AT-8000S/16

Layer 2 Managed Fast Ethernet Switch

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16 port standalone 10/100TX Layer 2 switch with 1 active SFP bay (unpopulated) and 1 standby 10/100/1000T port (RJ-45)

Overview

The small form factor AT-8000S/16 provides line-rate Layer 2 switching in an affordable, fixed-configuration platform. Featuring easy installation and exceptional reliability, this 10/100 switch comes with one Gigabit uplink port with the option of the integrated copper 10/100/1000 port or a 100 or 1000 SFP slot for fiber connectivity.

Ideal Workgroup and Remote Office Connectivity

Designed for the smaller workgroup or remote office this highly featured switch mirrors the advanced feature set of the larger 8000S series stackable products while offering the benefits of silent operation and a port density aimed at right priced functionality.

Easy Access Networking

Featuring an industry standard CLI and Allied Telesis' intuitive yet fully featured Web interface the advanced features of the AT-8000S/16 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 SNMP v3 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, full featured Allied Telesis Web interface
- Secure encrypted Web and CLI management with SSH v2 and SSL
- SNMP
- Two level access privileges

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

Small Form Factor

- Standalone switch for remote locations or where stacking is not required
- Silent operation (fanless)

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System Configuration

Dimensions (W x D x H)	33cm x 23cm x 4.3cm (13" x 9.1" x 1.7")
Weight	1.95kg (4.29lb)
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	3.87Mpps
Switching capacity	5.2Gbps

MTBF	447,901 hours

Store and forward mode
Non-blocking switch fabric
Auto MDI/MDI-X

Latency

10Mbit	85.71 µsec
100Mbit	17.30 µsec

Port speed:

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

Internal power supply – no fan

Interface Standards

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

General Standards

IEEE 802.1D	Bridging
IEEE 802.3x	BackPressure/ flow control

Redundancy Standards

IEEE 802.1D	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]

IPv6[1]

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 2674	IEEE 802.1Q MIB
RFC 1866	HTML
RFC 2068	HTTP
RFC 854	Telnet
RFC 783	TFTP

LLDP[1]
LLDP-MED[1]

IP address allocation
RFC 951/ RFC 1542 BootP / DHCP
Manual

RFC 2030 SNTP (Simple Network Time Protocol)
Syslog event
Dual software images

Security

Management Security: user name 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 VLAN[1]
IEEE 802.1x	RADIUS accounting[1]
IEEE 802.1x	Multi-session mode[1]
IEEE 802.1x	Action on violation[1]
IEEE 802.1x	Guest VLAN timeout[1]
IEEE 802.1x	Authentication not-required[1]

Security login banner[1]
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

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Power Characteristics

Voltage input	100-240V AC
Voltage output	12vDC
Current	0.75A
Power consumption	13.80W[2]
Power supply efficiency	71.35%
Heat dissipation	102.45BTU/hour
Clock frequency	166MHz
Acoustic noise	14.8dB

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/16 switch
Power cord AC
Rack-mount kit
Rubber feet for desktop installation
RS232 management cable
Install guide and user guide in CD and at www.alliedtelesis.com

Country of Origin

China

Ordering Information

AT-8000S/16-xx
16 port standalone 10/100TX Layer 2 switch with 1 active SFP bay (unpopulated) and 1 standby 10/100/1000T port (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 European0 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-SPZX80/xxxx
Single-mode Fiber, CWDM, 80km GbE SFP

CWDM wavelengths:
Where xxxx = 1470
1490
1510
1530
1550
1570
1590
1610

[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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