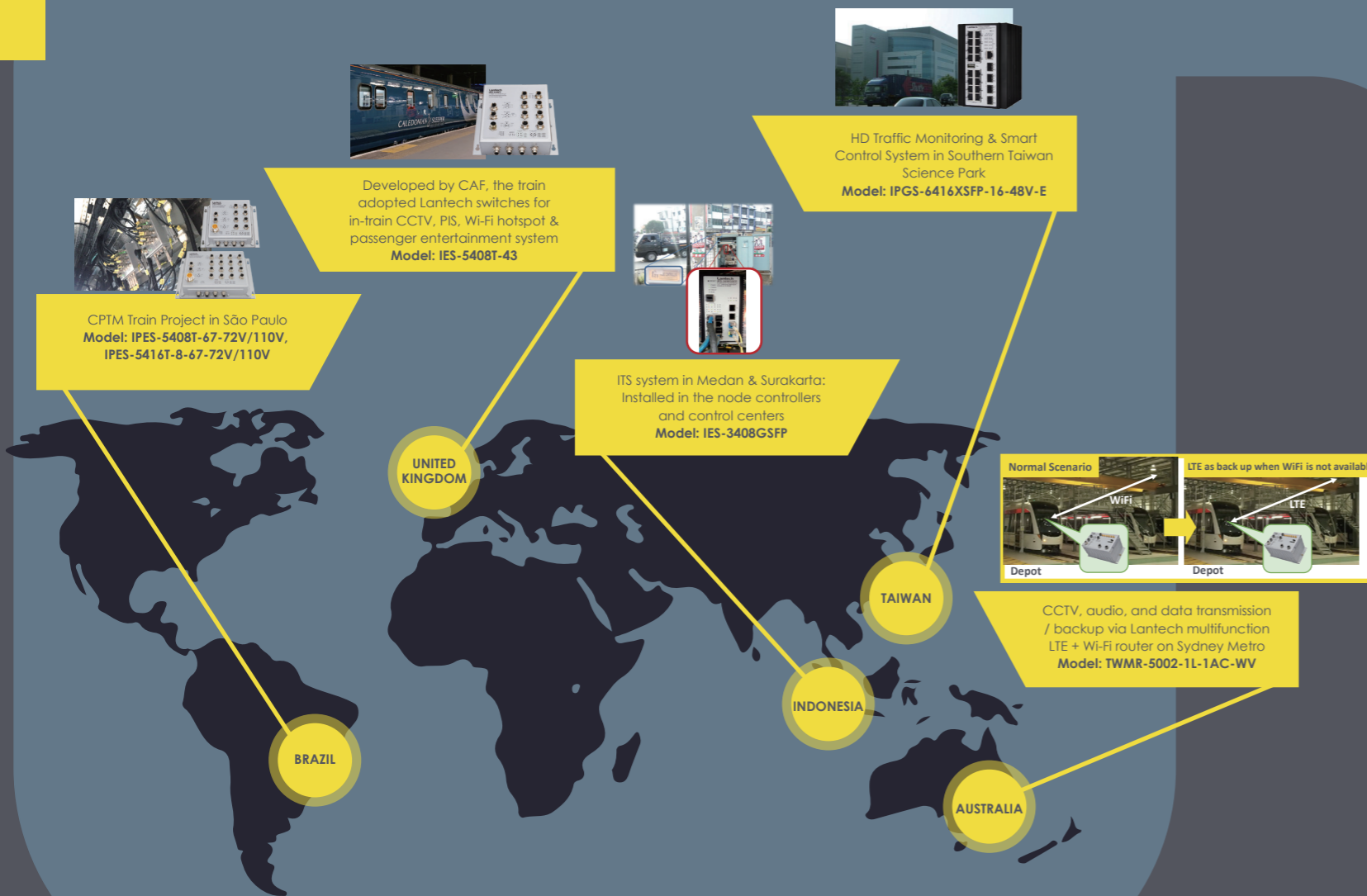


LantechTM

2020/2021 PRODUCT GUIDE



CASE REFERENCES



ABOUT LANTECH

With a long background in IP Ethernet products, Lantech brings the best network solutions for industrial and IP networks to the marketplace. The Lantech group is devoted to providing end user benefits & feature rich innovative high-quality networking solutions. We provide outstanding service and support to our world-wide partners & distribution network. Lantech provides high quality products with customer-focused services from our sales offices located in Taiwan, Australia, Germany, UK and Singapore.

Our core values are based on our firmware modularity development to meet with special requirement of projects as well as the continuous improvement of hardware to cope with different levels of certificate and criteria for various harden applications including rollingstock railway, trackside, vehicle, transportation, maritime, offshore, power substation, industrial surveillance. PoE (power over Ethernet) is one of key advantage solution which Lantech is good at DC-DC conversion built-in the switch and router that could have greater PoE budget and wider input voltage range.

Lantech products are successfully deployed around the world and used in all types of applications, including bus system in Spain, tram system in Finland, train in France and Germany, outdoor wireless surveillance system in Malaysia, military truck system in Vietnam, traffic networks in the UK and city surveillance system in Romania, etc.

As an IRIS-certified company, Lantech ensures that the quality of our products and services meets the high standards required by our customers worldwide and are suitable for use in the rail industry.

Quality Policy

- Technical Innovation
- Sustainable Improvements
- Customer Satisfaction
- Grow Responsibly with Suppliers

Safety Policy

- Create Safety Awareness
- Implement Safety Training
- Guarantee Safe Operations
- Provide Safe Products



*Industrial-grade products

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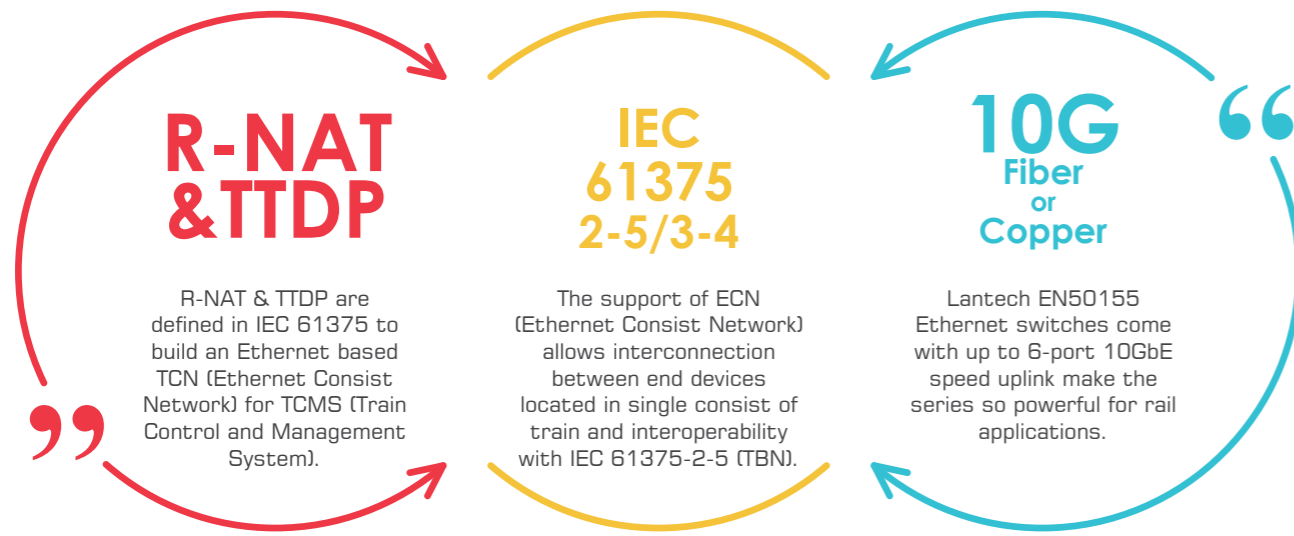
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On-board Networking Switches for TCMS Communications



- Optional Railway Network Address Table (R-NAT) for OS4 models
- Smart Bypass Protection
- EN 50155:2017, EN 50121-4, EN 55032 and EN45545-2
- Wide Voltage Input 16.8~137.5VDC w/ Isolation
- Inrush Current Limit
- Up to 80W PoE w/PoE & System Isolation

Product Selection



TPGS-R6616XFT
16 10/100/1000T PoE at + 4 10G copper
+ 2 10G Q-ODC fiber OS4 EN50155
Managed Switch



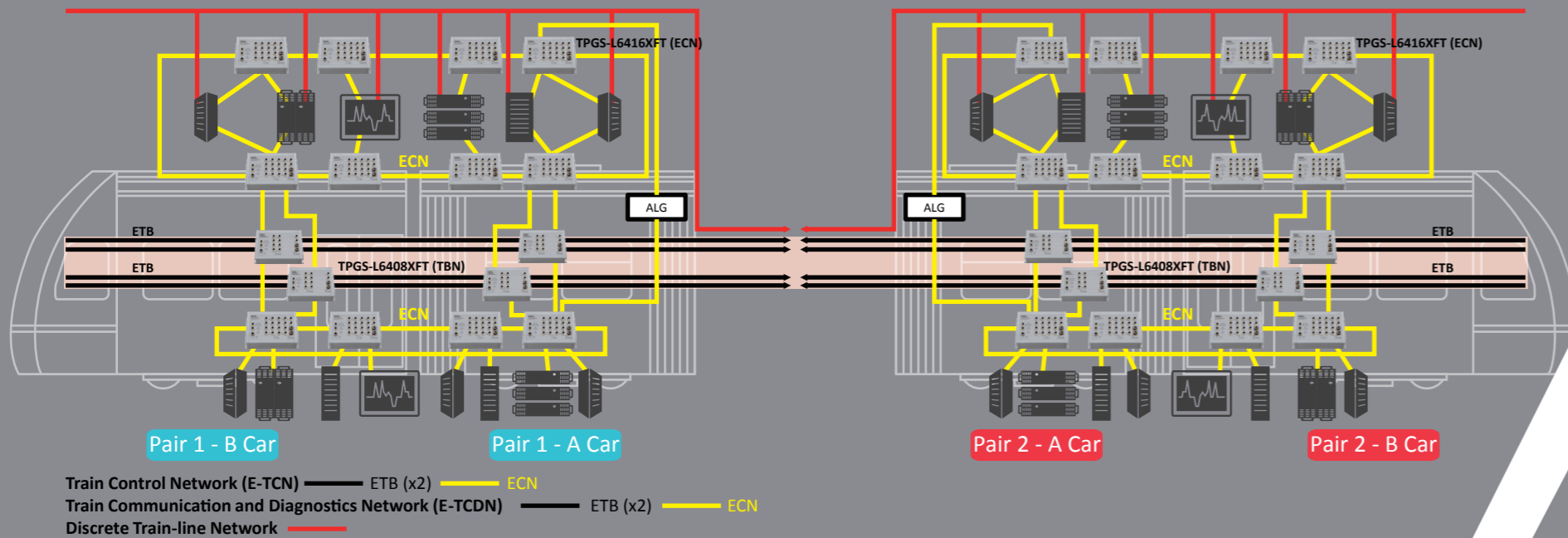
TPES-L6424XFT
24 10/100TX (PoE at) + 2 10G copper +
2 10G Q-ODC fiber OS3 EN50155
Managed Switch



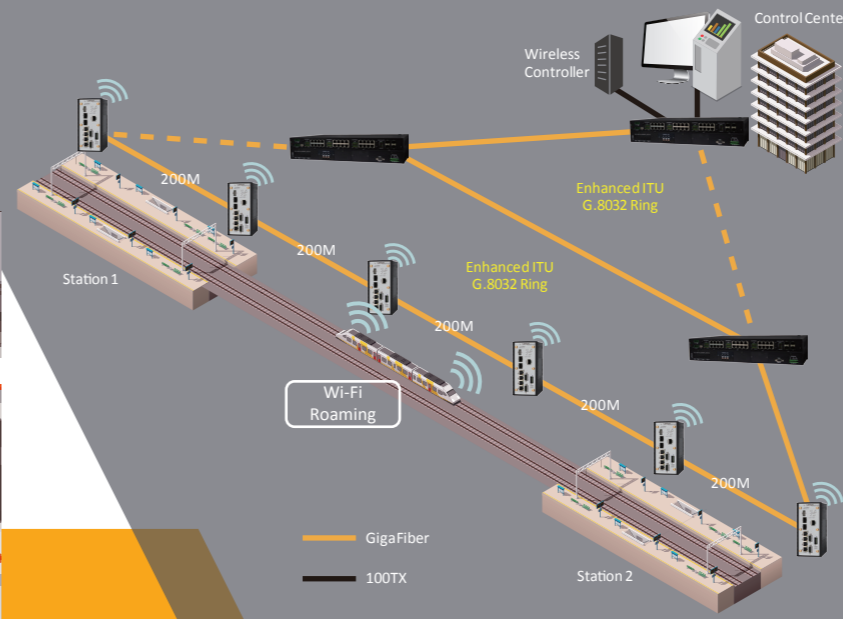
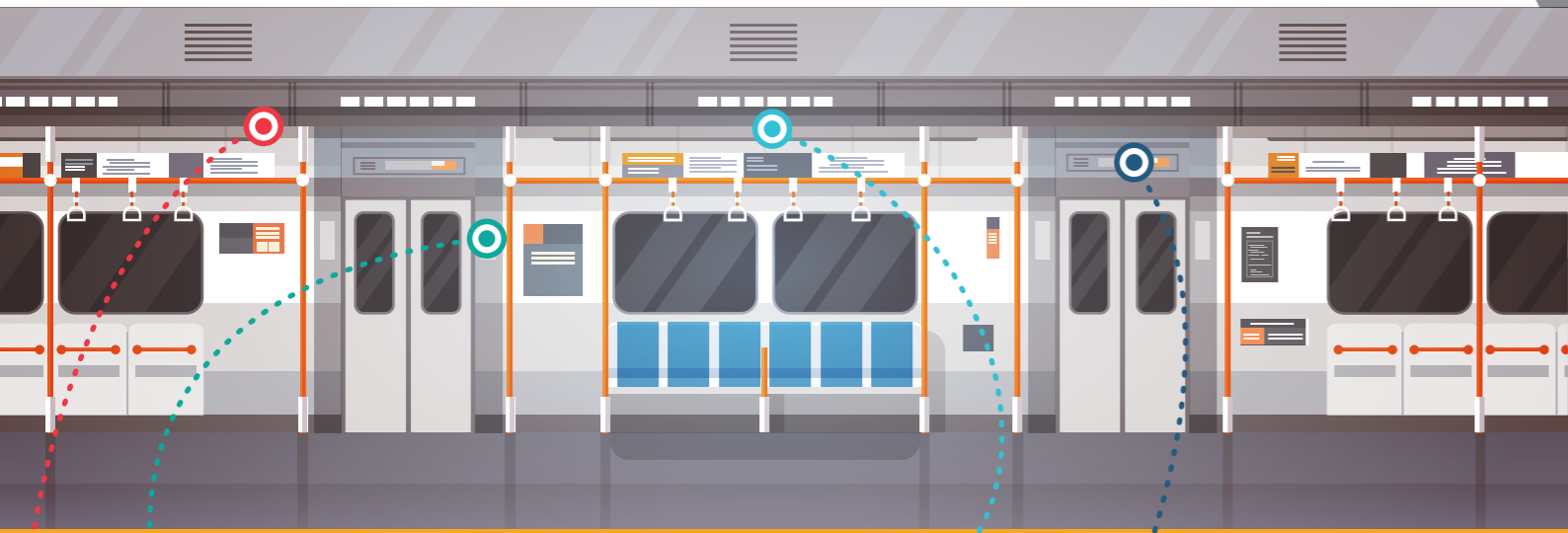
TPGS-L6416XFT
8 10/100/1000T PoE at + L2+ EN50155
Managed Switch



TPGS-L6408XFT
8 10/100TX PoE at + 4 10/100/1000T
L2+ EN50155 Managed Switch



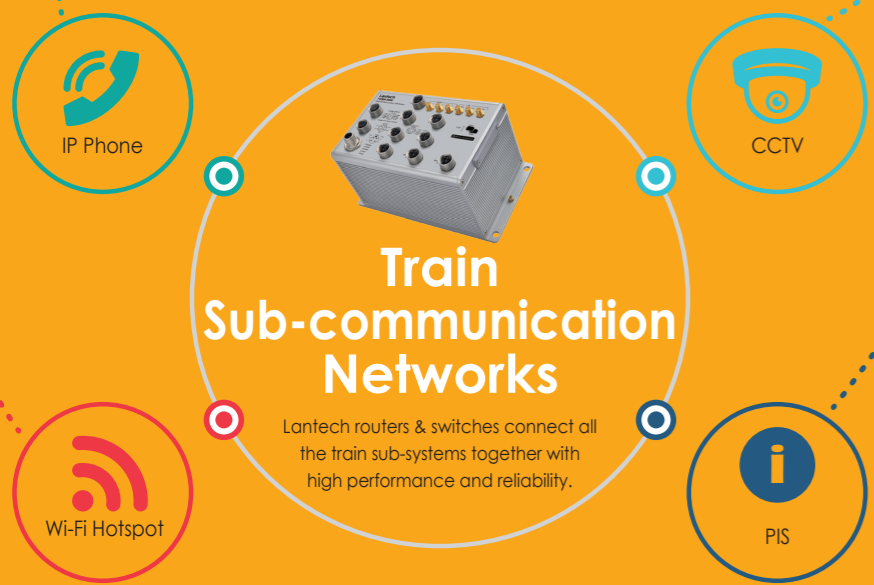
On-board / Trackside Networking Multi-function Routers



BEST FOR TRACKSIDE

802.11s
Wireless Mesh Network

MESH
&
Fiber Connection



Features at a glance Lantech Multi-function Routers

- Wi-Fi**
 - Wireless Client-base Roaming
 - Advanced security & 16 SSIDs
 - IEEE 802.11ac Dual Band Operation
 - 802.11s Wireless Mesh Network
- Software**
 - Multisite VPN, OpenVPN and Firewall
 - Managed Switch Built-in
 - Load Balancing

- LTE**
 - Dual Concurrent LTE Design 4G/3G
 - Optional eSIM Chip**
- Hardware**
 - Galvanic Isolation, Wide Input Voltage
 - USB Port for Configuration
 - Optional EMMC Flash Storage**
 - Ignition Sensing
 - Serial Ports: Modbus Gateway

Product Selection



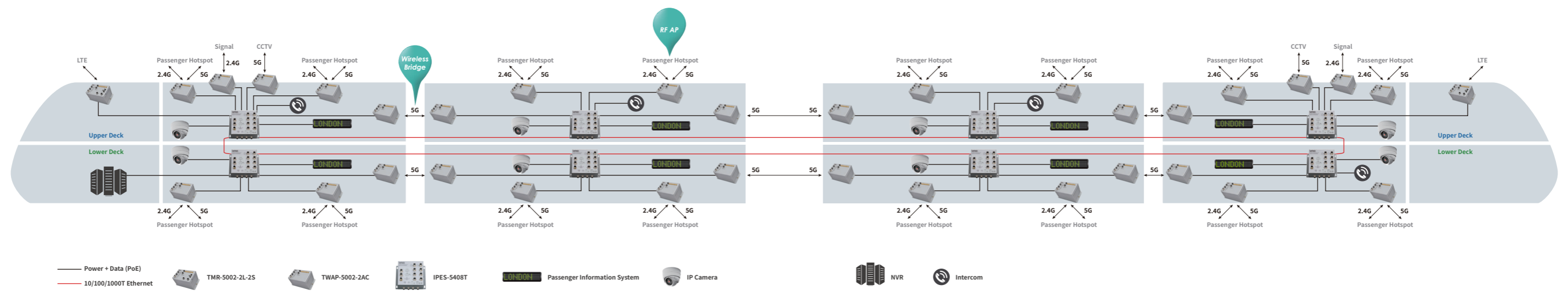
TWMR-5208MGF
EN50155 Multifunction VPN Router w/up to 2x WiFi 11ac + up to 2x LTE 4G + 8 GigaT + 2 1G/2.5G Fiber + 2 copper WAN



TWMR-5006
EN50155 Multifunction VPN Router w/1x WiFi 11ac + 1x LTE 4G + 2 serial ports + 6 Gigabit X-coded Ethernet Switch



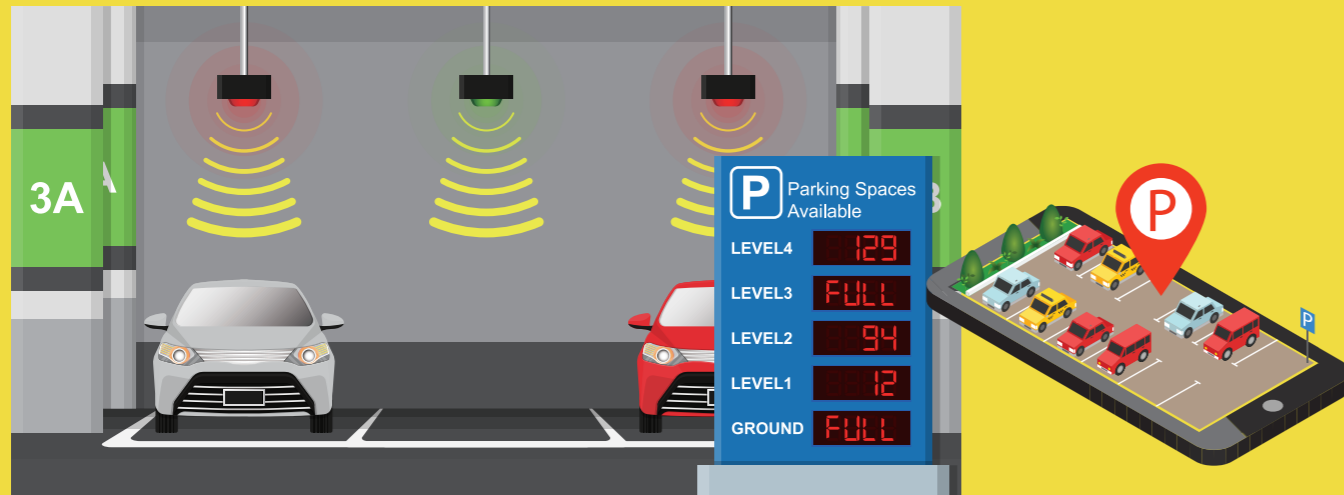
IWMR-3204DF
Industrial Multifunction VPN Router w/up to 2x WiFi 11ac + up to 2x LTE 4G + 2 serial ports + 4 Gigabit Ethernet + 2 Dual Speed SFP Switch



Industrial Solutions
Hardened Ethernet Connections
Ethernet Connections
Accessories

Intelligent Transportation System

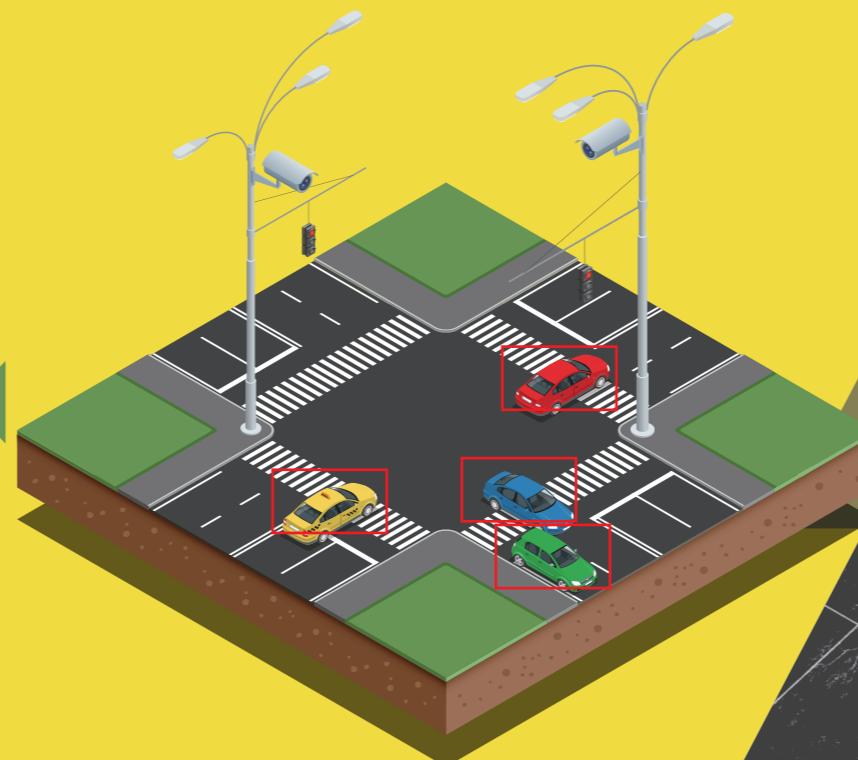
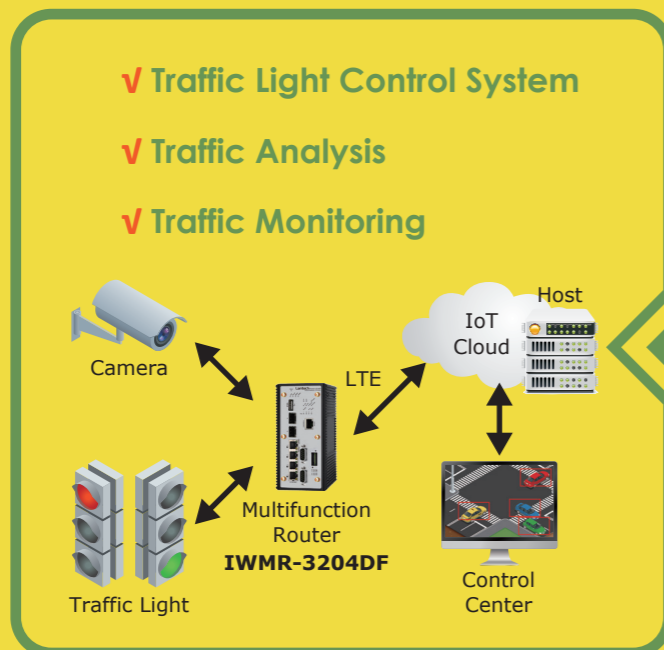
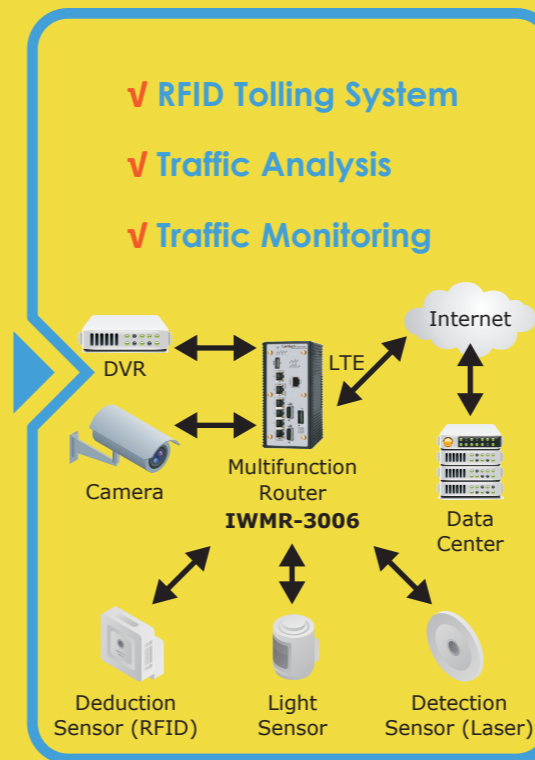
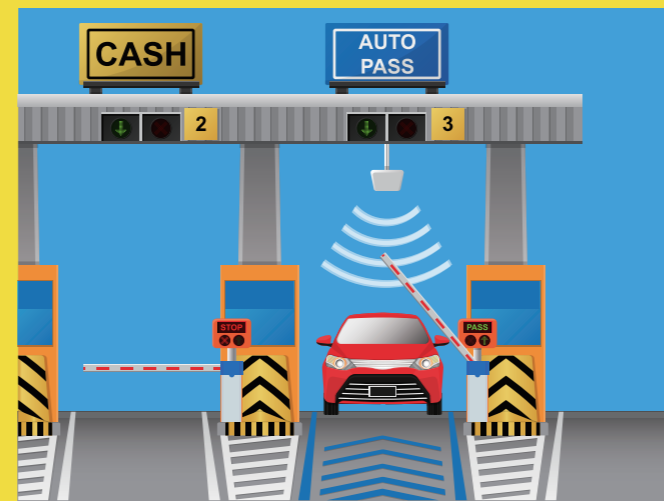
Product Selection



IWMR-3204DF
Industrial Multifunction VPN Router
w/up to 2x WiFi 11ac + up to 2 LTE 4G
+ 2 serial ports + 4 Gigabit Ethernet
+ 2 Dual Speed SFP Switch



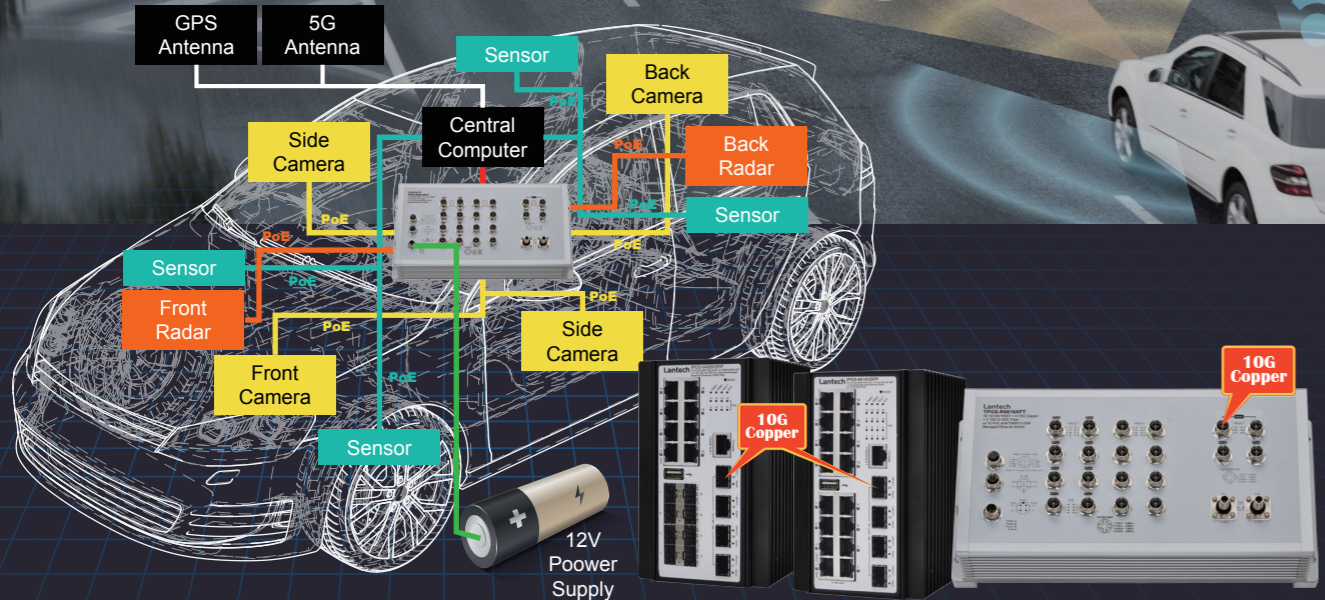
IPGS-3408GSFP
8 10/100/1000T PoE at
+ 4 1000M SFP L2+
Industrial Managed
Ethernet Switch



Industrial Solutions
Hardened Ethernet Connections
Ethernet Connections
Accessories

Autonomous Car

“Data transmission between 4K/8K camera, 360 degree camera, sensor, radar, GPS and inertial measurement units”



Lantech DIN-Rail 10G Uplinks Managed Ethernet Switches

- 4 x 10G Uplinks Fiber or Copper*
- Optional L3/L3 lite Capacity
- USB Port for Backup and Configuration
- Built-in Power Converter (12VDC input / 24VDC input)
- Feed 30W Power – 802.3at Standard (PoE models)
- Configurable Power Budget (240W@48V; 120W@24V; 80W@12V)
- PoE Detection and Scheduling
- Built-in Environmental Monitoring
- Wide range operation temperature: -40~75°C/-40~167°F
- Fan-less design

Lantech EN50155 10G Uplinks Managed Ethernet Switches

- IP54/21-rated Aluminum Housing
- Inrush Current Limit
- L2+ or L3 Lite Management
- EN 50155 / EN 45545-2 Certified
- Wide Voltage 16.8~137.5VDC Isolated Input w/ PoE 80W Budget
- PoE Detection and Scheduling
- Built-in Environmental Monitoring
- Wide range operation temperature: -40~75°C/-40~167°F
- Fan-less design

Bus Communications System



Lantech Industrial 7-in-1 Multi-function Routers

- Wi-Fi 802.11ac
- Storage
- Gateway
- Managed Switch
- LTE
- PoE
- VPN



Lantech E-Marking Certified Ethernet Switches

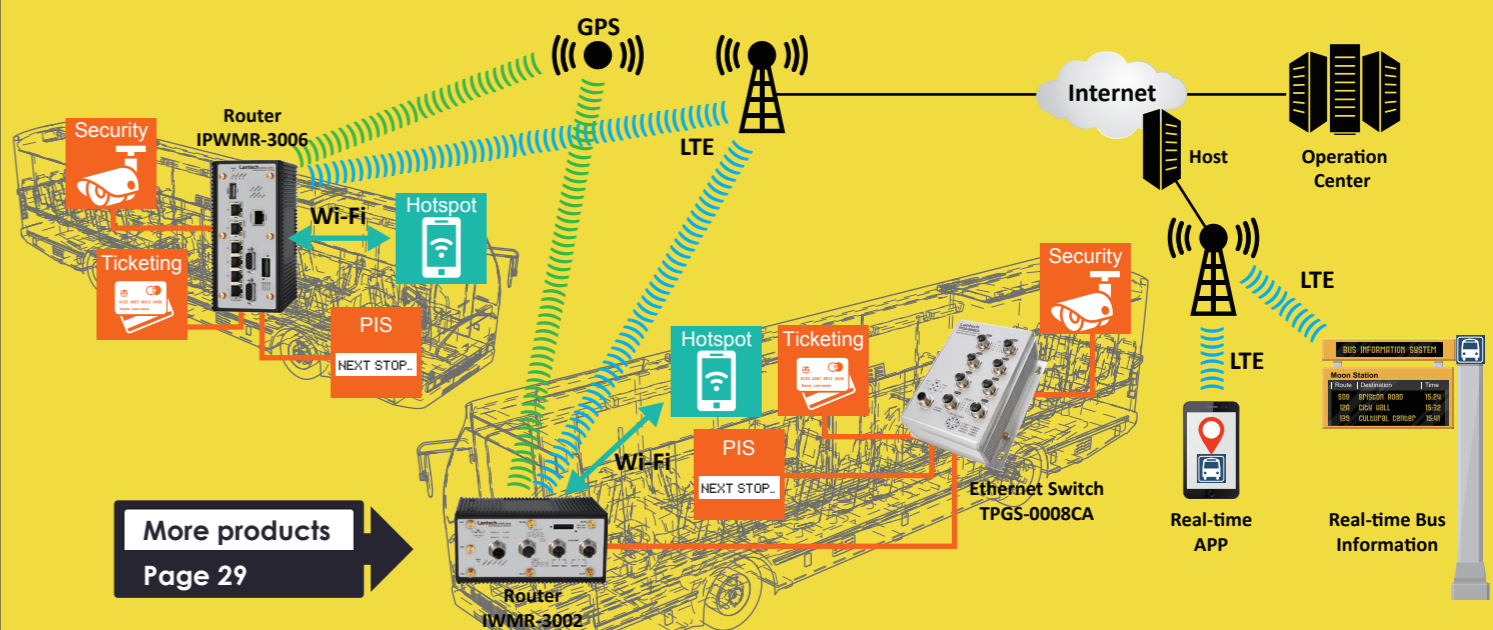
- E4 I(P)ES-0005B 5 10/100TX (PoE at) EN50155 Unmanaged Switch
- I(P)ES-0008B 8 10/100TX (PoE at) EN50155 Unmanaged Switch

- E13 IES-0016 16 10/100TX Industrial Unmanaged Switch
- I(P)GS-0008B 8 10/100/1000T (PoE) Industrial Unmanaged Ethernet Switch
- I(P)ES-0008B 8 10/100TX (PoE) Industrial Unmanaged Ethernet Switch

Lantech ITxPT Compliant Ethernet Switches



- T(P)GS-0008CA 8 10/100/1000T (PoE at) EN50155 Unmanaged Switch
- T(P)ES-0008CA 8 10/100TX (PoE at) EN50155 Unmanaged Switch



More products
Page 29

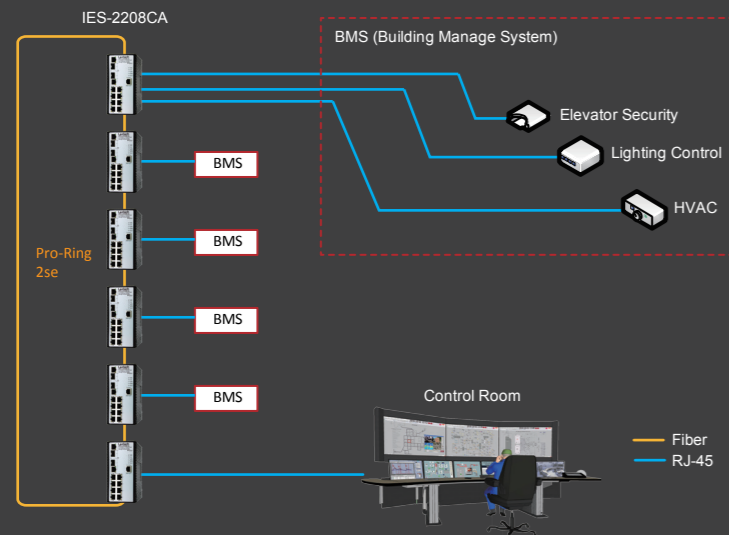
Industrial Solutions

Hardened Ethernet Connections

Ethernet Connections

Accessories

Building Automation



Challenges

Historically, building owners in the market for a new Building Management Systems (BMS) have been forced to choose between one of several proprietary equipment manufacturers. Normally BMS equipment is fitted in compact wall mounted control cabinets that are distributed around the building, with most devices being DIN Rail mounted.

Our Solutions

The use of TCP/IP for BMS system communications has brought about increased choice in selecting products from different vendors in the same BMS system and reducing the associated cabling and network hardware costs. For cable runs which exceed the 100 meter limitation of Cat5e or for links between different buildings, a fiber optic link is the ideal solution.

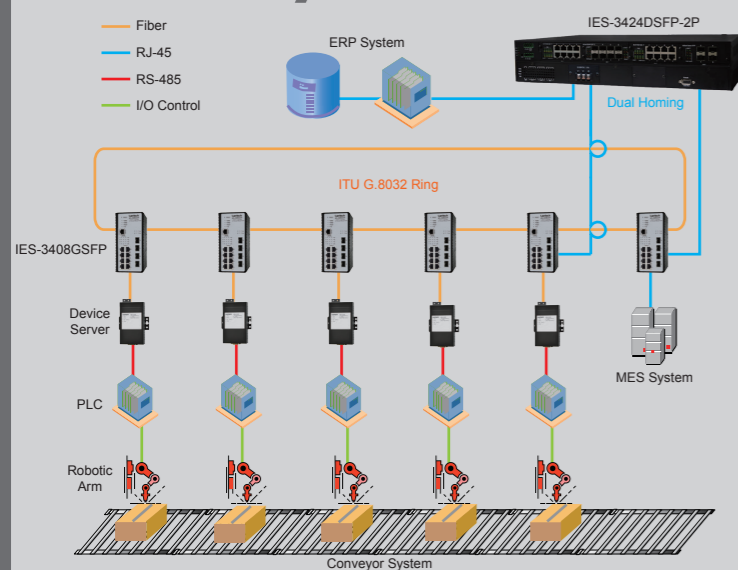
IES-2208CA

8 10/100TX + 2 10/100/1000T/
Dual Speed SFP Combo
Industrial Managed Switch



- 100M/1000M Dual Speed SFP Fiber
- Pro-Ring 2se covers Single-Ring Topology
- Wide operating temperature range from -40°C to 75°C

Factory Automation



Challenges

The most dynamic and challenging part for factory automation floor network is redundancy and real-time. Factory automation needs to be absolutely accurate because any interruption or delay could result in huge amount of lost, especially when the operation is non-stop, 7/24/365. On the other hand, to satisfy the rapid changing industry environment, manufacturing process must have high flexibility than before.

Our Solutions

Based on IP protocol, managers are able to control equipments and transmit data to SCADA, where connects with database and then generate statistic data for monitoring the operating status. As the equipments are all utilizing IP protocol and connect to the Ethernet, it's easier to integrate and change configuration through Internet. By collocating with Ethernet switches, managers are able to monitor the status, detect the failure, and solve the problem immediately.

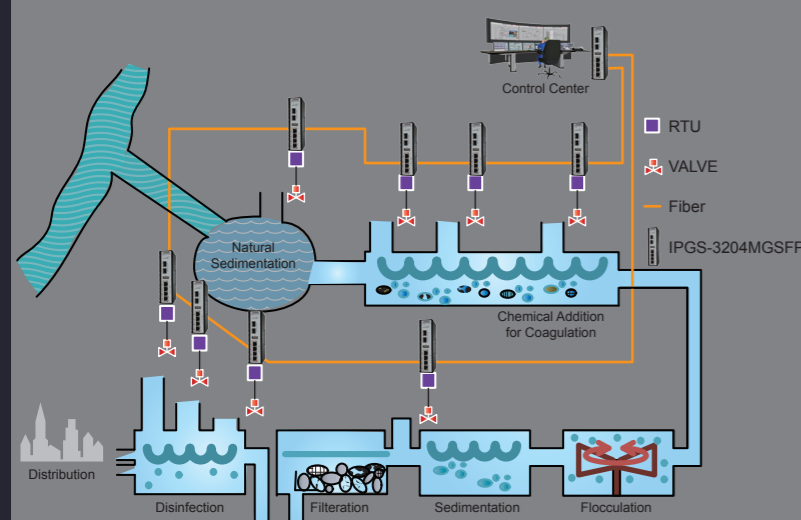
IES-3408GSFP

4 1000FX + 8 10/100TX
L2+ Managed Ethernet Switch



- Wide range dual DC powered input with galvanic isolation
- Enhanced G.8032 ring protection
- Wide operating temperature range from -40°C to 70°C

Process Control



Challenges

Water treatment process is essential for modern life to make water more acceptable and eliminating bad residues existing in many public sanitation systems then to return water back into natural environment without ecological impacts for the use of drinking water, industrial process, medical, hotel process and others.

Our Solutions

Using the industrial Ethernet network is the most convenient and reliable solution for water treatment system to connect with SCADA, PLC, water sensors, water bumps etc. Since the water treatment plant might cover huge floor space, the long transmission distance becomes one of the major considerations.

IGS-3204MGSFP

2 1G/2.5GSFP + 4 10/100TX
L2+ Managed Ethernet Switch



- Slim design
- Up to 2.5G Speed SFP Fiber
- Enhanced ITU G.8032 Ring
- USB port for backup & restore
- Wide operating temperature range from -40°C to 70°C

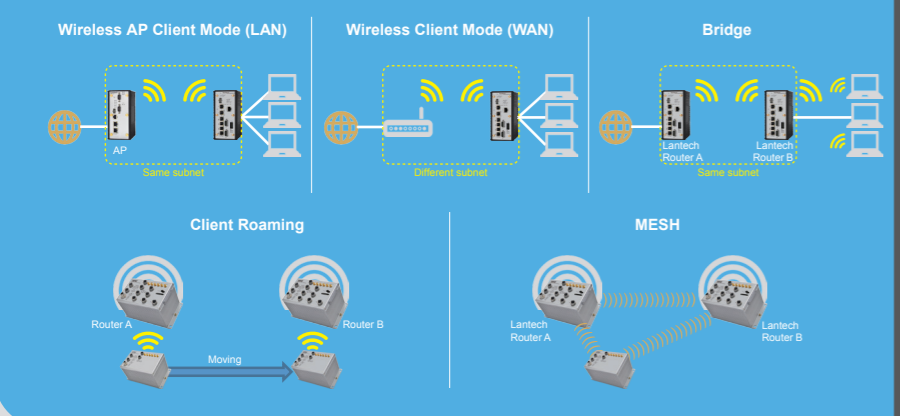
Why Choose Lantech?

FEATURE HIGHLIGHTS OF MULTI-FUNCTION ROUTERS

01 7-in-1 Multifunction

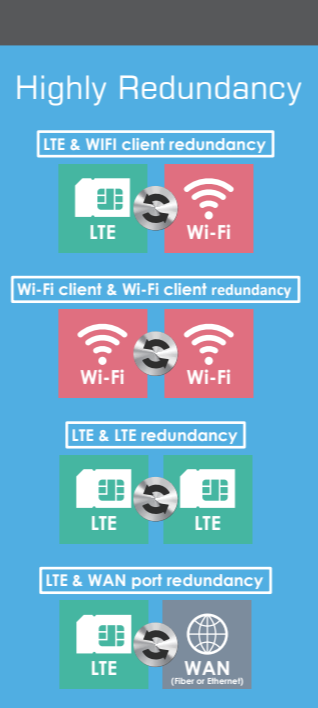


5-in-1 Wireless Modes

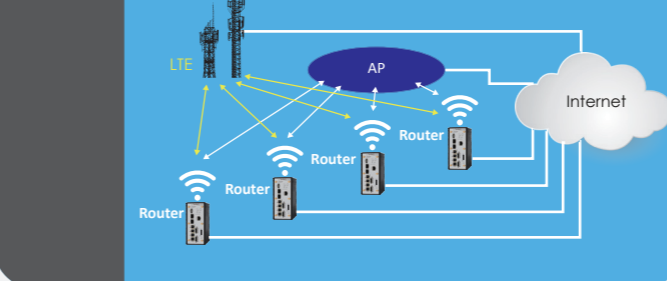


02

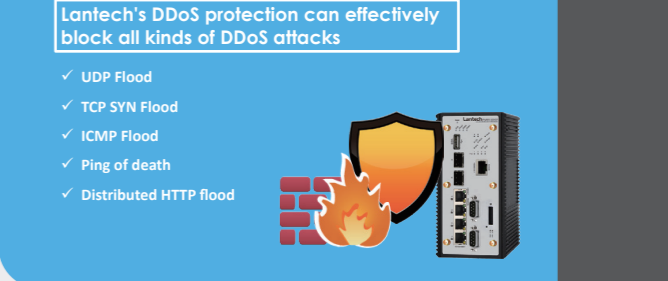
03 Highly Redundancy



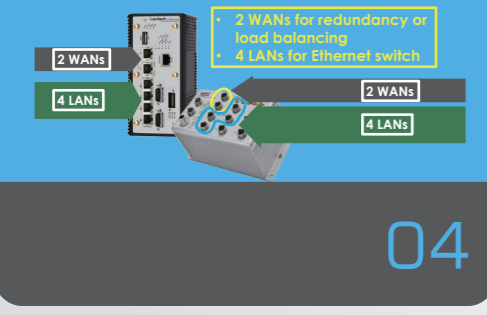
08 WAN-WAN Redundancy



09 DDoS & Firewall

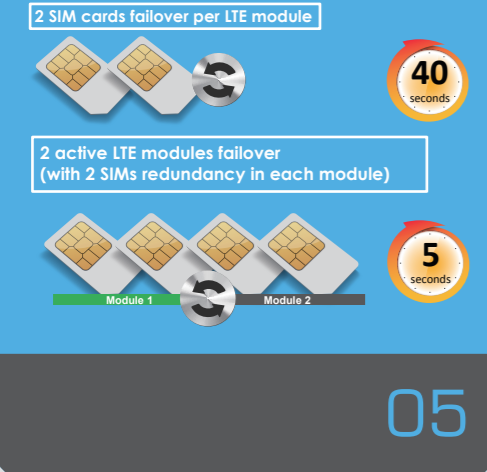


Up to 2 WAN + 4 LAN Ports



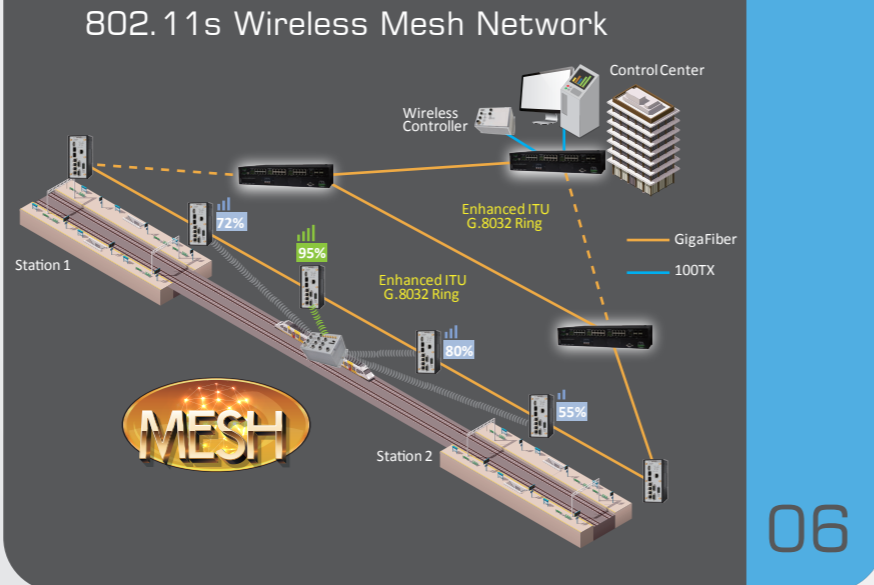
04

SIM Redundancy



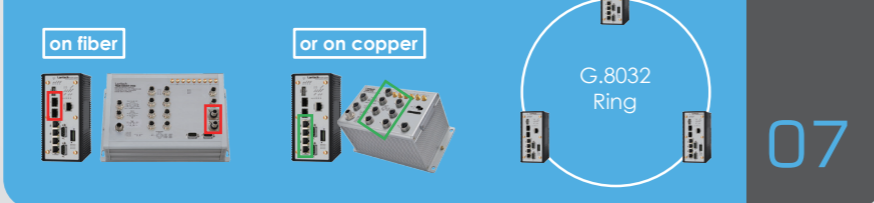
05

802.11s Wireless Mesh Network



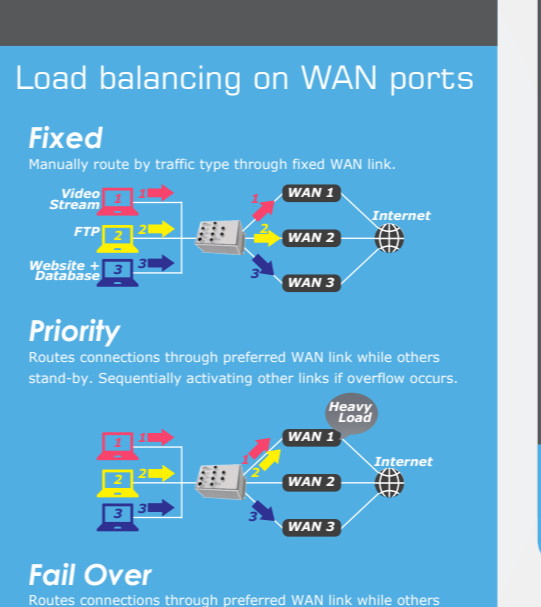
06

LAN Ethernet Ring Redundancy



07

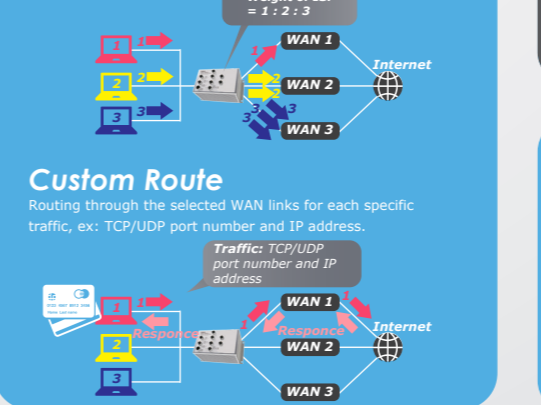
10 Load balancing on WAN ports



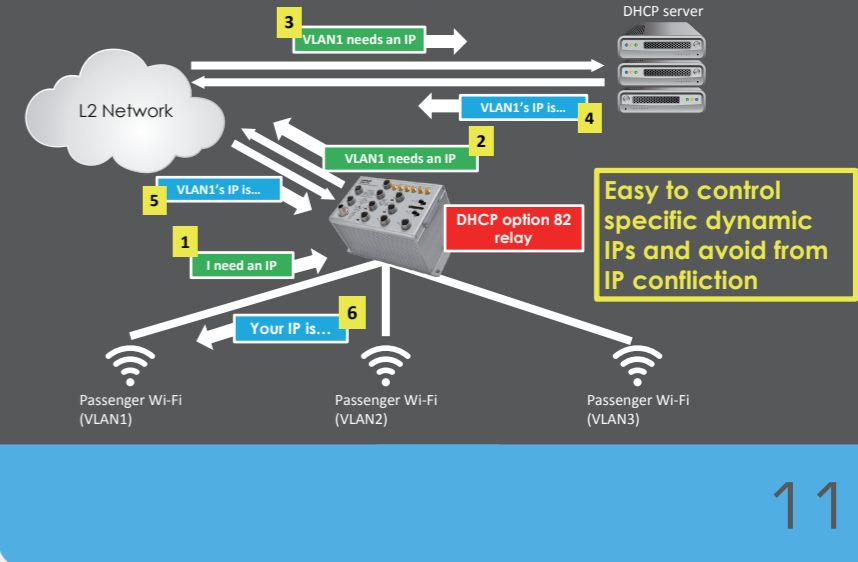
Weighted Round-Robin



Custom Route



Work as DHCP option 82 relay



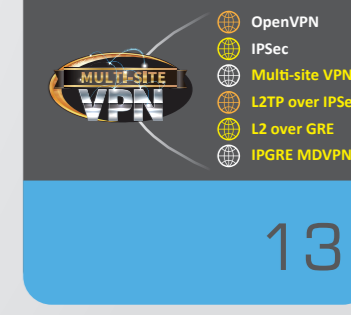
11

QoS on WAN



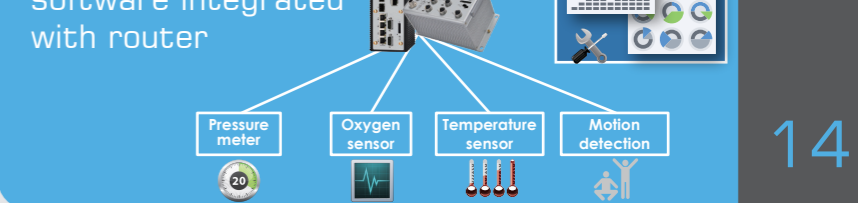
12

Full VPN support



13

Customized controller software integrated with router



14

15 Built-in Managed Switch Function

- ✓ Port Management
- ✓ QoS
- ✓ VLAN
- ✓ Multicast
- ✓ Redundant Protection
- ✓ Security

Router + Managed Functions

No need to purchase extra switches for a small network

Support Dynamic Route

BGP OSPF EIGRP

Most competitors only support RIP

16 Supports IPv6

- ✓ Resolve IP Address space exhaustion
- ✓ Elimination of NAT
- ✓ Makes routing more efficient.
- ✓ Simplified Network Configuration and easier to management

IPv6

Integrated PoE Functions

PoE AT 30W

- PoE Detection** Monitoring power consumption, voltage, current and temperature in real time
- PoE Schedule** Customize the schedule to ON/OFF PoE
- Power Budget Management**

Ignition sensing on 3000 series to extend the operation time when engine is off

Engine is off → Extended operation time → Router shut down

Ignition Sensing

19

Optional eSIM

eSIM

22

Double isolation design to minimize the risk of surge, EFT at input, PoE and serial ports

DOUBLE ISOLATED

Surge EFT

Input PoE Serial

20

802.11AC 3Tx3R Wi-Fi

Multi-channel 3Tx3R Wi-Fi 11ac for maximum communication bandwidth

11ac 3T 3R

transmitters receivers

433Mbps x3 = 1.3Gbps

21

Optional EMMC storage inside router

EMMC

8GB 16GB 32GB

23

24 LTE Status Timeline

To check the LTE status at a glance

24

Superior LTE Performance

Reliable brand LTE module is powered by **SIERRA WIRELESS**

High compatibility

- APAC model for Asia & Oceania
- EUNA model for Europe & North America
- WW model for worldwide

Fast speed

- Downlink (Cat 6): FDD: 300 Mbps TDD: 222 Mbps
- Uplink (Cat 6): FDD: 50 Mbps TDD: 26 Mbps

WW model

- Downlink (Cat 12): 600 Mbps
- Uplink (Cat 13): 150 Mbps

25

How To Find A Right Model? WIFI, MOBILE, OR BOTH?

Wi-Fi + LTE

LTE Only

Wi-Fi Only

Model Name

IPWAP-3XXX
IWAP-3XXX
TPWAP-5XXX
TWAP-5XXX

Model Name

IPMR-3XXX
IMR-3XXX
TPMR-5XXX
TMR-5XXX

Model Name

IPWMR-3XXX
IWMR-3XXX
TPWMR-5XXX
TWMR-5XXX

	Multifunction Wi-Fi + LTE Routers		Multifunction LTE Mobile Routers		Multifunction Wi-Fi Routers	
	5000 Series	3000 Series	5000 Series	3000 Series	5000 Series	3000 Series
Aluminum case	●	-	●	-	●	-
SIM slots	Up to 4	Up to 4	Up to 6	Up to 6	-	-
SMA antenna connectors	Up to 9	Up to 7	Up to 9	Up to 7	Up to 9	Up to 7
802.11ac/a/b/g/n WiFi	●	●	-	-	●	●
Power inputs	16.8~137.5VDC (WV model)	9~60VDC (24V model)	16.8~137.5VDC (WV model)	9~60VDC (24V model)	16.8~137.5VDC (WV model)	9~60VDC (24V model)
WiFi WMM	●	●	-	-	●	●
Ignition sensing	-	●	-	●	-	●

Industrial Solutions
Hardened Ethernet Connections
Ethernet Connections
Accessories

Product Line-ups

4G LTE + Wi-Fi Multifunction Routers

Embedded Module Slots X3			Embedded Module Slots X2			Embedded Module Slots X3					
T(P)WMR-5208MGF EN50155 Multifunction VPN Router w/up to 2 WiFi 11ac + up to 2 LTE 4G + 8 GigaT + 2 1G/2.5G Fiber	T(P)WMR-5208MGT EN50155 Multifunction VPN Router w/up to 2 WiFi 11ac + up to 2 LTE 4G + 8 GigaT + 2 1G/2.5G Copper	T(P)WMR-5008 EN50155 Multifunction VPN Router w/up to 2 WiFi 11ac + up to 2 LTE 4G + 8 GigaT Ethernet + 4 serial ports	T(P)WMR-5006 EN50155 Multifunction VPN Router w/1 WiFi 11ac + 1 LTE 4G + 2 serial ports + 6 GigaT	T(P)WMR-5004 EN50155 Multifunction VPN Router w/1 WiFi 11ac + 1 LTE 4G + 2 serial ports + 4 GigaT + 2WAN	TWMR-5002 EN50155 Multifunction VPN Router w/1 WiFi 11ac + 1 LTE 4G + 2 serial ports + 2 GigaT (incl.1 PD)	I(P)WMR-3204DF Industrial Multifunction VPN Router w/up to 2 WiFi 11ac + up to 2 LTE 4G + 2 serial ports + 4 GigaT + 2 Dual Speed SFP	I(P)WMR-3004DF Industrial Multifunction VPN Router w/up to 2 WiFi 11ac + up to 2 LTE 4G + 2 serial ports + 4 GigaT + 2 Dual Speed SFP WAN	I(P)WMR-3006 Industrial Multifunction VPN Router w/up to 2 WiFi 11ac + up to 2 LTE 4G + 2 serial ports + 6 GigaT	I(P)WMR-3004 Industrial Multifunction VPN Router w/up to 2 WiFi 11ac + up to 2 LTE 4G + 2 serial ports + 4 GigaT + 2WAN	IWMR-3003(-M12) Industrial Multifunction VPN Router w/up to 2 WiFi 11ac + up to 2 LTE 4G + 2/4 serial ports + 3 GigaT	IWMR-3002(-M12) Industrial Multifunction VPN Router w/up to 2 WiFi 11ac + up to 2 LTE 4G + 2/4 serial ports + 2 GigaT

4G LTE Multifunction Routers

Embedded Module Slots X3			Embedded Module Slots X2			Embedded Module Slots X3					
T(P)MR-5208MGF EN50155 Multifunction VPN Router w/up to 3 LTE 4G + 8 GigaT + 2 1G/2.5G Fiber	T(P)MR-5208MGT EN50155 Multifunction VPN Router w/up to 3 LTE 4G + 8 GigaT + 2 1G/2.5G Copper	T(P)MR-5008 EN50155 Multifunction VPN Router w/up to 3 LTE 4G + 8 GigaT Ethernet + 4 serial ports	T(P)MR-5006 EN50155 Multifunction VPN Router w/2 LTE 4G + 2 serial ports + 6 GigaT	T(P)MR-5004 EN50155 Multifunction VPN Router w/2 LTE 4G + 2 serial ports + 4 GigaT + 2WAN	TMR-5002 EN50155 Multifunction VPN Router w/2 LTE 4G + 2 serial ports + 2 GigaT (incl.1 PD)	I(P)MR-3204DF Industrial Multifunction VPN Router w/2 LTE 4G + 2 serial ports + 4 GigaT + 2 Dual Speed SFP	I(P)MR-3004DF Industrial Multifunction VPN Router w/2 LTE 4G + 2 serial ports + 4 GigaT + 2 Dual Speed SFP WAN	I(P)MR-3006 Industrial Multifunction VPN Router w/2 LTE 4G + 2 serial ports + 6 GigaT	I(P)MR-3004 Industrial Multifunction VPN Router w/2 LTE 4G + 2 serial ports + 4 GigaT + 2WAN	IMR-3003(-M12) Industrial Multifunction VPN Router w/2 LTE 4G + 2/4 serial ports + 3 GigaT	IMR-3002(-M12) Industrial Multifunction VPN Router w/2 LTE 4G + 2/4 serial ports + 2 GigaT

Wi-Fi Multifunction Routers

Embedded Module Slots X3			Embedded Module Slots X2			Embedded Module Slots X3					
T(P)WAP-5208MGF EN50155 Multifunction VPN Router w/up to 3 WiFi 11ac + 8 GigaT + 2 1G/2.5G Fiber	T(P)WAP-5208MGT EN50155 Multifunction VPN Router w/up to 3 WiFi 11ac + 8 GigaT + 2 1G/2.5G Copper	T(P)WAP-5008 EN50155 Multifunction VPN Router w/up to 3 WiFi 11ac + 8 GigaT Ethernet + 4 serial ports	T(P)WAP-5006 EN50155 Multifunction VPN Router w/2 WiFi 11ac + 2 serial ports + 6 GigaT	T(P)WAP-5004 EN50155 Multifunction VPN Router w/2 WiFi 11ac + 2 serial ports + 4 GigaT + 2WAN	TWAP-5002 EN50155 Multifunction VPN Router w/2 WiFi 11ac + 2 serial ports + 2 GigaT (incl.1 PD)	I(P)WAP-3204DF Industrial Multifunction VPN Router w/2 WiFi 11ac + 2 serial ports + 4 GigaT + 2 Dual Speed SFP	I(P)WAP-3004DF Industrial Multifunction VPN Router w/2 WiFi 11ac + 2 serial ports + 4 GigaT + 2 Dual Speed SFP WAN	I(P)WAP-3006 Industrial Multifunction VPN Router w/2 WiFi 11ac + 2 serial ports + 6 GigaT	I(P)WAP-3004 Industrial Multifunction VPN Router w/2 WiFi 11ac + 2 serial ports + 4 GigaT + 2WAN	IWAP-3003(-M12) Industrial Multifunction VPN Router w/2 WiFi 11ac + 2/4 serial ports + 3 GigaT	IWAP-3002(-M12) Industrial Multifunction VPN Router w/2 WiFi 11ac + 2/4 serial ports + 2 GigaT

*M12 model does not support serial ports.

EN50155 NAT Routers

T(P)GR-5208MGF-2WAN 8 10/100/1000T + 2 1G/2.5G Q-ODC Fiber + 2 1G/2.5G WAN EN50155 L2+ Managed Ethernet Router	T(P)GR-5208MGT-2WAN 8 10/100/1000T + 2 1G/2.5G Copper + 2 1G/2.5G WAN EN50155 L2+ Managed Ethernet Router
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Model name (P) = PoE model

Learn more about Lantech multifunction routers



5000 Series Routers



3000 Series Routers

Why Choose Lantech?

FEATURE HIGHLIGHTS OF HARDENED & ROLLING STOCK ETHERNET SWITCHES

01 Optional Layer 3 Lite (L3L)

1. Inter-VLAN Routing

Route traffic between different VLAN by implementing a switch with routing function in the network.

2. Router-on-a-stick

A type of routing configuration in which a single physical interface set as VLAN trunk port manages traffic between multiple VLANs from edge site.

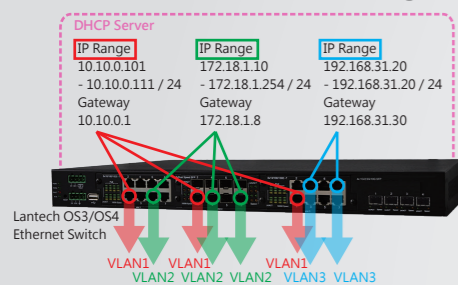
3. VRRP

Provides automatic assignment of available VLAN gateways to participating hosts and increases the availability and reliability of VLAN routing paths via automatic default gateway selections on different VLAN groups.

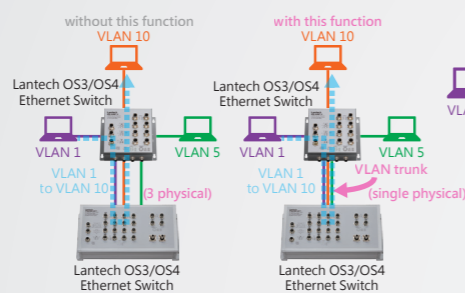


OS4 Platform
OS3 Platform

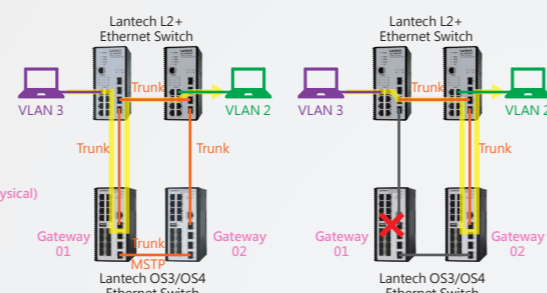
1. Inter-VLAN Routing



2. Router-on-a-stick



3. VRRP



Optional Layer 3



1. OSPF

Open Shortest Path First (OSPF) protocol is an Interior Gateway Protocol used to distribute routing information within a single Autonomous System.

2. RIP

Routing Information Protocol (RIP) is a dynamic routing protocol which uses hop count as a routing metric to find the best path between the source and the destination network.

3. PIM

Protocol-Independent Multicast (PIM) is a family of multicast routing protocols for Internet Protocol (IP) networks that provide one-to-many and many-to-many distribution of data over a LAN, WAN or Internet.

4. DVMRP

Distance Vector Multicast Routing Protocol (DVMRP) is a routing protocol used to share information between routers to facilitate the transportation of IP multicast packets among networks.

OS4 Platform
OS3 Platform

02

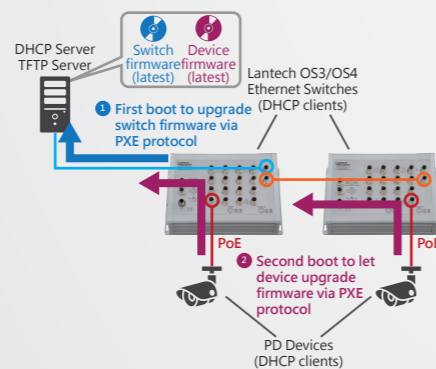
Software Advantage – Layer 2+

OS4 Platform
OS3 Platform

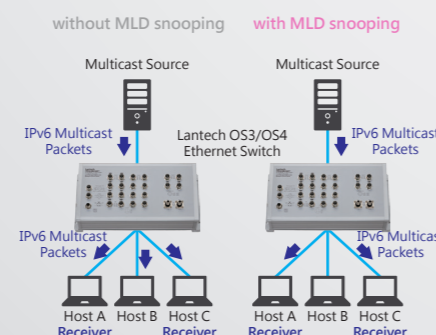
1. PXE
2. Protocol based VLAN
3. IPv6 Multicast
4. Subnet based VLAN

03

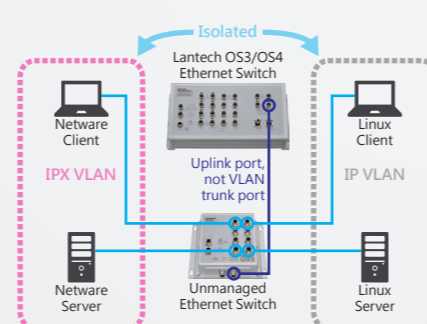
1. PXE



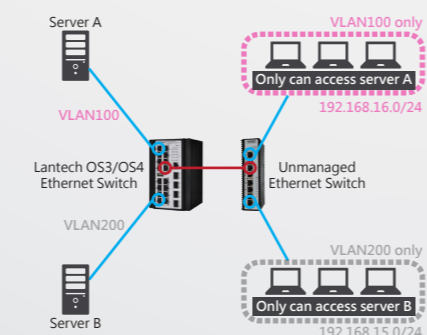
3. IPv6 Multicast



2. Protocol-based VLAN

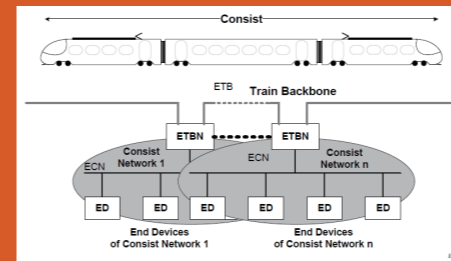


4. Subnet-based VLAN



Optional TBN (IEC 61375-2-5) & built-in ECN (IEC 61375-3-4)

Backbone of train network which is responsible to exchange the data from each consist

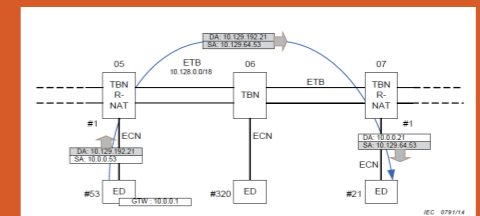


OS4 Platform
OS3 Platform

04

Optional R-NAT (IEC 61375-2-5)

If ED#53 will communicate with ED#21, it doesn't need to know the IP address of ED#21 but just need to know the IP address of TBN which is responsible to build physical connection with ED#21.

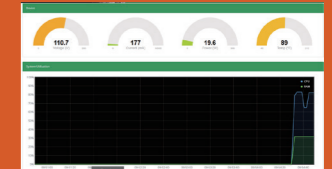


OS4 Platform

05

Real-time Environmental Monitoring

Real input voltage in routers & OS3/OS4 Ethernet switches



OS4 Platform
OS3 Platform

06

Wide Voltage (Isolated) 16.8~137.5VDC Power Input (EN50155 Series)

Built-in Power Converter 12/24VDC boost up to 48VDC (Industrial Series)

WIDE Voltage +Isolation
12V booster
48V

07

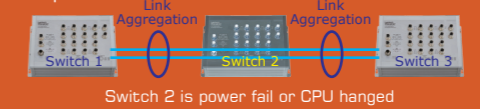
Compliance to Various Standards for Different Applications

<p>Rolling Stocks</p> <ul style="list-style-type: none"> EN 50155:2017 EN 50121-4 EN 55032 EN 45545-2 	<p>Vehicles</p> <ul style="list-style-type: none"> E-Marking ITxPT 	<p>Power Substations</p> <ul style="list-style-type: none"> IEC 61850-3 IEEE 1613 	<p>Maritime</p> <ul style="list-style-type: none"> DNV 	<p>Industrial & Outdoor</p> <ul style="list-style-type: none"> IP30 rated to IP67 rated
--	---	--	--	---

08

Smart Bypass Protection (Optional)

The bypass relay is set to bypass the switch to the next one when power is off or CPU hanged to prevent network disruption.



10

Integrated PoE Functions



PoE Detection

Monitoring power consumption, voltage, current and temperature in real time

PoE Schedule

Customize the schedule to ON/OFF PoE

PoE Budget Management

09

10GbE Connectivity - To Fulfill Huge Bandwidth Requirement



11

Inrush Current Protection



The inrush current on initial power up can be limited lower than 10 x nominal current and for less than 1ms.

12

USB port to upload & download the configuration file

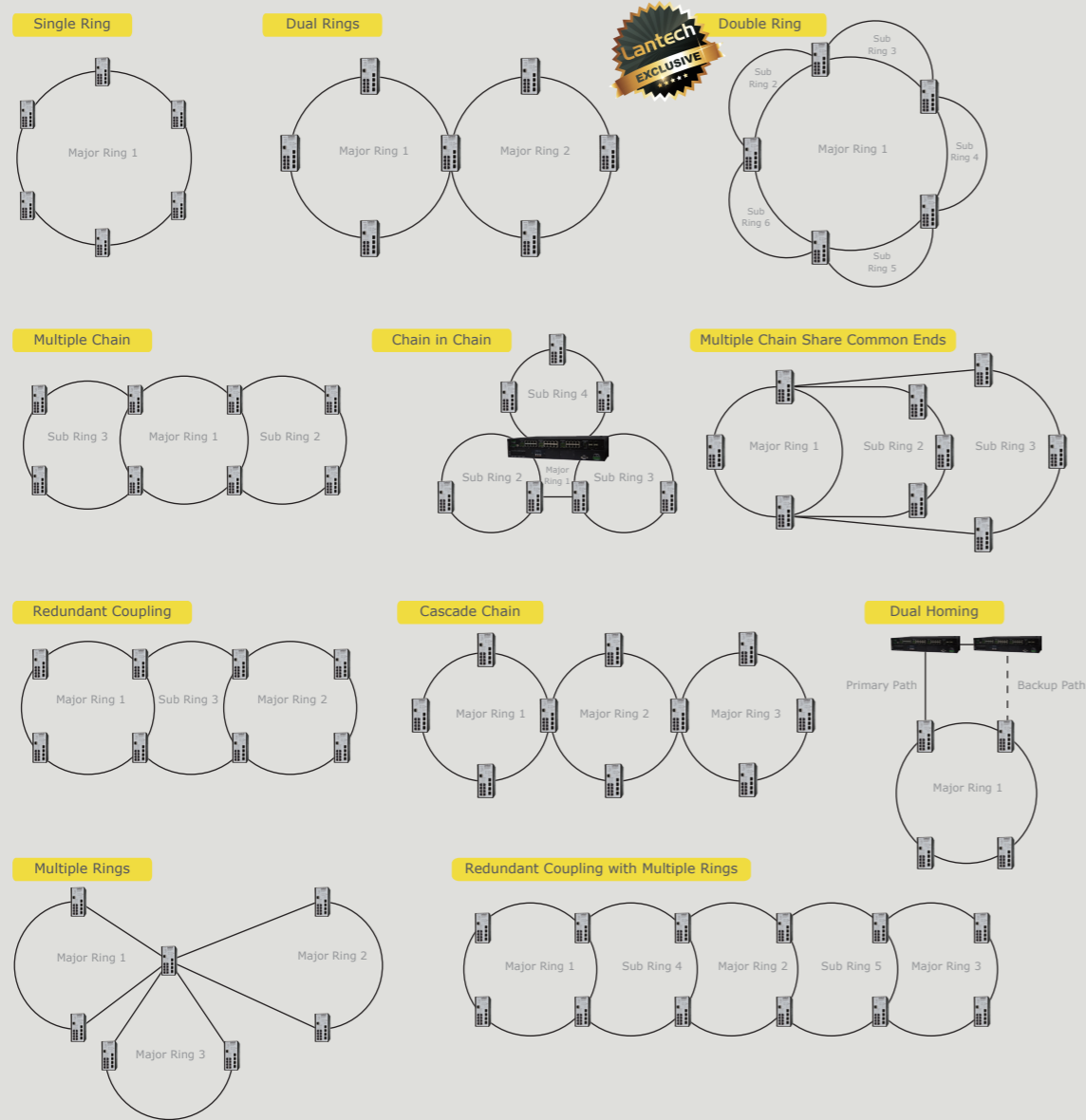


13

Enhanced ITU G.8032 Ring

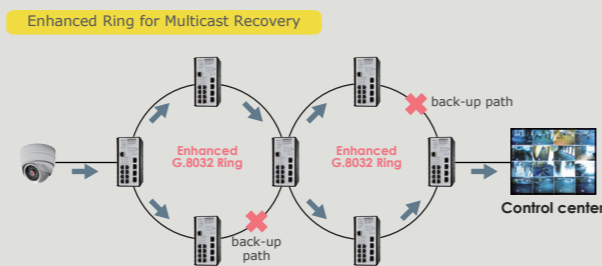
- OS4 Platform
- OS3 Platform
- OS2 Platform
- OS1 Platform

Established by ITU (International Telecommunication Unit), the G.8032 protocol is compatible with Ethernet standard and has been supported by many major Ethernet system providers. With our long background in IP Ethernet industry, Lantech is proud to present our enhanced ITU G.8032 ring which covers multicast & data recovery.



Lantech G.8032 ring has basic, auto, enhanced, multi-train mode.

Basic	Compliant with 3rd party ERPS switch, recovery time <100ms
Auto	Single ring auto-select each role
Enhanced	Support data/ multicast recovery <20ms in single ring
Multi-Train	Support auto dynamic coupling



What's the difference? OS PLATFORM'S COMPARISON

OS4 Platform	OS3 Platform	OS2 Platform	OS1 Platform
L2+ Dual image L3L** L3** TBN** ECN Hardware-NAT**	L2+ Dual image L3L** L3** TBN** ECN	L2+ Dual image	L2+

Complete management levels, L2+, L3 Life**, L3**

	Layer 3 Lite (L3L)	Layer 2 +			Layer 2 2000 series
		OS4/OS3	OS2	OS1	
TTDP (IEC 61375)	•				
R-NAT**	•				
IP based port	•				
VLAN routing	•				
VRRP	•				
Static Unicast Routing	•				
DHCP pool with per VLAN	•				
MRP	•	•			
Protocol Based	•	•			
Subnet Based	•	•			
MLD Snooping	•	•			
Port Monitoring	•	•			
PXE application	•	•			
IP v6 DHCP Server (Basic)	•	•			
Dual Image	•	•			
ARP inspection	•	•		•	
BPDGuard	•	•		•	
QinQ	•	•		•	
Remote admin (limitation of accessing way)	•	•	•	•	
GVRP	•	•	•	•	
SSL	•	•	•	•	
Login Security (TACACS+)	•	•	•	•	
Login Security (RADIUS)	•	•	•	•	
Dual Homing	•	•	•	•	
SSH	•	•	•	•	
CDP	•	•	•	•	
Topology View	•	•	•	•	
Environment Monitoring	•	•	**	**	
MSTP	•	•	•	•	
Loop Protection	•	•	•	•	
IGMP router port	•	•	•	•	
GMRP	•	•	•	•	
VLAN based QoS	•	•	•	•	
MAC based DHCP	•	•	•	•	
Option82 DHCP Relay	•	•	•	•	
Option 12/42/66	•	•	option 66 only	option 66 only	
DHCP Snooping	•	•	•	•	
Digital Input/Output	•	•	•	•	
Triggered by event of environment	•	•	**	**	
Triggered by event of SFP DDM	•	•	•	•	
Ping	•	•	•	•	
ARP	•	•	•	•	
QoS under 61375-3-4	•	•	•	•	
Proprietary redundant protocol	ITU-Ring Enhance mode	ITU-Ring Enhance mode	ITU-Ring Enhance mode	ITU-Ring Enhance mode	ProRing2se
ACL	Ingress only	Ingress only	Ingress Only	•	•
SNMP Trap	•	•	•	•	V1/V2c
Firmware upgrading	WEB/TFTP/FTP	WEB/TFTP/FTP	WEB/TFTP/FTP	WEB/TFTP/FTP	WEB/TFTP
Configuration file import/export	WEB/TFTP/FTP	WEB/TFTP/FTP	WEB/TFTP/FTP	WEB/TFTP/FTP	WEB/TFTP
G.8032 standard				•	
Auto Provision				•	

** Optional
***Spec may vary by model

EN50155 10G Uplinks Managed Ethernet Switches

EN50155 2.5G Uplinks Managed Ethernet Switches

OS4 Platform			
NEW T(P)GS-R6804XFT 4 1G/2.5G + 6 10G copper + 2 10G Q-ODC fiber w/8 PoE EN50155 OS4 Managed Switch 8 10G 4 GT 8 PoE USB	NEW T(P)GS-R6804XT 4 1G/2.5G + 8 10G copper w/8 PoE EN50155 OS4 Managed Switch 8 10G 4 GT 8 PoE USB	NEW T(P)ES-R6804XFT 4 10/100TX + 6 10G copper + 2 10G Q-ODC fiber w/8 PoE EN50155 OS4 Managed Switch 8 10G 4 TX 8 PoE USB	NEW T(P)GS-R6804XT 4 10/100TX + 8 10G copper w/8 PoE EN50155 OS4 Managed Switch 8 10G 4 TX 8 PoE USB
T(P)GS-R6616XFT 16 10/100/1000T (PoE at) + 4 10G copper + 2 10G Q-ODC fiber EN50155 OS4 Managed Switch 6 10G 16 GT 16 PoE USB	T(P)GS-R6616XT 16 10/100/1000T (PoE at) + 6 10G copper EN50155 OS4 Managed Switch 6 10G 16 GT 16 PoE USB	T(P)GS-R6416XFT 16 10/100/1000T (PoE at) + 2 10G copper + 2 10G Q-ODC Fiber EN50155 OS4 Managed Switch 4 10G 16 GT 16 PoE USB	T(P)GS-R6416XT 16 10/100/1000T (PoE at) + 4 10G copper EN50155 OS4 Managed Switch 4 10G 16 GT 16 PoE USB
T(P)GS-R6608XFT 8 10/100/1000T (PoE at) + 4 10G copper + 2 10G Q-ODC fiber EN50155 OS4 Managed Switch 6 10G 8 GT 10 PoE USB	T(P)GS-R6608XT 8 10/100/1000T (PoE at) + 6 10G copper EN50155 OS4 Managed Switch 6 10G 8 GT 10 PoE USB	T(P)GS-R6408XFT 8 10/100/1000T (PoE at) + 2 10G copper + 2 10G Q-ODC Fiber EN50155 OS4 Managed Switch 4 10G 8 GT 10 PoE USB	T(P)GS-R6408XT 8 10/100/1000T (PoE at) + 4 10G copper EN50155 OS4 Managed Switch 4 10G 8 GT 10 PoE USB
T(P)ES-R6616XFT 16 10/100TX (PoE at) + 4 10G copper + 2 10G Q-ODC fiber EN50155 OS4 Managed Switch 6 10G 16 TX 16 PoE USB	T(P)ES-R6616XT 16 10/100/1000T (PoE at) + 6 10G copper EN50155 OS4 Managed Switch 6 10G 16 TX 16 PoE USB	OS3 Platform	
		T(P)GS-L6416XFT 16 10/100/1000T (PoE at) + 2 10G Copper + 2 10G Q-ODC fiber EN50155 OS3 Managed Switch 4 10G 16 GT 16 PoE USB	T(P)GS-L6416XT 16 10/100/1000T (PoE at) + 4 10G Copper EN50155 OS3 Managed Switch 4 10G 16 GT 16 PoE USB
T(P)GS-L6408XFT 8 10/100/1000T (PoE at) + 2 10G Copper + 2 10G Q-ODC fiber EN50155 OS3 Managed Switch 4 10G 8 GT 8 PoE USB	T(P)GS-L6408XT 8 10/100/1000T (PoE at) + 4 10G Copper EN50155 OS3 Managed Switch 4 10G 8 GT 8 PoE USB	T(P)GS-L6216XT 16 10/100/1000T (PoE at) + 2 10G Copper EN50155 OS3 Managed Switch 2 10G 16 GT 16 PoE USB	T(P)GS-L6216XF 16 10/100/1000T (PoE at) + 2 10G Q-ODC fiber EN50155 OS3 Managed Switch 2 10G 16 GT 16 PoE USB
T(P)GS-L6208XT 8 10/100/1000T (PoE at) + 2 10G Copper EN50155 OS3 Managed Switch 2 10G 8 GT 8 PoE USB	T(P)GS-L6208XF 8 10/100/1000T (PoE at) + 2 10G Q-ODC fiber EN50155 OS3 Managed Switch 2 10G 8 GT 8 PoE USB	T(P)ES-L6424XFT 24 10/100TX (PoE at) + 2 10G copper + 2 10G Q-ODC fiber EN50155 OS3 Managed Switch 4 10G 24 TX 24 PoE USB	T(P)ES-L6424XT 24 10/100TX (PoE at) + 4 10G copper EN50155 OS3 Managed Switch 4 10G 24 TX 24 PoE USB
T(P)ES-L6416XFT 16 10/100TX (PoE at) + 2 10G Copper + 2 10G Q-ODC fiber EN50155 OS3 Managed Switch 4 10G 16 TX 16 PoE USB	T(P)ES-L6416XT 16 10/100TX (PoE at) + 4 10G Copper EN50155 OS3 Managed Switch 4 10G 16 TX 16 PoE USB	T(P)ES-L6408XFT 8 10/100TX (PoE at) + 2 10G Copper + 2 10G Q-ODC fiber EN50155 OS3 Managed Switch 4 10G 8 TX 8 PoE USB	T(P)ES-L6408XT 8 10/100TX (PoE at) + 4 10G Copper EN50155 OS3 Managed Switch 4 10G 8 TX 8 PoE USB
T(P)ES-L6216XT 16 10/100TX (PoE at) + 2 10G copper EN50155 OS3 Managed Switch 2 10G 16 TX 16 PoE USB	T(P)ES-L6216XF 16 10/100TX (PoE at) + 2 10G Q-ODC fiber EN50155 OS3 Managed Switch 2 10G 16 TX 16 PoE USB	T(P)ES-L6208XT 8 10/100TX (PoE at) + 2 10G copper EN50155 OS3 Managed Switch 2 10G 8 TX 8 PoE USB	T(P)ES-L6208XF 8 10/100TX (PoE at) + 2 10G Q-ODC fiber EN50155 OS3 Managed Switch 2 10G 8 TX 8 PoE USB

OS4 Platform			
NEW T(P)GS-R5804MGFT 4 10/100/1000T + 6 1G/2.5G copper + 2 1G/2.5G Q-ODC fiber w/8 PoE EN50155 OS4 Managed Switch 8 2.5G 4 GT 8 PoE USB	NEW T(P)GS-R5804MGT 4 10/100/1000T + 8 1G/2.5G copper w/8 PoE EN50155 OS4 Managed Switch 8 2.5G 4 GT 8 PoE USB	NEW T(P)ES-R5804MGFT 4 10/100TX + 6 1G/2.5G copper + 2 1G/2.5G Q-ODC fiber w/8 PoE EN50155 OS4 Managed Switch 8 2.5G 4 TX 8 PoE USB	NEW T(P)GS-R5804MGT 4 10/100TX + 8 1G/2.5G copper w/8 PoE EN50155 OS4 Managed Switch 8 2.5G 4 TX 8 PoE USB
T(P)GS-R5616MGFT 16 10/100/1000T (PoE at) + 4 1G/ 2.5G copper + 2 1G/2.5G Q-ODC fiber EN50155 OS4 Managed Switch 6 2.5G 16 GT 16 PoE USB	T(P)GS-R5616MGT 16 10/100/1000T (PoE at) + 6 1G/2.5G copper EN50155 OS4 Managed Switch 6 2.5G 16 GT 16 PoE USB	T(P)GS-R5416MGFT 16 10/100/1000T (PoE at) + 2 1G/2.5G copper + 2 1G/2.5G Q-ODC Fiber EN50155 OS4 Managed Switch 4 2.5G 16 GT 16 PoE USB	T(P)GS-R5416MGT 16 10/100/1000T (PoE at) + 4 1G/2.5G copper EN50155 OS4 Managed Switch 4 2.5G 16 GT 16 PoE USB
T(P)GS-R5608MGFT 8 10/100/1000T (PoE at) + 4 1G/2.5G copper + 2 1G/2.5G Q-ODC fiber EN50155 OS4 Managed Switch 6 2.5G 8 GT 10 PoE USB	T(P)GS-R5608MGT 8 10/100/1000T (PoE at) + 6 1G/2.5G copper EN50155 OS4 Managed Switch 6 2.5G 8 GT 10 PoE USB	T(P)GS-R5408MGFT 8 10/100/1000T (PoE at) + 2 1G/ 2.5G copper + 2 1G/2.5G Q-ODC Fiber EN50155 OS4 Managed Switch 4 2.5G 8 GT 10 PoE USB	T(P)GS-R5408MGT 8 10/100/1000T (PoE at) + 4 1G/2.5G copper EN50155 OS4 Managed Switch 4 2.5G 8 GT 10 PoE USB
T(P)ES-R5616MGFT 16 10/100TX (PoE at) + 4 1G/ 2.5G copper + 2 1G/2.5G Q-ODC fiber EN50155 OS4 Managed Switch 6 2.5G 16 TX 16 PoE USB	T(P)ES-R5616MGT 16 10/100/1000T (PoE at) + 6 1G/2.5G copper EN50155 OS4 Managed Switch 6 2.5G 16 TX 16 PoE USB	OS3 Platform	
		T(P)GS-L5416MGFT 16 10/100/1000T (PoE at) + 2 1G/ 2.5G Copper + 2 1G/2.5G Q-ODC fiber EN50155 OS3 Managed Switch 4 2.5G 16 GT 16 PoE USB	T(P)GS-L5416MGT 16 10/100/1000T (PoE at) + 4 1G/2.5G Copper EN50155 OS3 Managed Switch 4 2.5G 16 GT 16 PoE USB
NEW T(P)GS-L5408MGFTA 8 10/100/1000T (PoE at) + 2 1G/ 2.5G Copper + 2 1G/2.5G Q-ODC fiber EN50155 OS3 Managed Switch 4 2.5G 8 GT 8 PoE USB	NEW T(P)GS-L5408MGTA 8 10/100/1000T (PoE at) + 4 1G/2.5G Copper EN50155 OS3 Managed Switch 4 2.5G 8 GT 8 PoE USB	T(P)GS-L5216MGT 16 10/100/1000T (PoE at) + 2 1G/2.5G Copper EN50155 OS3 Managed Switch 2 2.5G 16 GT 16 PoE USB	T(P)GS-L5216MGF 16 10/100/1000T (PoE at) + 2 1G/2.5G Q-ODC fiber EN50155 OS3 Managed Switch 2 2.5G 16 GT 16 PoE USB
NEW T(P)GS-L5208MGTA 8 10/100/1000T (PoE at) + 2 1G/2.5G Copper EN50155 OS3 Managed Switch 2 2.5G 8 GT 8 PoE USB	NEW T(P)GS-L5208MGFA 8 10/100/1000T (PoE at) + 4 1G/2.5G Q-ODC fiber EN50155 OS3 Managed Switch 2 2.5G 8 GT 8 PoE USB	T(P)ES-L5424MGFT 24 10/100TX (PoE at) + 2 1G/ 2.5G copper + 2 1G/2.5G Q-ODC fiber EN50155 OS3 Managed Switch 4 2.5G 24 TX 24 PoE USB	T(P)ES-L5424MGT 24 10/100TX (PoE at) + 4 1G/2.5G copper EN50155 OS3 Managed Switch 4 2.5G 24 TX 24 PoE USB
T(P)ES-L5416MGFT 16 10/100TX (PoE at) + 2 1G/ 2.5G Copper + 2 1G/2.5G Q-ODC fiber EN50155 OS3 Managed Switch 4 2.5G 16 TX 16 PoE USB	T(P)ES-L5416MGT 16 10/100TX (PoE at) + 4 1G/2.5G Copper EN50155 OS3 Managed Switch 4 2.5G 16 TX 16 PoE USB	NEW T(P)ES-L5408MGFTA 8 10/100TX (PoE at) + 2 1G/ 2.5G Copper + 2 1G/2.5G Q-ODC fiber EN50155 OS3 Managed Switch 4 2.5G 8 TX 8 PoE USB	NEW T(P)ES-L5408MGTA 8 10/100TX (PoE at) + 4 1G/2.5G Copper EN50155 OS3 Managed Switch 4 2.5G 8 TX 8 PoE USB
NEW T(P)ES-L5216MGT 16 10/100TX (PoE at) + 2 1G/2.5G copper EN50155 OS3 Managed Switch 2 2.5G 16 TX 16 PoE USB	NEW T(P)ES-L5216MGF 16 10/100TX (PoE at) + 2 1G/2.5G Q-ODC fiber EN50155 OS3 Managed Switch 2 2.5G 16 TX 16 PoE USB		

Model name (P) = PoE model

Model name (P) = PoE model

Industrial Solutions

Hardened Ethernet
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Connections

Accessories

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Learn more



EN50155 Rackmount Ethernet Switches

OS3 Platform

<p>T(P)GS-L6424XFTR 24 10/100/1000T (PoE at) + 2 10G Copper + 2 10G Q-ODC fiber EN50155 OS3 Managed Switch</p> <p>4 10G, 24 GT, 16 PoE, USB</p>	<p>T(P)GS-L6424XTR 24 10/100/1000T (PoE at) + 4 10G Copper EN50155 OS3 Managed Switch</p> <p>4 10G, 24 GT, 16 PoE, USB</p>	<p>T(P)GS-L6416XFTR 16 10/100/1000T (PoE at) + 2 10G Copper + 2 10G Q-ODC fiber EN50155 OS3 Managed Switch</p> <p>4 10G, 16 GT, 16 PoE, USB</p>	<p>T(P)GS-L6416XTR 16 10/100/1000T (PoE at) + 4 10G Copper EN50155 OS3 Managed Switch</p> <p>4 10G, 16 GT, 16 PoE, USB</p>
<p>T(P)GS-L6408XFTR 8 10/100/1000T (PoE at) + 2 10G Copper + 2 10G Q-ODC fiber EN50155 OS3 Managed Switch</p> <p>4 10G, 8 GT, 8 PoE, USB</p>	<p>T(P)GS-L6408XTR 8 10/100/1000T (PoE at) + 4 10G Copper EN50155 OS3 Managed Switch</p> <p>4 10G, 8 GT, 8 PoE, USB</p>	<p>T(P)GS-L5408MGFTR 8 10/100/1000T (PoE at) + 2 1G/2.5G Copper + 2 1G/2.5G Q-ODC fiber EN50155 OS3 Managed Switch</p> <p>4 2.5G, 8 GT, 8 PoE, USB</p>	<p>T(P)GS-L5408MGTR 8 10/100/1000T (PoE at) + 2 1G/2.5G Copper EN50155 OS3 Managed Switch</p> <p>4 2.5G, 8 GT, 8 PoE, USB</p>

EN50155 Giga Uplinks Managed Ethernet Switches

OS3 Platform

<p>T(P)GS-L5016T 16 10/100/1000T (PoE at) EN50155 OS3 Managed Switch</p> <p>16 GT, 16 PoE, USB</p>	<p>T(P)ES-L5408T 8 10/100TX (PoE at) + 4 Giga Copper Uplinks EN50155 OS3 Managed Switch</p> <p>4 GT, 8 TX, 8 PoE, USB</p>		
<p>OS1 Platform</p>			
<p>T(P)GS-5208GF 8 10/100/1000T (PoE at) + 2 1000FX L2+ EN50155 Managed Switch</p> <p>2 Q-ODC, 8 GT, 8 PoE</p>	<p>T(P)GS-5010T 10 10/100/1000T (w/ 8 PoE at) L2+ EN50155 Managed Switch</p> <p>10 GT, 8 PoE</p>	<p>T(P)GS-5008T 8 10/100/1000T (PoE at) L2+ EN50155 Managed Switch</p> <p>8 GT, 8 PoE</p>	<p>T(P)ES-5416T 16 10/100TX (PoE at) + 4 10/100/1000T L2+ EN50155 Managed Switch</p> <p>4 GT, 16 TX, 16 PoE</p>
<p>T(P)ES-5408T 8 10/100TX (PoE at) + 4 10/100/1000T L2+ EN50155 Managed Switch</p> <p>4 GT, 8 TX, 8 PoE</p>	<p>I(P)GS-5008T 8 10/100/1000T (PoE at) L2+ EN50155 Managed Switch</p> <p>8 GT, 8 PoE</p>	<p>I(P)ES-5416T 16 10/100TX (PoE at) + 4 10/100/1000T L2+ EN50155 Managed Switch</p> <p>4 GT, 16 TX, 16 PoE</p>	<p>I(P)ES-5408T 8 10/100TX (PoE at) + 4 10/100/1000T L2+ EN50155 Managed Switch</p> <p>4 GT, 8 TX, 8 PoE</p>
<p>I(P)ES-5408S 8 10/100TX (PoE at) + 4 10/100/1000T L2+ EN50155 Managed Switch</p> <p>4 GT, 8 TX, 8 PoE</p>	<p>I(P)ES-5208DF 8 10/100TX (PoE at) + 2 100/1000FX L2+ EN50155 Managed Switch</p> <p>2 FX, 8 TX, 8 PoE</p>	<p>Learn more</p>	

Model name (P) = PoE model

EN50155 Unmanaged Ethernet Switches

Product Line-ups

<p>T(P)ES-0216T 16 10/100TX (PoE at) + 2 10/100/1000T EN50155 Unmanaged Switch</p> <p>2 GT, 16 TX, 16 PoE</p>	<p>T(P)ES-0212T 12 10/100TX (PoE at) + 2 10/100/1000T EN50155 Unmanaged Switch</p> <p>2 GT, 12 TX, 12 PoE</p>	<p>T(P)ES-0016T 16 10/100/1000T (PoE at) EN50155 Unmanaged Switch</p> <p>16 TX, 16 PoE</p>	<p>Learn more</p>
<p>T(P)GS-0010T 10 10/100/1000T (8 PoE at) EN50155 Unmanaged Switch</p> <p>10 GT, 8 PoE</p>	<p>T(P)GS-0208GF 8 10/100/1000T (PoE at) + 2 1000FX EN50155 Unmanaged Switch</p> <p>2 Q-ODC, 8 GT, 8 PoE</p>	<p>T(P)GS-0008CA 8 10/100/1000T (PoE at) EN50155 Unmanaged Switch</p> <p>8 TX, 8 PoE</p>	
<p>I(P)ES-0208GF 8 10/100TX (PoE at) + 2 1000FX EN50155 Unmanaged Switch</p> <p>2 FX, 8 TX, 8 PoE</p>	<p>I(P)ES-0208T 8 10/100TX (PoE at) + 2 10/100/1000T EN50155 Unmanaged Switch</p> <p>2 GT, 8 TX, 8 PoE</p>	<p>I(P)ES-0008A 8 10/100TX (PoE at) EN50155 Unmanaged Switch</p> <p>8 TX, 8 PoE</p>	<p>I(P)ES-0008B 8 10/100TX (PoE at) EN50155 Unmanaged Switch</p> <p>8 TX, 8 PoE</p>
<p>I(P)ES-0005B 5 10/100TX (PoE at) EN50155 Unmanaged Switch</p> <p>5 TX, 5 PoE</p>	<p>IPES-0101T 1 10/100TX (PoE at) + 1 10/100TX EN50155 Unmanaged Switch</p> <p>2 TX, 1 PoE</p>		

Model name (P) = PoE model

EN50155 Power Protector

Product Line-ups

<p>Power Protector</p> <ul style="list-style-type: none"> Power input voltage protection Power input polarity protection Inrush current protection Enhance Surge protection Enhance EFT protection 	<p>Learn more</p> <p>(Coming Soon)</p>
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Industrial L3/10G (PoE) Ethernet Switches

High Performance 10G Ethernet Capacity

To fulfill huge bandwidth requirement, Lantech OS4/OS3 IP30 switch series provides up to 4-port 10G Copper or Fiber uplinks.

Flexible Modularity & L3 Upgradable**

Lantech provides highly customized modular models to satisfy all kinds of needs, from 100TX to dual speed SFP. All OS3 series models are able to upgrade to Layer 3.

Feed up to 60W Power – PoE (PoE model)

The PoE models support IEEE802.3at standard which is able to feed up to 30W at each PoE port, while PoE -PBT models support IEEE802.3bt standard that delivers 60W per port.

PoE Detection and Scheduling (PoE model)

PoE detection can detect if the connected PD hangs and then restart the PD; PoE scheduling allows pre-set power feeding schedule upon a routine time table. Each PoE port can be enabled/disabled, get the voltage, current, Watt, and temperature info displayed on WebUI. It saves both time and energy. Built-in power converter is able to boost up from 12V/24V, and step down from 110V (vary on models).

Configurable Power Budget (PoE model)

To prevent over consumption that causes the system to become unstable, Lantech PoE switches are able to control the power budget by limiting the total power consumption for all connected PDs. Each port's power limit can be defined as well.

Built-in Power Converter

Normally in vehicle environments, 48V power supply is not available. The built-in power converter is able to boost up from 12V (car), 24V (bus), and step down 110V, making the devices function well.

Complete Protection for Stable Operation

Not only designed with inrush current protection, the over voltage protection also ensures the switch to sustain instantaneous high voltage of up to 160VDC.

USB Port for Backup and Configuration

With the special-designed USB port, backup / restore configuration is easier than ever! Simply plug in the USB thumb drive and the system will automatically detect and decide the action. No laptop or console needed.

Product Line-ups

<p>OS4 Platform</p> <p>I(P)GS-R6424XSFP-2P 24 10/100/1000T (PoE at/af) + 4 1G/2.5G/10G SFP Industrial Managed Ethernet Switch</p> <p>4 10G, 24 GT, 24 PoE, USB</p>	<p>OS4 Platform</p> <p>I(P)GS-R6424XFT-2P 24 10/100/1000T (PoE at/af) + 2 1G/2.5G/10G SFP + 2 10GT uplink Industrial Managed Ethernet Switch</p> <p>4 10G, 24 GT, 24 PoE, USB</p>	<p>OS3 Platform</p> <p>I(P)GS-6300-2P 4 Modular-Slots w/4/2 x1G/2.5G/10G SFP+ + 2 10GT uplink Industrial Managed Ethernet Switch</p> <p>4 10G, Max 24GT, Max 28SFP, Max 24PoE, USB</p>	<p>OS3 Platform</p> <p>I(P)GS-L6424M-2P 24 10/100/1000T (PoE at/af) w/4/2 x1G/2.5G/10G SFP+ + 2 10GT uplink Industrial Managed Ethernet Switch</p> <p>4 10G, 24 GT, 24 PoE, USB</p>
<p>OS3 Platform</p> <p>I(P)GS-6416XSFP 16 10/100/1000T (PoE) + 4 1G/2.5G/10G SFP+ Industrial Managed Ethernet Switch</p> <p>4 10G, 16 GT, 16 PoE, USB</p>	<p>OS3 Platform</p> <p>I(P)GS-6488XSFP 8 10/100/1000T (PoE) + 8 100M/1G SFP + 4 1G/2.5G/10G SFP+ Industrial Managed Ethernet Switch</p> <p>4 10G, 8 GT, 8 SFP, 8 PoE, USB</p>	<p>OS3 Platform</p> <p>I(P)GS-L6408XSFP 8 10/100/1000T (PoE) + 4 1G/2.5G/10G SFP+ Industrial Managed Ethernet Switch</p> <p>4 10G, 8 GT, 8 PoE, USB</p>	<p>OS3 Platform</p> <p>I(P)GS-L6424M-2P 24 10/100/1000T (PoE at/af) w/4/2 x1G/2.5G/10G SFP+ + 2 10GT uplink Industrial Managed Ethernet Switch</p> <p>4 10G, 24 GT, 24 PoE, USB</p>

**optional

Model name (P) = PoE model

Industrial Managed (PoE) Ethernet Switches

Product Line-ups

<p>OS3 Platform</p> <p>I(P)GS-L5424MGSFP-2P 24 10/100/1000T (PoE at/af) + 4 1G/2.5G SFP Industrial Managed Ethernet Switch</p> <p>Max 24GT, Max 18FX, Max 32SFP, Max 24PoE, USB</p>	<p>OS1 Platform</p> <p>I(P)GS-5400-2P 4 Modular-Slots L2+ Industrial Managed Ethernet Switch</p> <p>Max 24GT, Max 18FX, Max 32SFP, Max 24PoE, USB</p>	<p>OS1 Platform</p> <p>I(P)GS-5424 24 10/100/1000T (PoE at/af) + 4 Dual Speed SFP L2+ Industrial Managed Ethernet Switch</p> <p>24 GT, 4 SFP, 24 PoE, USB</p>	<p>OS1 Platform</p> <p>IGS-5816-2P 8 10/100/1000T + 16 Dual Speed SFP L2+ Industrial Managed Ethernet Switch</p> <p>8 GT, 16 SFP, USB</p>
<p>OS1 Platform</p> <p>I(P)ES-3424DSFP-2P 24 10/100TX (PoE at/af) + 4 Dual Speed SFP L2+ Industrial Managed Ethernet Switch</p> <p>4 SFP, 24 TX, 24 PoE, USB</p>	<p>OS3 Platform</p> <p>I(P)GS-5416MGSFP 16 10/100/1000T (PoE at/af) + 4 1G/2.5G SFP L2+ Industrial Managed Ethernet Switch</p> <p>4 SFP, 16 GT, 16 PoE, USB</p>	<p>OS3 Platform</p> <p>I(P)GS-5488MGSFP 8 10/100/1000T (PoE) + 8 100M/1G SFP + 4 1G/2.5G SFP L2+ Industrial Managed Ethernet Switch</p> <p>12 SFP, 8 GT, 8 PoE, USB</p>	<p>OS3 Platform</p> <p>I(P)GS-L5408MGSFP 8 10/100/1000T (PoE) + 4 1G/2.5G SFP L2+ Industrial Managed Ethernet Switch</p> <p>4 SFP, 8 GT, 8 PoE, USB</p>
<p>OS1 Platform</p> <p>I(P)GS-5408DFT 8 10/100/1000T (PoE) + 2 Dual Speed SFP + 2 10/100/1000T L2+ Industrial Managed Ethernet Switch</p> <p>2 SFP, 10 GT, 8 PoE, USB</p>	<p>OS1 Platform</p> <p>I(P)GS-5408GSFP 8 10/100/1000T (PoE) + 4 1000M SFP L2+ Industrial Managed Ethernet Switch</p> <p>4 SFP, 8 GT, 8 PoE, USB</p>	<p>OS1 Platform</p> <p>I(P)GS-3408GSFP 8 10/100/1000T (PoE) + 4 1000M SFP L2+ Industrial Managed Ethernet Switch</p> <p>4 SFP, 8 GT, 8 PoE</p>	<p>OS2 Platform</p> <p>I(P)GS-3208GSFP 8 10/100/1000T (PoE) + 2 1000M SFP L2+ Industrial Managed Ethernet Switch</p> <p>2 SFP, 8 GT, 8 PoE, USB</p>
<p>OS2 Platform</p> <p>I(P)GS-3208C 8 10/100/1000T (PoE) + 2 10/100/1000T/Dual Speed SFP L2+ Industrial Managed Ethernet Switch</p> <p>2 SFP, 8 GT, 8 PoE, USB</p>	<p>OS2 Platform</p> <p>I(P)GS-3204MGSFP 4 10/100/1000T (PoE) + 2 1G/2.5G SFP L2+ Industrial Managed Ethernet Switch</p> <p>2 SFP, 4 GT, 4 PoE, USB</p>	<p>OS2 Platform</p> <p>I(P)GS-3008 8 10/100/1000T (PoE) L2+ Industrial Managed Ethernet Switch</p> <p>8 GT, 8 PoE</p>	<p>OS1 Platform</p> <p>I(P)ES-5408DFT 8 10/100TX (PoE) + 2 10/100/1000T + 2 Dual Speed SFP L2+ Industrial Managed Ethernet Switch</p> <p>2 SFP, 2 GT, 2 TX, 8 PoE</p>
<p>OS1 Platform</p> <p>I(P)ES-3416DSFP 16 10/100TX (PoE) + 4 Dual Speed SFP L2+ Industrial Managed Ethernet Switch</p> <p>4 SFP, 16 TX, 16 PoE</p>	<p>OS1 Platform</p> <p>I(P)ES-3016 16 10/100TX (PoE) L2+ Industrial Managed Ethernet Switch</p> <p>16 TX, 16 PoE</p>	<p>OS1 Platform</p> <p>I(P)ES-3408GSFP 8 10/100TX (PoE) + 4 1000M SFP L2+ Industrial Managed Ethernet Switch</p> <p>4 SFP, 8 TX, 8 PoE</p>	<p>2000 Series</p> <p>I(P)ES-2208CB 8 10/100TX (PoE) + 4 10/100/1000T/Dual Speed SFP Combo L2+ Industrial Managed Ethernet Switch</p> <p>2 SFP, 8 TX, 8 PoE</p>

Model name (P) = PoE model

Industrial Unmanaged (PoE) Ethernet

Built-in Power Converter

Normally in rolling stock and vehicle environments, 48V power supply is not available. The built-in power converter is able to boost up from 12V (car), 24V (bus), and step down 110V (train), making the devices function well.

Feed 30W Power – 802.3at

IEEE802.3at standard is able to feed up to 30W to each PoE port, which is twice as the previous 802.3af standard. It's ideal for big power consumption devices such as PTZ IP cameras, High power wireless AP, etc.

E-Marking Certified

The E-marking certificate makes it the most suitable PoE switch for bus, carriage, other vehicles application as well as for industrial areas where the power source is limited with 24V but has demand of IP surveillance or VoIP applications. (24V model)



Product Line-ups

<p>I(P)GS-0016 16 10/100/1000T (PoE at/af) Industrial Ethernet Switch</p> <p> </p>	<p>I(P)GS-0208GSFP 8 10/100/1000T (PoE at/af) + 2 1000M SFP Industrial Ethernet Switch</p> <p>  </p>		
<p>I(P)GS-0208C 8 10/100/1000T (PoE at/af) + 2 10/100/1000T/Dual Speed SFP Combo Industrial Ethernet Switch</p> <p>  </p>	<p>I(P)GS-0008B 8 10/100/1000T (PoE at/af) Industrial Ethernet Switch</p> <p> </p>	<p>I(P)GS-0204DSFP 4 10/100/1000T (PoE) + 2 Dual Speed SFP Industrial Ethernet Switch</p> <p>  </p>	<p>IPGS-0005T-4 5 10/100/1000T w/ 4 PoE at/af Industrial Ethernet Switch</p> <p> </p>
<p>IPGS-0101T Industrial Gigabit Switch with PoE 802.3at/af</p> <p> </p>	<p>I(P)ES-0016 16 10/100TX (PoE at/af) Industrial Ethernet Switch</p> <p> </p>	<p>I(P)ES-0208CA 8 10/100TX (PoE at/af) + 2 10/100/1000T/Dual Speed SFP Combo Industrial Ethernet Switch</p> <p>  </p>	<p>IPES-0104GT-4 4 10/100TX PoE at/af + 1 10/100/1000T Industrial Ethernet Switch</p> <p>  </p>
<p>I(P)ES-0204DFT-4 4 10/100TX (PoE at/af) + 1 10/100/1000T + 1 Dual Speed SFP Industrial Ethernet Switch</p> <p>  </p>	<p>I(P)ES-0008B 8 10/100TX (PoE at/af) Industrial Ethernet Switch</p> <p> </p>	<p>I(P)GC-0101DSFP 10/100/1000T to 100/1000M SFP 802.3at Industrial PoE Switch Converter</p> <p>  </p>	<p>IPES-0101T 1 10/100TX (PoE at) + 1 10/100TX EN50155 Unmanaged Switch</p> <p> </p>

Model name (P) = PoE model
*E-Marking is future release

Industrial IEC 61850-3 Ethernet Switches



IEC 61850-3 / IEEE 1613 Certified

The series complies with the strict substation-rated standard of IEC 61850-3 and IEEE 1613. It is able to help against electrical interference and meets communication requirements for network equipment used in power substations. For example, the switch was tested with high ESD of up to 8K (contact) and 15K (air).

Zero GOOSE Message Packet Loss

The series supports standardized GOOSE messages that ensure the most critical packets are transmitted. The manager is able to receive and react in unexpected accidents in real time without any packet loss.

IEC61850-90-4 switch data modeling

Lantech IEC 61850-3 model embeds a MMS server based on IEC61850-90-4 switch data modeling for power SCADA that allow power SCADA to control and monitor the switch without additional NMS.

Product Line-ups

<p>I(P)GS-5400-2P-PT 4 Modular Slots Industrial L2+ IEC 61850-3 Managed (PoE) Switch</p> <p>    </p>	<p>I(P)GS-5424-PT 24 10/100/1000T (PoE) + 4 DualSpeed SFP IEC 61850-3 Managed Ethernet Switch</p> <p>   </p>	<p>I(P)ES-3424DSFP-2P-PT 24 10/100TX (PoE) + 4 DualSpeed SFP IEC 61850-3 Managed Ethernet Switch</p> <p>   </p>	<p>Do you know?</p> <p>The series built-in MMS:</p> <ul style="list-style-type: none"> • IP address information • Environmental Monitoring • PoE status • Port status • Packet statistics
<p>I(P)GS-5408DFT-PT 2 10/100/1000T + 2 100/1000 SFP + 8 10/100/1000T (PoE) IEC 61850-3 Industrial Managed Ethernet Switch</p> <p>   </p>	<p>I(P)ES-5408DFT-PT 8 10/100TX (PoE) + 2 10/100/1000T + 2 Dual Speed SFP L2+ Industrial Managed Ethernet Switch</p> <p>  </p>		

Model name (P) = PoE model

Industrial E-marking / ITxPT Transportation Routers & Switches



What is E-marking?

The e-mark is an EU mark for approved vehicles and vehicle components sold into the EU.



What is ITxPT?

ITxPT defines the physical interfaces between on-board systems, including general architecture, generic mechanisms with the communication protocols.

4G LTE + Wi-Fi Multifunction Routers					
<p>I(P)WMR-3204DF Industrial Multifunction VPN Router w/up to 2 WiFi 11ac + up to 2 LTE 4G + 2 serial ports + 4 GigaT + 2 Dual Speed SFP</p> <p>4 GT, 2 SFP, 4 PoE, USB, 2 Serial</p>	<p>I(P)WMR-3004DF Industrial Multifunction VPN Router w/up to 2 WiFi 11ac + up to 2 LTE 4G + 2 serial ports + 4 GigaT + 2 Dual Speed SFP WAN</p> <p>4 GT, 4 PoE, USB, 2 Serial, 2 WAN</p>	<p>I(P)WMR-3006 Industrial Multifunction VPN Router w/up to 2 WiFi 11ac + up to 2 LTE 4G + 2 serial ports + 6 GigaT</p> <p>6 GT, 4 PoE, USB, 2 Serial</p>	<p>I(P)WMR-3004 Industrial Multifunction VPN Router w/up to 2 WiFi 11ac + up to 2 LTE 4G + 2 serial ports + 4 GigaT + 2WAN</p> <p>4 GT, 4 PoE, USB, 2 Serial, 2 WAN</p>	<p>I(W)MR-3003(-M12) Industrial Multifunction VPN Router w/up to 2 WiFi 11ac + up to 2 LTE 4G + 2/4 serial ports + 3 GigaT</p> <p>3 GT, 1 PD, 4 Serial, USB</p>	<p>I(W)MR-3002(-M12) Industrial Multifunction VPN Router w/up to 2 WiFi 11ac + up to 2 LTE 4G + 2/4 serial ports + 2 GigaT</p> <p>2 GT, 1 PD, 4 Serial, USB</p>
4G LTE Multifunction Routers					
<p>I(P)MR-3204DF Industrial Multifunction VPN Router w/2 LTE 4G + 2 serial ports + 4 GigaT + 2 Dual Speed SFP</p> <p>4 GT, 2 SFP, 4 PoE, USB, 2 Serial</p>	<p>I(P)MR-3004DF Industrial Multifunction VPN Router w/2 LTE 4G + 2 serial ports + 4 GigaT + 2 Dual Speed SFP WAN</p> <p>4 GT, 4 PoE, USB, 2 Serial, 2 WAN</p>	<p>I(P)MR-3006 Industrial Multifunction VPN Router w/2 LTE 4G + 2 serial ports + 6 GigaT</p> <p>6 GT, 4 PoE, USB, 2 Serial</p>	<p>I(P)MR-3004 Industrial Multifunction VPN Router w/2 LTE 4G + 2 serial ports + 4 GigaT + 2WAN</p> <p>4 GT, 4 PoE, USB, 2 Serial, 2 WAN</p>	<p>I(M)R-3003(-M12) Industrial Multifunction VPN Router w/2 LTE 4G + 2/4 serial ports + 3 GigaT</p> <p>3 GT, 1 PD, 4 Serial, USB</p>	<p>I(M)R-3002(-M12) Industrial Multifunction VPN Router w/2 LTE 4G + 2/4 serial ports + 2 GigaT</p> <p>2 GT, 1 PD, 4 Serial, USB</p>
Wi-Fi Multifunction Routers					
<p>I(P)WAP-3204DF Industrial Multifunction VPN Router w/2 WiFi 11ac + 2 serial ports + 4 GigaT + 2 Dual Speed SFP</p> <p>4 GT, 2 SFP, 4 PoE, USB, 2 Serial</p>	<p>I(P)WAP-3004DF Industrial Multifunction VPN Router w/2 WiFi 11ac + 2 serial ports + 4 GigaT + 2 Dual Speed SFP WAN</p> <p>4 GT, 4 PoE, USB, 2 Serial, 2 WAN</p>	<p>I(P)WAP-3006 Industrial Multifunction VPN Router w/2 WiFi 11ac + 2 serial ports + 6 GigaT</p> <p>6 GT, 4 PoE, USB, 2 Serial</p>	<p>I(P)WAP-3004 Industrial Multifunction VPN Router w/2 WiFi 11ac + 2 serial ports + 4 GigaT + 2WAN</p> <p>4 GT, 4 PoE, USB, 2 Serial, 2 WAN</p>	<p>I(W)AP-3003(-M12) Industrial Multifunction VPN Router w/2 WiFi 11ac + 2/4 serial ports + 3 GigaT</p> <p>3 GT, 1 PD, 4 Serial, USB</p>	<p>I(W)AP-3002(-M12) Industrial Multifunction VPN Router w/2 WiFi 11ac + 2/4 serial ports + 2 GigaT</p> <p>2 GT, 1 PD, 4 Serial, USB</p>

*M12 model does not support serial ports.

Ethernet Switches					
<p>T(P)ES-0216T 16 10/100TX (PoE at) + 2 10/100/1000T EN50155 Unmanaged Switch</p> <p>2 GT, 16 TX, 16 PoE</p>	<p>T(P)ES-0212T 12 10/100TX (PoE at) + 2 10/100/1000T EN50155 Unmanaged Switch</p> <p>2 GT, 12 TX, 12 PoE</p>	<p>T(P)ES-0016T 16 10/100TX (PoE at) EN50155 Unmanaged Switch</p> <p>16 TX, 16 PoE</p>	<p>T(P)GS-0008CA 8 10/100/1000T (PoE at) EN50155 Unmanaged Switch</p> <p>8 GT, 8 PoE</p>	<p>T(P)ES-0008CA 8 10/100TX (PoE at) EN50155 Unmanaged Switch</p> <p>8 TX, 8 PoE</p>	<p>I(P)ES-5408T-X-IGN 8 10/100TX (PoE at) + 4 10/100/1000T L2+ Managed Switch</p> <p>4 GT, 8 TX, 8 PoE</p>
<p>I(P)ES-5408T-D-IGN 12 10/100TX (w/8 PoE at) L2+ Managed Switch</p> <p>12 TX, 8 PoE</p>	<p>I(P)ES-0208GF 8 10/100TX (PoE at/af) + 2 1000FX EN50155 Unmanaged Switch</p> <p>2 TX, 8 TX, 8 PoE</p>	<p>I(P)ES-0208T 8 10/100TX (PoE at/af) + 2 1000FX EN50155 Unmanaged Switch</p> <p>2 GT, 8 TX, 8 PoE</p>	<p>I(P)ES-0008A 8 10/100TX (PoE at/af) EN50155 Unmanaged Switch</p> <p>8 TX, 8 PoE</p>	<p>I(P)ES-0008B 8 10/100TX (PoE at) EN50155 Unmanaged Switch</p> <p>8 TX, 8 PoE</p>	<p>I(P)ES-0005B 5 10/100TX (PoE at/af) EN50155 Unmanaged Switch</p> <p>5 TX, 5 PoE</p>
<p>I(P)ES-3416DSFP 16 10/100TX (PoE at/af) + 4 Dual Speed SFP L2+ Managed Ethernet Switch</p> <p>4 SFP, 16 TX, 16 PoE</p>	<p>I(P)ES-3016 16 10/100TX (PoE at/af) L2+ Industrial Managed Ethernet Switch</p> <p>16 TX, 16 PoE</p>	<p>I(P)GS-0016 16 10/100/1000T (PoE at/af) Industrial Ethernet Switch</p> <p>16 GT, 16 PoE</p>	<p>I(P)ES-0016 16 10/100TX (PoE at/af) Industrial Ethernet Switch</p> <p>16 TX, 16 PoE</p>	<p>I(P)GS-0008B 8 10/100/1000T (PoE at/af) Industrial Ethernet Switch</p> <p>8 GT, 8 PoE</p>	<p>I(P)ES-0008B 8 10/100TX (PoE) Industrial Ethernet Switch</p> <p>8 TX, 8 PoE</p>

Model name (P) = PoE model

Industrial DNV Type Ethernet Switches

DNV Certified

DNV (Det Norske Veritas) is a certification that verifies maritime facilities comply for satisfactory operation in typical on-board environments. All the certified switches are designed to create a reliable solution for marine applications.

- ✓ Strict EMC Tests
- ✓ Anti-Vibration
- ✓ Prevent Compass Interference

Product Line-ups

<p>I(P)GS-R6424XSFP-2P-DNV* 24 10/100/1000T (PoE at/af) + 4 1G/2.5G/10G SFP Industrial Managed Ethernet Switch</p> <p>4 10G, 24 GT, 24 PoE, USB</p>	<p>I(P)GS-R6424XFT-2P-DNV* 24 10/100/1000T (PoE at/af) + 2 1G/2.5G/10G SFP + 2 10GT uplink Industrial Managed Ethernet Switch</p> <p>4 10G, 24 GT, 24 PoE, USB</p>		
<p>I(P)GS-L6424M-2P-DNV* 24 10/100/1000T (PoE at/af) w/4/2 x1G/2.5G/10G SFP+ + 2 10GT uplink Industrial Managed Ethernet Switch</p> <p>4 10G, 24 GT, 24 PoE, USB</p>	<p>LGS-2624C-DNV 20 10/100/1000T + 4 1000T/100/1000M SFP Combo + 2 100/1000M SFP L2+ Managed Switch</p> <p>4 Combo, 20 GT, 2 SFP</p>	<p>IES-2208CA-DNV 8 10/100TX + 2 10/100/1000T Dual Speed SFP Combo Industrial Managed Ethernet Switch</p> <p>2 Combo, 8 TX</p>	<p>IES-2008B-DNV 8 10/100TX Industrial Managed Ethernet Switch</p> <p>8 TX</p>

*DNV is future release

Industrial Hazardous Ethernet Switches

ATEX Certified













The ATEX Directive 94/9/EC is a directive adopted by the European Union (EU) to facilitate free trade in the EU by aligning the technical and legal requirements in the Member States for products intended for use in potentially explosive atmospheres.




Product Line-ups

<p>IES-2208CA-ATEX 8 10/100TX + 2 10/100/1000T Dual Speed SFP Combo Industrial Managed Switch</p> <p>2 Combo, 8 TX</p>	<p>IES-2008B-ATEX 8 10/100TX Industrial Managed Ethernet Switch</p> <p>8 TX</p>
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Industrial Entry Ethernet Switches

 <p>IGS-0016 16 10/100/1000T Industrial Unmanaged Switch</p> <p>16 GT</p>	 <p>IGS-0208GSFP 8 10/100/1000T + 2 1000M SFP Industrial Unmanaged Switch</p> <p>2 SFP 8 GT</p>	 <p>IGS-0204DSFP 4 10/100/1000T + 2 Dual Speed SFP Industrial Unmanaged Switch</p> <p>2 SFP 4 GT</p>	 <p>IGS-0008B 8 10/100/1000T Industrial Unmanaged Switch</p> <p>8 GT</p>
 <p>IES-0208CA 8 10/100TX + 2 10/100/1000T/ Dual Speed SFP Combo Industrial Unmanaged Switch</p> <p>2 Combo 8 TX</p>	 <p>IES-0204DFT 4 10/100TX + 1 10/100/1000T + 1 Dual Speed SFP Industrial Unmanaged Switch</p> <p>1 SFP 1 GT 4 TX</p>	 <p>IES-0204FT 4 10/100TX + 2 100FX Industrial Unmanaged Switch</p> <p>2 FX 4 TX</p>	 <p>IES-0104FT 4 10/100TX + 1 100FX Industrial Unmanaged Switch</p> <p>1 FX 4 TX</p>
 <p>IES-0016 16 10/100TX Industrial Unmanaged Switch</p> <p>16 TX</p>	 <p>IES-0008B 8 10/100TX Industrial Unmanaged Switch</p> <p>8 TX</p>	 <p>IES-0008T 8 10/100TX Industrial Unmanaged Switch</p> <p>8 TX</p>	 <p>IES-0005T 5 10/100TX Industrial Unmanaged Switch</p> <p>5 TX</p>

Industrial Converter Series

 <p>IPGC-0101DSFP 10/100/1000T to 100/1000M SFP 802.3at Industrial PoE Switch Converter</p> <p>1 SFP 1 GT 1 PoE</p>	 <p>IGC-0101DSFP 10/100/1000T to 100/1000M SFP Industrial Switch Converter</p> <p>1 SFP 1 GT</p>	 <p>IGS-022DSFP 1 100M/1000M SFP + 1 1000M SFP Industrial Ethernet Switch Converter</p> <p>2 SFP</p>	<p>NEW</p>  <p>MBAK19010 MBAK19011 19" Rack Mounting Kit for 35 (W) x 105 (D) x 152 (H) mm Industrial Converters</p>
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Serial Devices

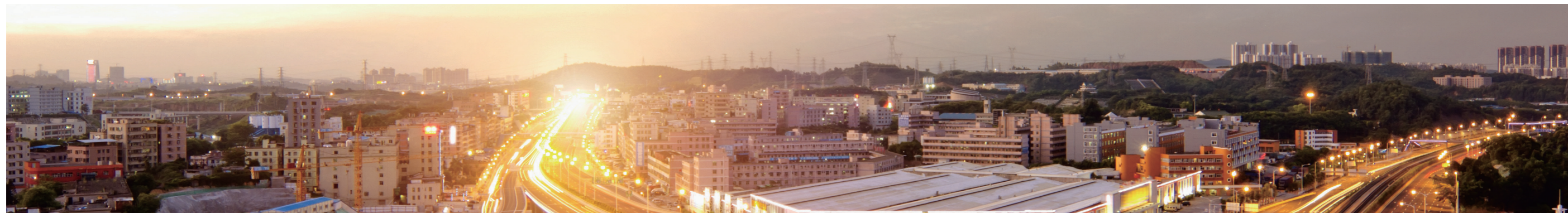
<p>NEW</p>  <p>IDS-2204A-M12 4 M12 RS-232/422/485 port to 2 M12 10/100TX Ethernet Industrial Device Server</p> <p>4 Serial 2 TX</p>	 <p>LSC-1102B Ethernet to RS-232/ 422/ 485 Serial Device</p> <p>1 Serial 8 TX</p>	 <p>LSC-0101U USB to RS-422/485 Serial Device</p> <p>1 Serial USB</p>
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Central Managed Ethernet Switches


 <p>LPGS-2424C-240W 24 10/100/1000T + 4 1000T/ 100/1000M SFP Combo L2 PoE af/at Gigabit Managed Ethernet Switch</p> <p>4 Combo 24 GT 24 PoE</p>	 <p>LGS-2624C 20 10/100/1000T + 4 1000T/100/ 1000M SFP Combo + 2 100/1000M SFP L2+ Managed Switch</p> <p>4 Combo 20 GT 2 SFP</p>
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PoE Series

 <p>POA-1000A Single Port PoE Power Source Injector IEEE802.3at/af PoE, 10/100/1000Mbps LAN</p>	 <p>POA-100B Single Port PoE Power Source Injector IEEE802.3at/af PoE, 10/100Mbps LAN</p>	 <p>POS-100A Adjustable Output Power Over Ethernet Splitter</p>
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Fiber Converters




CM-121
10/100/1000BaseT to 1000M SFP
Web Smart Fiber Media Converter

1 GT 1 SFP




CM-022A
100/1000Base SFP to
100/1000Base SFP Media Converter

1 SFP 1 SFP




CM-021DSFP
Gigabit Ethernet 10/100/1000Base-T
to 100/1000Base-X Media Converter

1 GT 1 SFP



CM-011A
10/100TX to 100FX
Media Converter

1 TX 1 SFP



MC-116-RPS
16 slots
Universal Media Converter Chassis

Supported Models: CM-121, CM-022A, CM-011A

Products Naming Rule

TPES-R6416TA-8-PT-MM-XL-XAC-2S-67-12V-BB

of uplink ports

6: 10G uplinks
5: L2+ managed
3: L2+ managed
2: L2 managed
1: Smart managed
0: Unmanaged

of major ports

S: Switch
C: Converter / Controller
R: Router
AP: Access Point
MR: Mobile Router

of PoE ports

E: Major ports are 10/100TX Ethernet
G: Major ports are Giga Ethernet
W: Wireless
P: PoE

I: Hardened (Industrial grade)
L: Non-industrial
T: EN50155 certified

Model version

R: Rack-mount

2S: 2 serial ports

SM/SX: Single mode fiber
MM/LX: Multi mode fiber
Q-ODC: Q-ODC connector
QSM: Single mode Q-ODC fiber
QMM: Multi mode Q-ODC fiber

Input power:
12V=9.5~56VDC
24V=9~36VDC / 9~56VDC
72V=50.4~90VDC
110V=43~137.5VDC
HV=90~305VAC/120~430VDC
WV=16.8~137.5VDC
WVI=WV with isolation
LDC=36~85VDC
AC=85~265VAC IEC320
2P=Dual embedded power

C: Combo
F: Fiber
DF: Dual speed fiber
GF: Giga fiber
T/GT: Giga T
GSFP: 1000M SFP
DSFP: Dual speed SFP
DFT: Dual speed fiber + Giga T
AC: 802.11AC wireless
S: Compact size
XSFP(IP30): 1G/2.5G/10G SFP
MGSFP(IP30): 1G/2.5G SFP
XT: 1G/2.5G/5G/10G Copper
XF: 1G/2.5G/5G/10G Fiber
XFT: XT+XF
MGT: 1G/2.5G Copper
MGF: 1G/2.5G Fiber
MGFT: MGT + MGF

2L: 2 LTE modules
1L: 1 LTE module
2AC: 2 802.11AC modules
1AC: 1 802.11AC module
WW: Worldwide LTE band
EUUNA: Europe / North America LTE band
APAC: Asia Pacific LTE band

67: IP67 housing
65: IP65 housing
54: IP54 housing
41: IP41 housing
21: IP21 housing

BB: 2-pairs bypass
B: 1-pair bypass
BT: 1-pair copper bypass
BBT: 2-pairs copper bypass
BF: 1-pair fiber bypass
BBF: 2-pairs fiber bypass

Accessories



ANT11000041
ANT11000042
ANT11000051



ANT11000044
ANT11000045
ANT11000055



ANT12000001



ADA11000052 / AD11000053

Cellular Antenna

Part Number	Antenna Type	Frequency	Casing	Dimension	Gain
ANT11000041	2G/3G/4G dipole antenna EU type	791~960/ 1710~2170/ 2500~2700MHz	Plastic SMA plug	162.2 x 19.6 x 13.5mm (LxWxH)	3dBi
ANT11000042	2G/3G/4G dipole antenna US type	704~960/1710~2170MHz	Plastic SMA plug	162.2 x 19.6 x 13.5mm (LxWxH)	3dBi
ANT11000044	2G/3G/4G dipole antenna EU type	704~960/1710~2690MHz	Plastic SMA plug	105 x 27 x 9.4mm (LxWxH)	1.6dBi
ANT11000045	2G/3G/4G dipole antenna US type	704~960/1710~2170MHz	Plastic SMA plug	105 x 27 x 9.4mm (LxWxH)	3dBi

GPS Antenna

Part Number	Antenna Type	Frequency	Casing	Dimension	Gain
ANT12000001	GPS antenna	1575.42 ± 1.023MHz	Deep into water 50cm (30mins), Magnet mount, SMA plug	40.5 x 38.0 x 12.3mm (LxWxH) cable length: 3M	28dBi

Wi-Fi Antenna

Part Number	Antenna Type	Frequency	Casing	Dimension	Gain
ANT11000051	dipo Wi-Fi antenna	2.4/5 GHz	Plastic SMA plug	162.2 x 19.6 x 13.5mm (LxWxH)	3dBi (2.4GHz) 4dBi (5GHz)
ANT11000051	dipo Wi-Fi antenna	2.4/5 GHz	Plastic SMA plug	105 x 27 x 9.4mm (LxWxH)	6dBi (2.4GHz) 4dBi (5GHz)
ANT11000090	omnidirectional 3x3 MIMO Wi-Fi antenna	2.4/5 GHz	IP67, Screw Mount	Height 65.35 x Diameter 147.5mm cable length: 3M	5dBi

Antenna Base

Part Number	Description
ADA11000052	Magnetic antenna base for Wi-Fi, RP SMA Jack Base, Length : 1M
ADA11000053	Magnetic antenna base for 3G/4G, RP SMA Jack Base, Length : 1M

Pioneering Industrial and IP Networks



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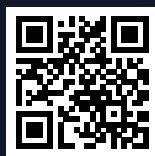
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