6-Port Hardened Industrial Gigabit PoE+ Layer 2 Managed DIN-Rail Switch
TI-PG541i (V1.0R)

- Hardened IP30 rated metal enclosure with integrated DIN-Rail mount
- Wide operating temperature range - 40 to 70 °C (-40 to 158 °F)
- 4 x Gigabit PoE+ (802.3at) ports, 1 x Gigabit port, and 1 x Gigabit SFP slot
- 120 Watts total power budget
- Dual redundant power inputs and alarm relay output
- CLI (Telnet), Web (HTTP), SNMP v1/2c management
- 802.1Q/MAC-Based VLAN and IGMP Snooping support
- 802.1p/DSCP/Queue Scheduling (SP/WFQ/WRR) QoS support
- Power supply sold separately (models: 48VDC3000/TI-S24048)
- Limited Lifetime Warranty

TRENDnet’s 6-Port Hardened Industrial Gigabit PoE+ Layer 2 Managed DIN-Rail Switch, model TI-PG541i, has four Gigabit PoE+ ports, one Gigabit port, one Gigabit SFP slot and a 120 Watts PoE budget. The switch is equipped with an IP30 rated metal enclosure and designed to withstand a high degree of vibration, shock, protection against ESD/EMI/surge, and operate within a wide temperature range (- 40 – 70 °C (- 40 - 158 °F)) for harsh environments. L2 management include features such as PoE port control, VLAN, multicast, and QoS which allow for network integration flexibility.
Industrial Hardened Design
Equipped with a rugged IP30 rated enclosure and designed to withstand a high degree of vibration, shock, protection against ESD/EMI/surge, and operate with a wide temperature range (-40 – 70 °C (-40 - 158 °F)) for harsh environments.

Integration Flexibility
Managed features include PoE per port control/priority/scheduling/power delay, 802.1Q/MAC-based VLAN, IGMP snooping, per port bandwidth control/802.1p/DSCP/queue scheduling, and SNMP trap/RMON/SMTP alert/syslog/port mirror for monitoring and flexible network integration.

Fault Tolerance
Features dual redundant power inputs (Primary and RPS) from external power sources and an output alarm relay to indicate the event of input power failure.

Networking Solution

1. LED indicators
2. Gigabit PoE+ ports
3. Gigabit port
4. SFP slot
5. Reset button
6. Integrated DIN-Rail mount
7. DIP switches
8. DC power connector
9. 6-pin terminal block
10. Grounding point
Full PoE+ Power Budget
Supplies up to 30 Watts of PoE/PoE+ power per port (ports 1-4 802.3at/802.3af) with a 120 Watt PoE power budget

Network Ports and Capacity
4 x Gigabit PoE+ ports, 1 x Gigabit Port, and 1 x Gigabit SFP slot allow for a 12Gbps switching capacity

Integrated DIN-Rail Mount
IP30 rated metal enclosure with integrated DIN-rail mounting hardware

Full PoE Control Per Port
PoE control features include enabling/disabling PoE and class, power priority, PD alive check, scheduling, and power delay per port using CLI or web management.

L2 Management
Managed features include 802.1Q, /MAC-Based VLAN, IGMP v1/2/3 Snooping, per port bandwidth control/802.1p/DSCP/Queue Scheduling (SP/WFQ/WRR), and Storm Control for flexible network integration.

System Monitoring
Monitoring features include SNMPv1/v2c, MIB support, SNMP trap, RMON Groups (1, 2, 3, 9), SMTP alert, syslog, and port mirroring.

Redundant Power
Dual redundant power inputs (primary and RPS) with overload current protection

Alarm Output
Alarm relay output triggered by power failure of primary and/or redundant power (DIP switch)

Jumbo Frame
Sends larger packets, or Jumbo Frames (up to 10K)

Wide Temperature
Hardened switch is rated for an operating temperature range of -40 to 70 °C (-40 to 158 °F)

Electro Magnetic Compliance
Complies with IEC61000-6-2 EMC generic standard immunity for industrial environments

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

LED Indicators
LED indicators convey power, redundant power, alarm, SFP, PoE, and network port status

Grounding Point
Grounding point protects equipment from external electrical surges
Specifications

Standards
- IEEE 802.1p
- IEEE 802.1Q
- IEEE 802.1ab
- IEEE 802.3
- IEEE 802.3af
- IEEE 802.3at
- IEEE 802.3az

Device Interface
- 4 x Gigabit PoE+ ports
- 1 x Gigabit port
- 1 x Gigabit SFP slot
- 6-pin removable terminal block (primary/RPS power inputs & alarm relay output)
- Optional power adapter input (adapter sold separately)
- DIP switch (Alarm for Primary/RPS power)
- LED indicators

Data Transfer Rate
- Ethernet: 10 Mbps (half-duplex), 20 Mbps (full-duplex)
- Fast Ethernet: 100 Mbps (half-duplex), 200 Mbps (full-duplex)
- Gigabit Ethernet: 2000 Mbps (full-duplex)
- SX/LX: 2000 Mbps (full-duplex)

Performance
- Switch fabric: 12 Gbps
- RAM buffer: 128 MB
- MAC address table: 8K entries
- Jumbo frames: 10 KB
- Forwarding rate: 8.93 Mpps (64-byte packet size)

Management
- CLI (Telnet)
- HTTP web based GUI
- SNMP v1, v2c
- SNMP trap
- RMON groups 1, 2, 3, 9
- Enable/disable 802.3az power saving
- LLDP
- SMTP
- SMTP Alert
- Syslog
- Port statistics/utilization
- Traffic monitor
- Trusted host
- Port mirror (Ingress, Egress; Both)
- Storm control (Multicast, DLF, Broadcast)

MIB
- MIB II RFC 1213
- Bridge MIB RFC 1493
- Ethernet Interface MIB RFC 1643
- RMON MIB RFC 1757
- Power Ethernet MIB RFC 3621

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 Fair Queuing (WFQ), Weighted Round Robin (WRR)

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
- Static multicast address
- Up to 256 multicast entries

Special Features
- CLI & web based management
- Full power PoE+
- Wide operating temperature range
- Dual redundant power inputs
- Alarm relay triggered by power failure
- Surge/ESD protection

Power
- PWR (Primary) terminal input: 48 – 57V DC (TI-S12048 sold separately)
- RPS (Redundant) terminal input: 48 – 57V DC (TI-S24048 sold separately)
- Consumption: 10 Watts (max.), 130 Watts (max.) with PoE+ fully loaded

Optional Power Adapter (48VDC3000 sold separately)
- Input: 100 – 240 V AC, 50/60 Hz, 2 A
- Output: 48 V DC, 3.34 A 160 Watts max.

Optional Power Supply (TI-S24048 sold separately)
- Input: 100 – 240 V AC, 50/60 Hz, 1.8 A 125 – 370 V DC
- Output: 240 Watts, 48 V, 5 A
- DIN-rail: TS-35/7.5 or 15
- Operating Temperature: - 25 to 70 °C (- 13 to 158 °F)

PoE
- PoE budget: 120 Watts
- Up to 15 Watts per port for PoE
- Up to 30 Watts per port for PoE+
- Mode A: Pins 1, 2 (V+) and pins 3, 6 (V-)
- PoE enable/disable per port setting, priority, scheduling, power delay, and PD alive check

Enclosure
- IP30 rated metal enclosure
- DIN-Rail Mount
- Grounding Point
- ESD (Ethernet) Protection: 8KV DC
- Surge (Power) Protection: 6KV DC

MTBF
- 180,136 hrs @ 85 °C
- 435,905 hrs @ 25 °C

Operating Temperature
- - 40 – 70 °C (- 40 - 158 °F)

Operating Humidity
- Max. 95% non-condensing

Dimensions
- 135 x 120 x 31 mm (5.31 x 4.72 x 1.22 in.)

Weight
- 528 g (1.17 lbs.)

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

Warranty
- Limited Lifetime Warranty

Package Contents
- TI-PG541i
- Quick Installation Guide
- CD-ROM (User’s Guide)

TRENDnet offers a limited 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.