



SECURITY GATEWAY 901-TW

SGW 901-TW FOR SECURE ETHERNET NETWORK SEPARATION

SEPARATION BETWEEN NETWORKS ENSURES HIGHER CYBER SECURITY IN RAIL VEHICLES

- Use of the Security Gateway SGW 901-TW in rail vehicles for secure Ethernet network separation, e.g. between the TCMS network and the Comfort Network
- Two integrated 1 Gigabit ports provide two logically and physically separate Ethernet networks for controlled, secure data access
- Data communication takes place exclusively for clearly defined data telegrams; others are filtered out
- Secure data separation between vital data and comfort data simplifies vehicle approval
- Integrated firmware and user-friendly web interface for easy operation and configuration
- Certification according to DIN EN 62443-4-1 and DIN EN 62443-4-2 with Security Level 1 enables a wide range of applications
- The device simplifies system engineering and allows the system integrator to design a secure network architecture (e.g. defense in-depth)
- Thanks to its convenient web interface, the SGW can be very easily configured and updated to the latest software version at any time

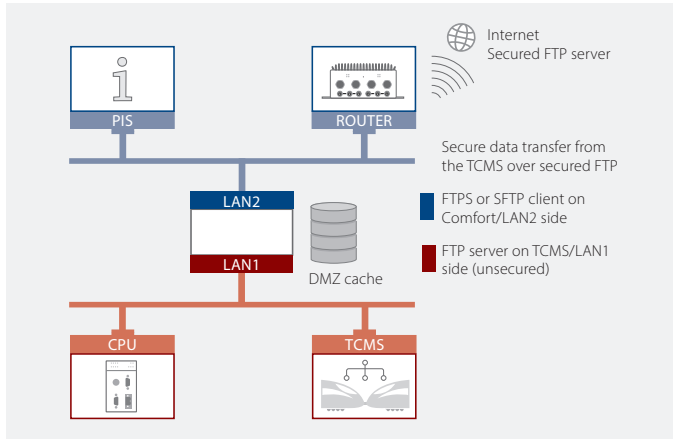
TECHNICAL DATA

- 4x Gigabit Ethernet ports
- Electrical power supply 24 – 110 V DC
- Designed for harsh industrial and mobile applications according to EN 50155
- Designed for an operating temperature range from –40 to +70 °C
- Housing protection class IP40
- Dimensions 140 x 150 x 48 mm
- Weight 1500 g



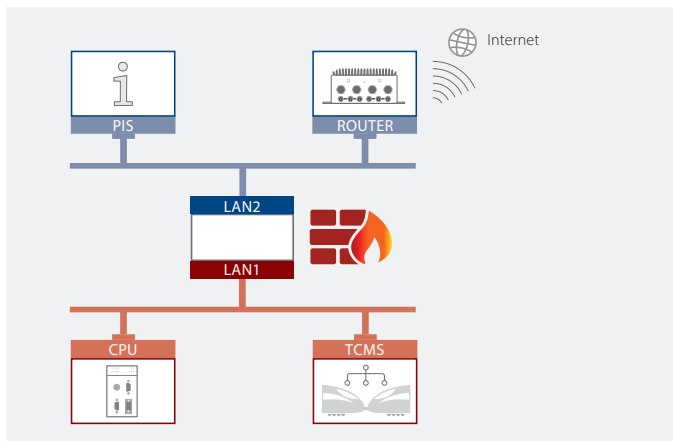
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USE CASES



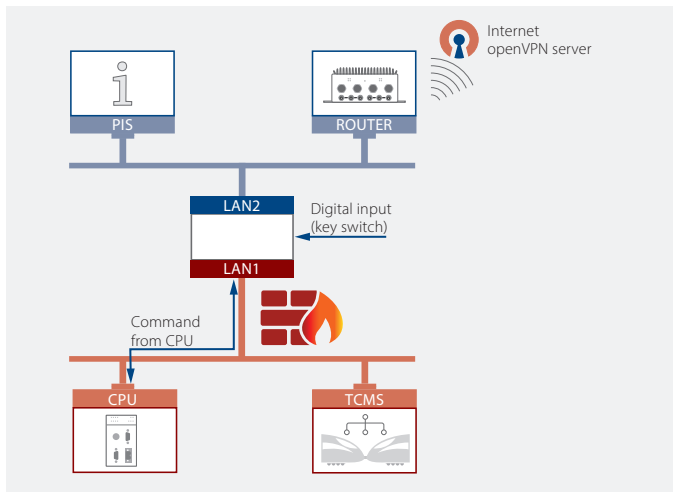
FTP – DMZ FUNCTIONALITY

- For all services that want to transfer files from external sources into the TCMS, the SGW acts as a demilitarized zone (i.e. there are no direct connections)
- The SGW allows data transfer to and from the TCMS over a secured FTP channel



FIREWALL FUNCTIONALITY

- Connection control between Comfort and TCMS networks
 - IPTABLES: Directional connection control (ALLOW, DENY, BLOCK, LOG) using TCP/IP features port, IP address, and much more
 - NETFILTER: Implementation of the IPTABLES rules in the kernel
 - Traffic shaper
 - Logging
 - Filter rules according to the TCMS-interface, COMFORT-Network-Interface or VPN interface



REMOTE ACCESS WITH OPENVPN

- Control of the remote access to the TCMS network (OpenVPN)
- OpenVPN client with certificate-based login to a trusted OpenVPN server (chosen by the operator)
- Restriction of remote access to devices in the TCMS network via a whitelist
- Two-factor authentication during the creation of the VPN Tunnel
 - Digital input (key switch)
 - Command from CPU
- Firewall rules may be applied additionally

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