



Product Name	GAOTek 24 Port Gigabit Port Network Managed Switch L3
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GAOTek 24 Port Gigabit Port Network Managed Switch L3

Outline:

GAO Tek Ethernet Switch Series is an enterprise-class line of standalone access switches that ease the deployment of secure converged applications. It is designed for an easy-to-deploy network environment, has high performance and high port density characters.

Can provide stable, reliable, secure, and high-performance IPV4/IPv6 switching services for enterprise network access, server access in data centers, 802.11n WLAN deployment, and high-quality Gigabit desktop access etc.



TOP-S3230-28TX



TOP-S3230-28SX



TOP-S3220P-28TX (POE)

The switch adopts a high-performance ASIC design to enable it forward data at wire speed through all Gigabit to 10 Gigabit ports. Has complete functions such as security control, QoS, and multicast capability. It can filter data packets by layer 4 to layer 7 ACL based on user definition. Combined with 802.1x authentication protocol, the switch can provide users with various security applications.

With powerful QOS and multicast functions, the switches can meet the needs of enterprise network video and audio high-priority data and other specific data. It is suitable for typical applications where enterprise networks need to use VLAN service isolation and ensure strict data priority. Its large-capacity Gigabit and 10 Gigabit ports can provide low-cost, high-performance, strong scalability, and simple management access solutions for enterprise networks, IP MAN ((metropolitan area network) and campus/university networks.

Main Features:

10 gigabit Ethernet convergence capability

Supports high-density GIGABit interfaces and SFP+ 10-Gigabit interfaces, providing targeted solutions for large-traffic data exchange in data centers, simplifying the network structure and reducing network maintenance costs.



Rich link-level reliability technology

Not only supports the traditional STP/RSTP/MSTP spanning tree protocol, but also supports the latest Ethernet ring network standard ERPS. ERPS is the G.8032 standard issued by ITU-T. Based on the traditional Ethernet MAC and bridge functions, ERPS implements fast switching of the Ethernet loop network protection at the millisecond level, greatly improving the network reliability. Convergence time is not affected when multiple services and heavy traffic are carried on the network.

Mature IPV6 features

Supports IPV4/IPV6 dual-stack, IPV4-in-IPV6, IPV6-in-IPV4, and IPV6-in-IPV6, and supports IPV6 over IPV4 tunnels (manual tunnels, 6TO4 tunnels, ISATAP tunnels, and GRE tunnels).

It can be deployed on a pure IPV4 or IPV6 network or a network where both IPV4 and IPV6 coexist, meeting the requirements of the network transition from IPV4 to IPV6.

PoE Function without power off

When a PoE switch is restarted, it does not interrupt power supply for the powered devices, such as cameras and VoIP phones. This ensures that the powered devices are not powered off during the restart of the switch.

Flexible ACL access control

The ACL processing mechanism of all hardware is adopted to ensure the control requirements of Gigabit high-speed forwarding. Supports layer 2 to layer 7 ACL access control. Classifies data flows based on source and destination MAC addresses, source and destination IP addresses, UDP/TCP port numbers, and IP protocol types.

Sets access control rules to "permit or deny" based on data classification and applies the rules to vlans or physical ports. Supports the global ACL function, increasing the number of valid ACL entries and facilitating customer use and maintenance.



Multiple security and authentication technologies protect against ARP attacks

Security policies, such as user permission and identity authentication, port security, port limiting, port monitoring, address filtering, loopback detection and 802.1x authentication etc., are provided to protect user access and network security. It has excellent security function-

design. Supports SNMP V3, MAC+IP+VLAN binding, 802.1x authentication and other security policies based on user security policies.

It also supports security technologies such as anti-network storm attack, anti-DOS /DDOS attack, anti-ARP attack and anti-network protocol packet attack, which can effectively prevent attacks and viruses. More suitable for large-scale, multi-service, complex traffic access network.

Supports rich QoS policy mechanisms and QINQ function

Fully realize DIFFSERV model, provide up to 8 QoS queues, support DSCP/TOS/ 802.1p and other QoS modes. SP, SRR, WRR, WFQ and mixed scheduling queue scheduling algorithms, can achieve port speed limiting, traffic shaping and other QoS functions. Meet customer network data processing priority requirements;

Supports port trust, user can configure trust CoS, DSCP, IP priority, and port priority, and modify the DSCP and CoS values of packets. can classify traffic by port, VLAN, DSCP, IP priority, and ACL, modify the DSCP and IP priorities of packets, and specify different bandwidths to provide different service qualities for voice, data, and video transmission on the same network.

The QinQ function is supported to encapsulate a user's private NETWORK VLAN tag into a public network VLAN tag, so that packets carrying two VLAN tags can pass through the backbone network and intercommunicating with the user's private network.

Supports VST horizontal virtualization and/or MVST vertical virtualization

Multiple switches can be virtualized into a single switch for unified management and data forwarding of unified entries. The VST technology enables cross-device link bundling. When a link fails, services are switched over within 0 seconds, enhancing network stability. MSTP and VRRP are not required to be deployed on the network, and the link bandwidth usage increases by 100%



Technical Specification:

Model	TOP-S3230-28TX	TOP-S3230-28SX	TOP-S3220P-28TX
Hardware Part			
Fixed port	24*10/100/1000M Ethernet Ports; 4*GE/10GE SFP+; 1*RJ45 console; 1*USB; Built-in 1*AC Power Supply;	24*10/100/1000M SFP Ports; 4*GE/10GE SFP+; 1*RJ45 console; 1*USB; Built-in 2*AC Power Supply;	24*10/100/1000M Ethernet Ports; 4*GE/10GE SFP+; 1*RJ45 console; 1*USB; Built-in 1 *AC power module; 24*POE/POE+ supported
Exchange Capacity	336Gbps		
Packet forwarding rate	95Mpps		
VLAN	4K		
Power Consumption	≤30W	≤45W	≤430W (POE 380W)
Power Input	AC 100V ~ 240V, 50Hz ~ 60Hz		
Operating humidity	10~90%RH		
Storage humidity	5~95%RH		
Operating temp.	-10°C~55°C		
Storage Temp.	-40°C~70°C		
Dimension	442*220*44.2mm	442*320*44.2mm	440*380*44.2mm
Software Spec.			
L i n	limit the number of MAC addresses that a port can learn:Static MAC configuration; The blackhole MAC		
	Dynamic and static ARP, proxy ARP, and gratuitous ARP		



	Local area network (LAN)	Ethernet, Ethernet II, VLAN, 802.3x, 802.1p, 802.1Q, 802.3ad
		QinQ, Flexible QinQ, and Vlan Mapping
		STP/RSTP/MSTP, GVRP, Super Vlan, Pvlan, Voice VLAN, Monitor link BPDU Tunnel, EIPS
		Multiple-to-single,multiple-to-multiple ports mirroring, remote port mirroring, and flow mirroring
POE	POE Function	802.3af, 802.3at, Priority, preemption, automatic fault monitoring
Security	Security Function	AAA, PORTAL, 802.1X, RADIUS, TACACS+, SSH, Port security, user classification, andport isolation, DHCP snooping, DAI, ARP check, IP source guard, CPU protection
	Attack defense	URPF&LAND attack, SYN Flood attack, Smurf attack, Ping Flood attack, TearDrop attack, Ping of Death attack, TCP packet attack, ICMP packet attack, TCP/UDP packet destination port equals source port attack detection
Network protocol	Routing protocol	Default route, static route,RIP V1/V2, OSPF, RIPng, OSPFv3
	Multicast protocol	IGMP PROXY, IGMP filter, MLD v1/v2, IGMP Snooping, MLD v1/v2 Snooping
		PIM-DM, PIM-SM, PIM-SDM, PIM-SSM
	IP application	DHCP Server, DHCP Client, DHCP Relay, DHCP Snooping, Option 43/60/82
		DHCPv6 Server, DHCPv6 Client, DHCPv6 Relay, DHCPv6 Option 6/16/18/37
		DNS, PING, FTP Server, FTP Client, IP Accounting, UDP Helper, NTP



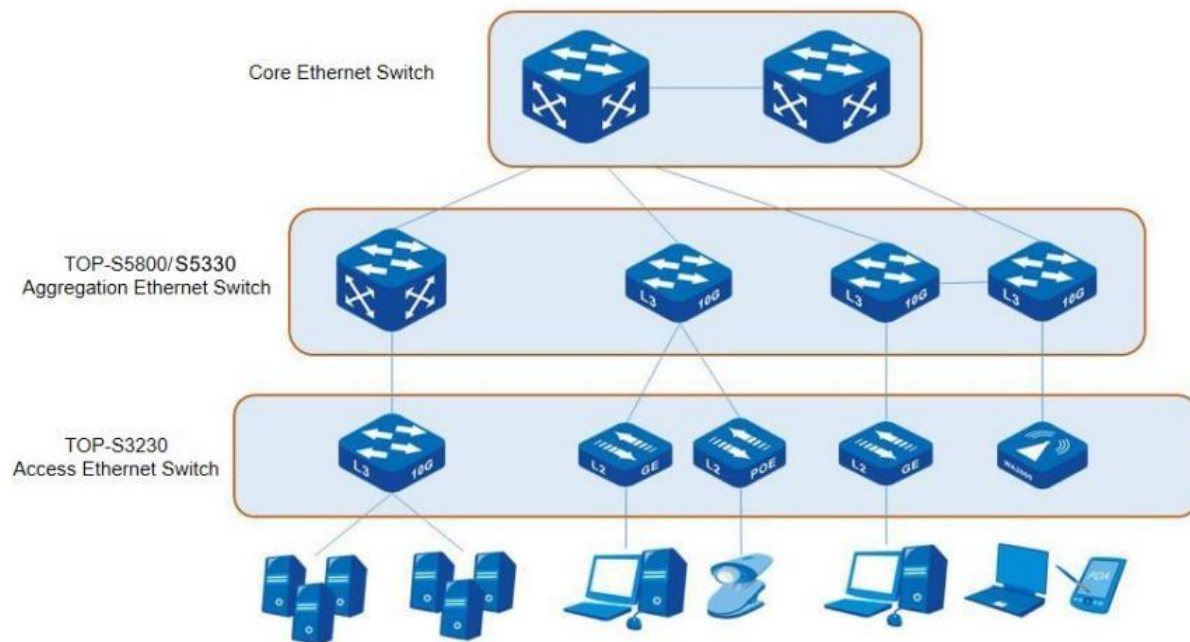
	IPv6	IPv6 ND, IPv6 PMTU, IPv6 ACL, DS-Lite, IPv4/v6 Dual Stack
QoS	Flow classification	Based on the port, MAC address, IP address, IP priority, DSCP priority, TCP/UDP port number, and protocol type etc.
	Traffic regulation	CAR
	Congestion management	SP, WRR, SP+WRR
	Congestion avoidance	RED, WRED
Virtualization	Virtualization technology	Supports Virtual Switching Technologies (VST), distributed device management, distributed link aggregation, and unified route management. Can realize 8 hardware devices VMS deployment.
		Support vertical virtualization to virtualize core devices into one device
Management	Network management	Console port Login management, HTTP, Telnet (VTY) remote management, WEB management, SSH management, SNMP V1/V2/V3, RMON 1/2/3/9, SYSLOG, DDMI, broadcast storm display
	Line management	Port line detection (VCT), UDLD
	Traffic analysis	Sflow Traffic analysis
QAM	Network Quality Assurance (SLA)	Network latency, jitter, packet loss rate and other tests



Reliability	Link Reliable	BFD for OSPF/VRRP etc., Keepalive Gateway, VRRP/VRRPv6, G.8032(ERPS) Ring protocol
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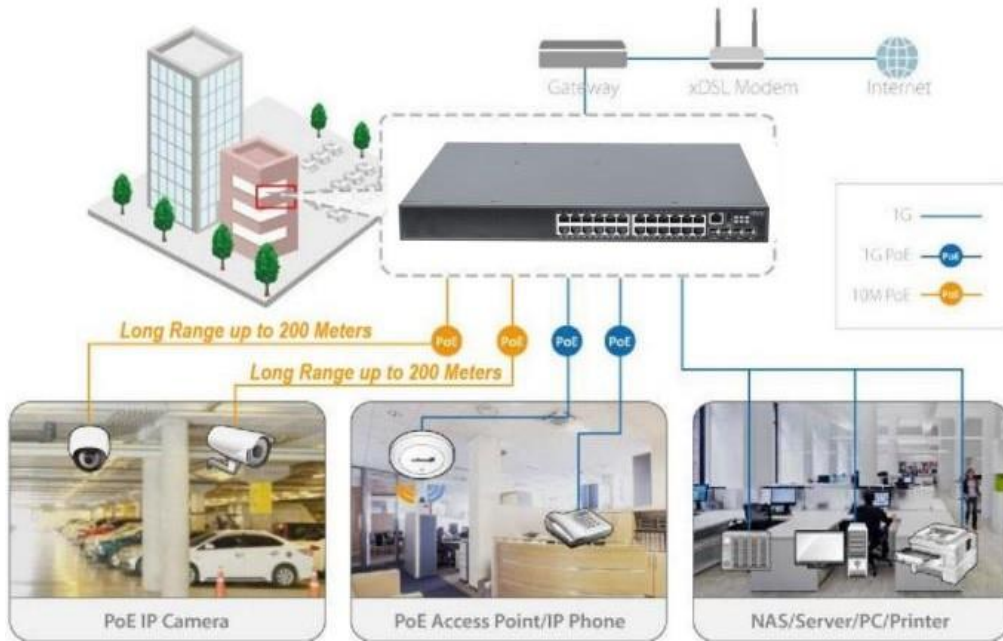
Typical Application:

TOP-S3230 access switches connects to TOP-S5330 & TOP-S5800 aggregation switches and connects to the core switches through 10GE uplink ports for gigabit access.





Smart Building LAN Gigabit Access



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