

ST Engineering Data Diode (5000 Series) Integration with Radiflow OT IDS

Ensure secure data transfer between OT zones while maintaining the “air-gap” between physically separated source and destination networks

Introduction

ST Engineering’s Data Diode is a high-assurance, hardware-enforced, one-way data transmission solution that protects against network-based cyberattacks and data leakage, and enables network segregation.

ST Engineering’s Data Diode is an excellent solution for inter-zone data transfer, from high- to low-security zones, e.g. Manufacturing Execution Systems (MES), Electronics Manufacturing Services (EMS), Production Data, ERP, as well as production and cyber security monitoring systems, that need to send information across the DMZ to corporate enterprise, cloud, SOC, OCC and other systems in low security level zones.

Alternately, ST Engineering’s Data Diode can be used for sending operation traffic from the high-security process zones to control/supervisory levels.

The Problem

Securing data transfer from high- to low security assurance zone can not always be achieved using a software-based security gateway, such as firewalls or secure routers due to their inherent vulnerabilities.

Instead, a hardware-based gateway is required to ensure that should the low-security zone (e.g. the cloud, or enterprise zones) be compromised, the higher-security zone that sent the data would remain isolated, and the channel used for sending the data between the zones would not be used as an attack vector in the production area.

In addition, effective monitoring and anomaly detection requires deep understanding of traffic within the operational networks and this demands stateful awareness of session and protocol support.



ST Engineering Data Diode (Model 5282, Top and Model 5283, Bottom) are able to eliminate cyber threats and maintain inter-network segregation.

Features include:

- Hardware-enforced one-way communication.
- CSA-certified (CC EAL 4+)
- Patented SFP+ ensures unidirectional communication at high performance.
- File Loss Detection capability
- Ease of system integration and customization through Integrated Management Portal
- Stackable hardware
- Compact design

Solution:

The integration between ST Engineering’s Data Diode (5000 Series) and Radiflow’s OT IDS and OT collector provides a one-box solution for full visibility into the organization’s OT assets, topology, system behavior, cyber-attacks, and breaches to OT cyber security policies, and can be used to secure data transfer from L1 to L2, L3 to L5, or both.

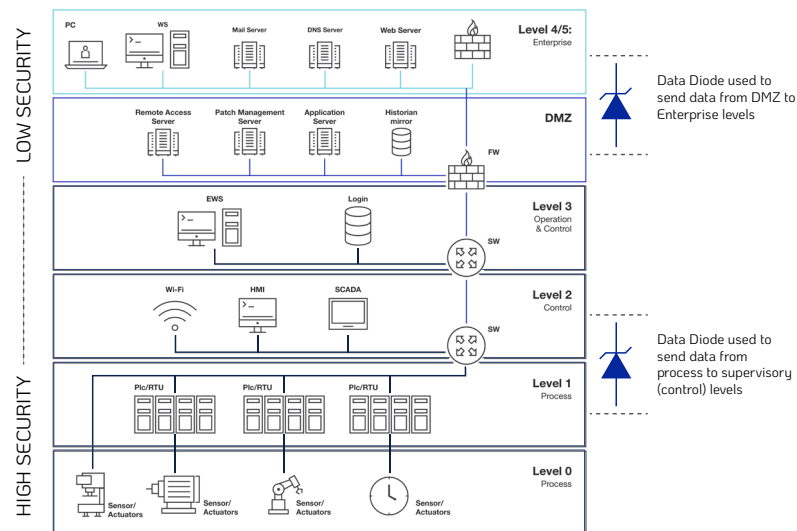
With the new integration, cybersecurity alerts and reports from Radiflow’s OT IDS can now be sent from production environments to enterprise and cloud services, while preventing any form of network-based cyber threats that may originate from the networks of lower security assurance levels.

For securing data transfer between L1 (Process) and L2 (Control), the integrated solution includes a Radiflow ruggedized, hardened OT data collector installed in L1. This eliminates the need to install additional industrial PCs at the high-security Process level, as PCs are prone to vulnerabilities and might be compromised.

Use case

A Radiflow OT IDS is connected to L2 to monitor production switches from the OT process level and supervisory environments. Operational data is collected via span ports (mirror) from industrial switches and network taps placed at strategic data flow junctions.

In this scenario, the OT IDS’s monitoring is totally out-of-band from the production network, and protected by the ST Engineering Data Diode to ensure there is no available access to Radiflow’s OT IDS or to the production network from a lower security assurance level such as L5 (Enterprise).



ST Engineering Data Diodes, integrated with Radiflow’s OT IDS, ensure one-way data traffic from high to low-security zones

ABOUT RADIFLOW

Radiflow develops unique OT cybersecurity tools to protect and ensure organizations’ digital resilience. The company closely collaborates with Managed Security Service Providers to oversee the discovery and management of all relevant data security points. Founded in 2009, Radiflow has offices and partners in Europe, USA and APAC. Its field-proven solutions are installed at over 7000 sites around the globe.

ABOUT ST ENGINEERING

ST Engineering is a global technology, defence and engineering group with offices across Asia, Europe, the Middle East and the U.S., serving customers in more than 100 countries. The Group uses technology and innovation to solve real-world problems and improve lives through its diverse portfolio of businesses across the aerospace, smart city, defence and public security segments. An industry leader in cybersecurity with over two decades of experience, we deliver a holistic suite of trusted cybersecurity solutions to empower cyber resilience for government and ministries, critical infrastructures, and commercial enterprises.