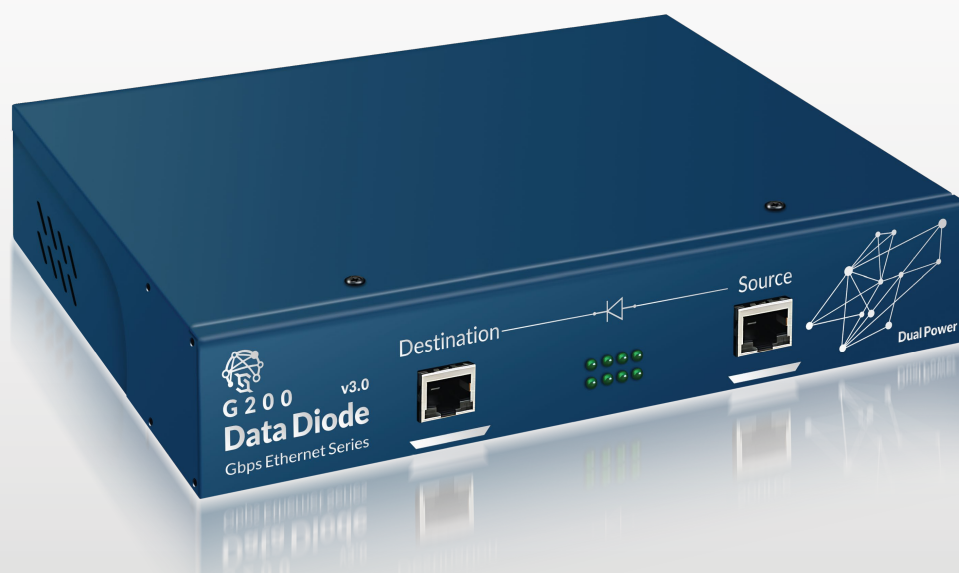




Parto Ertebat Saba

DATA DIODE

Data Flow Rectifier



A Data Diode is an advanced cybersecurity device designed to ensure secure, one-way data transmission over Ethernet networks. The device is built entirely on a hardware-based architecture and directs data flow exclusively in a single direction without relying on any operating system. To achieve this objective, the transmitting and receiving sections are designed as completely isolated components, preventing any possibility of data feedback, reverse communication, or unauthorized intrusion.

 www.pesaba.com  admin@pesaba.com  +98 021 44215738

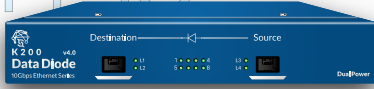
 No. 2, Corner of 7th Alvand Alley, Ebrahimi Street, Marzdaran, Tehran, Iran

A-100



- Interfaces: 2 x Fast Ethernet (FE)
- Dimensions (H x W x D): 40 x 140 x 190 mm
- Weight: 0.45 kg
- Operating Temperature: 0°C to +60°C
- Power Supply: Dual 5 VDC Power Adapters

A-10



- Interfaces: 2 x 1Gbps Ethernet Ports
- Dimensions (H x W x D): 45 x 244 x 190 mm
- Weight: 1.395 kg
- Operating Temperature: 0°C to +60°C
- Power Supply: Dual 5 VDC, 3 A Power Adapters

G-200



- Interfaces: 2 x 10Gbps Ethernet Ports
- Dimensions (H x W x D): 45 x 244 x 190 mm
- Weight: 1.395 kg
- Operating Temperature: 0°C to +60°C
- Power Supply: Dual 12 VDC Power Adapters

K-200



- Interfaces: 2 x Fast Ethernet Ports
- Dimensions (H x W x D): 45 x 180 x 290 mm
- Weight: 1.1 kg
- Operating Temperature: 0°C to +70°C
- Power Supply: Dual 220 VAC Power Inputs

G-300

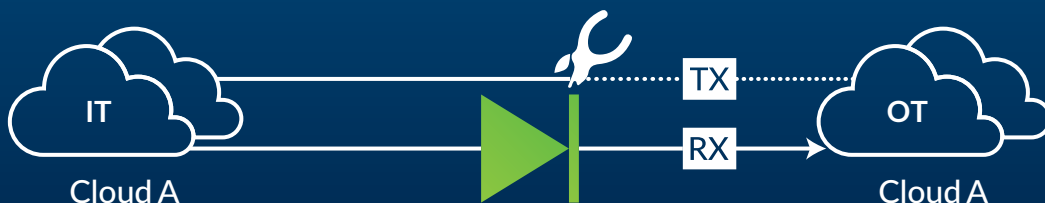


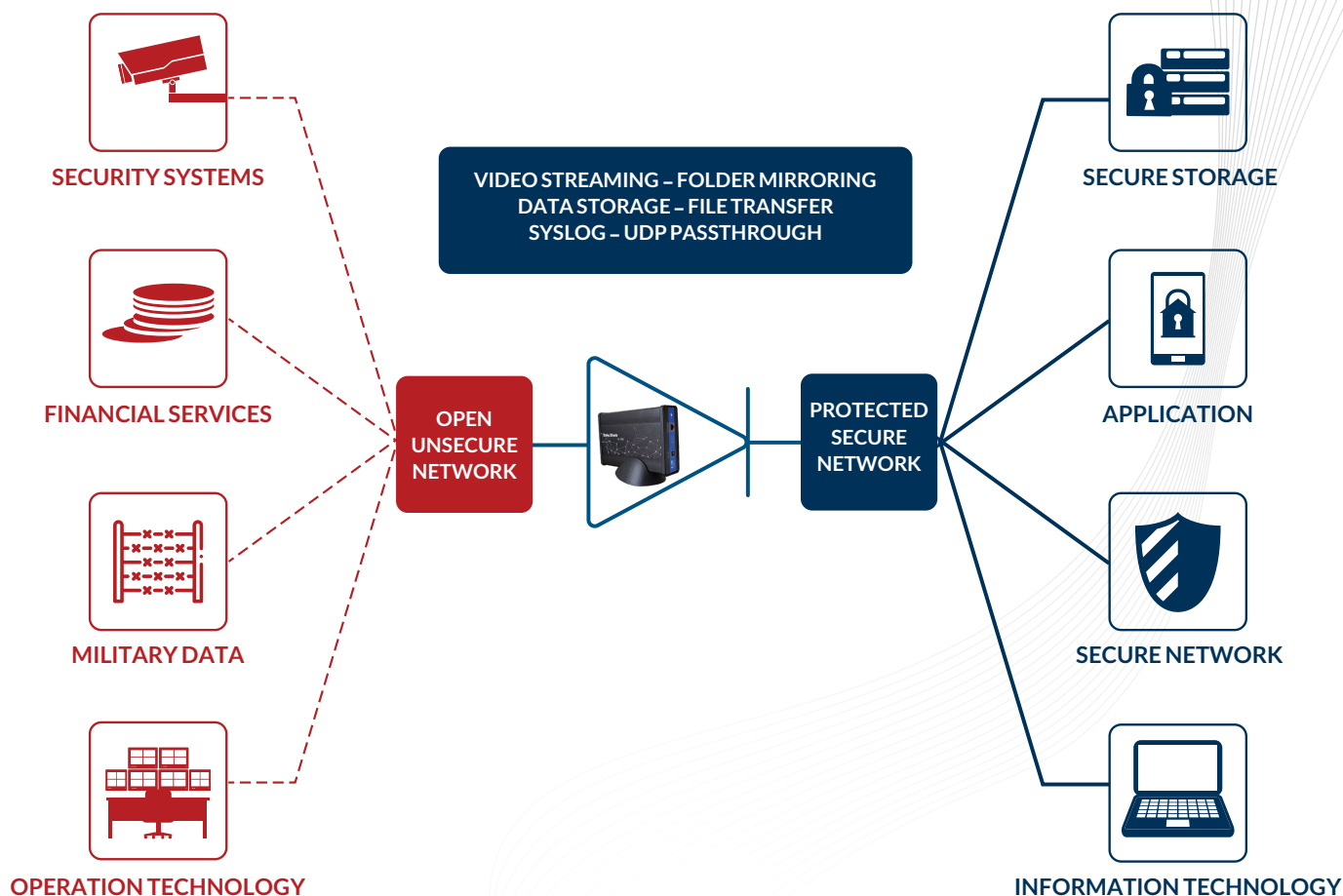
- Interfaces: 2 x 1Gbps / Fast Ethernet Ports
- Form Factor: 1U Rack-Mount Chassis
- Weight: 3.45 kg
- Operating Temperature: 0°C to +60°C
- Power Supply: Dual 220 VAC Power Inputs
- Live Camera Streaming Support



System Technical Specifications

- Secure and unidirectional data transfer over Ethernet-based networks
- Hardware-based isolation between network segments (Air gap)
- FPGA-based architecture for maximum performance, high throughput, and enhanced cyberattack resilience
- Prevention of data leakage through isolated power circuits for transmission and reception modules
- Long-term reliability with a set-and-forget deployment model
- Support for a wide range of data transfer services
- User-friendly Windows and web-based management software
- Simultaneous delivery of multiple services on a single platform
- Available in FE, GE, and 10GbE speed for various bandwidth requirements
- Available in desktop and 19-inch 1U rack-mount form factors
- Available with both AC and DC power options
- Operation in transparent mode (without an IP address) or IP-based mode with DHCP support
- Equipped with LED indicators for monitoring device operational status and performance
- Support for data encryption between the two management software applications
- REST API support for user interface customization by the customer or system integrator
- Support for SNMP and Syslog monitoring protocols for industrial network supervision
- Ability to define multiple users with different access privilege levels
- File reception event notification through the Kafka platform
- Integrated Performance Management dashboard
- Capability for integration with kiosk systems
- Intelligent transfer capabilities powered by the YARA scanning engine





Available Services

1- Unidirectional Message Transfer Service (UDP Streaming)

This service enables one-way transmission of UDP messages generated by devices such as sensors without requiring any additional software.

2- File Transfer Service

This service transfers multiple folders and their entire contents from one side to the other, regardless of file type or size. It also supports file filtering based on filename patterns, file extensions, file size, creation time, and folder structure.

3- Database Synchronization Service

This service provides real-time synchronization of SQL, Oracle, and Elasticsearch databases and tables.

4- S3 Synchronization Service (Simple Storage Service)

This service enables synchronization of object storage platforms that support the Amazon S3 storage protocol, such as MinIO.

5- Kafka Synchronization Service

This service enables real-time notification of data stored within Kafka Message Broker nodes.

6- Screen Mirroring Service

This service provides real-time transmission of display output from secure industrial networks to the target (untrusted) network. It also supports multiple Unicast and Multicast streaming scenarios.

7- Modbus Service

This service enables periodic communication with PLCs using the Modbus TCP protocol and transfers the acquired data to the destination through the Data Diode.

8- Camera Service

This service supports video streaming from multiple cameras to an NVR or video management and storage applications using the RTSP protocol.

9- OPC UA Transfer Service

This service enables the transfer and real-time synchronization of industrial tag data associated with control systems and SCADA platforms through the Data Diode.