



# 16-Port Industrial Gigabit L2 Managed DIN-Rail Switch

# TI-G160i (V2)

- 16 x Gigabit ports
- 32Gbps switching capacity
- Hardened IP40 rated metal housing
- Includes DIN-rail mounting bracket
- Operating temperature range of -40° 75° C (-40° 167° F)
- Supports LACP, STP/RSTP, VLAN, and IGMP Snooping
- IEEE 802.1p QoS with queue scheduling support
- Bandwidth control per port

- Remote cloud management with TRENDnet Hive™
   (Additional fee applies)
- Redundant power inputs with overload current protection
- Supports Ethernet Ring Protection Switching (ERPSv2)
- Alarm relay output triggered by power failure
- Power supply sold separately (model: TI-M6024)
- Lifetime Warranty
- NDAA / TAA compliant (U.S. and Canada only)

TRENDnet's 16-Port Industrial Gigabit L2 Managed DIN-Rail Switch, model TI-G160i, delivers advanced management features and 16 gigabit ports providing a total of 32Gbps switching capacity. Connect up to 16 devices to the switch for high-speed gigabit network connections. The switch is equipped with an IP40 rated metal enclosure, designed to withstand a high degree of vibration and shock, while operating within a wide temperature range of -40° – 75° C (-40° – 167° F) for industrial environments. Advanced traffic management controls, troubleshooting, and SNMP monitoring support make this a powerful solution for SMB networks.

Easily manage and configure TRENDnet's 16-Port Industrial Gigabit L2 Managed DIN-Rail Switch remotely by updating the switch to the latest firmware for access to TRENDnet Hive™. TRENDnet Hive is a network cloud manager that reduces management time and cost. This cloud managed switch requires no additional hardware, server, or personal cloud with TRENDnet's reliable cloud service.





# **Shock and Vibration** Compliant

Compliant with shock (IEC 60068-2-27), freefall (IEC 60068-2-32), and vibration (IEC 60068-2-6) standards



# Integration Flexibility

Managed features include VLAN, IGMP snooping, QoS, RMON, SNMP trap, and syslog for monitoring and flexible network integration.



# **Industrial Design**

Equipped with an IP40 rated metal enclosure, designed to withstand a high degree of vibration and shock, while operating within a wide temperature range of -40° - 75° C (-40° - 167° F) for industrial environments.

# **FEATURES**



## **Network Ports**

16 Gigabit Ports



#### **Access Control**

Managed access control features include ACLs, IP-MAC-Port binding, ARP inspection, 802.1X RADIUS, MAC address learning, DHCP snooping, and IP Source Guard provides layered network access controls



# **Switching Capacity**

32Gbps switching capacity



### **Extreme Temperature Range**

A wide operating temperature range of  $-40^{\circ} - 75^{\circ}$  C ( $-40^{\circ} -$ 167° F) allows for installations in extreme hot or cold environments



## **Hive Enabled**

Remotely manage, configure, and diagnose this L2 switch via TRENDnet's cloud service (Additional fee applies)



# **System Monitoring**

Monitoring features include SNMP v1 / v2c / v3, MIB support, SNMP trap, RMON Groups (1, 2, 3, 9), SMTP alert, syslog, and port mirroring



# **Redundant Power Inputs**

Redundant power inputs with overload current protection (power supply sold separately: TI-M6024)



# **Shock and Vibration Resistant**

Compliant for shock (IEC 60068-2-27), freefall (IEC 60068-2-32), and vibration (IEC 60068-2-6) standards



# **Traffic Management**

Managed features include 802.1Q, MAC & Port Isolation VLAN, IGMP Snooping, per port bandwidth control / 802.1p / DSCP / Queue Scheduling (SPQ / WRR / WFQ), STP / RSTP, and link aggregation for flexible network integration



#### **DIN-Rail Mount**

IP40 rated metal enclosure includes DIN-rail mounting bracket



# **Jumbo Frame**

Sends larger packets, or Jumbo Frames (up to 10KB), for increased performance



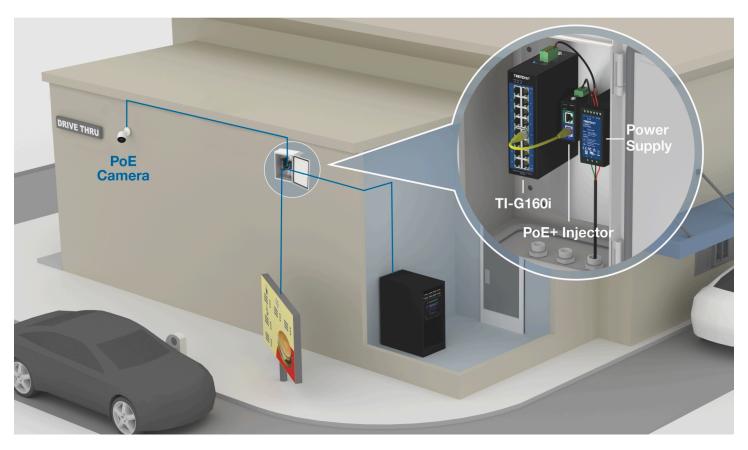
# **Grounding Point**

Grounding point protects equipment from external electrical surges



# **NETWORKING SOLUTION**







# **SPECIFICATIONS**

#### **Standards**

- IEEE 802.1d
- IEEE 802.1p
- IEEE 802.1Q
- IEEE 802.1w
- IEEE 802.1X
- IEEE 802.1ab
- IEEE 802.1ax
- IEEE 802.3u
- IEEE 802.3x
- IEEE 802.3ab
- IEEE 802.3ad
- IEEE 802.3az

#### **Device Interface**

- 16 x Gigabit ports
- 6-pin removable terminal block (primary/RPS power inputs & alarm relay output)
- · DIP switch (Alarm for Primary/RPS power)
- · LED indicators
- Reboot button

#### **Performance**

- · Switch fabric: 32Gbps · RAM buffer: 512KB
- MAC address table: 8K entries
- · Jumbo frames: 10KB
- Forwarding rate: 23.8Mpps (64-byte packet size)

#### **MIB**

- MIB II RFC 1213
- Bridge MIB RFC 1493
- RMON (Group 1,2,3,9) RFC 2819 RFC 1757

#### **Spanning Tree**

- · STP (spanning tree protocol)
- RSTP (rapid spanning tree protocol)
- · BPDU filter, guard, and root guard

#### **Link Aggregation**

· Static link aggregation and dynamic LACP (Up to 8 groups)

# Management

- HTTP/HTTPS (TLS 1.3) web-based GUI
- · CLI: Telnet / SSHv2
- SNMP v1, v2c, v3
- SNMP trap (up to 5 receivers)
- RMON groups 1/2/3/9
- Modbus TCP/IP
- · Device configuration backup & restore, upgrade firmware, reboot, and reset to default
- · Multiple administrative or read-only user accounts
- · Enable or disable power saving mode per port
- · Static MAC entries
- · LLDP (Link layer discovery protocol)
- · Topology Map
- ONVIF device discovery
- SNTP
- · SMTP alert
- Syslog
- · Port statistics/utilization
- · Traffic monitor
- · Port mirror: one to one, many to one
- · Storm control: Broadcast, multicast, destination lookup failure (Min. limit: 1pps)
- · Loopback detection
- · DHCP relay/option 82
- ERPS (Ethernet Ring Protection Switching) G8032v2

# **Hive Cloud Management**

- · Configure, monitor, and manage through the TRENDnet Hive Cloud Management Portal remotely via PC or Mac web browser
- · Multi-device management
- · Provisioning through scheduled batch or configuration updates for multiple switches
- · Event/hardware network monitoring (CPU/ memory utilization)
- Configure features such as IP address settings, VLANs, spanning tree, loopback detection, IGMP snooping, link aggregation, and bandwidth control through cloud management

#### Quality of Service (QoS)

- 802.1p Class of service (CoS)
- DSCP (Differentiated Services Code Point)
- · Bandwidth control per port
- · Queue Scheduling: strict priority (SP), weighted round robin (WRR), weighted fair queuing (WFQ)

#### **VLAN**

- 802.1Q tagged VLAN
- · MAC-based VLAN
- Protocol VLAN
- · Port isolation
- Up to 256 VLAN groups, ID range 1-4094

#### Multicast

- IGMP snooping v1, v2, v3
- · IGMP querier
- · IGMP fast leave
- Up to 256 multicast groups
- · Static multicast entries

#### **Access Control**

- · 802.1X authentication (Local user database, RADIUS, guest VLAN assignment)
- DHCP snooping/screening
- · Trusted host/IP access list for management access
- Port Security/MAC address learning restriction (Up to 100 entries per port)
- Static/dynamic ARP inspection

#### **ACL**

- · Source/Destination MAC address
- · Source/Destination IP address
- Source Interface
- VLAN ID
- EtherType
- TCP/UDP port 1-65535

#### **Power**

- PWR (Primary) terminal input: 12 60V DC
- RPS (Redundant) terminal input: 12 60V DC
- · Compatible power supply: TI-M6024 (60W) sold separately
- Max. Consumption: 18W



#### **Terminal Block**

· Power inputs, alarm relay contact, 6 pin

Wire range: 0.5 mm2 to 2.5 mm2

Solid wire (AWG): 18-20
Stranded wire (AWG):18-20
Wire strip length: 10-11mm

#### **DIP Switch**

Switch 1

· Status: Off

Function: Disable alarm relay for PWR power input

· Status: On

Function: Enable alarm relay for power failure on PWR power input

• Switch 2

· Status: Off

 Function: Disable alarm relay for RPS power input

· Status: On

 Function: Enable alarm relay for power failure on RPS power input

# **Alarm Relay Output**

 Relay outputs with current carrying capacity of 1A, 24V DC

Short circuit mode when one power source is connected

Open circuit mode when two power sources are connected

#### **Enclosure**

• IP40 rated metal enclosure

· Fanless passive cooling

· DIN-Rail mount

· Grounding Point

ESD (Ethernet) Protection: 8KV DC
Surge (Data) Protection: 1kV DC
Surge (Power) Protection: 1KV DC

#### **MTBF**

• 576,317 hours @ 25° C

# **Operating Temperature**

• -40° – 75° C (-40° – 167° F)

# **Operating Humidity**

· Max. 95% non-condensing

#### **Dimensions**

• 160 x 120 x 50mm (6.3 x 4.72 x 1.97 in.)

#### Weight

· 928g (2.05 lbs.)

# Certifications

• CE

• FCC

• Shock (IEC 60068-2-27)

Freefall (IEC 60068-2-32)

• Vibration (IEC 60068-2-6)

#### Warranty

· Lifetime Warranty

# **Package Contents**

TI-G160i

· Removable terminal block

· DIN-Rail mounting bracket

All references to speed are for comparison purposes only. Product specifications, size, and shape are subject to change without notice, and actual product appearance may differ from that depicted herein.

TRENDnet offers a lifetime warranty for all of its metal-enclosed network switches that have been purchased in the United States/Canada on or after 1/1/2015. Cooling fan and internal power supply carry a one-year warranty.