

## LAYER 2 Gigabit with SFP+ Network Switch AS2+ Series

AS2-2404S

### OVERVIEW

Angustos AS2+ Series is Layer 3 Lite 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

#### Industrial Ethernet Ring with Zero Delay and Zero Packet Loss

- Industry-level EAPS, less than 50ms
- Null packet loss
- ADAPT - Angustos Device Auto Protocol

#### Telecom-Level Ethernet Switch

- Telecom-level Ethernet-ring protection protocol
- STP/RSTP/MSTP
- Active and standby uplinks and LACP link aggregation

#### 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/ 802.1ad

#### 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



#### 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
- MPLS short Bridging

#### Certification

- CE / FCC/ RoHS

#### Stability

- Static/LACP link aggregation, Interface backup
- EAPS and ERPS
- ISSU
- AVSS virtual Stack, VRRR, 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

#### AS2-2404S

Interface		24 x GE TX 4 x 10GE / GE SFP +
Backplane		128 Gbps
Forwarding Rate (64bytes)		96
Power consumption	No load	22 W
	Full load	35 W
Power supply	100-220V (50-60Hz)	45 W
Total Output BTU	(1000BTU/H=293W)	153.58
Fan		Fanless
MTBF(H)		200,000 H
Dimension	WxDxH (mm)	440x180x44
Weight	Empty (kg)	2.6
Console		1 x RJ45 port
Forwarding Mode		Store-Forward
Flash (MB)		16
DRAM (MB)		256
MAC		16K
Buffer size (MB)		1.5
Jumbo Frame		9K
Interface VLAN / Routing Table		64 / 512
Certification		CE, FCC, RoHS
Temperature		Operational : -10°C-60°C   Storage : -20°C-70°C
Humidity		Operational : 0 - 90%   Storage : 0 - 90% Non-Condensing

## LAYER 2 Gigabit with SFP+ Network Switch AS2+ Series AS2-24O4S

### 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

AS-P75-DC	Hot-swap DC Power (Max Power 75W, DC-36V~72V input, isolated cooling fan)
AS-P75-AC	Hot-swap AC Power (Max Power 75W, AC 100-240V input, isolated cooling fan)
AS-P150-DC	Hot-swap DC Power (Max Power 150W, DC-36V~72V input, isolated cooling fan)
AS-P150-AC	Hot-swap AC Power (Max Power 150W, AC 100-240V input, isolated cooling fan)