

# Your Go-To Industrial PoE Expert

**MOXA®**



## PoE Application Note

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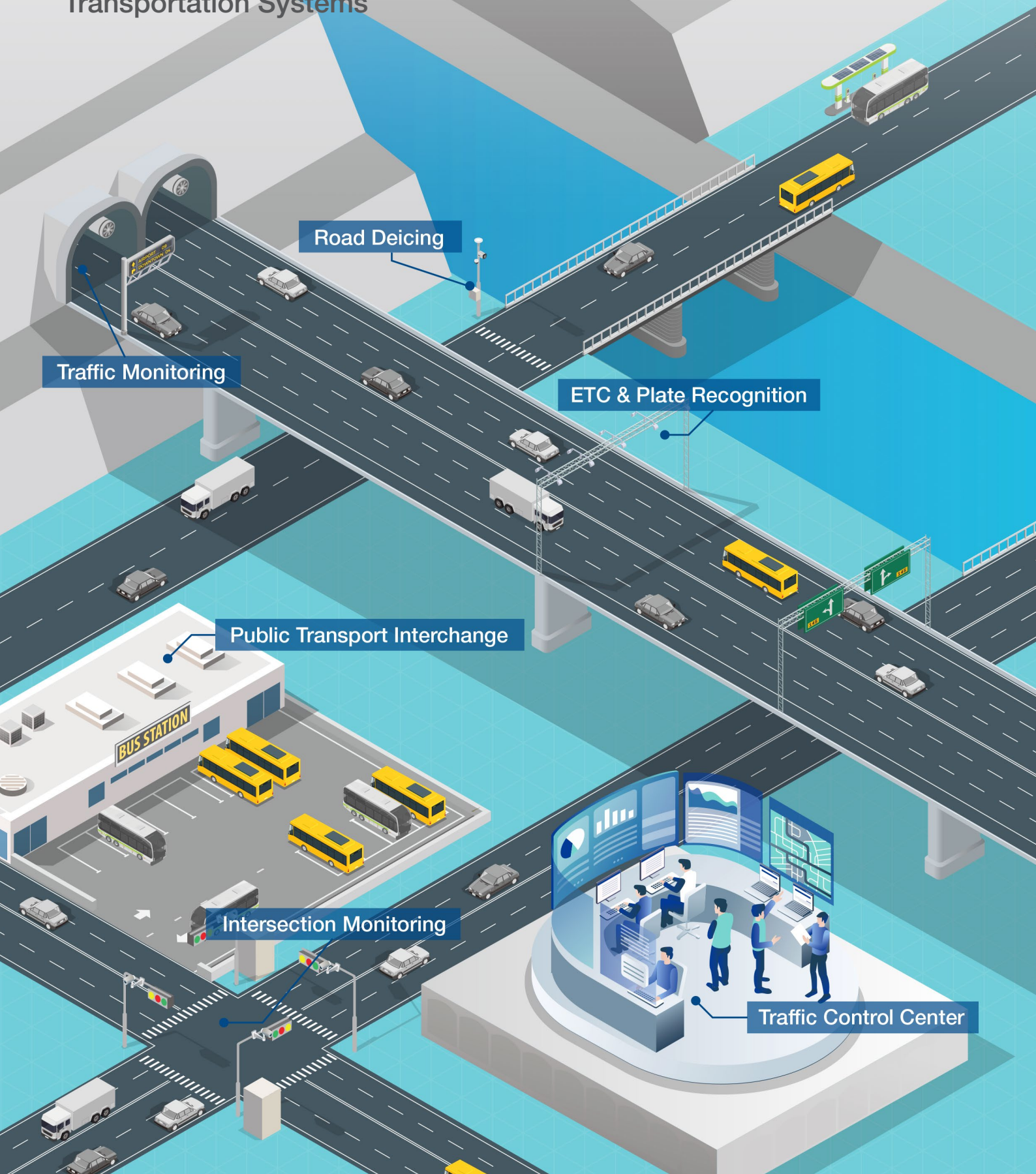
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Lear more about Moxa PoE solutions, please visit: <https://event.moxa.com/mat/anz/poe-solutions/index.htm>

# Industrial Communication and Computing Solutions for Intelligent Transportation Systems



Road Deicing

Traffic Monitoring

ETC & Plate Recognition

Public Transport Interchange

Intersection Monitoring

Traffic Control Center





# Rugged PoE Networks for Highway Traffic Monitoring

## Moxa Products



### EDS-4008 Series

**8-port Managed Ethernet Switches with Options of 4 802.3bt PoE Ports or 4 Gigabit Uplink Ports**

- Support IEEE 802.3bt PoE for up to 90 W output per port
- Extensive power input options
- Compact and flexible housing
- Compliant with IEC 62443-4-2 industrial cybersecurity standards
- Turbo Ring and Turbo Chain (recovery time < 20 ms @ 250 switches), and RSTP/STP for network redundancy



### NPort 6400 Series

**4-port RS-232/422/485 Secure Terminal Servers**

- LCD panel for easy IP address configuration (standard temp. models)
- Secure operation modes for Real COM, TCP Server, TCP Client, Pair Connection, Terminal, and Reverse Terminal
- Nonstandard baudrates supported with high precision
- Security features based on IEC 62443



### MXview One Series

**Industrial Network Management Software**

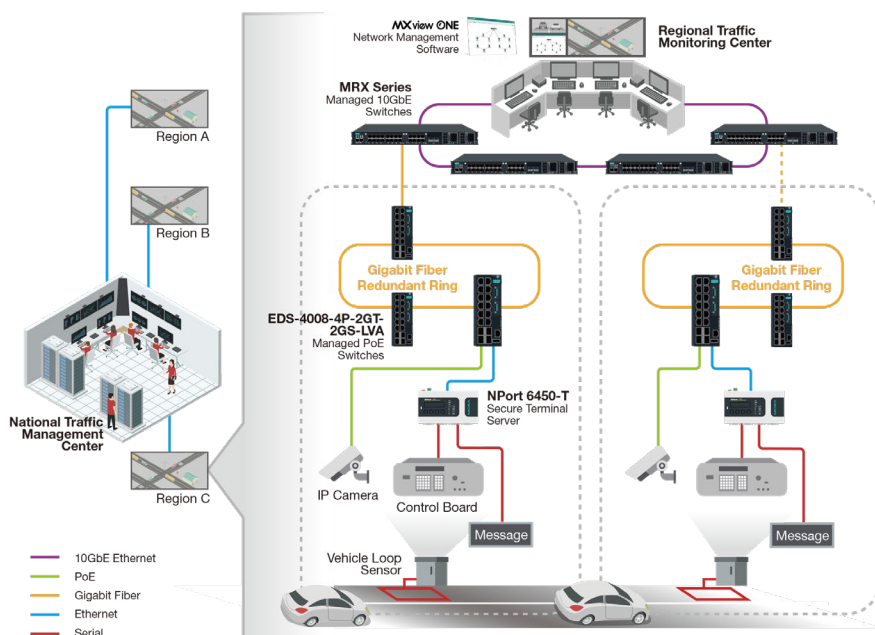
- Visualize the network topology and status for optimal clarity
- Real-time alert notifications for swift responses to minimize downtime
- Easily manage and configure Moxa network devices remotely

## Requirements

- Network infrastructure with rapid recovery capability to ensure fast data transferrals for real-time intersection monitoring
- High bandwidth for IP surveillance
- Reduced size and cable to fit the compact roadside cabinet space
- Easy to mass configure, manage and monitor for efficient troubleshooting across all network devices
- Survive the extreme outdoor environment

## Why Moxa

- EDS-4008 Series supports full GbE uplinks for high-bandwidth networks (2.5G SFP modules available) and less than 50 ms redundancy (under the Gigabit fiber link) to avoid communication loss.
- Compact designed EDS-4008 Series can support 802.3bt PoE for up to 90 W output per port for supplying sufficient power to PDs, like, IP cameras, wireless APs, sensors, IP phone... etc.
- Moxa Smart PoE technology provides PD outage detection and auto-reboot for uninterrupted system availability
- Centralized network devices configuration and management through MXview One Series
- Wide range of products from the Serial Device Servers to L3 10GbE switches, to fulfill all communication infrastructural needs
- NEMA TS2 certification
- IEC 62443-4-2 SL2 certification for secure network devices





# Ensure ETC Precision with Reliable PoE Communication Networks

## Moxa Products



### EDS-4008 Series

**8-port Managed Ethernet Switches with Options of 4 802.3bt PoE Ports or 4 Gigabit Uplink Ports**

- Support IEEE 802.3bt PoE for up to 90 W output per port
- Extensive power input options
- Compact and flexible housing
- Compliant with IEC 62443-4-2 industrial cybersecurity standards
- Turbo Ring and Turbo Chain (recovery time < 20 ms @ 250 switches), and RSTP/STP for network redundancy



### ioLogik E2200 Series

**Smart Ethernet Remote I/O with Click&Go Logic**

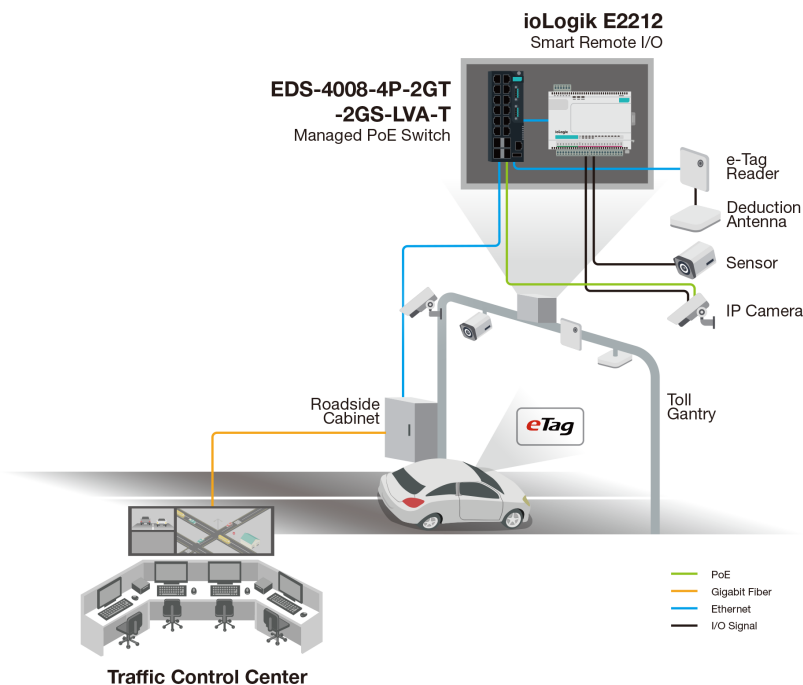
- Front-end intelligence with Click&Go control logic, up to 24 rules
- Active communication with MX-AOPC UA Server
- Save time and wiring costs with peer-to-peer communications
- Support SNMP v1/v2c/v3
- Simplify I/O management with MXIO library for Windows or Linux
- Wide operating temperature models available for -40 to 75°C environments

## Requirements

- Minimize cabling and equipment on outdoor toll gantries
- Ensure high-speed, high-bandwidth for data and image transmission
- Maintain durability for continuous operations
- Achieve fast I/O scanning rate for accurate sensor signal capture
- Simple maintenance and monitoring to enable cost-effective remote troubleshooting

## Why Moxa

- The EDS-4008 Series compact PoE++ switches offer with up to 90 W output per port to ensure sufficient power for IP cameras.
- Support full GbE uplinks for high-capacity networks, with 2.5G SFP modules available.
- Feature Smart PoE for IP camera outage detection and auto-reboot, facilitating remote management.
- The ioLogik E2212 Smart I/O delivers rapid I/O scanning rates below 4 ms, enhancing data accuracy.
- Operate reliably in extreme temperatures from -40 to 75°C for uninterrupted service.
- NEMA TS2 certification
- IEC 62443-4-2 SL2 certification for secure network devices







# Smart City Traffic Improvement with Intelligent Transportation System

## Moxa Products



**EDS-4012 Series**  
8+4G-port Managed Ethernet Switches with 8 802.3bt PoE Ports Option

- High-capacity 90 W IEEE 802.3bt PoE per port
- Fast Ethernet switches with the option for 4 Gigabit SFP uplink ports
- Fast recovery time (< 20 ms @ 250 switches)
- Compliant with the IEC 62443-4-2 cybersecurity standard
- Dual power inputs



**V2403C Series**  
Rugged IIoT Embedded Computers

- Dual display (HDMI, DP), 4 serial ports, 4 GbE ports, 4 DIs, 4 DOs, 4 USB, and 2 Mini PCIe slots
- Cellular and Wi-Fi 5 wireless capability with Gigabit Ethernet
- Certified by Azure and AWS
- Power ignition management
- -40 to 70° C wide operating temperature range



**MXview One Series**  
Industrial Network Management Software

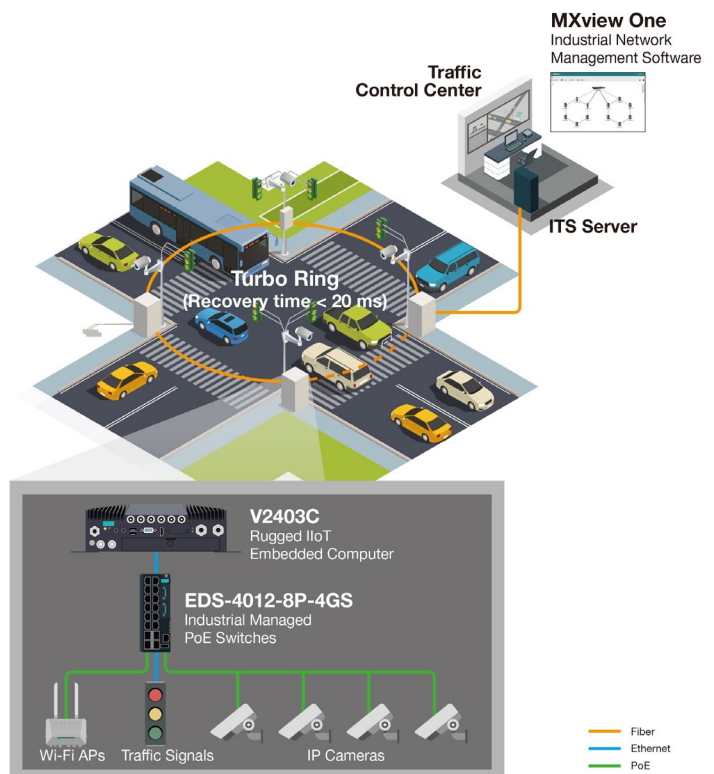
- Visualize the network topology and status for optimal clarity
- Real-time alert notifications for swift responses to minimize downtime
- Easily manage and configure Moxa network devices remotely

## Requirements

- Effective traffic management solution for communication between vehicles, operators, and onsite control stations
- Remote monitoring as part of onsite failure detection
- Real-time data collection from various roadside sensors
- Robust design that withstands outdoor harsh environment

## Why Moxa

- Comprehensive solution for real-time response
- Moxa's V2403C Series is a cutting-edge computing platform that acts as a roadside unit (RSU) for collecting data from sensors and surveillance videos from cameras. Via Moxa's EDS-4012 Series managed switches, it also serves as a bridge between edge computing devices and the ITS server for real-time communication.
- Moxa's EDS-4012 Series managed PoE switches supply adequate power to IP cameras for surveillance, and to Wi-Fi APs for municipal free internet service.
- Moxa's Turbo Ring technology ensures a network recovery time of less than 20 ms and STP/ RSTP/MSTP offers network redundancy, thereby helping maintain stable networks for real-time communication.
- Industry certified for secure and stable operation under harsh conditions





# High-Density PoE Connections for Continuous Operations in Public Transport Interchange

## Moxa Products



### RKS-G4028 Series 28G-port Full Gigabit Rackmount Managed PoE Switches

- Support IEEE 802.3bt PoE up to 90 W output per port
- Gigabit Turbo Ring and Turbo Chain (recovery time < 50 ms @ 250 switches), and STP/RSTP/MSTP for network redundancy
- Dual isolated power inputs
- High EMC immunity
- -40 to 75°C wide operating temperature range
- Maximum 300 W power budget with external power supply



### ioLogik E2200 Series Smart Ethernet Remote I/O with Click&Go Logic

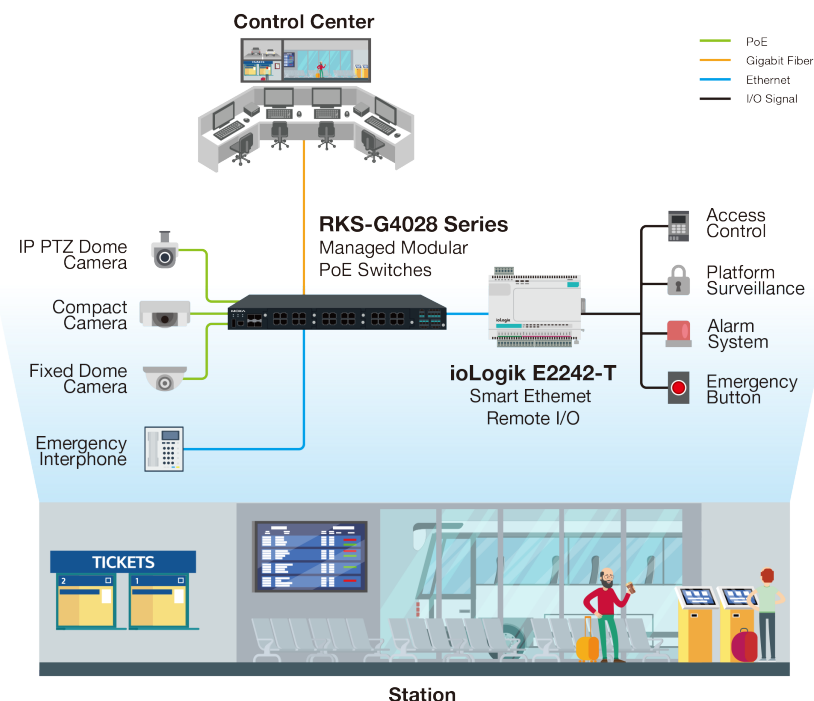
- Front-end intelligence with Click&Go control logic, up to 24 rules
- Active communication with MX-AOPC UA Server
- Save time and wiring costs with peer-to-peer communications
- Support SNMP v1/v2c/v3
- Simplify I/O management with MXIO library for Windows or Linux
- Wide operating temperature models available for -40 to 75°C environments

## Requirements

- A switch hub capable of flexible expansion and can cater to various combinations to accommodate a variety of surveillance devices.
- High PoE output to support numerous IP cameras
- Durable for continuous operations around the clock
- Simplified configuration, maintenance, and backup processes for efficient operation
- Compliance with IEC cybersecurity standards

## Why Moxa

- The RKS-G4028 Series boasts modular interfaces and high-density PoE connections, accommodating diverse connectors from Fast Ethernet to Gigabit networks, with support for up to 28 Gigabit ports, making this series ideal for comprehensive surveillance setups, including cameras, ticketing systems, security alarms, and emergency call-out systems.
- Moxa's Smart PoE functionality enhances operational reliability through PD outage detection and automatic reboot capabilities, facilitating rapid PD operational status assessments.
- Devices are certified under IEC 62443-4-2 SL2, guaranteeing a high level of security for network devices against cyber threats







# Enable Uninterrupted Runway De-icing System Communications with Robust PoE

## Moxa Products



### EDS-4008 Series

**8-port Managed Ethernet Switches with Options of 4 802.3bt PoE Ports or 4 Gigabit Uplink Ports**

- Support IEEE 802.3bt PoE for up to 90 W output per port
- Extensive power input options
- Compact and flexible housing
- Compliant with IEC 62443-4-2 industrial cybersecurity standards
- Turbo Ring and Turbo Chain (recovery time < 20 ms @ 250 switches), and RSTP/STP for network redundancy



### Nport IA5000A Series

**4-port Serial Device Servers**

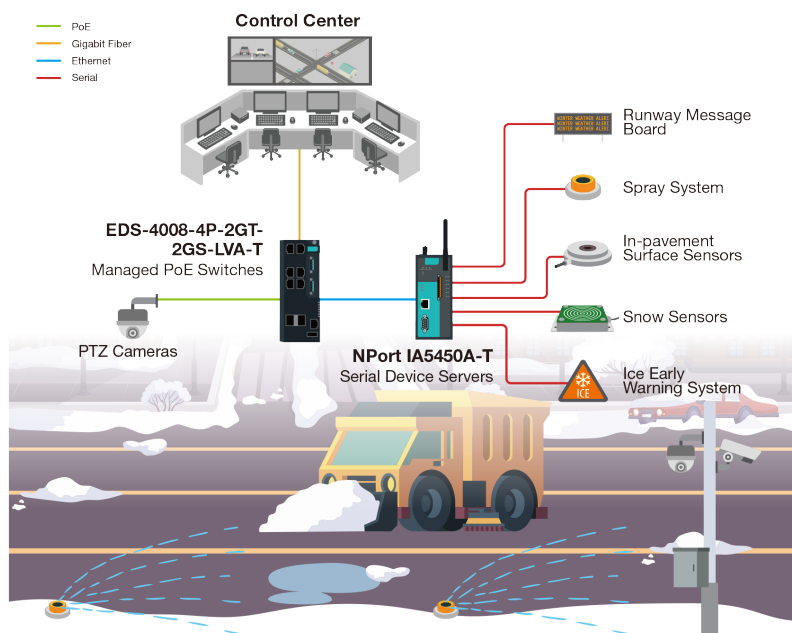
- 2 Ethernet ports with the same IP or dual IP addresses for network redundancy
- C1D2, ATEX, and IECEx certified for harsh industrial environments
- Cascading Ethernet ports for easy wiring
- Enhanced surge protection for serial, LAN, and power
- Redundant DC power inputs
- 2 kV isolation for serial signals (isolation models)
- -40 to 75°C operating temperature range (-T models)

## Requirements

- Operation under extreme low-temperature outdoor environments.
- Reliable, high-power output for PTZ cameras.
- Real-time data transfer and video streaming for effective monitoring and enhanced road safety in winter.
- Durable design with serial connectivity for a variety of on-site sensors and equipment using serial protocols.

## Why Moxa

- Designed to withstand extreme temperatures ranging from -40 to 75°C, Moxa's solutions are well-suited for 24/7 operation in harsh winter conditions.
- The EDS-4008 Series managed PoE switches offer a compact solution with PoE++ support, delivering up to 90 W per port, ensuring ample power for PTZ cameras
- With full GbE uplinks (2.5G SFP modules available), the EDS-4008 Series is capable of supporting high-bandwidth networks.
- Moxa's Smart PoE technology enhances system reliability through PD outage detection and automatic reboot, facilitating rapid operational status checks for PTZ cameras and other powered devices.
- NPort IA5000A Series provides high density serial connectivity and 2 kV isolation for serial signals.





# Traffic Monitoring and Plate Recognition for Highway Surveillance

## Moxa Products



### EDS-4008 Series

**8-port Managed Ethernet Switches with Options of 4 802.3bt PoE Ports or 4 Gigabit Uplink Ports**

- Support IEEE 802.3bt PoE for up to 90 W output per port
- Extensive power input options
- Compact and flexible housing
- Compliant with IEC 62443-4-2 industrial cybersecurity standards
- Turbo Ring and Turbo Chain (recovery time < 20 ms @ 250 switches), and RSTP/STP for network redundancy



### MXview One Series

**Industrial Network Management Software**

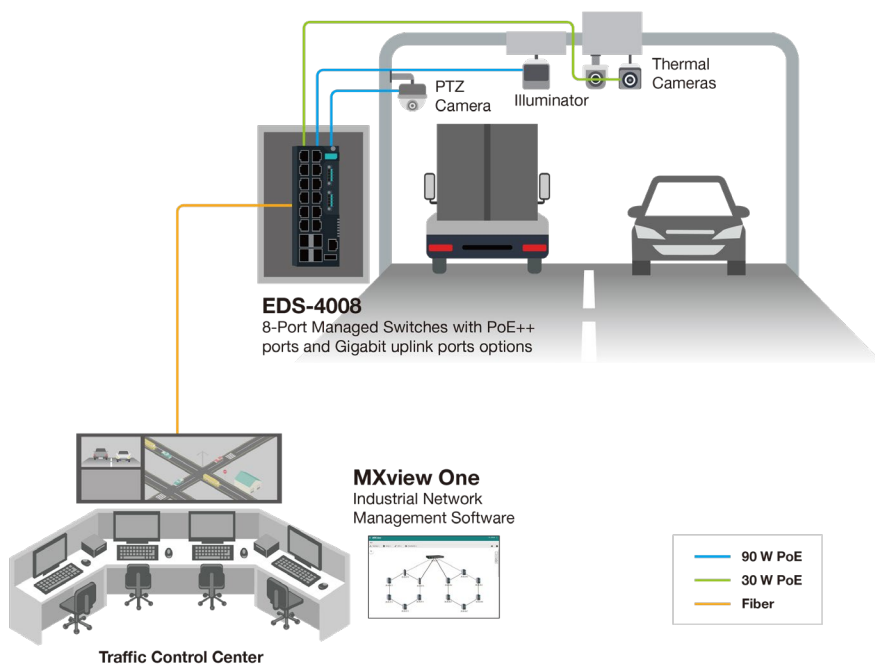
- Visualize the network topology and status for maximum visibility
- Real-time alert notifications to respond swiftly and minimize downtime
- Easily manage and configure Moxa network devices remotely

## Requirements

- High-bandwidth fiber network backbone to transmit high volumes of data back to the control center
- High tolerance for outdoor operations
- 802.3bt PoE and high power PoE for powering outdoor PTZ IP cameras
- Network redundancy with secure data encryption capabilities
- Real-time monitoring of events and network status

## Why Moxa

- High bandwidth supports HD CCTV throughput
- Fanless design that features a wide operating temperature range from -40 to 75°C
- 90 W PoE for PTZ cameras (Smart PoE automatically configures the switch for up to 90 W power supply as required)
- Supports Turbo Ring and Turbo Chain featuring less than 20 ms network redundancy
- NEMA TS2 certification
- MXview One Series real-time network management tool provides intuitive, easy-to-use visualization tailored for automation engineers







# PoE Networks for Intersection CCTV Surveillance

## Moxa Products



**EDS-P206A Series**  
6-port Unmanaged Ethernet Switches with 4 IEEE 802.3af/at PoE Ports

- IEEE 802.3af/at compliant PoE and Ethernet combo ports
- Maximum 30 W output per PoE port
- 12/24/48 VDC redundant power inputs
- Intelligent power consumption detection and classification
- -40 to 75°C wide operating temperature range



**SPL-24 Series**  
PoE Splitters

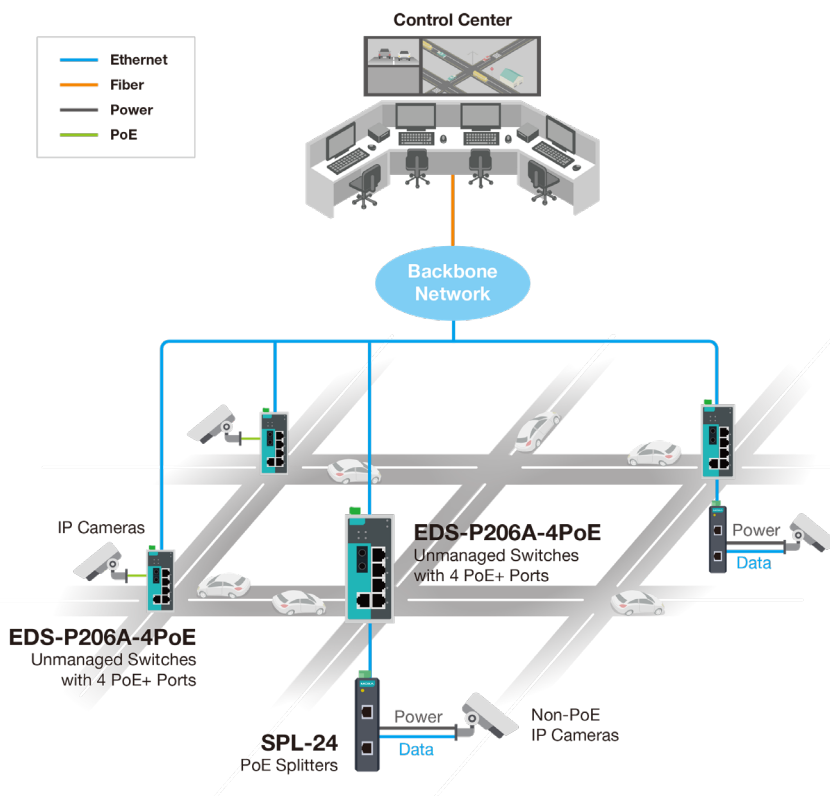
- IEEE 802.3af compliant; split power and data from PoE equipment
- Support maximum output power of 12.95 W at 24 VDC
- Short-circuit protection for power output
- -40 to 75°C wide operating temperature range

## Requirements

- HD CCTV surveillance systems to be installed as part of a nationwide municipal public safety program with a limited budget
- Both PoE and existing non-PoE IP cameras for real-time intersection traffic monitoring
- Limited space for additional installation and cabling
- Systems must withstand outdoor conditions

## Why Moxa

- EDS-P206A-4PoE Series unmanaged PoE switches and SPL-24 Series PoE splitters offer cost-effective PoE solutions that can be implemented at a national scale and integrate with existing devices
- Wide operating temperature range from -40 to 75° C and high MTBF to withstand extreme weather conditions
- Small form factor offers installation flexibility





# Real-time Video Streaming and Monitoring Network for Autonomous Haulage System in Surface Mining

## Moxa Products



**TN-5500A Series**  
**EN 50155 M12 Managed**  
**PoE Switches**

- Up to 2 Gigabit ports with optional bypass relay function
- 8 PoE and Ethernet combo ports compliant with IEEE 802.3at/af
- 30 W maximum per PoE port with a total power budget of 120 W



**V2406C Series**  
**EN 50155 x86 Industrial**  
**Computers**

- Intel® Celeron®/Intel® Core™ i3/i5/i7 high-performance processors
- 2 hot-swappable HDD/SSD slots, 2 Mini PCIe expansion slots
- M12 connectors



**OnCell G4302-LTE4**  
**Industrial LTE Cat 4**  
**Secure Cellular Routers**

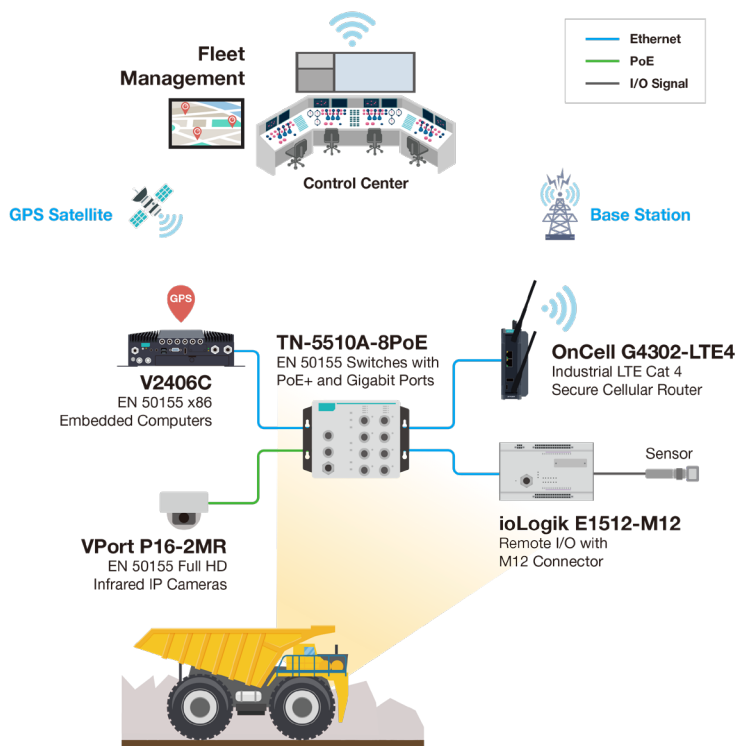
- Support global cellular bands, including those in America, Australia, Europe, Asia, and Japan
- Advanced cybersecurity features, including secure boot, VPN, firewall, and NAT
- Rugged and compact design

## Requirements

- A reliable cellular communication and networking solution for real-time monitoring of autonomous mining trucks
- A compact, robust design for on-board equipment that withstands constant vibration and harsh environments
- PoE switches for powering the powered devices (PDs) on trucks
- Ease of configuring and diagnosing

## Why Moxa

- High MTBF and five-year warranty
- Anti-shock and anti-vibration PoE switches, IP cameras, remote I/O, and industrial computers with M12 connectors, all with dust-tight IP rating
- OnCell LTE Cat 4 cellular router featuring VPN, firewall, and NAT functions to protect internal networks from unauthorized access
- Fanless design that delivers outstanding thermal performance
- Awarded multiple industry certifications
- ABC-01 Series configurators offer automatic network configuration backup and restoration, improving maintenance efficiency while reducing system downtime







# CCTV Surveillance Solutions for Onboard Mining Locomotives

## Moxa Products



**TN-5300A**  
EN 50155 M12 Unmanaged PoE Switches

- M12 connectors
- Up to 8 IEEE 802.3af compliant PoE and Ethernet combo ports
- IEEE 802.3/802.3u/802.3x support
- -40 to 75°C wide operating temperature range



**V2406C Series**  
EN 50155 x86 Industrial Computers

- Intel® Celeron®/Intel® Core™ i3/i5/i7 high-performance processors for network video recorder
- 2 hot-swappable HDD/SSD slots, 2 Mini PCIe expansion slots
- M12 connectors



**VPort P16-1MP-M12 Series**  
EN 50155 720P IP Cameras

- Clear color image output during day and night
- High quality image performance in changing lighting conditions



**VPort P16-1MP-M12-IR Series**  
EN 50155 720P IP Cameras

- Built-in IR illuminator and ICR for low lux environments
- Up to 3 H.264 or MJPEG independent video streams



**MPC-2101/2121 Series**  
EN 50155 x86 Industrial Panel Computers

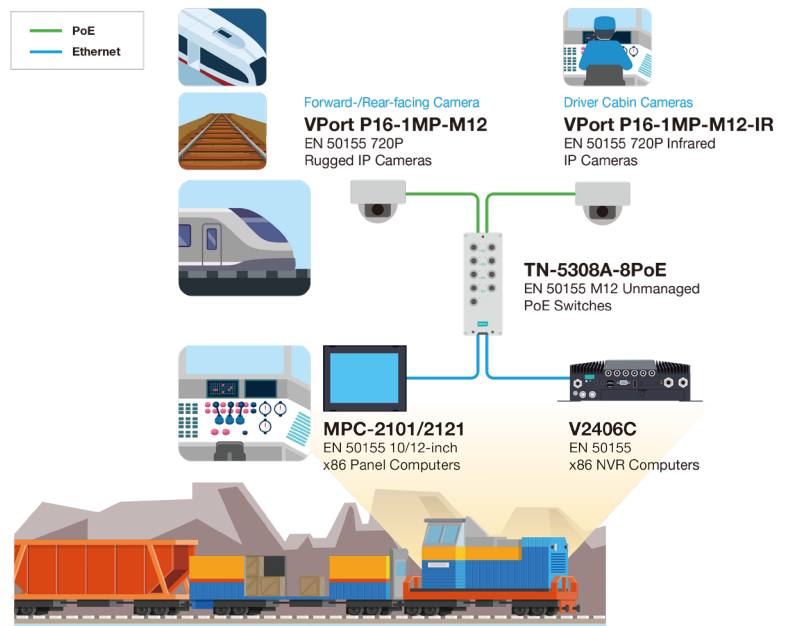
- 10/12-inch panel computer
- Intel Atom® processor E3845 1.91 GHz
- 1000-nit sunlight-readable LCD
- Wide operating temperature range of -40 to 70°C without a fan or heater

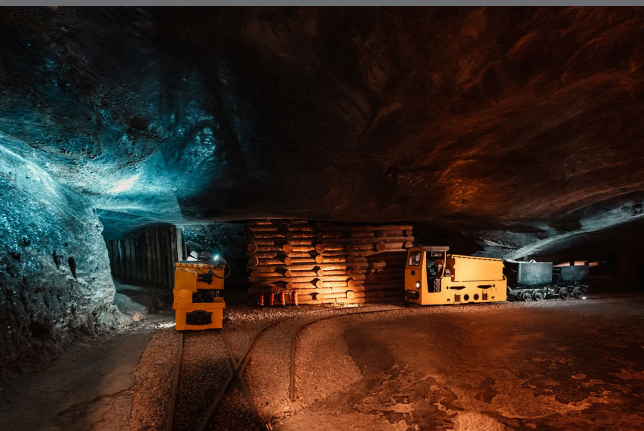
## Requirements

- Continuous CCTV monitoring with crystal-clear image quality and a wide dynamic range suitable for both dark and light environments
- High-performance video streams for smooth video surveillance
- Vibration, humidity, and dust-resistant devices with a temperature tolerance range of -40 to 75°C and ability to withstand harsh environments

## Why Moxa

- EN 50155 IP cameras provide superior image quality under any lighting condition
- Optimal streaming performance in low-bandwidth environments and easy monitoring of devices' operation status in the driver's cabin
- Compact, industrial-grade switches to power up cameras
- Computers, switches, IP cameras, and panel displays are all equipped with M12 connectors for enhanced anti-shock and anti-vibration performance
- High MTBF & five-year warranty





# Powering Up IP Surveillance and Wi-Fi Communications through Centralized Underground Security Monitoring

## Moxa Products



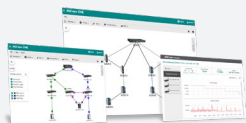
**MDS-G4028 Series**  
28G-port Layer 2 Full  
Gigabit Modular Managed  
PoE Switches

- PoE output 36 W per port, 720 W maximum power budget
- Hot-swappable modules for uninterrupted operations
- Rugged diecast design for harsh environments
- -40 to 75°C wide operating temperature range
- Dual power inputs



**AWK-4252A Series**  
Industrial IEEE 802.11ac  
Wireless AP/Client

- Concurrent dual-band Wi-Fi with aggregated data rates up to 1.267 Gbps
- Easy network setup with NAT
- Millisecond-level client-based dual band Turbo Roaming
- P68-rated; -40 to 75°C wide operating temperature range
- IEC 62443-4-2 certified



**MXview One Series**  
Industrial Network  
Management Software

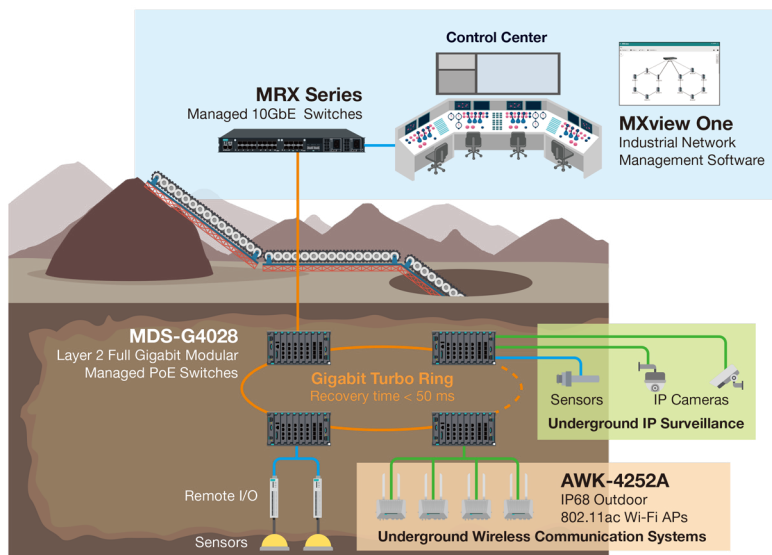
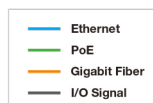
- Visualize the network topology, network traffic, and devices status in real time
- Real-time alert notifications
- Ease to manage and configure
- Monitor the status of Moxa AWK wireless devices with MXview Wireless add-on module

## Requirements

- PoE to connect and power IP cameras, security devices, and Wi-Fi access points (APs)
- Compact devices that fit in confined spaces
- Rugged design with high vibration resistance to withstand the environmental hazards of mining sites

## Why Moxa

- MDS-G4000 Series' modular, flexible design provides up to 24 PoE ports, which not only supply sufficient power to numerous IP cameras and Wi-Fi APs, but also allow for future expansion
- Rugged, compact housing that fits in confined cabinet spaces
- Robust diecast frame can withstand 30 G shocks and up to 10 G of force
- Hot-swappable modules that can be easily replaced without tools, minimizing downtime
- Wide operating temperature range suitable for outdoor environments







# Communication Network for Tramway Ticketing System

## Moxa Products



**RKS-G4028 Series**  
28G-port Full Gigabit  
Rackmount Managed  
PoE Switches

- Support IEEE 802.3bt PoE up to 90 W output per port
- Gigabit Turbo Ring and Turbo Chain (recovery time < 50 ms @ 250 switches), and STP/RSTP/MSTP for network redundancy
- Dual isolated power inputs
- High EMC immunity
- -40 to 75°C wide operating temperature range
- Maximum 300 W power budget with external power supply



**AWK-3252A Series**  
Industrial IEEE 802.11ac  
Wireless AP/Client

- Concurrent dual-band Wi-Fi with aggregated data rates up to 1.267 Gbps
- Easy network setup with NAT
- Millisecond-level client-based dual band Turbo Roaming
- Built-in 2.4 and 5 GHz band pass filter
- -40 to 75°C wide operating temperature range
- IEC 62443-4-2 certified



**V2403C Series**  
x86 Industrial Computers

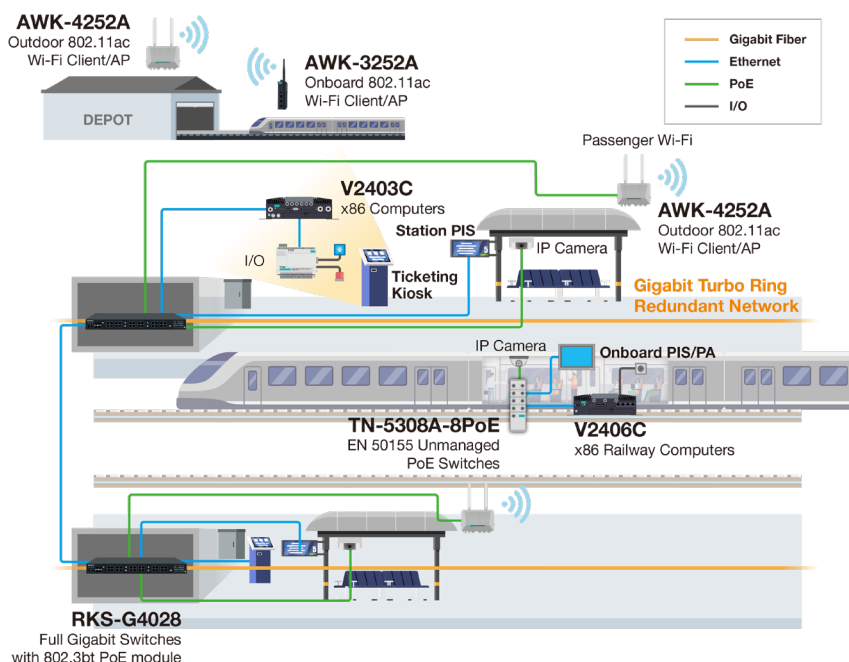
- Intel® Celeron®/Intel® Core™ i3/i5/i7 high-performance processors for network video recorder
- Dual display (HDMI, DP), 4 serial ports, 4 GbE ports, 4 DIs, 4 DOs, 4 USB, and 2 Mini PCIe slots
- Compliant with EN 50121-4 for wayside applications

## Requirements

- Long-distance data transmission from multiple ticketing kiosks for traffic analysis
- Redundant network connectivity to ensure uninterrupted system operations
- Industrial-grade durability to withstand onboard shocks and vibrations
- Cost-effectiveness

## Why Moxa

- RKS-G4028 Series' fiber module supports long-distance communication
- RKS-G4028 Series with optional 802.3bt PoE module supports 90 W power output per port
- Turbo Ring and Turbo Chain technologies support Gigabit network recovery time of less than 50 ms at 250-switch load
- RKS-G4028 Series features a wide operating temperature range from -40 to 75° C
- EN 50121-4 certified to withstand extreme wayside conditions
- Complete communication networks with network infrastructure, edge connectivity, and computing solutions to ensure interoperability and reduce system integration costs





# Remote Pipeline Monitoring

## Moxa Products



**MDS-G4020 Series**  
20G-port Layer 2  
Full Gigabit Modular  
Managed PoE Switches

- PoE output 36 W per port, maximum 720 W power budget
- Hot-swappable modules for uninterrupted operations
- Rugged die-cast design for harsh environments
- -40 to 75°C wide operating temperature range
- Dual power input
- HTML5 dashboards for easy configuration
- Gigabit Turbo Ring and Turbo Chain network redundancy (recovery time < 50 ms @ 250 switches)



**MXview One Series**  
Industrial Network  
Management Software

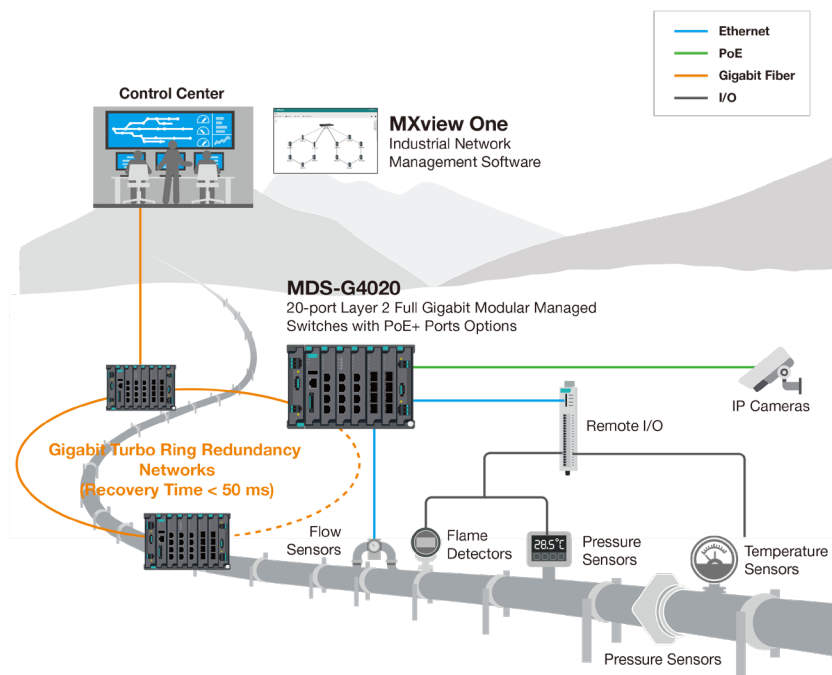
- Visualize the network topology and status for maximum visibility
- Real-time alert notifications to respond swiftly and minimize downtime
- Easily manage and configure Moxa network devices remotely

## Requirements

- Long-distance Gigabit network backhaul to connect subsystems in the field
- Reduce power cabling issues for remote IP cameras and other PDs
- Reliable, high-density Ethernet switches with multiple interfaces that can aggregate real-time video, voice, and data from remote subsystems
- Resilient industrial-grade devices that can operate in harsh conditions
- Din-rail design to fit inside cabinets

## Why Moxa

- Modular switches with fiber interfaces to connect pipeline subsystems to the remote control center over long distances
- Adequate PoE power supply
- Gigabit Turbo Ring supports network recovery time less than 50 ms
- Fanless, compact, and rugged ATEX Zone 2-and C1D2-certified design featuring DIN-rail installation
- MXview One Series network management software offers real-time monitoring of network status from the control center





# Security Monitoring Network for Power Substation Access Control

## Moxa Products



**EDS-P510A Series**  
8+2G-port Gigabit Managed PoE Switches

- 8 built-in PoE ports compliant with IEEE 802.3af/at
- Up to 36 W output per PoE+ port
- 3 kV LAN surge protection
- PoE diagnostics for powered-device mode analysis
- 2 Gigabit combo ports for high-bandwidth and long-distance communication



**IKS-6728A Series**  
24+4G-port Gigabit Rackmount Managed Ethernet Switches

- Gigabit Turbo Ring and Turbo Chain (recovery time < 50 ms @ 250 switches), and STP/RSTP/MSTP for network redundancy
- 1 kV LAN surge protection
- 4 Gigabit combo ports for high-bandwidth communication
- 8 built-in PoE ports compliant with IEEE 802.3af/at, with a 36 W maximum output per PoE+ port (IKS-6728A-8PoE)



**MXview One Series**  
Industrial Network Management Software

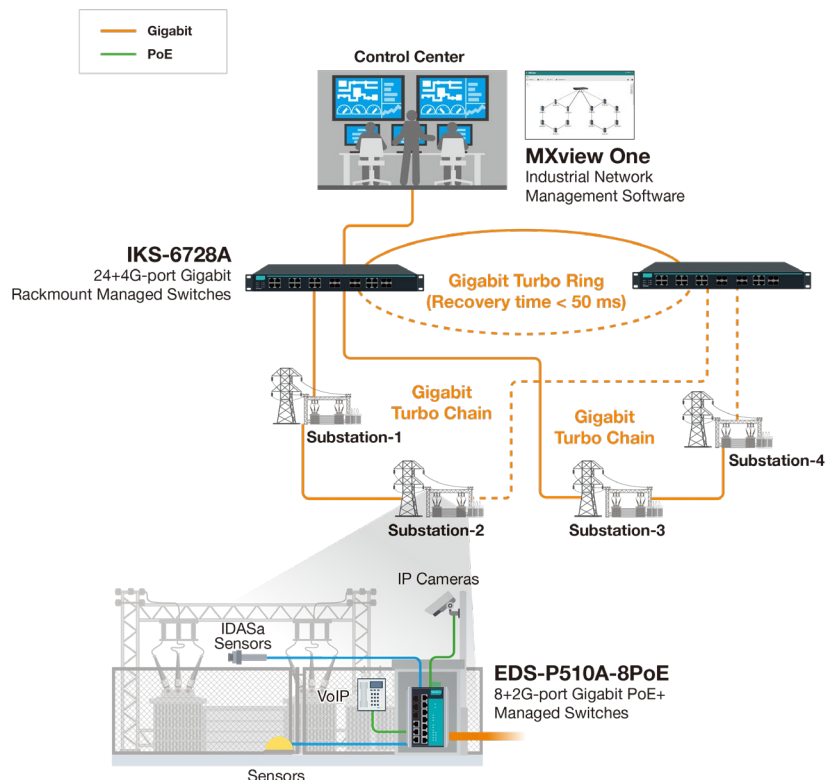
- Visualize the network topology and status for maximum visibility
- Real-time alert notifications to respond swiftly and minimize downtime
- Easily manage and configure Moxa network devices remotely

## Requirements

- Millisecond-level recovery networks to connect more than 150 substations nationwide
- 24/7 reliability for continuous security monitoring
- Connectivity and availability during EMI and surge conditions
- Reduce power cabling issues for remote IP cameras and VoIP
- Real-time monitoring and management to reduce costly visits to remote unmanned locations

## Why Moxa

- EDS-P510A Series PoE switches allow for high bandwidth, long-distance transmission as well as PoE+ power supply to remote powered devices
- EDS-P510A Series and IKS-G6728A Series support Turbo Ring and Turbo Chain network redundancy
- Industrial-grade products designed to withstand harsh operating conditions
- Embedded Smart PoE function enables the EDS-P510A Series PoE switches to detect failures and auto-reboot powered devices to ensure continuous operation







# Reliable PoE Networks for Automated Rubber-tired Gantry Cranes (ARTG)

## Moxa Products



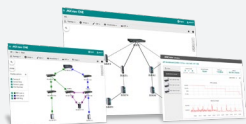
**EDS-P510A Series**  
8+2G-port Gigabit Managed PoE Switches

- 8 built-in PoE ports compliant with IEEE 802.3af/at
- Up to 36 W output per PoE+ port
- 3 kV LAN surge protection
- PoE diagnostics for powered-device mode analysis
- 2 Gigabit combo ports for high-bandwidth and long-distance communication



**EDS-P506E Series**  
4+2G-port Gigabit Managed Ethernet Switches with 4 PoE Ports Compliant with IEEE 802.3af/at

- Built-in 4 PoE+ ports support up to 60 W output per port
- Wide-range power inputs of 12/24/48 VDC
- Smart PoE functions for remote power device diagnosis and failure recovery
- 2 Gigabit combo ports for high-bandwidth communication



**MXview One Series**  
Industrial Network Management Software

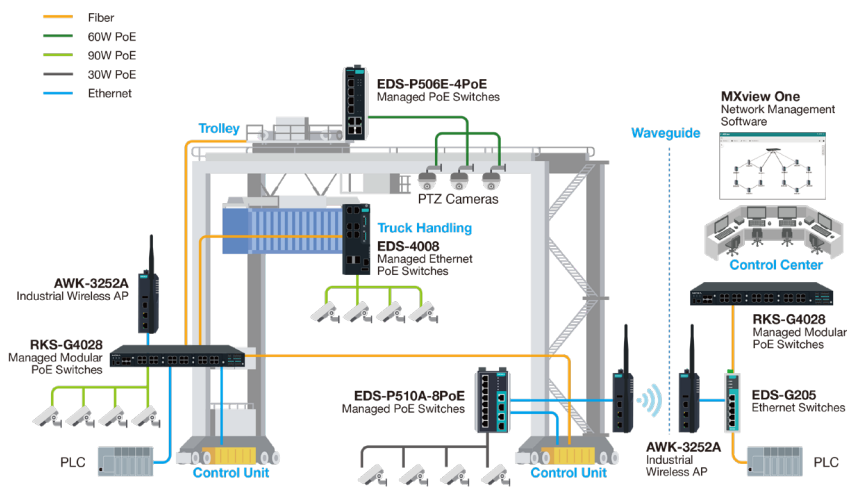
- Visualize the network topology and status for maximum visibility
- Real-time alert notifications to respond swiftly and minimize downtime
- Easily manage and configure Moxa network devices remotely

## Requirements

- PoE switches to overcome wire-deployment obstacles at height or on the ground
- Each port supplies 60 W power to high-resolution cameras, including PTZ cameras, for accurate container recognition
- Robust switches must withstand outdoor environments, particularly constant exposure to humid and salt-rich coastal air
- High-reliability networks to ensure real-time image processing and transmission
- User-friendly network management software that allows operators to manage the ARTG crane system network remotely and effectively

## Why Moxa

- Complete PoE switches portfolio that satisfies all IP camera power sourcing requirements
- To power up multiple cameras, the EDS-P506E-4PoE Series supports up to four 60 W PoE ports with a 180 W power budget
- High EMI protection, a fanless design for harsh outdoor environments, and a wide operating temperature range from -40 to 75°C
- Smart PoE function supports automatic powered device (PD) failure detection and rebooting for network recovery, eliminating or minimizing the need for manual inspection or maintenance
- MXview One Series network management software features real-time visualization of network status to improve ARTG crane system reliability





# Seamless Power and Data Delivery in Unmanned Warehouses with PoE

## Moxa Products



**EDS-4008 Series**  
8-port Managed Ethernet Switches with Options of 4 802.3bt PoE Ports or 4 Gigabit Uplink Ports

- Support IEEE 802.3bt PoE for up to 90 W output per port
- Extensive power input options
- Compact and flexible housing
- Compliant with IEC 62443-4-2 industrial cybersecurity standards
- Turbo Ring and Turbo Chain (recovery time < 20 ms @ 250 switches), and RSTP/STP for network redundancy



**EDS-2005-EL Series**  
5-port Unmanaged Ethernet Switches

- 10/100BaseT(X) (RJ45 connector)
- Compact size for easy installation
- QoS supported to process critical data in heavy traffic
- IP40-rated metal housing
- -40 to 75°C wide operating temperature range (-T models)



**DRP-C100 Series**  
x86 Industrial Computers

- DIN-rail mountable computers with fanless design
- Intel® Celeron® or Intel® Core™ i5/i7 processor
- Rich interface options for up to 8 serial and 10 LAN ports
- Compact size to fit most field applications
- -30 to 60°C operating temperature range



**AWK-3252A Series**  
IEEE 802.11ac Wireless AP/Client

**AWK-1151C Series**  
IEEE 802.11ac Wireless Client

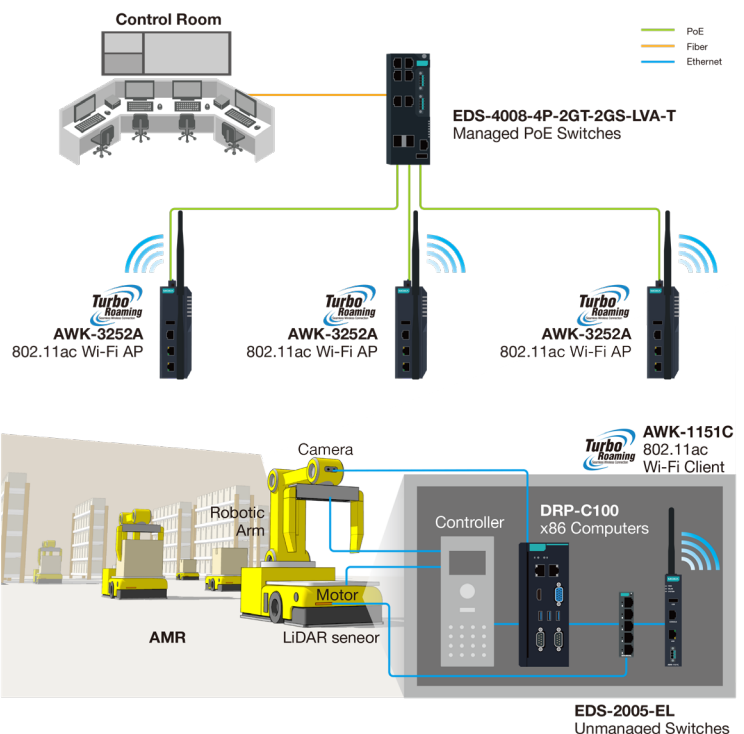
- Universal (UN) models with configurable country or region code for more flexible deployment
- Millisecond-level client-based Turbo Roaming
- Built-in 2.4 GHz and 5 GHz band pass filter for more reliable wireless connections
- -40 to 75°C wide operating temperature range (-T models)
- Integrated antenna isolation

## Requirements

- High power output to support numerous wireless APs
- Enhanced AMR efficiency through fast data transmission across both wired and wireless networks
- Compact design suitable for machine installation
- Dependable performance with strong vibration and EMI noise resistance

## Why Moxa

- The EDS-4008 Series are equipped to provide up to 90W per port with PoE++ capability, delivering ample power for multiple wireless APs.
- The EDS-4008 Series also offer full GbE uplinks with options for 2.5G SFP modules, ensuring high-bandwidth connectivity suitable for intensive data transmission needs.
- Compact, robust design for easy machine integration and enhanced EMC and RF protection
- Support 802.11ac performance and include Turbo Roaming technology, enabling seamless millisecond-level handovers for uninterrupted wireless connectivity.
- The UN model adheres to multi-region RF certification compliance, ensuring broad usability and regulatory acceptance across different regions markets.



## Your Trusted Partner in Automation

Moxa is a leading provider of edge connectivity, industrial computing, and network infrastructure solutions for enabling connectivity for the Industrial Internet of Things (IIoT). With over 35 years of industry experience, Moxa has connected more than 102 million devices worldwide and has a distribution and service network that reaches customers in more than 85 countries. Moxa delivers lasting business value by empowering industries with reliable networks and sincere service. Information about Moxa's solutions is available at [www.moxa.com](http://www.moxa.com).

### Moxa Americas

#### USA

Toll Free: 1-888-MOXA-USA  
Tel: +1-714-528-6777  
Fax: +1-714-528-6778  
[usa@moxa.com](mailto:usa@moxa.com)

#### Brazil

Tel: +55-11-95261-6545  
[brazil@moxa.com](mailto:brazil@moxa.com)

### Moxa Europe

Tel: +49-89-37003-99-0  
Fax: +49-89-37003-99-99  
[europe@moxa.com](mailto:europe@moxa.com)

### Moxa Asia-Pacific and Taiwan

#### Asia/Taiwan

Tel: +886-2-8919-1230  
Fax: +886-2-8522-8623  
[asia@moxa.com](mailto:asia@moxa.com)  
[taiwan@moxa.com](mailto:taiwan@moxa.com)

#### India

Tel: +91-80-4172-9088  
Fax: +91-80-4132-1045  
[india@moxa.com](mailto:india@moxa.com)

#### Korea

Tel: +82-2-6268-4048  
Fax: +82-2-6268-4044  
[korea@moxa.com](mailto:korea@moxa.com)

#### Japan

Tel: +81-3-6721-5670  
Fax: +81-3-6721-5671  
[japan@moxa.com](mailto:japan@moxa.com)

### Moxa China

#### Shanghai

Tel: +86-21-5258-9955  
Fax: +86-21-5258-5505  
[china@moxa.com](mailto:china@moxa.com)

#### Beijing

Tel: +86-10-5976-6123/24/25/26  
Fax: +86-10-5976-6122  
[china@moxa.com](mailto:china@moxa.com)

#### Shenzhen

Tel: +86-755-8368-4084/94  
Fax: +86-755-8368-4148  
[china@moxa.com](mailto:china@moxa.com)

