

LAYER 3 Gigabit with SFP+ Network Switch AS3-S Series

AS3-S2406 / AS3-S4806 / AS3-S2406F / AS3-S4806F

OVERVIEW

Angustos AS3 Series is Layer 3 with Full-gigabit and 10G+ network switch series for medium to large size Data network distribution. Designed for Carrier, Data Center and Enterprise centralized networks that required stability and durability. Supports functions such as powerful ACL, flexible QinQ, 1:1 or N:1 VLAN switching, Ethernet OAM, carrier-level QoS and industry-level IOGE Ether-ring, ensuring this switch series meets application requirements in all kinds of complicated sites. It also supports layer-3 routing protocol.

PRODUCT FEATURES

Carrier-level High Reliability

- Redundant Power module
- Dual backup, hot-swap
- Seamless switching, BDD mechanism
- STP / RSTP/MSTP
- VRRP - Ring protection

Telecom-Level Ethernet Switch

- Telecom-level Ethernet-ring protection protocol
- STP/RSTP/MSTP
- Active and standby uplinks and LACP link aggregation
- Layer 2 + Layer 3 MPLS VPN

Flexibile Networking

- Easy Maintenance with CLI/ Telnet/ SSH/ SSL and SNMP
- Web GUI module built-in for easy management procedures.
- Support FTP, TFTP, SFTP, ISSU, Zero Touch Provisioning.
- Automatic equipment discovery, network topology, equipment configuration, performance data statistic and analysis.

VLAN

- 4K Active VLAN,
- QinQ & Selective QinQ,
- GVRP, Private VLAN,
- Voice VLAN

Spanning Tree

- 802.1D (STP),
- 802.1W(RSTP) and 802.1S(MSTP)
- BPDU guard, root guard and loopback guard

Multicast

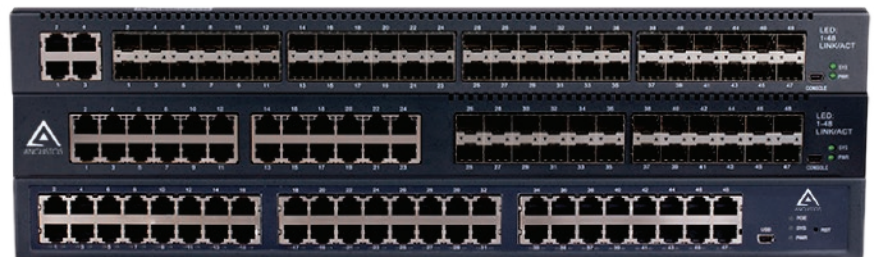
- IGMP v1/2/3
- IGMP Snooping / IGMP Fast Leave
- IGMP Filter / MVR

IP

- Static route
- RIP, OSPF
- 512 routing table
- IPv4/v6 dual stack

Basic Standards

- IEEE 802.3 - 10Mbit/s
- IEEE 802.3ab - G.bit/s Base-T
- IEEE 802.3z - G.bit/s Base-X
- IEEE 802.3u - 10/100 Mbit/s auto
- IEEE 802.3x/ 802.3ad
- IEEE 802.1d/ 802.1p/ 802.1q/ 802.1w
- IEEE 802.1ad/ 802.1az



Advance IPv6

- ICMPv6, DHCPv6, ACLv6 and IPv6 Telnet
- IPv6 neighbor discovery, Path MTU discovery
- MLD V1, MLD snooping
- Manual tunnel, ISAPTAP Tunnel, 6 to 4 tunnel
- IPv6 RADVD

Certification

- CE / FCC/ RoHS

QoS

- CAR, HQoS, MAC/IP/TCP/UDP/ VLAN/COS/DSCP/TOS based
- QoS, 802.1P/DSCP priority relabeling, SP, WRR, and "SP+WRR",
- Tail-Drop, WRED, flow monitoring and traffic shaping

Security

- Port isolation, Port security, and "IP+MAC+port" binding, MAC sticky DHCP Snooping and option 82, DAI & IP source guard, PPPoE+.
- IEEE 802.1x, Radius and BDTacacs+
- L2/L3/L4 ACL flow identification and filtration Anti-attack from DDoS, TCP's SYN Flood, UDP Flood, etc.
- Broadcast/multicast/unknown unicast storm-control
- Md5, SHA-256, RSA-1024, AES256, etc.

Environment

- Operating temperature/humidity: -10°C-60°C, 0%-90% non-condensing
- Storage temperature/humidity : -20°C-70°C, 0%-90% non-condensing

Stability

- Static/LACP link aggregation, Interface backup
- EAPS and ERPS
- ISSU
- BVSS, VRRP, UDLD

Management

- Console, Telnet, SSH v1/2, HTTP, HTTPS, SNMP v1/v2/v3, RMON
- TFTP, FTP, SFTP
- NTP
- ZTP(Zero Touch Provisioning)
- SPAN, RSPAN

DHCP

- DHCP server / relay / client
- DHCP snooping / option 82
- DHCP pool

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SPECIFICATION

| | | AS3-S2406 | AS3-S4806 |
|------------------------|--------------------|---------------------|---------------------|
| Interface | | 24 x GE TX | 48 x GE TX |
| | | 6 x 10GE / GE SFP + | 6 x 10GE / GE SFP + |
| Backplane | | 216 Gbps | 216Gbps |
| Forwarding Rate (Mpps) | | 126 Mpps | 162 Mpps |
| Power consumption | No load | 32 W | 33 W |
| | Full load | 55 W | 64 W |
| Power supply | 100-220V (50-60Hz) | 75 W | 75 W |
| Total Output BTU | (1000BTU/H=293W) | 255.9 | 255.9 |
| Fan | | 2 | 2 |
| MTBF(H) | | 200,000 H | 200,000 H |
| Dimension | WxDxH (mm) | 440x350x44 | 440x350x44 |
| Weight | Empty (kg) | 5.3 | 6 |
| | | AS3-S2406F | AS3-S4806F |
| Interface | | 24 x GE SFP | 24 x GE SFP |
| | | 8 x GE TX | 24 x GE TX |
| | | 6 x 10 GE/GE SFP+ | 6 x 10GE / GE SFP + |
| Backplane | | 216 Gbps | 216 Gbps |
| Forwarding Rate (Mpps) | | 138 Mpps | 162 Mpps |
| Power consumption | No load | 32 W | 38 W |
| | Full load | 64 W | 69 W |
| Power supply | 100-220V (50-60Hz) | 75 W | 75 W |
| Total Output BTU | (1000BTU/H=293W) | 255.9 | 511.9 |
| Fan | | 2 | 2 |
| MTBF(H) | | 200,000 H | 200,000 H |
| Dimension | WxDxH (mm) | 440x350x44 | 440x350x44 |
| Weight | Empty (kg) | 5.5 | 6 |

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SPECIFICATION (cont)

| | | |
|------------------|---|-----|
| Console | 1 x Mini USB | |
| Forwarding Mode | Store-Forward | |
| Flash (MB) | 16 | |
| DRAM (MB) | 512 | |
| MAC | 32K | |
| Buffer size (MB) | 2 | |
| Jumbo Frame | 9K | |
| Routing Table | IPv4 | 12K |
| | IPv6 | 6K |
| ARP Table | IPv4 | 12K |
| | IPv6 | 2K |
| Total SVI | 1K | |
| VLAN | 4K Active VLAN, QinQ & Selective QinQ, GVRP, Private VLAN | |
| Spanning Tree | 802.1D (STP)/ 802.1W (RSTP) / 802.1S (MSTP), BPDU guard, root guard loopback guard | |
| Multicast | PIM-SM, PIM-DM, IGMP v1/v2/v3, IGMP Snooping, IGMP Fast Leave, MVR, IGMP filter | |
| IPv4 | Static routing, RIP v1/v2, OSPF, BGP, PBR, ECMP, BFD for OSPF, BGP | |
| IPv6 | ICMPv6, DHCPv6, ACLv6 and IPv6 Telnet, IPv6 neighbor discovery, Path MTU discovery | |
| | MLD V1/V2, MLD snooping, IPv6 Static Routing, RIPng, OSPFv3, BGP4+ | |
| | Manual tunnel, ISATAP tunnel, 6 to 4 tunnel | |
| MPLS | LDP protocol, Multi-VRF, MPLS L2 VPN | |
| QoS | CAR, HQoS, MAC/IP/TCP/UDP/VLAN/COS/DSCP/TOS based QoS, 802.1P/DSCP priority | |
| | SP, WRR, and "SP+WRR", Tail-Drop, WRED, flow monitoring and traffic shaping | |
| Security | Port isolation, Port security, and "IP+MAC+port" binding, MAC sticky, DHCP Snooping and option 82 | |
| | DAI & IP source guard, PPPoE+, IEEE 802.1x, Radius and BDTacacs+ | |
| | L2/L3/L4 ACL flow identification & filtration , Anti-attack from DDoS, TCP's SYN Flood, UDP Flood, Broadcast/multicast/unknown unicast storm-control MD5, SHA-256, RSA-1024, AES256, etc. | |
| Reliability | Static/LACP link aggregation, Interface backup | |
| | BVSS virtual-stacking. EAPS and ERPS, URPF, LLDPISU, VRRP | |
| | 1+1 power backup | |
| Certification | CE, FCC, RoHS | |
| Temperature | Operational : -10°C-60°C Storage : -20°C-70°C | |
| Humidity | Operational : 0 - 90% Storage : 0 - 90% Non-Condensing | |

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Optical Module

**Other module available upon request*

| | |
|-----------------------|--|
| AS-SFP-CO | GE SFP single to RJ45 module |
| AS-SFP-SX-D | GE SFP MM (500m,850nm,LC,DDM) |
| AS-SFP-LX-10-D | GE SFP SM (10Km,1310nm,LC,DDM) |
| AS-SFP-LX-20-D | GE SFP SM (20Km,1310nm,LC,DDM) |
| AS-SFP-LX-40-D | GE SFP SM (40Km,1310nm,LC,DDM) |
| AS-SFP-ZX-80-D | GE SFP SM (80Km, 1550nm, LC, DDM) |
| AS-SFP-LX-310-10-BIDI | GE SFP SM, single-chip BIDI (10Km, TX1310/RX1550, LC, DDM) |
| AS-SFP-LX-310-20-BIDI | GE SFP SM, single-chip BIDI (20Km, TX1310/RX1550, LC, DDM) |
| AS-SFP-LX-550-10-BIDI | GE SFP SM, single-chip BIDI (10Km, TX1550/RX1310, LC, DDM) |
| AS-SFP-LX-550-20-BIDI | GE SFP SM, single-chip BIDI (20Km, TX1550/RX1310, LC, DDM) |
| AS-SFP+-SX | TE 10G SFP+ multi-mode (300m, 850nm, LC) |
| AS-SFP+-LX-10 | TE 10G SFP+ single-mode (10Km, 1310nm, LC, DDM) |
| AS-SFP+-LX-20 | TE 10G SFP+ single-mode (20Km, 1310nm, LC, DDM) |
| AS-SFP+-LX-40 | TE 10G SFP+ single-mode (40Km, 1310nm, LC, DDM) |
| AS-SFP+-LX-SM-270-10 | 10GE SFP+SM, single-chip and BIDI (10Km, TX1270/RX1330, LC, DDM) |
| AS-SFP+-LX-SM-330-10 | 10GE SFP+SM, single-chip and BIDI (10Km, TX1330/RX1270, LC, DDM) |
| AS-SFP+-LX-SM-270-20 | 10GE SFP+SM, single-chip and BIDI (20Km, TX1270/RX1330, LC, DDM) |
| AS-SFP+-LX-SM-330-20 | 10GE SFP+SM, single-chip and BIDI (20Km, TX1330/RX1270, LC, DDM) |
| AS-SFP+-LX-SM-270-40 | 10GE SFP+SM, single-chip and BIDI (40Km, TX1270/RX1330, LC, DDM) |
| AS-SFP+-LX-SM-330-40 | 10GE SFP+SM, single-chip and BIDI (40Km, TX1330/RX1270, LC, DDM) |

Optional Power Module

| | |
|----------------|---|
| AS3-PWM-150-DC | Hot-swap DC Power (Max Power 150W, DC-36V~72V input, isolated cooling fan) |
| AS3-PWM-150-AC | Hot-swap AC Power (Max Power 150W, AC 100-240V input, isolated cooling fan) |