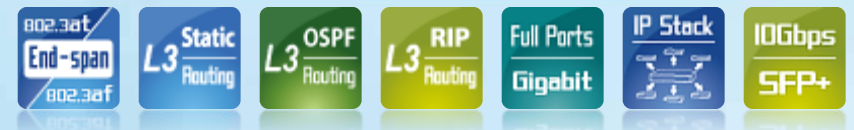


Layer 3 48-Port Gigabit + 4-Port 10G SFP+ Stackable Managed Switch

SGS-6341-48T4X



Outlines

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

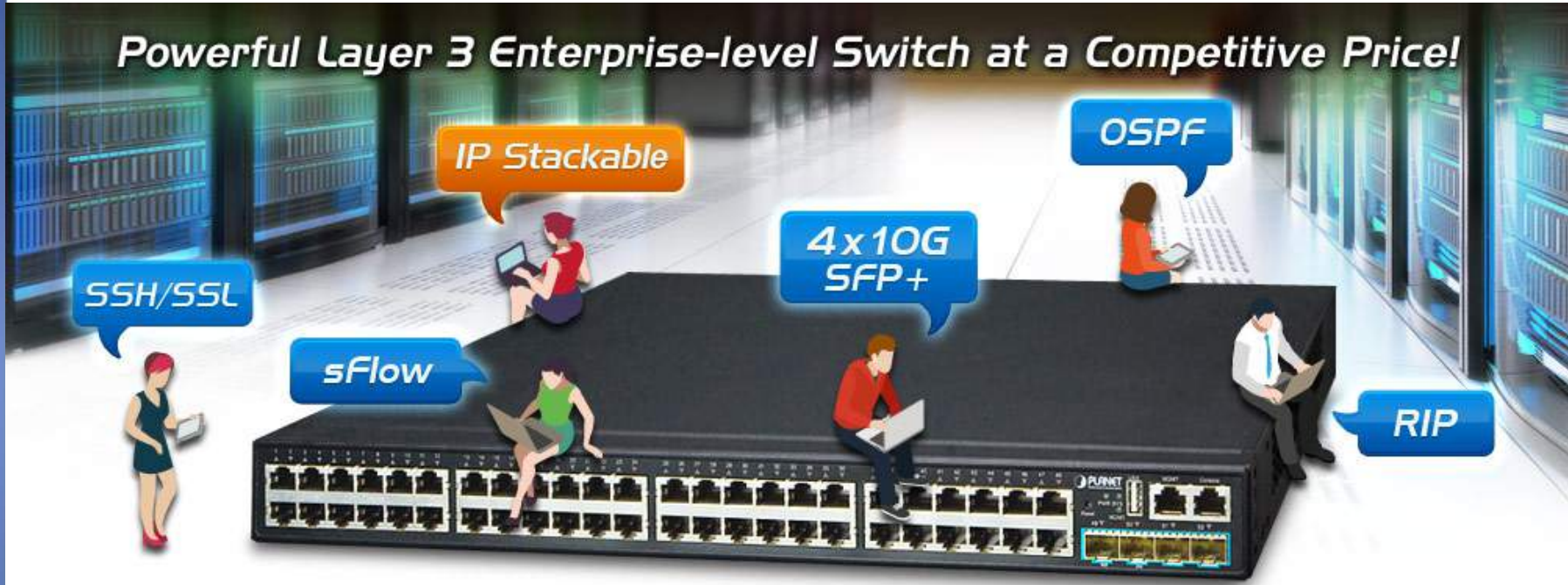


Product Overview



Product Overview

Powerful Layer 3 Enterprise-level Switch at a Competitive Price!



Layer 3 Static/Dynamic Routing IP Stackable Managed Switches

Multi-layer

Layer 3

- XGS3-24042**
- 24 10/100/1000 RJ45
 - 4 1/10G SFP+
 - L3 Multicast
 - AC + DC power input



- XGS3-24242**
- 16TP/SFP combo
 - 8SFP + 4 1/10G
 - 2 QSFP+ VSF Port
 - L3 Multicast
 - AC + DC power input



- SGS-6341-48T4X**
- 48 10/100/1000 RJ45
 - 4 1/10G SFP+
 - L3 Multicast



- SGS-6340-24T4S**
- 24 10/100/1000 RJ45
 - 4 1000BASE-X SFP



- SGS-6340-48T4S**
- 48 10/100/1000 RJ45
 - 4 1000BASE-X SFP



- SGS-6341-24T4X**
- 24 10/100/1000 RJ45
 - 4 1/10G SFP+



- SGS-6341-24P4X**
- 24 10/100/1000 RJ45 PoE
 - 4 1/10G SFP+



- SGS-6340-24P4S**
- 24 10/100/1000 RJ45 PoE
 - 4 1000BASE-X SFP



- SGS-6340-20S4C4X**
- 24 100/1000BASE-X SFP
 - 4G TP/SFP combo
 - 4 1/10G SFP+



- SGS-6340-16XR**
- 16 1/10G SFP+
 - AC + DC power input



Without 10G

With 10G

Product Overview

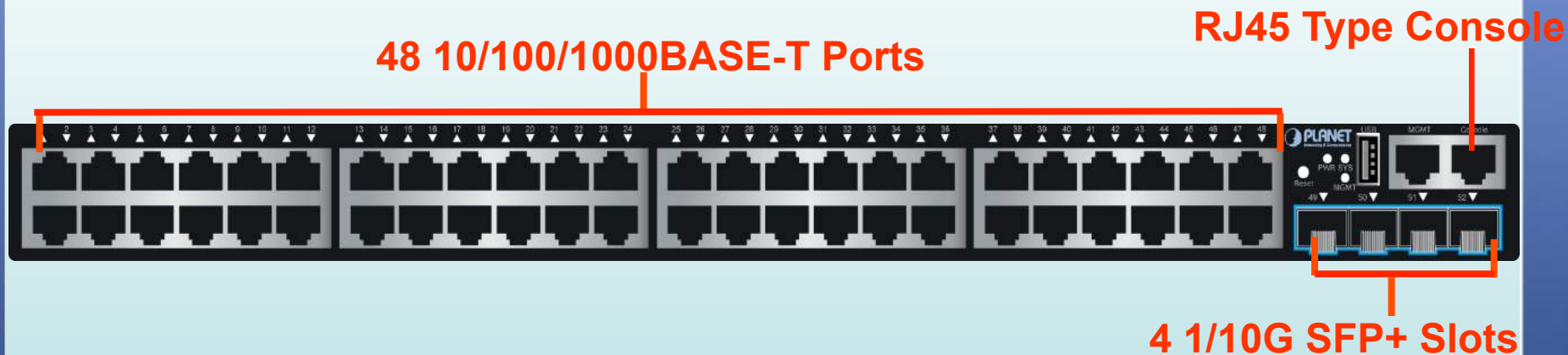
◆ SGS-6341-48T4X Front Panel

- ✓ **48 10/100/1000BASE-T RJ45 ports (Ports 1~48)**
 - Auto-MDI/MDI-X, auto negotiation

- ✓ **4 1/10G SFP+ slots (Port 49~52)**
 - Compatible with 1000BASE-X SFP transceiver

- ✓ **RJ45 type console port**

- ✓ **Reset button**

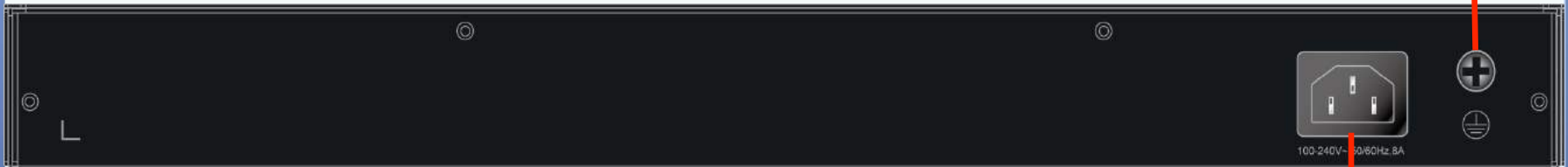


Product Overview



◆ SGS-6341-48T4X Rear Panel

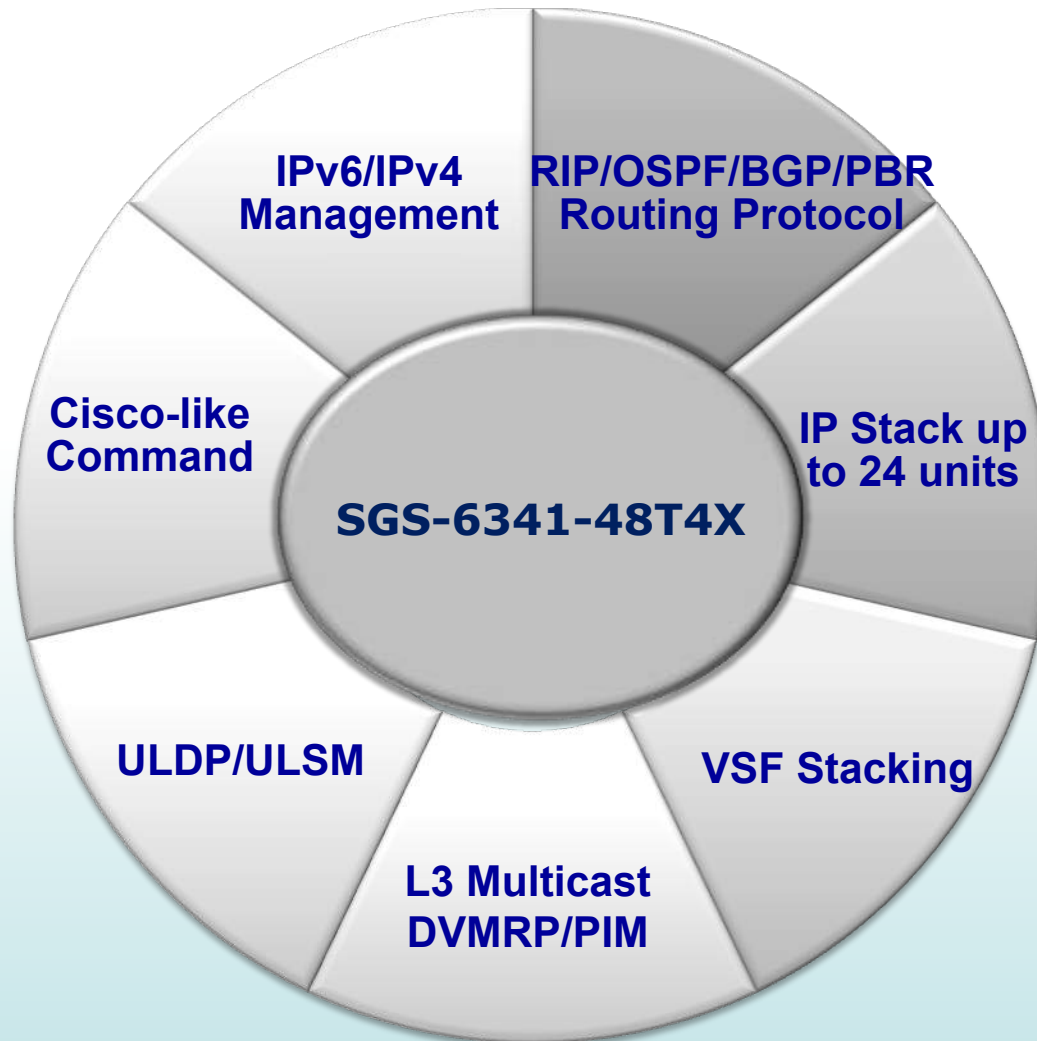
- ✓ AC power input
- ✓ Grounding screw



Grounding Screw

AC Power Input

Key Features

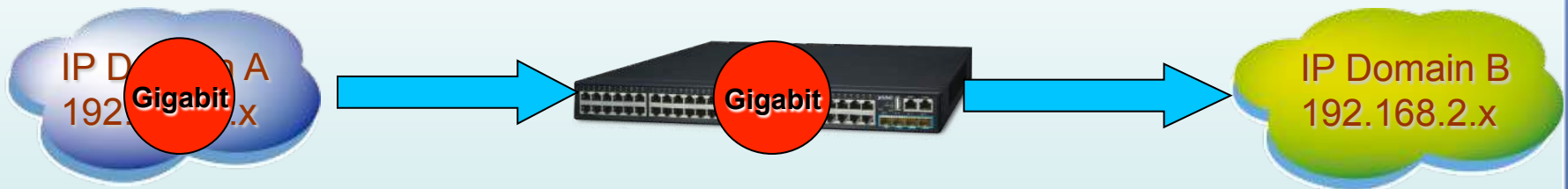


Product Benefits



Layer 3 Routing Benefits

- ◆ IPv4/IPv6 Layer 3 Static Routing
- ◆ Layer 3 Dynamic Routing
 - ✓ RIPv1/v2 (Routing Information Protocol)
 - ✓ OSPFv1/v2 (Open Shortest Path First)
 - ✓ BGP (Border Gateway Protocol)
 - ✓ PBR (Policy-based Routing)

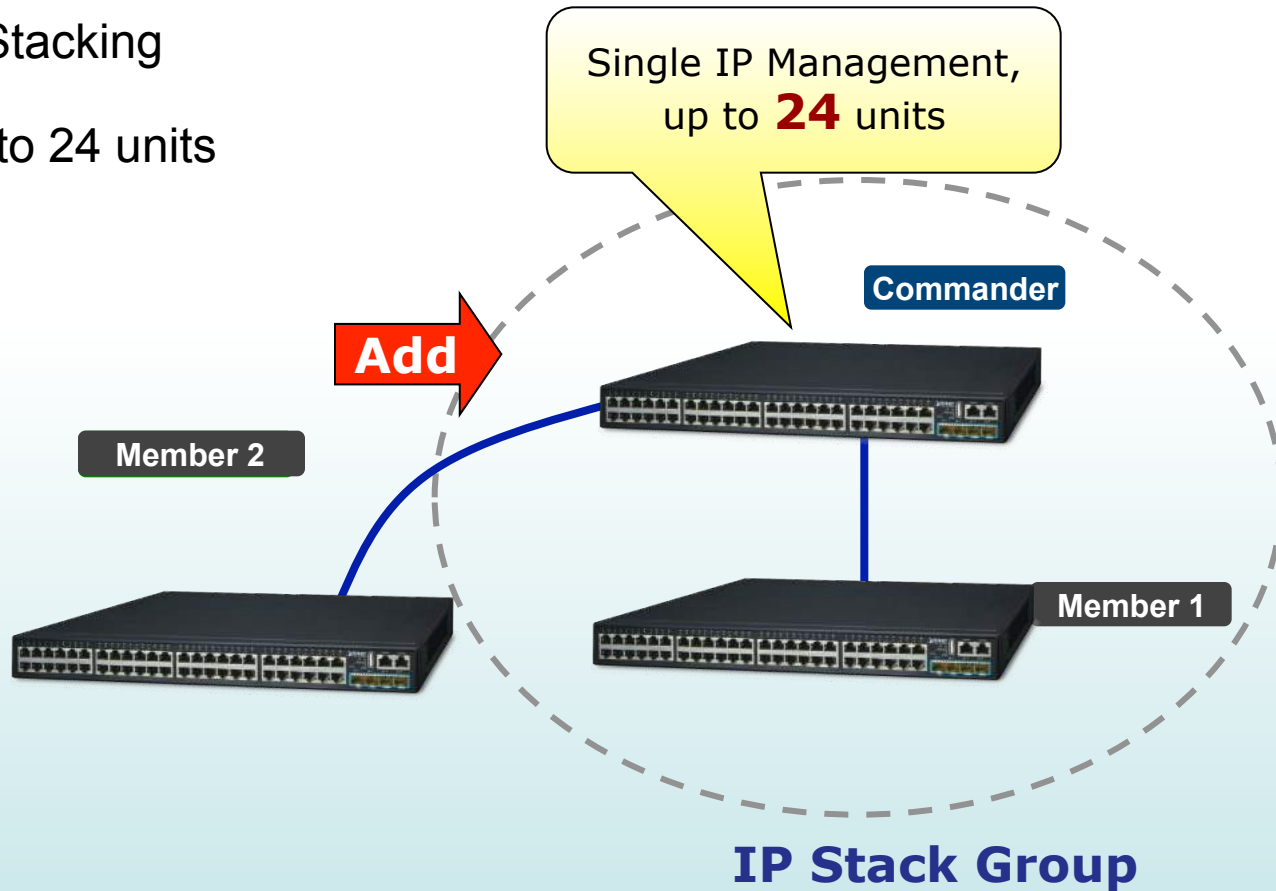


Wire-speed VLAN Routing

IP Stacking Benefits

◆ Single IP Management

- ✓ IP Stacking
- ✓ Up to 24 units



CLI Benefits

- ◆ Console command is Cisco-like, which allows users to make it work more easily.

```
SGS-6341-24P4X#config terminal
SGS-6341-24P4X(config)#interface vlan 1
SGS-6341-24P4X(config-if-vlan1)#ip address 192.168.0.100 255.255.255.0
SGS-6341-24P4X(config-if-vlan1)#exit
SGS-6341-24P4X(config)#exit
SGS-6341-24P4X#show ip interface brief
```

Index	Interface	IP-Address	Protocol
11001	Vlan1	192.168.0.100	down
17500	Loopback	127.0.0.1	up

```
SGS-6341-24P4X#config terminal
SGS-6341-24P4X(config)#vlan 2
SGS-6341-24P4X(config-vlan2)#interface ethernet 1/0/1-10
SGS-6341-24P4X(config-if-port-range)#switchport access vlan 2
Set the port Ethernet1/0/1 access vlan 2 successfully
Set the port Ethernet1/0/2 access vlan 2 successfully
Set the port Ethernet1/0/3 access vlan 2 successfully
Set the port Ethernet1/0/4 access vlan 2 successfully
Set the port Ethernet1/0/5 access vlan 2 successfully
Set the port Ethernet1/0/6 access vlan 2 successfully
Set the port Ethernet1/0/7 access vlan 2 successfully
Set the port Ethernet1/0/8 access vlan 2 successfully
Set the port Ethernet1/0/9 access vlan 2 successfully
Set the port Ethernet1/0/10 access vlan 2 successfully
SGS-6341-24P4X(config-if-port-range)#
```



Product Features



Product Specifications

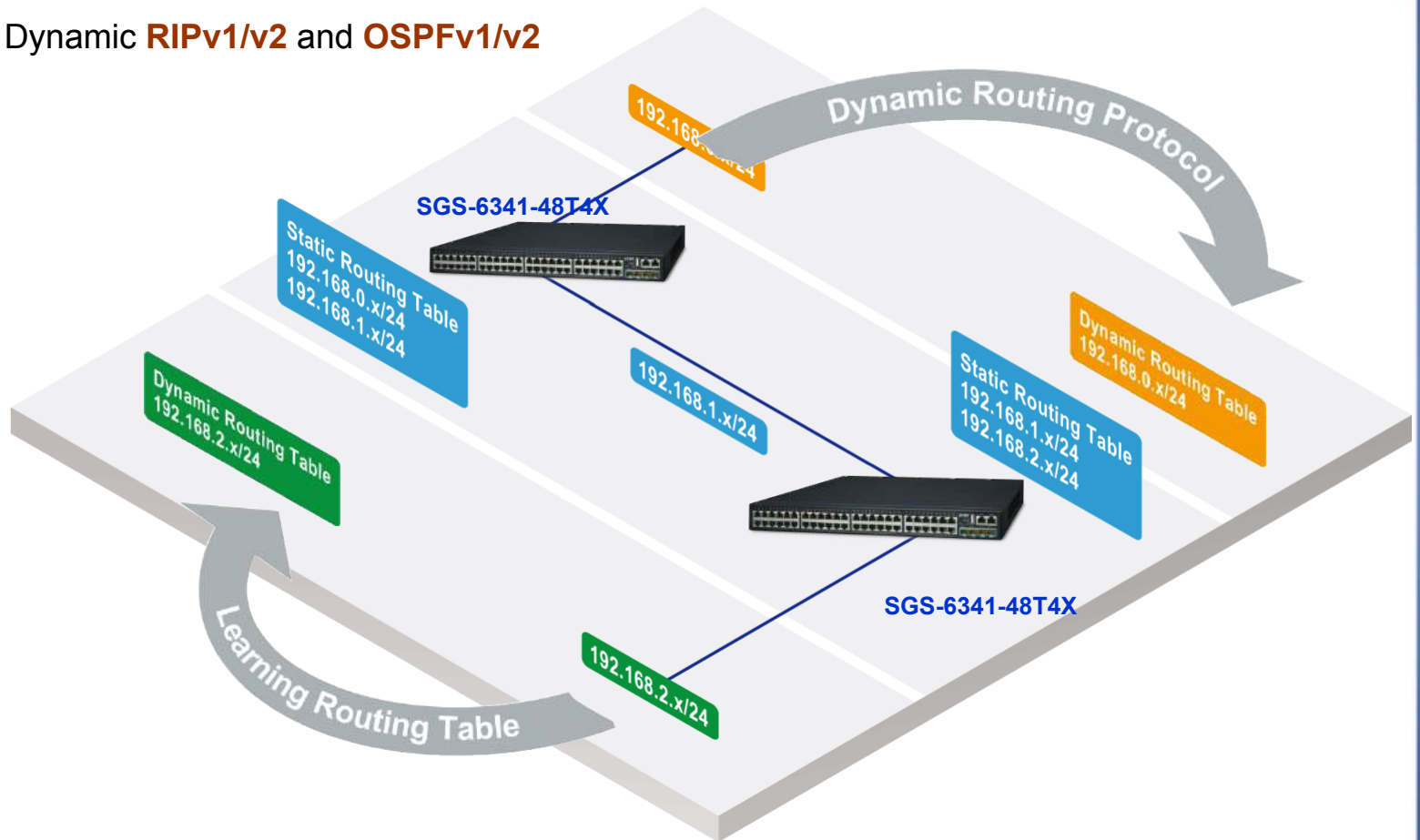
◆ SGS-6341-48T4X Hardware

- ✓ **48 10/100/1000BASE-T** RJ45 copper ports
- ✓ **4 1/10G** mini-GBIC/**SFP+** slots
- ✓ **176Gbps/non-blocking** switch fabric
- ✓ **10K** bytes jumbo frame
- ✓ **16K** MAC address entries
- ✓ 19 inch/1U height

Product Features

◆ Supports Layer 3 Routing

- ✓ IPv6/IPv4 Static Layer 3 Routing
- ✓ Dynamic **RIPv1/v2** and **OSPFv1/v2**



Product Features

◆ Supports VLAN

- ✓ IEEE 802.1Q tagged VLAN
- ✓ Provider Bridging (VLAN **Q-in-Q**) support (IEEE 802.1ad)
- ✓ Private VLAN Edge (PVE)
- ✓ GVRP – Dynamic VLAN learning
- ✓ Protocol-based VLAN
- ✓ MAC-based VLAN
- ✓ IP subnet VLAN

◆ Supports 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, spanning tree by VLAN)
- ✓ **BPDU** and **Port Guard** enhance switch network reliability, manageability and security

Product Features

◆ IPv6/IPv4 Quality of Service

- ✓ Strict priority and Weighted Round Robin (WRR) CoS policies
- ✓ Traffic Classification
 - IEEE 802.1p CoS/ToS
 - IPv4/IPv6 DSCP
 - IP TCP/UDP port number
 - Port-based QoS
- ✓ **Traffic-policing** on the switch port
- ✓ **Voice VLAN**

◆ Supports Link Aggregation

- ✓ IEEE 802.3ad Link Aggregation Control Protocol (LACP)
- ✓ Cisco ether-channel (static trunk)
- ✓ Up to **16Gbps** bandwidth (duplex mode)

Product Features

◆ Multicast

- ✓ Supports IPv4 IGMP Snooping v1, v2 and **v3**
- ✓ Supports IPv6 MLD Snooping v1 and **v2**
- ✓ Querier mode support
- ✓ MVR (Multicast VLAN Registration)

◆ Security

- ✓ **Network Access Authentication mechanism**
 - IEEE 802.1x Port-based authentication for user identity control
 - MAC-based authentication for easy deployment
 - **Web Proxy authentication**
 - RADIUS/TACACS+
 - Guest VLAN
- ✓ **IPv6/IPv4 Access Control List (ACL)**
 - **IP-based** and **MAC-based** filtering to permit or deny traffic
 - Time-based ACL

Product Features

◆ Enhanced Security

- ✓ **DHCP Snooping** to filter untrusted DHCP messages
- ✓ **ARP Guard**
 - Discards ARP packets with invalid MAC address to IP address binding
 - Protects the network from certain "man-in-the-middle" attacks
- ✓ **IP Source Guard**
 - Helps prevent IP spoofing attacks when a host tries to spoof and use the IP address of another host
 - Any IP traffic with a source IP address other than that assigned will be filtered out
- ✓ **Auto DoS rule** to defend DoS attack

Product Features

◆ Management

- ✓ Supports the unit for IPv4/IPv6 **HTTP**
- ✓ Supports the user IP security inspection for IPv4/IPv6 **SNMP**
- ✓ Supports IPv4/IPv6 **FTP/TFTP**
- ✓ Supports IPv4/IPv6 **NTP**
- ✓ Supports the RADIUS authentication for IPv4/IPv6 Telnet user name and password
- ✓ Supports IPv4/IPv6 **SSH/SSL**
- ✓ Supports Syslog server for IPv4 and IPv6 Standard-based Management Protocols
 - Web-based
 - Telnet, Console Command Line
 - SNMP v1 and v2c
- ✓ **Security Authentication** for secure management
 - **SSH, SSL and SNMPv3**
- ✓ SNMP RMON 1, 2, 3 and 9 for in/out network traffic and event monitoring
- ✓ Supports sFlow, ULDP, ULPP and ULSM

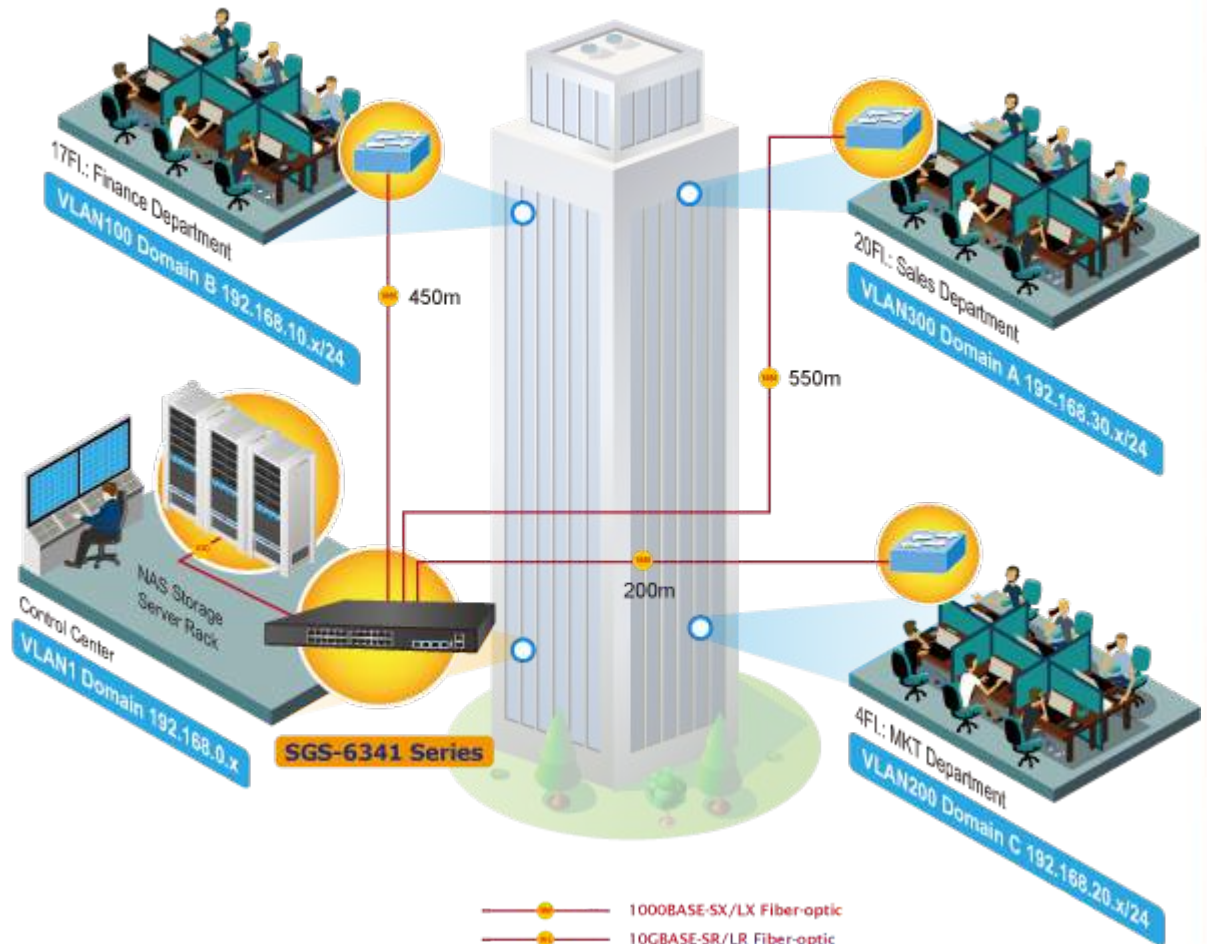
Applications



Applications

- ✓ To separate different departments with dynamic routing function

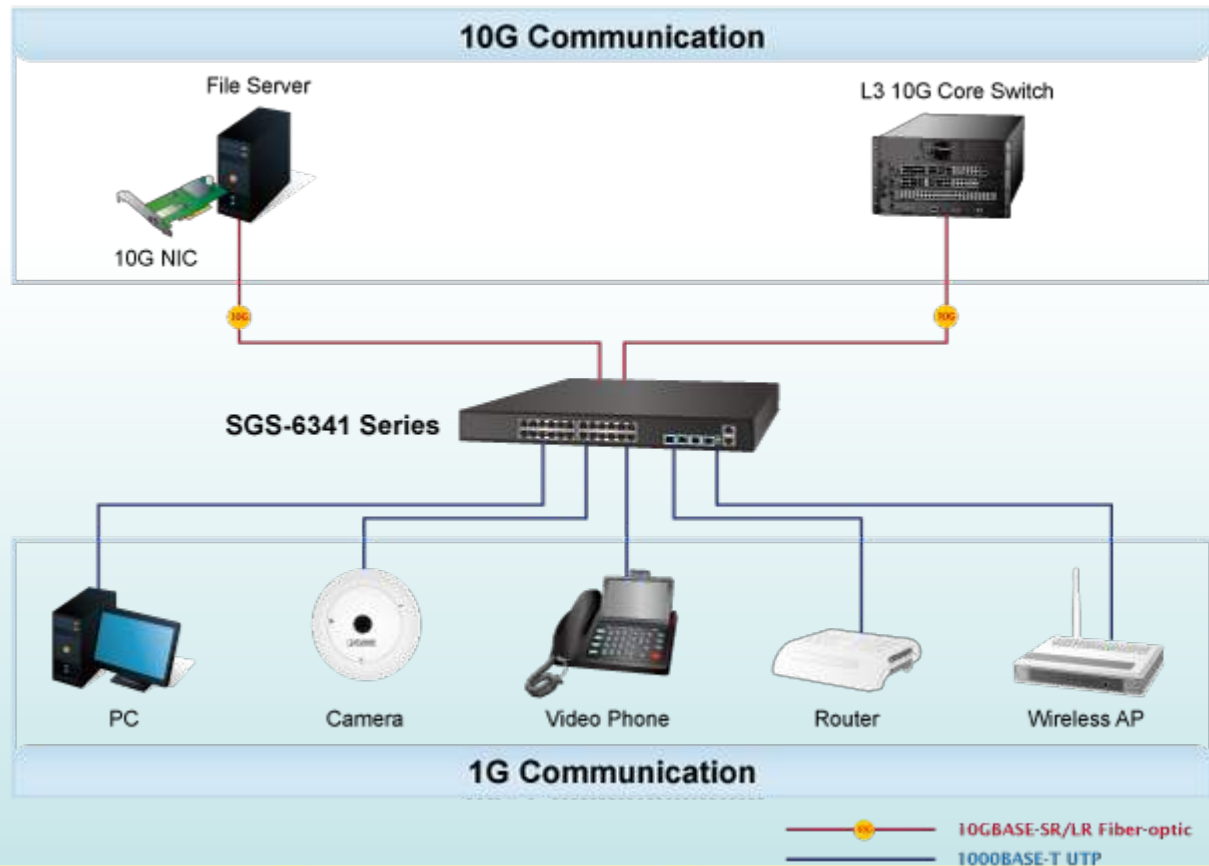
VLAN Routing + 10G Uplink Applications



Applications

- ◆ Excellent Solution to Core/Data Center Security and QoS Switch
 - ✓ The SGS-6341 series performs high Gigabits per second non-blocking switch fabric so it can easily provide a local 10Gbps high bandwidth Ethernet network for the backbone of your department.

High Performance Server Service



Appendix



Sales Target

◆ Target Markets

- ✓ Enterprise, Hospital, Government, Campus
- ✓ ISP, Telecom, Service Provider
- ✓ Data Center

◆ Why **SGS-6341-48T4X** could be your best choice.

- ✓ The following are 48-port Gigabit Switches, but dynamic routing is not featured:
 - GS-5220-48T4X, GS-2240-48T4X
- ✓ XGS3-24042 and XGS3-24242 comes with dynamic routing at a high price.
- ✓ The following are Layer 3 Switches, but 10G SFP+ interface is not featured:
 - SGS-6340-24T4S
 - SGS-6340-48T4S
 - SGS-6340-24P4S

Appendix

◆ Available **Gigabit Ethernet** Fiber Optic SFP Modules:

✓ Gigabit Ethernet Transceiver (1000BASE-X SFP)

Model	Speed (Mbps)	Connector Interface	Fiber Mode	Distance	Wavelength (nm)	Operating Temp.
MGB-GT	1000	Copper	--	100m	--	0 ~ 60 degrees C
MGB-SX	1000	LC	Multi Mode	550m	850nm	0 ~ 60 degrees C
MGB-SX2	1000	LC	Multi Mode	2km	1310nm	0 ~ 60 degrees C
MGB-LX	1000	LC	Single Mode	10km	1310nm	0 ~ 60 degrees C
MGB-L30	1000	LC	Single Mode	30km	1310nm	0 ~ 60 degrees C
MGB-L50	1000	LC	Single Mode	50km	1550nm	0 ~ 60 degrees C
MGB-L70	1000	LC	Single Mode	70km	1550nm	0 ~ 60 degrees C
MGB-L120	1000	LC	Single Mode	120km	1550nm	0 ~ 60 degrees C
MGB-TSX	1000	LC	Multi Mode	550m	850nm	-40 ~ 75 degrees C
MGB-TLX	1000	LC	Single Mode	10km	1310nm	-40 ~ 75 degrees C
MGB-TL30	1000	LC	Single Mode	30km	1310nm	-40 ~ 75 degrees C
MGB-TL70	1000	LC	Single Mode	70km	1550nm	-40 ~ 75 degrees C

Appendix

◆ Available Gigabit Ethernet Fiber Optic SFP Modules:

✓ Gigabit Ethernet Transceiver (1000BASE-BX, Single Fiber bi-directional SFP)

Model	Speed (Mbps)	Connector Interface	Fiber Mode	Distance	Wavelength (TX)	Wavelength (RX)	Operating Temp.
MGB-LA10 MGB-LB10	1000	WDM (LC)	Single Mode	10km	1310nm	1550nm	0 ~ 60 degrees C
1550nm					1310nm		
MGB-LA20 MGB-LB20	1000	WDM (LC)	Single Mode	20km	1310nm	1550nm	0 ~ 60 degrees C
1550nm					1310nm		
MGB-LA40 MGB-LB40	1000	WDM (LC)	Single Mode	40km	1310nm	1550nm	0 ~ 60 degrees C
1550nm					1310nm		
MGB-LA60 MGB-LB60	1000	WDM (LC)	Single Mode	60km	1310nm	1550nm	0 ~ 60 degrees C
1550nm					1310nm		
MGB-TLA10 MGB-TLB10	1000	WDM (LC)	Single Mode	10km	1310nm	1550nm	-40 ~ 75 degrees C
1550nm					1310nm		
MGB-TLA20 MGB-TLB20	1000	WDM (LC)	Single Mode	20km	1310nm	1550nm	-40 ~ 75 degrees C
1550nm					1310nm		
MGB-TLA40 MGB-TLB40	1000	WDM (LC)	Single Mode	40km	1310nm	1550nm	-40 ~ 75 degrees C
1550nm					1310nm		
MGB-TLA60 MGB-TLB60	1000	WDM (LC)	Single Mode	60km	1310nm	1550nm	-40 ~ 75 degrees C
1550nm					1310nm		

Appendix

◆ Available 10Gigabit Ethernet Fiber Optic SFP Modules:

✓ 10Gigabit Ethernet Transceiver (10GBASE-X SFP+)

Model	Speed (Mbps)	Connector Interface	Fiber Mode	Distance	Wavelength (nm)	Operating Temp.
MTB-SR	10G	LC	Multi Mode	300m	850nm	0 ~ 60 degrees C
MTB-LR	10G	LC	Single Mode	10km	1310nm	0 ~ 60 degrees C

✓ 10Gigabit Ethernet Transceiver (10GBASE-BX, Single Fiber Bi-directional SFP+)

Model	Speed (Mbps)	Connector Interface	Fiber Mode	Distance	Wavelength (TX)	Wavelength (RX)	Operating Temp.
MTB-LA20	10G	WDM (LC)	Single Mode	20km	1270nm	1330nm	0 ~ 60 degrees C
MTB-LB20	10G	WDM (LC)	Single Mode	20km	1330nm	1270nm	0 ~ 60 degrees C
MTB-LA40	10G	WDM (LC)	Single Mode	40km	1270nm	1330nm	0 ~ 60 degrees C
MTB-LB40	10G	WDM (LC)	Single Mode	40km	1330nm	1270nm	0 ~ 60 degrees C
MTB-LA60	10G	WDM (LC)	Single Mode	60km	1270nm	1330nm	0 ~ 60 degrees C
MTB-LB60	10G	WDM (LC)	Single Mode	60km	1330nm	1270nm	0 ~ 60 degrees C



ACTIVATING IP POWER