

Layer 3 12-Port 10G SFP+ + 8-Port 10/100/1000T Managed Switch with Dual 100~240V AC Redundant Power

XGS-6350-12X8TR



Presentation Outlines

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

High-performance and Ideal Solution
for **Layer 3** Management Infrastructure



Long Distance
Transmission

Remote Headquarters

Product Positioning



Layer 3 Static/Dynamic Routing Managed Switches

Full Multi-layer

- Developing
- New Phase-in
- Available

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



Simple Multi-layer

SGS-6341-48T4X

- 48 10/100/1000 RJ45
- 4 1/10G SFP+
- L3 Multicast



XGS-6350-12X8TK New

- 12 1/10G SFP+
- 8 10/100/1000 RJ45
- L3 Multicast



Layer 3

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+
- L3 Multicast



SGS-6341-24P4X

- 24 10/100/1000 RJ45 PoE
- 4 1/10G SFP+
- L3 Multicast



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

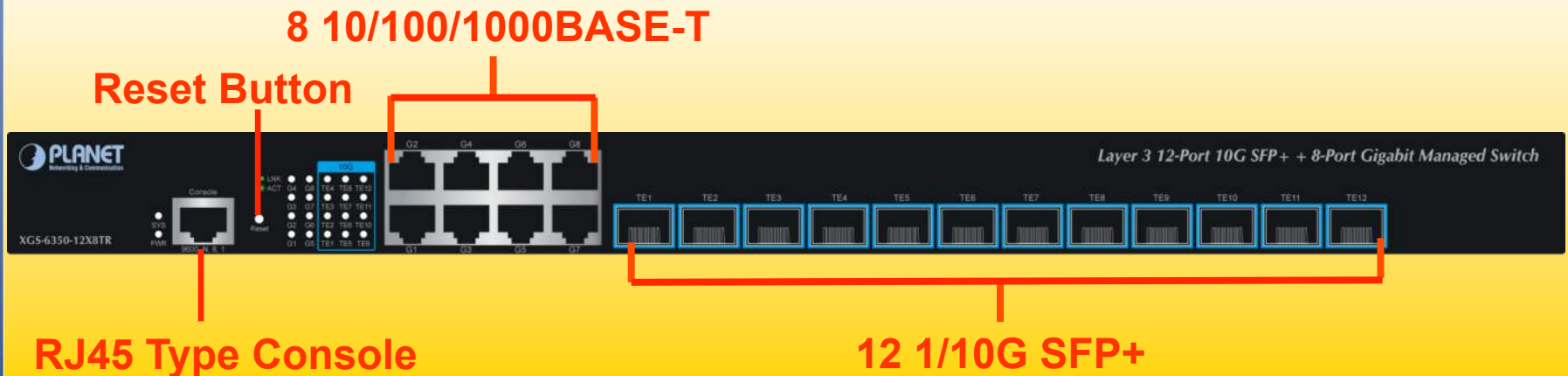
Product Overview



Product Overview

◆ XGS-6350-12X8TR Front Panel

- ✓ **12** 1/10G SFP+ slots (TE1~12)
 - Compatible with 1000BASE-X SFP transceiver
- ✓ **8** 10/100/1000BASE-T RJ45 Ports (G1~G8)
 - Auto-MDI/MDI-X, auto negotiation
- ✓ RJ45 type console port
- ✓ Reset button

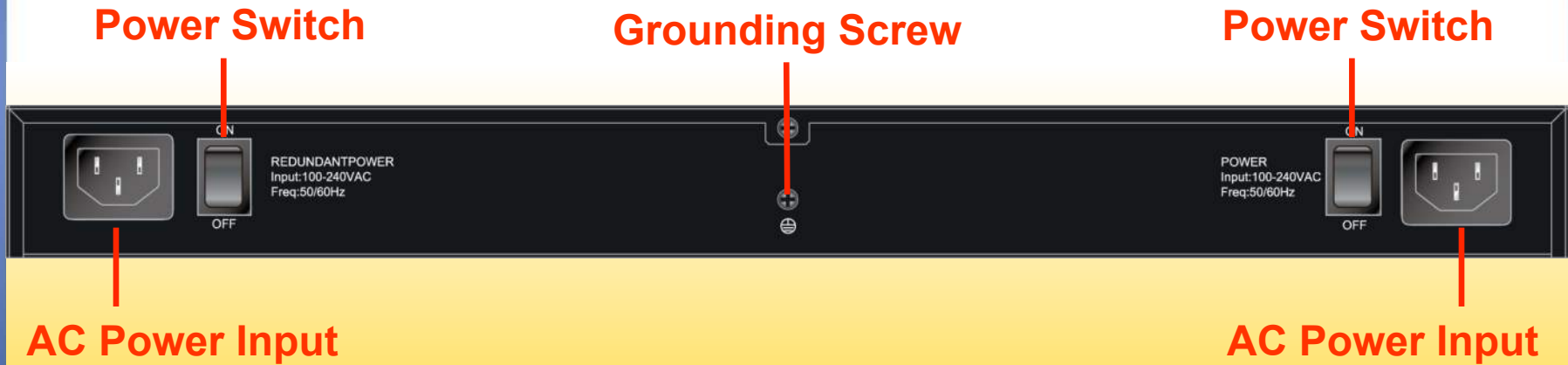


Product Overview



◆ XGS-6350-12X8TR Rear Panel

- ✓ Dual 100~240V AC power input
- ✓ Power switch
- ✓ Grounding screw



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)



Wire-Speed VLAN Routing

CLI Benefits

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

```
Switch#config
Switch_config#interface vlan1
Switch_config_vl#ip address 192.168.0.254 255.255.255.0
Switch_config_vl#exit
Switch_config#exit
Switch#show ip interface brief
```

Interface	IP-Address	Method	Protocol-Status
Null0	unassigned	manual	up
VLAN1	192.168.0.254	manual	up

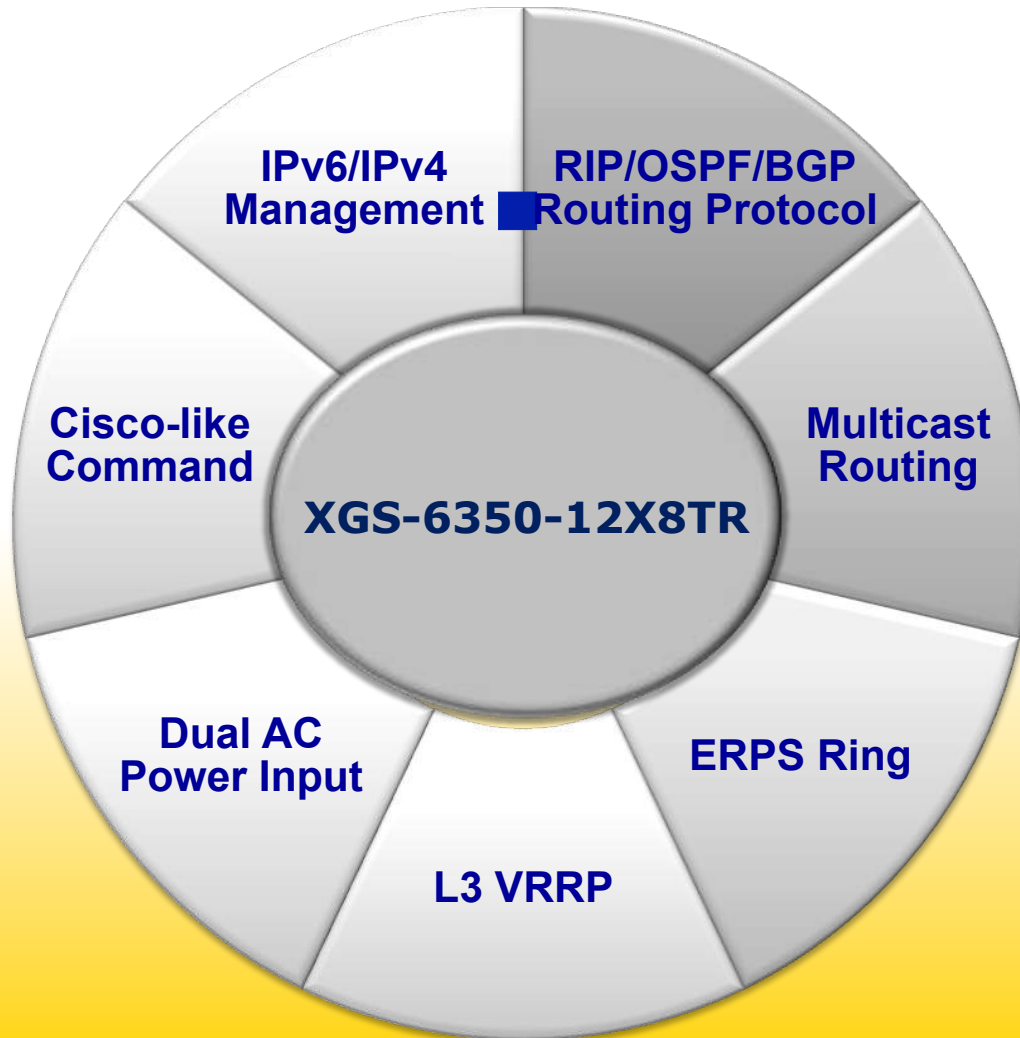
```
Switch#config
Switch_config#interface gigaehternet0/1
Switch_config_g0/1#speed 100
Switch_config_g0/1#exit
Switch_config#interface range gigaehternet0/2-8
Switch_config_if_range#speed 100
Switch_config_if_range#
```



Product Features



Key Features



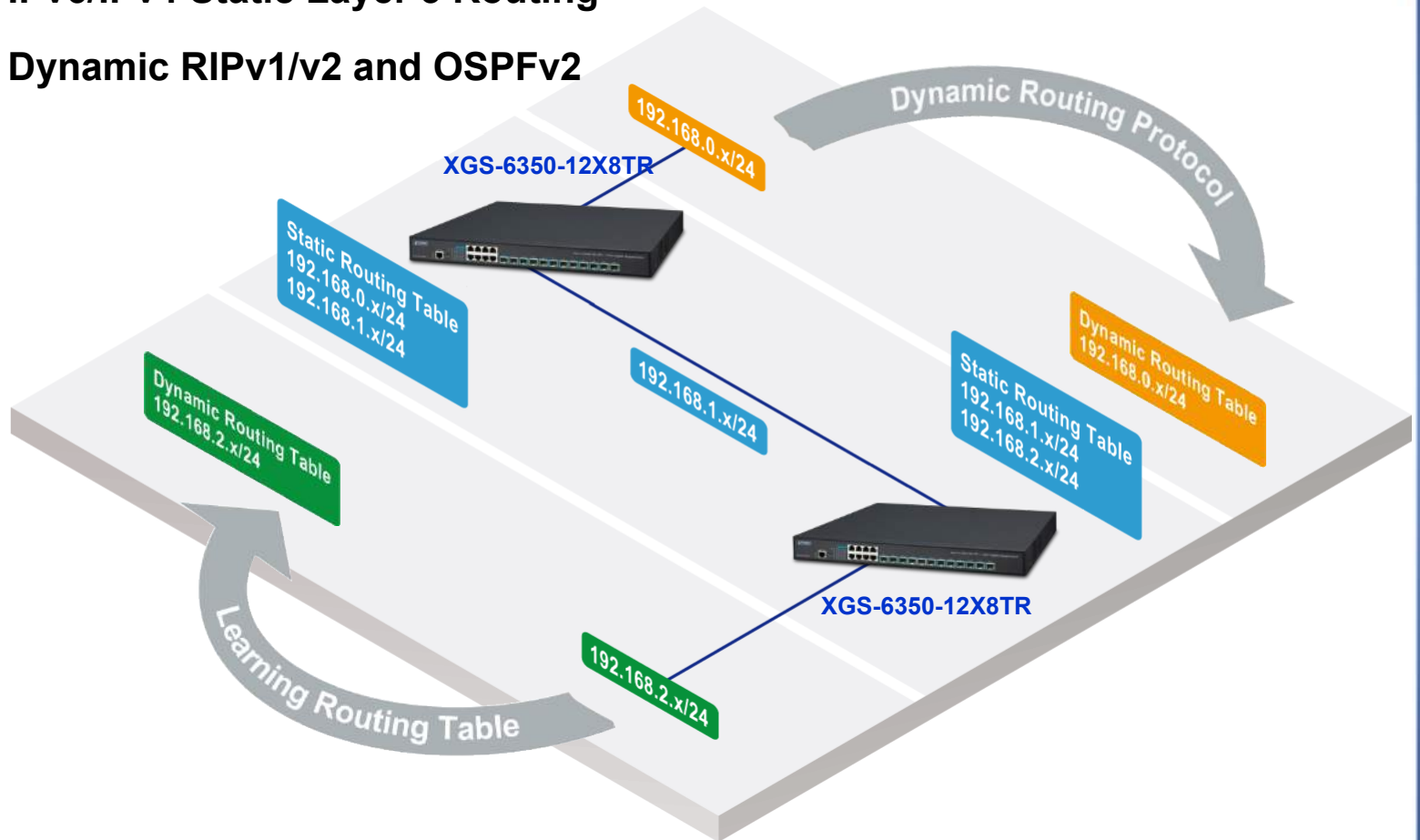
Product Features

◆ Hardware

- ✓ **12 1/10G** mini-GBIC/SFP+ slots
- ✓ **8 10/100/1000BASE-T** RJ45 copper
- ✓ **256Gbps/non-blocking** switch fabric
- ✓ **180Mpps** switch throughput
- ✓ **9K** bytes jumbo frame
- ✓ **32K** MAC address entries
- ✓ **19 inch/1U** height
- ✓ **Reset** button
- ✓ **Dual 100~240 AC** redundant power

Product Features

- ◆ Supports Layer 3 Routing
 - ✓ IPv6/IPv4 Static Layer 3 Routing
 - ✓ Dynamic RIPv1/v2 and OSPFv2



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

Product Features

- ◆ **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 **root guard** enhances switch network reliability, manageability and security

Product Features

◆ Quality of Service (QoS)

- ✓ 8 priority queues on all switch ports
- ✓ Strict priority and Weighted Round Robin (WRR) CoS policies
- ✓ Traffic Classification
 - IEEE 802.1p CoS/ToS
 - IPv4/IPv6 DSCP
 - Port-based WRR

◆ Supports Link Aggregation

- ✓ IEEE 802.3ad Link Aggregation Control Protocol (LACP)
- ✓ Cisco ether-channel (static trunk)
- ✓ Maximum 32 trunk groups with up to 8 ports per trunk group

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
 - RADIUS/TACACS+
- ✓ IPv6/IPv4 Access Control List (ACL)
 - IP-based and MAC-based filtering to permit or deny traffic

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

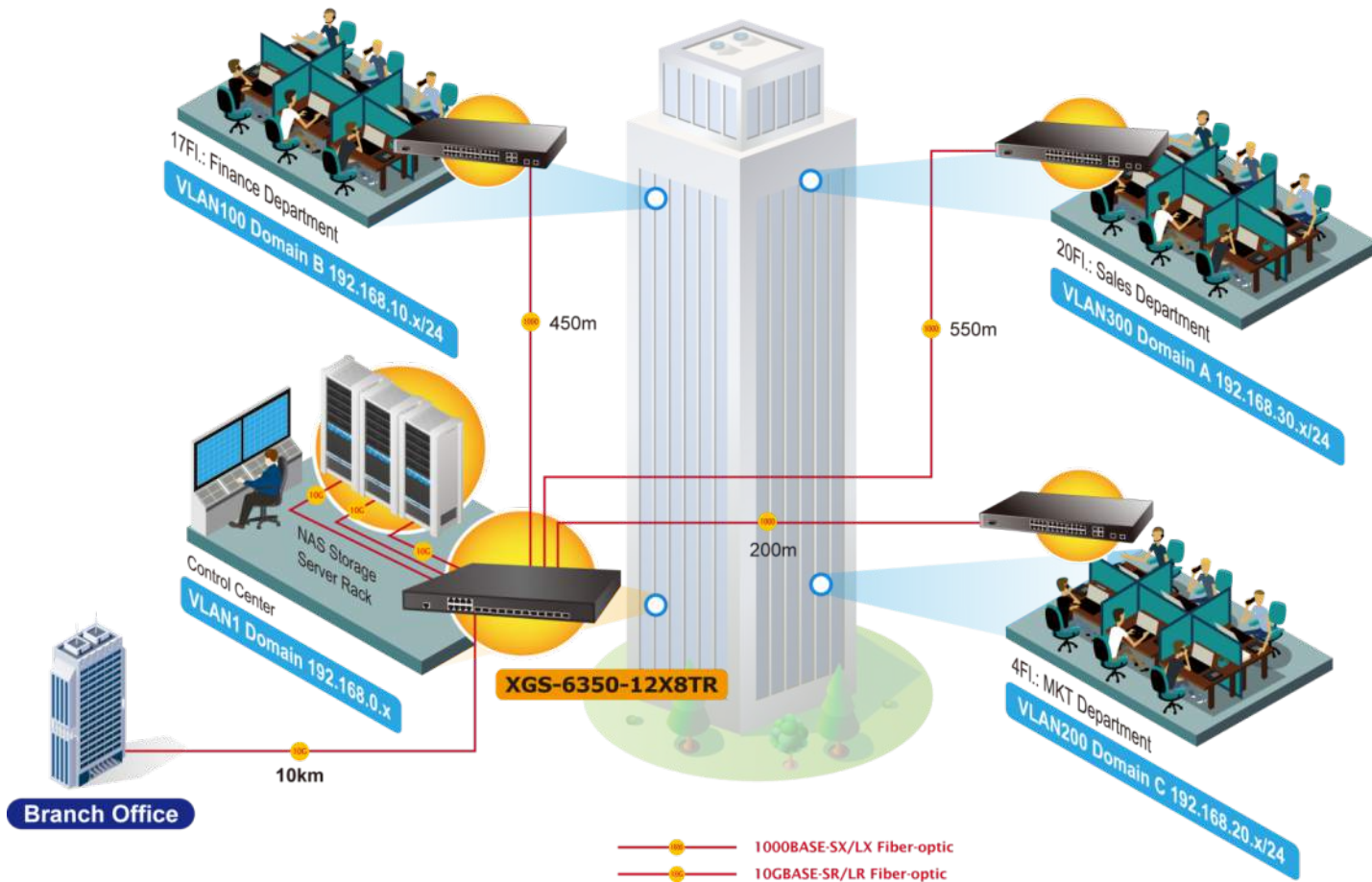
- ✓ Supports the unit for IPv4/IPv6 **HTTP**
- ✓ Supports the user IP security inspection for IPv4/IPv6 **SNMP**
- ✓ Supports IPv4/IPv6 **TFTP**
- ✓ Supports IPv4/IPv6 **NTP**
- ✓ Supports the RADIUS authentication for IPv4/IPv6 Telnet user name and password
- ✓ Supports IPv4/IPv6 **SSH**
- ✓ Supports Syslog server for IPv4 and IPv6 Standard-based Management Protocols
 - Web-based
 - Telnet, Console Command Line
 - SNMP v1, v2c and v3
- ✓ **Security Authentication** for secure management
 - **SSH and SNMPv3**
- ✓ **SNMP RMON 1, 2, 3 and 9** for in/out network traffic and event monitoring

Applications



Applications

- ◆ To separate different departments with routing function
VLAN Routing + 10G Uplink Applications

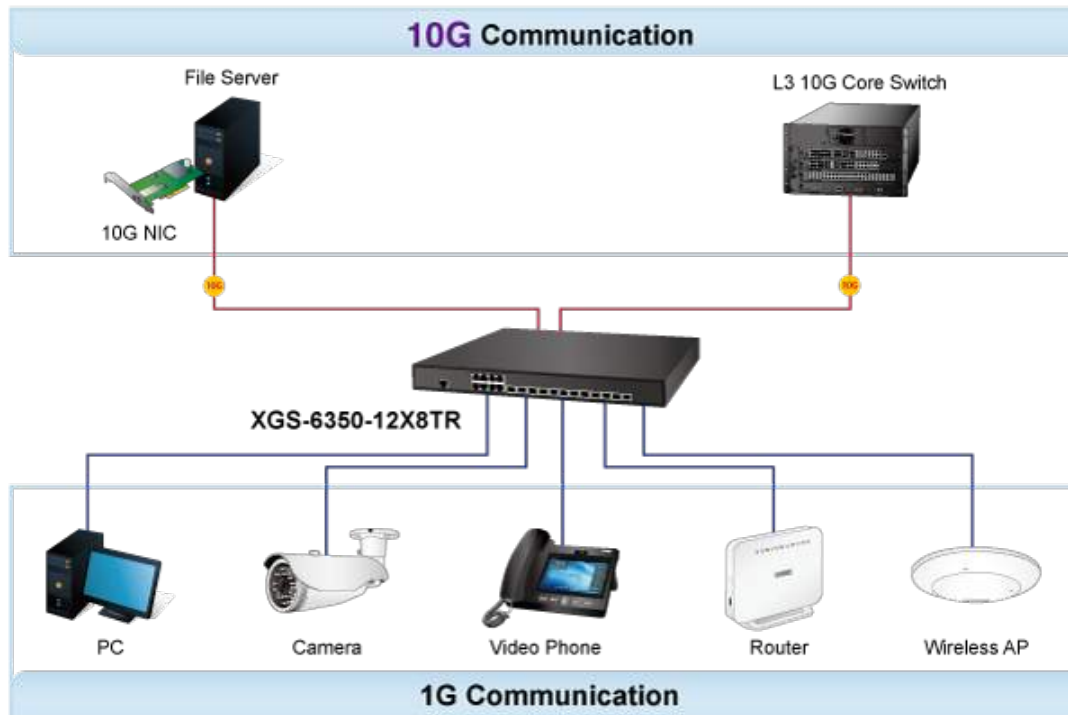


Applications

◆ Excellent Solution to Core/Data Center Security and QoS Switch

- ✓ The XGS-6350-12X8TR 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 10Gbps Server Service






Comparison






Comparison Table (1/4)

Layer 3 10G SFP+ Managed Switches Comparison Chart

	PLANET	PLANET	PLANET
Model Name	XGS-6350-12X8TR	SGS-6340-16XR	XGS3-24242
			
Performance	■	■	■
Switch Fabric	256Gbps	320Gbps	208Gbps
MAC Address Table	32K	16K	32K
Jumbo Frame	9K	9K	16K
Interface			
1000BASE-X SFP Slots	-	-	24, 100FX Compatible
10/100/1000BASE-T	8	-	16 (Combo)
10GBASE-X SFP+ Slots	12, 1000FX Compatible	16, 1000FX Compatible	4
QSFP+ Slot	-	-	2 (For Hardware Stacking)
Console	RJ45 type RS232	RJ45 type RS232	RJ45 type RS232
IPv4 Routing	■	■	■
IP Routing	Static Route	■ ■	■ ■
	RIP v1 / v2	■ ■	■ ■
	OSPFv2	■ ■	■ ■
	BGP	■ ■	■ ■
	IGMP	■ ■	■ ■




Comparison Table (2/4)

Layer 3 10G SFP+ Managed Switches Comparison Chart

		PLANET	PLANET	PLANET
Model Name		XGS-6350-12X8TR	SGS-6340-16XR	XGS3-24242
				
IPv4 Routing		■	■	■
Multicast Routing	DVMRP	-	-	■ ■
	PIM	PIM-SM	-	PIM-DM/SM/SSM
Policy-based Routing		■ ■	■ ■	■ ■
VRRP		■ ■	■ ■	■ ■
MRPP (Multi-layer Ring Protection Protocol)		■ ■	■ ■	■ ■
Layer 2 Features		■	■	■
Link Aggregation	Static	■ ■	■ ■	■ ■
	LACP	32 groups with 8 ports per trunk group	128 Trunks/8 Ports	128 Trunks/8 Ports
VLAN	802.1Q	■ ■	■ ■	■ ■
	Protocol-based	■ ■	■ ■	■ ■
	Q-in-Q	■ ■	■ ■	■ ■
	GVRP	■ ■	■ ■	■ ■
	Private VLAN	■ ■	■ ■	■ ■




Comparison Table (3/4)

Layer 3 10G SFP+ Managed Switches Comparison Chart

	PLANET	PLANET	PLANET
Model Name	XGS-6350-12X8TR	SGS-6340-16XR	XGS3-24242
			
Layer 2 Features	■	■	■
Spanning Tree	802.1d/1w/1s	802.1d/1w/1s	802.1d/1w/1s
STP BPDU Guard	■ ■	■ ■	■ ■
Multicast ■			
IGMP Snooping	V1,V2, V3	V1, V2, V3	V1, V2, V3
IGMP Query mode, IGMP Filtering	■ ■	■ ■	■ ■
MLDv1/v2, MLD v1/v2 Snooping	■ ■	■ ■	■ ■
QoS	■	■	■
L2 802.1p	■/8 queues	■/8 queues	■/8 queues
L3 IP TOS/DSCP	■ ■	■ ■	■ ■
L4 TCP/UDP Port	■ ■	■ ■	■ ■
Strict/WRR	■/■ ■	■/■ ■	■/■ ■
Security ■			
802.1X Port based, RADIUS	■ ■	■ ■	■ ■

Comparison Table (4/4)

Layer 3 10G SFP+ Managed Switches Comparison Chart

	PLANET	PLANET	PLANET
Model Name	XGS-6350-12X8TR	SGS-6340-16XR	XGS3-24242
			
Security	■	■	■
ACL	L2/L3/L4	L2/L3/L4	L2/L3/L4
Port/IP/MAC Security	■ ■	■ ■	■ ■
TACACS+	■ ■	■ ■	■ ■
DHCP Snooping	■ ■	■ ■	■ ■
IP Source Guard	■ ■	■ ■	■ ■
ARP Inspection	■ ■	■ ■	■ ■
DoS Protection	■ ■	■ ■	■ ■
Management	■	■	■
Management & Configuration	Console; Telnet; SSH; Web browser; SNMP v1, v2c and v3	Console; Telnet; SSH; Web browser; SNMP v1, v2c and v3	Console; Telnet; SSH; Web browser; SNMP v1, v2c and v3
Stacking	- ■	IP Stacking, 24 ■	IP Stacking, 24 ■
SNMP V1, V2c, V3, Trap, RMON	■ ■	■ ■	■ ■

Appendix



Sales Target

◆ Target Markets

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

◆ Why XGS-6350-12X8TR could be your best choice.

- ✓ XGS3-24042 and XGS3-24242 come with dynamic routing but they are priced a little higher.
- ✓ The following are Layer 3 Lite 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)

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