

PoE Switch Introduction

Your Partner in Industrial Communication

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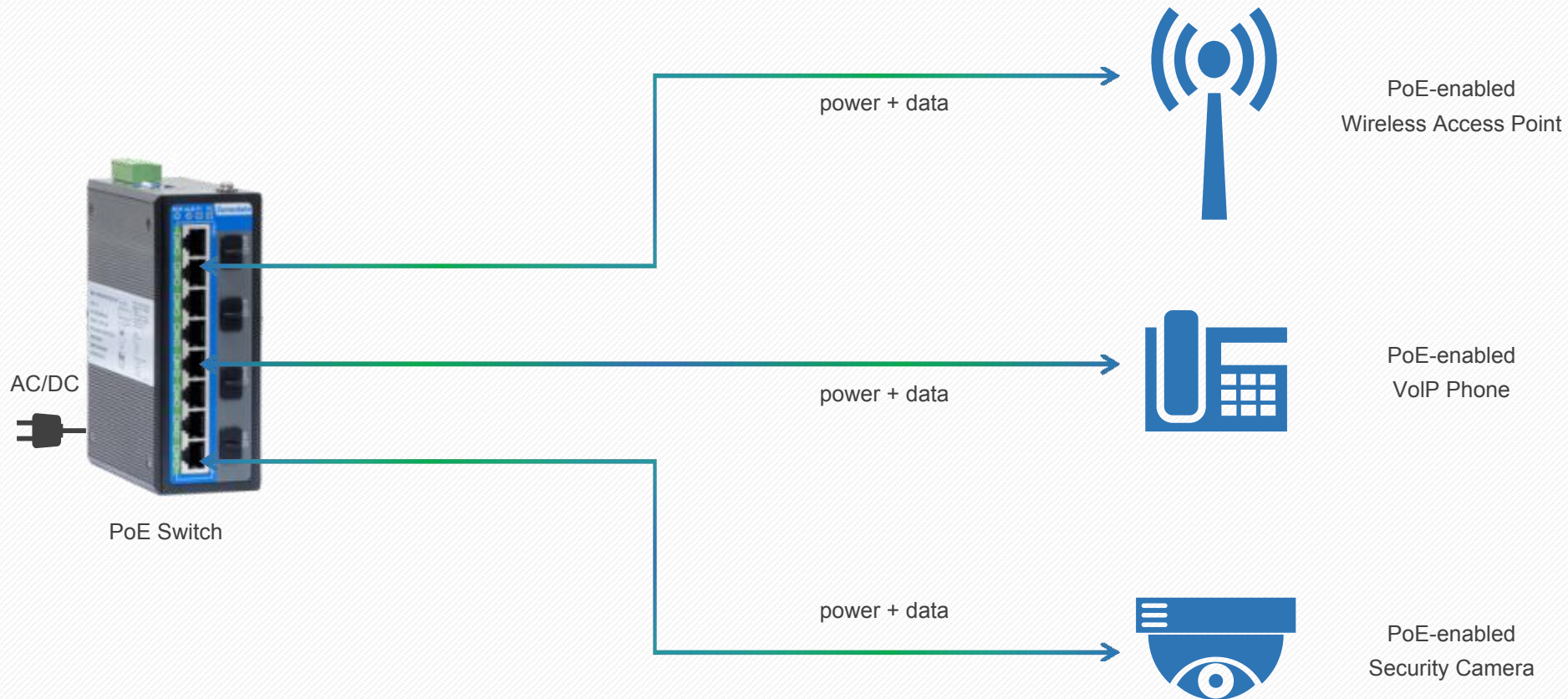
01

PoE & PoE Switch

- What is PoE?
- Terminology
- What are the advantages of PoE?
- Why you need the PoE switch?

What is PoE?

Power over Ethernet (PoE) is technology that passes electric power over twisted-pair Ethernet cable to powered devices (PD), such as wireless access points, IP cameras, and VoIP phones in addition to the data that cable usually carries. It enables one RJ45 cable to provide both data connection and electric power to PDs instead of having a separate cable for each.



Terminology

PoE, PoE+ and Ultra PoE

PoE Standard	PoE Common Name	Power Output	Year	Comment	3onedata
IEEE 802.3af	PoE	15.4W	2003	12.95W power available for connected device (PD)	✓
IEEE 802.3at	PoE+	30W	2009	25.50W power available for connected device (PD)	✓
IEEE 802.3bt Type 3	4PPoE, Ultra PoE, UPoE	60W	2018	51.00W power available for connected device (PD)	✓
IEEE 802.3bt Type 4	Ultra PoE, UPoE	100W	2018	71.00W power available for connected device (PD)	✓

Powered Device (PD)

Any network device that is powered by PoE is referred to as a powered device, or PD. Wireless access points, IP security cameras and VoIP phones are common examples. The rise of the more powerful IEEE 802.3bt standard has paved the way for more power-hungry applications such as PoE LED lighting and High-Speed HD Outdoor PoE network cameras with climate control.

Power Sourcing Equipment (PSE)

PSE devices send power and data over the Ethernet cable to a connected PD. PSE devices are classified as either “midspan” or “endspan”.

ENDSPAN

Also called endpoint, the typical endspan is a PoE Network Switch. Since the switch itself can power connected devices, there is no need for an additional power source between the PoE switch (PSE) and the connected PoE edge device (PD).

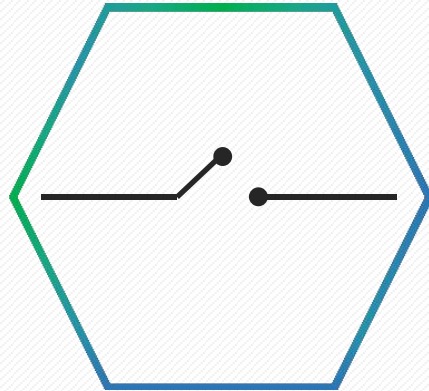


What are the advantages of PoE?



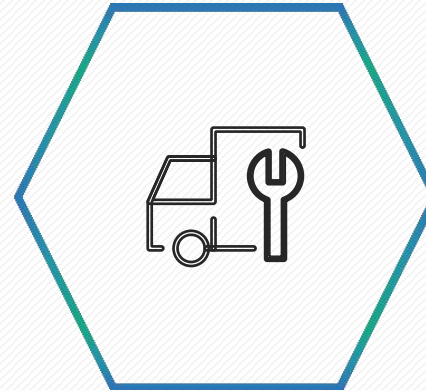
Installation Cost Saving

Delivery of data and power over a standard Ethernet cable eliminate the need for AC/DC power supplies and outlets to give power to PD equipment.



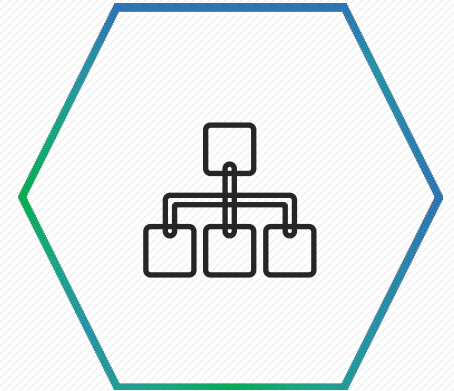
Fewer Points of Failure

Guarantee a constant power delivery, which is important for mission-critical PoE edge devices.



Flexibility & Simplicity

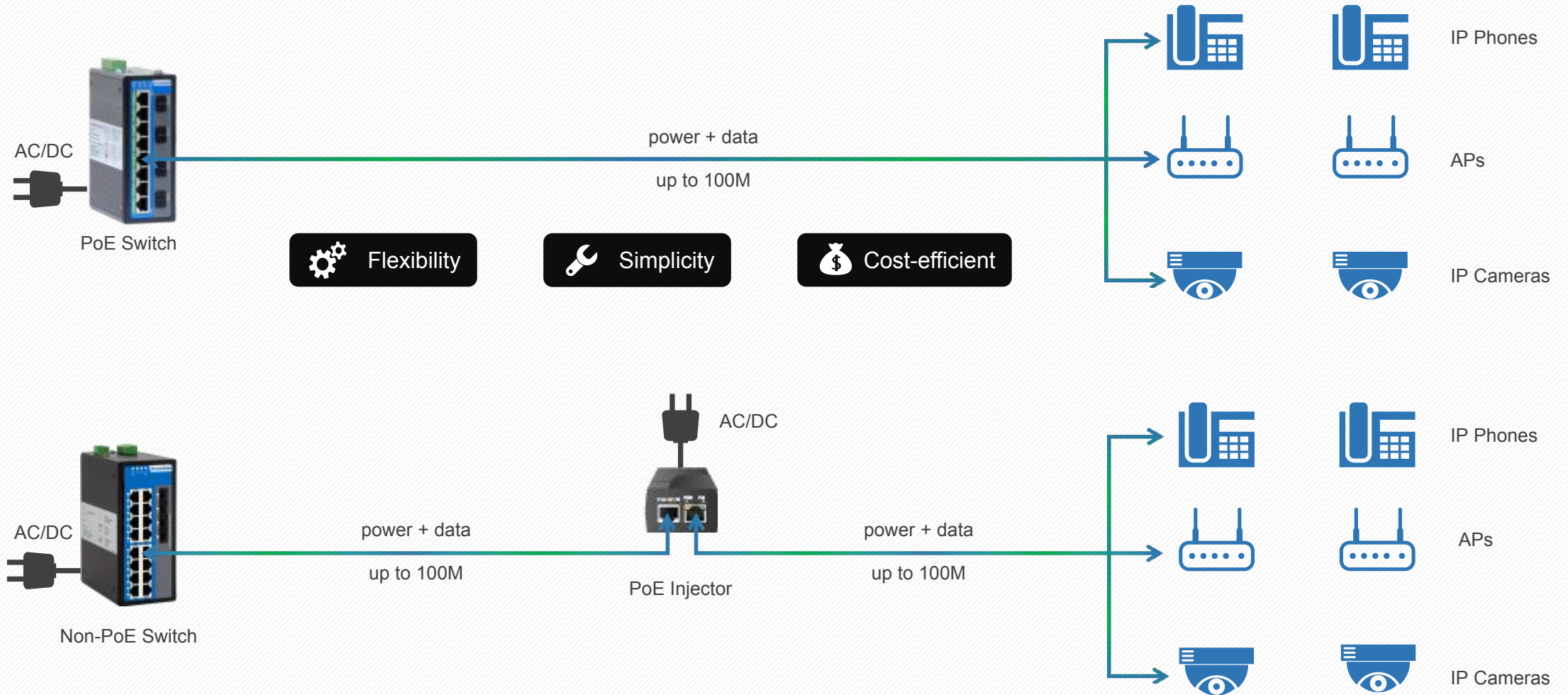
PoE allows one cable for both power and data transmission, makes installing or expanding a network much simpler



Centralized Power Management

Managed PoE switch offers the ability to remotely restart connected PoE devices and reduce the downtime of your connected devices.

Why you need the PoE switch?





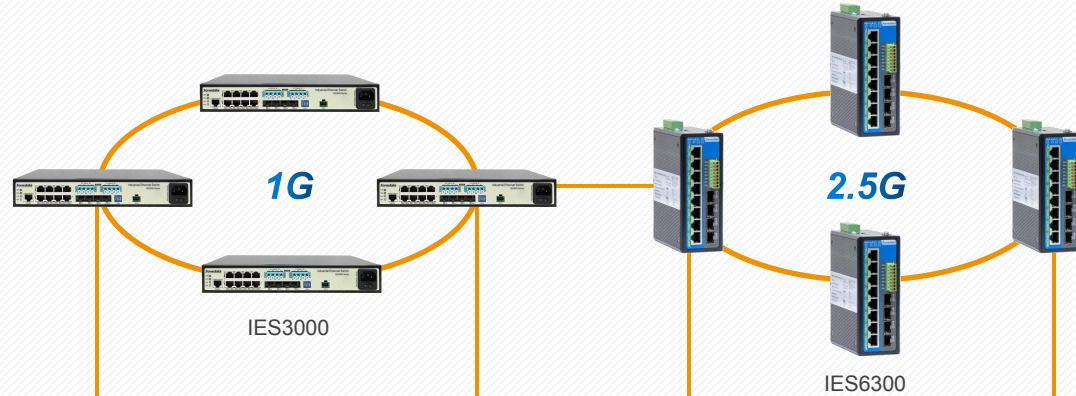
02

3onedata PoE Switch Introduction

- Product Family
- Products Advantage
- Product Details
- Products Application

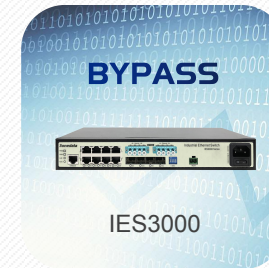
Product Family

High-speed
Convergence
Layer



Convergence
Layer

Device
Layer



Industrial Design to Ensure High Availability



Wide Operating Temperature

Non-blocking Video Transmission

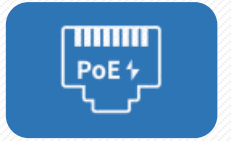


Dust-proof Design

High Protection



Strong Function to Ensure High Reliability



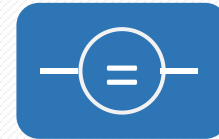
60W Per Port



802.1X Certification
Improve Network Security



IPv6 Management



24VDC Input Optional



Recovery Time < 20ms



Internal Modular
Structure Design

DDM

Digital Diagnostic
Monitoring

GVRP

GVRP VLAN
Registration Protocol

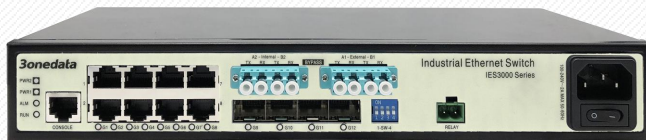
**Jumbo
Frame**

Improves Data
Transmission Efficiency

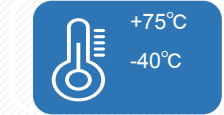
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IES3000-8GP4GS-2BP-2P48-240W

HOT



12-port Full Gigabit Managed Bypass PoE Switch



- 8 gigabit copper ports (optional PoE) + 4 gigabit SFP slots and 2 Bypass
- SW-Ring technology, automatic recovery time < 20ms
- DDM (Digital Diagnostic Monitoring) function
- 16KBytes jumbo frame improves data transmission efficiency
- Bypass seamless handover technology guarantees signal stabilities
- Multiple access ways: CLI, WEB, Telnet, SNMP
- Two optional power supplies: 24VDC PoE, 48VDC PoE

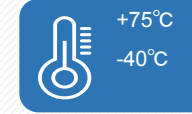


IES6300 Series

12/8/6-port Full Gigabit L2 Managed PoE Switch



HOT



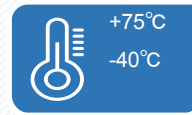
- 2 2.5G Ethernet SFP fiber ports + 2 Gigabit SFP fiber ports (optional) + 4/8 Gigabit copper ports
- SW-Ring technology, automatic recovery time < 20ms
- Support multiple network protocols: STP/RSTP/MSTP, ERPS, PoE, DHCP, VLAN, QoS function, IGMP Snooping function, LLDP etc.
- DDM (Digital Diagnostic Monitoring) function
- Two optional power supplies: 24VDC PoE, 48VDC PoE
- Unmanaged Version: IES2300



IES6300-8GP2GS2HS IES6300-8GP2GS2HS IES6300-4GP2GS2HS IES6300-4GP2HS
-2DI2DO

IES6312 Series

12-port Full Gigabit L2 Managed PoE Switch



- 4 Gigabit fiber ports (SFP slots) + 8 Gigabit copper ports
- SW-Ring technology, automatic recovery time < 20ms
- DDM (Digital Diagnostic Monitoring) function
- 16KBytes jumbo frame improves data transmission efficiency
- Supports Radius, SNMPv3, 802.1X, HTTPS and SSH configuration, enhances network security
- Multiple access methods: CLI, WEB, Telnet, SNMP
- Unmanaged Version: IES2312



IES6312-8GP4GS-
2P24-120W

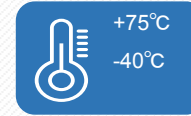
IES6312-8GP4GF-
2P24-120W

IES6312-8GP4GS-
2P48-240W

IES6312-8GP4GF-
2P48-240W



IPS2000G



- 1 Gigabit copper/fiber port + 4 Gigabit PoE copper ports
- Support 802.1 at/af, single PoE port power up to 30W
- Support 48VDC input voltage
- Flow control function
- Port-rate-limit function

5-port Full Gigabit L2 Unmanaged PoE Switch



IPS215 Series

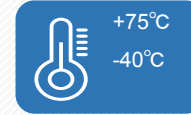
5-port 100M L2 Unmanaged PoE Switch



IPS215-4PoE



IPS215-1F-4PoE



- 2 Gigabit Combo ports (SFP slot/RJ45) + 4 100M PoE copper ports
- Support 802.1 at/af, single PoE port power up to 30W
- Support 48VDC input voltage
- VLAN function & port-rate-limit function



IPMC100 Series

2/3-port Full Gigabit Unmanaged PoE Media Converter



IPMC100-1GF-1GPoE



IPMC100-1GF-2GPoE



IPMC100-1GS-1GPoE



IPMC100-1GS-2GPoE



- Single PoE port power up to 30W
- Support 802.1 at/af, automatic recognition adaptation
- Flow control function
- Port-rate-limit function
- Support 48VDC input voltage



IPMC101 Series

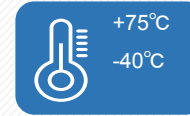
2-port 100M Unmanaged PoE Media Converter



IPMC101-F-PoE



IPMC101-1S-PoE



- 1 100M fiber port/SFP slot + and 1 100M PoE copper port
- Support 802.1 at/af, single PoE port power up to 30W
- Automatic recognition adaptation
- Support 48VDC input voltage
- LFP function



IES6220 Series

20-port 100M/Gigabit L2 Managed PoE Switch



IES6220-16P4GS-
2P48-120W

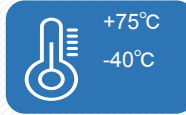
IES6220-16P4GS-
2P48-200W

IES6220-8T8P4GS-
2P48-200W

IES6220-8T8P4GS-
2P48-120W



PoE+



+75°C

-40°C



IP40



RPS

- 4 Gigabit SFP slots + 16 100M PoE copper ports
- SW-Ring technology, automatic recovery time < 20ms
- Single PoE port power up to 30W
- Optional AC/DC power supply, DC dual power supply redundancy
- DDM (Digital Diagnostic Monitoring) function
- Unmanaged Version: IES2220



IES6310 Series

NEW

6/10-port Full Gigabit L2 Managed PoE Switch



- 2 2.5G Ethernet SFP ports + 4/8 Gigabit copper
- SW-Ring technology, automatic recovery time < 20ms
- Single PoE port power up to 30W
- Dual power supply, 48VDC PoE or 24VDC PoE power input
- Support multiple network protocols and industrial standards, such as STP/RSTP, DHCP, VLAN, QoS, IGMP Snooping, LLDP
- Unmanaged Version: IES2310



IES6310-8GP2HS-2P24-120W

IES6310-8GP2HS-2P48-120W

IES6310-4GP2HS-2P24-120W

IES6310-4GP2HS-2P48-120W



IES6210 Series

6/10-port 100M/Gigabit L2 Managed PoE Switch



IES6210-8P2GC-2P24



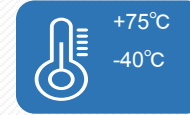
IES6210-8P2GC-2P48



IES6210-4P2GC-2P24



IES6210-4P2GC-2P48

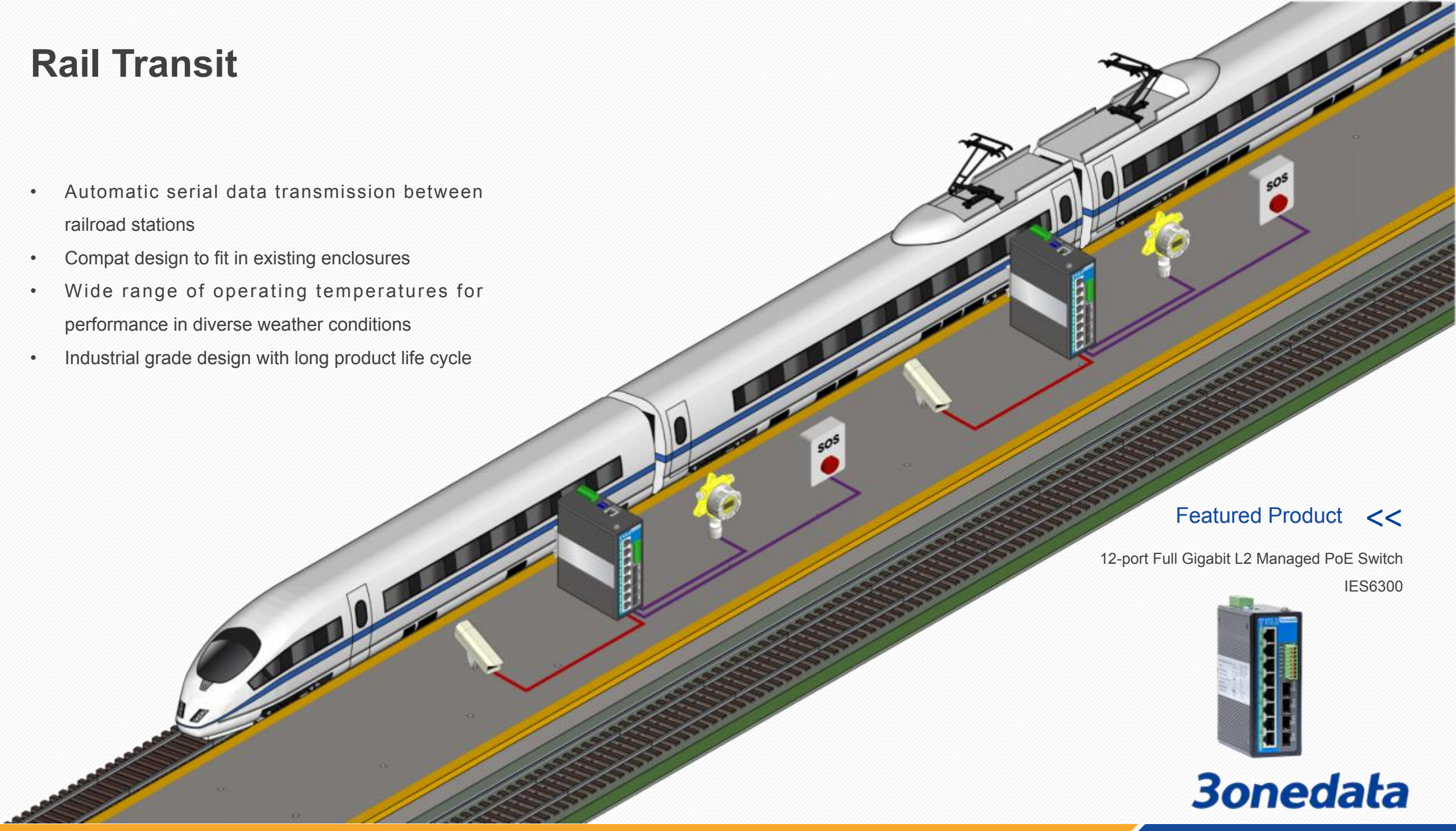


- 2 Gigabit Combo ports(SFP slot or RJ45) + 4/8 100M PoE copper ports
- SW-Ring technology, automatic recovery time < 20ms
- Single PoE port power up to 30W
- Optional AC/DC power supply, DC dual power supply redundancy
- DDM (Digital Diagnostic Monitoring) function
- Unmanaged Version: IES2210



Rail Transit

- Automatic serial data transmission between railroad stations
- Compat design to fit in existing enclosures
- Wide range of operating temperatures for performance in diverse weather conditions
- Industrial grade design with long product life cycle



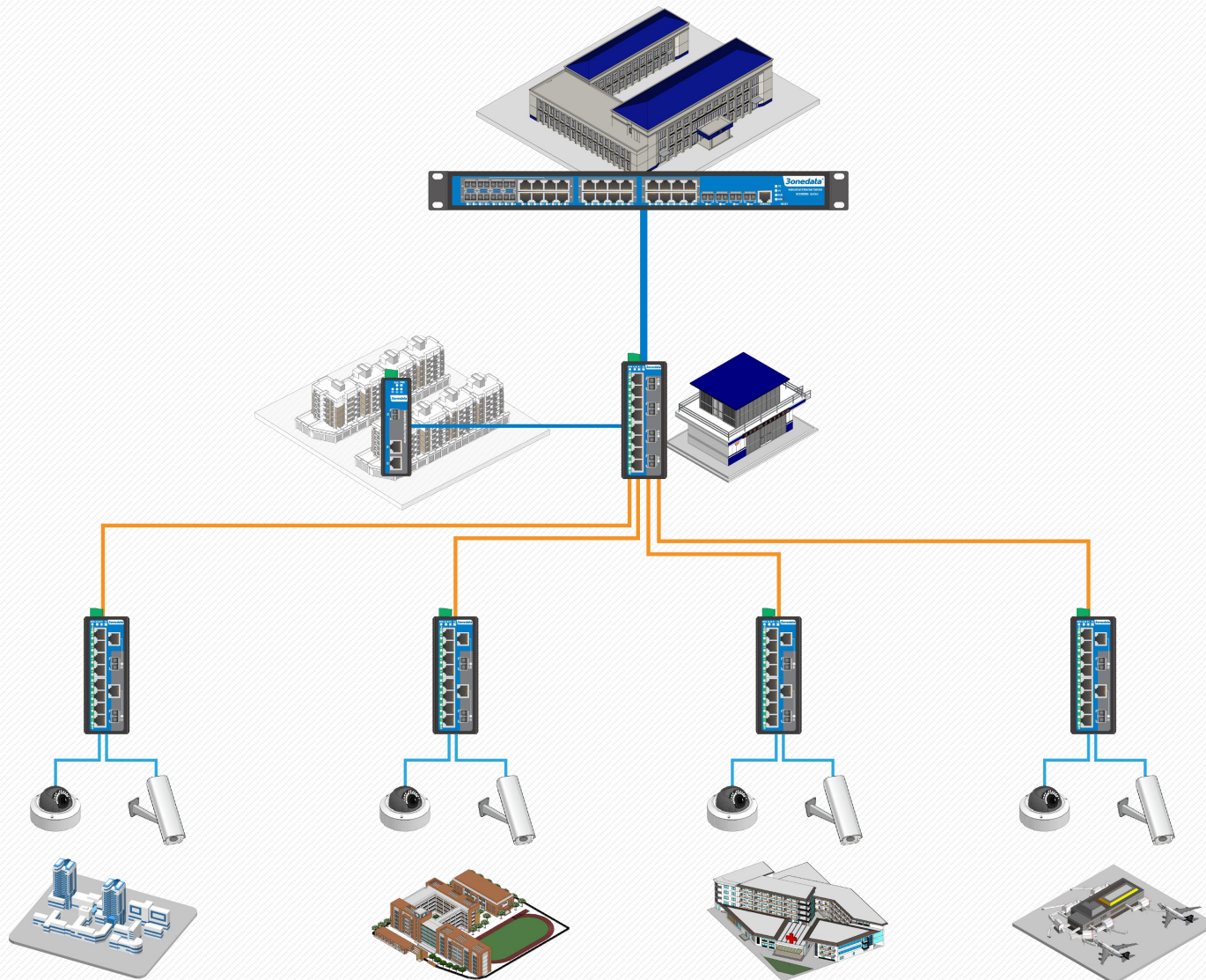
Featured Product <<

12-port Full Gigabit L2 Managed PoE Switch
IES6300



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Public Video Surveillance



- Industrial grade design for outdoor use in harsh environments
- Max 120km distance of fiber transmission
- Rich network management, separate devices with different business-type in LAN
- High bandwidth guarantees the video fluent
- Easy installation and maintenance, convenient to expand

Featured Products <<



IES6312

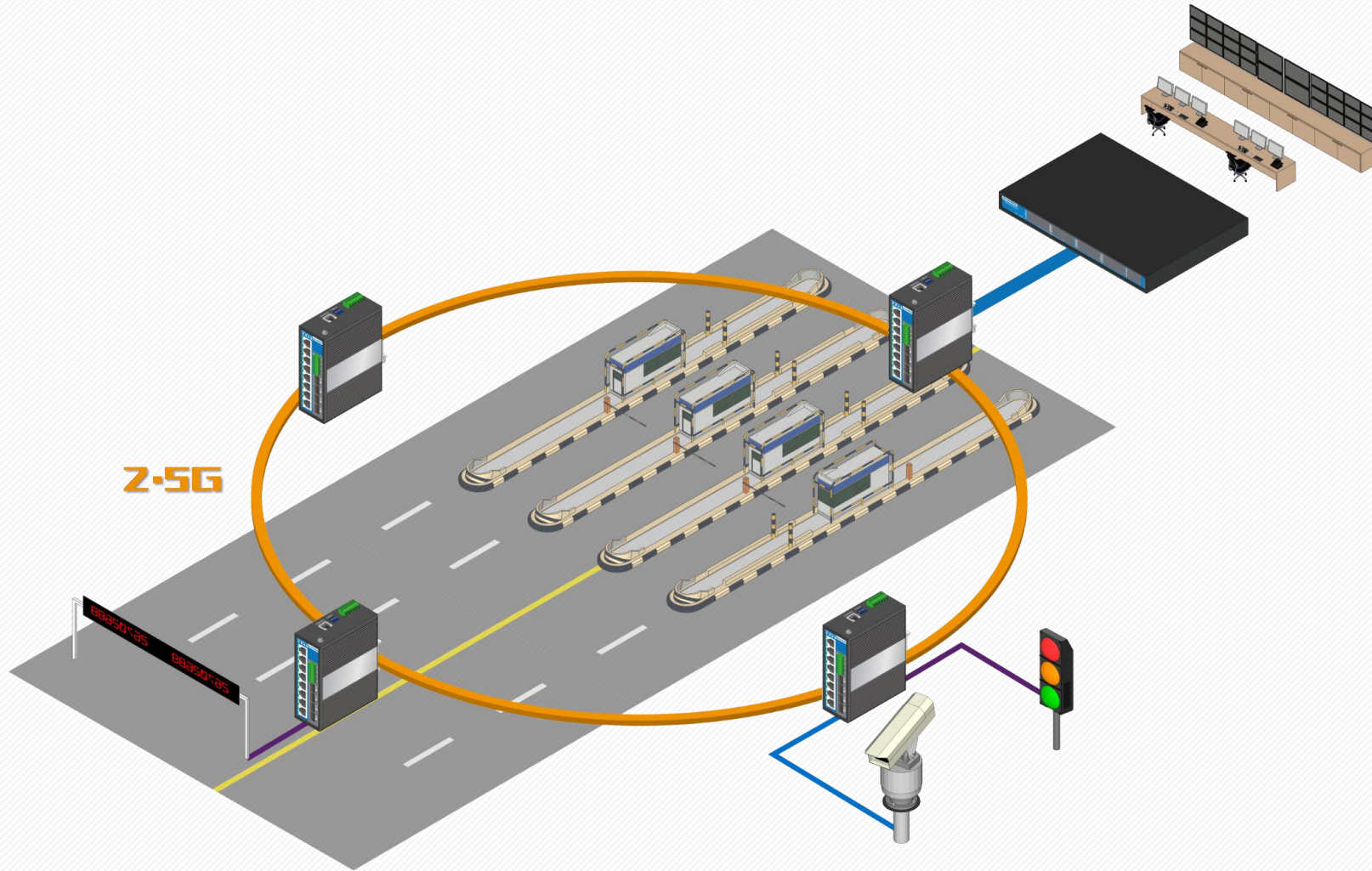
12-port Full Gigabit
L2 Managed PoE Switch



IES6210

6/10-port 100M/Gigabit
L2 Managed PoE Switch

Highway



- Surveillance IP camera networking
- Rugged/outdoor wide operating temperature devices
- Redundant network to eliminate downtime for any traffic control or ring monitoring device

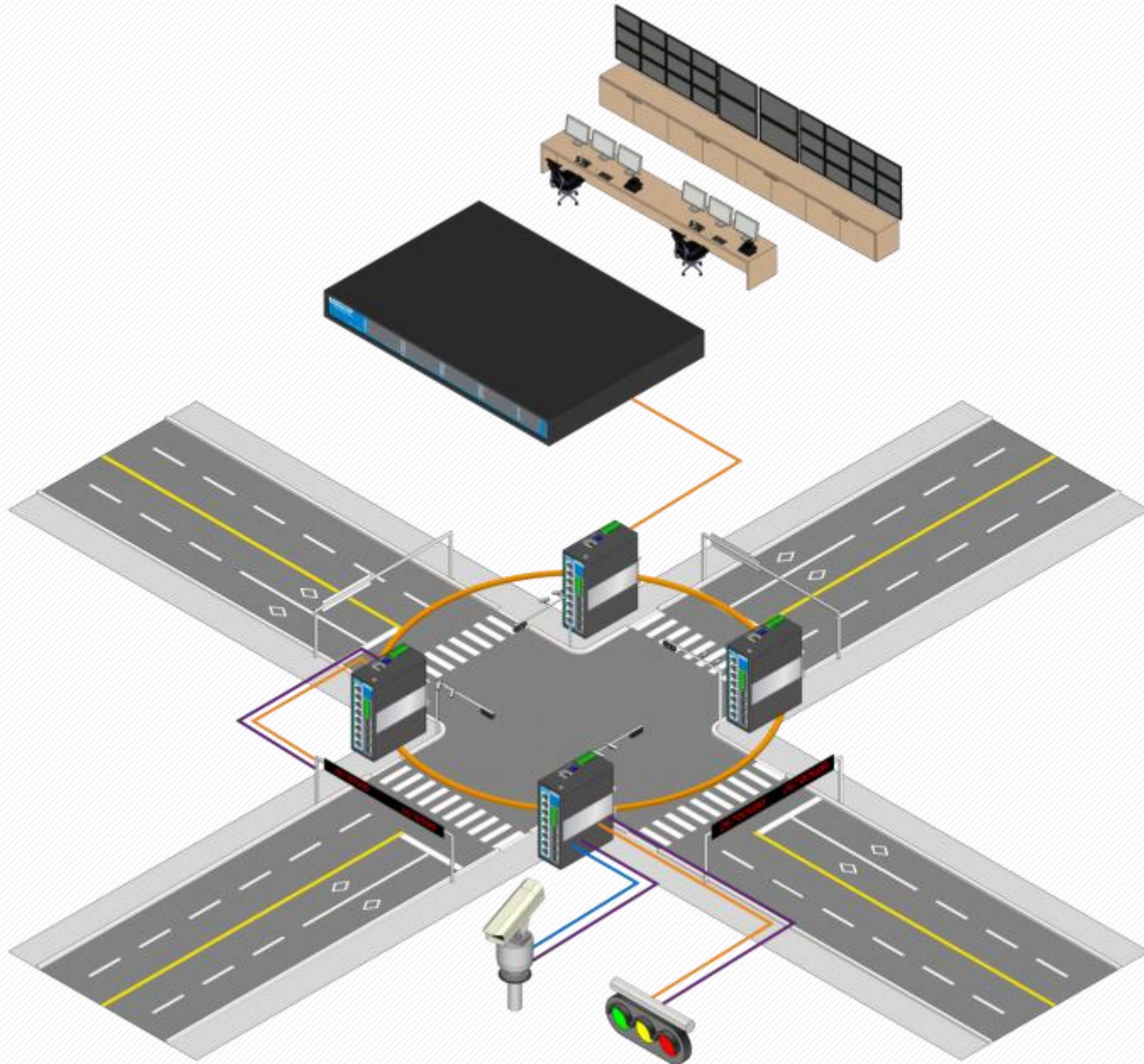
Featured Product <<



IES6300

12-port Full Gigabit L2 Managed PoE Switch

Traffic Monitoring



- Real-time traffic monitoring
- Industrial grade design for outdoor use in harsh environments
- High ESD and surge protection

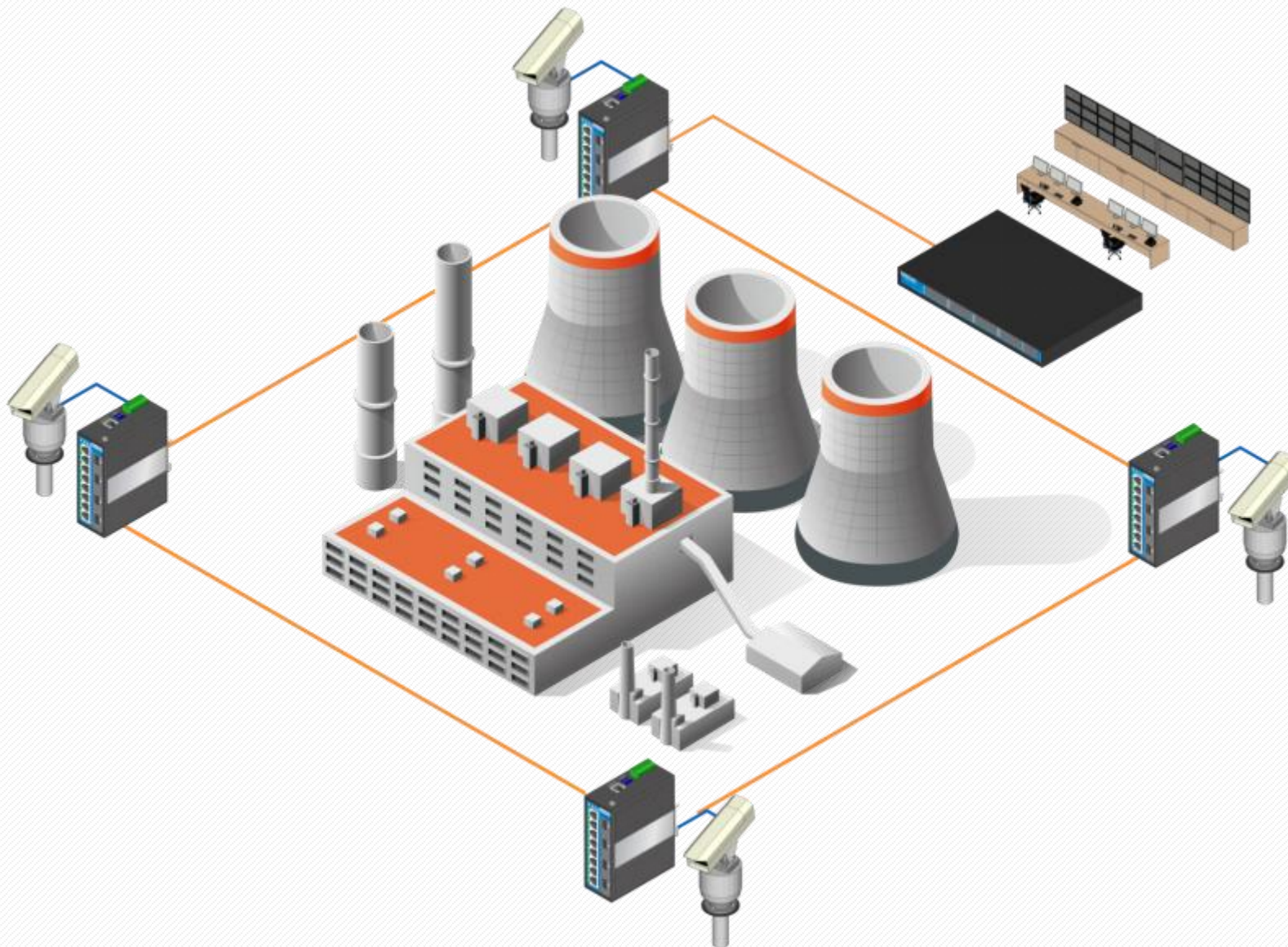
Featured Product <<



IES6300

12-port Full Gigabit L2 Managed PoE Switch

Industrial Park



- Control center engages in remote monitoring and control of field site equipment and surveillance of pipelines
- Network equipment suitable for wide temperature ranges, high humidity, dusty and even explosive environments
- Fiber optics cascade for long distance transmission

Featured Products <<

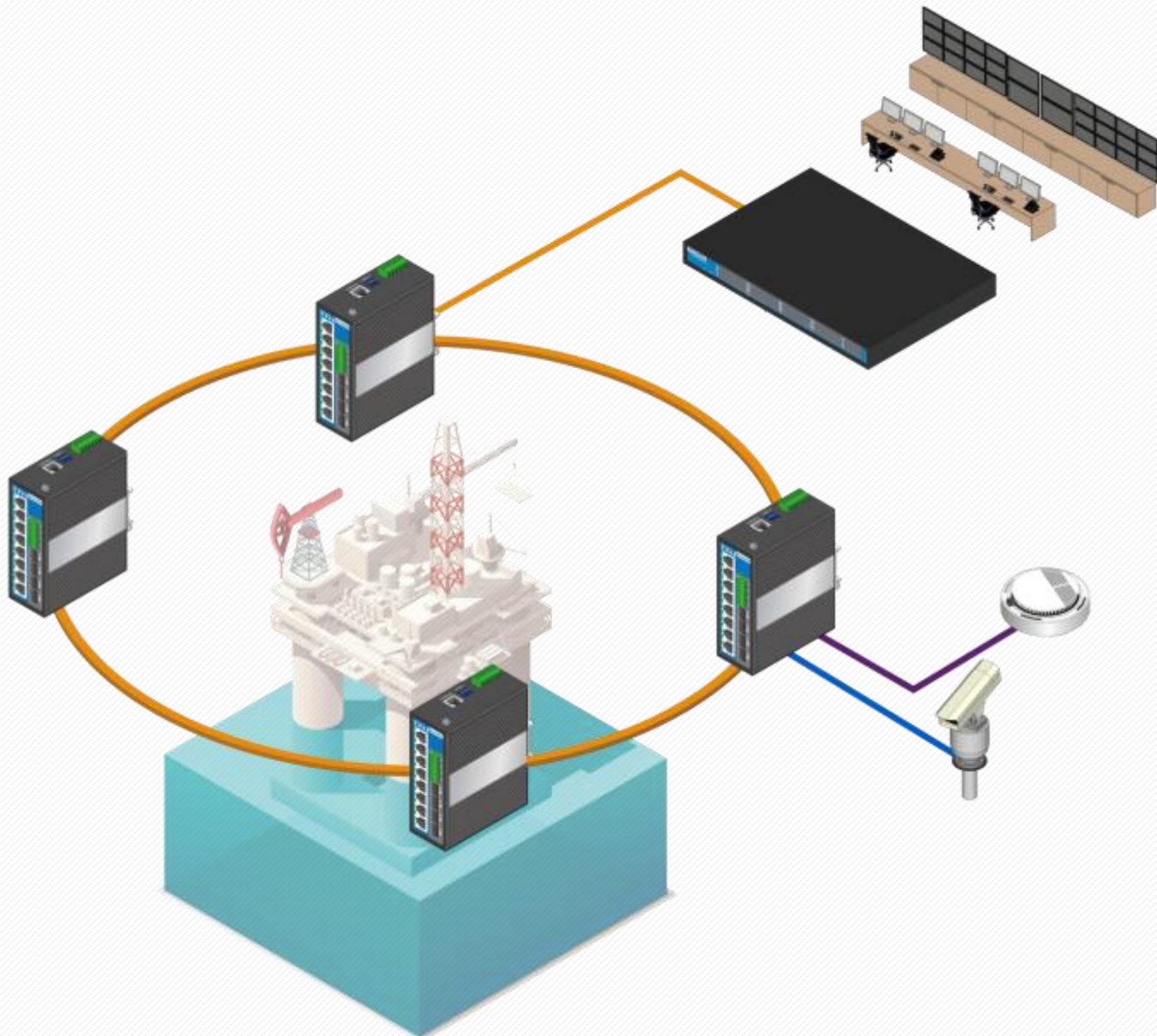


IES6312
12-port Full Gigabit L2
Managed PoE Switch



IES6210
12-port 100M L2
Managed PoE Switch

Pipeline Monitoring



- Control center engages in remote monitoring and control of field site equipment and surveillance of pipelines
- Network equipment suitable for wide temperature ranges, high humidity, dusty and even explosive environments
- Fiber optics cascade for long distance transmission

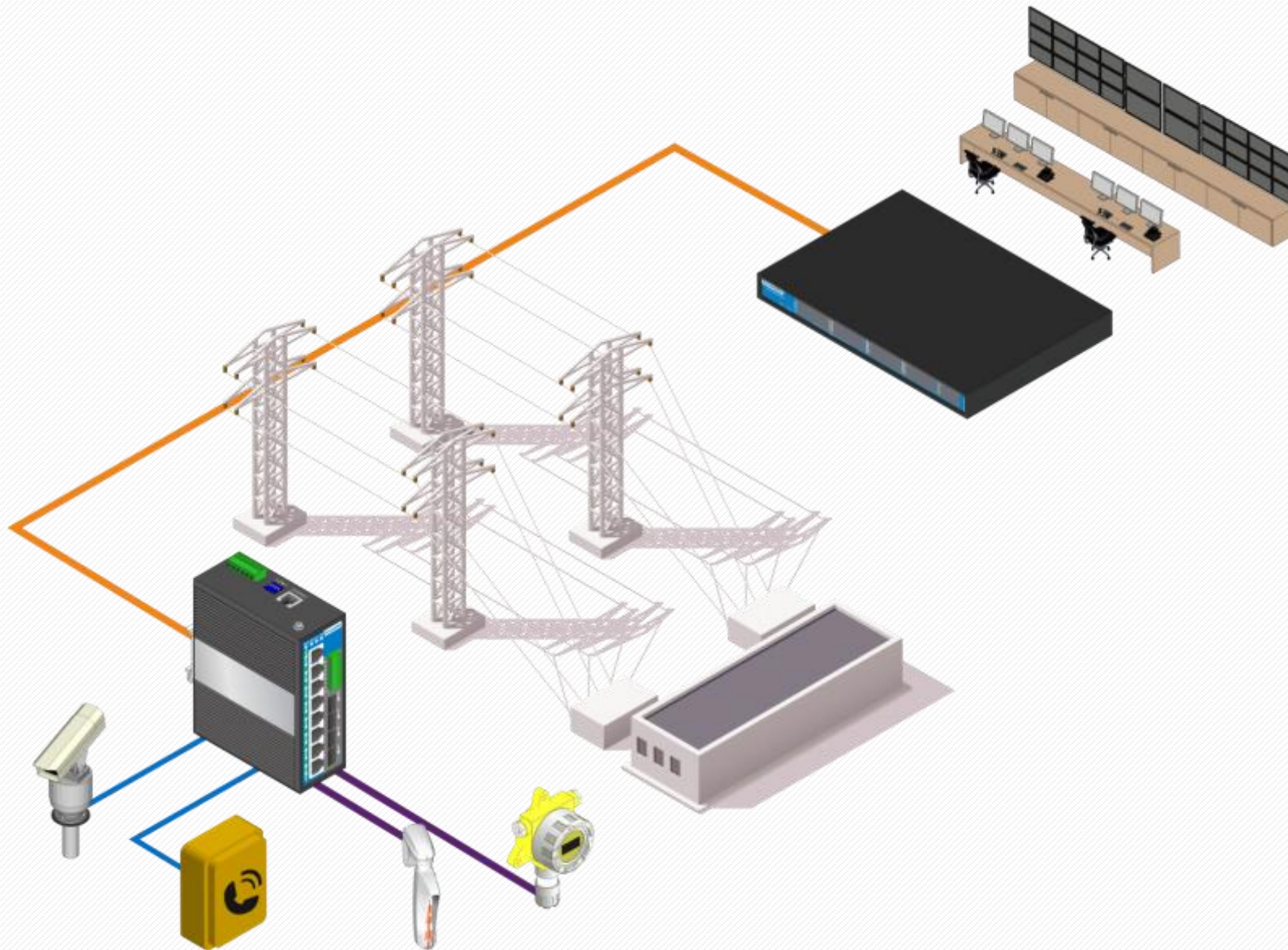
Featured Product <<



IES6300

12-port Full Gigabit L2 Managed PoE Switch

Substation Monitoring



- 24/7 reliability for continuous operation
- Connectivity and availability even during EMI and surge conditions
- Remote management of operations to reduce costly onsite visits to unmanned locations

Featured Product <<



IES6300

12-port Full Gigabit L2 Managed PoE Switch

Thank you !

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