Radiflow

iSEG RF-1031
Secure Gateway

HIGHLIGHTS

- Authentication Proxy for securing remote access

- IP SCADA firewall

- IPsec VPN over cellular & fiber with X.509 certificates

- Ruggedized gateway for Serial and Ethernet devices, fit for harsh environmental conditions

- Resilient network uplink over Ethernet or Cellular

- SCADA protocols gateway

- Enabler for NERC CIP v6 compliance

DESIGNED FOR SMALL REMOTE SITES THAT REQUIRE A SECURE CONNECTION TO A LIMITED NUMBER OF DEVICES

The iSEG RF-1031 offers security solutions for both M2M (Machine to Machine) and H2M (Human to Machine) traffic by incorporating a DPI (Deep-Packet Inspection) firewall, as well as a user-identity firewall.

The iSEG RF-1031 includes a distributed DPI firewall or monitoring all network traffic and managing physical and remote access control systems. The whitelist-based firewall is installed at every port for both Serial and Ethernet traffic. Each SCADA protocol packet is validated by the firewall for source, destination, protocol and packet content.

The firewall's two states (Monitoring and Blocking) allow blocking suspicious traffic or just monitoring, in addition to triggering an alarm at the control center.

The iSEG RF-1031 supports VPN tunnels for secure inter-site connectivity with IPsec, DMVPN, mGRE tunnels (among others) with key management certificates, supporting layer-3 services.

In addition, the iSEG RF-1031 fully supports L3 switches (VLANs, Routing, etc.) for Ethernet and serial ports.

The iSEG RF-1031 offers a built-in APA (Authentication Proxy Access), for compliance with the NERC CIP V6 requirement for identifying and granting privileges to users prior to granting network access.

Once validated, specific access is granted to predefined devices and functions, and each operation is logged. The iSEG RF-1031 is also integrated with a physical identity server system, for other authentication methods (e.g. magnetic card.)

SPECIFICATIONS

SECURITY

Distributed DPI Firewall
Profile-based firewall
Security rules planning per service group Firewall modes: Monitoring, Enforcement
IEC 104 DPI Firewall
Modbus TCP DPI Firewall
DNP3 TCP DPI Firewall
S7 TCP DPI Firewall

VPN

IPsec Certificates X.509
IPsec Dynamic Key Exchange
IPSec encryption AES, 3DES
L3 IPSec VPN policy based L3
IPSec VPN route based
L3 mGRE DM-VPN
Access control
Access Lists L3, L4
NAT
User-based/Task-based access control for local devices via local APA (Authentication Proxy Access)
OS image encryption

INTERFACES

1 or 2 x RS-232 RJ45 Serial port 1 x RS-485 RJ-45 Serial port
1 x 10/100TX RJ-45 Ethernet port 1x100/1000 SFP Ethernet port Cellular Modem with dual SIM for HSPA + LTE/ CDMA 450MHz
Discrete lines: 2 In, 2 Out
Console

PHYSICAL DESIGN

DIN rail mounting, optional wall mount Rugged enclosure - IP 30
Fanless, self-cooling
Wide range of ambient temperature: min. -40°C, max +70°C (-40°F to +158°F)
Storage Temperature: min -40°C, max +85°C Operating humidity up to 90%
Dimensions (HxWxD) 106 x 44.7 x 120mm Power consumption: 9W
Power supply 9-60V
DC IEC 61850-3 conformance
MTBF 25 years

MANAGEMENT

Console serial port Backup/Restore running config
Conditioned/scheduled system reboot
Remote management and upgrade TFTP/SFTP Client
Safe Mode
Syslog

PROTECTION

Protection over wired and cellular connections Protection between Cellular ISPs (SIM cards backup)
Conditioned/scheduled system reboot

NETWORKING

Serial

SCADA gateway IEC 101/104 and DNP3 Terminal Server Byte/Frame modes Serial transparent tunneling byte mode
Routing
Static routing
OSPF v2
IPv4

Switching

Auto Crossing
Auto Negotiation IEEE 802.3ab VLAN Tagging
Time
Local Time settings
SNTP
Diagnostic
Counters & statistics per Port LED diagnostics
Ping

About Radiflow

Radiflow is an OT Cyber Security company that develops unique tools to secure digital assets for the long term. The company works directly with Managed Security Service Providers to overseethe 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 in over 6000 sites around the globe.

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