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.)

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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
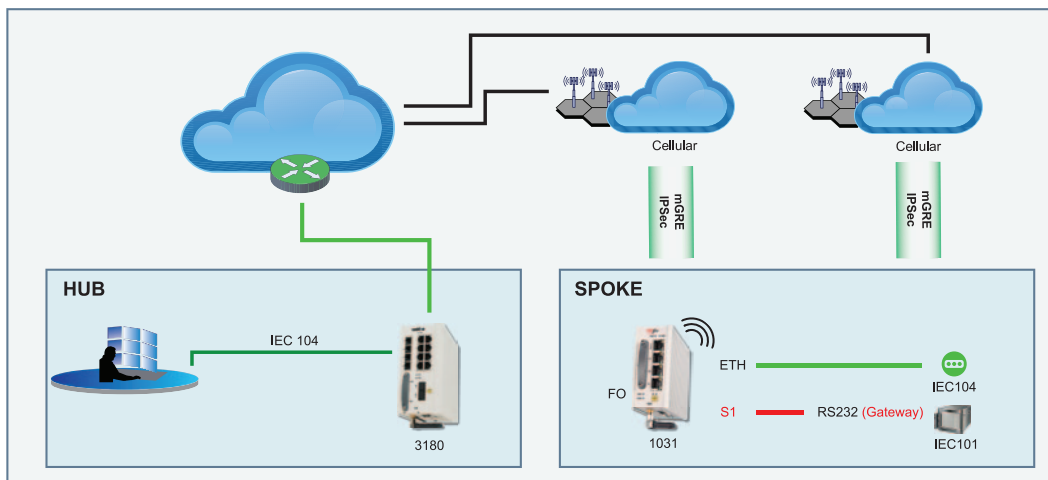
Routing

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
RMON
DDM

Typical implementation, with remote site access over redundant cellular networks

About Radiflow

Radiflow is a leading provider of industrial cyber security solutions for critical business operations. Our comprehensive portfolio of cybersecurity solutions empowers critical infrastructure and industrial enterprises to maintain visibility, control and security of their operational environment. Our intelligent threat management for Industrial cybersecurity minimizes potential business interruption and loss within your OT environment.

The Radiflow team consists of professionals from diverse backgrounds, from veterans of military cyber and communications units to former employees of leading players in the industry. Founded in 2009, Radiflow' first solutions were launched in late 2011, validated by leading research labs and successfully deployed by major utilities worldwide. More at radiflow.com.

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