A-GEAR World Wide Manufacturing

Product Specification
A-GEAR S3900
High Performance 10Gigabit Ethernet Switch

A-GEAR S3900 is a standard L3 congestion-less switch, which is capable of multi-layer switching and wire-speed route forwarding. Its high-performance ASIC and modular design enable you to employ a suitable number of interfaces and to configure various networks with great flexibility, all based on their individual requirements. It supports multiple access authentication models that can be flexibly configured, making it especially ideal for community access networks. Due to its high performance and low cost, A-GEAR S3900 is considered a very competitive Ethernet switching solution for community networking and workgroup networking in enterprise networks.

1. Application

- Aggregation level of large enterprise networks
- Giga core of small- to Medium-sized business networks
- Connection server cluster of data centers
- A multi-layer solution with high performance but low cost, which is applied when multiple Giga ports are needed in other situations where multiple Giga ports are needed

2. Features

2.1. Excellent performance

- S3928/S3928GX: 240 Gbps switch fabric, at least extend to 4*10GE XFP ports
- S3948: 280 Gbps switch fabric, at least extend to 4*10GE XFP ports
- Hardware routing, wire-speed L3 switching, packet forwarding rate: 131Mpps
- Giga optical fiber supports up to 80 km long-distance transfer, direct connection to MAN backbone networks

2.2. Security and reliability

- Quota system for connected hosts per port
- IEEE 802.1x port-based user authentication

A-GEAR World Wide Manufacturing

- Ethernet port trunking provides more bandwidth and system redundancy
- Powerful ACL supports L2-L4 data filtering

2.3. Easy maintenance

- Supports device stacking through cluster technology. Central management with unified IP address saves IP addresses
- Management via CONSOLE port, Web, SNMP, etc.
- BootRom and other software upgrade through TFTP
- Support DHCP and relay, provide dynamic IP address assignment
- Support SFP standard interface, protect your investment
- Redundant power supply

2.4. Powerful traffic and broadcast control

- Automatically detect and restrain broadcast storm, support IGMP datagram snooping, effectively restrict broadcast flooding
- Full- and half- duplex traffic control
- Ethernet port bit rate quota
- Advanced buffer management supports 802.1p, with 4 dispatching queues per port mapping the 8 priority queues in 802.1p
- IP multicast and QoS support
- Jumbo frame

2.5. Multiple routing polices

- Static routing
- Support RIP v1/v2, OSPF v2, BGPv4 and many other dynamic routing protocols
- Support PIM-SM, PIM-DM and many other multicast routing protocols

3. Specifications

	A-GEAR S3928	A-GEAR S3928GX	A-GEAR S3948
Port	20 10/100/1000M TX 4 GSFP/TX Combo 1 10G slots (up to 4 10G XFP ports) 1 Console Port	20 Gigabit SFP slots 4 GSFP/TX Combo 1 10G slots (up to 4 10G XFP ports) 1 Console Port	44 10/100/1000M TX 4 GSFP/TX Combo 2 10G slots (up to 4 10G XFP ports) 1 Console Port
Processor	RISC 300MHz		
Flash	8 MB		
Memory	128 MB (up to 256MB)		
L3 Forwarding Rate	96Mpps all wire-speed, with filtering	96Mpps all wire-speed, with filtering	131Mppsall wire-speed, with filtering
Switch Fabric	240G bps	240G bps	280G bps

A-GEAR World Wide Manufacturing

	A-GEAR S3928	A-GEAR S3928GX	A-GEAR S3948
Switching Mode	Store-and-forward		
MAC Address Table Size	8K		
Queue Buffer	64 MB		
Jumbo frame	16383		
Functions			
Spanning Tree	IEEE 802.1D (STP), IEEE 802.1w (RSTP), IEEE 802.1s MSTP		
VLAN	Port-based VLAN, 802.1Q tag VLAN, Super VLAN, Private VLAN, GVRP dynamic VLAN configuration, VLAN Stacking (QinQ)		
Traffic Control	Back pressure at half-duplex, 802.3x at full-duplex, CAR support, 100M port: 1M step size; 1000M port: 8M step size		
Storm Control	Stop sending at threshold to restrict broadcast/multicast/unicast storms		
Multicast Control	IGMP snooping		
Multicast Protocol	IGMP v1/v2/v3, PIM-SM, PIM-DM		
Port Trunking	Up to 32 groups with up to 8 ports per group, dynamic LACP or static aggregation		
Port Mirroring	Supported. Can be based on flow classification		
Cluster	Cluster up to 32, manageable through single IP		
Unicast	Static, RIP v1/v2, OSPF v2, BGP v4		
Policy-based Routing	IP-based routing policies		
Redundant Routing	VRRP		
Proxy	Proxy ARP		
DHCP	DHCP Server/Client/DHCP Relay		
NAT	Static or dynamic NAT		
Security	IEEE 802.1x port-based user authentication Port Security Hardware support for IP ACL, MAC ACL, VLAN ACL Hardware support for port-based user authentication by combinations and bandings of port, IP address, and MAC address Web user authentication RADIUS User privilege classification and password protection DHCP snooping, DHCP option82, IP Source Guard		

A-GEAR World Wide Manufacturing

	A-GEAR S3928	A-GEAR S3928GX	A-GEAR S3948
QoS	Head Of Line (HOL) blocking prevention mechanism 4 dispatching queues per port, mapping the 8 priority queues in 802.1p WRR, SP, and FIFO queuing algorithms Best Effort Service Differentiated Service Strict Priority Weighted Round Robin First Come First Serve TOS re-tagging RTS		
Network Management	SNMP v1/v2 RMON (Group 1, 2, 3, 9) Telnet Command Line Interface (CLI) Web Interface Support A-GEAR network management tools suite: Broad Director NTP SSH LLDP		
Physical and electrical parameters			
Dimensions (mm) (L χ W x H)	442 χ 316x 44		
Power Consumption	60 W (max)		
LED Indicators	Power, system, link, activity		
Power Supply	AC 100 ~ 240 V, 47 ~ 63 Hz, 1A/230V, RPS power hot standby		
Working environment			
Temperature	Operating: 0 ~ 50℃, non-operating: -40 ~ 70℃		
Humidity	0 ~ 90% (no condensing)		

4. Order Information

A-GEAR S3928	Network management Router Switch, 20 ports 10/100/1000M Ethernet ports + 4 1000M SFP/TX Combo ports + 1 extended slots for 10G modules (up to 4 10G XFP ports), 1 console
A-GEAR S3928GX	Network management Router Switch, 20 Gigabit SFP slots + 4 1000M SFP/TX Combo ports + 1 extended slots for 10G modules (up to 4 10G XFP ports), 1 console

A-GEAR World Wide Manufacturing

A-GEAR S3948	Network management Router Switch, 44 ports 10/100/1000M Ethernet ports + 4 1000M SFP/TX Combo ports + 2 extended slots for 10G modules (up to 4 10G XFP ports)

The functions and corresponding parameters may change in light of the upgrade of software, modular, etc. The right of final interpretation belongs to A-GEAR. For more information, please contact us.