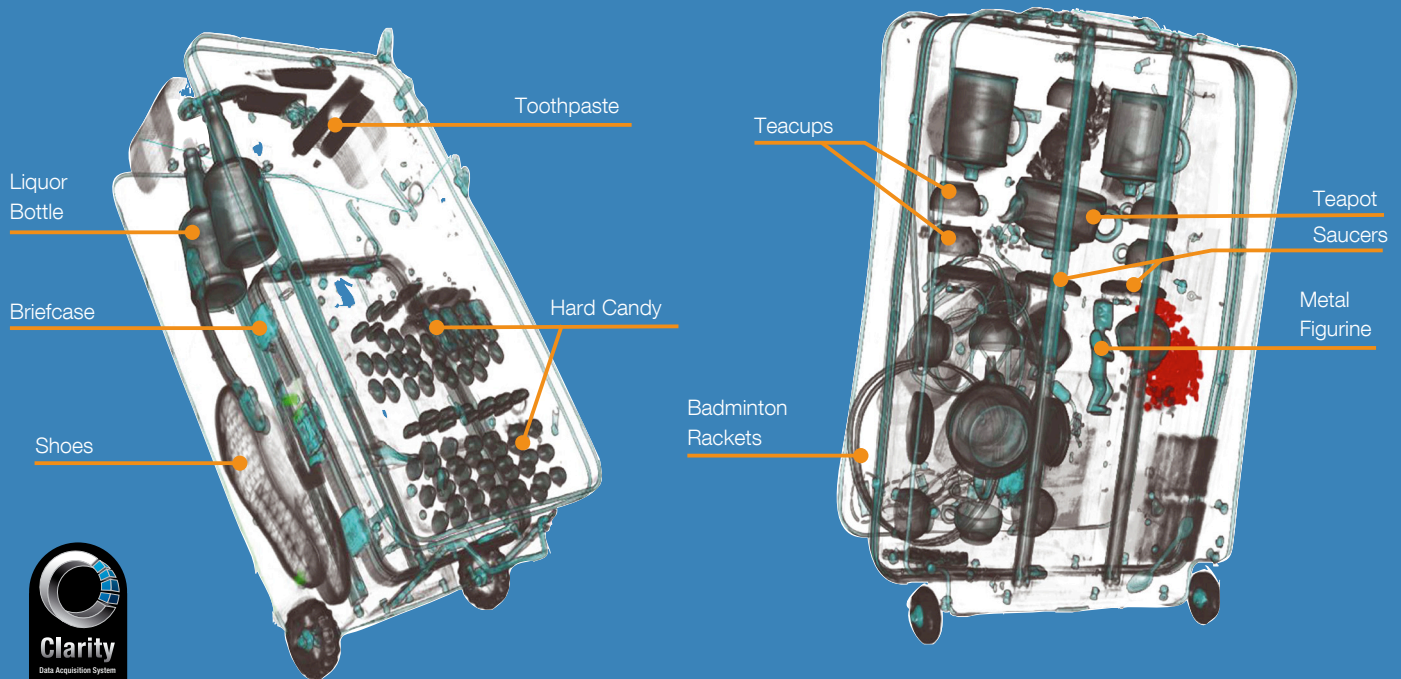# CTX 9800 DSi™

GROUNDBREAKING PERFORMANCE

Morpho Detection's CTX 9800 DSi™ represents the latest evolution in CTX™ explosives detection system (EDS) technology. The CTX 9800 DSi introduces a new Data Acquisition System (DAS) that delivers unprecedented high-resolution 3D images. This unique high-resolution imaging engine, called Clarity, represents the culmination of Morpho Detection's years of aviation security experience around the world combined with GE Healthcare's leading-edge imaging technology.

Benefits

- TSA-certified
- Meets ECAC Performance Standard 3 for EDS
- Unprecedented high-resolution 3D images through Morpho Detection's Clarity Data Acquisition System (DAS)
- Constant-width one-meter conveyor belt and tunnel
- Intuitive and simplified user interface
- Dynamic screening capable of automatic bag-by-bag detection mode selection via the Baggage Handling System (BHS)
- Multiplexing solutions
- Extensive support capability and experience

Bag views captured using Clarity shown below

Toothpaste

Liquor Bottle

Briefcase

Hard Candy

Shoes

Teacups

Teapot

Saucers

Metal Figurine

Badminton Rackets

Clarity
Data Acquisition System

The CTX 9800 DSi joins the CTX 9000 DSi™ and CTX 9400 DSi™ in providing aviation security solutions relied upon by airports throughout the world. The imaging advances offered by the Clarity DAS place the CTX 9800 DSi at the forefront of TSA-certified, constant width one-meter conveyor belt and tunnel EDS solutions. Morpho Detection's history supporting these systems in demanding airport environments demonstrates the superior operational efficiency and detection capabilities of the CTX family.

Providing significant improvements in throughput capacity, the CTX 9800 DSi offers advanced-throughput performance with a path to continued detection and technological innovations to meet future security and operational requirements.

Clarity

The Clarity Data Acquisition System (DAS) is the latest evolution of computed tomography (CT) technology for Morpho Detection's CTX products. Producing unprecedented high-quality 3D images, Clarity brings together for the first time Morpho Detection's automated explosives detection expertise with GE Healthcare's pioneering work in 3D CT technology for high-resolution medical CT scanners. The combination of these two capabilities generates high-resolution 3D images that afford finely-detailed views of baggage contents and precise algorithmic calculations, providing an increased ability to identify threats, reduce false alarm rates and lower operational costs.

Advanced User Interface

Benefiting from extensive experience and operational human factor studies, the CTX 9800 DSi User Interface helps operators maximize the value, detail and threat separation that high-resolution 3D images can provide. With the ability to visually "travel" throughout the bag and fully manipulate images, operators have more information and flexibility than ever before. Combining high-resolution 3D images with advanced navigation tools enhances the analysis of details and specific structures of suspected threats by maximizing the information available to make efficient and effective security decisions.

Multiplexing Solutions

Multiplexing (MUXv2™) is the software and hardware that networks the CTX 9800 DSi with the User and Control Interfaces for remote screening of checked baggage. Designed to integrate the CTX 9800 DSi and other CTX 9x00 systems, MUXv2 seamlessly processes high-resolution 3D and 2D bag images. MUXv2 dramatically improves the availability, scalability and operational savings of the EDS network, and increased scalability allows for a greater number of CTX systems to be placed on a single MUXv2 cluster. With redundancy of key network components and increased cluster size, MUXv2 provides efficiency and potential cost savings to EDS airport installations.

Operational Throughput Breakthrough

Designed for the most demanding airport environments, the CTX 9800 DSi brings together significant throughput advancements with high-resolution 3D images offered by Clarity. The CTX 9800 DSi helps to streamline the screening process by using helical scanning and a continuous conveyor mode of operation. The combination of improvements in throughput and advances in detection can reduce the overall operating cost per bag and maximize a customer's capital investment over time.

BHS Integration

The CTX 9800 DSi, an ideal system for fully-integrated solutions, has a constant-width one meter-wide conveyor belt and tunnel[1], reducing the need for costly and potentially troublesome directional input devices. The CTX 9800 DSi accepts large and elongated bags, which can minimize the quantity of out-of-gauge or oversized luggage requiring separate processing.

Dynamic screening allows the CTX system to change inspection modes automatically on a bag-by-bag basis through commands from the BHS. It also enables inspection options to be adjusted based on security and operational needs or the demands of future screening protocols.

Sensor Fusion

Utilizing flexible network architecture, the CTX 9800 DSi system can be collaboratively combined with other platforms such as X-ray Diffraction (XRD). The fusion of multiple sensors increases the breadth of threat detection and alarm resolution capabilities, which can enhance the security of the combined system. By offering the potential to minimize human operator intervention, Sensor Fusion can contribute to higher detection rates, lower false alarm rates and reduced operational costs.

Services and Support

Committed to ensuring operational availability and efficiency, Morpho Detection has developed comprehensive maintenance programs to provide continuous customer support. Baggage screening operations can run more smoothly with our highly-trained field service team members on standby to maintain and diagnose systems, troubleshoot problems, and repair or replace parts.

Enhanced remote diagnostic capabilities allow monitoring of all CTX 9x00 series systems deployed within an airport from a central location. This centralized monitoring and status management, combined with an advanced user interface, ensures prompt notification and faster response time.

Morpho Detection also provides flexible support programs and training to optimize product performance and increase customer satisfaction. Our 24-hour Customer Assistance Center provides prompt access to qualified technical support personnel and an integrated response program. Meanwhile, our training experts provide specialized instruction to CTX operators through year-round courses to optimize their effectiveness and productivity.

For successful CTX product integration, customers and BHS companies can utilize our EDS modeling services and Morpho Detection's Project Management team to plan for proper design layout and deployment. Each model is customized to the unique operational requirements of each facility. Contact us to learn how Morpho Detection can support your aviation security needs.

[1] For current tunnel opening dimensions, please see
     CTX 9800 DSi technical specifications document

KEY MISSIONS, KEY TECHNOLOGIES, KEY TALENTS

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