

TES-3080-M12

➔ **Industrial EN50155 8-port managed Ethernet switch with 8x10/100Base-T(X), M12 connector**

Features

- Leading EN50155-compliant Ethernet switch for rolling stock application
- Fastest Redundant Ethernet Ring: **O-Ring** (recovery time < 10ms over 250 units of connection)
- **Open-Ring** supports the other vendor's ring technology in open architecture
- **O-RSTP** supports applications with complex topology
- STP/RSTP/MSTP supported
- Supports **PTP Client** (Precision Time Protocol) clock synchronization
- IGMP v2/v3 (IGMP snooping support) for filtering multicast traffic
- Port Trunking for easy of bandwidth management
- SNMP v1/v2c/v3 support for secured network management
- RMON for traffic monitoring
- Supports LLDP protocol
- Port lock to prevent access from unauthorized MAC address
- Event notification through Syslog, Email, SNMP trap, and Relay Output
- Windows utility (**Open-Vision**) supports centralized management and configurable by Web-based, Telnet, and Console (CLI)
- M12 connectors to guarantee reliable operation against environmental disturbances
- Wall mounting enabled

Preliminary

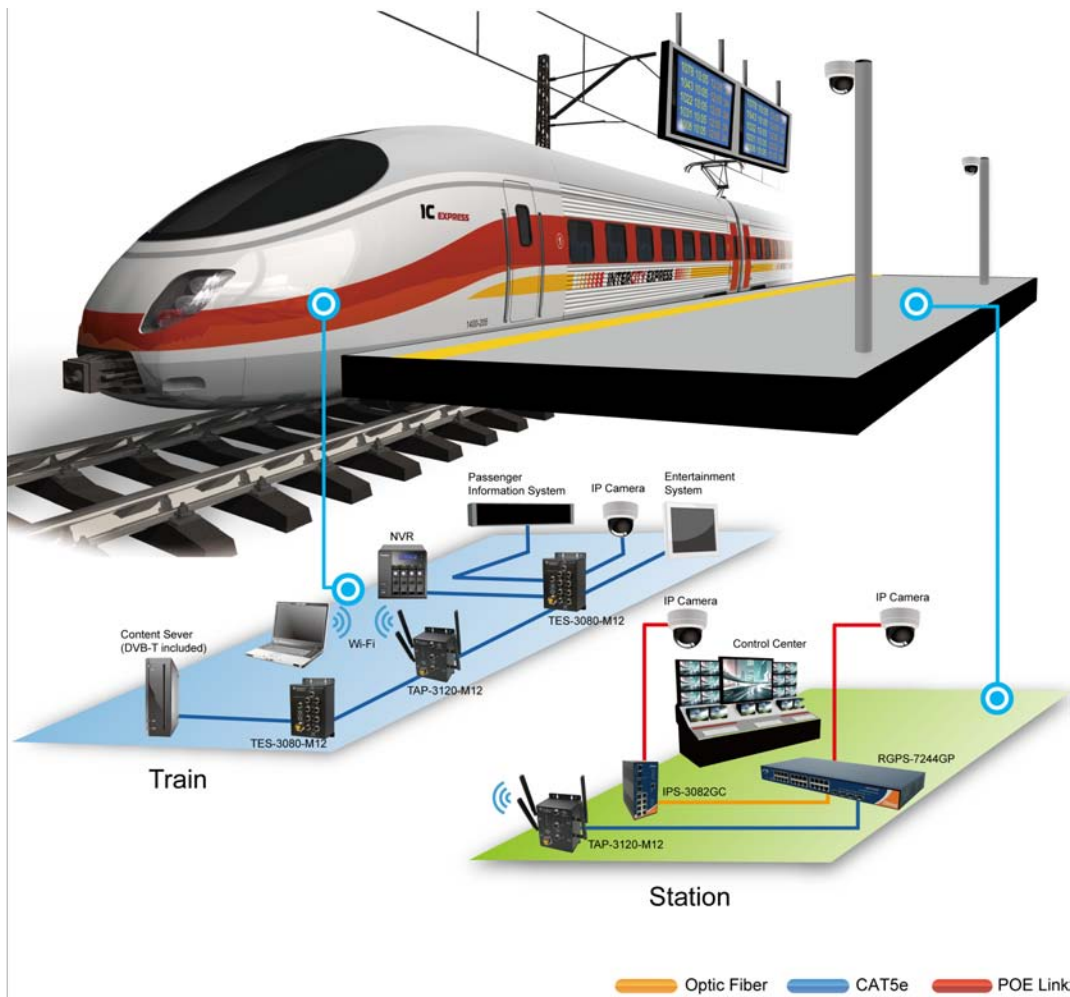


Introduction

ORing's Transporter series managed Ethernet switches are designed for industrial applications, such as rolling stock, vehicle, and railway applications. The TES-3080-M12 is the managed Redundant Ring Ethernet switch with 8x10/100Base-T(X) ports which is compliant with EN50155 standard. With complete support of Ethernet Redundancy protocol, **O-Ring** (recovery time < 10ms over 250 units of connection), **Open-Ring**, **O-RSTP**, and MSTP/RSTP/STP (IEEE 802.1s/w/D) can protect your mission-critical applications from network interruptions or temporary malfunctions with its fast recovery technology.

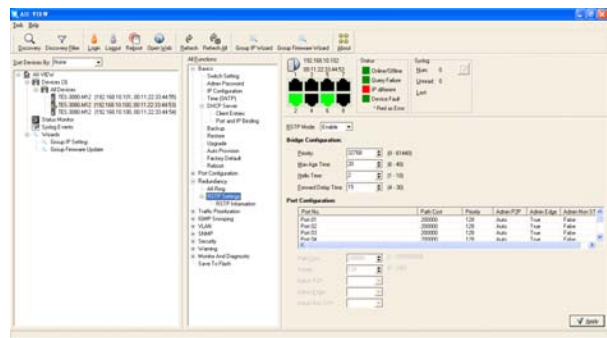
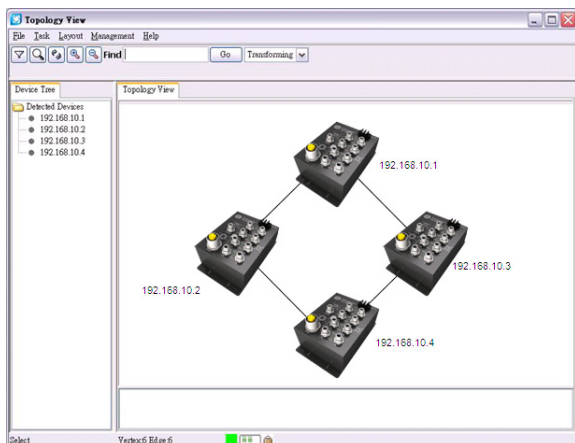
TES-3080-M12 EN50155 Ethernet Switch is specifically designed for the toughest industrial environments. It uses M12 connectors to ensure tight and robust connections, plus it guarantees reliable operation against environmental disturbances, such as vibration and shock. Additionally, the **Open-Ring** technology is also supported which can be applied for other vendor's proprietary ring. Network management on TES-3080-M12 is centralized and convenient via the powerful windows utility ~ **Open-Vision**. In addition, the wide operating temperature range from -40°C to 70°C can satisfy most of operating environments. Therefore, the TES-3080-M12 Ethernet switch is one of the most reliable choices for rolling stock and highly-managed Ethernet applications.

Practical Operation



Open-Vision

ORing's switches are intelligent switches. Being different from other traditional redundant switches, ORing provides a set of Windows utility (**Open-Vision**) for users to manage and monitor all of industrial Ethernet switches on the industrial network.



Security Features	<p>Enable/disable ports, MAC based port security Port based network access control (802.1x) VLAN (802.1Q) to segregate and secure network traffic Supports Q-in-Q VLAN for performance & security to expand the VLAN space Radius centralized password management SNMP v1/v2c/v3 encrypted authentication and access security</p>
Software Features	<p>STP/RSTP/MSTP (IEEE 802.1D/w/s) Redundant Ring (O-Ring) with recovery time less than 10ms over 250 units TOS/Diffserv supported Quality of Service (802.1p) for real-time traffic VLAN (802.1Q) with VLAN tagging and GVRP supported IGMP Snooping for multicast filtering Port configuration, status, statistics, monitoring, security SNTP for synchronizing of clocks over network Supports PTP Client (Precision Time Protocol) clock synchronization DHCP Server / Client support Port Trunk support MVR (Multicast VLAN Registration) support</p>
Network Redundancy	<p>O-Ring Open-Ring O-RSTP STP RSTP MSTP</p>
Warning / Monitoring System	<p>Relay output for fault event alarming Syslog server / client to record and view events Include SMTP for event warning notification via email Event selection support</p>
LED Indicators	
Power Indicator	Green : Power LED x 2
R.M. Indicator	Green : Indicates that the system is operating in O-Ring Master mode
O-Ring Indicator	Green : Indicates that the system is operating in O-Ring mode
Fault Indicator	Amber : Indicates unexpected event occurred
10/100Base-T(X) M12 Port Indicator	Green for port Link/Act. Amber for Duplex/Collision
Fault Contact	
Relay	Relay output to carry capacity of 3A at 24VDC
Power	
Redundant Input Power	Dual 12~48VDC on 5-pin M23 connector
Power Consumption (Typ.)	5 Watts
Overload Current Protection	Present
Reverse Polarity Protection	Present
Physical Characteristics	
Enclosure	IP-30
Dimensions (W x D x H)	125 (W) x 65 (D) x 196 (H)mm (4.92 x 2.56 x 7.72 inch)
Weight (g)	896 g
Environmental	
Storage Temperature	-40 to 85°C (-40 to 185°F)
Operating Temperature	-40 to 70°C (-40 to 158°F)
Operating Humidity	5% to 95% Non-condensing

Regulatory Approvals	
EMI	FCC Part 15, CISPR (EN55022) class A, EN50155 (EN50121-3-2, EN55011, EN50121-4)
EMS	EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11
Shock	IEC60068-2-27
Free Fall	IEC60068-2-32
Vibration	IEC60068-2-6
Safety	EN60950-1
Warranty	5 years

Ordering Information

TES-3 **AA** **B** -M12

Code Definition	10/100Base-T(X) Port Number	Additional Port Number
Option	- 08: 8 ports	- 0: 0 port

Available Model	Model Name	Description
	TES-3080-M12	EN50155 8-port managed Ethernet switch with 8x10/100Base-T(X), M12 connector

Packing List

- TES-3080-M12
- ORing Tool CD
- Quick Installation Guide

Optional Accessories (Can be purchased separately)

- Open-Vision M500, Powerful Network Management Windows Utility Suite, 500 IP devices
- DR-45 series : 45 Watts DIN-Rail power supply
- DR-75 series : 75 Watts DIN-Rail power supply
- DR-120 series : 120 Watts DIN-Rail power supply
- M12C : M12 cable accessories