

AGENT-7 FW



Advanced Hardened Firewall Layer 2/3/4/7 Gigabit Ethernet

Power System integrity depends at a great extent on the availability and proper operation of Protection and Control devices. Cyber attacks protection is a must to ensure Substation Automation System performance and availability.

AGENT-7 FW series of Firewalls from PULLNET Technology is a rugged and compact solution designed to fulfil the specific requirements of Power Utilities **Protection** and **Control** systems.

Cyber protection of Operational systems is guaranteed by AGENT-7 FW thanks to its working capability at layer 2/3/7 together with its powerful filtering rules and high capacity of cyber attacks detection.

ADVANTAGES

Hardened. AGENT-7 FW series has been designed to work in harsh environments affected by environmental conditions and electromagnetic disturbances.

Advanced architecture. System architecture together with a simplified configuration allows Graded Security Schemes to be implemented in a straightforward manner. Thanks to this, 1 single device can provide different security level each one specialized in the protection of a different application domain.

Flexibility. Configuration flexibility together with its wide range of operational modes makes AGENT-7 FW an optimal solution to protect substation applications and devices from cyber attacks since it is possible to define different protection zones based on in-depth protection schemes or customized cyber protection functions. AGENT-7 FW fulfils cyber protection measures and mechanisms specified by IEC 62351 .

Quality of Service. AGENT-7 FW provides up to 18 Gbit/s throughput with Advanced scheduling and traffic Management

AGENT-7 FW high traffic processing performance and throughput allows substation **Protection** and **Control** systems to be protected from Cyber attacks without impairing their real-time performance.

AGENT-7 FW provides a number of advanced features and protocols that guarantee the protection of networks with high availability requirements. Thanks to AGENT-7 FW service segmentation capabilities, real-time services can be integrated over a common infrastructure without jeopardizing their security.

functions that guarantee the performance of configured QoS.

Secure Management. AGENT-7 FW includes the required cyber security features to protect configuration and management functions.

AGENT-7 FW includes authentication using IEEE 802.1x, RADIUS, TACACS+; secure remote access with SSH and HTTPS; secure web server and Telnet as well as Access Control Lists (ACLs) and SNMPv3.

Cyber Security Features. AGENT-7 FW implements the following cyber security functions:

- Ports and protocol blocking
- Layer 7 statefull filtering
- Denial of service (DoS) protection
- Malicious Host detection
- Port scanner blocking
- Network Address Translation (NAT)
- VPN support

Cost-Efficiency. A powerful and compact implementation with advanced Management features. Different models to fit every configuration requirement.



AGENT-7 FW Technical specifications



Interfaces

Up to 8 Ethernet RJ-45 10/100/1000 Base-T ports
Up to 2 SFP ports for Optical GB interfaces. Opcional
Secure Virtual Console Port with CLI commands

Performance

Switching Capacity from 3 to 18 GBit/s depending on the model
Address MAC Table size: 12K by default. Up to 64K by configuration

Layer 2 Features

Auto-negotiation
Flow Control IEEE 802.3x
Spanning Tree: 802.1d (STP), 802.1w (RSTP), 802.1s(MSTP)
Up to 4000 VLAN
IEEE 802.1q VLAN, GVRP, Port based VLAN and Private VLAN
IEEE 802.1ad Q-in-Q VLAN

Layer 3 Features

Static and dynamic routes
Dynamic or fixed ARP table
RIP V1 y V2, OSPF, BGP and role-based routing
Virtual redundant routing (VRRP)
Multicast routing PIM
Optional MPLS interface with VPLS and MPLS IP VPN

Further Security Features

Blocking of non-routable IP addresses
Protocol blocking
Specific TCP filters
Blocking of corrupted IP packets
Detection of infected emails
OpenVPN or IPsec VPNs. Encryption with DES, 3DES, AES, MD5 o SHA-1
32 clients VPN. 128 tunnels. VPN accelerator included

Quality of Service

8 Priority levels
Priority according to IEEE 802.1p, CoS, DSCP and Source IP
WRR and Strict Scheduling
TCP/UDP, labelling and access control list
Rate limiting per port

Gestión y supervisión

Gestión mediante aplicación segura. Protección frente ataques por fuerza bruta
Servidor WEB seguro.
Consola remota segura
Actualización del Firmware mediante TFTP seguro
Registro eventos Logs. Adquisición remota mediante Syslog
Manejo de Proxy
Operación redundante en Activo/Espera

Power Supply

18 to 72 VDC or 88 to 300 VDC or 85 to 264 VAC
Redundant Power Supply (optional)

Access Security

Control de acceso basado en IEEE 802.1x y tabla MAC
SSH; Autenticación RADIUS y TACACS+; Conexiones Telnet y Web encriptadas
Listas de Control de Acceso (restricciones acordadas a cabeceras de Capa 2/3/4)

Environment, EMI & EMC

Operating temperature: -40°C a +75°C
IEC 61000-6-2 Industrial
IEC 61850-3 Electric Utility Substations
IEC-60870-2-1 Class III, FCC Part 15 (Class A) y EN 55022 (CISPR 22 Class A)
CE Mark

Mechanical

482x238x44.5 mm

Guarantee

5 Years