AhnLab Data Diode

Rock-Solid Unidirectional Data Transmission

AhnLab Data Diode fortifies OT network air-gapping by delivering one-way data transmission from the OT to the IT network.

Overview

AhnLab Data Diode is a simple but powerful security solution that strengthens network air-gapping by delivering unidirectional data transfer capabilities. It ensures the separation of the OT network, which tends to be more secure with less exposure, by forcing one-way communication from the OT to the IT network. We applied technologies such as data encryption, forward error correction (FEC), error control, and malware inspection to further reinforce the security and integrity of transmitted data. As a result, it has been embraced by various organizations across factories, power plants, transportations, etc.

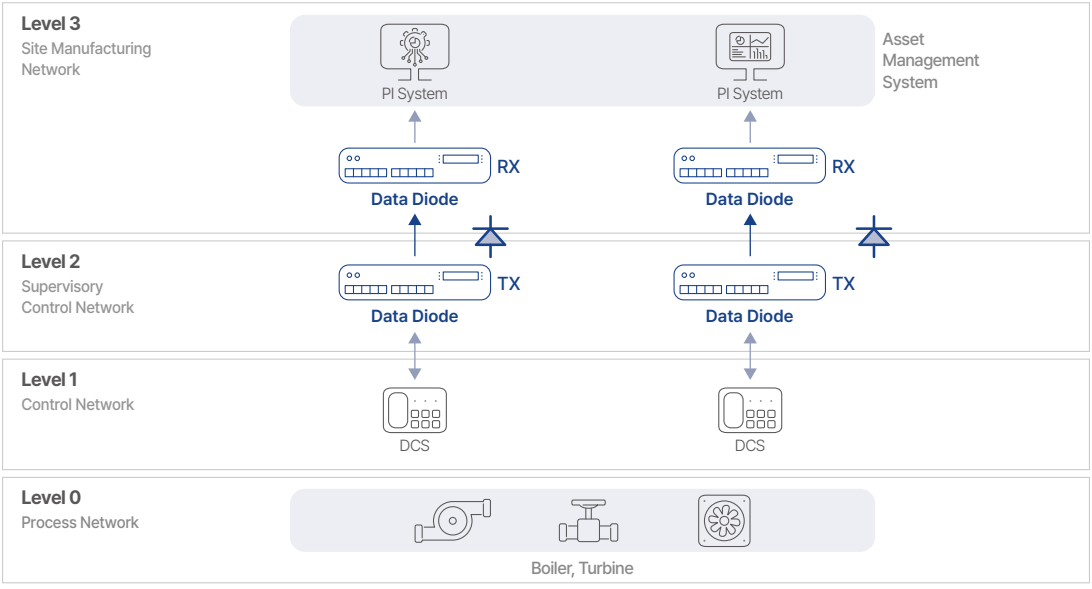
Hardware with One-way NIC
Non-routable Protocols

Encrypting Transmitted Data
Forward Error Correction (FEC)

Supporting Various Use Cases
Heterogeneous Protocol Conversion

Deployment

AhnLab Data Diode implements one-way data transmission by physically connecting the transmitter (Tx) and receiver (Rx) in a switchover format to build a properly air-gapped and secure environment. Thanks to our extensive protocol support across IT and OT domains, the solution deployment can be optimized for the customer environment. Its flexibility can satisfy multiple use cases associated with OT protocol conversion, file transfer (FTP), CCTV streaming, and database integration.



Key Features

#1. Service Features

One-way Communication	· Tx and Rx are physically separated (detached) · Only the Tx is physically connected, while the Rx is disconnected · No reverse transmission from less secure networks to secure networks · Real-time data transmission without data loss
Redundant Configuration	· Redundant configurations of Tx and Rx for stability · Performing failover measures when equipment or line fails

#2. Security Features

Data Integrity	· Log generation in case of data loss · Transmission management: error recovery codes, transmission rate control, etc. · Receiving management: error test/recovery, packet loss and receiving failure management
Secure Communication	· Data control setting when network ports of the Tx and Rx are disconnected · Safe and exclusive unidirectional protocol for Tx and Rx transmission (not TCP/IP) · TCP/IP communication for other occasions to support various services
Malware Scan	· Robust malware scan powered by AhnLab TS Engine
Encryption	· Confidentiality and integrity through the encryption of transmitted data

#3. Management Features

Log	· Data transmission log and system audit log management · Logs saved for at least 365 days
Access	· Real-time access status and access history · Blocking access and locking user account when the admin authentication fails · Terminating sessions when admin exceeds pre-defined login duration · Preventing overlapping logins
Setting	· Security setting based on the national standard guideline · Real-time policy setting

Product Lineup

AhnLab Data Diode offers two hardware types, supporting data transmissions from 100Mbps to 1G-10Gbps; the lineups are Detachable (1-10G) and Mini (100M). Customers can choose the hardware that best suits their needs.

	Detachable	Mini
CPU	Intel Quad-core 3.6GHz	Intel Dual-core 2.2GHz
RAM	16GB	8GB
HDD	1TB	120GB
NIC	10/100/1000Mbps * 8 ports	10/100/1000Mbps * 2 ports
One-way NIC	1/10Gbps Fiber * 2 ports	100Mbps * 1 port

AhnLab, Inc.
220, Pangyoyeok-ro, Bundang-gu, Seongnam-si, Gyeonggi-do, 13493, South Korea
www.ahnlab.com / global.sales@ahnlab.com

AhnLab