VOLKTEK
Connecting Communities

Safrer Driving through Tunnels with
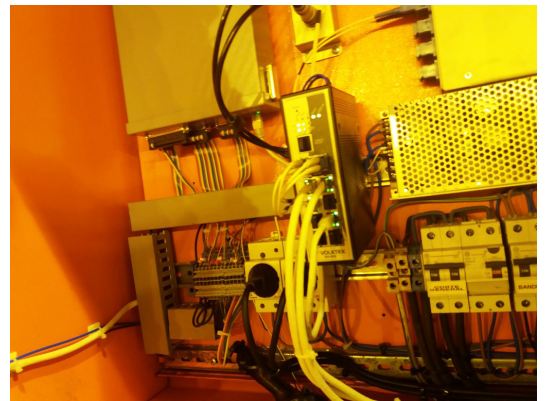*Industrial Ethernet Solution Malaga, Spain*

▶ Project Introduction

   Everyday thousands of vehicles are passing through one of the longest and busiest tunnel situated in Malaga, Spain where the chances of fires, accidents, vehicular problems are very high, hence tunnel safety is most necessary. To provide a securable tunnel drive, IP video surveillance as well as automated devices such as lighting control, electronic signage board are being installed to ensure the highest level of safety for drivers. Addition to this, to enable the passenger to communicate with nearest control room for help, the tunnel is occupied with emergency VoIP telephone booths. However, for reliable transmission of data from those automated devices to the control room, Industrial Ethernet solution is required which can withstand the unfavorable conditions in tunnel, such as vibration, humidity, and temperature influence.

Keeping these specific requirements and challenges in mind, Volktek has come up with INS-8528, the leading-edge industrial Ethernet switch that provides robust and reliable connectivity between the automated devices and control room.

▶ System Requirement

- Industrial reliability to adapt to the harsh environmental requirements
- Support network redundancy, ensure the real-time and reliable data
- Networking flexibility, high reliability, high scalability
- Long distance transmission support
- Proper network segment by VLAN, IGMP for effective traffic utilization

▶ Volktek's Solution

- Industrial hardened design which can tolerate wide temperature -40°C~75°C and can sustain in immense humidity and dust
- Designed with efficient L2 features such as IGMP snooping, VLAN for real time data traffic management
- Long-haul fiber connectivity that provide high-bandwidth connectivity and can easily extensible to control room
- Redundant ring topology with millisecond scale network recovery to operate the device in maximum uptime
- Redundant Power inputs with power isolation for non-stop operations
- Compactable and space-conscious design which can easily fit inside the road-side cabinet

▶ System Description

The robust INS-8528, Volktek's managed industrial grade switch equipped with 8-port 10/100Base-T and 2-slot 100/1000 SFP which can actively establish efficient communication between the last mile automated devices such as tunnel lighting system, electronic signage board, IP cameras with the control center without any interrupt or delay.