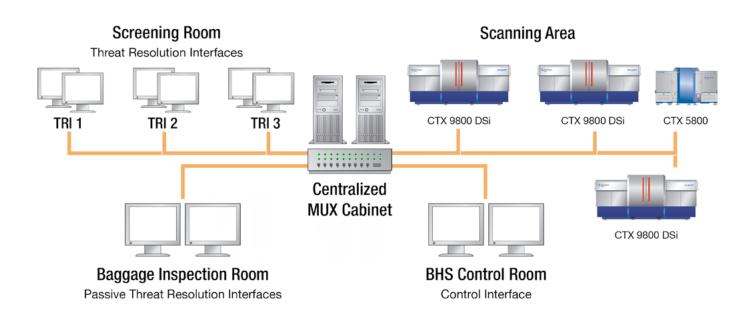# NETWORKING SOLUTIONS FOR CTX™ SERIES SYSTEMS

A SECURE NETWORKING ENVIRONMENT FOR THE CTX FAMILY

When choosing an explosive detection system (EDS), you're making a long-term investment in your airport that meets both current and future passenger throughput and detection standards. The same concept applies to networking your EDS. Our networking solutions, known as MUX, refer to the software and hardware that link our CTX systems with User and Control Interfaces for remote screening of checked baggage. Highly customizable to fit the exact needs of your airport, MUX allows multiple operators to view bags from single or multiple EDS, resulting in more efficient screening and use of personnel.

BENEFITS

- Scalable, flexible solution for networking explosive detection systems
- Highly customizable, site-specific network design
- Multiple redundancies to minimize points of failure
- Hot-swappable components with automatic failover
- Centralized data collection and seamless integration of 2-D and 3-D images

smiths detection

Formerly Morpho Detection, a Safran Company

EFFICIENCY AND OPTIMIZING PERFORMANCE

Boost Performance Now and in the Future

Our networking solutions remove the one-to-one relationship between a CTX system and an airport operator. Screeners at multiple combinations of workstations can review bags from one or multiple CTX systems, providing more efficient image distribution and optimization of personnel. With our infrastructure, we can design a network that works with your current site requirements while still being flexible enough to meet new regulations or passenger growth. Each MUXv2 server supports multiple scanners, TRIs, CIs, and Passive Threat Resolution Interfaces (PTRIs) to address changing needs. Each MUXv2 cluster is scalable to support up to 20 CTX 9800 DSi™/CTX 5800™/dual-energy systems.

Secure centralized data collection, more effective utilization of Threat Image Projection (TIP) for operator testing, and advanced statistical analysis through Field Data Reporting (FDR) also help to ensure optimal system and operator usage so you can plan for peaks in traffic.

We also offer a pathway for upgrading your hardware and software to MUXv2 – one that allows for the addition of 3-D systems, such as the CTX 5800 and CTX 9800 DSi, now or in the future.

Field Data Reporting (FDR) and Threat Image Projection (TIP)

We offer nearly twenty standard reports for FDR (also known as Data Reporting System, or DRS), including threat/alarm, system monitor, and operator performance summary. Reporting can also be customized, though our standard offering covers the most requested types of reports.

TIP library images are provided "randomly" to an operator to test their proficiency and alertness. After the screener makes a decision on the bag, MUXv2 scores their performance, collects the results and notifies the operator of their performance. Scores are then stored in a secure, centralized database, providing a detailed statistical record of operator performance.

Security

Our networking solutions are all subject to third-party penetration testing, and are designed to operate on either a dedicated, closed network or across an existing airport's network infrastructure. By using an existing network, there is the possibility of external intrusion into the system, which should be mitigated and considered. Since MUXv2 is a dedicated, closed network, we can control access to the solution, and we work closely with each airport to implement secure standards to reduce the risk of malicious intrusion.

NETWORKING COMPONENTS

Our MUXv2 system consists of multiple components, which are typically positioned throughout the airport:

CTX Scanners

CTX scanners are placed inline with the baggage handling conveyor belts or non-integrated setups.
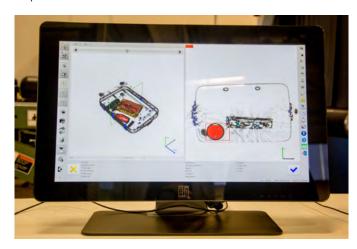
Control Interface (CI)

Each MUXv2 solution includes a Control Interface (CI), a special operator interface that provides a single remote access point to all control and configuration functions for each CTX system. Multiple CIs can be supported on each MUXv2 cluster and deliver continuous feedback on each machine's status. The CI workstation is generally placed in the same room where the Baggage Handling System (BHS) is controlled.

Threat Resolution Interface (TRI)

To display the CTX 9800 DSi and CTX 5800's high-resolution 3-D images, MUXv2 supports TRIs with faster processing speeds than previous models. These TRIs are grouped in one (or more) screening rooms.

Passive Threat Resolution Interface (PTRI)

Optional Passive Threat Resolution Interfaces (PTRI) can be added to the MUXv2 system to assist operators in directed searches of alarmed bags by recalling suspect bags on a passive viewing terminal. PTRIs use simple touch screens to focus on a specific area or item within an alarmed bag and may be fitted with a handheld barcode scanner, which expedites the screening process by allowing operators to quickly recall bag images based on bag ID. PTRI workstations are usually located in baggage reconciliation/inspection areas.

Passive Threat Resolution Interfaces assist baggage inspectors in resolving alarms.

MUX Cabinet

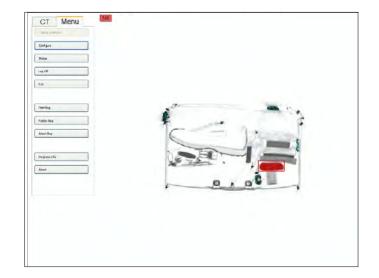The Centralized MUX Cabinet and network switches typically reside in a server room.

Basic Configuration

We currently offer three options:

• **MUXv2** is our fully scalable networking option, with integrated 3-D and 2-D image viewing, a high level of hardware redundancy, automatic fail-over of servers, hot-swappable components, and central storage of both "suspect" and "clear" images.

• As a lower cost option for the support of two CTX systems, **MUXv2 Light** eliminates some hardware for a lower level of redundancy, but still integrates 3-D and 2-D image viewing while securely storing a copy of all images.

• **MUX of One** is designed for standalone EDS systems, providing flexibility for lobby, integretaed, or out-of-gauge systems for remote alarm resolution.

The basic MUXv2 installation includes the following components:
- Data storage/database server (with redundant capabilities)
- MUXv2 software license for all computers
- Switches (with redundant backup)
- Server rack, connectors and miscellaneous hardware components (building infrastructure wiring is not included)
- Control Interface
- Redundant Uninterrupted Power Supplies (UPS) for the Centralized MUX Cabinet
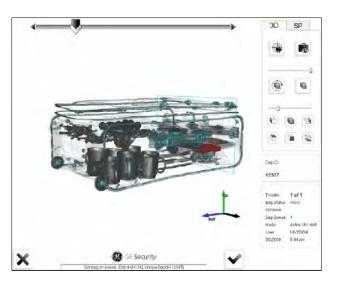
Configuration/Scalability Options

Every airport's design and associated screening requirements are unique, so we work closely with each customer to ensure that their network's features and components are engineered to meet the specific needs of their airport. In addition to typically is included in a basic installation, customization options include:
- PTRIs
- Remote racks
- Barcode scanners
- Network printers
- Additional TRIs
- Additional CIs
- Additional image storage
- MUXv2 peripheral expansion kit
- Comprehensive service and support

Our networking solutions are scalable, highly customizable options for linking explosive detection systems to more efficiently screen checked baggage.

For more information about the scalability and flexibility of our network offerings, contact your sales representative or email us at info@morphodetection.com.

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