DIGISAFE®
CONNECTING SECURELY

TRUSTED NETWORK

Data Diode

Protecting the Security, Integrity and Availability of Critical Assets

Industry 4.0 and the growth of the Internet Of Things has been the driving force towards the convergence of computer networks and increased connectivity. However, when integrating these networks, a lot of cyber risks are aggregated. A solution that can maintain the "air-gap" among these networks while regulating legitimate data to flow is required to address these challenges.

DigiSAFE Data Diode is a unidirectional communication and data transfer gateway that enables organisations to transfer data securely across physically separated networks without the risks of any data leakage. The high performance solution comes in a compact design that integrates seamlessly with users' operational environments. The security design prevents data leakage and eliminates cyber threats by enforcing the one-way data transfer at both the physical and protocol layers.

It complements ST Engineering Electronics' suite of cybersecurity solutions to enhance the security and resilience of Information Technology and Industrial Control System/ Supervisory Control and Data Acquisition infrastructures against cyber attacks.

Key Features

Information Assurance by Design

Ensures no data leakage due to hardware-enforced one-way communication

Certified under National IT Evaluation Scheme (NITES) by Cyber Security Agency of Singapore (CSA)

Compact Design

Allows all functionalities to be encapsulated within a compact footprint

High Throughput and Robust Performance

Forward Error Correction (FEC) and Forward Error Detection (FED) are implemented at the data transfer layer to reduce data loss and to check data integrity respectively

Files lost detection capability

Configurable for High Availability

Ease of System Integration and Customisation

Supports an array of IT and SCADA/ICS networking protocols for system integration and interoperability

Empowering thru' Innovation

ST Engineering
Electronics

Specifications

Operational Feature	Specifications			
Support for variety of network protocols	- TCP, UDP, SYSLOG, SNMP Traps, HTTP, HTTP(S) - Folders Mirroring (SMB, SAMBA, CIFS), SFTP, FTP(S), TFTP, SMTP, SCP, RCP - OPC UA, OPC DA, MODBUS (RS232/TCP), MQTT			
Operation & Management	- Build-in Data Diode operational health monitoring - Can send SYSLOG, Email(SMTP), files, PI Point & SNMP out for alerts - NTP Synchronisation over Data Diode - Self-Service configuration Portal			
Hardware Specification	V1 (2U)	V2 (1U)	V3 (1U)	V4 (2U)
Certification	NITES certified by CSA Singapore	NITES & CC (under review)	NITES & CC (under review)	NITES & CC (under review)
Dimensions and Weight				
Height	4.30 cm	4.32 cm	4.40 cm	4.36 cm
Width	43.50 cm	43.00 cm	43.84 cm	44.20 cm
Depth	57.60 cm	54.50 cm	60.00 cm	29.83 cm
Weight	8.6 - 13.7 kg (per server)	14.0 kg	12.9 kg	4.1 kg (per server)
Power				
Type/Watts	One fixed 300 W; or two hot-swap 460 W	One x 70 W (per node)	One x 650 W (per node)	Up to 2 x 300 W
Input	AC 100 to 240 V	AC 125 to 250 V	AC 110 to 240 V	AC 110 to 240 V
Memory & Hard Disk	8 GB RAM 480 GB (expandable)	8 GB RAM 500 GB (expandable)	8 GB RAM (Up to 64 GB) 500 GB (expandable)	8 GB RAM (Up to 32 GB) 500 GB (expandable)
Network Interfaces	2 x GbE RJ-45 ports for Data and Management Interfaces	1 x SFP GbE and 1 x SFP 10 GbE ports for Data and 1 x SFP GbE port for Management Interface (per node)	1 x GbE RJ-45 and 1 x SFP 10 GbE ports for Data and 1 x GbE RJ-45 port for Management Interface (per node)	1 x SFP GbE (expandable to 7 ports) and 1 x GbE RJ-45 ports for Data and Management Interface
Throughput	Up to 1 Gbps(UDP) Up to 500 Mbps(files)	Up to 1 Gbps(UDP) Up to 500 Mbps(files)	Up to 9 Gbps(UDP) Up to 800 Mbps(files)	Up to 1 Gbps(UDP) Up to 500 Mbps(files)
Export Control & Customs	Harmonised System (HS) code - 8517.62.61			

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