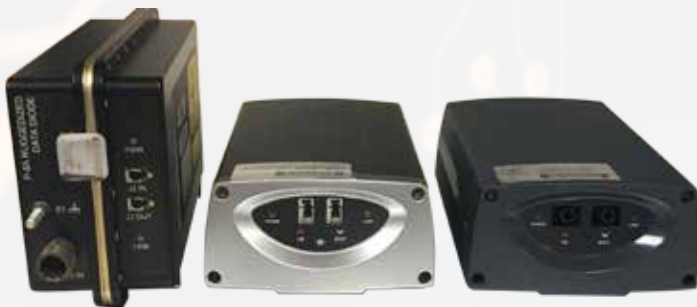


# Data Diode Solution™

Maximum Assurance and Maximum Unidirectional Throughput

Large scale data breaches are increasing in frequency and severity, while nation-state level adversaries are posing greater risks than ever before.

To mitigate these risks, we offer the Data Diode Solution for cross domain data transfer. The solution enables enterprises and Government agencies to transfer data from one domain to another via the most secure method. Listed on the Unified Cross Domain Services Management Office (UCDSMO) baseline, and backed by a Common Criteria EAL7+ security certification, the Data Diode Solution offers unparalleled assurance, while delivering superior unidirectional throughput.



*Solutions include enterprise and tactical hardware options.*

## Theory of Operations

The Data Diode Solution is a controlled interface, strictly enforcing a unidirectional flow of data at the physical level. The absence of a return path ensures no possible data leakage by physically preventing back channels, thereby controlling risks of threats designed to covertly breach and exfiltrate sensitive data.

## Use Cases

- **Network separation** – physically prevents data leakage from secure to non-secure domains
- **Streaming video feeds** – delivers HD video from non-secure field assets into secure environments
- **Live sensor feeds** – facilitates active streaming of field data from sensors to mission operation centers
- **Multicast/broadcast** – distributes data from a single source to authorized recipients
- **Critical infrastructure protection** – safeguards industrial control system networks and assists with North American Electric Reliability Corporation Critical Infrastructure Plan (NERC CIP) compliance
- **Bulk file transfers** – automates high-speed file transfers between shared network folders and streamlines database replication
- **Quarantine separation** – ensures the isolation of malicious data in a controlled sandbox environment
- **Cloud separation** – provides secure connection between sensitive cloud infrastructures
- **Secure email messaging** – allows sending of one-way email to secure domains

## FOR MORE INFORMATION

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The Data Diode functions in conjunction with our Data Pump Applications and content filtering software. Typically sitting between two servers attached to their respective security domains, the Data Diode physically supports unidirectional file-based transfers, video-streaming, and email.

### Data Pump Applications

#### Data Forwarding Application (DFA)

- Streams UDP, TCP and multicast data
- Can receive data from various sources on multiple ports

#### File Transfer Application (FTA)

- Enables unidirectional transfer of bulk files with deep content inspection
- Transfer Mode
  - All files are moved to the high-side destination and deleted from the low-side
- Archive Mode
  - Files are moved to the high-side destination, archived in a configured folder on the low-side, and deleted from the low-side source folder
- Replicate Mode
  - Any changes detected in the low-side source folder are replicated into the high-side destination folder while retaining the files on the low-side
- Mirror Mode
  - Regardless of low-side source folder activity, files are copied to the high-side as is, based on a configured time period

#### Email Transfer Application (ETA)

- Enables one-way transfer of SMTP data to send email to secured networks
- Blocks unauthorized attachments and notifies the high-side recipient
- Pairs with content filtering and antivirus

### About Us

BAE Systems Cybersecurity Products portfolio is focused on enterprise defense and the protection of information. We protect the world's most sensitive information with innovative solutions such as STOP™ secure operating system, our class-leading cross domain products, the Data Diode Solution™ and XTS® Guard 5, and our Secure Information Broker Appliance, SIBA.

### Content Filtering Capabilities

We install and configure third-party COTS products ahead of time to simplify deployment.

### Supported Content Filters

- Purifile™
- Tripwire™
- McAfee®
- Sophos

### Data Diode Specifications

Diode Throughput	100 Mbps, 1 Gbps, 10 Gbps
Dimensions	63 (H) x 118 (W) x 173 (L) mm 2.5 (H) x 4.6 (W) x 6.8 (L) in.
Weight	Unpackaged: 1 kg (2.2 lbs) Packaged: 2 kg (4.4 lbs)
Input Voltage	100-240V 50-60HzAC
Output Voltage	5V 4ADC
Connection	2.5 mm socket (2.5 mm plug on cable from PSU)
Humidity	Operating: 10%-90% RH non-condensing Storage: 10%-95% RH non-condensing