# Layer 3 24-Port 100/1000X SFP + 8-Port Shared TP + 4-Port 10G SFP+ Stackable Managed Switch (100~240V AC, 36-75V DC)

Powerful Layer 3 Routing Solution for All Long-Reach Networks

PLANET XGS3-24242 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** and **multiple SFP fiber** interfaces delivered in a rugged, strong case. The administrator can flexibly choose the suitable SFP/SFP+ transceiver according to the transmission distance or the transmission speed required to extend the 10G network efficiently. Besides, with **128Gbps switching fabric**, the XGS3-24242 can handle extremely large amounts of data in a secure topology linking to backbone or high capacity servers for ISP and enterprise VoIP, video streaming, and multicast applications.
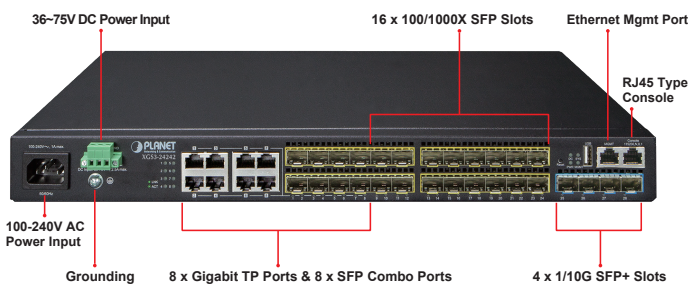
High Performance 10Gbps Ethernet Capacity

The four SFP+ slots built in the XGS3-24242 supports **Dual-speed**, **10GBASE-SR/LR** or **1000BASE-SX/LX**. With 10Gbps uplink interfaces, the XGS3-24242 boasts a high-performance switch architecture that is capable of providing non-blocking switch fabric and wire-speed throughput as high as 128Gbps, which greatly simplifies the tasks of upgrading the LAN for catering to increasing bandwidth demands.

AC and DC Redundant Power to Ensure Continuous Operation

The XGS3-24242 is equipped with one 100~240V AC power supply unit and one additional 36-75V DC power supply unit for redundant power supply. A redundant power system is also provided to enhance the reliability with either AC or DC power supply unit. The redundant power system is specifically designed to handle the demands of high-tech facilities requiring the highest power integrity.

Physical Ports

- **24 100/1000BASE-X mini-GBIC/SFP** ports
- **Eight 10/100/1000BASE-T RJ45** copper ports, shared with Port-1 to Port-8
- **4 10GBASE-SR/LR SFP+** ports, compatible with 1000BASE-SX/LX/BX SFP
- RJ45 to DB9 console interface for switch basic management and setup
- 1 USB2.0 interface for configuration and firmware storage

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 XGS3-24242 into one logical device
  - Connects with stack member 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

- Complies with the IEEE 802.3, IEEE 802.3u, IEEE 802.3ab,

IP Stacking Management

The XGS3-24242 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 XGS3-24242 and SGS-6341 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 XGS3-24242 and SGS-6341 Series
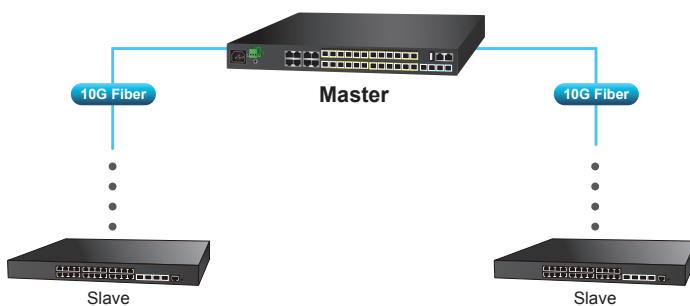
High Reliability Hardware Stacking

Two of the 10G SFP+ ports are used to connect several XGS3-24242 units to build a virtually logical facility. The XGS3-24242 gives the enterprises, service providers and telecoms flexible control over port density, uplinks and switch stack performance. The XGS3-24242 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.

Layer 3 Routing Support

The XGS3-24242 enables the administrator to conveniently boost network efficiency by configuring Layer 3 static routing manually, and the RIP or OSPF 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.

Full IPv6 Support

The XGS3-24242 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.

IEEE 802.3z Gigabit Ethernet standard

- Supports auto-negotiation and half-duplex/full-duplex modes for all 10BASE-T, 100BASE-TX and 1000BASE-T ports
- Auto-MDI/MDI-X detection on each RJ45 port
- Prevents packet loss flow control
  - IEEE 802.3x pause frame flow control in full-duplex mode
  - Back pressure flow control in half-duplex mode
- 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
  - Up to 256 VLANs groups, out of 4041 VLAN IDs
  - Provider Bridging (VLAN Q-in-Q, IEEE 802.1ad) supported
  - Private VLAN Edge (PVE) supported
  - GVRP protocol for Management VLAN
  - Protocol-based VLAN
  - 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 and root guard
- Port mirroring to monitor the incoming or outgoing traffic on a particular port (many to many)
- Provides port mirror (many-to-1)

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

Robust Layer 2 Features

The XGS3-24242 can be programmed for basic switch management functions such as port speed configuration, port aggregation, VLAN, Multiple Spanning Tree Protocol, WRR, 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 XGS3-24242 allows the operation of a high-speed trunk combined with multiple ports. It enables up to 128 groups for trunking with a maximum of 8 ports for each group.
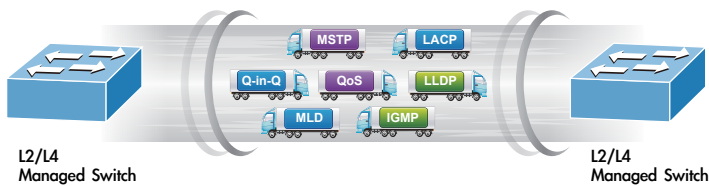
Excellent Layer 2 to Layer 4 Traffic Control

The XGS3-24242 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 Security

The XGS3-24242 supports ACL policies comprehensively. The traffic can be classified by source/destination IP addresses, source/destination MAC addresses, IP protocols, TCP/UDP, IP precedence, time ranges and ToS. Moreover, various policies can be conducted to forward the traffic. The XGS3-24242 also provides IEEE 802.1x port based access authentication, which can be deployed with RADIUS, to ensure the port level security and block illegal users.

Efficient and Secure Management

For efficient management, the XGS3-24242 is equipped with console, Web and SNMP management interfaces. With its built-in Web-based management interface, the XGS3-24242 offers an easy-to-use, platform-independent management and configuration facility. The XGS3-24242 supports standard Simple Network Management Protocol (SNMP) and can be managed via any standard-based management software.

For reducing product learning time, the XGS3-24242 offers Cisco-like command via Telnet or console port and customer doesn't need to learn new command from these switches. Moreover, the XGS3-24242 offers secure remote management by supporting SSH connection which encrypts the packet content at each session.

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

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

Computer

SSL **SSH** **SNMPv3**

Intelligent SFP Diagnosis Mechanism

The XGS3-24242 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)*

Voltage

Ammeter

Temperature

XGS3-24242

Power Transmitter

Power Receiver

Applications

High Availability Mesh Networking Solution for Big Data System

By means of improving the technology of optical fiber Ethernet with highly-flexible, highly-extendable and easy-to-install features, the XGS3-24242 offers up to **128Gbps** data exchange speed via optical fiber interface and the transmission distance can be extended to 120km. The XGS3-24242 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 XGS3-24242 is the ideal solution for data centers, service providers and telecoms to build redundant connection and establish high bandwidth for **Big Data** server farm.
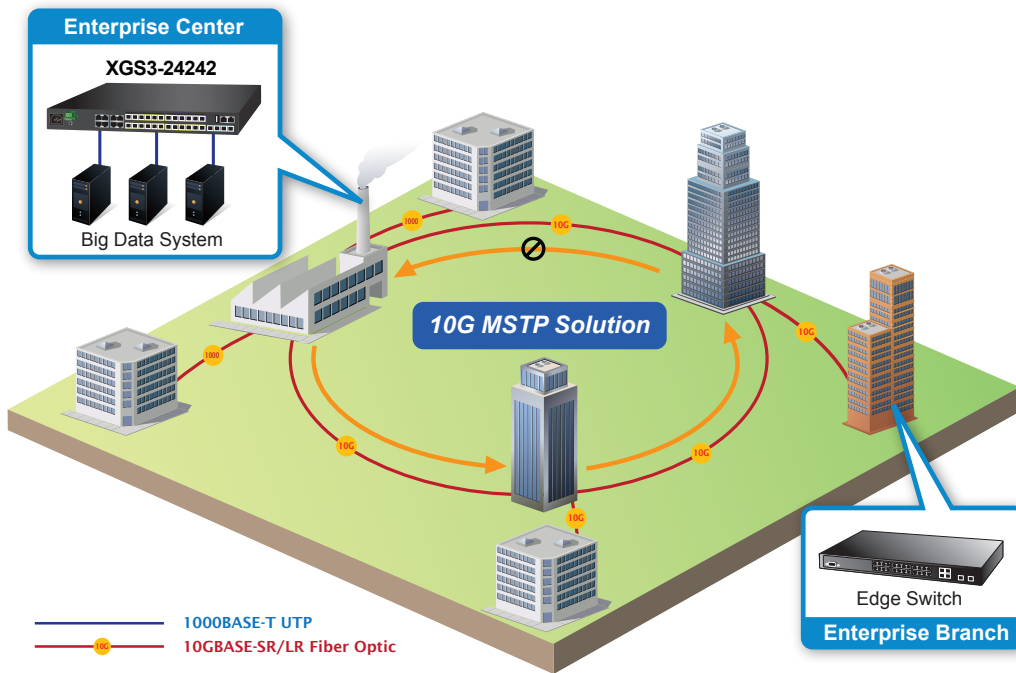
Excellent Solution to Core/Data Center Security and QoS Switch

The XGS3-24242 performs 128Gbps 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 XGS3-24242 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.
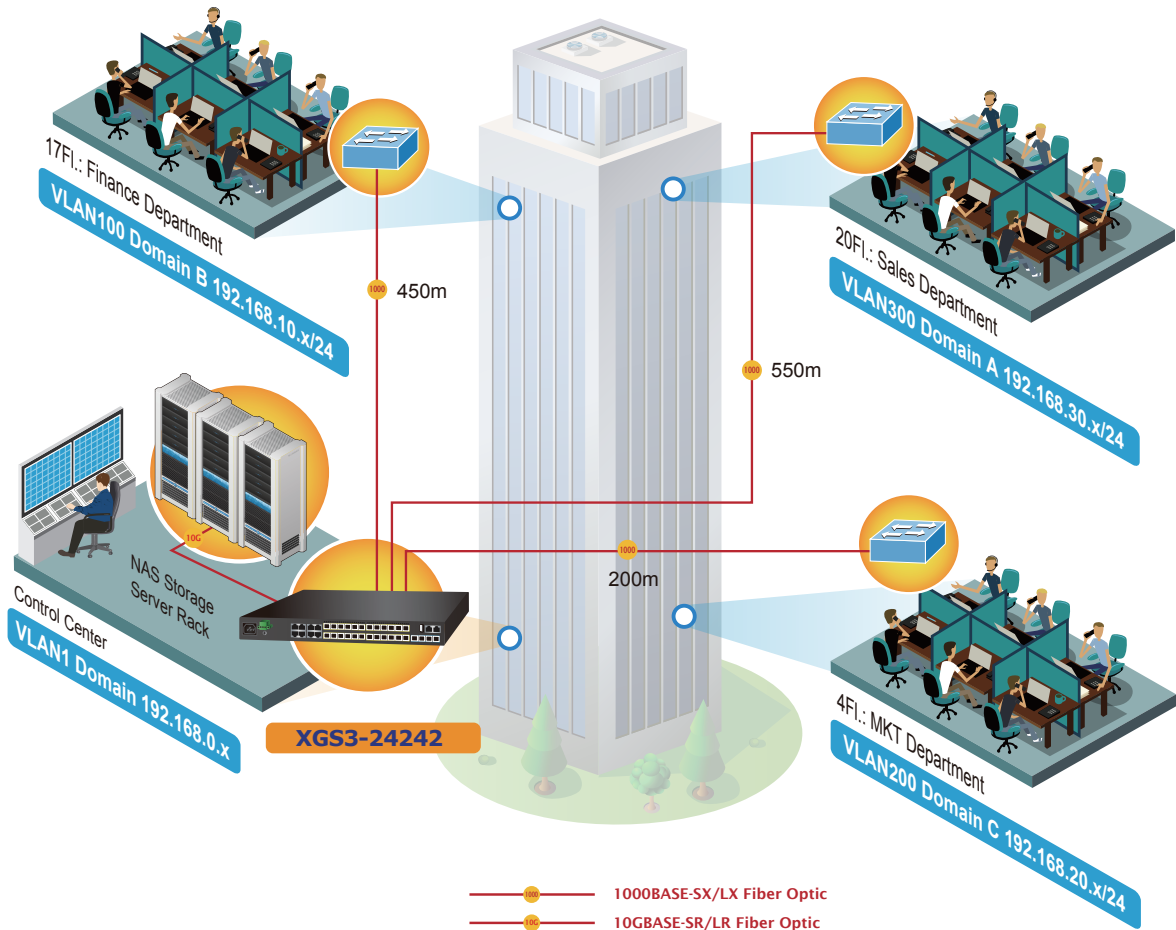

High Performance Server Service
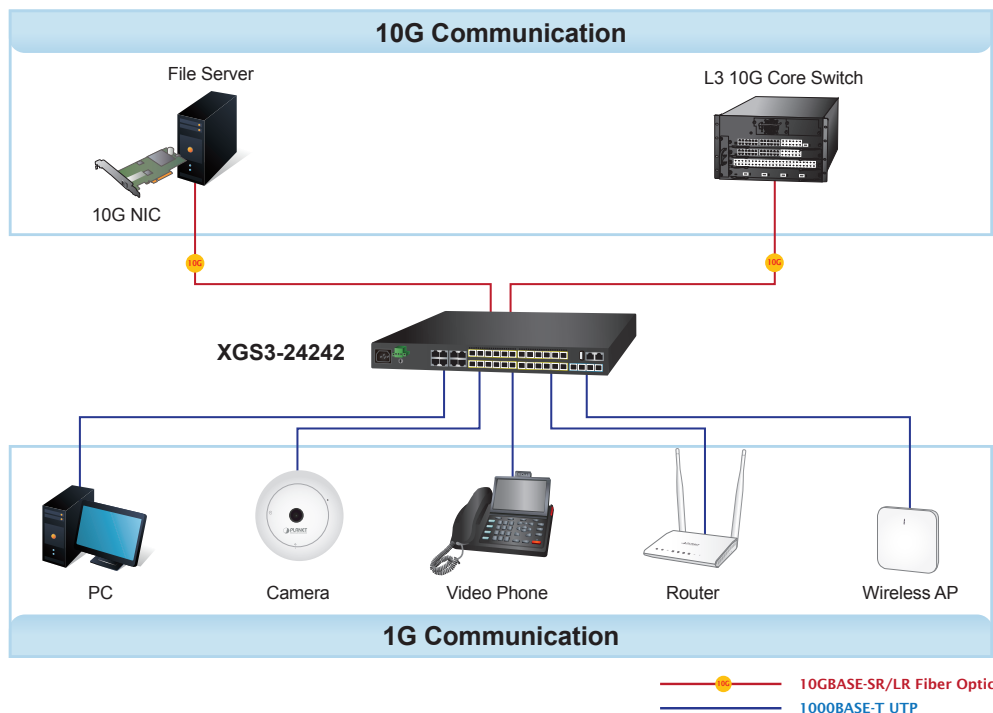
Layer 3 VLAN Routing

With the built-in robust Layer 3 traffic routing protocols, the XGS3-24242 ensures reliable routing between VLANs and network segments. The routing protocols can be applied via VLAN interface. The XGS3-24242 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

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

450m

550m

200m

NAS Storage Server Rack

Control Center
VLAN1 Domain 192.168.0.x

XGS3-24242

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

1000BASE-SX/LX Fiber Optic
10GBASE-SR/LR Fiber Optic

Specifications

Product	XGS3-24242
Hardware Specifications	
SFP/mini-GBIC Slots	24 100/1000BASE-X SFP interfaces Compatible with 100BASE-FX SFP transceiver
Copper Ports	8 10/100/1000BASE-T RJ45 auto-MDI/MDI-X ports, shared with Port-1 to Port-8
SFP+ Slots	4 10GBASE-SR/LR SFP+ interfaces (port-25 to port-28) Compatible with 1000BASE-SX/LX/BX SFP transceiver
Console	1 x RJ45-to-RS232 serial port (115200, 8, N, 1)
Switch Architecture	Store-and-forward
Switch Fabric	128Gbps/non-blocking
Switch Throughput	95.23Mpps
Address Table	16K MAC address table with auto learning function
ARP Table	4K
Routing Table	IPv4 Routing Entry:13K IPv6 Routing Entry: 3.2K
ACL Table	3K
Shared Data Buffer	1.5MB
Flow Control	Back pressure for half duplex IEEE 802.3x pause frame for full duplex
Jumbo Frame	10KB

LED	System:
	  PWR/DC/MGMT/SYS
	Ports:
	  10/100/1000T RJ45 Port: LNK/ACT
	  1/10G SFP+ slot: LNK/ACT

Dimensions (W x D x H)	440 x 240 x 43.6 mm, 1U height
Weight	3173g
Power Consumption	Max. 51.1 watts/174 BTU (AC input) Max. 47.6 watts/162 BTU (DC input)
Power Requirements	AC 100~240V, 50/60Hz DC 36V-75V, 2.5A 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
MPLS	MPLS, VRF, LDP
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 Function

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 256 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
Bandwidth Control	TX/RX/Both
Link Aggregation	IEEE 802.3ad LACP/static trunk Supports 128 trunk groups with 8 ports per trunk group

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

Multicast	IGMP v1/v2/v3 snooping Querier mode support MLD v1/v2 snooping Multicast VLAN Register (MVR)
Access Control List	Supports Standard and Expanded ACL IP-based ACL/MAC-based ACL Time-based ACL Up to 1K entries
Security	Supports MAC + port binding IPv4/IPv6 + MAC + port binding IPv4/IPv6 + port binding Supports MAC filter ARP scanning prevention
Authentication	IEEE 802.1x port-based network access control AAA authentication: TACACS+ and IPv4/IPv6 over RADIUS

Management Function

IP Cluster (Stacking) Compatibility List	XGS3-24242v3 XGS3-24042v3 SGS-6341-24T4Xv2 SGS-6341-24P4Xv2 SGS-6341-16S8C4XRv2 SGS-6341-48T4X
Hardware Stacking Compatibility List	XGS3-24242v3
System Configuration	Console, Telnet, SSH, Web browser, 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+
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	RFC 768 UDP
	IEEE 802.3u 100BASE-TX	RFC 793 TFTP
	IEEE 802.3z Gigabit 1000BASE-SX/LX	RFC 791 IP
	IEEE 802.3ab Gigabit 1000BASE-T	RFC 792 ICMP
	IEEE 802.3ae 10Gb/s Ethernet	RFC 2068 HTTP
	IEEE 802.3x flow control and back pressure	RFC 1112 IGMP v1
	IEEE 802.3ad port trunk with LACP	RFC 2236 IGMP v2
	IEEE 802.1D Spanning Tree Protocol	RFC 3376 IGMP v3
	IEEE 802.1w Rapid Spanning Tree Protocol	RFC 2710 MLD v1
	IEEE 802.1s Multiple Spanning Tree Protocol	FRC 3810 MLD v2
	IEEE 802.1p Class of Service	RFC 2328 OSPF v2
	IEEE 802.1Q VLAN tagging	RFC 1058 RIP v1
	IEEE 802.1X port authentication network control	RFC 2453 RIP v2
	IEEE 802.1ab LLDP	

Environments

Operating	Temperature: 0 ~ 50 degrees C
	Relative Humidity: 5 ~ 95% (non-condensing)
Storage	Temperature: -10 ~ 70 degrees C
	Relative Humidity: 5 ~ 95% (non-condensing)

Ordering Information

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)

Related Products

XGS3-24042	Layer 3 24-Port 10/100/1000T + 4-Port 10G SFP+ Stackable Managed Switch
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-6341-24T4X	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-6341-48T4X	Layer 3 48-Port 10/100/1000T + 4-Port 10G SFP+ Stackable Managed Switch

Available 10Gbps Modules for XGS3-24242

MTB-RJ	1-Port 10GBASE-T SFP+ Copper Fiber Optic Module - 30m
MTB-SR	1-Port 10GBASE-SR SFP+ Fiber Optic Module - 300m
MTB-SR2	1-Port 10GBASE-SR SFP+ Fiber Optic Module – 2km
MTB-LR	1-Port 10GBASE-LR SFP+ Fiber Optic Module - 10km
MTB-LR20	1-Port 10GBASE-LR SFP+ Fiber Optic Module - 20km
MTB-LR40	1-Port 10GBASE-LR SFP+ Fiber Optic Module - 40km
MTB-LR60	1-Port 10GBASE-LR SFP+ Fiber Optic Module - 60km
MTB-LR80	1-Port 10GBASE-LR SFP+ Fiber Optic Module - 80km
MTB-TSR	1-Port 10GBASE-SR SFP+ Fiber Optic Module - 300m (-40~75 degrees C)
MTB-TSR2	1-Port 10GBASE-SR SFP+ Fiber Optic Module – 2km (-40~75 degrees C)
MTB-TLR	1-Port 10GBASE-LR SFP+ Fiber Optic Module - 10km (-40~75 degrees C)
MTB-TLR20	1-Port 10GBASE-LR SFP+ Fiber Optic Module - 20km (-40~75 degrees C)
MTB-TLR40	1-Port 10GBASE-LR SFP+ Fiber Optic Module - 40km (-40~75 degrees C)
MTB-TLR60	1-Port 10GBASE-LR SFP+ Fiber Optic Module - 60km (-40~75 degrees C)
MTB-TLA20	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 20km (TX:1270nm RX:1330nm) (-40~75 degrees C)
MTB-TLB20	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 20km (TX:1330nm RX:1270nm) (-40~75 degrees C)
MTB-TLA40	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 40km (TX:1270nm RX:1330nm) (-40~75 degrees C)
MTB-TLB40	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 40km (TX:1330nm RX:1270nm) (-40~75 degrees C)
MTB-TLA60	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 60km (TX:1270nm RX:1330nm) (-40~75 degrees C)
MTB-TLB60	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 60km (TX:1330nm RX:1270nm) (-40~75 degrees C)
MTB-LA10	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 10km (TX:1270nm RX:1330nm)
MTB-LB10	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 10km (TX:1330nm RX:1270nm)
MTB-LA20	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 20km (TX:1270nm RX:1330nm)
MTB-LB20	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 20km (TX:1330nm RX:1270nm)
MTB-LA40	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 40km (TX:1270nm RX:1330nm)
MTB-LB40	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 40km (TX:1330nm RX:1270nm)
MTB-LA60	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 60km (TX:1270nm RX:1330nm)
MTB-LB60	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 60km (TX:1330nm RX:1270nm)
MTB-LA70	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 70km (TX:1270nm RX:1330nm)
MTB-LB70	1-Port 10GBASE-BX SFP+ Fiber Optic Module - 70km (TX:1330nm RX:1270nm)

Available 1000Mbps Modules for XGS3-24242

MGB-GT	SFP-Port 1000 BASE-T Module
MGB-LX	SFP-Port 1000 BASE-LX mini-GBIC module - 20km
MGB-SX	SFP-Port 1000 BASE-SX mini-GBIC module - 550m
MGB-SX2	SFP-Port 1000 BASE-SX mini-GBIC module - 2km
MGB-L40	SFP-Port 1000 BASE-LX mini-GBIC module - 40km
MGB-L80	SFP-Port 1000 BASE-LX mini-GBIC module - 80km
MGB-L120	SFP-Port 1000 BASE-LX mini-GBIC module - 120km
MGB-LA10	SFP-Port 1000 BASE-BX (WDM, TX:1310nm) mini-GBIC module - 10km
MGB-LB10	SFP-Port 1000 BASE-BX (WDM, TX:1550nm) mini-GBIC module - 10km
MGB-LA20	SFP-Port 1000 BASE-BX (WDM, TX:1310nm) mini-GBIC module - 20km
MGB-LB20	SFP-Port 1000 BASE-BX (WDM, TX:1550nm) mini-GBIC module - 20km
MGB-LA40	SFP-Port 1000 BASE-BX (WDM, TX:1310nm) mini-GBIC module - 40km
MGB-LB40	SFP-Port 1000 BASE-BX (WDM, TX:1550nm) mini-GBIC module - 40km
MGB-LA80	SFP-Port 1000 BASE-BX (WDM, TX:1490nm) mini-GBIC module - 80km
MGB-LB80	SFP-Port 1000 BASE-BX (WDM, TX:1550nm) mini-GBIC module - 80km
MGB-TSX	SFP-Port 1000 BASE-SX mini-GBIC module - 550m (-40~75 degrees C)
MGB-TSX2	SFP-Port 1000 BASE-SX mini-GBIC module - 2km (-40~75 degrees C)
MGB-TLX	SFP-Port 1000 BASE-LX mini-GBIC module - 20km (-40~75 degrees C)
MGB-TL40	SFP-Port 1000 BASE-LX mini-GBIC module - 40km (-40~75 degrees C)
MGB-TL80	SFP-Port 1000 BASE-LX mini-GBIC module - 80km (-40~75 degrees C)
MGB-TSA	SFP-Port 1000 BASE-BX (WDM, TX:1310nm) mini-GBIC module - 2km (-40~75 degrees C)
MGB-TSB	SFP-Port 1000 BASE-BX (WDM, TX:1550nm) mini-GBIC module - 2km (-40~75 degrees C)
MGB-TLA10	SFP-Port 1000 BASE-BX (WDM, TX:1310nm) mini-GBIC module - 10km (-40~75 degrees C)
MGB-TLB10	SFP-Port 1000 BASE-BX (WDM, TX:1550nm) mini-GBIC module - 10km (-40~75 degrees C)
MGB-TLA20	SFP-Port 1000 BASE-BX (WDM, TX:1310nm) mini-GBIC module - 20km (-40~75 degrees C)
MGB-TLB20	SFP-Port 1000 BASE-BX (WDM, TX:1550nm) mini-GBIC module - 20km (-40~75 degrees C)
MGB-TLA40	SFP-Port 1000 BASE-BX (WDM, TX:1310nm) mini-GBIC module - 40km (-40~75 degrees C)
MGB-TLB40	SFP-Port 1000 BASE-BX (WDM, TX:1550nm) mini-GBIC module - 40km (-40~75 degrees C)
MGB-TLA80	SFP-Port 1000 BASE-BX (WDM, TX:1490nm) mini-GBIC module - 80km (-40~75 degrees C)
MGB-TLB80	SFP-Port 1000 BASE-BX (WDM, TX:1550nm) mini-GBIC module - 80km (-40~75 degrees C)

Available 100Mbps Modules for XGS3-24242

Fast Ethernet Transceiver (100BASE-X SFP)

Model	Speed (Mbps)	Connector Interface	Fiber Mode	Distance	Wavelength (nm)	Operating Temp.
MFB-FX	100	LC	Multi Mode	2km	1310nm	0 ~ 60 degrees C
MFB-F20	100	LC	Single Mode	20km	1310nm	0 ~ 60 degrees C
MFB-F40	100	LC	Single Mode	40km	1310nm	0 ~ 60 degrees C
MFB-F60	100	LC	Single Mode	60km	1310nm	0 ~ 60 degrees C
MFB-F120	100	LC	Single Mode	120km	1310nm	0 ~ 60 degrees C
MFB-TFX	100	LC	Multi Mode	2km	1310nm	-40 ~ 75 degrees C
MFB-TF20	100	LC	Single Mode	20km	1310nm	-40 ~ 75 degrees C

Fast Ethernet Transceiver (100BASE-BX, Single Fiber Bi-directional SFP)

Model	Speed (Mbps)	Connector Interface	Fiber Mode	Distance	Wavelength (TX)	Wavelength (RX)	Operating Temp.
MFB-FA20	100	WDM(LC)	Single Mode	20km	1310nm	1550nm	0 ~ 60 degrees C
MFB-FB20	100	WDM(LC)	Single Mode	20km	1550nm	1310nm	0 ~ 60 degrees C
MFB-TSA	100	WDM(LC)	Multi Mode	2km	1310nm	1550nm	-40 ~ 75 degrees C
MFB-TSB	100	WDM(LC)	Multi Mode	2km	1550nm	1310nm	-40 ~ 75 degrees C
MFB-TFA20	100	WDM(LC)	Single Mode	20km	1310nm	1550nm	-40 ~ 75 degrees C
MFB-TFB20	100	WDM(LC)	Single Mode	20km	1550nm	1310nm	-40 ~ 75 degrees C
MFB-TFA40	100	WDM(LC)	Single Mode	40km	1310nm	1550nm	-40 ~ 75 degrees C
MFB-TFB40	100	WDM(LC)	Single Mode	40km	1550nm	1310nm	-40 ~ 75 degrees C

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