



AT-8000GS/24POE

Layer 2 Stackable Gigabit Power over Ethernet Switch

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24 port stackable 10/100/1000T Power over Ethernet Layer 2 switch with 4 standby SFP bays (unpopulated)

Overview

One of a series of high performance Gigabit Ethernet stackable switches from Allied Telesis, the AT-8000GS/24POE provides high performance Layer 2 switching in an affordable fixed configuration platform combined with Power over Ethernet for edge devices such as IEEE 802.11n access points, IP phones or IP cameras. This switch offers 24 10/100/1000 ports, with four combo 1Gbps SFP slots. Two integrated stacking connectors deliver a total of 20Gbps 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. Support for jumbo Ethernet frames enables higher throughput of time sensitive data.

Ideal Branch Office and Wiring Closet Connectivity Where Power over Gigabit Ethernet is Needed

Powerful line rate performance and stackability make this switch ideal for branch offices or the wiring closet of larger offices. 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-8000GS/24POE 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 8000GS 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.

Key Features

Easy, Well Known Management

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

Power over Ethernet

- Provides standards-based IEEE 802.3af
- Power over Ethernet to all 24 10/100/1000 ports

Affordable Truly Stackable 10/100/1000 Switching Platform

- Single IP address stack management
- 20Gig 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 Access Control Lists (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 Access Control Lists (ACL)
- Port MAC Address security options



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Access Control Lists (ACLs)

Access Control Lists enable inspection of incoming frames and classify them based on various criteria. Specific actions can then be applied to these frames in order to more effectively manage the network traffic. Typically ACLs are used as a security mechanism, either permitting or denying entry (hence the name Access Control) for frames in a group, but can also be applied to QoS.

Supported ACL types are:

- IP ACLs – applicable to IP packet type. All classification fields are related to IP packets.
- MAC ACLs – classification fields are based on Layer 2 fields.

Technical Specifications

System Configuration

Dimensions	44cm x 25.7cm x 4.32cm
(W x D x H)	(17.32" x 10.16" x 1.7")
Weight	3.50kg (7.71lb)
Mounting	19" rack-mountable hardware included

System Capacity

128MB RAM	
16MB flash memory	
Up to 4,096 VLAN ID	
8,000 MAC address	
Packet buffer memory	3Mbit

Performance

Wirespeed switching on all Ethernet ports for all packet sizes including jumbo frames up to 10Kbytes

Throughput up to	50.6Mpps
Switching capacity	68Gbps
Switch fabric speed	88Gbps

MTBF	80,000 hours
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Auto-negotiation, duplex, MDI/MDI-X

Port speed:

10/100TX	RJ-45
100FX	SFP support ¹
10/100/1000T	RJ-45
1000SX, 1000LX	SFP slot
Console RS232	RJ-45 connector

Latency:

10Mbit	77.21 usec
100Mbit	9.47 usec
1000Mbit	2.23 usec

Interface Standards

IEEE 802.3	10T and 10FL
IEEE 802.3u	100TX
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 with optional fast link capability
IEEE 802.1W	Rapid Spanning-Tree
IEEE 802.1s	Multiple Spanning-Tree
BPDU guard	
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 active 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

Support for 256 multicasts
Unregistered multicasts are dropped by default¹

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, SNMP, PING, TFTP/Copy, Syslog

Management and Monitoring

WEB, CLI, Telnet, SSH, serial console port	
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

LLDP¹

IEEE 802.1ab

LLDP-MED¹

IP address allocation

RFC 951/ RFC 1542 BootP/ DHCP manual

DHCP snooping

RFC 2030 NTP, Simple Network Time Protocol

Syslog event

Dual software images

Stacking:

Up to six units with a mix of AT-8000GS/24, AT-8000GS/24POE and AT-8000GS/48 can be stacked together in any combination

Single system appearance

Single IP management

Backup master

Redundant ring stacking topology with 20Gbps 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 for Telnet management
 SSLv3 for Web management
 RFC 1492 TACACS+
 RFC 2618 RADIUS authentication
 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
 RFC 2865 IEEE 802.1x port-based network access control
 MAC-based network access control
 Guest VLANs
 ACL — Access Control Lists

Fault Protection

Broadcast storm control

Power Characteristics

Voltage input 100-240V AC / 50-60Hz
 Current 3.25A
 Acoustic noise 61dB
 Maximum heat dissipation 715.65 BTU/hour

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)
 Operating humidity 5% to 80% non-condensing
 Storage humidity 5% to 95% non-condensing
 Operating altitude Maximum 3,000m (9,843ft)

Electrical/ Mechanical Approvals

Safety UL 1950, CSA22.2 no.950, TUV (EN60950), CE
 EMI FCC Class A, EN55022 Class A, VCCI Class A, C-TICK
 Immunity EN50082-1
 RoHS compliant 6/6 compliant
 Environmental
 Standard ATI QLT 1220

Package Description

One AT-8000GS/24POE switch
 Power cord AC
 Rack-mount kit
 Rubber feet for desktop installation
 RS232 management cable (RJ-45)
 Stacking cable
 Install guide and user guide available on the CD and at www.alliedtelesis.com

Country of Origin

China

Ordering Information

AT-8000GS/24POE-xx
 24 port stackable 10/100/1000T Power over Ethernet Layer 2 switch with 4 standby SFP bays (unpopulated)

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

¹ New feature available in April 2009