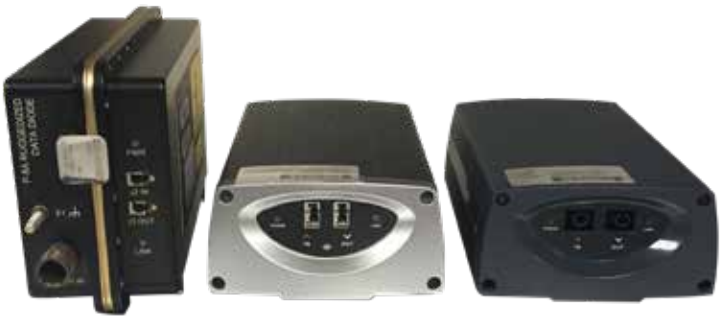
BAE SYSTEMS

Data Diode Solution™

Maximum assurance for unidirectional throughput

As cyber attacks continue to rise, nation state level adversaries are in greater risk than ever before. To prevent data breaches, BAE Systems has designed the Data Diode Solution. A Raise-the-Bar (RTB) compliant, one-way transfer device enabling secure unidirectional transfer of data between networks by utilizing software predicated on Red Hat Enterprise Linux (RHEL) software. This solution enables enterprise and government agencies to transfer sensitive information from one domain to another via the most secure method.



Solutions include enterprise and tactical hardware options.

File Transfer Application (FTA)

- Enables unidirectional transfer of bulk files

Transfer mode

- All files are moved to the high side destination and deleted from the low side

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

Email Transfer Application (ETA)

- Enables one-way transfer of simple mail transfer protocol (SMTP) data to send email to secured networks
- Blocks unauthorized attachments and notifies the high side recipient

Data Forwarding Application (DFA)

- Streams user datagram protocol (UDP), transmission control protocol (TCP), and multicast data
- Can receive data from various sources on multiple ports

The Data Diode functions in conjunction with our Data Pump Applications (DPA). 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 Diode specifications	
Diode throughput	Enterprise: 100Mb, 1Gb, 10Gb Tactical: 100Mb, 1Gb
Dimensions	Enterprise: 2.5 (H) x 4.5 (W) x 6.5 (L) in. Tactical: 5.0 (H) x 3.0 (W) x 8.0 (L) in.
Weight	Enterprise: 2.0 lbs Tactical: 3.5 lbs
Temperature	Operating: 5˚C to 40˚C Storage: -20˚C to 70˚C
Humidity	Operating: 10% to 90% non-condensing Storage: 10% to 95% non-condensing

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, providing critical infrastructure protection while safeguarding industrial control system networks.
- **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.

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Cleared for open publication on 04/20; **ES-C4ISR-042120-0077.**

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CS-20-A77-05