

Cybersecurity

ST Engineering Data Diode



Protecting the Security, Integrity and Availability of Critical Assets

ST Engineering Data Diode is one solution that can be used for data transfer while maintaining the “air-gap” between physically separated source and destination networks. As more cities and corporations around the world continue to leverage on improving technologies to better operate and manage services, the amount of data generated will only continue to increase.

ST Engineering Data Diode not only allows real time movement of data, it does so while eliminating cyber threats and maintaining the segregation between these networks. ST Engineering Data Diode complements the suite of cybersecurity solutions offered by ST Engineering.

Key Features

Information Assurance by Design

- Ensures no data leakage due to hardware-enforced one-way communication.
- Certified under Common Criteria (CC EAL 4+) by CSA.

Enhanced Performance with Patented Technology

- Patented SFP+ ensures unidirectional communication at high performance.
- File Loss Detection capability

Ease of System Integration and Customisation

- Integrated Management Portal for ease of deployment, operation & maintenance.
- Stackable hardware for integration of 3rd party solution.

Compact Design

- Allows all functionalities to be encapsulated within a compact footprint.

Specifications

Operational Feature	Specifications	
Support for a variety of network and data replication protocols	TCP, UDP, SYSLOG, SNMP Traps, HTTP, HTTP(S), Probe Mode Folders Mirroring (SMB, SAMBA), SFTP, FTP, SMTP OPC UA, Kafka, PI System, MODBUS (RS232/TCP), IEC 104, MQTT, RTSP	
Operational & Management	Built-in Data Diode operational health monitoring Can send SYSLOG, Email(SMTP), files, PI Point & SNMP trap for alerts NTP Synchronisation over Data Diode Self-Service Configuration Portal	
Security Certification	CC EAL 4+ certified by CSA Singapore	
Model	5282	5283
Dimensions and Weight		
Height	4.4cm	4.4cm
Width	43cm	43cm
Depth	76cm	76cm
Weight	10.6kg	11.8kg
Power		
Type/Watts	2 x 300 W redundant PSU	2 x 300 W redundant PSU
Input	AC 100 to 240 V @ 50/60 Hz 5A Max	AC 100 to 240 V @ 50/60 Hz 5A Max
Memory & Hard Disk	2 x 8 GB RAM 2 x 1 TB (expandable)	4 x 8 GB RAM 4 x 1 TB (expandable)
Network Interfaces		
Production Port (Data)	2 x 1 GbE (RJ45) or 2 x 10 GbE (SFP+) (teamed network)	
Management Port	1 x 1 GbE (RJ45) (per node)	
Unidirectional Media Transfer Rate	10 Gbps	10 + 10 Gbps
File Transfer Performance (Throughput)	End-to-end files transfer (per Data Diode) 1. File size more than 1 MB: more than 500 Mbps 2. File size less than 10 KB: more than 200 files/sec 3. No more than 1 file lost for every 5,000,000 files transferred	
Environment		
Operating	Temperature: 0 to 40°C Humidity: 10% to 95% RH	Temperature: 0 to 40°C Humidity: 10% to 95% RH
Storage	Temperature: -20 to 70°C Humidity: 10% to 95% RH	Temperature: -20 to 70°C Humidity: 10% to 95% RH
Export Control & Customs	Harmonised System (HS) code - 8517.62.61	
MTBF	114,218 Hrs	62,936 Hrs
Safety Certifications	FCC, CE, UL+CB, BSMI, VCCI	
Shipping Dimensions & Weight		
Height	16cm	16cm
Width	60cm	60cm
Depth	88cm	88cm
Weight	14.2kg	15.4kg