



ZKTeco Composite Security Inspection Solution for COP30 2025

Client Overview

COP30 (The 30th United Nations Climate Change Conference) was held from 10th to 21st November 2025 in Belém, the gateway city to the Amazon rainforest in Brazil, known as the "Forest COP" or "Nature COP," symbolizing a renewed focus on Earth's ecology and tropical rainforest protection. The conference marked the 10th anniversary of the Paris Agreement, focusing on actions to keep global warming within 1.5°C, emphasizing increased climate financing (through the "Baku-Belém Roadmap" targeting approximately USD 1.3 trillion annually by 2035), accelerating energy transition and phasing out fossil fuels, setting global adaptation and resilience goals, and stopping and reversing deforestation by 2030 via the "Tropical Forest Finance Facility" and the "5-Year Forest Action Plan."

Participants of COP30 included government representatives from over 190 Parties worldwide, environmental organizations, business leaders, scientists, and media. Among the attendees were Brazilian government officials and UN Climate Change Secretariat personnel. Many national leaders and ministerial officials, alongside NGOs and private sector representatives, also actively participated. ZKTeco was honored to provide security inspection solutions for this significant international event.

Requirement

Security Inspection with Both Effectiveness and Efficiency

The security inspection requirement for COP30 was very stringent, demanding high detection accuracy to effectively screen prohibited items and ensure attendee safety, while also maintaining efficient throughput to facilitate smooth access and prevent bottlenecks that could disrupt the overall event order. For this major international event, security equipment also needed to be easy to manage, user-friendly, and compliant with human health and safety standards, minimizing radiation exposure and discomfort.

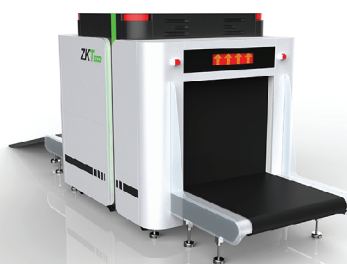
Solution

ZKTeco provided a comprehensive security inspection solution for COP30, covering both pedestrian (walk-through) and object inspection, including the ZKX100100 and ZKX6040 X-ray Security Inspection Systems and the ZKD2180 Walk-through Metal Detector. At entry, all participants had their personal belongings scanned by either the ZKX100100 or ZKX6040 to detect prohibited items, while the individuals themselves passed through the ZKD2180 to detect any on-person threats.



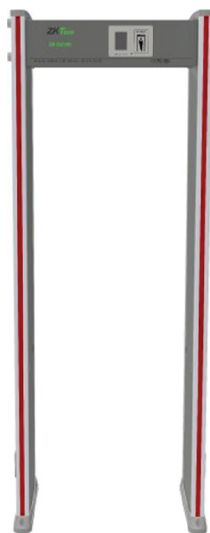
ZKX6040

X-ray Security Inspection Systems



ZKX100100

X-ray Security Inspection Systems



ZKD2180

Walk-through Metal Detector



Solution Advantages



Outstanding Inspection Performance

Object Detection

ZKTeco's ZKX100100 and ZKX6040 luggage inspection systems are equipped with high-performance dual-energy X-ray generators producing images at high and low energy for object detection, enhanced by advanced image processing algorithms generating highly clear and accurate images. Both devices feature high-resolution 21.5-inch color LED screens for precise threat identification. They can accurately detect organic and inorganic substances based on the effective atomic number, with features like high-density alarms, explosive and drug alerts to proactively reduce security risks.

Pedestrian Detection

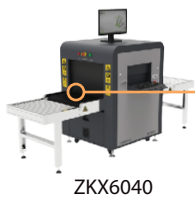
The ZKD2180 walk-through metal detector can accurately detect various ferrous and non-ferrous metallic contraband, with sensitivity levels up to 500 and detection zones adjustable to 6, 12, or 18 zones, covering heights up to 200cm. Equipped with a 3.5-inch TFT color screen and active alarm functions (adjustable audio alarms and LED warning lights), it significantly enhances the speed and accuracy of personnel security checks.



High Throughput Efficiency

The ZKX100100 offers a 100 x 100cm inspection channel, maximum load of 200kg, suitable for large luggage and features a low platform height to facilitate loading heavy items. The conveyor speed can be adjusted up to 40cm per second to handle high flow volumes efficiently. The ZKX6040 is designed for smaller carry-on luggage with a 60 x 40cm channel and 120kg max load, complementing the ZKX100100 in managing high traffic through load balancing. The ZKD2180 supports throughput up to 40 persons per minute, ensuring efficient screening in crowds.

Hand-carry



ZKX6040

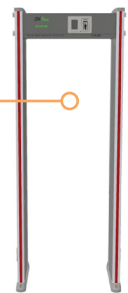
Heavy Luggage



ZKX100100



Walk-through



ZKD2180

Enhanced Security Management

Both ZKX6040 and ZKX100100 include luggage counting functions to automatically record the number of bags screened in set periods. The ZKD2180 also tracks and distinguishes the numbers of successfully and unsuccessfully screened persons for effective reporting.

Human Health and Safety

According to the International Commission on Radiological Protection standards, radiation leakage from ZKX100100 and ZKX6040 is extremely low (0.2 $\mu\text{Gy/h}$ and less than 0.5 $\mu\text{Sv/h}$ respectively), well below safety limits, ensuring no risk to people nearby.

