48-Port 10/100Mbps + 4 Gigabit TP / 2 SFP Managed Switch

High-Density / Cost-effective / Powerful class Fast Ethernet solution for SMB / Enterprise Network

The PLANET WGSW-5242 is 48-Port 10/100Mbps + 4 Gigabit TP / 2 SFP Managed Switch with advanced Web-based management support. And it is ideal for small businesses, the network edge, or workgroups within larger organizations where extra bandwidth and powerful QoS or security features are required. The WGSW-5242 is capable of providing non-blocking switch fabric and wire-speed throughput as high as 17.6Gbps to perform effective data traffic control for both SMB and Enterprise VoIP, video streaming and multicast applications, which greatly simplifies the tasks of upgrading the LAN for catering to increasing bandwidth demands.

Robust Layer 2 Features

The WGSW-5242 can be programmed for basic Switch management functions such as Port speed configuration, Port aggregation, VLAN, Spanning Tree protocol, QoS, bandwidth control and IGMP Snooping. The WGSW-5242 provides 802.1Q VLAN protocol, which enables you to quickly segregate network traffic by department or workgroup. The VLAN groups allowed on the WGSW-5242 will be maximally up to 256. By supporting port aggregation, the WGSW-5242 has 4 Gigabit copper / 2 SFP fiber uplink interfaces for connecting to the core switch that allows the operation of a high-speed trunk combining multiple ports. It enables up to 6 groups of maximum 8-ports for trunking, and supports fail-over as well.

Excellent Traffic Control

PLANET WGSW-5242 is loaded with powerful traffic management and includes numerous QoS and bandwidth limiting features to help ensure that traffic is prioritized properly to deliver the best possible user experience for real-time applications such as voice and video or bandwidth-intensive graphic/video file uploads or downloads. It also empowers the enterprises to take full advantages of the limited network resources and guarantees the best performance at VoIP and Video conferencing transmission.

Efficient Management

For efficient management, the WGSW-5242 Managed Ethernet Switch is equipped with console, telnet, SSH, SSL, WEB and SNMP management interfaces. With its built-in Web-based management interface, the PLANET WGSW-5242 offers an easy-to-use, platform-independent management and configuration facility. The WGSW-5242 supports standard Simple Network Management Protocol (SNMP) and can be managed via any standard-based management software. For text-based management, WGSW-5242 can be accessed via Telnet and the console port. Moreover, the WGSW-5242 offers secure remote management by supporting SSL and SSH connection which encrypts the packet content at each session.

Powerful Security

PLANET WGSW-5242 offers comprehensive Access Control List (ACL) for enforcing security to the edge. Its protection mechanisms also comprise port-based 802.1x user and device authentication, which prompts end users to provide their username and password before they are permitted to pass data. The port-security is effective in limiting the numbers of clients pass through, so that network administrators can now construct highly secured corporate networks with time and effort considerably less than before. The WGSW-5242 enables you to monitor the type of traffic being transmitted on the network by many-to-one or one-to-one port mirroring function. The unicast & multicast storm control feature of the WGSW-5242 provides threshold for bandwidth used by unicast & multicast traffic.

Flexibility and Extension solution

The four mini-GBIC slots built in the WGSW-5242 are compatible with 1000Base-SX/LX and WDM SFP (Small Factor Pluggable) fiber-optic modules. The distance can be extended from 550 meters (Multi-Mode fiber) up to above 10/20/30/40/50/70/120 kilometers (Single-Mode fiber or WDM fiber). It is well suited for applications within the enterprise data centers and distributions. It is also compatible for 100Base-FX and WDM SFP (Small Factor Pluggable) fiber-optic modules that help administrator flexibility to establish environment.

Data Sheet

KEY FEATURES

PHYSICAL PORT

- 48-Port 10/100Base-TX Fast Ethernet RJ-45

- 4-Port 10/100/1000Base-T Gigabit Ethernet RJ-45

- 2 mini-GBIC/SFP slots, shared with Port-51 and Port-52

- RS-232 DB9 console interface for Switch basic management and setup

LAYER 2 FEATURES

- Complies with the IEEE 802.3, IEEE 802.3u, IEEE 802.3ab, IEEE 802.3z Gigabit Ethernet standard

- Supports Auto-negotiation and Half-Duplex / Full-Duplex modes for all 10Base-T/100Base-TX and 1000Base-T ports.

- Auto-MDI/MDI-X detection on each RJ-45 port

- Prevents packet loss Flow Control:
  - IEEE 802.3x PAUSE Frame flow control for Full-Duplex mode
  - Back-Pressure Flow Control in Half-Duplex mode

- High performance Store and Forward architecture, broadcast storm control, runt/CRC filtering eliminates erroneous packets to optimize the network bandwidth

- 8K MAC address table, automatic source address learning and ageing

- 4Mbit embedded memory for packet buffers

- Support VLAN
  - IEEE 802.1Q Tag-based VLAN
  - GVRP for dynamic VLAN Management
  - Up to 256 VLANs groups, out of 4096 VLAN IDs
  - Private VLAN Edge (PVE) supported
  - Management VLAN

- Support Link Aggregation
  - Up to 6 trunk groups
  - Up to 8 ports per trunk group with 1.6Gbps bandwidth (Full Duplex Mode / Fast Ethernet port)
  - Up to 4 ports per trunk group with 8Gbps bandwidth (Full Duplex Mode / Gigabit Ethernet port)
  - IEEE 802.3ad LACP (Link Aggregation Control Protocol)

- Spanning Tree Protocol
  - STP, IEEE 802.1D (Classic Spanning Tree Protocol)
  - RSTP, IEEE 802.1w (Rapid Spanning Tree Protocol)
  - MSTP, IEEE 802.1s (Multiple Spanning Tree Protocol, spanning tree by VLAN)

- Port Mirroring to monitor the incoming or outgoing traffic on a particular port (many to one)

QUALITY OF SERVICE

- 4 priority queues on all switch ports

- Traffic classification:
  - IEEE 802.1p CoS
  - IP TOS / DSCP / IP Precedence
  - Port-Based QoS

- Supports QoS and In/Out bandwidth control on each port

MULTICAST

- Support IGMP Snooping v1 and v2

- IGMP Querier / IGMP Proxy / IGMP Immediately Leave support

SECURITY

- IEEE 802.1x Port-Based Authentication

- IP-Based Access Control List (ACL)

- MAC-Based Access Control List

- Port Security

- Supports Auto Dos

- Port Self-loop Detection

MANAGEMENT

- Switch Management Interface
  - Console / Telnet Command Line Interface
  - Web switch management
  - SNMP v1, v2c, and v3 switch management
  - SSH / SSL secure access

- DHCP client for IP address assignment

- Support DHCP relay function

- Built-in Trivial File Transfer Protocol (TFTP) client

- Firmware upload / download via TFTP or HTTP protocol

- Configuration upload / download via TFTP or HTTP protocol

- SNTP (Simple Network Time Protocol)

- Logging to syslog server

- Four RMON groups 1, 2, 3, 9 (history, statistics, alarms, and events)

- Supports Ping function

- Cable Diagnostic technology provides the mechanism to detect and report potential cabling issues, such as cable opens, cable shorts, and etc. on Copper Links

- Link Layer Discovery Protocol (LLDP)

- Management IP
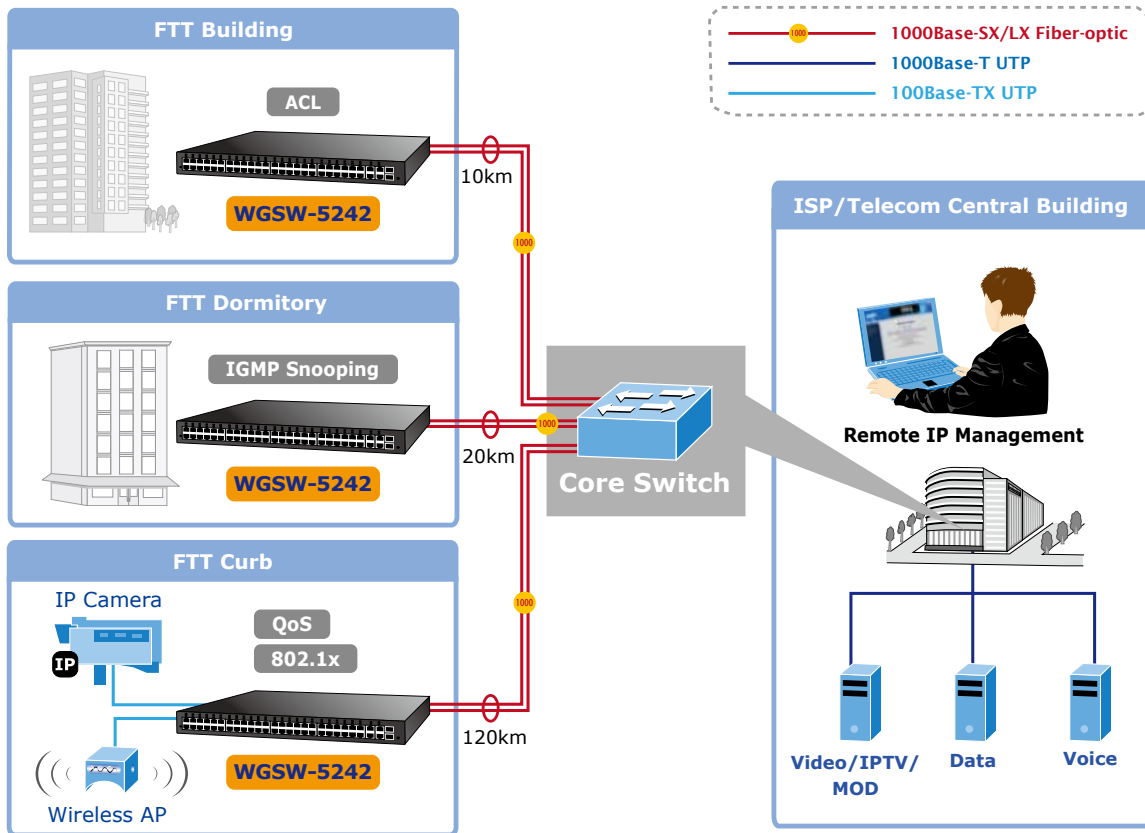
- Support memory & flash log

APPLICATIONS

Department/Workgroup/FTTx Edge Switch

With up to 17.6Gbps non-blocking switch fabric and 48 high density ports design, the WGSW-5242 can easily provide the stable bandwidth required for both now and future. It can easily offer a local, stable bandwidth, and security network for small businesses, the network edge, or workgroups. With the four SFP ports, the WGSW-5242 provides uplink to the backbone through Gigabit Ethernet LX/SX SFP modules.

The WGSW-5242 provides up to 4 Gigabit Ethernet ports to uplink for core switch / servers. With its port trunking function, an 8 GB fat pipe is provided for connecting to the backbone if required.

Enterprise Security and QoS Edge Switch

With the IEEE 802.1x Network access authentication, MAC/IP/Protocol Access Control list and Port Security limit the number of MAC address to be passed through one specific port. The IGMP Snooping and QoS features in the WGSW-5242 improve the network efficiency and protect the network clients.

SPECIFICATION

Product	48-Port 10/100Mbps + 4 Gigabit TP / 2 SFP Managed Switch
Model	WGSW-5242
Hardware Specification	
Copper Ports	48 10/100Base-T + 4 10/100/1000Base-T RJ-45 Auto-MDI/MDI-X ports
SFP / mini-GBIC slots	2 100/1000Base-X SFP interfaces, shared with Port-51 and Port-52
Switch Architecture	Store-and-Forward
Switch Fabric	17.6Gbps / non-blocking
Switch throughput	13.09Mpps
Address Table	8K MAC address table with Auto learning function
Share data Buffer	4Mbits
Flow Control	Back pressure for Half-Duplex IEEE 802.3x Pause Frame for Full-Duplex
LED	Power, Link/Act per port
Reset Button	< 5 sec: System reboot > 10 sec: Factory Default
Dimension (W x D x H)	430 x 250x 44.5 mm, 1U height
Weight	2672g
Power Consumption	27.8 Watts / 110.70 BTU (Maximum)
Power Requirement	AC 100~240V, 50/60Hz ,2.2A (Maximum)
Layer Function	
Management Interface	Console, Telnet, SSH, Web Browser, SSL, SNMPv1, v2c and v3
Port Configuration	Port disable/enable. Auto-negotiation 10/100/1000Mbps full and half duplex mode selection. Flow Control disable / enable.
Port Status	Display each port's speed duplex mode, link status, Flow control status, Auto negotiation status.
VLAN	IEEE 802.1Q Tag-based VLAN GVRP for VLAN Management Up to 256 VLANs groups, out of 4049 VLAN IDs Private VLAN Edge (PVE) supported
Bandwidth Control	Ingress Rate Limit Egress Traffic Shaper
Link Aggregation	IEEE 802.3ad LACP Supports 6 groups of 8-Port trunk
QoS	Traffic classification based on 802.1p priority, IP TOS / DSCP / IP Precedence
IGMP Snooping	IGMP (v1/v2) Snooping, IGMP Querier mode
Access Control List	IP-Based ACL / MAC-Based ACL Up to 128 entries
SNMP MIBs	RFC-1213 MIB-II RFC-2863 Interface MIB RFC-2665 EtherLike MIB RFC-1493 Bridge MIB RFC-2674 Extended Bridge MIB RFC-2819 RMON MIB (Group 1, 2, 3 and 9) RFC-2737 Entity MIB RFC-2618 RADIUS Client MIB
Standard Conformance	
Regulation Compliance	FCC Part 15 Class A, CE
Standards Compliance	IEEE 802.3 10Base-T IEEE 802.3u 100Base-TX / 100Base-FX IEEE 802.3z Gigabit SX/LX IEEE 802.3ab Gigabit 1000T IEEE 802.3x Flow Control and Back pressure IEEE 802.3ad Port trunk with LACP IEEE 802.1D Spanning tree protocol IEEE 802.1w Rapid spanning tree protocol IEEE 802.1s Multiple Spanning tree protocol IEEE 802.1p Class of service IEEE 802.1Q VLAN Tagging IEEE 802.1x Port Authentication Network Control IEEE 802.1ad LLDP

ORDERING INFORMATION

WGSW-5242	48-Port 10/100Mbps + 4 Gigabit TP / 2 SFP Managed Switch

AVAILABLE MODULES FOR WGSW-5242

MGB-GT	SFP-Port 1000Base-T Module
MGB-SX	SFP-Port 1000Base-SX mini-GBIC module - 550m
MGB-LX	SFP-Port 1000Base-LX mini-GBIC module - 10km
MGB-L30	SFP-Port 1000Base-LX mini-GBIC module - 30km
MGB-L50	SFP-Port 1000Base-LX mini-GBIC module - 50km
MGB-L70	SFP-Port 1000Base-LX mini-GBIC module - 70km
MGB-L120	SFP-Port 1000Base-LX mini-GBIC module - 120km
MGB-LA10	SFP-Port 1000Base-LX (WDM,TX:1310nm) mini-GBIC module - 10km
MGB-LB10	SFP-Port 1000Base-LX (WDM,TX:1550nm) mini-GBIC module - 10km
MGB-LA20	SFP-Port 1000Base-LX (WDM,TX:1310nm) mini-GBIC module - 20km
MGB-LB20	SFP-Port 1000Base-LX (WDM,TX:1550nm) mini-GBIC module - 20km
MGB-LA40	SFP-Port 1000Base-LX (WDM,TX:1310nm) mini-GBIC module - 40km
MGB-LB40	SFP-Port 1000Base-LX (WDM,TX:1550nm) mini-GBIC module - 40km
MFB-FX	SFP-Port 100Base-FX Transceiver (1310nm) - 2km
MFB-F20	SFP-Port 100Base-FX Transceiver (1310nm) - 20km
MFB-F40	SFP-Port 100Base-FX Transceiver (1310nm) – 40km
MFB-F60	SFP-Port 100Base-FX Transceiver (1310nm) – 60km
MFB-FA20	SFP-Port 100Base-BX Transceiver (WDM,TX:1310nm) - 20km
MFB-FB20	SFP-Port 100Base-BX Transceiver (WDM,TX:1550nm) - 20km

C-WGSW-5242