NETWORKING SOLUTIONS FOR CTX EXPLOSIVE DETECTION SYSTEMS

Frequently Asked Questions about CTX EDS Networking

Our scalable 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.

HOW IT WORKS

What are the different networking solutions options available?

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, 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 units, providing flexibility for lobby, integrated, or out-of-gauge systems for remote alarm resolution.

What are the different components that make up MUXv2?

A basic MUXv2 installation typically includes the following components:

- Data storage/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 (CI)
- Redundant Uninterrupted Power Supplies (UPS) for the Centralized MUX Cabinet

Do I need to upgrade if I have older EDS machines or an earlier version of your network?

Our specialists can work with you to design a pathway for upgrading your hardware and software to MUXv2 – one that also allows for the addition of 3-D systems, such as the CTX 5800™ and CTX 9800 DSi™, now or in the future.

Does your network interface with the Baggage Handling System (BHS)?

Our standard network offering does not interface directly with the BHS, in order to prevent points of failure. Certain special customizations may require a MUX to BHS connection, but these must be carefully considered from a reliability, data integrity and security perspective.

Is this networking solution fully redundant?

Yes, and various levels of redundancy are possible. It depends on what you're trying to achieve or what your requirements are. Our networking solutions have duplicate switches, power supplies, redundant connections to each CTX system, multiple servers with automatic failover, and many other customizable options to provide additional redundancy, if required. The exact number of redundant components is site and customer specific, but your networking specialist can work with you directly to ensure your site specifications are met.

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SMITHS DETECTION'S CTX™ NETWORKING SOLUTION

How reliable is your network? How often does it go down?

It's extremely reliable. We use leading industry standard switches and servers and ensure almost all critical components are replicated, so there are very few points of failure.

How secure are your network solutions?

We conduct third-party penetration testing on all of our solutions. As a closed network system, MUXv2 is a secure solution in limiting the access to the system.

How does this solution get serviced?

We conduct monthly service checks to ensure all networks run at optimum levels.

Do you have examples of customized MUX installations and network reliability?

The flexibility we have within our solutions allows us to build a network to your exact requirements. With multi-level screening, certain alarmed images are sent directly to higher-proficiency screeners, avoiding the need to open those bags, and multiple images can be sent simultaneously to multiple departments (for instance, customs and police teams) for review. For another customer, we installed a system that allows an airport authority in a single, centralized location to review reports on all CTX machines in all airports on their network. From a reliability standpoint, a customer with a mirrored setup (identical primary and backup systems) experienced no downtime when their primary system was lost in an on-site accident – operations continued seamlessly with their backup system.

BENEFITS

What are the benefits to me to investing in your networking solution?

When choosing an EDS solution, you're making a long-term investment in your airport that meets both current and future detection standards. The same concept applies to networking your EDS. With our infrastructure, we can design a network that meets your current site requirements while still being flexible enough to address new regulations or passenger growth.

By implementing MUX, operators at multiple combinations of workstations can screen bags from one or multiple CTX systems, providing more efficient image distribution and allowing for the optimization of personnel. 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.

How is your networking solution configurable and scalable?

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 what's typically included in a basic installation, customization options include:

- Passive Threat Resolution Interfaces
- Remote racks, barcode scanners and network printers
- Additional Threat Resolution Interfaces and Control Interfaces
- Additional image storage capabilities
- MUXv2 peripheral expansion kit
- Comprehensive service and support

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What if I want to leverage the networks I already have?

Our networking solutions offer the ability to leverage an airport's current network infrastructure. However, by using the existing network, there is the possibility of external intrusion into the system, which should be mitigated and considered. As MUXv2 is a dedicated, closed network, we can control access to the solution.

What are the benefits of virtual clustering?

Virtual clustering reduces the need to have several separate networks, while creating customized workflows for image routing or to support multiple decisions on a bag. For instance, one cluster may link operators reviewing images from an international terminal, while another networks those screening domestic images. Virtual clustering should be discussed with your networking specialist on an airport-by-airport basis.

How many work stations do I need for my solution?

This depends on many factors, such as expected throughput, screening protocols, and decision time available within the BHS. Your networking specialist can work with you to determine the optimal number for your environment.

What about Threat Image Projection (TIP)?

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.

How big is the image library?

Our standard TIP library is 400 images, and that library can be added to by the customer as needed.

What types of reporting are available?

We offer nearly twenty standard reports for Field Data Reporting (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.

Why are your networking solutions an extra cost and not part of the total EDS package offered?

Every environment is unique, and a network designed for one airport may not work for another. The flexibility and scalability of our solutions allow us to design a customized system that operates the exact way you want and need it to. Your sales representative will work closely with you to determine the best operational setup for your airport.

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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