24 Gigabit SFP slots with 4 shared 10/100/1000Base-T Layer 3 Managed Fiber Switch

Multi port Fiber Optical connective capability extend the coverage of Multi-Layer Routing Services

The PLANET WGS3-24240 Multi-Layer Switch is an essential Layer 3 functionality multimedia Switch which brings high-end security and traffic control to the edge of the network. The WGS3-24240 offers multi port fiber optical connective capability and helps to extend the coverage of Multi-Layer routing Services. With IP routing and multicast routing capabilities and flexible SFP interfaces, the WGS3-24240 is the ideal choice for the core layer of Telecoms, campuses, and enterprises that need long reach and stability of IP metro access networks.

High Performance / Robust Multilayer Routing Capability

The wire-speed routing features are included to provide full support for multimedia Layer 4 applications. It includes Layer 3 IP Static Routing, RIPv1/v2, OSPF, VRRP protocols and Multicast routing protocols such as DVMRP, IGMP, PIM-DM and PIM-SM. It boasts a high performance switch architecture that provides non-blocking switch fabric and L2/L3 wire-speed throughput as high as 48Gbps. The PLANET Managed Multi-Layer Switch solution performs a cost-effective solution for today with the ability to expand as network demands grow.

Flexibility and Extension Solution

The 24 mini-GBIC slots built in the WGS3-24240 are compatible with 1000Base-SX/LX and WDM SFP (Small Factor Pluggable) fiber-optic modules. The data transmission distance can be extended from 550 meters (Multi-Mode fiber) up to above 10/50/70/120 km (Single-Mode fiber or WDM fiber). They are well suited for application within the enterprise data center and distribution.

Excellent Traffic Control

The PLANET WGS3-24240 is loaded with powerful traffic management and QoS features to enhance services offered by telecoms. The QoS features include wire-speed Layer 4 traffic classifiers, bandwidth limiting, Policy-Based DiffServ that are particular helpful for multi-tenant unit, multi business unit, Telco, or Network Service Provide applications. It also empowers the enterprises to take full advantages of the limited network resources and guarantee the best performance at VoIP and Video conferencing transmission.

Powerful Security

The PLANET WGS3-24240 offers comprehensive Access Control List (ACL) to enforce security to the edge. Its protection mechanisms comprise port-based 802.1x user and device authentication. The port-security is effective in limit the numbers of clients pass through. The administrators can now construct highly secured corporate networks with considerably less time and effort than before.

Efficient Management

With its built-in Web-based management, the PLANET WGS3-24240 offers an easy-to-use, platform-independent management and configuration facility. The PLANET WGS3-24240 supports standard Simple Network Management Protocol (SNMP) and can be managed via any standard-based management software. For text-based management, the WGS3-24240 can also be accessed via Telnet and the console port. For secure remote management, the WGS3-24240 support SSL and SSH connection which encrypt the packet content at each session.

KEY FEATURES

HARDWARE FEATURES

- 24 Gigabit SFP mini-GBIC interface for fiber optical extension
- 4 RJ-45 ports for 10/100/1000Base-T high speed transmission
- Jumbo frame up to 9KB
- 16K MAC address entries
- 19-inch, 1U height rack mount design

LAYER 2 FEATURES

- Wire speed of L2 switching performance
- Provide Broadcast storm protection
- Support IGMP snooping v1, v2 and v3
- Support VLAN
    - *IEEE 802.1Q VLAN*
    - *GARP/GVRP/GMRP*
    - *Up to 4041 VLANs groups, out of 4041 VLAN IDs*
    - *Protocol-Based VLAN*
    - *Private VLAN Edge (PVE)*
    - *Q-in-Q tunneling*
- Support Spanning Tree Protocol
    - *STP, IEEE 802.1d (Spanning Tree Protocol)*
    - *RSTP, IEEE 802.1w (Rapid Spanning Tree Protocol)*
    - *MSTP, IEEE 802.1s (Multiple Spanning Tree Protocol)*
- Support Link Aggregation
    - *up to 8 trunk groups*
    - *up to 8 ports per trunk group*
    - *802.3ad Link Aggregation and LACP*
    - *Cisco ether-channel (Static Trunk)*
- Provide Port Mirror (many-to-1)

IP ROUTING FEATURES

- IP Routing protocol support RIP v1/v2, OSPF v2
- The Routing interface support Per-Port routing and VLAN routing mode
- Support router discovery (IRDP)
- VRRP protocol for redundant routing deploy
- Support route redistribution

MULTICAST ROUTING FEATURES

- Support PIM-DM (Protocol Independent Multicast - Dense Mode) and PIM-SM (Protocol Independent Multicast - Sparse Mode)
- Support DVMRP (Distance Vector Multicast Routing Protocol)
- Support IGMP v1/v2/v3

SECURITY

- User/Password protected system management
- L2/L3/L4 ACL (access control list)
- RADIUS and TACACS client
- IEEE 802.1x Port-Based Authentication for network access control
- Port MAC lock security

QUALITY OF SERVICE

- 8 priority queues per port
- IEEE 802.1p based CoS
- IP TOS/Precedence and DSCP based CoS
- Policy based DiffServ (Differentiated Services) per port
- Strict priority and Weighted Round Robin (WRR) CoS policies

MANAGEMENT

- Provide 1 male DB9 RS-232C console interface
- *Switch Management type:*
    - *Console and Telnet Command Line Interface*
    - *HTTP IP Web management*
    - *SNMP v1, v2c, and v3 central management*
- SSH v1/v2 and SSL v3/TLS v1 switch management and security network login
- BOOTP and DHCP for IP address assignment
- Support DHCP server and relay function
- SNTP (Simple Network Time Protocol)
- Support message/event/error/trap logs
- Support logging to local file and syslog server
- Firmware upload/download via XMODEM or TFTP
- Configuration upload/download via XMODEM or TFTP
- SSH/SSL/TLS keys download via TFTP
- Support Ping and telnet function
- Private Enterprise MIB
- Four RMON groups 1, 2, 3, 9 (history, statistics, alarms, and events)

APPLICATIONS

### ISP / Telecom Long Distance Backbone Routing Switch

With built-in robust Layer 3 IP and Multicast routing protocols, the WGS3-24240 ensures reliable routing between VLANs and network segmentation. The routing protocols can be applied by per-port or VLAN interface with up to 2K routing entries, and the high-density routing fiber optical interfaces provide expandability to meet the long reach and growing needs of networks. Moreover, with the hot VLAN feature, Q-in-Q (VLAN stacking) supported, it allows the service providers to offer certain services such as Internet access on VLANs for specific customers and meanwhile still can provide other types of services for other customers on other VLANs.
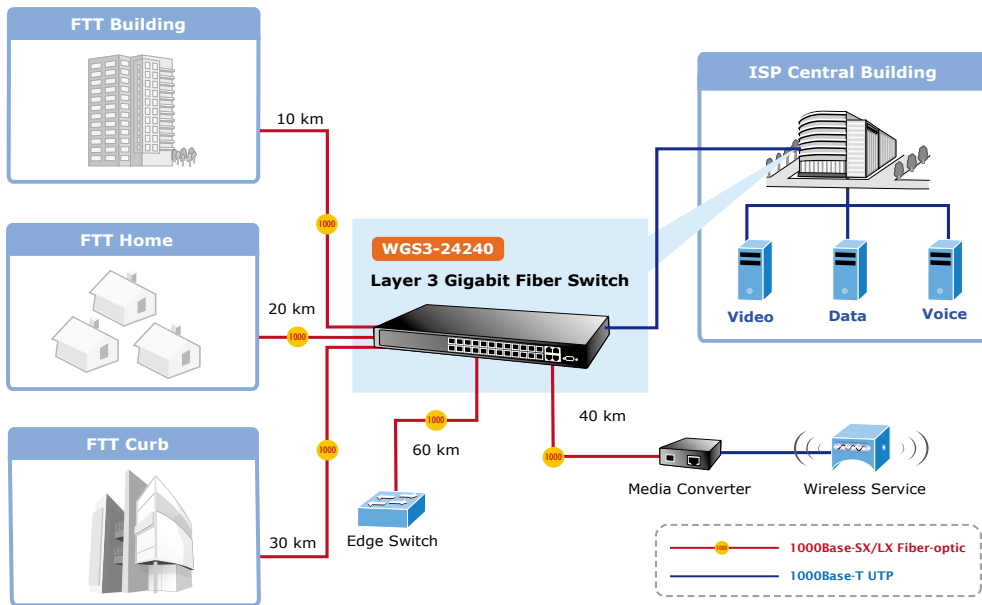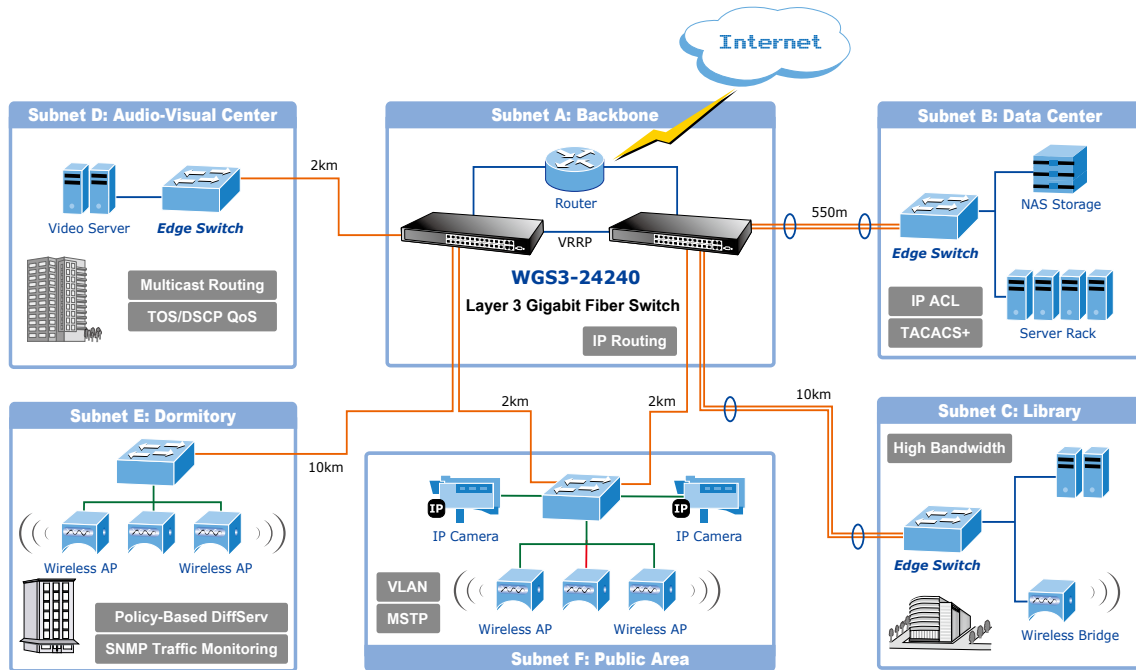

Enterprise / Factory Core Routing and Security Switch

With 24 flexible Gigabit SFP slots and Layer 3 IP / Multicast Routing capability, the WGS3-24240 offers a high speed and secure way to expand the Ethernet network among enterprises headquarter, branch offices and factories over long distance. With the enterprise architecture growing up, the IP nodes and office areas would be more widespread. The WGS3-24240 helps to connect those areas within a shared LAN Ethernet and also keep the performance and stability. With the VLAN, IP routing and security features, the WGS3-24240 protects the network from unauthorized access.

Data Sheet
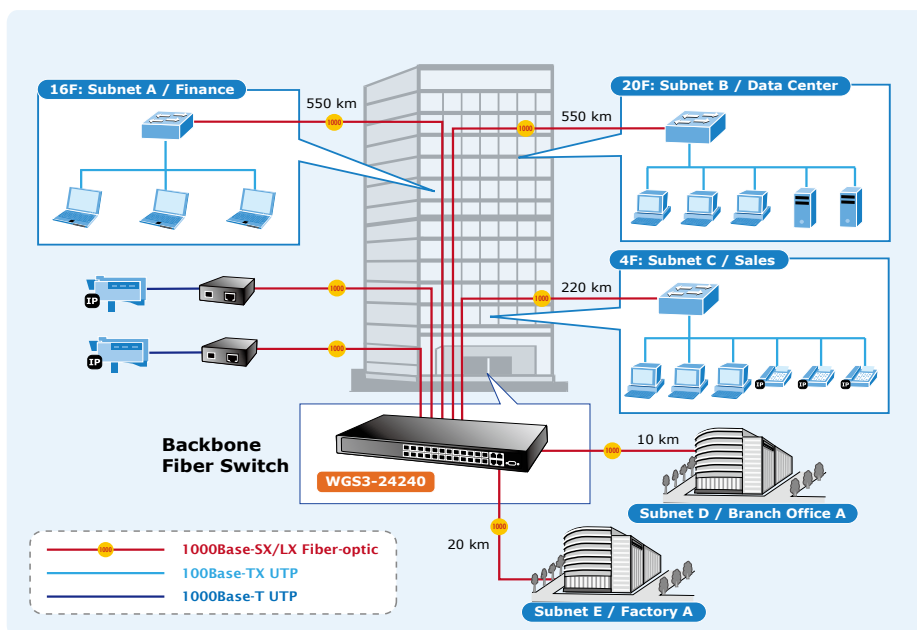
Campus / Community Core Routing and QoS Switch

For small area network communication such as in campus and community, the WGS3-24240 Multi-Layer switch enables an affordable and efficient network deployment. The layer 3 IP routing capability creates more IP domain and available IP nodes for intranet service by demand. The Switch also enables incredible performance for high bandwidth applications such as remote education and video stream with the full management layer 2 features, consisting of IGMP Snooping, VLAN, port trunk, bandwidth control and advanced QoS functionalities to enhance a high-performance campus networking.

SPECIFICATION

Product	24-Port Gigabit SFP slots with 4 shared 10/100/1000Base-T Layer 3 Managed Fiber Switch
Model	WGS3-24240
Hardware Specification	
Horizontal Resolution	24 SFP interfaces, support 1000Base-SX/LX
10/100/1000Base-T Ports	4 RJ-45 Auto-MDI/MDI-X ports Shared with Port-11, Port-12, Port-23 and Port-24
Switch Architecture	Store-and-Forward
Switch Fabric	48Gbps / non-blocking
Switch Throughput	35.7Mpps
Address Table	16K MAC address table with Auto learning function
Layer 3 Routing Table	2048 entries
Buffer Memory	2Mbytes for packet buffer
Flow Control	Back pressure for Half-Duplex IEEE 802.3x Pause Frame for Full-Duplex
Jumbo Frame	9Kbytes
LED	Power, Link/Act, FDX/COL
Dimension (W x D x H)	440 x 350 x 44.5 mm, 1U height
Weight	5kg
Layer 3 function	
IP Routing Protocol	Static Route, RIPv1/v2, OSPFv2, IRDP, VRRP
Multicast Routing Protocol	IGMP, DVMRP, PIM-DM/SM
Routing Interface	Per Port / Per VLAN
Layer 2 function	
Management Interface	Console. Telnet, SSH, Web, SSL, SNMP
Port Configuration	Port disable/enable Auto-negotiation 10/100Mbps full and half duplex mode selection. Maximum frame size
Port Status	Display each port's speed duplex mode, link status, Flow control status. Auto negotiation status, trunk status.
VLAN	IEEE 802.1Q Tagged Based VLAN ,up to 4094 VLAN groups GVRP protocol for VLAN management.
Link Aggregation	Support 8 groups of 8-Port trunk support IEEE 802.3ad LACP
QoS	Traffic classification based on Port Number, 802.1p priority, DS/TOS field in IP Packet Policy-based DiffServ
Bandwidth Control	Egress Traffic Shaping
IGMP Snooping	Supports v1, v2 and v3. Maximum up to 255 multicast groups.
Port Mirror	RX / TX / Both
Access Control List	IP-Based ACL / MAC-Based ACL Up to 100 entries
Standards Compliance	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 PLANET Private MIB
Environment	
Operating	Temperature: 0 ~ 50 Degree C Relative Humidity: 20 ~ 85% (non-condensing)
Storage	Temperature: -40 ~ 70 Degree C Relative Humidity: 20 ~ 90% (non-condensing)

ORDERING INFORMATION

WGS3-24240	24 Gigabit SFP slots with 4 shared 10/100/1000Base-T Layer 3 Managed Fiber Switch

AVAILABLE MODULES

MGB-GT	SFP-Port 1000Base-T Module
MGB-SX	SFP-Port 1000Base-SX mini-GBIC module
MGB-LX	SFP-Port 1000Base-LX mini-GBIC module
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

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