

# 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.)

### ABOUT RADIFLOW

Radiflow develops trusted Industrial Cyber-Security Solutions for Critical Business Operations. Our portfolio of game-changing solutions for ISC/SCADA networks empowers users to maintain visibility and control of their OT networks. Our intelligent Threat Detection and Analysis Platform for industrial cyber-security minimizes potential business interruption and loss within your OT environment.

Radiflow's team consists of professionals from diverse backgrounds, from cyber-experts from elite military units and automation experts from global cyber-security vendors.

Founded in 2009, Radiflow' solutions, are successfully deployed by major industrial enterprises and utilities protecting over 5,300 critical facilities worldwide. More at [www.radiflow.com](http://www.radiflow.com).

## 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: 5W  
 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  
 NAT  
 DHCP client

#### Switching

Auto Crossing  
 Auto Negotiation IEEE 802.3ab  
 VLAN Tagging

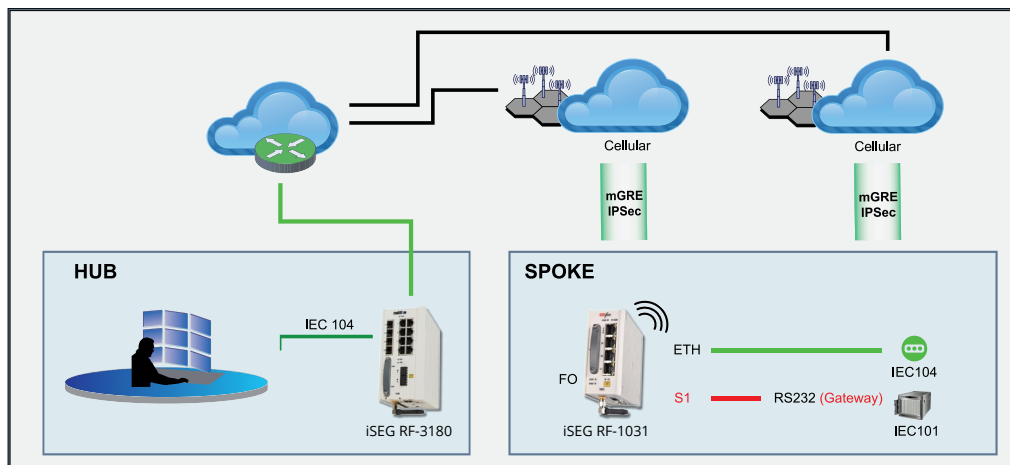
#### Time

Local Time settings  
 SNTP

#### Diagnostic

Counters & statistics per Port  
 LED diagnostics  
 Ping  
 RMON  
 DDM

## TYPICAL DEPLOYMENT



Typical implementation, with remote site access over redundant cellular networks

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