

INFODIODE SMART

Solution for Critical Infrastructure



InfoDiode SMART Software & Hardware solution

InfoDiode SMART H&S solution provides simultaneous data transmission of several industrial protocols across the perimeter boundary. Specialized industrial protocol connectors allow to collect data from each network segment (from different SCADA systems, controllers, OPC servers, sensors) and transfer them further on a one-way channel, Providing the highest insulation requirements for the protected segment.

InfoDiode SMART H&S solution is implemented on the Russian certified hardware platform, Russian software developed by AMT-GROUP.

Critical Infrastructure Protection and Monitoring

Provides protection and monitoring of CI object, excluding any impact on it.

Support of Industry protocols OPC UA, Modbus, MQTT

Provides secure remote interaction of critical segments of individual enterprise and organization through untrusted networks. Transmits data abroad of the trusted perimeter of the network on the protocols OPC UA, Modbus, MQTT, FTP(S), CIFS, SFTP, UDP, etc.

The Foundation for Digital Twins

Transfers replicas of critical information resources (OPC servers, SCADA systems by major vendors) outside the ICS/CI perimeter borders for subsequent processing and analysis.

Centralized Control Rooms and Situation Centers

Provides the centers with real online data, including video recording, in conditions of guaranteed isolation of observation objects.

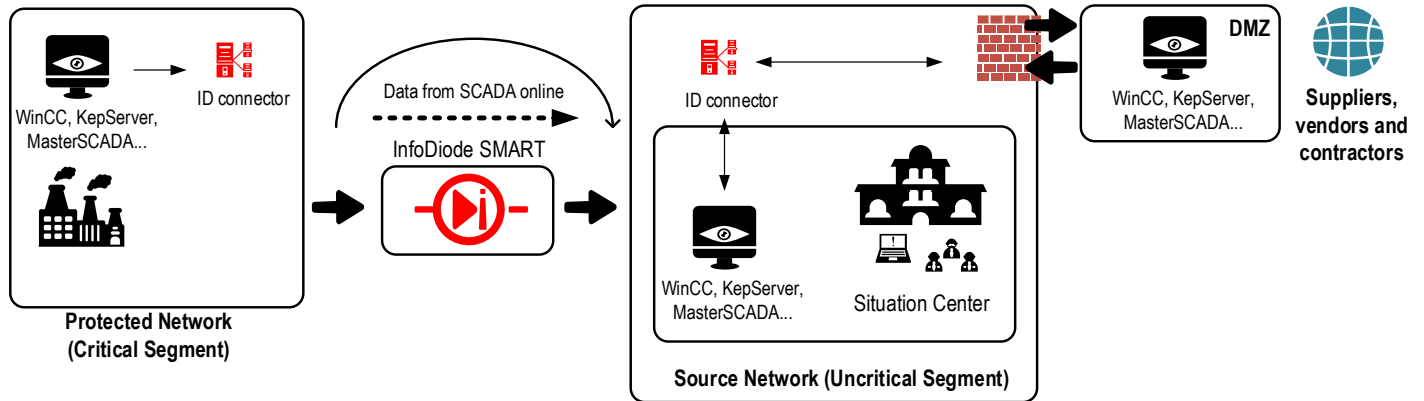
Aggregation of SCADA data within ERP, MES and cloud solutions

Transmits data from multiple SCADA systems to ERP, MES systems, cloud solutions, eliminating any feedback from these systems.

InfoDiode SMART Application Scenarios

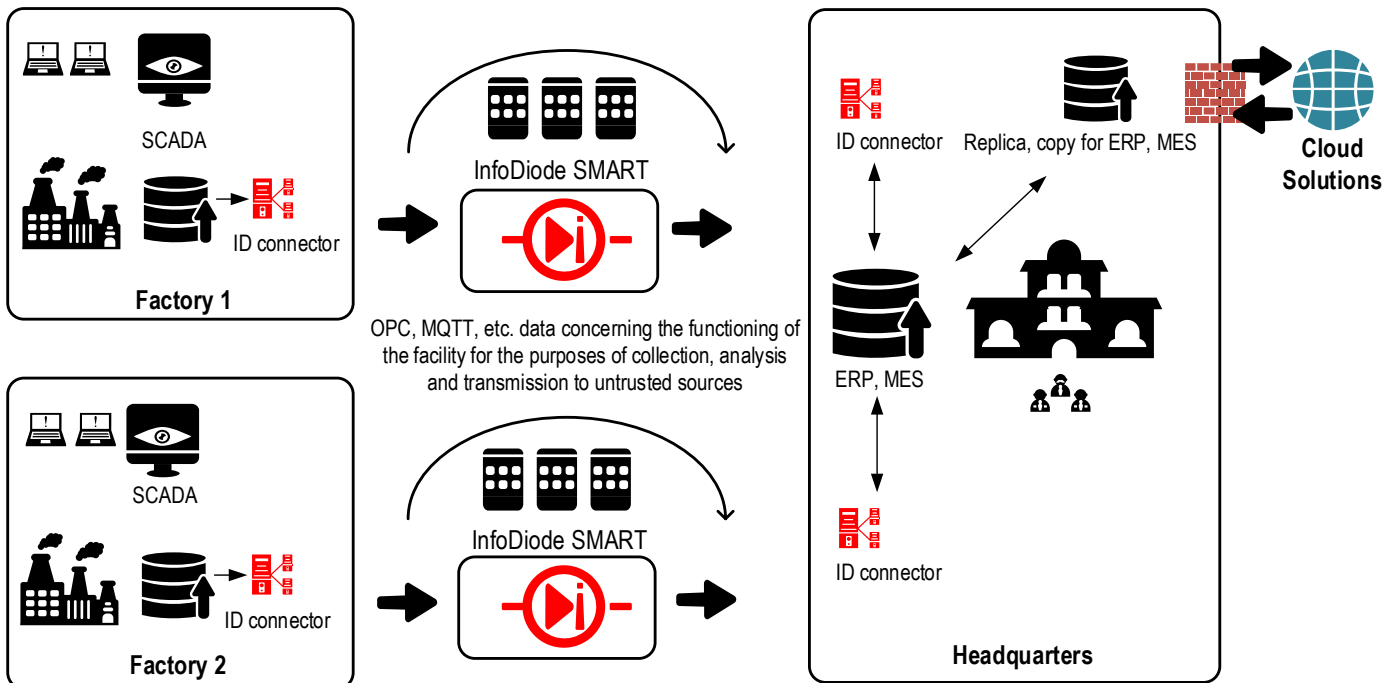
Scenario 1. Online monitoring of SCADA systems abroad perimeter

Applicability: Critical industrial and energy facilities, enterprises of the defense and industrial complex. In this scenario, the object is physically isolated from the observer network, while maintaining online monitoring of the object through SCADA.



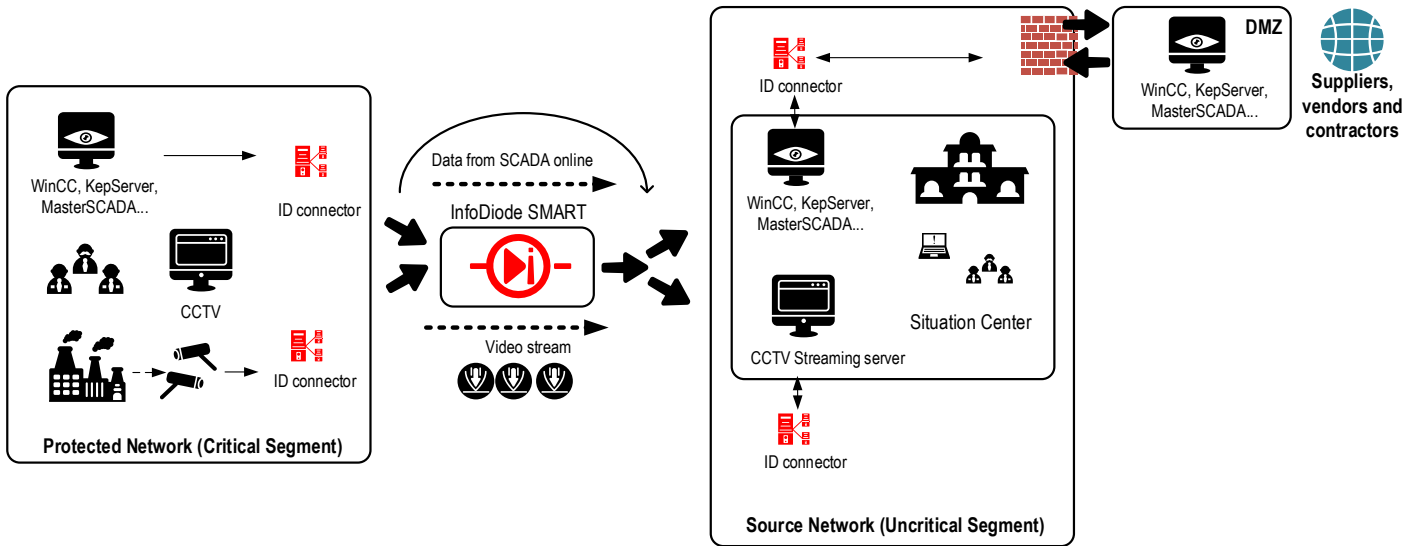
Scenario 2. Transfer of «raw» data from SCADA systems to higher levels, in ERP, MES, etc.

Applicability: In this scenario it is possible to collect and aggregate data from several SCADA systems for their transmission to MES, ERP, to «cloud». At the same time, the data sources themselves, located in critical segments, remain completely isolated from external influences. They are protected by hardware solutions.



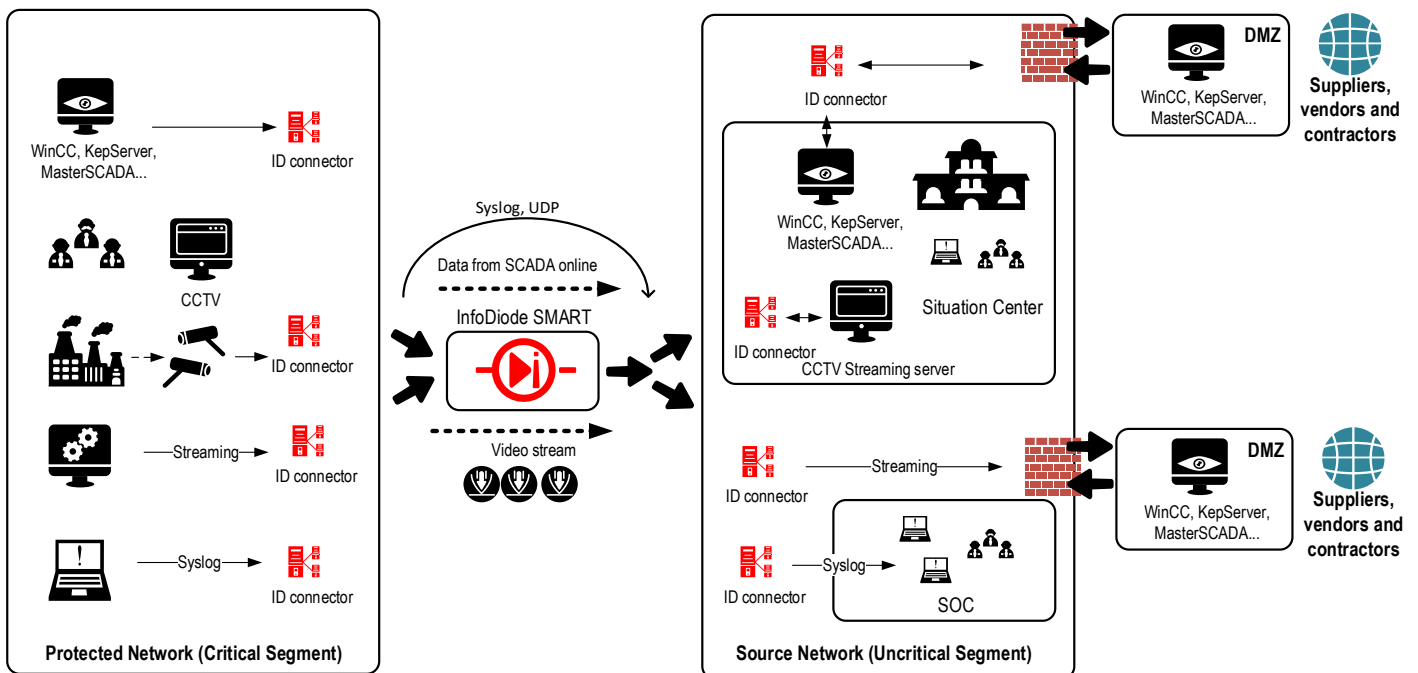
Scenario 3. Visual observation of the object under conditions of data transmission and telemetry

Applicability: any organization that uses closed network segments where industrial traffic circulates. This scenario provides not only online monitoring of the diagnostic parameters and SCADA data of the system, but also enables simultaneous transmission of video stream, keeping visual control of the condition of the object, being outside the protected perimeter. Given the impossibility of establishing any connection (guaranteed no feedback). This scenario significantly exceeds the security of traditional perimeter firewall schemes and allows the design of integrated situation centres and monitoring centres, excluding any impact on CI.



Scenario 4. Transfer complex traffic - syslog, video, industrial, desktop streaming

Applicability: The schema provides a high level of protection against external threats (similar to Scenario 3) and effective isolation, while the number of data sources can be further expanded by transferring syslog traffic from industrial segment systems, Streaming desktop operators, transmitting UDP traffic of different nature.



InfoDiode SMART technical specifications

Characteristics	Specifications
Transmission rate	Up to 1 Gbps
Supported protocols	OPC UA, Modbus, MQTT, FTP/FTPS, SFTP, CIFS, UDP
Industrial applications	WinCC, KepServerEX, MasterScada
Interfaces	2 x 1000Base-T
Mounting system	(1RU) Rack mounting, tabletop
Power supply	Redundant, 4 inputs, 198-253 VAC, 47-63 Hz, Max 60 W, IEC320 IEC
Operating conditions	0 – 40 C, humidity 5—95 %
Chassis size (WxHxD, mm)	483 x 44,5 x 250
Unit weight (kg)	4,2
Certificates	EAC
Design	Industrial, no moving parts
Passive cooling	Yes

Ordering information

P/N	Description	Detailed description
InfoDiode SMART		
AMTID-SMRT-BK-1000	InfoDiode SMART - Base KIT, 1Gbps, including InfoDiode SMART software	InfoDiode SMART, 1RU (1Gbps, 1000Base-T, RJ45), InfoDiode SMART software, support UDP, MQTT
Connectors for InfoDiode SMART		
AMTID-SMRT-CN-MB	External software for InfoDiode SMART - connector for ModBus	Software (connector) for virtual machines and/or servers - support ModBus industrial protocol
AMTID-SMRT-CN-OPCUA	External software for InfoDiode SMART - connector for OPC-UA	Software (connector) for virtual machines and/or servers - support OPC UA industrial protocol (*up to 10 000 tags)
AMTID-SMRT-CN-FT	External software for InfoDiode SMART - connector for TP/FTPS, CIFS, SFTP	Software (connector) for virtual machines and/or servers - support FTP/FTPS, CIFS, SFTP



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