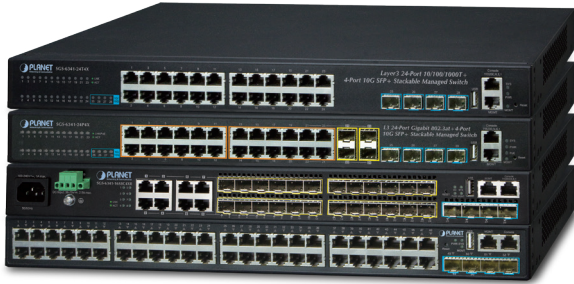# Layer 3 Multiple Gigabit + 4-Port 10G SFP+ Stackable Managed Switch

Powerful 10Gbps and Layer 3 Routing Solution for Enterprise Backbone and Data Center Networking

PLANET SGS-6341 series is a **Layer 3 Stackable Managed Gigabit Switch that provides high-density performance, Layer 3 static routing, RIP (Routing Information Protocol)** and **OSPF (Open Shortest Path First)**. With **10Gbps** uplink interfaces and **switch stacking** capability, the SGS-6341 series can handle extremely large amounts of data in a secure topology linking to an enterprise backbone or high-capacity servers. The powerful multicast routing and network security features make the SGS-6341 series perform effective data traffic control for ISP and enterprise VoIP, video streaming, and multicast applications.

The hardware specifications of these models are shown below:

Models	10/100/1000T Copper	100/1000X SFP	1000/10G SFP+	PoE Ports	Power Input
SGS-6341-24T4X	24	--	4	--	AC
SGS-6341-24P4X	24	4 (combo)	4	24	AC
SGS-6341-16S8C4XR	8 (combo)	24	4	--	AC + DC
SGS-6341-48T4X	48	--	4	--	AC

High Performance 10Gbps Ethernet Capacity

The four SFP+ ports built in the SGS-6341 series boasts a high-performance switch architecture that is capable of providing non-blocking switch fabric and wire-speed throughput as high as up to 80Gbps, which greatly simplifies the tasks of upgrading the LAN for catering to increasing bandwidth demands. Each of the SFP+ ports supports **Dual-Speed**, **10GBASE-SR/LR** or **1000BASE-SX/LX**, meaning the administrator now can flexibly choose the suitable SFP/SFP+ transceiver according to the transmission distance or the transmission speed required to extend the network efficiently.

Stacking Features

- **IP Stacking**
  - Connects with stack member via Gigabit TP, SFP and 10G SFP+ interfaces
  - Single IP address management, supporting up to 24 IP units stacked together
- **Hardware Stacking**
  - Virtualized multiple SGS-6341 series stacked into one logical facility
  - Connects with stack members via assigned 10G SFP+ interfaces
  - Single IP address stack management, supporting up to 4 hardware units stacked together
  - Stacking architecture supports redundant Ring mode

IP Routing Features

- IP routing protocol supports **RIPv1/v2**, **RIPng**, **OSPFv2/v3**, **BGP4/4+**
- Routing interface provides per VLAN routing mode
- **VRRPv1/v3** protocol for redundant routing deployment
- Supports route redistribution
- Supports hardware-based wire-speed VLAN routing

Multicast Routing Features

- Supports **PIM-DM** (Protocol Independent Multicast – Dense Mode) and **PIM-SM** (Protocol Independent Multicast – Sparse Mode) and **PIM-SSM** (Protocol Independent Multicast – Source Specific Multicast)
- Supports **DVMRP** (Distance Vector Multicast Routing Protocol)
- Supports IGMP v1/v2/v3 and MLD v1/v2

Layer 2 Features

- High performance Store-and-Forward architecture, broadcast storm control, port loopback detection
- 16K MAC address table, automatic source address learning and aging
- Supports VLAN
  - IEEE 802.1Q tag-based VLAN
  - GVRP for dynamic VLAN management
  - Provider Bridging (VLAN Q-in-Q, IEEE 802.1ad) supported
  - Private VLAN Edge (PVE) supported
  - GVRP protocol for Management VLAN
  - Protocol-based VLAN

Central IP Stacking Management

Positioned as the distribution or aggregation layer switch for large networks, the SGS-6341 series supports IP stacking function that helps network managers to easily configure up to 24 switches in the same series via one single IP address instead of connecting and setting each unit one by one. The IP Stacking technology groups PLANET SGS-6341 switch series together to enable centralized management through a single unit, regardless of physical location or switch type, as long as they are connected to the same local network.

IP Stacking
Up to 24 units with SGS-6341 Series
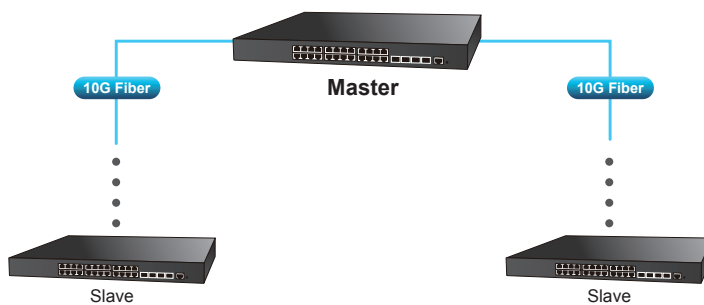
High Reliability Hardware Stacking

Two of the 10G SFP+ ports can be configured to connect several SGS-6341 series for building a virtually logical facility. The SGS-6341 series gives the enterprises, service providers and telecoms flexible control over port density, uplinks and switch stack performance. The SGS-6341 series can connect as a ring for redundancy and ensures that data integrity is retained even if one switch in the stack fails. You can even hot-swap switches without disrupting the network, which greatly simplifies the tasks of upgrading the LAN for catering to increasing bandwidth demands.

Hardware Stacking
Up to 4 units with SGS-6341 Series
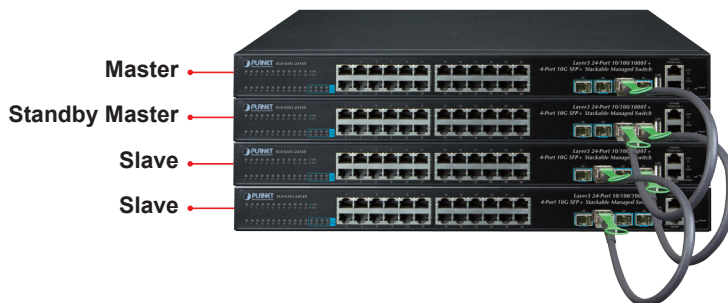
Redundant Ring, Fast Recovery for Critical Network Applications

The SGS-6341 series supports redundant ring technology and features strong, rapid self-recovery capability to prevent interruptions and external intrusions. It incorporates advanced ITU-T **G.8032 ERPS** (Ethernet Ring Protection Switching) technology and Spanning Tree Protocol (802.1s MSTP) into customer's network to enhance system reliability and uptime in harsh environments. In a certain simple Ring network, the recovery time could be less than 50ms to quickly bring the network back to normal operation.

– MAC-based VLAN
– IP subnet VLAN
- Supports Link Aggregation
  – Maximum 128 trunk groups, up to 8 ports per trunk group
  – IEEE 802.3ad LACP (Link Aggregation Control Protocol)
  – Cisco ether-channel (static trunk)
- Supports Spanning Tree Protocol
  – STP, IEEE 802.1D (Classic Spanning Tree Protocol)
  – RSTP, IEEE 802.1w (Rapid Spanning Tree Protocol)
  – MSTP, IEEE 802.1s (Multiple Spanning Tree Protocol, spanning tree by VLAN)
  – Supports BPDU & root guard
- Port mirroring to monitor the incoming or outgoing traffic on a particular port (many to many)
- Provides port mirror (many-to-1)
- Supports G.8032 ERPS (Ethernet Ring Protection Switching)

Quality of Service
- 8 priority queues on all switch ports
- Support for strict priority and WRR (Weighted Round Robin) CoS policies
- Traffic classification
  – IEEE 802.1p CoS/ToS
  – IPv4/IPv6 DSCP
  – Port-based WRR
- Strict priority and WRR CoS policies

Multicast
- Supports IPv4 IGMP snooping v1, v2 and v3; IPv6 MLD v1 and v2 snooping
- Querier mode support
- Supports Multicast VLAN Register (MVR)

Security
- IEEE 802.1x port-based network access authentication
- MAC-based network access authentication
- Built-in RADIUS client to cooperate with the RADIUS servers for IPv4 and IPv6
- TACACS+ login users access authentication
- IP-based Access Control List (ACL)
- MAC-based Access Control List
- Supports DHCP snooping
- Supports ARP inspection
- **IP Source Guard** prevents IP spoofing attacks
- **Dynamic ARP Inspection** discards ARP packets with invalid MAC address to IP address binding
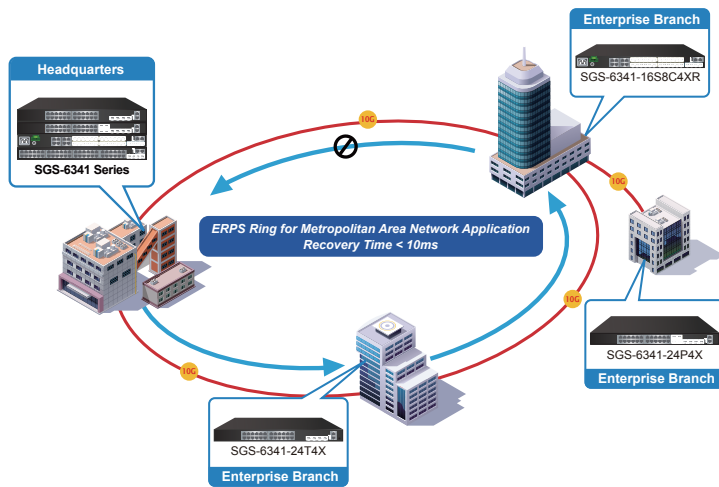
Layer 3 Routing Support

The SGS-6341 series enables the administrator to conveniently boost network efficiency by configuring Layer 3 static routing manually, the RIP (Routing Information Protocol) or OSPF (Open Shortest Path First) settings automatically.

- ► The RIP can employ the hop count as a routing metric and prevent routing loops by implementing a limit on the number of hops allowed in a path from the source to a destination.
- ► The OSPF is an interior dynamic routing protocol for autonomous system based on link state. The protocol creates a database for link state by exchanging link states among Layer 3 switches, and then uses the Shortest Path First algorithm to generate a route table based on that database.

Strong Multicast

The SGS-6341 series supports abundant multicast features. In Layer 2, it features IPv4 IGMPv1/v2/v3 snooping and IPv6 MLD v1/v2 snooping. In Layer 3 multicast protocols, it features IGMPv1/v2/v3 and DVMRP. With Multicast VLAN Register (MVR), multicast receiver/sender control and illegal multicast source detect functions which make the SGS-6341 series great for any robust networking.

Full IPv6 Support

The SGS-6341 series provides **IPv6 management** and enterprise-level secure features such as **SSH**, **ACL**, **WRR** and **RADIUS** authentication. It thus helps the enterprises to step in the IPv6 era with the lowest investment. In addition, you don't need to replace the network facilities when the IPv6 FTTx edge network is built.

Robust Layer 2 Features

The SGS-6341 series can be programmed for basic switch management functions such as port speed configuration, port aggregation, VLAN, Multiple Spanning Tree Protocol, bandwidth control and IGMP snooping. This switch provides 802.1Q tagged VLAN, Q-in-Q, voice VLAN and GVRP Protocol functions. By supporting port aggregation, the SGS-6341 series allows the operation of a high-speed trunk combined with multiple ports. It enables up to 16 groups for trunking with a maximum of 8 ports for each group.
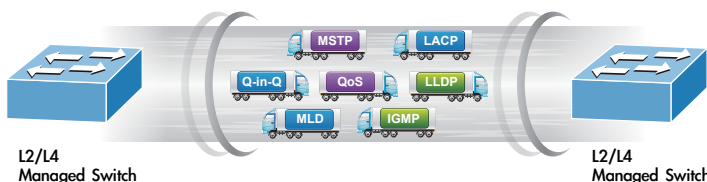
Management

- • Management IP for IPv4 and IPv6
- • Switch Management Interface
    - – Console/Telnet Command Line Interface
    - – Web switch management
    - – SNMP v1, v2c, and v3 switch management
    - – SSH/SSL secure access
- • BOOTP and DHCP for IP address assignment
- • Firmware upload/download via TFTP or HTTP Protocol for IPv4 and IPv6
- • SNTP (Simple Network Time Protocol) for IPv4 and IPv6
- • User privilege levels control
- • Syslog server for IPv4 and IPv6
- • Supports DDM
- • Four RMON groups 1, 2, 3, 9 (history, statistics, alarms and events)
- • Supports sFlow
- • Supports ULDP
- • Supports ULPP (Uplink Protection Protocol)
- • Supports ULSM (Uplink State Monitor protocol)
- • Supports LLDP/LLDP MED
- • Supports DHCP Option82, Option37/38
- • Supports ping, trace route function for IPv4 and IPv6

Power over Ethernet (SGS-6341-24P4X)

- • Complies with IEEE 802.3at Power over Ethernet Plus, end-span PSE
- • Up to 24 ports of IEEE 802.3af/802.3at devices powered
- • Supports PoE power up to 30 watts for each PoE port
- • Auto detects powered device (PD)
- • Circuit protection prevents power interference between ports
- • Remote power feeding up to 100 meters
- • PoE management
    - – Total PoE power budget control
    - – Per port PoE function enable/disable
    - – PoE port power feeding priority
    - – Per PoE port power limitation
    - – PD classification detection
    - – PoE schedule

Redundant Power System (SGS-6341-16S8C4XR)

- • 100~240V AC / 11-13V DC Dual power redundant
- • Active-active redundant power failure protection
- • Backup of catastrophic power failure on one supply

Excellent Layer 2 to Layer 4 Traffic Control

The SGS-6341 series is loaded with powerful traffic management and WRR features to enhance services offered by telecoms. The WRR functionalities include wire-speed Layer 4 traffic classifiers and bandwidth limitation which are particularly useful for multi-tenant unit, multi-business unit, Telco, or network service applications. It also empowers the enterprises to take full advantage of the limited network resources and guarantees the best in VoIP and video conferencing transmission.

Powerful Network Security

The SGS-6341 series offers comprehensive Layer 2 to Layer 4 **Access Control List** (ACL) for enforcing security to the edge. It can be used to restrict network access by denying packets based on source and destination IP address, TCP/UDP ports or defined typical network applications. Its protection mechanism also comprises 802.1x Port-based, MAC-based and web-based user and device authentications, which can be deployed with RADIUS, to ensure the port level security and block illegal users.

Advanced IP Network Protection

The SGS-6341 series also provides DHCP Snooping, IP Source Guard and Dynamic ARP Inspection functions to prevent IP snooping from attack and discard ARP packets with invalid MAC address. The network administrators can now construct highly-secure corporate networks with considerably less time and effort than before.

Efficient and Secure Management

For efficient management, the SGS-6341 series is equipped with console, Web and SNMP management interfaces.

► With the built-in Web-based management interface, the SGS-6341 series offers an easy-to-use, platform-independent management and configuration facility.

► For text-based management, it can be accessed via Telnet and the console port. For reducing product learning time, the SGS-6341 series offers Cisco-like command and customer doesn't need to learn new command from these switches

► For standard-based monitor and management software, it offers SNMPv3 connection which encrypts the packet content at each session for secure remote management.

Moreover, the SGS-6341 series offers secure remote management by supporting SSHv2 and SSLv3 connection which encrypts the packet content at each session.

Intelligent SFP Diagnosis Mechanism

The SGS-6341 series supports SFP-DDM (Digital Diagnostic Monitor) function that greatly helps network administrator to easily monitor real-time parameters of the SFP and SFP+ transceivers, such as optical output power, optical input power, temperature, laser bias current, and transceiver supply voltage.

Digital Diagnostic Monitor **(DDM)**
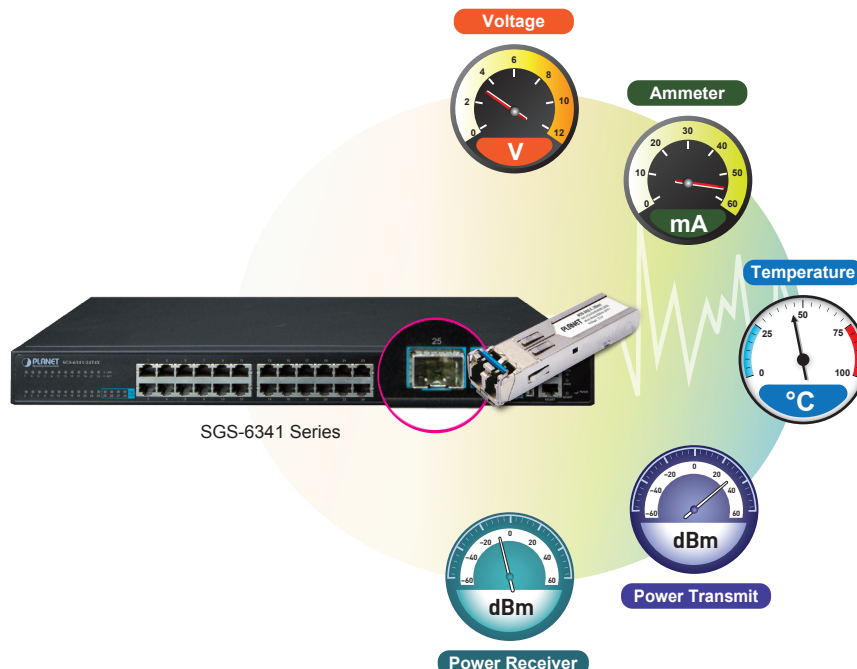
Centralized Power Management for Gigabit Ethernet PoE Networking

To fulfill the needs of higher power required PoE network applications with Gigabit speed transmission, the SGS-6341-24P4X features high-performance Gigabit IEEE 802.3at PoE+ (up to 30 watts) on all ports. It perfectly meets the power requirements of PoE VoIP phone and all kinds of PoE IP cameras such as IR, PTZ, speed dome cameras or even box type IP cameras with built-in fan and heater.

The SGS-6341-24P4X's PoE capabilities also help to reduce deployment costs for network devices as a result of freeing from the restrictions of power outlet locations. Power and data switching are integrated into one unit, delivered over a single cable and managed centrally. It thus eliminates the cost for additional AC wiring and reduces installation time.

PoE Schedule for Energy Saving

Besides being used for IP surveillance, the SGS-6341-24P4X is certainly applicable to build any PoE network including VoIP and wireless LAN. Under the trend of energy saving worldwide and contributing to the environmental protection on the Earth, the SGS-6341-24P4X can effectively control the power supply besides its capability of giving high watts power. The "PoE schedule" function helps you to enable or disable PoE power feeding for each PoE port during specified time intervals and it is a powerful function to help SMBs or enterprises save energy and budget.

1000Base-T UTP with PoE
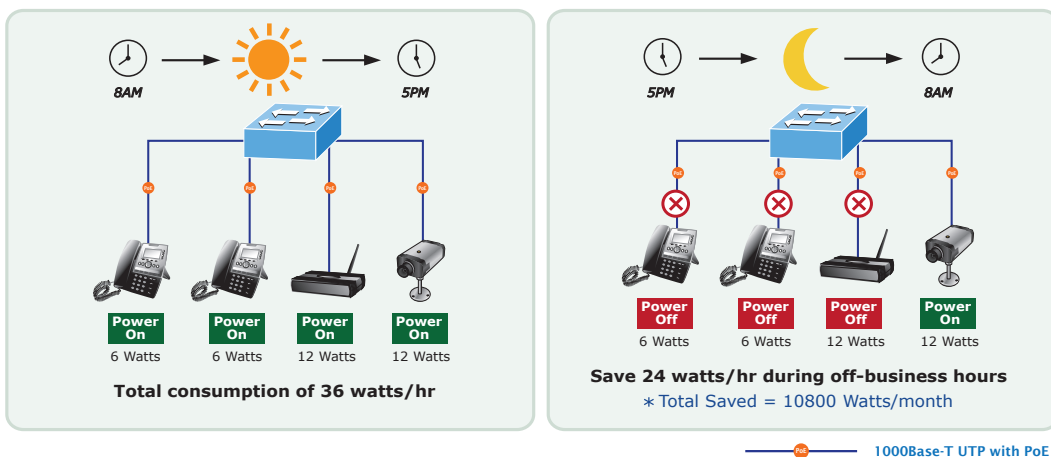
Applications

Excellent Solution to Enterprise Security and QoS Switch

The SGS-6341 series performs 128/178 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. With the four built-in SFP+ ports, the SGS-6341 series provides the uplink to the backbone network through the 10G Ethernet LR/SR SFP+ modules. It further improves the network efficiency and protects the network clients by offering the security and QoS features.

High Performance Server Service

10GBASE-SR/LR Fiber-optic
1000BASE-T UTP
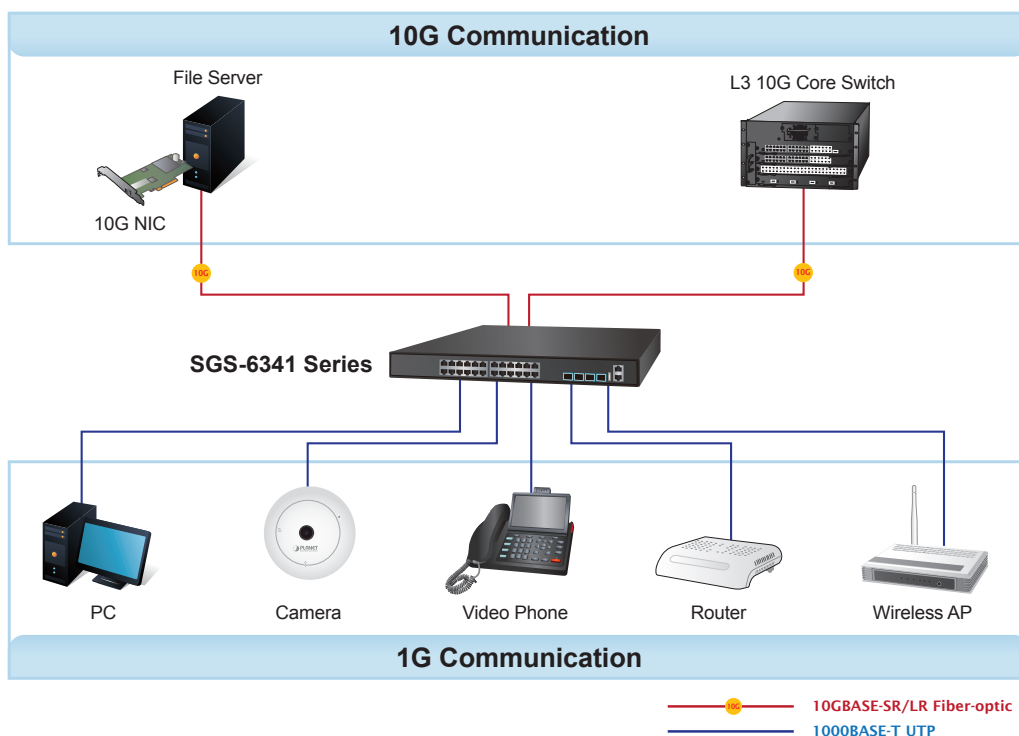
Layer 3 VLAN Routing

With the built-in robust Layer 3 traffic routing protocols, the SGS-6341 series ensures reliable routing between VLANs and network segments. The routing protocols can be applied via VLAN interface. The SGS-6341 series is certainly a cost-effective and ideal solution for enterprises.

VLAN Routing + 10G Uplink Applications

17Fl.: Finance Department
VLAN100 Domain B 192.168.10.x/24

450m

20Fl.: Sales Department
VLAN300 Domain A 192.168.30.x/24

550m

NAS Storage
Server Rack
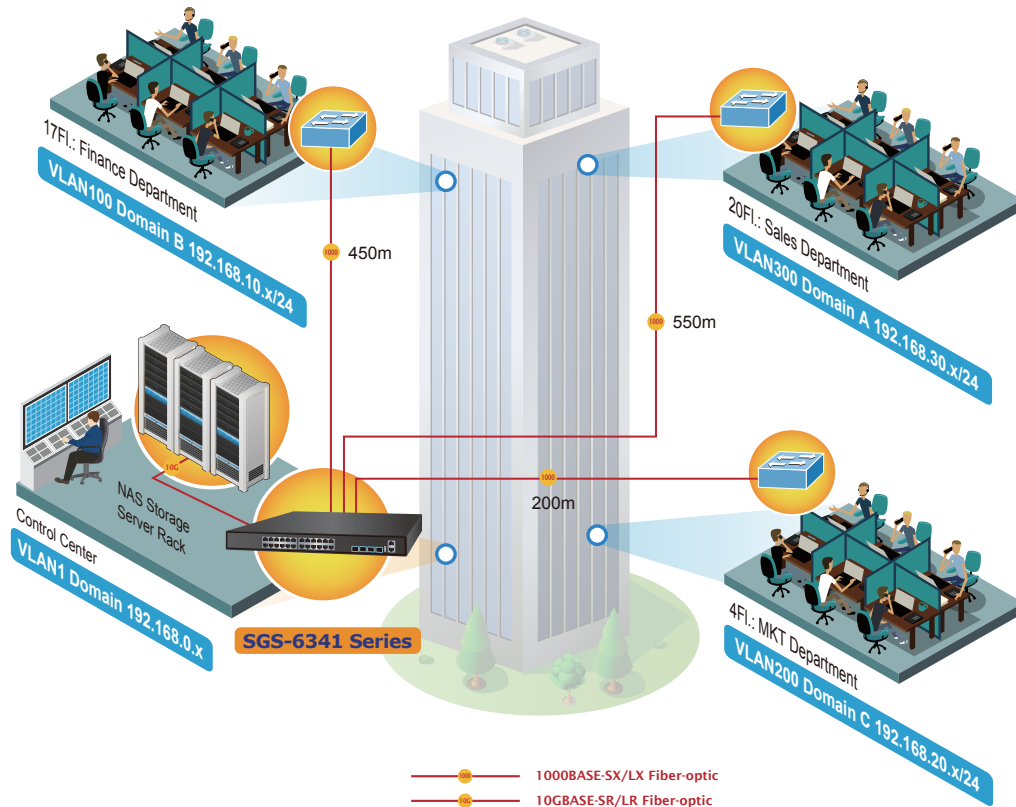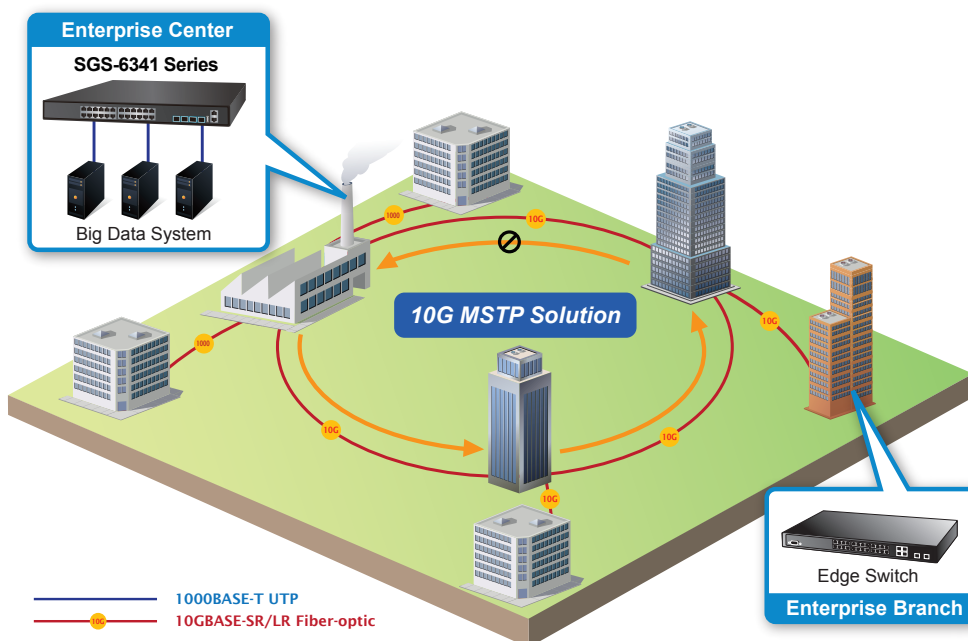
Control Center
VLAN1 Domain 192.168.0.x

200m

SGS-6341 Series

4Fl.: MKT Department
VLAN200 Domain C 192.168.20.x/24

—— 1000BASE-SX/LX Fiber-optic
—— 10GBASE-SR/LR Fiber-optic

High Availability Mesh Networking Solution for Big Data System

With highly-flexible, highly-extendable and easy-to-install features, the SGS-6341 series offers up to 128/178Gbps data exchange speed via optical fiber interface and the transmission distance can be extended to 120km. The SGS-6341 series features strong, rapid, self-recovery capability to prevent interruptions and external intrusions. It incorporates **IEEE 802.1s MSTP (Multiple Spanning Tree Protocol, spanning tree by VLAN)** into customer's automation network to enhance system reliability and uptime. The SGS-6341 series is the ideal solution for data centers, service providers and telecoms to build redundant connection and establish high bandwidth for **Big Data** server farm.

Enterprise Center

SGS-6341 Series

Big Data System

10G MSTP Solution

Edge Switch

Enterprise Branch

—— 1000BASE-T UTP
—— 10GBASE-SR/LR Fiber-optic

Specifications

Product	SGS-6341-24T4X	SGS-6341-24P4X	SGS-6341-16S8C4XR	SGS-6341-48T4X
Hardware Specifications				
Hardware Version	2	2	2	1
10/100/1000 RJ45 Ports	24	24	8 (combo)	48
100/1000BASE-X SFP Ports	--	4 (combo)	24	-
10G SFP+ Ports	4 10GBASE-SR/LR SFP+ interface Backward compatible with 1000BASE-SX/LX/BX SFP transceiver			
Management Port	1 x 10/100/1000BASE-T RJ45 port			
Console Port	1 x RJ45-to-RS232 serial port (115200, 8, N, 1)			
USB Port	1 x USB 2.0 for switch configuration backup and resoter			
CPU	ARM A9 800MHz			
RAM	512Mbytes			
Flash Memory	128Mbytes			
Dimensions (W x D x H)	440 x 240 x 43.6 mm	440 x 320 x 43.6mm	440 x 240 x 43.6 mm	440 x 240 x 43.6mm
Weight	3170g	4503g	3170g	3471g
Power Consumption	26 watts/ 88.66 BTU	15.4 watts/ 52.51BTU (System) 401.7 watts/ 1369.8 BTU (System+PoE)	34 watts/116BTU	46.4 watts/158.22 BTU
Power Requirements- AC	AC 100~240V, 50/60Hz	AC 100~240V, 50/60Hz	AC: 100~240V, 50/60Hz	AC 100~240V, 50/60Hz
Power Requirements - DC	--	--	DC: 36~72V	--
Fan	1	2	1	1
LED	PWR, MGMT, SYS - 10/100/1000T RJ45 Port: LNK/ACT -1/10G SFP+ Port: LNK/ACT	PWR, MGMT, SYS, PoE - 10/100/1000T RJ45 Port: LNK/ACT and PoE-in-Use - 1/10G SFP+ Port: LNK/ACT	PWR, MGMT, SYS - 10/100/1000T RJ45 Port: LNK/ACT - 1/10G SFP+ Port: LNK/ACT	PWR, MGMT, SYS - 10/100/1000T RJ45 Port: LNK/ACT - 1/10G SFP+ Port: LNK/ACT
Switching Specifications				
Switch Architecture	Store-and-forward			
Switch Fabric	128Gbps/non-blocking			176Gbps/non-blocking
Switch Throughput	95.23Mpps			130.95Mpps
Address Table	16K MAC address table with auto learning function			
ARP Table	4K			
Routing Table	1024 (IPv4 + IPv6)			
IP Interface	1024			
ACL Table	1024			
Shared Data Buffer	1.5MB			
Jumbo Frame	10KBytes			
Flow Control	Back pressure for half duplex IEEE 802.3x pause frame for full duplex			
Power over Ethernet Specifications				
PoE Standard	--	IEEE 802.3at PoE+ PSE	--	--
PoE Power Supply Type	--	End-span	--	--
PoE Power Output	--	Per port 53V DC, 30.8 watts (max.)	--	--
Power Pin Assignment	--	1/2(+), 3/6(-)	--	--
PoE Power Budget	--	370 watts (max.)	--	--
IPv4 Layer 3 Functions				
IP Routing Protocol	■ Static route ■ RIPv1/v2 ■ OSPFv2 ■ BGPv4 ■ Policy-based routing (PBR) ■ LPM routing (MD5 authentication) ■ Hardware-based Layer 3 routing			
Multicast Routing Protocol	■ IGMP v1/v2/v3 ■ DVMRP ■ PIM-DM/SM ■ PIM-SSM			

Layer 3 Protocol	■ VRRP v1/v3 ■ ARP ■ ARP Proxy ■ IGMP Proxy
IPv6 Layer 3 Functions	
IP Routing Protocol	■ RIPng ■ OSPFv3 ■ BGPv4+ ■ IPv6 LPM Routing ■ IPv6 Policy-based Routing (PBR) ■ IPv6 VRRPv3 ■ IPv6 URPF ■ IPv6 RA ■ Hardware-based Layer 3 routing
Multicast Routing Protocol	■ PIM-SM/DM for IPv6 ■ MLD for IPv6 (v1) ■ MLDv1/v2 ■ MLD Snooping, 6 to 4 Tunnels ■ IPv6 Any Cast RP ■ Multicast receive control ■ Illegal multicast source detect
Layer 3 Protocol	■ Configured Tunnels ■ ISATAP ■ GRE Tunnel
Other	ICMPv6,ND,DNSv6
Layer 2 Functions	
Port Configuration	Port disable/enable Auto-negotiation 10/100/1000Mbps full and half duplex mode selection Flow control disable/enable Bandwidth control on each port Port loopback detect
Port Status	Display each port's speed duplex mode, link status, flow control status and auto negotiation status
VLAN	802.1Q tagged VLAN, up to 4K VLAN groups 802.1ad Q-in-Q (VLAN stacking) GVRP for VLAN management Private VLAN Edge (PVE) supported Protocol-based VLAN MAC-based VLAN IP subnet VLAN
Spanning Tree Protocol	STP, IEEE 802.1D (Classic Spanning Tree Protocol) RSTP, IEEE 802.1w (Rapid Spanning Tree Protocol) MSTP, IEEE 802.1s (Multiple Spanning Tree Protocol, spanning tree by VLAN) Supports BPDU and root guard
Multicast	IGMP v1/v2/v3 snooping Querier mode support MLD v1/v2 snooping Multicast VLAN Register (MVR) Up to 4K multicast groups (IPv4 + IPv6)
Link Aggregation	IEEE 802.3ad LACP/static trunk Supports 128 groups with 8 ports per trunk group
Bandwidth Control	TX/RX/Both At least 64Kbps step

QoS	8 priority queues on all switch ports
	Supports strict priority and Weighted Round Robin (WRR) CoS policies
	Traffic classification:
	  - IEEE 802.1p CoS/ToS
	  - IPv4/IPv6 DSCP
	  - Port-based WRR

Ring	Supports ITU-G G.8032 ERPS
Security Functions	
Access Control List	Supports Standard and Expanded ACL IP-based ACL/MAC-based ACL Time-based ACL Up to 1024 entries

Security	Supports MAC + port binding IPv4/IPv6 + MAC + port binding IPv4/IPv6 + port binding Supports MAC filter ARP scanning prevention
AAA Authentication	TACACS+ and IPv4/IPv6 over RADIUS
Network Access Control	IEEE 802.1x port-based network access control MAC-based authentication Web authentication

Switch Management Functions

System Configuration	Console, Telnet, SSHv2, Web browser, SSL, SNMP v1, v2c and v3
Management	Supports both IPv4 and IPv6 addressing Supports the user IP security inspection for IPv4/IPv6 SNMP Supports MIB and TRAP Supports IPv4/IPv6 FTP/TFTP Supports IPv4/IPv6 NTP Supports RMON 1, 2, 3, 9 four groups Supports the RADIUS authentication for IPv4/IPv6 Telnet user name and password Supports IPv4/IPv6 SSH The right configuration for users to adopt RADIUS server's shell management Supports CLI, console, Telnet Supports SNMP v1, v2c and v3 Supports Security IP safety net management function: avoid unlawful landing at nonrestrictive area Supports Syslog server for IPv4 and IPv6 Supports TACACS+ Supports IPv4 and IPv6 DHCP server
IP Cluster (Stacking) Compatibility List	XGS3-24242v2 and v3 XGS3-24042v2 and v3 SGS-6341-24T4Xv2 SGS-6341-24P4Xv2 SGS-6341-16S8C4XRv1 and v2 SGS-6341-48T4X
Hardware Stacking Compatibility List	SGS-6341-24T4Xv2 SGS-6341-24P4Xv2 SGS-6341-16S8C4XRv1 and v2 SGS-6341-48T4X
SNMP MIBs	RFC 1213 MIB-II RFC 1215 Internet Engineering Task Force RFC 1271 RMON RFC 1354 IP-Forwarding MIB RFC 1493 Bridge MIB RFC 1643 Ether-like MIB RFC 1907 SNMP v2 RFC 2011 IP/ICMP MIB RFC 2012 TCP MIB RFC 2013 UDP MIB RFC 2096 IP forward MIB RFC 2233 if MIB RFC 2452 TCP6 MIB RFC 2454 UDP6 MIB RFC 2465 IPv6 MIB RFC 2466 ICMP6 MIB RFC 2573 SNMP v3 notify RFC 2574 SNMP v3 vacm RFC 2674 Bridge MIB Extensions (IEEE 802.1Q MIB) RFC 2674 Bridge MIB Extensions (IEEE 802.1P MIB)

Standard Conformance

Regulatory Compliance	FCC Part 15 Class A, CE

Standards Compliance	IEEE 802.3 10BASE-T
	IEEE 802.3u 100BASE-TX
	IEEE 802.3z Gigabit 1000BASE-SX/LX
	IEEE 802.3ab Gigabit 1000BASE-T
	IEEE 802.3ae 10Gb/s Ethernet
	IEEE 802.3x flow control and back pressure
	IEEE 802.3ad port trunk with LACP
	IEEE 802.1ag CFM
	IEEE 802.1D Spanning Tree Protocol
	IEEE 802.1w Rapid Spanning Tree Protocol
	IEEE 802.1s Multiple Spanning Tree Protocol
	IEEE 802.1p Class of Service
	IEEE 802.1Q VLAN tagging
	IEEE 802.1X port authentication network control
	IEEE 802.1ab LLDP
	IEEE 802.3af Power over Ethernet
	IEEE 802.3at Power over Ethernet PLUS
	RFC 768 UDP
	RFC 783 TFTP
	RFC 793 TCP
	RFC 791 IP
	RFC 792 ICMP
	RFC 2068 HTTP
	RFC 1112 IGMP v1
	RFC 2236 IGMP v2
	RFC 3376 IGMP v3
	RFC 2710 MLD v1
	RFC 3810 MLD v2
	RFC 2328 OSPF v2
	RFC 1058 RIP v1
	RFC 2453 RIP v2
	ITU-T G.8032 ERPS Ring
Environment	
Operating	Temperature: 0 ~ 50 degrees C Relative Humidity: 5 ~ 90% (non-condensing)
Storage	Temperature: -10 ~ 70 degrees C Relative Humidity: 5 ~ 90% (non-condensing)

Ordering Information

SGS-6341-24T4X	Layer 3 24-Port 10/100/1000T + 4-Port 10G SFP+ Stackable Managed Switch
SGS-6341-24P4X	Layer 3 24-Port 10/100/1000T 802.3at PoE + 4-Port 10G SFP+ Stackable Managed Switch (370W)
SGS-6341-16S8C4XR	Layer 3 16-Port 100/1000X SFP + 8-Port Gigabit TP/SFP + 4-Port 10G SFP+ Stackable Managed Switch (100~240V AC, 36~75V DC)
SGS-6341-48T4X	Layer 3 48-Port 10/100/1000T + 4-Port 10G SFP+ Stackable Managed Switch

Related Products

XGS3-24042	Layer 3 24-Port 10/100/1000T + 4-Port 10G SFP+ Stackable Managed Switch
XGS3-24242	Layer 3 24-Port 100/1000X SFP + 8-Port Shared TP + 4-Port 10G SFP+ Stackable Managed Switch (100~240V AC, 36-75V DC)
XGS-5240-24X2QR	Layer 2+ 24-Port 10G SFP+ + 2-Port 40G QSFP+ Stackable Managed Switch

Available Modules for SGS-6341 series

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

Model	Speed (Mbps)	Connector Interface	Fiber Mode	Distance	Wavelength (nm)	Operating Temp.
MTB-RJ	10G	Copper	--	30m	--	0 ~ 70 degrees C
MTB-SR	10G	LC	Multi Mode	300m	850nm	0 ~ 60 degrees C
MTB-LR	10G	LC	Single Mode	10km	1310nm	0 ~ 60 degrees C
MTB-TSR	10G	LC	Multi Mode	Up to 300m	850nm	-45 ~ 75 degrees C
MTB-TLR	10G	LC	Single Mode	10km	1310nm	-45 ~ 75 degrees C

10Gbps SFP+ (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

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	20km	1310nm	0 ~ 60 degrees C
MGB-L40	1000	LC	Single Mode	40km	1310nm	0 ~ 60 degrees C
MGB-L80	1000	LC	Single Mode	80km	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-TL40	1000	LC	Single Mode	40km	1310nm	-40 ~ 75 degrees C
MGB-TL80	1000	LC	Single Mode	80km	1550nm	-40 ~ 75 degrees C

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	1550nm 1310nm	0 ~ 60 degrees C
MGB-LA20 MGB-LB20	1000	WDM(LC)	Single Mode	20km	1310nm 1550nm	1550nm 1310nm	0 ~ 60 degrees C
MGB-LA40 MGB-LB40	1000	WDM(LC)	Single Mode	40km	1310nm 1550nm	1550nm 1310nm	0 ~ 60 degrees C
MGB-LA60 MGB-LB60	1000	WDM(LC)	Single Mode	60km	1310nm 1550nm	1550nm 1310nm	0 ~ 60 degrees C
MGB-TLA10 MGB-TLB10	1000	WDM(LC)	Single Mode	10km	1310nm 1550nm	1550nm 1310nm	-40 ~ 75 degrees C
MGB-TLA20 MGB-TLB20	1000	WDM(LC)	Single Mode	20km	1310nm 1550nm	1550nm 1310nm	-40 ~ 75 degrees C
MGB-TLA40 MGB-TLB40	1000	WDM(LC)	Single Mode	40km	1310nm 1550nm	1550nm 1310nm	-40 ~ 75 degrees C
MGB-TLA60 MGB-TLB60	1000	WDM(LC)	Single Mode	60km	1310nm 1550nm	1550nm 1310nm	-40 ~ 75 degrees C

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