

Layer 3 Multi-Port 10 Gigabit Managed Ethernet Switch

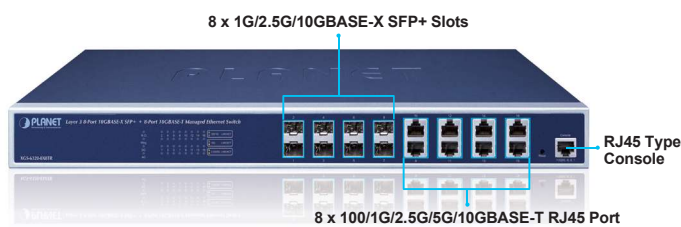


Perfect Managed All-port 10Gbps Switch with L3/L2 Switching and Security

PLANET XGS-6320 series is a **fully-managed all-port 10Gbps Ethernet switch** designed for the demand of high-bandwidth required network equipment, such as Wi-Fi 6/6E wireless AP, NAS, workstation and those with 10Gbps fiber or copper interfaces. It features **multiple 10GBASE-T copper ports** and **10GBASE-X SFP+ fiber ports** are flexibly designed to extend the connection distance.

Models	10GBASE-X SFP+ Port	10GBASE-T RJ45 Port	Power Input - AC	Power Input - DC
XGS-6320-8X8TR	8	8	100-240V AC	36-60V DC
XGS-6320-12X4TR	12	4		

With such a favorable data link capability, hardware-based Layer 3 routing performance, Layer 2 and Layer 4 switching engine and user-friendly yet advanced IPv6/IPv4 management interfaces, it helps to accelerate the deployment of the next-generation high-bandwidth required network for Metro, smart cities and enterprises.



Physical Port

• XGS-6320-8X8TR

- Eight **10GBASE-X SFP+** ports, backward compatible with 1000BASE-X and 2500BASE-X SFP transceivers
- Eight **10GBASE-T RJ45** ports, backward compatible with 100/1G/2.5G/5GBASE-T auto-negotiation

• XGS-6320-12X4TR

- Twelve **10GBASE-X SFP+** ports, backward compatible with 1000BASE-X and 2500BASE-X SFP transceivers
- Four **10GBASE-T RJ45** ports, backward compatible with 100/1G/2.5G/5GBASE-T auto-negotiation
- RJ45 type RS232 console interface for switch basic management

Redundant Power System

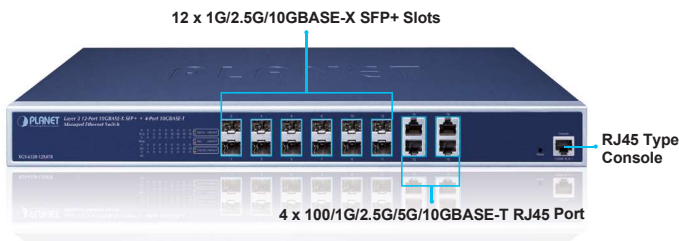
- Redundant 100~240V AC and 36-60V DC dual power
- Active-active redundant power failure protection
- Backup of catastrophic power failure on one supply
- Fault tolerance and resilience

Layer 3 IP Routing Features

- IPv4 dynamic routing protocol supports RIPv2 and OSPFv2 and IPv6 OSPFv3
- IPv6 dynamic routing protocol supports OSPFv3
- IPv4/IPv6 hardware static routing
- Routing interface provides per VLAN routing mode

Layer2 Features

- Storm Control support
 - Broadcast/Multicast/Unknown unicast
- Supports **VLAN**
 - IEEE 802.1Q tagged VLAN
 - Supports provider bridging (VLAN Q-in-Q, IEEE 802.1ad)
 - Private VLAN Edge (PVE)
 - Protocol-based VLAN
 - MAC-based VLAN
 - Voice VLAN
 - GVRP (GARP VLAN Registration Protocol)
- Supports **Spanning Tree Protocol**
 - IEEE 802.1D Spanning Tree Protocol
 - IEEE 802.1w Rapid Spanning Tree Protocol
 - IEEE 802.1s Multiple Spanning Tree Protocol, spanning tree by VLAN



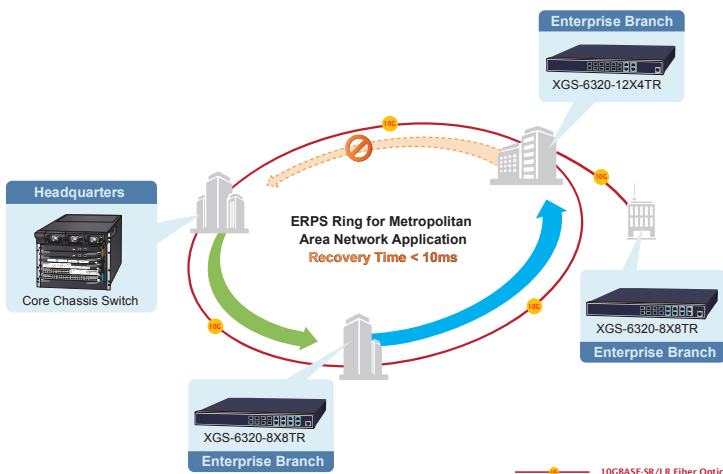
10GBASE-T and 10GBASE-X SFP Dual Media Interfaces for Diversified Bandwidth Applications

PLANET XGS-6320 series has the capability to reach a high speed of 10Gbps over copper or fiber-optic cabling which helps to accelerate the performance of large data transmission. The built-in 10GBASE-T copper interfaces support 5-speed (10G/5G/2.5G/1G/100) auto-negotiation, and 10Gbps data transmission with the existing Cat6A/Cat7 UTP cabling, meaning the speed can be increased without costs. It can definitely give you the speed you demand and its Plug and Play makes installation easy.

The fiber-optic 10GBASE-X SFP+ interfaces support 4 speeds, 10GBASE-SR/LR, 2500BASE-X, 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.

Redundant Ring, Fast Recovery for Critical Network Applications

The XGS-6320 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 (802.1w RSTP) 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 10ms** to quickly bring the network back to normal operation.



- BPDU Guard
- Supports **Link Aggregation**
 - 802.3ad Link Aggregation Control Protocol(LACP)
 - Cisco ether-channel (static trunk)
 - Maximum 8 trunk groups, up to 16 ports per trunk group
- Provides port mirror (many-to-1)
- Port mirroring to monitor the incoming or outgoing traffic on a particular port
- Loop protection to avoid broadcast loops
- Link Layer Discovery Protocol (LLDP)
- Compatible with Cisco uni-directional link detection(UDLD) that monitors a link between two switches and blocks the ports on both ends of the link if the link fails at any point between the two devices
- Supports G.8032 ERPS (Ethernet Ring Protection Switching)

Quality of Service

- Ingress Shaper and Egress Rate Limit per port bandwidth control
- 8 priority queues on all switch ports
- Traffic classification
 - IEEE 802.1p CoS
 - TOS/DSCP/IP Precedence of IPv4/IPv6 packets
 - IP TCP/UDP port number
 - Typical network application
- Strict priority and Weighted Round Robin (WRR) CoS policies
- Supports QoS and In/Out bandwidth control on each port
- Traffic-policing on the switch port
- DSCP remarking

Multicast

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

Security

- Authentication
 - IEEE 802.1x Port-based/MAC-based network access authentication
 - Built-in RADIUS client to co-operate with the RADIUS servers

Cybersecurity Network Solution to Minimize Security Risks

The cybersecurity feature included to protect the switch management in a mission-critical network virtually needs no effort and cost to install. Both SSHv2 and TLSv1.2 protocols are utilized to provide strong protection against advanced threats. The network administrator can now construct highly-secure corporate networks with considerably less time and effort than before.



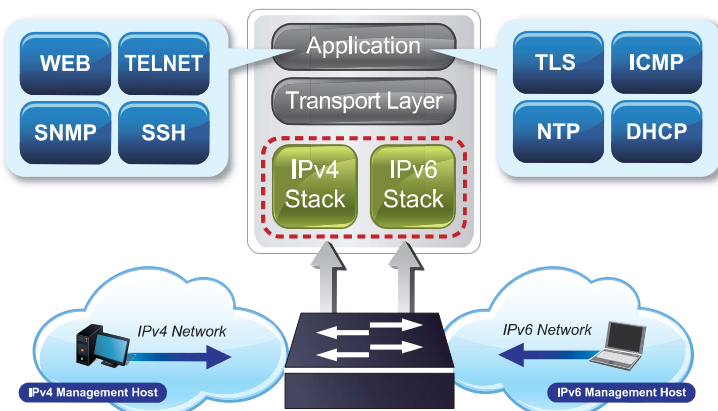
AC and DC Redundant Power to Ensure Continuous Operation

The XGS-6320 series is equipped with one 100~240V AC power supply unit and one additional 36-60V 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.



Solution for IPv6 Networking

With the support for IPv6/IPv4 protocol, and easy and user-friendly management interfaces, the XGS-6320 series is the best choice for IP surveillance, VoIP and wireless service providers to connect with the IPv6 network. It also helps SMBs to step in the IPv6 era with the lowest investment and without having to replace the network facilities even though ISPs establish the IPv6 edge network.



- TACACS+ login users access authentication
- RADIUS/TACACS+ users access authentication
- Guest VLAN assigns clients to a restricted VLAN with limited services
- Access Control List
 - IP-based Access Control List (ACL)
 - MAC-based Access Control List
- Source MAC/IP address binding
- **DHCP Snooping** to filter un-trusted DHCP messages
- **Dynamic ARP Inspection** discards ARP packets with invalid MAC address to IP address binding
- **IP Source Guard** prevents IP spoofing attacks
- IP address access management to prevent unauthorized intruder

Management

- IPv4 and IPv6 dual stack management
- Switch Management Interfaces
 - Web switch management
 - Console and Telnet Command Line Interface
 - SNMP v1 and v2c switch management
 - SSHv2, TLSv1.2 and SNMPv3 secure access
- SNMP Management
 - Four RMON groups (history, statistics, alarms and events)
 - SNMP trap for interface Linkup and Linkdown notification
- **IPv6** IP Address/NTP/DNS management
- Built-in Trivial File Transfer Protocol (TFTP) client
- BOOTP and DHCP for IP address assignment
- System Maintenance
 - Firmware upload/download via HTTP/TFTP
 - Reset button for system reboot or reset to factory default
 - Dual Images
- DHCP Functions:
 - DHCP Relay
 - DHCP Option82
 - DHCP Server
- User Privilege levels control
- NTP (Network Time Protocol)
- Network Diagnostic
 - ICMPv6/ICMPv4 Remote Ping
 - Cable Diagnostic technology provides the mechanism to detect and report potential cabling issues
 - SFP-DDM (Digital Diagnostic Monitor)
- SMTP, Syslog and SNMP trap remote alarm
- System Log

Specifications

Product	XGS-6320-8T8XR	XGS-6320-12X4TR
Hardware Specifications		
Copper Ports	8 10GBASE-T RJ45 auto negotiation ports (Ports 9 to 16) Supports 10G/5G/2.5G/1G/100Mbps data rate	4 10GBASE-T RJ45 auto negotiation ports (Ports 13 to 16) Supports 10G/5G/2.5G/1G/100Mbps data rate
SFP+ Slots	8 10GBASE-SR/LR SFP+ ports (Ports1 to 8) Backward compatible with 1000BASE-SX/LX/BX and 2500BASE-X SFP transceivers	12 10GBASE-SR/LR SFP+ ports (Ports1 to 12) Backward compatible with 1000BASE-SX/LX/BX and 2500BASE-X SFP transceivers
Console	1 x RJ45-to-DB9, RS232 serial port (115200, 8, N, 1)	
Reset Button	< 5 sec: System reboot > 5 sec: Factory default	
RAM	2048Mbytes	
Flash Memory	64Mbytes	
Dimensions (W x D x H)	440 x 200 x 44.5mm, 1U height	
Weight	2,870g	2,832g
Power Requirements - AC	100~240V AC, 50/60Hz, 2.1A max.	
Power Requirement - DC	DC 36-60V, 2A	
Power Consumption	AC Input: System On: 22W Full loading: 44W DC Input: System on: 25W Full loading: 45W	AC Input: System On: 22W Full loading: 40W DC Input: System on: 25W Full loading: 40W
ESD Protection	6KV DC	
Surge Protection	4KV DC	
Fan	2 smart fans	
LED	System: AC (Green), DC (Green), Ring (Green), Ring Owner (Green) Per 10GBASE-T RJ45 ports: 100/1G/ LNK/ACT (Green) 10G LNK/ACT (Amber) 2.5G/5G LNK/ACT (Green and amber) Per 10GBASE-X SFP+ ports: 100/1G/ LNK/ACT (Green) 10G LNK/ACT (Amber) 2.5G LNK/ACT (Green and amber)	
Switching Specifications		
Switch Architecture	Store-and-Forward	
Switch Fabric	320Gbps/non-blocking	
Throughput	238.1Mpps@ 64Bytes packet	
Address Table	32K entries, automatic source address learning and aging	
Shared Data Buffer	32Mbits	
Flow Control	IEEE 802.3x pause frame for full duplex Back pressure for half duplex	
Jumbo Frame	10240bytes	
Layer 3 Functions		
IP Interfaces	Max. 128 VLAN interfaces	
Routing Table	Max. 512 static route entries Max. 3072 routing table entries	
Routing Protocols	IPv4 RIPv2 IPv4 OSPFv2 IPv6 OSPFv3 IPv4 hardware static routing IPv6 hardware static routing	
Layer 2 Functions		
Port Configuration	Port disable/enable Flow Control disable/enable Port link capability control	
Port Status	Display each port's speed duplex mode, link status, flow control status, auto negotiation status, trunk status	
Port Mirroring	TX/RX/Both Many-to-1 monitor	

VLAN	<p>IEEE 802.1Q tag-based VLAN, IEEE 802.1ad Q-in-Q tunneling Private VLAN Edge (PVE) MAC-based VLAN Protocol-based VLAN Voice VLAN MVR (Multicast VLAN Registration) GVRP Up to 4K VLAN groups, out of 4094 VLAN IDs</p>
Spanning Tree Protocol	<p>IEEE 802.1D Spanning Tree Protocol (STP) IEEE 802.1w Rapid Spanning Tree Protocol (RSTP) IEEE 802.1s Multiple Spanning Tree Protocol (MSTP) Supports 7 MSTP instances BPDU Guard, BPDU filtering and BPDU transparent Root Guard</p>
Link Aggregation	<p>IEEE 802.3ad LACP (static trunk) Supports 8 trunk groups with 16 ports per trunk</p>
IGMP Snooping	<p>IPv4 IGMP (v1/v2/v3) snooping IPv4 IGMP querier mode support Supports 255 IGMP groups</p>
MLD Snooping	<p>IPv6 MLD (v1/v2) snooping, IPv6 MLD querier mode support Supports 255 MLD groups</p>
Bandwidth Control	<p>Per port bandwidth control Ingress: 10Kbps~13128Mbps Egress: 10Kbps~13128Mbps</p>
Ring	<p>Supports ERPS, and complies with ITU-T G.8032 Recovery time < 10ms @ 3 nodes Recovery time < 50ms @ 16 nodes Supports Major ring and sub-ring</p>
QoS	<p>Traffic classification based, strict priority and WRR 8-level priority for switching - Port number - 802.1p priority - 802.1Q VLAN tag - DSCP/TOS field in IP packet</p>
Security Functions	
Access Control List	<p>IP-based ACL/MAC-based ACL ACL based on: - MAC Address - IP Address - Ethertype - Protocol Type - VLAN ID - DSCP - 802.1p Priority Up to 512 entries</p>
Security	<p>Port security IP source guard, up to 512 entries Dynamic ARP inspection, up to 1K entries Command line authority control based on user level Static MAC address, up to 64 entries</p>
AAA	<p>RADIUS client TACACS+ client</p>
Network Access Control	<p>IEEE 802.1x port-based network access control MAC-based authentication Local/RADIUS authentication</p>
Management Functions	
Basic Management Interfaces	<p>Console;Telnet; Web browser; SNMP v1, v2c</p>
Secure Management Interfaces	<p>SSHv2, TLSv1.2, SNMPv3</p>