Radiflow

PRODUCT DATASHEET

iSEG RF-3180
Secure Gateway

HIGHLIGHTS

- Secure access and identity management
- IP DPI SCADA firewall (DNP3, ModBus, IEC-101/104, S7)
- IPsec VPN over cellular & fiber
- Up to 16 x 10/100 and 2 x 100/1000 SFP ports
- RS-232 ports with protocol gateway functionality
- Cellular 2G/3G/4G/LTE modem with two SIM cards for operator redundancy
- Fit for harsh industrial environments

SPECIFICALLY DESIGNED FOR REMOTE SITE ENVIRONMENTS

Radiflow's iSEG RF-3180 ruggedized gateway was designed to meet the security and environmental challenges of critical infrastructures' remote sites.

The iSEG RF-3180 secures both M2M (Machine to Machine) and H2M (Human to Machine) traffic by incorporating DPI (Deep-Packet Inspection) capability for analyzing SCADA network traffic. Upon detecting an anomaly the 3180 will automatically generate alerts, block the abnormal activity and isolate any affected sub-networks.

To facilitate NERC CIP V6 compliance, the iSEG RF-3180 includes an APA (Authentication Proxy Access).

It grants authenticated users access to predefined devices and functions, all fully logged.

Radiflow's whitelist-based, distributed DPI firewall ensures uninterrupted control over the network. Installed at every port for both Serial and Ethernet traffic, meaning that every access point at the remote site is firewalled. Each SCADA protocol packet is validated by the firewall engine not only for its source and destination, but also for its protocol and packet content. The distributed firewall structure enables the creation of a unique firewall at each access point on the network, which is especially important for securing insider attack.

SPECIFICATIONS

SECURITY

Profile-based firewall
Security rules planning per service group Modes: Monitoring, Enforcement
IP DPI SCADA firewall (DNP3, ModBus, IEC-101/104, S7)

VPN

IPsec Dynamic Key Exchange
IPsec encryption AES, 3DES
L3 IPsec VPN: policy based, route based L3 mGRE DM-VPN

Access control

Port access filter per MAC/IP addresses Enable/Disable port IEEE 802.1x port-based authentication Local APA (Authentication Proxy Access)
User activity report (under local APA)
Access Lists L2, L3, L4 NAT - traversal

INTERFACES

2 x 100/1000 SFP ports
8 x 10/100 Base-T ports POE+
8 x 10/100 Base-T Ports (optional)
8 x 100FX SFP Ports (optional)
4 x RS-232 Ports (optional)
Cellular Modem (optional)

LOCAL OPERATION

RS-232 Console Port
Local USB Port for Emergency Boot
Discrete outputs for reporting system alarms
Failsafe output relay for reporting critical alarms

PHYSICAL DESIGN

Mounting: DIN rail (optional wall mount)
Enclosure: Rugged - IP 30 rated, no fans
Weight: 1.4Kg (DC), 1.8Kg (AC) Dimensions: (mm) 148h x 72w x 123d
Operating temperature: -40oC to 75oC
Storage temperature: -40oC to 85oC
Operating Humidity: 5%-90%
IEC 61850-3 - Electric Utility Substations
IEEE1613 EMI - Electric Utility Substations
EN50121-4 - Vibration and Shock resistance
IEC 61000-4

MANAGEMENT

Console serial port
Remote CLI access using SSH tunnel
Backup/Restore running config
Conditioned/scheduled system reboot
Remote management and upgrade TFTP/SFTP Client
Safe Mode
Syslog
SNMPv1/v2C/v3
iSIM Network Management System
OS image encryption

INPUT POWER RANGES

12 -12V DC (range: 9-18v DC)
24 - 24V DC (range: 18-32v DC)
48 - 48V DC (range: 36-60v DC)
HD – 125V DC (range : 85-165v DC)
110-230V AC (range: 90-250v AC)
WDC- Wide DC range (range: 18-60v DC)

POWER CONSUMPTION

15W without PoE
135W with PoE

NETWORKING

Advanced Layer 2 feature-set

ITU-T G.8032v2 Ethernet ring
IEEE 802.1s MSTP
IEEE 802.1w RSTP, enhanced RSTP
IEEE 802.3ad LAG with LACP
IEEE 802.1q VLAN segregation IEEE 802.1p per-port queues
DHCP Client
QOS Prioritization, Shaping, Scheduling
OAM EFM IEEE 802.3ah
OAM CFM ITU-T Y.1731/IEEE 802.1ag

Layer 3 feature-set

Static routing; OSPF, RIPv2 Routing
VRRP redundancy scheme

Serial

Transparent tunneling of serial streams
SCADA gateway for IEC101/104, DNP3
Terminal Server Byte/Frame mode; TCP/UDP Cellular Modem
Cellular 2G/3G/4G/LTE modem with 2 x SIM cards

System Performance

Line rate L2/L3 switching throughput
Switching latency < 10µSec
16K MAC addresses; 4K VLANs
L2 Multicast

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.