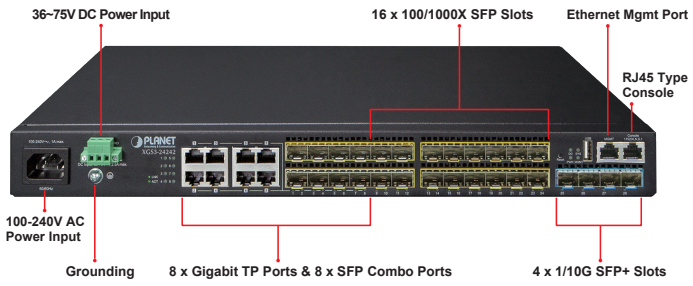
Layer 3 24-Port 100/1000X SFP + 8-Port Shared TP + 4-Port 10G SFP+ Stackable Managed Switch (100~240V AC, 36-75V DC)

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

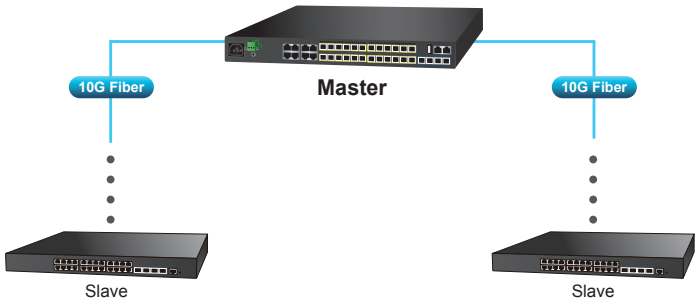
- Complies with the IEEE 802.3, IEEE 802.3u, IEEE 802.3ab,

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