



# VEHICLE SOLUTIONS



## Lantech E-Marked / ITxPT certified Ethernet switches

On board the modern Buses & Trams there are many IP systems as part of the on board communications for example IP cameras, PIS, and ticketing systems. Lantech have developed a series of Ethernet switches to meet the current E-marking / ITxPT standard for on onboard vehicle applications. We are able to provide a complete solution for your fleet.



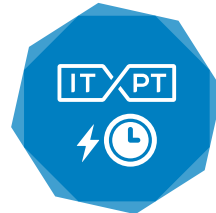
**10GbE copper or fiber to fulfill huge bandwidth requirement**

Lantech vehicle Ethernet switches come with up to 4X 10GbE speed uplink ports which make the series ideal for autonomous vehicles.



**E-Marked with ISO 16750-2 (ISO 7637-5)**

The E-mark is an EU certification for approved vehicles and vehicle components sold into the EU. ISO 16750-2 is an enhanced definition and verification method for harmonization of pulse generators according to ISO 7637.



**ITxPT certified with ignition and PoE Off/Timer**

The switch is ITxPT labeled with ignition function, delay shut down, standby green mode, and Inventory service. The PoE Off/Timer function on ignition standby mode can ultimate the battery standby time by connecting essential devices.



**24VDC input with PoE isolation; DC-DC Converter & 120W PoE**

The switch is designed with dual power that accepts 9~36VDC and are able to provide PoE and Ethernet galvanic isolation protection. The 24VDC to 48VDC converter is built in for bus applications with up to 120W PoE power feeding (PoE model).



**Enhanced Cybersecurity**

- Port security / IP and MAC basis
  - Handling error scenarios and invalid input correctly
  - Session Control
  - IEC 62443-4-1 Certified
  - IEC 62443-4-2 Compliance\*\*\*
- \*\*\*By yearly renew



**Complete IGMP**

- The switch supports complete IGMP for video surveillance application:
- IGMP query
  - IGMP static route
  - 1024 multicast groups
  - IGMP router port
  - IGMP snooping v1, v2, v3



**DHCP & VLAN**

The switch supports various DHCP for easy device replacement, including Port-based DHCP, DHCP Relay, DHCP Option 82, and Mac-based DHCP. It supports VLAN to isolate different networks for better data protection.



**Rate limiting & NAT**

Rate Limiting allows setting limit of each port's ingress/ egress rate. The switch also supports PAT (port address translation): many to 1; Port forwarding.