

28-Port 10/100/1000Mbps with 4 Shared SFP Managed Switch

WGSW-28040



IPv6
Management

Fan Less

IGMP
Snooping

SNMP

802.1Q
VLAN

MSTP

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Presentation Outline

- ◆ **Product Overview**
- ◆ **Product Benefits**
- ◆ **Product Features**
- ◆ **Application**
- ◆ **Comparison**
- ◆ **Appendix**



Product Overview

- ◆ **What an “Edge Switch”, can satisfy with Business Owner, MIS and Employees at the same time:**

Boss

- Lower owner cost
- No upgrade
- One time investment

MIS

- Reliable, Rich Features
- Powerful Security
- Easy management

Employee

- High Speed

Product Benefits

◆ The WGSW-28040 applies:

✓ Low Owner price, Gigabit performance

- 56Gbps Switch Capacity

✓ Fanless design, green Ethernet technology

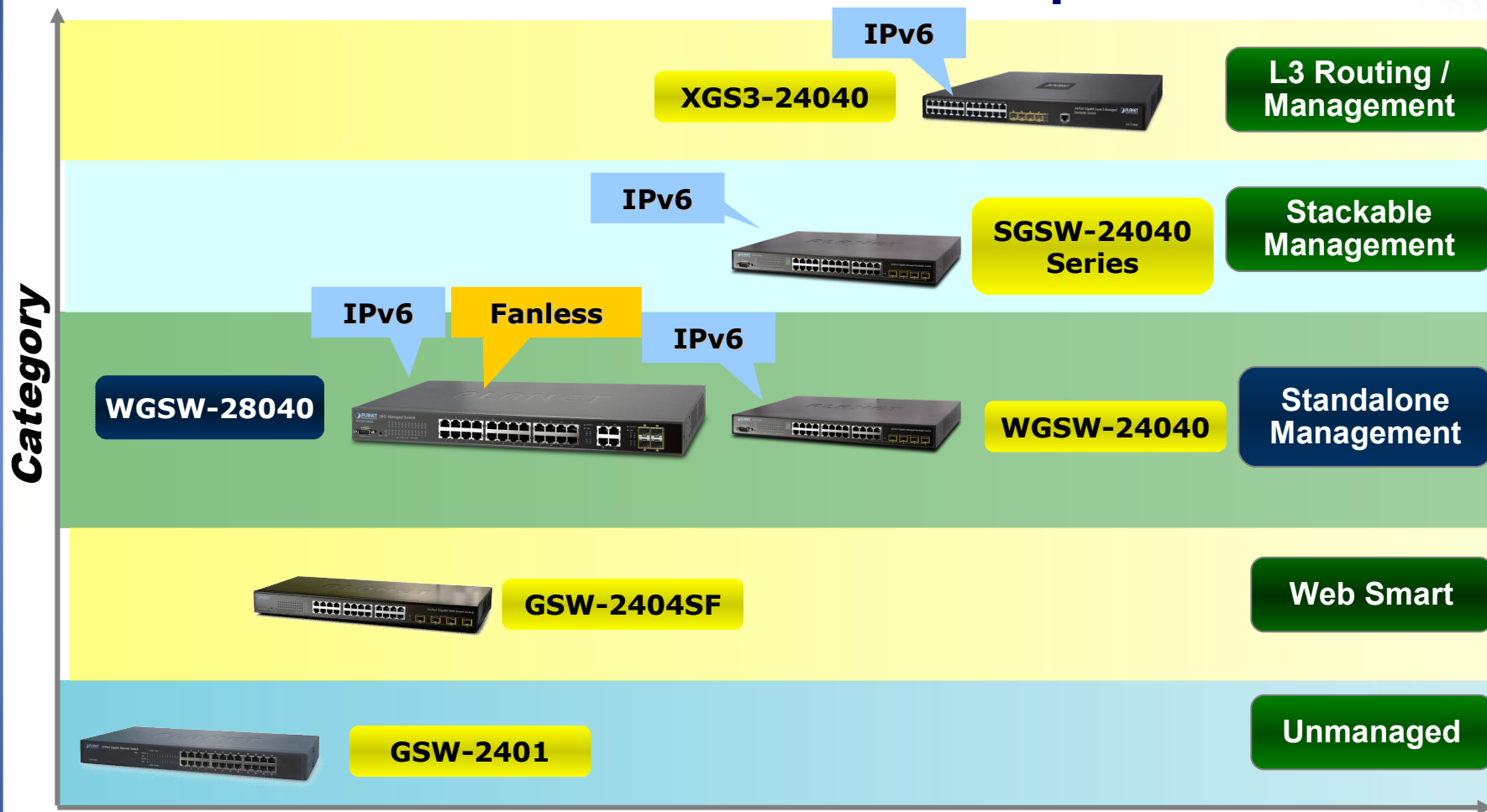
- To provide a quiet, energy saving, high speed and reliable office network environment
- **22watts** maximum power consumption
- Fanless design with **zero noise**

✓ Variety of management interface

- **IPv6** / IPv4 HTTP / **SSL** / **SSH** / Telnet / CLI
- SNMP v1 and v2c Management Interface

Product Position

◆ PLANET 24G Switches Product Map



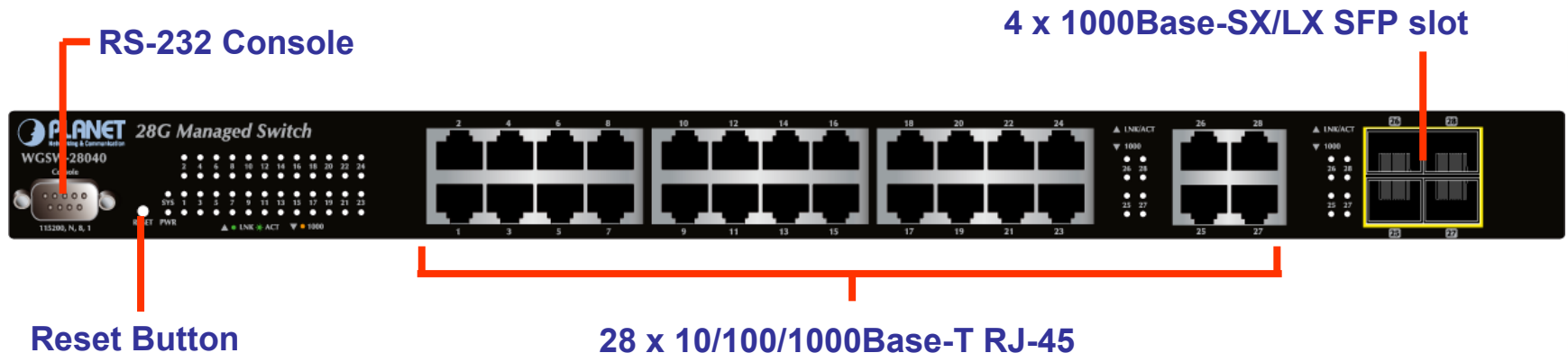
Features

Product Overview



◆ Front Panel of WGSW-28040

- ✓ **28-Port 10/100/1000Base-T RJ-45**
 - Auto-MDI/MDI-X
 - Auto Negotiation
- ✓ **4 for 3.3VDC mini GBIC/SFP slots**
 - 1000Base-X compatible , shared with Port-25~Port-28
- ✓ **RS-232 console Interface**
- ✓ **One Reset button**



Product Overview



◆ Rear Panel of WGSW-28040

- ✓ 100~240V AC, universal Power Supply
- ✓ One Power Switch
- ✓ Fanless



Product Features

◆ Hardware

- ✓ **28-Port 10/100/1000Mbps** Gigabit Interface
- ✓ **4 SFP slots**, flexible for **Gigabit** Fiber-Optic network extension
 - Plug and play
 - 1000Base-SX/LX :Maximum 120 kilometers (MGB-L120)
- ✓ **RS-232 DB9** console interface for Switch management and setup
- ✓ **Low power consumption**
 - **22Watts** maximum power consumption
- ✓ **Zero noise by fanless design**

◆ Performance

- ✓ **56Gbps Switch Fabric**
- ✓ **9K** Jumbo Frame
- ✓ **16K MAC Address Table**

Product Features

◆ VLAN

- ✓ IEEE 802.1Q Tagged VLAN
- ✓ Up to 256 VLANs groups, out of 4094 VLAN IDs
- ✓ Provider Bridging (VLAN **Q-in-Q**) support (IEEE 802.1ad)
- ✓ **Private VLAN** Edge (PVE / Port Isolation)

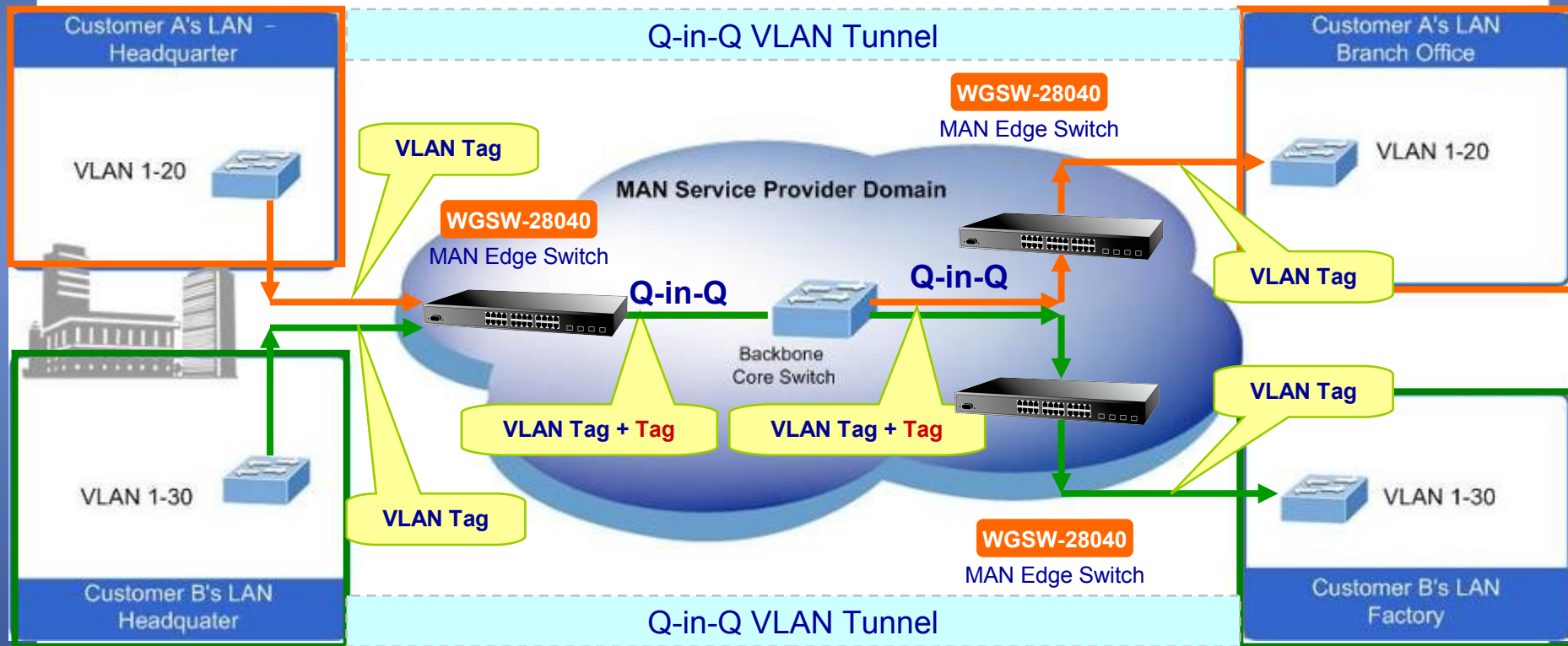
◆ Spanning Tree Protocol

- ✓ **STP**, IEEE 802.1d (Spanning Tree Protocol)
- ✓ **RSTP**, IEEE 802.1w (Rapid Spanning Tree Protocol)
- ✓ **MSTP**, IEEE 802.1s Multiple Spanning Tree Protocol
- ✓ **BPDU Guard** and **BPDU Filtering** enhances switch network reliability, manageability, and security

Product Features

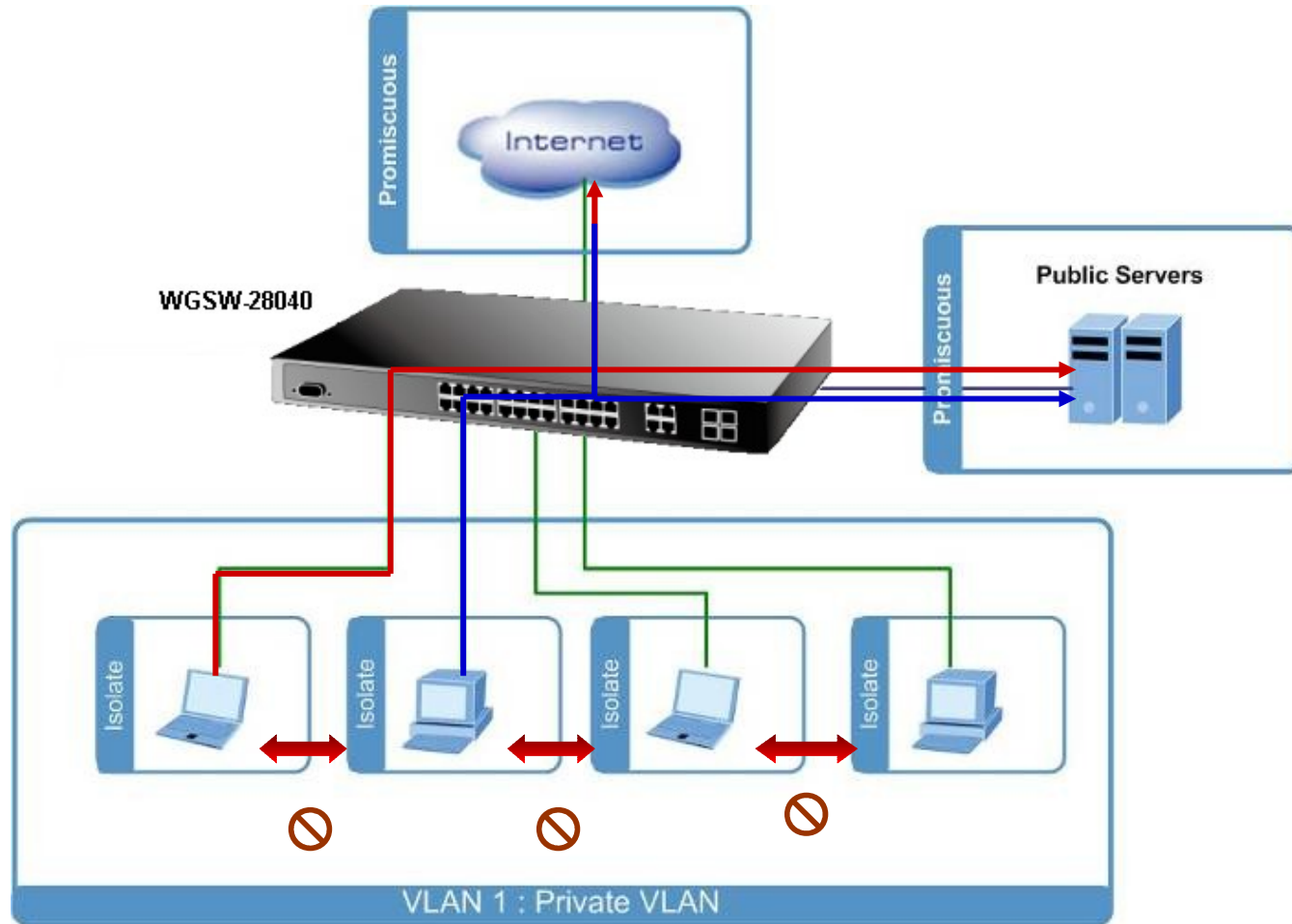
◆ Q-in-Q VLAN Tunnel

- ✓ QinQ is designed for service providers carrying traffic for multiple customers across their networks. It is used to maintain customer-specific VLAN and Layer 2 protocol configurations even when different customers use the same internal VLAN IDs.



Product Features

- ◆ **Private VLAN** – isolates edge ports to ensure privacy



Product Features

◆ Link Aggregation

- ✓ **802.3ad** Link Aggregation Control Protocol (**LACP**)
- ✓ Cisco ether-channel (Static Trunk)
- ✓ Maximum 8 trunk groups, up to 8 ports per trunk group
- ✓ Up to **16Gbps** bandwidth (Duplex Mode)

◆ Port Mirror

- ✓ Many to 1
- ✓ Monitor the **incoming** or **outgoing** traffic on a particular port

Product Features

◆ Quality of Service

- ✓ **Ingress / Egress Rate Limit** per port bandwidth control
- ✓ **8 priority** queues on all switch ports
- ✓ Traffic Classification
 - Port-Based priority
 - 802.1p CoS
 - IP **DSCP** of IPv4 / IPv6 packets
- ✓ **Strict priority** and **Weighted Round Robin (WRR)** CoS policies
- ✓ **DSCP remarking**

◆ Multicast

- ✓ Supports IGMP Snooping v1, v2 and **v3**
- ✓ Querier mode support
- ✓ IGMP Snooping v2 filtering
- ✓ Unknown Multicast drop

Product Features

◆ Security

✓ Storm Control support

- Broadcast / Multicast / Unknown-Unicast / Unknown-Multicast

✓ Authentication

- IEEE **802.1X Port-Based** network access authentication
- Built-in **RADIUS client** to co-operate with the RADIUS servers

✓ Access Control List (ACL)

- **IP-Based / MAC-Based ACL** filtering to permit or deny traffic

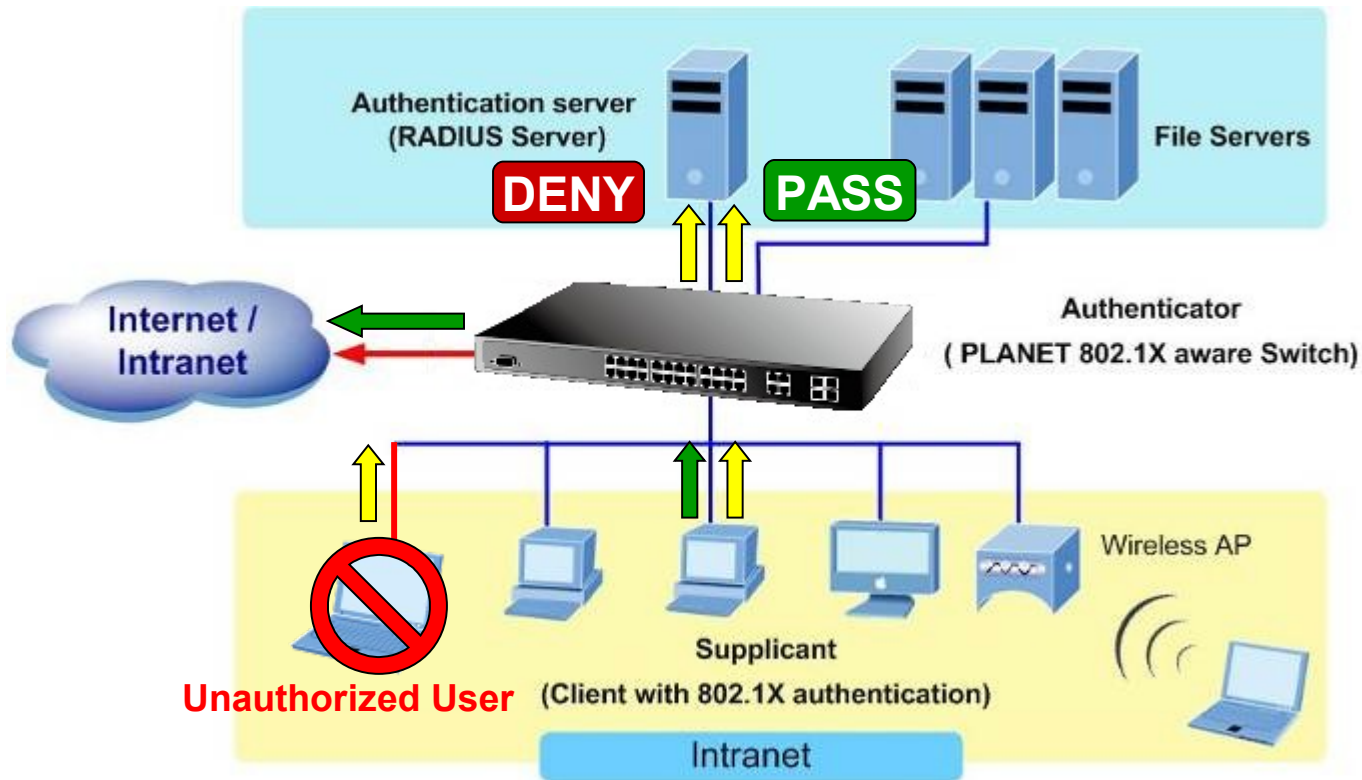
✓ MAC Security

- Static MAC
- Source / Destination MAC filtering
- **Port Security** for source MAC address entries filtering

Product Features

◆ Active Security

- ✓ 802.1X **Port-Based** User Authentication
- ✓ RADIUS Authentication for Management Access
- ✓ **L2/L3/L4 Access Control List**



Product Features

◆ Management

- ✓ **IPv4 / IPv6** Dual Stack
- ✓ Switch management interfaces
 - Console / Telnet Command Line Interface
 - Web switch management
 - SNMP v1, v2c switch management
 - **SSH / SSL** secure access
- ✓ Four RMON groups (history, statistics, alarms and events)
- ✓ **SNMP trap** for device Link Up and Link Down notification
- ✓ Cisco-Like commands

Product Features

◆ Management Tools

- ✓ Built-in Trivial File Transfer Protocol (TFTP) client
- ✓ DHCP for IP address assignment
- ✓ Auto Configuration for IPv6 address assignment
- ✓ Firmware upload/download via HTTP / TFTP
- ✓ Configuration backup/reload via HTTP / TFTP
- ✓ SNTP (Simple Network Time Protocol)
- ✓ **Event Log and Alarm**
 - **Local System Log**
 - **Remote Syslog**
- ✓ Reset button for system reboot or reset to factory default

Product Features

Remote Management



```

COM1-115200band - Tera Term VT
File Edit Setup Control Window Resize Help

===== Initial from startup-config [Start] =====
===== Initial from startup-config [Done] =====

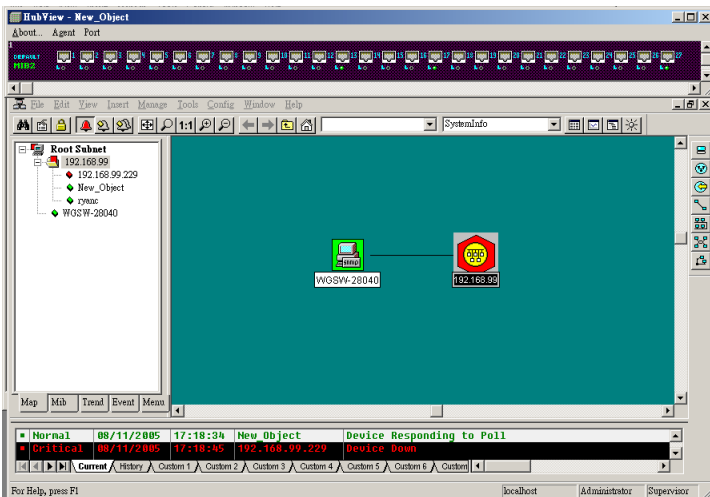
Switch Command Line Interface (version 1.0)

Press any key to continue
Username: admin
Password: *****
WGSW-28040# conf
WGSW-28040(config)#
  hostname
  history
  no
  show
  exit
  e
  more
  acl
  acl-range
  acl-policy
  acl-template
  dot1x
  radius-server
  igmp-snooping
  clear
  mac-address-table
  lacp
  trunk
  mirror
  port
  port-security

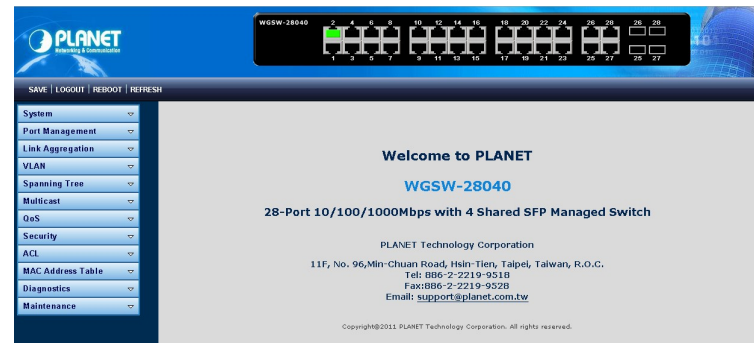
  Set system's network name
  Set the number of history commands
  Negate a command or set its defaults
  Show running system information
  Exit current mode and down to previous mod

  show XMORE page on cli
  ACL configuration
  ACL range configuration
  ACL policy configuration
  ACL template configuration
  802.1x configuration
  Radius server configuration
  IGMP Configuration
  Reset functions
  Mac table configuration
  LACP information
  Trunk Configuration
  Mirror configuration
  Port configuration
  Port security
  
```

Console / Telnet / SSH



SNMP v1, v2c



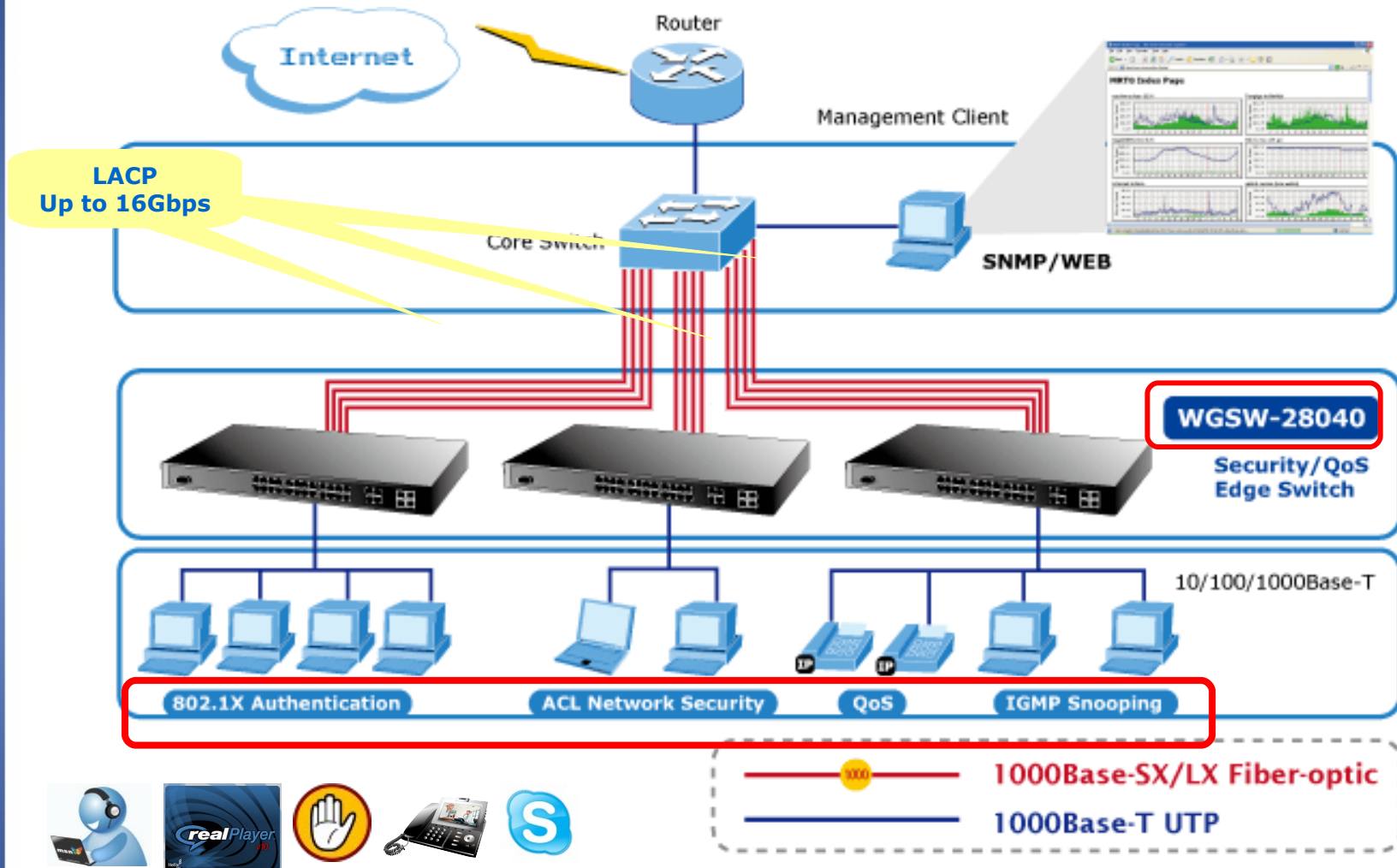
HTTP / SSL

Application




◆ Managed Gigabit Edge / Department Switch

- ✓ Gigabit Ethernet supported equipment has become the fundamental unit of Enterprises and SMB. With up to **56Gbps** of non-blocking switch fabric, the WGSW-28040 can easily provide the high bandwidth required from now on.
- ✓ It can easily provide a local, high bandwidth and Gigabit Ethernet network for department or even backbone of enterprises or SMB. It is also ideal to be used as **manageable edge switch** to connect to clients.
- ✓ With the four SFP ports, the WGSW-28040 provides the uplink to the core network through Gigabit Ethernet LX/SX SFP modules.
- ✓ The WGSW-28040 improves the network efficiency and protects the network clients with the powerful features:
 - Layer 2 to Layer 4 ACL
 - QoS
 - 802.1X Port-Based network access authentication security
 - Multicast IGMP Snooping






Application



Product Comparison


Model name		GSW-2404SF	WGSW-28040	WGSW-24040
Feature		Web Smart	L2 / L4 IPv6 Managed	L2/L4 Full IPv6 Managed
				
Interface				
10/100/1000Base-T		24	28	24
1000Base-SX/LX SFP		4 (Combo)	4 (Combo)	4 (Combo)
Console		-	DB9 / RS-232	DB9 / RS-232
Hardware				
FAN		1 Fan	Fanless	1 Fan
Switch Fabric		48Gbps	56Gbps	48Gbps
Power Consumption		Max. 26Watts	Max. 22Watts	Max. 30Watts
Green Networking		■	■	■
Security				
ACL		-	L2 / L3 / L4	L2 / L3 / L4
Port Security		-	■	■
TACACS+		-	-	■
DHCP Snooping		-	-	■
Management				
IPv6 / IPv4 Management		- / ■	■ / ■	■ / ■
Management & Configuration		Web Smart	WEB, Telnet, Console	WEB, Telnet, Console
SSH / SSL		- / -	■ / ■	■ / ■
SNMP	V1, V2c	■	■	■
	V3	-	-	■

Product Comparison - Competitor

Brand	PLANET	Cisco	Negear	D-Link	ZyXEL	
Model name	WGSW-28040	ESW-540-24	GS724T	DGS-1210-24	GS-1524	
Product Outlook						
Features	Managed	Managed	Web Smart	Web Smart	Web Smart	
Interface						
Switching Capacity	56Gbps	48Gbps	48Gbps	48Gbps	48Gbps	
10/100/1000Base-T	28	24	24	24	24	
SFP / mini-GBIC	4 (Combo)	4 (Combo)	2 (Combo), 100FX support	4 (Combo)	4 (Combo)	
Console	DB9 / RS-232	DB9 / RS-232	-	-	-	
Layer 2 Features						
Jumbo Frame	9K	-	■	■	9K	
Bandwidth Control	In / Out	In / Out	In / Out	In / Out	In / Out	
Link Aggregation	Static	8 Trunks / 8 Ports	■	■	■	
	LACP	8 Trunks / 8 Ports	8 Trunks / 8 Ports	?? Trunks / 4 Ports	8 Trunks / 8 Ports	6 Trunks / 8 Ports
VLAN	Port Base	-	■	■	-	■
	802.1Q	■	■	■	■	■
	Q-in-Q	■	-	-	-	-
	Private VLAN	■	■	-	-	-
	Voice VLAN	-	■	■	■	-
Spanning Tree	802.1D / 802.1w / 802.1s	802.1D / 802.1w / 802.1s	802.1D / 802.1w / 802.1s	802.1D / 802.1w	-	
STP BPDU Guard	■	-	-	-	-	
BPDU Filtering	■	-	-	-	-	
IGMP Snooping	V1 / V2 / V3	V1 / V2	V1 / V2	V1 / V2	-	
IGMP Query mode	■	-	■	■	-	

Product Comparison - Competitor



Brand		PLANET	Cisco	Negear	D-Link	ZyXEL
Model name		WGSW-28040	ESW-540-24	GS724T	DGS-1210-24	GS-1524
Product Outlook						
Quality of Service						
QoS	802.1p	■ / 8 queues	■ / 4 queues	■ / 4 queues	■ / 4 queues	■ / 4 queues
	TOS / DSCP	- / ■	■ / ■	■ / ■	- / ■	■ / ■
	Strict / WRR	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■
Policy-base DiffServ		■	■	■	-	-
Security						
802.1X		■	■	??	■	-
ACL		L2 / L3 / L4	L2 / L3 / L4	L2 / L3	L2 / L3 / L4	-
RADIUS		■	■	■	■	■
Port Security (MAC Limit)		■	■	■	■	-
MAC Security		■	-	-	■	-
Management						
SNMP	V1, V2c, v3	■ / ■ / -	■ / ■ / ■	■ / ■ / -	■ / ■ / ■	■ / ■ / ■
	Trap	■	■	■	■	-
	RMON	■	■	-	■	■
System Log / Syslog		■ / ■	- / -	■ / ■	■ / ■	- / -
Management		WEB, Telnet, Console	WEB, Console	WEB	WEB, Telnet	WEB, Telnet
SSH / SSL		■ / ■	- / ■	- / -	- / -	■ / ■
IPv6 Management		■	-	-	-	-
Other Management		SNTP	-	LLDP / SNTP	LLDP / SNTP	-
Hardware						
Power Consumption		Max. 22 Watts	??	Max. 43 Watts	Max. 24 Watts	Max. 43 Watts
FAN		Fanless	1 x fan	Fanless	Fanless	Fanless
Redundant Power Input		-	■	-	-	-
Operating Temperature		0~50 Degree C	0~40 Degree C	0~40 Degree C	0~40 Degree C	0~45 Degree C

Appendix

◆ Available Modules:

✓ Gigabit SFP

- **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-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

Appendix - Sales Target

◆ Target Markets

- ✓ SMB Office / Enterprise
- ✓ Government / Campus
- ✓ ISP / Telecom / Service Provider
- ✓ System Integrator

◆ Target Customers

- ✓ Who need **Low power consumption** but **High Performance Gigabit Switch**
- ✓ Who need **Traffic Classification** and **Easy Management** network solution
- ✓ Who need **IPv6 management Switch**



ACTIVATING IP POWER