Allied Telesis™

AT-8000GS/24POE

Layer 2 Stackable Gigabit Power over Ethernet Switch

AT-8000GS/24POE

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
- Support for up to 18 class 2 powered devices at 7.3 watts
- Support for up to 9 class 3 powered devices at 15.4 watts

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

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

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

Port speed:

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

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
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

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

IP address allocation

RFC 951/ RFC 1542	BootP/ DHCP manual

RFC 2030 SNTP, 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

Security

Management security: username and password protection
SSHv2 for Telnet management
SSLv3 for Web management

RFC 1492	TACACS+
RFC 2618	RADIUS authentication
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	3.5A
Power consumption	65W

PoE ouput power:

Available PoE power:	140W @ 48vDC
IEEE 802.3af class 3 (15.4W):	Max 9 ports
IEEE 802.3af class 2 (7.3W):	Max 18 ports

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 in CD

Country of Origin

Philippines

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

Gigabit Ethernet Mini GBIC - Small Form Pluggables (SFPs)

AT-SPSX

A Small Form-factor Pluggable (SFP) Gigabit SX transceiver that provides a full-duplex Gigabit solution up to 550m on multi-mode fiber.

Technical specifications:
- Media type — MMF
- Wavelength — 850nm
- Maximum data rate — 2.125Gbps
- Digital diagnostics — Yes
- Transmit power (min) — -9dBm
- Transmit power (max) — -3.5dBm
- Receive sensitivity
  - at 1.25Gbps (typ) — -22dBm
  - at 1.25Gbps (max) — -20dBm
  - at 2.125Gbps (typ) — -20dBm
  - at 2.125Gbps (max) — -18dBm
- Power budget
  - at 1.25Gbps (min) — 11dBm
  - at 1.25Gbps (min) — 9dBm
- Fiber connectors — LC

AT-SPLX10

A Small Form-factor Pluggable (SFP) Gigabit LX transceiver that provides a full-duplex Gigabit solution up to 10km on single-mode fiber.

Technical specifications:
- Media type — SMF
- Wavelength — 1310nm
- Maximum data rate — 2.125Gbps
- Distance — 10km
- Digital diagnostics — Yes
- Transmit power (min) — -9.5dBm
- Transmit power (max) — -3dBm
- Receive sensitivity
  - at 2.125Gbps (max) — -21dBm
  - at 1.25Gbps (max) — -22dBm
- Power budget
  - at 2.125Gbps (min) — 11.5dBm
  - at 1.25Gbps (min) — 12.5dBm
- Fiber connectors — LC

AT-SPLX40

A Small Form-factor Pluggable (SFP) Gigabit LX transceiver that provides a full-duplex Gigabit solution up to 40km on single-mode fiber.

Technical specifications:
- Media type — SMF
- Wavelength — 1310nm
- Maximum data rate — 2.125Gbps
- Distance — 40km
- Digital diagnostics — Yes
- Transmit power (min) — 0dBm
- Transmit power (max) — 5Bm
- Receive sensitivity
  - at 2.125Gbps (max) — -21dBm
  - at 1.25Gbps (max) — -22dBm
- Power budget
  - at 2.125Gbps (min) — -21dBm
  - at 1.25Gbps (min) — -22dBm
- Fiber connectors — LC

AT-SPLX40/1550

A Small Form-factor Pluggable (SFP) Gigabit LX transceiver that provides a full-duplex Gigabit solution up to 40km on single-mode fiber.

Technical specifications:
- Media type — SMF
- Wavelength — 1550nm
- Maximum data rate — 1.25Gbps
- Distance — 40km
- Digital diagnostics — Yes
- Transmit power (min) — 5dBm
- Transmit power (max) — -2.5Bm
- Receive sensitivity (typ) — -26dBm
- Receive sensitivity (max) — -24dBm
- Power budget — 19dBm
- Fiber connectors — LC

AT-SPZX80

A Small Form-factor Pluggable (SFP) Gigabit LX transceiver that provides a full-duplex Gigabit solution up to 80km on single-mode fiber.

Technical specifications:
- Media type — SMF
- Wavelength — 1550nm
- Maximum data rate — 1.25Gbps
- Distance — 80km
- Digital diagnostics — Yes
- Transmit power (min) — 0dBm
- Transmit power (typ) — 2dBm
- Transmit power (max) — -3Bm
- Receive sensitivity (typ) — -26dBm
- Receive sensitivity (max) — -24dBm
- Power budget — 24dBm
- Fiber connectors — LC

Connecting The (IP) World

Allied Telesis