# TRENDnet®

14-Port Gigabit Managed Layer 2 SFP Switch with 2 Shared RJ-45 Ports

TL2-FG142 (v1.0R)

- 12 x SFP slots (100/1000Mbps)
- 2 x Shared Gigabit ports (RJ-45 or SFP slots)
- Web-based management interface
- Supports IPv6, LACP, VLAN, and IGMP Snooping
- 802.1Q tagged-based VLAN, Protocol, Private, and Voice VLAN support
- Q-in-Q VLAN tunneling and translation
- QoS with queue scheduling support
- Supports up to 32 IPv4/IPv6 static routes

- SFlow agent for layer 2 network analysis
- Bandwidth control per port
- 28Gbps switching capacity
- Connectivity Fault Management / OAM
- Supports 100/1000Base-FX fiber SFP modules
- Compatible with TEG-MGBRJ and TE100-MGBFX RJ-45 SFP modules
- Fanless design
- Limited Lifetime Warranty*

TRENDnet's 14-Port Gigabit Managed Layer 2 SFP Switch with 2 Shared RJ-45 Ports, model TL2-FG142, delivers advanced management features and a 28Gbps switching capacity. This rack mountable IPv6-ready SFP fiber switch comes with an intuitive web-based user interface. Advanced traffic management controls, troubleshooting, and SNMP monitoring make this SFP switch a powerful solution for any SMB network. The TL2-FG142 provides 12 gigabit SFP slots and 2 shared gigabit ports (RJ-45 or SFP). Its fanless design is ideal for quiet environments that require silent operation. This SFP switch also features a modular design to accommodate both fiber SFP modules and RJ-45 copper SFP modules.
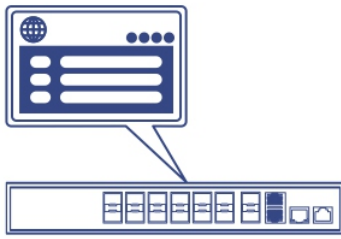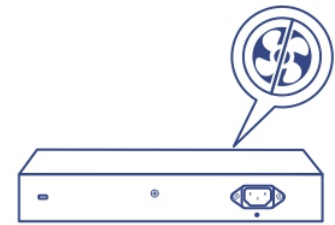
L2 Management

Included features such as Command Line Interface, OAM, sFlow, Private/Voice VLAN, Static Routes, and Link Aggregation provide a robust combination of SMB management options.
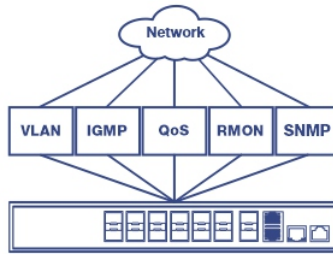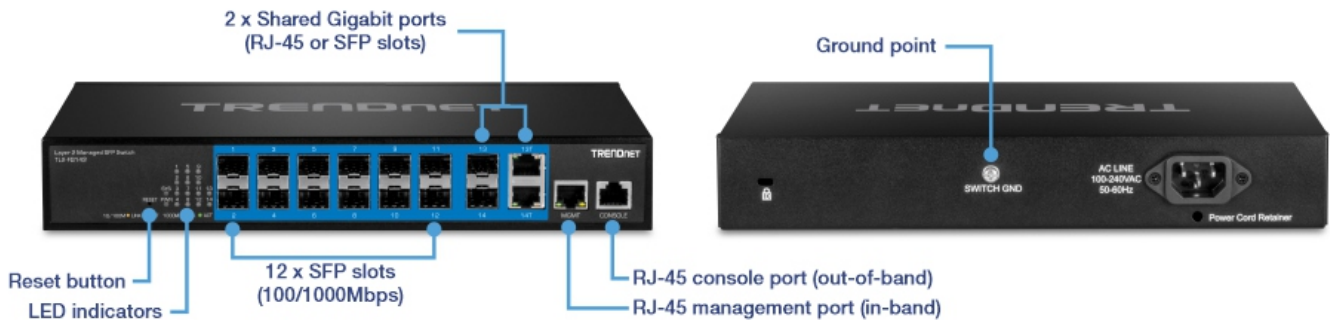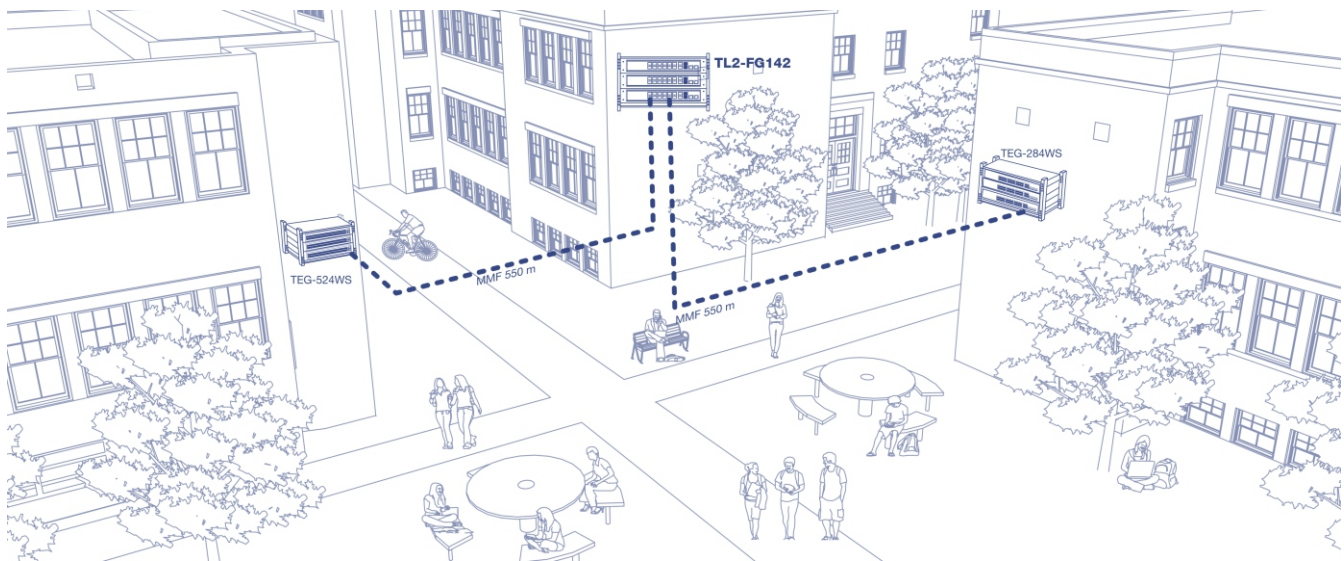
Integration Flexibility

SFP switch managed features include access control lists, tagged-based VLAN, IGMP snooping, QoS, RMON, SNMP trap, and syslog for monitoring and flexible network integration.

Fanless

Fanless design is ideal for quiet environments that require silent operation.

NETWORKING SOLUTION

TL2-FG142

TEG-284WS

TEG-524WS

MMF 550 m

MMF 550 m

2 x Shared Gigabit ports
(RJ-45 or SFP slots)

Ground point

Reset button

LED indicators

12 x SFP slots
(100/1000Mbps)

RJ-45 console port (out-of-band)

RJ-45 management port (in-band)

SWITCH GND

AC LINE
100-240VAC
50-60Hz

Power Cord Retainer

FEATURES

Hardware Design
SFP switch provides 12 gigabit SFP slots, 2 shared gigabit ports (RJ-45 or SFP), a management port, a console port, 28Gbps switching capacity, a built-in power supply, and rackmount brackets

Traffic Management
A broad range of network configurations are supported by: 802.1ax Link Aggregation, Asymmetric VLAN, 802.1Q VLAN, Voice VLAN, RSTP, MSTP, Loopback Detection, GVRP, 802.1p Class of Service (CoS), port bandwidth management, and QoS queue scheduling

IP Routing
Supports up to 32 IPv4/IPv6 static routes

Monitoring
sFlow, RMON, SNMP, SNMP Trap, Port Mirroring, and DDMI support

Fanless
Fanless design reduces energy consumption and operating noise

Access Control
SFP switch features access controls such as ACL, MAC/port filtering, 802.1X, TACACS+, and RADIUS

IPv6 Ready
This SFP switch supports IPv6 configuration and IPv6 neighbor discovery

SPECIFICATIONS

Standards
- ITU-T G.8013/Y.1731
- IEEE 802.1ag
- IEEE 802.3ah
- IEEE 802.1d
- IEEE 802.1p
- IEEE 802.1Q
- IEEE 802.1s
- IEEE 802.1w
- IEEE 802.1X
- IEEE 802.1ab
- IEEE 802.1ad
- IEEE 802.3
- IEEE 802.3u
- IEEE 802.3x
- IEEE 802.3az (RJ-45 ports only)
- IEEE 802.3ab
- IEEE 802.1ax
- IEEE 802.3z

Device Interface
- 12 x SFP slots (100/1000Mbps)
- 2 x Shared Gigabit ports (RJ-45 or SFP slots)
- 1 x RJ-45 management port (in-band)
- 1 x RJ-45 console port (out-of-band)
- Ground point
- LED indicators
- Reset button

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

Management
- CLI (Console / Telnet / SSHv2)
- HTTP / HTTPS web based GUI
- SNMP v1, v2c, v3
- SNMP trap
- RMON groups 1/2/3/9
- LLDP/LLDP-MED with optional TLVs
- ICMPv4/ICMPv6
- IPv4/IPv6
- IPv6 neighbor discovery
- DNS proxy
- Network time protocol (NTP)
- Green Ethernet/EEE or 802.3az per port
- Dual image

Monitoring
- CPU load
- IP interfaces/routing table
- Internal system logging
- External syslog
- Port traffic statistics
- QoS queue counters
- QCL control list
- Port mirror (One to one, many to one)
- EVC (Ethernet Virtual Connection) statistics
- MAC address table
- Digital diagnostics monitoring (DDM) for SFP modules
- RFC2544 support
- SFlow statistics

Performance
- Switching capacity: 28Gbps
- RAM buffer: 128MB
- MAC address table: 8K entries
- Jumbo frames: 9.6KB (configurable per port)
- Forwarding mode: store and forward
- Forwarding rate: 20.8Mpps (64-byte packet size)

MIB
- MIB II RFC 1213
- Bridge MIB IEEE8021-Q
- RMON (Group 1,2,3,9) RFC 2819
- Interface group MIB using SMIv2 RFC 2863
- Multicast group membership discovery MIB RFC 5519
- SNMP management frameworks RFC 3411
- User-based security model for SNMPv3 RFC 3414
- View-based access control model for SNMP RFC 3415
- Ethernet-like MIB RFC 3635
- 802.3 MAU MIB RFC 3636
- Entity MIB v3 RFC 4133
- Bridge MIB RFC 4188
- IP MIB RFC 4293
- RADIUS authentication client MIB RFC 4668
- RADIUS accounting MIB RFC 4670
- LLDP-MIB IEEE802.1AB
- PAE MIB IEEE802.1X

Spanning Tree
• Spanning tree protocol (STP)
• Rapid spanning tree protocol (RSTP)
• Multiple spanning tree protocol (MSTP)

Link Aggregation
• Static link aggregation and 802.3ad dynamic LACP (Up to 15 groups)

Quality of Service (QoS)
• Class of service (CoS)
• Set default drop precedence (DPL), priority code point (PCP), drop eligible indicator (DEI)
• Differentiated Services Code Point (DSCP) classification and translation
• Set egress port scheduler, port shaping, port tag marking
• Bandwidth control per port/rate limiting
• Queue scheduling: strict priority (SP), deficit weighted round robin (DWRR)

Storm Control
• Broadcast (Min. limit: 1pps)
• Multicast (Min. limit: 1pps)
• Unicast (Min. limit: 1pps)

VLAN
• 802.1Q tagged VLAN
• 802.1ad VLAN Q-in-Q
• Group VLAN Registration Protocol (GVRP)
• MAC-based VLAN
• Protocol-based VLAN
• VLAN ID range 1-4095
• Private VLAN/port isolation
• Voice VLAN (16 user defined OUIs)
• VLAN port to group and VID translation

Carrier Ethernet / OAM
• IEEE 802.1ag Connectivity Fault Management (CFM)
• IEEE 802.3ah Link OAM
• Per port per queue dual leaky bucket service policers with PCP or DSCP marking per service point
• Statistics and tagging options per service point
• Y.1731 Fault Management (AIS, RDI, LCK)
• Y.1731 Performance Management (LM, DM)
• RFC2544 support
• Link OAM statistics, port status, event status
• Link state tracking
• Link OAM MIB Retrieval
• Maintenance entity point (MEP)

Link Protection
• ITU-T G.8032/Y.1344 Ethernet ring protection switching (ERPS)
• ITU-T G.8031/Y.1342 Ethernet linear protection switching

L3 Features
• IPv4 / IPv6 static routing
• IPv4 interfaces: Up to 8
• IPv6 interfaces: Up to 8
• Routing table entries: Up to 32 (IPv4 / IPv6)
• ARP table (up to 1024 entries)
• DHCP IPv4 server, relay, option 82
• Inter-VLAN routing

Multicast
• IGMP snooping v1, v2, v3
• IGMP fast leave
• Static multicast entries
• MLD Snooping v1, v2
• Multicast VLAN Registration (MVR)
• Up to 1K multicast groups

Access Control
• User account control with privilege level management
• Access management control
• Port Security/MAC address learning restriction (Up to 64 entries per port)
• 802.1X port-based/single/multiple or MAC-based authentication
• RADIUS (Up to 5 servers)
• TACACS+ (Up to 5 servers)
• RADIUS assigned QoS/VLAN/Guest VLAN
• Local dial in user authentication
• DHCP IPv4 snooping
• Loopback detection/prevention
• IP Source Guard
• Static/dynamic ARP inspection
• Create ACLs based on rate limit/EVC profile

Power
• Input: 100 – 240V AC, 50/60 Hz
• Max. Consumption: 36W

Fan/Acoustics
• Fanless design

MTBF
• 118,034 hours

Operating Temperature
• 0° – 50° C (32° – 122° F)

Operating Humidity
• Max. 95% non-condensing

Dimensions
• 280 x 185 x 44.45mm (11.02 x 7.28 x 1.75 in.)
• Rack mountable 1U height
• Wall mountable

Weight
• 1.6 kg (3.52 lbs.)

Certifications
• CE
• FCC
• UL

Warranty
• Lifetime year

Package Contents
• TL2-FG142
• Quick Installation Guide
• Power cord
• RJ-45 to RS-232 console cable (1.5m / 5 ft.)
• Wall mount and Rackmount kit