OVERVIEW

The **S16TG2FG** is a L2 full 10G managed Ethernet core switch. it has **16*1/10G SFP+** fiber slot ports and **2*40G QSFP+** fiber slot ports. The **S16TG2FG** is a standard non-blocking Ethernet switch using Broadcom high-performance chips. The switch provides 484Gbps switching capacity and 360Mpps forwarding performance. It has flexible networking capabilities to ensure stable operation of the network and load balancing of links and to provide sufficient bandwidth for aggregation and core data exchange. Users can choose the appropriate 10G ports to meet the network needs.

The **S16TG2FG** has rich network management functions, complete security protection mechanism, complete ACL/QoS policy and rich VLAN functions, easy management and maintenance, high bandwidth, low latency, and simple network management. High-density access in data centers and cloud computing networks is also widely used in large and medium-sized security monitoring, large and medium-sized Internet cafes, enterprise networks, and the core or aggregation of metropolitan area networks.

FEATURES

❖ **High density 10G access, performance is remarkable**
- o 16*1/10G SFP+ fiber slot ports and 2*40G QSFP+ fiber slot ports to meet the high-density access requirements of 10G cores, which is convenient for users to flexibly set up networks to meet the network requirements of various scenarios.
- o Support non-blocking wire speed forwarding.
- o Support full duplex based on IEEE802.3x and half duplex based on backpressure.

❖ **Strong business processing capability**
- o IEEE802.1Q VLAN, flexible VLAN division, mac VLAN, protocol VLAN and private VLAN.
- o STP, RSTP, and MSTP spanning tree protocols can eliminate layer 2 loops and implement link back up.
- o QoS, Priority mode based on 802.1P, Port & DSCP, queue scheduling algorithm includes EQU, SP, WRR & SP+WRR.
- o Static aggregation and dynamic aggregation can increase link bandwidth, achieve load balancing, link back up, and improve link reliability.
- o ALC, filter data packet through configuring matching rules, processing operation & time permission, and provide flexible and safe access control.
- o IGMP V1 / V2 multicast protocol and IGMP Snooping, meet the needs of multi-terminal HD video surveillance and video conference access.

❖ **Security**
- o Port isolation, port broadcast storm suppression.
- o Quad binding of IP address, MAC address, VLAN, and port to filter data packets.
- o DHCP Snooping put an end to set up a private DHCP server to ensure the legality of the DHCP server.
- o DoS protection to prevent attacks includes Land Attack, Scan SYNFIN, Xmascan, Ping Flooding, etc.

- o ARP protection, protecting against gateway spoofing, ARP spoofing, and ARP attack in the local area network.
- o IP source protection to prevent spoofing of illegal addresses including MAC spoofing, IP spoofing, MAC / IP spoofing, etc.
- o 802.1X authentication provides authentication for LAN computers and controls the authorization status of controlled ports based on the authentication results.
- o Port security, stop learning when the number of MAC addresses learned by the port reaches the max number, prevent MAC address attacks, and control port traffic.

❖ **Green energy saving**
- o Flexible front and rear air duct design and rear front air duct design.
- o Support power and fan redundancy configuration to ensure uninterrupted operation of the business.
- o Flexible support for front and rear and rear front air ducts through optional fan and power module.
- o Innovative energy-saving technology: Using the industry's latest energy-saving chips, intelligent fan speed control solution, support real-time power consumption detection, reduce operation and maintenance costs for customers, and create a green data center.
- o Adopt strict front and rear air duct design to support complete isolation of hot and cold air ducts, improve heat dissipation efficiency, and meet the design requirements of data center equipment room.

❖ **Easy maintenance**
- o Web network management, CLI command line (Console, Telnet), SNMP (V1 / V2 / V3), and other diversified management and maintenance methods.
- o HTTPS, SSL V3, TLSV1, SSHV1 / V2, and other encryption methods make management more secure.
- o RMON, system logs, and port traffic statistics facilitate network optimization and reconstruction.
- o LLDP can facilitate the network management system to query and determine the communication status of the link.
- o CPU monitoring, memory monitoring, Ping test, Tracert test and cable diagnose.
- o XModem protocol can upgrade software and BootRom through TFTP / ZMODEM
- o SFP +, compatible with XFP, etc.
- o Provide redundant power supply, fast failover, and fast connection, improve system reliability.

TECHNICAL SPECIFICATION

XENTINO S16TG2FG	
Interface Characteristics	
Fixed Port	16*1/10G SFP+ fiber slot ports (Data) 2*40G QSFP+ fiber slot ports (Data) 1*Console RS232 port (9600,N,8,1)
Optical Fiber Port	1/10G SFP+ optical fiber interface, default matching optical modules (optional order single-mode / multi-mode, single fiber / dual fiber optical module. LC)
Optical Cable/Distance	Multi mode: 850nm / 0 ~ 500M(1.25G), 0 ~ 300M (10G); single mode: 1310nm / 0 ~ 40KM, 1550nm/ 0 ~ 120KM.
Chip Parameter	
Network Management Type	L2
Network Protocol	IEEE802.3 10BASE-T, IEEE802.3i 10Base-T IEEE802.3u 100Base-TX, IEEE802.3ab 1000Base-T IEEE802.3z 1000Base-X, IEEE802.3ae 10GBase-SR/LR IEEE802.3x
Forwarding Mode	Store and Forward(Full Wire Speed)
Switching Capacity	484Gbps (Non-blocking)

Forwarding Rate	360Mpps (@64byte)
MAC	16K
Buffer Memory	24M
Jumbo Frame	10K
LED Indicator	Power: PWR (Green), Data:Link(Yellow), PoE: PoE (Green)
Reset Switch	Yes, One-button factory reset
Power	
Total PWR / Input Voltage	60W (AC100-240V)
Power Consumption	Standby<15W, Full Load<55W
Power Supply	Built-in power supply, AC 100~240V 50-60Hz 1.0A
Physical Parameter	
Operation TEMP / Humidity	-20~+55°C, 5%~90% RH Non condensing
Storage TEMP / Humidity	-40~+75°C, 5%~95% RH Non condensing
Dimension	440*285*44mm (L*W*H)
Net /Gross Weight	<3.5kg / <4.2kg
Form Factor	Desktop type, 19 inch 1U cabinet installation
Certification & Warranty	
Lightning Protection / Protection Level	Lightning protection: 6KV 8/20us, Protection level: IP30
Certification	CCC, CE mark, commercial, CE/LVD EN60950, FCC Part 15 Class B, RoHS
Warranty	2 years, lifelong maintenance.
Network Management Features	
Interface	IEEE802.3X (Full-duplex) Port temperature protection setting Port green Ethernet Energy-saving setting Broadcast storm control based on port speed The speed limit of the message flow in the access port. The minimum particle size is 64Kbps.
VLAN	Port based on VLAN, 802.1Q VLAN VLAN based on IP, VLAN based on MAC
Port Aggregation	LACP, Static aggregation, dynamic aggregation Max 9 aggregation groups and 8 ports per group.
Spanning Tree	STP (IEEE802.1d), RSTP (IEEE802.1w), MSTP (IEEE802.1s)
Multicast	MLD Snooping v1/v2, Multicast VLAN IGMP Snooping v1/v2, Max 1024 multicast groups, Fast log out
Port Mirroring	Bidirectional data mirroring based on port
QoS	Flow-based Rate Limiting Flow-based Packet Filtering 8*Output queues of each port 802.1p/DSCP priority mapping Diff-Serv QoS, Priority Mark/Remark Queue scheduling algorithm (SP, WRR, SP+WRR)

ACL	Port-based Issuing ACL, ACL based on port and VLAN L2 to L4 packet filtering, matching first 80 bytes message. Provide ACL based on MAC, Destination MAC address, IP Source, Destination IP, IP Protocol Type, TCP/UDP Port, TCP/UDP Port Range, and VLAN, etc.
Security	IP-MAC-VLAN-Port binding ARP inspection, Anti-DoS attack AAA & RADIUS, MAC learning limit Mac black holes, IP source protection IEEE802.1X & MAC address authentication Broadcast storm control, Backup for host datum SSH 2.0, SSL, Port isolation, ARP message speed limit User hierarchical management and password protection
DHCP	DHCP Client, DHCP Snooping
Management	One-key recovery Cable Diagnose, LLDP Web Management (HTTPS) NTP, System work log, Ping Test CPU instant utilization status view Console/AUX Modem/Telnet/SSH2.0 CLI Download & Management on FTP, TFTP, Xmodem, SFTP
System	Category 5 Ethernet network cable Web browser: Mozilla Firefox 2.5 or higher, Google browser chrome V42 or higher, Microsoft Internet Explorer10 or later; TCP/IP, network adapter, and network operating system (such as Microsoft Windows, Linux, or Mac OS X) installed on each computer in a network

ORDERING INFORMATION

Model	Description
S16TG2FG	L2 managed full 10G Ethernet core switch with 16*1/10G SFP+ fiber slot ports and 2*40G QSFP+ fiber slot ports. Total power is 60W, built-in power supply.

PACKAGE CONTENT

QTY	UNIT	CONTENT
1	SET	18-port L2 full 10G managed Ethernet core switch
1	PC	AC Power Cable
1	SET	Mounting Kits
1	PC	User Guide
1	PC	Warranty Card