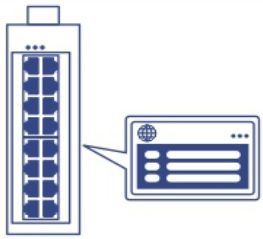
16-Port Industrial Gigabit Web Smart DIN-Rail Switch

TI-G160WS (v1.0R)

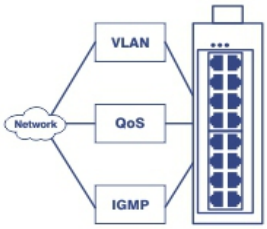
- 16 x Gigabit ports
- 32Gbps switching capacity
- Hardened IP30 rated metal housing
- Includes DIN-rail mounting bracket
- Operating temperature range of -40° – 75° C (-40° – 167° F)
- Supports LACP, STP/RSTP, VLAN, and IGMP Snooping
- IEEE 802.1p QoS with queue scheduling support
- Bandwidth control per port
- Dual redundant power inputs with overload current protection
- Alarm output triggered by power failure
- Power supply sold separately (models: TI-M6024)

TRENDnet's 16-Port Industrial Gigabit Web Smart DIN-Rail Switch, model TI-G160WS, delivers advanced management features with a 32Gbps switching capacity. Users are able to connect sixteen devices to the switch for high speed gigabit network connections. The switch is equipped with an IP30 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.



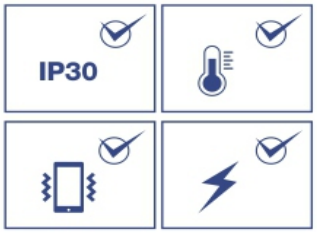
Web Smart Management

Provides an easy to use web management interface for advanced traffic management controls, VLAN, QoS, access controls, link aggregation, troubleshooting, SNMP monitoring, and per port MAC restriction.



Integration Flexibility

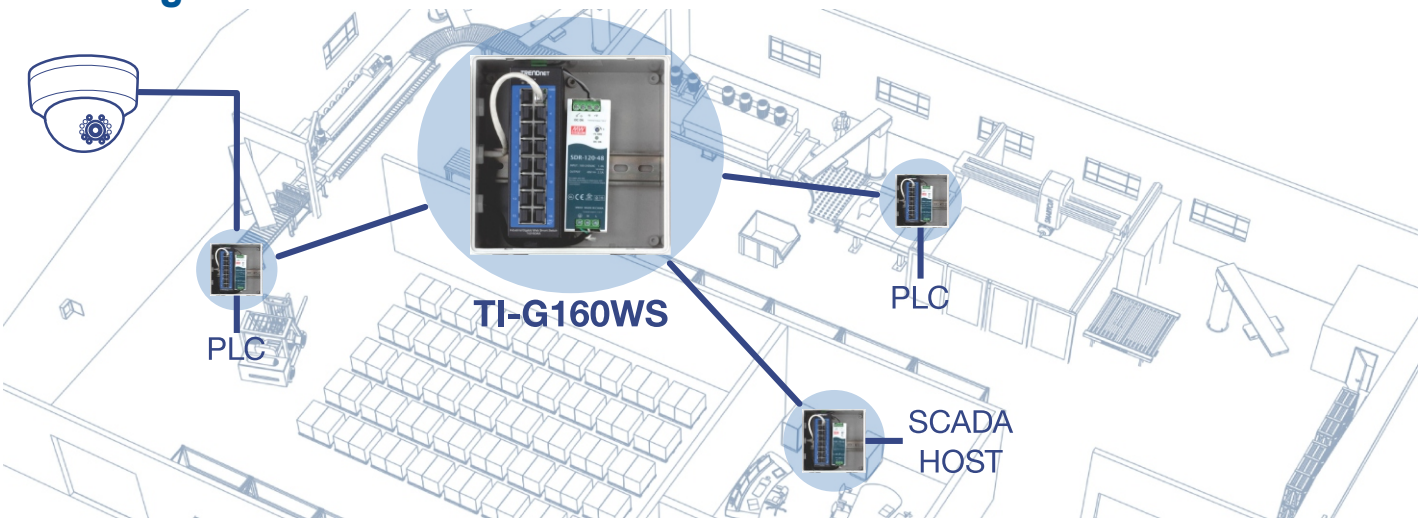
Managed features include access control lists, VLAN, IGMP snooping, QoS, RMON, SNMP trap, and syslog for monitoring and flexible network integration.



Industrial Design

Equipped with an IP30 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.

Networking Solution



Network Ports
16 Gigabit Ports

DIN-Rail Mount
IP30 rated metal enclosure includes DIN-rail mounting bracket

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

Access Control
Features such as ACL, MAC/port filtering, 802.1X, and RADIUS are compatible with layered access controls

Switching Capacity
32Gbps switching capacity

Extreme Temperatures
Industrial switch is rated for a wide operating temperature range of -40 – 75° C (-40 – 167° F)

Monitoring
RMON, SNMP, SNMP Trap, and Port Mirroring support administrator monitoring solutions

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

Shock and Vibration Resistant
Rated for shock (EN 60068-2-27), freefall (EN 60068-2-32), and vibration (EN 60068-2-6)

Traffic Management
A broad range of network configurations are supported by: 802.3ad link aggregation, Private VLAN, 802.1Q VLAN, RTSP, Loopback Detection, 802.1p Class of Service (CoS), port bandwidth management, and QoS queue scheduling

Alarm Relay
Alarm relay triggered by power failure of primary and/or redundant power

Grounding Point
Grounding point protects equipment from external electrical surges

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
Data Transfer Rate	• Ethernet: 10 Mbps (half-duplex), 20 Mbps (full-duplex) • Fast Ethernet: 100Mbps (half duplex), 200Mbps (full duplex) • Gigabit Ethernet: 2000Mbps (full duplex)
Performance	• Switch fabric: 32Gbps • RAM buffer: 128MB • MAC address table: 8K entries • Jumbo frames: 10KB • Forwarding mode: store and forward • Forwarding rate: 23.8Mpps (64-byte packet size)
Management	• HTTP web based GUI • CLI: Telnet / SSHv2 • SNMP v1, v2c, v3 • SNMP trap (up to 5 receivers) • RMON groups 1/2/3/9 • 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 unicast entries • LLDP (Link layer discovery protocol) • Netlite device 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 • Modbus/TCP
MIB	• MIB II RFC 1213 • Bridge MIB RFC 1493 • RMON (Group 1,2,3,9) RFC 1757
Spanning Tree	• IEEE 802.1d STP (spanning tree protocol) • IEEE 802.1w RSTP (rapid spanning tree protocol) • BPDU filter, guard, and root guard
Link Aggregation	• Static link aggregation and 802.1ax/802.3ad dynamic LACP (Up to 8 groups)
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 • Port isolation • Up to 256 VLAN groups, ID range 1-4094
Multicast	• IGMP snooping v1, v2, v3 • IGMP querier • IGMP fast/immediate 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
Special Features	• Netlite device discovery and map display in GUI • Port security: MAC address learning restriction per port • DHCP relay/option 82 & DHCP server snooping/screening support • Wide operating temperature range • Dual redundant power inputs • Alarm relay triggered by power failure • Surge and ESD protection
Power	• PWR (Primary) terminal input: 12 – 60V DC (TI-S12048 sold separately) • RPS (Redundant) terminal input: 12 – 60V DC (TI-S12048 sold separately) • Compatible power supply: TI-M6024 (60W), TI-S12048 (120W), TI-S24048 (240W) sold separately • Max. Consumption: 12W
Terminal Block	• Redundant power inputs, alarm relay contact, 6 pin • Wire range: 0.5 mm^2 to 2.5 mm^2 • Solid wire (AWG): 12-26 • Stranded wire (AWG): 12-26 • Wire strip length: 10-11mm
DIP Switch	• 1: PWR alarm relay (on or off alarm relay on power failure) • 2: RPS alarm relay (on or off alarm relay on power failure)
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	• IP30 rated metal enclosure • Fanless passive cooling • DIN-Rail mount • Grounding Point • ESD (Ethernet) Protection: 8KV DC • Surge (Power) Protection: 6KV DC
MTBF	• 1,072,674 hours @ 25° C • 177,143 hours @ 75° 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	• 884 g (1.95 lbs.)

Certifications	• CE • FCC • Shock (IEC 60068-2-27) • Freefall (IEC 60068-2-32) • Vibration (IEC 60068-2-6)
Warranty	• Lifetime

PACKAGE CONTENTS

- TI-G160WS
- DIN rail mounting bracket
- Quick Installation Guide

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.

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