



AT-8000S/48POE

Layer 2 Stackable Fast Ethernet Switch

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48 port stackable 10/100TX Power over Ethernet switch with 2 active SFP bays (unpopulated) and 2 standby 10/100/1000T ports (RJ-45)

Overview

One of a series of stackable switches from Allied Telesis, the AT-8000S/48POE provides high performance Layer 2 switching in an affordable fixed configuration platform combined with Power over Ethernet to provide power to edge devices including IP phones and wireless access points. This switch offers 48 10/100 ports, two fixed SFP combo slots plus two integrated stacking connectors that deliver a total of 4Gbps stacking bandwidth. The stacking capability integrated into this platform is configured as a resilient ring topology designed to provide high reliability and simplified management for higher port density applications.

Combined Ethernet and Power Delivery for Branch Office and Wiring Closet Connectivity

Powerful line rate performance and stackability make this switch ideal for branch offices or the wiring closet of larger offices where power is needed for remote devices. The state-of-the-art QoS capability of this product ensures reliable delivery of advanced network services such as voice while effectively controlling the continually increasing traffic needs found in today's networks.

Easy Access Networking

Featuring an industry standard CLI and Allied Telesis' intuitive yet fully featured Web interface the advanced features of the AT-8000S/48POE are accessible to a wide range of system administrators. The well known CLI and Web interfaces significantly reduce learning time and minimize the cost of deployment.

Secure Management

Only authorized administrators can access the management interface of the 8000S series. Protocols such as SSL, SSH and SNMPv3 facilitate this protection of your network with local or remote connections.

Securing the Network Edge

To ensure the protection of your data, it is important to control access to your network. Protocols such as IEEE 802.1x port-based authentication guarantee that only known users are connected to the network. Unknown users who physically connect can be isolated to a pre-determined part of your network offering guests such benefits as Internet access while ensuring the integrity of your private network data.

Gigabit and Fast Ethernet SFP Support

All switches in the 8000S family support both Gigabit and Fast Ethernet Small Form-factor Pluggables (SFPs). This makes the 8000S series an ideal family for environments where Gigabit fiber switches will be phased-in over time. The 8000S family allows for connectivity to the legacy 100FX hardware until it is upgraded to Gigabit. Support for both speeds of SFPs allows organizations to stay within budget as they migrate to faster technologies.

Key Features

Easy, Well Known Management

- Industry standard CLI
- Simple intuitive, fully featured Allied Telesis Web Interface
- Secure encrypted Web and CLI management with SSHv2 and SSL
- SNMP
- Two level access privileges

Power over Ethernet

- Provides standards based IEEE 802.3af Power over Ethernet to all 48 10/100 ports
- Support for up to 48 class 2 powered devices at 7.3 watts
- Support for up to 24 class 3 powered devices at 15.4 watts

Affordable Truly Stackable 10/100 Switching Platform

- Single IP address stack management.
- 4G resilient ring stacking architecture
- Across stack link aggregation
- Across stack VLAN configuration
- Across stack port mirroring
- Redundant standby stack master

All the QoS Needed in the Wiring Closet for Today's Voice and Data Networking

- Eight priorities assigned to four queues
- IEEE 802.1p for Layer 2 QoS
- DSCP (DiffServ) for Layer 3 QoS
- IEEE 802.1p to DSCP remarking traffic ready for transport to the Layer 3 core of the network
- Layer 2 and Layer 3 ACL

Securing the Network at its Most Vulnerable Point

- IEEE 802.1x and RADIUS network login: for advanced control of user authentication and accountability
- Guest VLAN: to ensure visitors or unauthorized users connect only to services defined by IT e.g. Internet
- TACACS+: for ease of management security administration
- Layer 2 and Layer 3 ACL
- Port MAC address security options

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System Configuration

Dimensions	44cm x 34.7cm x 4.3cm
(W x D x H)	(17.3" x 13.7" x 1.7")
Weight	5.6kg
Mounting	19" rack-mountable hardware included

System Capacity

64MB RAM	
16MB flash memory	
400Mhz CPU	
Up to 4,096 VLAN ID	
8,000 MAC address	
Packet buffer memory	1Mbit

Performance

Wirespeed switching on all Ethernet ports for all packet sizes

Throughput	13.09Mpps
Switching capacity	17.6Gbps

MTBF	197,009 hours
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Store and forward mode
Non-blocking switch fabric
Auto MDI/MDI-X

Latency	
10Mbit	88.60 μ sec
100Mbit	18.06 μ sec
1000Mbit	2.82 μ sec

Port speed	
10/100TX	RJ-45
10/100/1000T	RJ-45
100FX, 1000SX, 1000LX	SFP slot
RS232	DB9 pin, male port
Internal power supply	

Power over Ethernet

Total power budget	465W
For switch	12V/ 90W
PoE budget	50V/ 375W
PoE max supported	
IEEE 802.3af class 3 devices (15.4W):	24 ports
PoE max supported	
IEEE 802.3af class 2 devices (7.3W):	48 ports
IEEE 802.af	Power over Ethernet (mode B)

Interface Standards

IEEE 802.3	10T
IEEE 802.3u	100TX and 100FX
IEEE 802.3z	1000SX
IEEE 802.3ab	1000T

General Standards

IEEE 802.ID	Bridging
IEEE 802.3x	BackPressure/ flow control

Redundancy Standards

IEEE 802.ID	Spanning-Tree Protocol
IEEE 802.1W	Rapid Spanning-Tree
IEEE 802.1s	Multiple Spanning-Tree
BPDU guard ¹	
IEEE 802.3ad	LACP link aggregation (with up to eight members per group and up to eight groups per device)

Static port trunk

Quality of Services (QoS)

QoS in Layer 2 (IEEE 802.1p compliant Class of Service)

Traffic prioritization using IEEE 802.1p, ToS, DSCP fields
Map IEEE 802.1p priorities to CoS queues to prioritize traffic at Egress

Strict Scheduling and Weighted Round Robin

VLANs

IEEE 802.1Q VLAN tagging
Up to 256 VLANs
Port-based VLANs
MAC-based VLANs
Private VLANs
GARP VLAN Registration Protocol (GVRP)

Multicast Standards

RFC 1112	IGMP snooping (ver. 1)
RFC 2236	IGMP snooping (ver. 2)
RFC 3376	IGMP snooping (ver. 3)
RFC 3376	IGMP querier
Option to forward/filtering of unregistered MC frames ¹	

IPv6¹

IPv6	QoS
IPv6	ACL
IPv6	Host
RFC 2461	IPv6 neighbor discovery
RFC 2463	ICMPv6: Internet Control Message Protocol version 6
RFC 1981	Path MTU discovery
Dual-stack IPv4/IPv6 protocol	
IPv6	Tunnelling over IPv4
IPv6	Network management
IPv6	Applications: WEB/SSL Telnet server/SSH, AAA/Radius, Management
ACLs, SNTP, PING, TFTP/Copy, Syslog	

Management and Monitoring

WEB, CLI, Serial	
RFC 1157	SNMPv1/v2c
RFC 2570	SNMPv3
RFC 1213	MIB-II
RFC 1573	Evolution of MIB-II
RFC 1215	TRAP MIB
RFC 1493	Bridge MIB
RFC 2863	Interfaces group MIB
RFC 1643	Ethernet like MIB
RFC 1757	RMON 4 groups: Stats, History, Alarms, Events
RFC 2819	RMON 4 groups
RFC 2674	IEEE 802.1Q MIB
RFC 1866	HTML
RFC 2068	HTTP
RFC 854	Telnet
RFC 783	TFTP

LLDP¹

IEEE 802.1ab

LLDP-MED¹

IP address allocation

RFC 951/ RFC 1542 BootP/ DHCP

DHCP snooping

Manual

RFC 2030 SNTP, Simple Network Time Protocol

Syslog event

Dual software images

Stacking

Up to six units

Single system appearance

Single IP management

Back-up master

Full-duplex link with 2Gbps performance

Link aggregation/trunking across stack

Port mirroring across stack

VLAN across stack

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Security

Management security: username and password protection

SSHv2 Telnet management

SSLv3 Web management

RFC 1492 TACACS+

RFC 2138 RADIUS authentication

IEEE 802.1x Port-based network access control

IEEE 802.1x Dynamic VLAN¹

IEEE 802.1x RADIUS accounting¹

IEEE 802.1x Multi-session mode¹

IEEE 802.1x Action on violation¹

IEEE 802.1x Single-host violation¹

IEEE 802.1x Guest VLAN timeout¹

IEEE 802.1x Authentication not-required¹

Security login banner¹

Guest VLANs

RFC 2865 IEEE 802.1x port-based network access control

MAC-based network access control

ACL - Access Control Lists

Fault Protection

Broadcast storm control

Power Characteristics

Voltage input 100-240V AC

Voltage output 48VDC

Current 8A

Power consumption 494W²

Power supply efficiency 64.20%

Heat dissipation 1,587.9 BTU/hour

Clock frequency 166Mhz

Acoustic noise 49.1dB

Environmental Specifications

Operating temp 0°C to 40°C (32°F to 104°F)

Storage temp -25°C to 70°C (-13°F to 158°F)

Relative humidity 10% to 90% non-condensing

Storage humidity 5% to 95% non-condensing

Operating altitude Maximum 3,000m (9,843ft)

Electrical/ Mechanical Approvals

Safety UL 1950 (UL/cUL), EN60950 (TUV)

EMI FCC Class A, EN55022 Class A,

VCCI Class A, C-Tick,

EN61000-3-2, EN61000-3-3

Immunity EN55024

RoHS compliant

Package Description

One AT-8000S/48POE switch

Power cord AC

Rack-mount kit

Rubber feet for desktop installation

RS232 management cable

Stacking cable

Install guide and user guide in CD and at www.alliedtelesis.com

Country of Origin

China

Ordering Information

AT-8000/48POE-xx

48 port stackable 10/100TX PoE Layer 2 switch with 2 active SFP bays (unpopulated) and 2 standby 10/100/1000T ports (RJ-45)

Where xx = 10 for US power cord
20 for no power cord
30 for UK power cord
40 for Australian power cord
50 for European power cord

Accessories

Small Form Pluggables (SFPs)

AT-SPFX/2

Multi-mode fiber, 2km, 100FX, SFP, 1310nm

AT-SPFX/15

Single-mode fiber, 15km, 100FX, SFP, 1310nm

AT-SPFX/40

Single-mode fiber, 40km, 100FX, SFP, 1310nm

AT-SPTX

Copper, GbE Small Form-factor Pluggable (SFP)

AT-SPSX

Multi-mode fiber, GbE Small Form-factor Pluggable (SFP) 850nm

AT-SPLX10

Single-mode fiber, 10km, GbE SFP, 1310nm

AT-SPLX40

Single-mode fiber, 40km, GbE SFP, 1310nm

AT-SPLX40/1550

Single-mode fiber, 40km, GbE SFP, 1550nm

AT-SPZX80

Single-mode fiber, 80km, GbE SFP, 1550nm

AT-SPBD10-13

Single-mode fiber, 10km, GbE SFP, 1310/1490nm, LC-BiDi

AT-SPBD10-14

Single-mode fiber, 10km, GbE SFP, 1490/1310nm, LC-BiDi

¹ New feature on AT-S94 version 3.0.0.32

² Worst case load condition for actual measured power on sample unit

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