

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

WGSW-5242



Presentation Outline

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

WGSW-5242



Product Overview

◆ Front Panel of WGSW-5242

✓ **48-Port 10/100Base-TX RJ-45**

- Auto-MDI/MDI-X
- Auto Negotiation

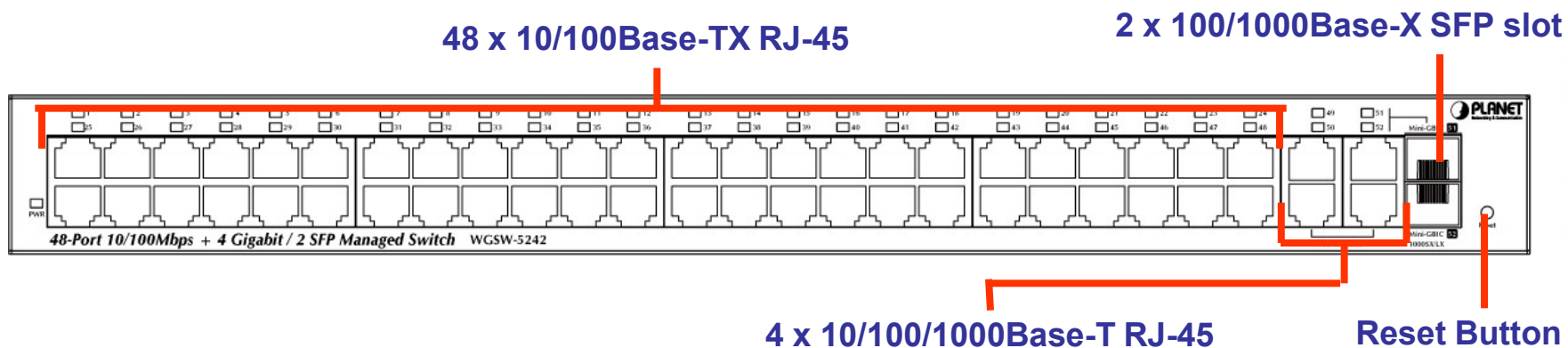
✓ **4-Port 10/100/1000Base-T RJ-45**

- Auto-MDI/MDI-X
- Auto Negotiation

✓ **2 for 3.3VDC mini GBIC/SFP slots**

- **100/1000Base-X compatible** , shared with Port-51~Port-52

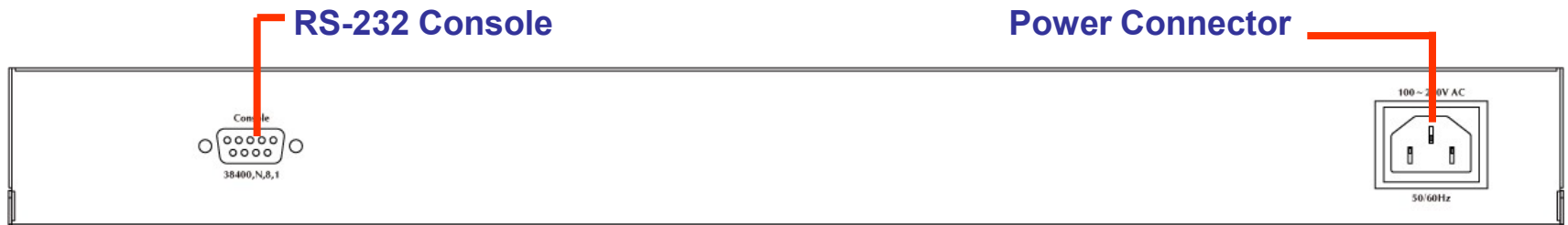
✓ **One Reset button**



Product Overview

◆ Rear Panel of WGSW-5242

- ✓ 100~240V AC, universal Power Supply
- ✓ **RS-232 Console Interface**



Product Benefits

◆ The WGSW-5242 applies:

- ✓ **High-Density / Cost-effective Fast Ethernet solution**
 - **17.6Gbps** Switch Capacity
 - 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

- ✓ **Variety of management interface**
 - HTTP / **SSH** / **SSL** / Telnet / CLI
 - SNMP v1, v2c and **v3** Management Interface

Product Features

◆ Hardware

- ✓ **48-Port 10/100Mbps** Fast Ethernet Interfaces
- ✓ **4-Port 10/100/1000Mbps** Gigabit Ethernet Interfaces
- ✓ **2 for 3.3VDC mini GBIC/SFP slots**
 - Plug and play
 - **1000Base-SX/LX** :Maximum 120 kilometers (MGB-L120)
 - **100Base-FX**: Maximum 60 kilometres (MFB-F60)
- ✓ **RS-232 DB9** console interface for Switch management and setup

◆ Performance

- ✓ **17.6Gbps** Switch Fabric / non-blocking
- ✓ **8K** MAC Address Table

Product Features

◆ VLAN

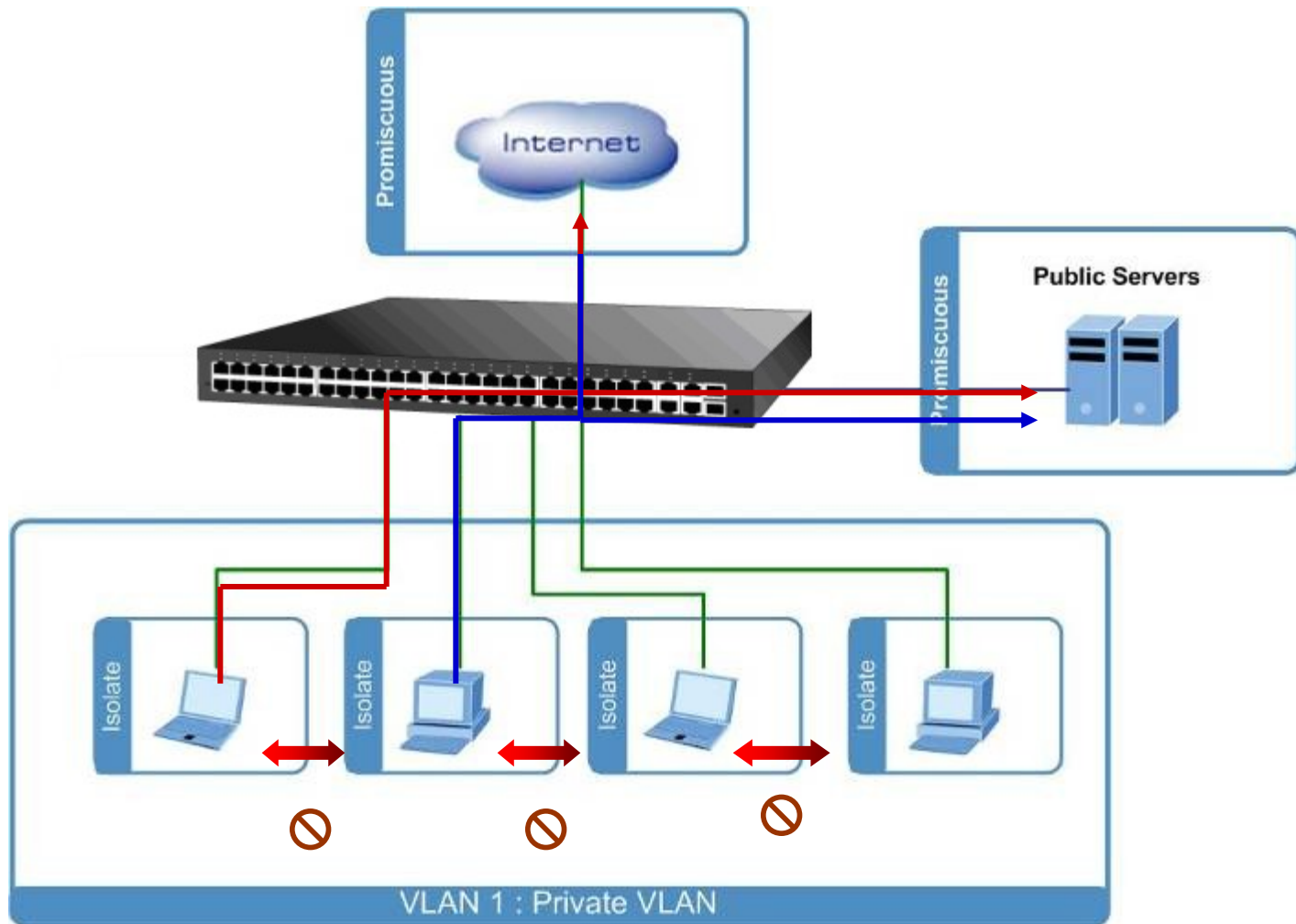
- ✓ IEEE 802.1Q Tagged VLAN
- ✓ Up to 256 VLANs groups, out of 4094 VLAN IDs
- ✓ **GVRP** for dynamic VLAN management
- ✓ **Private VLAN** Edge (PVE / Port Isolation)
- ✓ Management VLAN

◆ 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)

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 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)

◆ Port Mirror

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

Product Features

◆ Quality of Service

- ✓ **In/Out** bandwidth control on each port
- ✓ **4 priority** queues on all switch ports
- ✓ Traffic Classification
 - Port-Based QoS
 - 802.1p CoS
 - IP **DSCP** / ToS / IP Precedence

◆ Multicast

- ✓ Supports IGMP Snooping v1 and v2
- ✓ IGMP Immediately Leave support
- ✓ IGMP Querier
- ✓ IGMP Proxy

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

✓ Management IP List

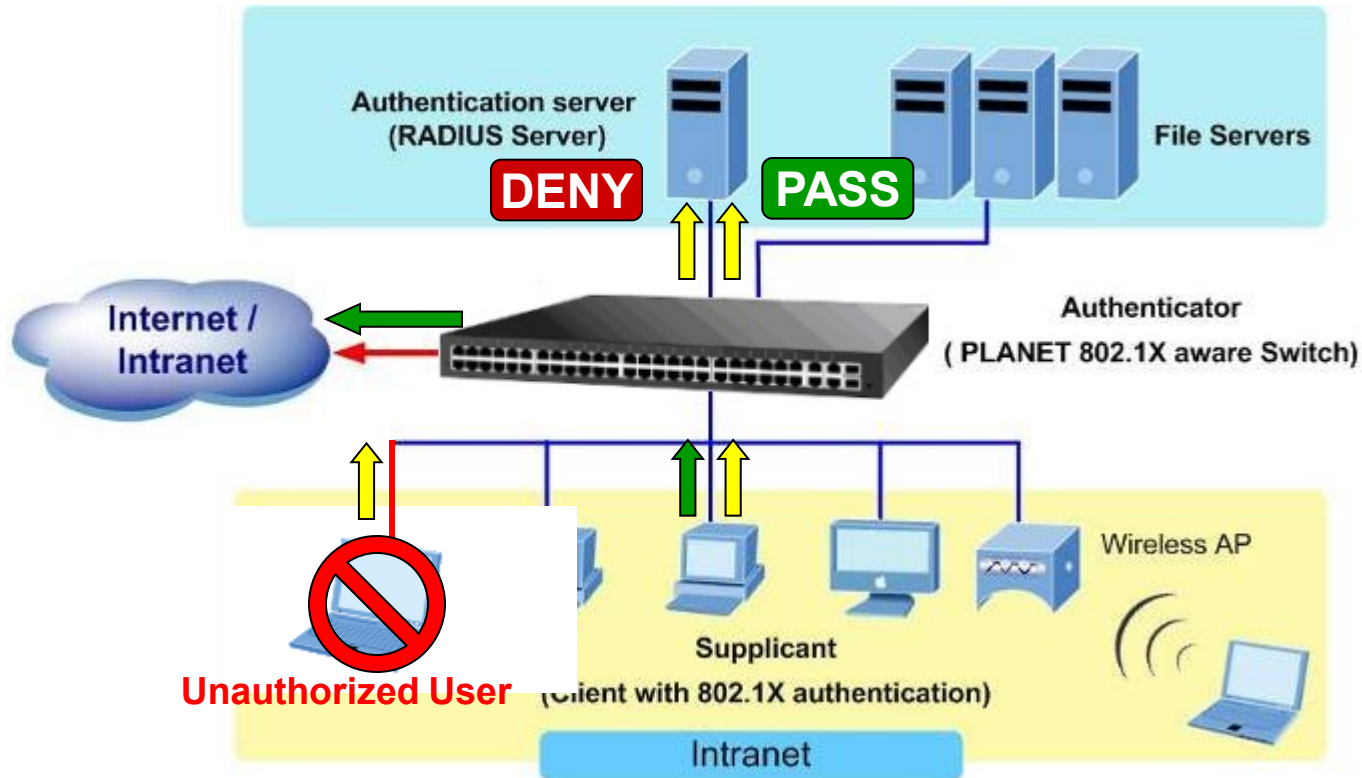
- Up to 8 hosts

✓ Supports Auto Dos

Product Features

◆ Active Security

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





◆ Management

- ✓ Switch management interfaces
 - Console / Telnet Command Line Interface
 - Web switch management
 - SNMP v1, v2c & v3 switch management
 - **SSH / SSL** secure access
- ✓ Four RMON groups 1, 2, 3, 9(history, statistics, alarms and events)
- ✓ **SNMP trap** for device Link Up and Link Down notification

Product Features

◆ Management Tools

- ✓ Built-in Trivial File Transfer Protocol (TFTP) client
- ✓ DHCP for IP address assignment
- ✓ Support **DHCP relay** function
- ✓ Firmware upload/download via HTTP / TFTP
- ✓ Configuration backup/reload via HTTP / TFTP
- ✓ SNTP (Simple Network Time Protocol)
- ✓ Support **memory** & **flash** log
- ✓ Reset button for system reboot or reset to factory default

Product Features

Remote Management



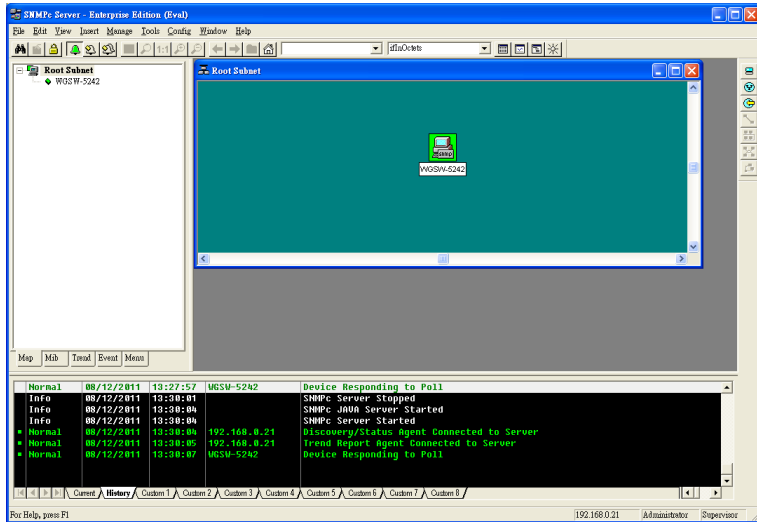
```

COM1:WGSW5242 - Telnet V1.1
File Edit Shell Control Window Reset Help
BAR[4] 0x00000000 / probed size 0x30303030 / CPU addr 0x59303030
BAR[5] 0x00000000 / probed size 0x30303030 / CPU addr 0x5f574800
eth0 configured
memory address = 0xb8001000
I/O address = 0x30303030
I/FP: 0x80492220, next: 0x80609574
I/FP: 0x80495574, next: 0x80017800
I/FP: 0x80497800, next: 0x80030000
found PCI device 14e4:0900:09
found PCI device 14e4:4713:09
found PCI device 14e4:4713:09
Enable CPU IRQ of ENAC1 0x3000b801
base address = 0xb8002000, iLine = 3, iPin = 2
found robo device with 0:0143:be41:48:00
found 1 robo device(s)
SPI unit 0: Dev 0x0048, Rev 0x01, Chip BCM5348_A1, Driver BCM5348_A0
SPI unit 1: Dev 0x4713, Rev 0x09, Chip BCM4713_A9, Driver BCM4713_A0
Attaching SOC unit 0... SPI device BCM5348_A1 attached as unit 0.
Attaching SOC unit 1... Broadcom BCM47xx 10/100 Mbps Ethernet Controller 2002.9.27.0

snmp_agent_init!
UCD-SNMP version 4.1.2
Init snpd...
Server listening on 0.0.0.0 port 22
Network interface status:
MAC Address: 00-30-4F-58-36-02
IP: 192.168.0.100
Netmask: 255.255.255.0
Gateway: 0.0.0.0
Management VLAN: 1

Username: admin
Password: *****
COMMAND>
    
```

Console / Telnet / SSH



SNMP v1, v2c & v3

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

Device Name	WGSW-5242
Hardware Version	00.03.00
Boot Version	1.1.2
Firmware Version	2.09a
Build Date	Mon Dec 13 14:28:31 2010
MAC Address	00-30-4F-58-36-02
System Name	
System Location	
System Contact	

Save Settings

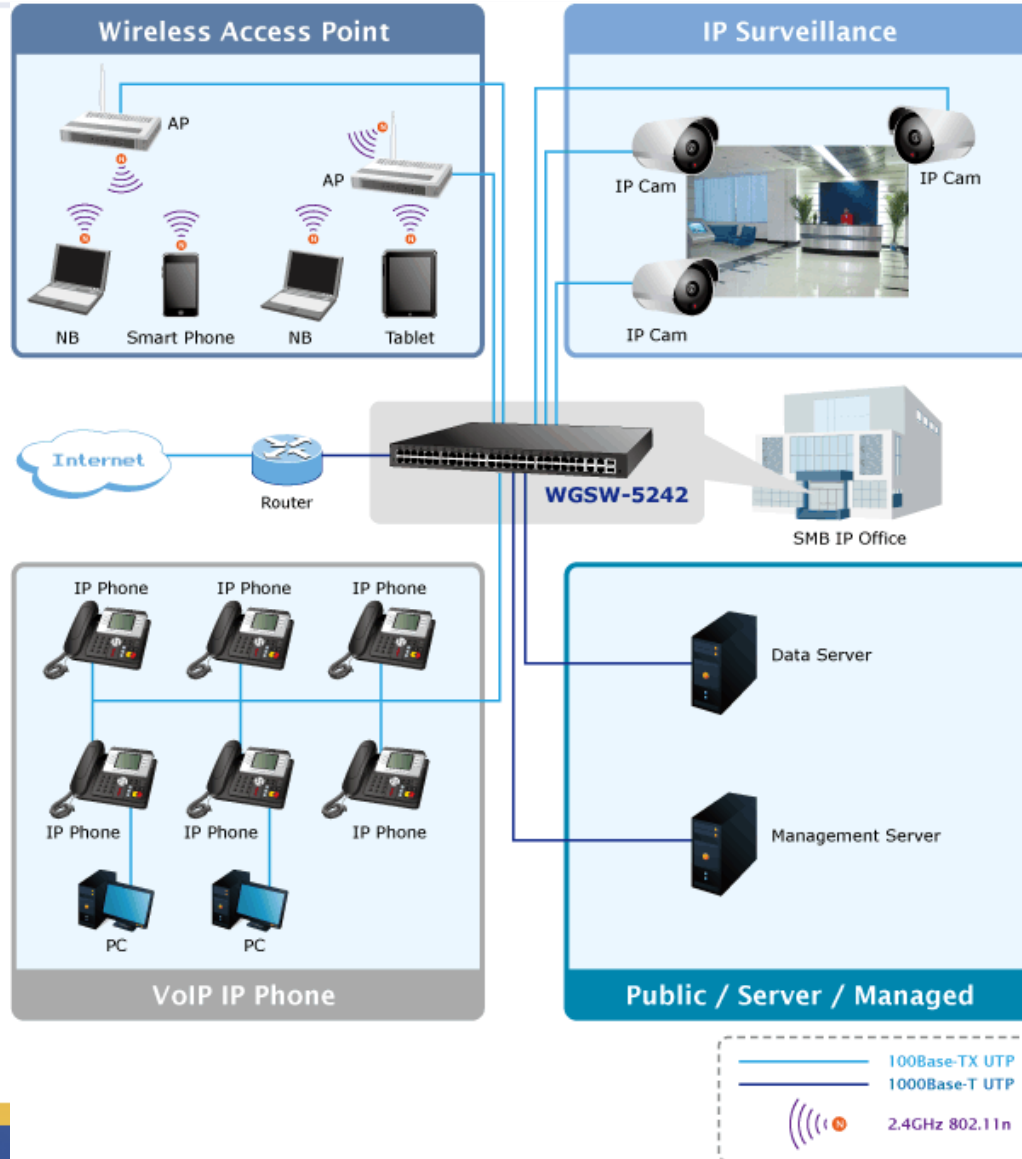
HTTP / SSL

Application



◆ 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.
- ✓ 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-5242 provides the uplink to the core network through Gigabit Ethernet LX/SX SFP modules.
- ✓ The WGSW-5242 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		WGSW-5240	WGSW-5242
			
Feature		L2 Managed	L2/L4 Full Managed
Interface			
10/100Base-TX		48	48
10/100/1000Base-T		4	4
1000Base-SX/LX SFP		4 (Cobmo)	2 (Combo)
100Base-FX SFP		--	Compatible
Console		DB9 / RS-232	DB9 / RS-232
Layer 2 Features			
Switch Fabric		17.6Gbps	17.6Gbps
Jumbo Frame		--	2K
Storm Control		Broadcast / Multicast / Unicast	Broadcast / Multicast / Unicast
Link Aggregation	Static	■	-
	LACP	--	6 Trunks / 8 Ports
VLAN	802.1Q	■	■
	GVRP	-	■
	Private VLAN	-	■
Active VLAN (1q/port)		256 / -	256 / -
Spanning Tree		802.1D/1w	802.1D / 1w / 1s
Loopback Detection		-	RSTP Root Guard
Multicast	IGMP Snooping	V1, V2	V1, V2
	IGMP Query mode	-	■
	IGMP Fast Leave	-	■

Product Comparison

Model name		WGSW-5240	WGSW-5242
			
QoS			
802.1p		■	■
TOS / DSCP		-	■
L4 Port No.		-	■ (By ACL)
Priority Mode			Strict / WRR
Security			
Authentication	802.1X Port-Based	■	■
	MAC Based	-	-
ACL	Layer	-	L2 / L3 / L4
	Maximum Rules		128
Port Security		-	■ / 24
IP / MAC Security		MAC-Binding / MAC Filter	MAC-Binding / Static MAC
RADIUS		■	■
TACACS+		-	■
Management IP List		-	■
DoS Defense		-	■
DHCP Relay		-	■
Option 82		-	■

Product Comparison

Model name		WGSW-5240	WGSW-5242
			
Management			
Management & Configuration		Web, Telnet, Console	Web, Telnet, Console
SSH / SSL		- / -	■ / ■
SNMP	V1, V2c	■	■
	V3	-	■
	Trap	■	■
	RMON	4 Groups	4 Groups
Stacking	Single IP Management	■	-
	Stacking Topology	IP Stacking	-
	Stacking Group (Unit)	8	-
Log / Alarm	Local	-	■
	Syslog	-	■
Time Setting		-	SNTP
LLDP		-	■
Cable Diagnostics		-	■
Configuration Back up / Restore		■	■

Appendix - Sales Target

◆ Target Markets

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

◆ Target Customers

- ✓ Who need **high-density Fast Ethernet edge solution**
- ✓ Who buys **WGSW-5240**

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

◆ Available Modules:

✓ 100Base-FX SFP

- **MFB-FX** SFP-Port 100Base-FX Transceiver (1310nm) -2km
- **MFB-F20** SFP-Port 100Base-FX Transceiver (1310nm) – 20km
- **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



ACTIVATING IP POWER