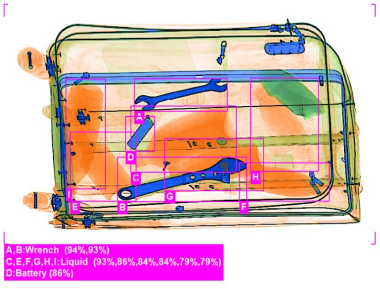
3D perspective X-ray screening image of baggage items

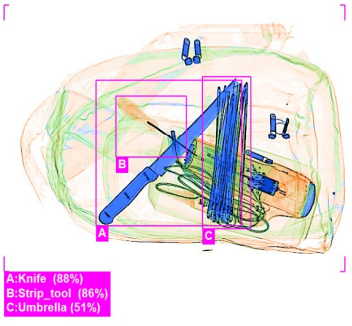
Computer Vision Driven X-Ray Image Analytics

Powered by computer vision technology, the ZKX6040 P3D delivers automated threat recognition through X-ray image analysis, which include the following capabilities:

Detection Parameters:

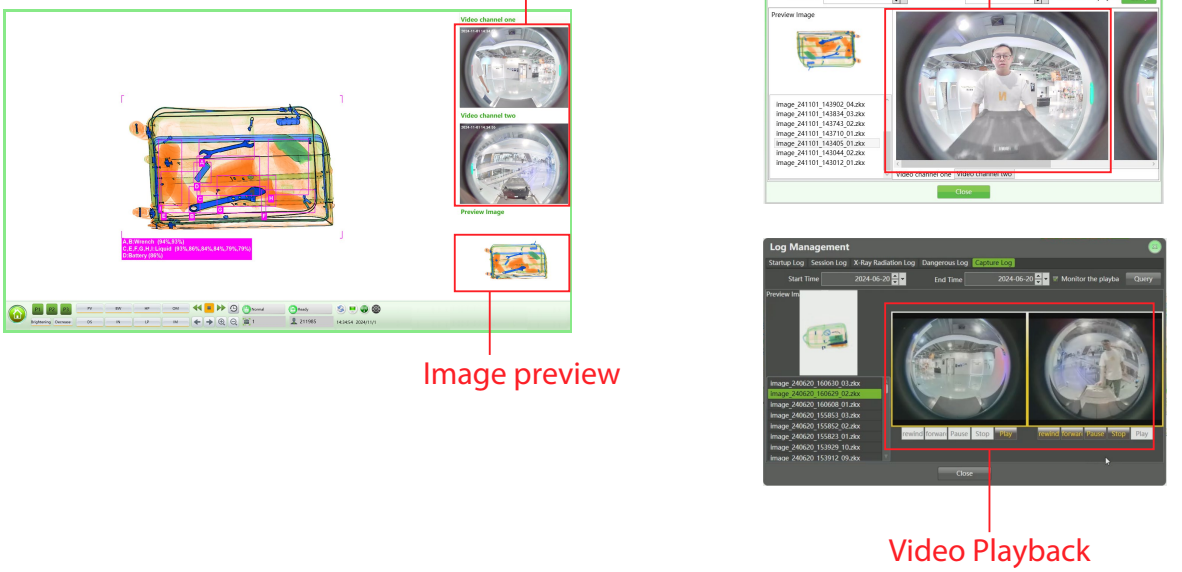
- 26 classified threat items (Firearms, Battery, Knives, Mobile Phones...).
- > 90% detection accuracy.
- < 10% false positive rate.
- < 5% missed detection rate.





Passenger and Baggage Tracking System

ZK6040 P3D is equipped with 2 built-in cameras that record in real-time and link passenger and baggage information. It links the the scanned carry-on baggage's image with records the baggage scanning process in real time. This makes it easy to trace back and restore the security inspection process.

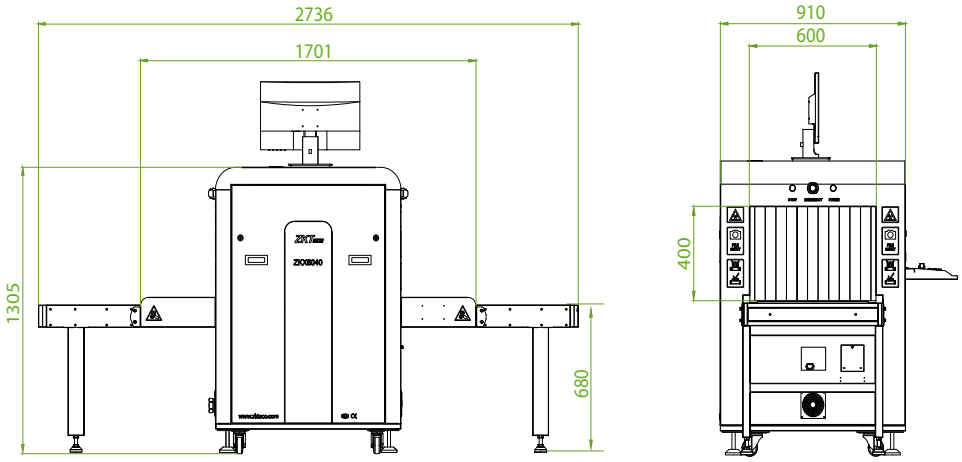


Specifications

General Specifications	
Tunnel Dimensions (W*H)	608 x 405 (mm)
Conveyor Speed	0.2m/sec
Conveyor Load	180kg (evenly distributed)
Conveyor Height	680 mm
Dual-energy detector	Yes
Single-view	Yes
Radiation Leak Dosage	0.3μ Gy/h (5cm from the surface)
Supported Software	ZKBio SIS
Communication Interface	RJ45(TCP/IP)
Dimensions (L*W*H)	1701*910*1305 (mm)
Package Dimensions (L*W*H)	2200*1200*1450 (mm)
Weight	380 kg
Package Weight	480 kg
Certifications	CE
Operating Environment	
Operating Temperature	-10°C to +45°C
Storage Temperature	-20°C to +60°C

Humidity	5 to 95% non-condensing
Power Supply	Input Voltage: 220V AC (±15%) Frequency: 50Hz (±3%) Voltage Range: 187V AC to 242V AC
Power Consumption	700W
Noise Level	≤55dB
X-ray Generator and Image Performance	
Number of Colors in X-ray Image	4
Anode Voltage	80-160 kV(adjustable)
Tube Current	0.3-1.0 mA(adjustable)
Orientation	Vertically upward
Generator Cooling	Sealed oil bath with forced air / 100%
Steel Penetration	36mm
Wire Resolution	34AWG
Space Definition	HorizontalΦ1.0mm/VerticalΦ2.0mm
Penetrate Definition	32AWG
X-ray Film Safety	ASA/ ISO 1600 standard of film safety
X-ray converter type	L-shaped detector line
Computer Specifications	
Operating System	Windows10
Processor	Intel quad-core i5-4570 3.6GHz
Monitor	21.5"Color LED Screen (1920*1080P)
RAM	8 GB DDR4
Hard Drive	2TB HDD
Additional Functions	Real-time passenger-baggage correlation, Automated image and video capture, Biometric data linkage, Quick retrieval of inspection records. USB 3.0 *1 Ports USB 2.0 *2 Ports Stored image / video capacity (e.g., IMS Image Storage System - stores up to 100,000 images)

Dimensions (mm)



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