

H5 Rail UTM

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Introduction

Safeguarding rolling stock communication networks from any kind of cyber-attacks and vulnerabilities is critical to protect the safety of passengers and workers as well as of assets. Teldat H5 Rail UTM is a special edge gateway designed to offer New Generation Firewall (NGFW) functionalities providing comprehensive 360-degree cybersecurity protection ranging from advanced IDS/IPS, SSL decryption, threat extraction, sandboxing, antivirus, DoS prevention, application control.

H5 Rail UTM can operate in either cloud or virtual appliance services to offer advanced security features to protect the whole LAN on board the train.

Interfaces

LAN connectivity	4-port Gigabit Ethernet switch
Console port*	Complete access for troubleshooting

Destacar

- NGFW gateway for rolling stock
- Firewall Throughput 2,8Gbps
- NGFW Throughput 1Gbps
- 4 Gb Ethernet ports switch to connect to LAN
- Ready for train operators security services
- Remote and Virtual Appliance management



Competitive Advantage

Comprehensive 360-degree protection	Including also advanced IDS/IPS, SSL decryption, threat extraction, sandboxing, antivirus, DoS prevention, application control, URL filtering and ZTNA.
Enterprise-class data connectivity	Edge router with high speed, up to 1000 Mbps IMIX ratio in switching/routing scenarios, sophisticated QoS and professional VPN-multivendor capabilities
Cybersecurity made in Europe label	The cybersecurity solution meets the stringent requirements established by internationally recognized standards, approval processes and security benchmarks.
Hardware design certified for Railways.	Certified according to railway standards (EN 50155, EN 50121-3-2, EN 45545-2, EN 301 908-1, EN 301 511) can work in extreme harsh environments.

Key Features

- **NGFW as a service for enhanced traffic control** The NGFW generates policies allowing 360-degree protection on board the rolling stock. With throughput of 1Gbps can handle IT/OT services without compromising the communication and maintaining the integrity of the data.
- **Hardware encryption** Powerful CPU with hardware encryption, available as an option, offering an aggregated encrypted performance greater than 1Gbps.
- **Advanced routing services** The routing application software includes all the advanced functions needed for the rolling stock on board networks, ready for the professional and most demanding scenarios.
- **Intrusion prevention systems (IPSs, TP)** An effective IPS solution for maximum security at the perimeters of the onboard network for advanced threat and anomaly detection, tailored to railway and operational technology (OT) challenges.
- **Onboard 4xGE switch** The built-in switch is ideal for small offices because it eliminates the need for an external switch, thus reducing costs and points of failure. GE, duplex, self-negotiable ports.
- **Integrated within the Teldat SD-WAN solution** Teldat SD-WAN multitenant solution for unified network management adding user-defined parameters, SLAs, policies, server load and new applications, QoS adjustments, and remote site registration/deregistration.

CARACTERÍSTICA TÉCNICA DEL HARDWARE

LAN connectivity

4x 10/100/1000 ethernet ports (LAN/WAN configurable)
M12-code X connector, selfnegotiation, automatic crossover
802.3i (10BaseT), 802.3u (100BaseT), 802.3ab (1000BaseT)

Dimensions and environmental specifications

L x W x H: 186 x 483 x 43,6 mm (1U on a rack).
Weight -4,5Kg.
Temperature: -20°C to 70°C, Storage: -40°C to 80°C.

Power supply

Multi-range nominal input voltage from 24V to 110VDC.
2 x M12 4pins code A (m) connector.
Maximum power consumption: 20W.

Environmental

Operating temperature range: EN 50155 OT3 from 25 °C to +70 °C.
Storage temperature: min. 40 °C max. +75 °C.
Relative atmospheric humidity: from 5% to 95%.

CARACTERÍSTICA TÉCNICA DEL SOFTWARE

IP protocol

ARP, ARP Proxy, MTU discovery, NAT/PAT, ICMP, BFD
Static and dynamic routing: RIP, OSPF, BGP, policy based routing(PBR)
Virtual Router Forwarding (Multi-VRF)

IP services

FTP, SFTP, SSH, Telnet server and client
NTP, LDAP, Syslog, SCP client, TFTP server
DHCP server/client/relay, DNS Proxy, dynDNS

Management

CLI configuration and storage in a plain text file
RADIUS and TACACS+ AAA support, Netflow, RMON, SNMPv1, v2c and v3
Cloud Net Manager tool(HTTPS based) and API restconf support

Security

MAC filtering. Static and dynamic access lists(ACLs)
Session-based Firewall
Deep packet inspection(L7 firewall)

Quality of Service(QoS)

Classification, marking, BW management, BW
prioritization and limitation
Strict policies (PQ), Low latency (LLQ), by weight/type (WFQ, CBWFQ)

IP protocol

Multicast routing: IGMP (v1,v2, v3), PIM-SM, MSDP, MLD, MLDv2
IPSLA service probes (delay, packet loss, jitter)
High availability: VRRP, HSRP

IPv6

Dual Stack, IP6oIPv4, IPv4oIPv6, GRE, 6rd, DHCP, ICMPv6, SLAAC
Static and dynamic routing RIPng, OSPFv3, MP-BGP
Multicast: MLD, MLDv2, Listener, Querier

NGFW Features

DNS Filtering; URL Filtering; Firewall; Antivirus / Antibot (C&C);
IDS / IPS IT/OT; Sandboxing; Application control; ZTNA; CASB;
Remote users / VPN Agent; (SSL / TLS) Inspection

Security

IPSec support in transport and tunnel mode.
Pre-shared authentication, RSA, Certificates, MDS, SHA-1
Encrypted: DES (56 bits), 3DES (168 bits), AES (128, 192 and 256 bits)

SDWAN networks

Overlay over hybrid networks with App-aware routing, QoS and Visibility
Central SD-WAN flow control including Zero Touch
Provisioning

CARACTERÍSTICA TÉCNICAS ADICIONALES

Certifications

Regulatory: CE (EU)/RED. Materials: RoHS, REACH.
Railway compliances: EN50155, EN61373, EN50121-3-2.
Fire & Smoke: EN45545.

SD-WAN Quality of Service

Four priority levels (Real-Time, High, Medium and Low)
Per application guaranteed Bw allocation in case of congestion
Per application rate limit.

Teldat Group



Founded in 1985, Teldat is a Spanish company whose mission is to provide companies with valuable solutions for cloud access, remote office communications, cyberse-curity and voice/data connectivity both in the office and in specific environments whether they are industrial, railway, vehicles or public services.

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