

AT-8000GS/24POE

LAYER 2 STACKABLE GIGABIT POWER OVER ETHERNET SWITCH

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 Where Gigabit Power over 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
- » SNMP
- » Two levels of access privileges

Power over Ethernet

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

Affordable, Truly Stackable 10/100/1000 Switching Platform

- » Single IP address stack management
- » 20 Gigabit 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 priority 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 List (ACL)

Securing the Network at its Most Vulnerable Point

- » IEEE 802.1x and RADIUS network login: for advanced control for user authentication and accountability
- » Guest VLAN: to ensure visitors or unauthorized users only connect to services defined by IT such as Internet services
- » TACACS+: for ease of management security administration
- » Layer 2 and Layer 3 Access Control List (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 ACLs 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.

AT-8000GS/24POE | Layer 2 Stackable Gigabit Power over Ethernet Switch

System Capacity

128MB RAM
16MB flash memory
Up to 4,096 VLAN ID
8K MAC addresses
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

Auto-negotiation, duplex, MDI/MDI-X

Port speed:

| | |
|----------------|-----------------|
| 10/100TX | RJ-45 |
| 100FX | SFP support |
| 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 |

Environmental Specifications

Operating temperature: 0°C to 40°C (32°F to 104°F)
Storage temperature: 25°C to 70°C (-13°F to 158°F)
Operating humidity: 5% to 80% non-condensing
Storage humidity: 5% to 95% non-condensing
Max operating altitude: 3,000 m (9,843 ft)

Quality of Service (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

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 |
| LLDP | |
| IEEE 802.1ab | |
| LLDP-MED | |

IP address allocation

RFC 951/ RFC 1542 BootP/ DHCP manual

DHCP snooping

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 using a 1m HDMI stacking cable

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

VLAN

IEEE 802.1Q VLAN tagging

Up to 256 active VLANs

Port-based VLANs

MAC-based VLANs

Private VLANs

GARP VLAN Registration Protocol (GVRP)

General Standards

| | |
|-------------|---------------------------|
| IEEE 802.1D | Bridging |
| IEEE 802.3x | BackPressure/flow control |

Interface Standards

| | |
|--------------|--------------|
| IEEE 802.3 | 10T and 10FL |
| IEEE 802.3u | 100TX |
| IEEE 802.3z | 1000SX |
| IEEE 802.3ab | 1000T |

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 |
| BPDUGuard | |
| IEEE 802.3ad | LACP link aggregation (with up to eight members per group and up to eight groups per device) |

Static port trunk

IP Multicast

| | |
|--|------------------------|
| 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 default | |

Security / IEEE 802.1x

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 VLAN |
| IEEE 802.1x | RADIUS accounting |
| IEEE 802.1x | Multi-session mode |
| IEEE 802.1x | Action on violation |
| IEEE 802.1x | Single-host violation |
| IEEE 802.1x | Guest VLAN timeout |
| IEEE 802.1x | Authentication not-required |
| Security login banner | |
| RFC 2865 | IEEE 802.1x port-based network access control |

MAC-based network access control

Guest VLANs

ACL – Access Control Lists (max 256 entries)

IPv6

| | |
|-------------------------------|---|
| 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 |

Fault Protection

Broadcast storm control

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 |
| EMC | EN61000-3-2, EN61000-3-3 |
| Immunity | EN55082-1, EN55024 |
| RoHS compliant | 6/6 compliant |
| Environmental Standard | ATI QLT 1220 |

Package Description

AT-8000GS/24POE switch

AC power cord

Rack mount kit

Rubber feet for desktop installation

RS232 management cable (RJ-45)

HDMI stacking cable (1m)

Install Guide and CLI users guide available at alliedtelesis.com

Country of Origin

China

Physical Specifications

Dimensions (W x D x H): 44 x 25.7 x 4.32 cm
(17.32 x 10.16 x 1.7 in)
Weight: 3.50 kg / 7.7 lb

Mounting: 19" rack-mountable hardware included

Power Characteristics

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

AT-8000GS/24POE | Layer 2 Stackable Gigabit Power over Ethernet Switch



Ordering Information

Gigabit Ethernet Switches

AT-8000GS/24POE-xx
24-port stackable 10/100/1000T Power over Ethernet Layer 2 switch with four 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

Small Form Pluggable Optics Modules

AT-SPFX/2
SFP, MMF, 100Mbps, 2 km, 1310 nm, LC

AT-SPFX/15
SFP, SMF, 100Mbps, 15 km, 1310 nm, LC

AT-SPFX/40
SFP, SMF, 100Mbps, 40 km, 1310 nm, LC

AT-SPBD10-13
SFP, SMF, 1000Mbps, 10 km, 1310/1490 nm, LC-BiDi

AT-SPBD10-14
SFP, SMF, 1000Mbps, 10 km, 1490/1310 nm, LC-BiDi

AT-SPTX
SFP, 10/100/1000T, 100 m, RJ-45

AT-SPSX
SFP, MMF, 1000Mbps, 220 / 500 m, 850 nm, LC

AT-SPLX10
SFP, SMF, 1000Mbps, 10 km, 1310 nm, LC

AT-SPLX40
SFP, SMF, 1000Mbps, 40 km, 1310 nm, LC

AT-SPZX80
SFP, SMF, 1000Mbps, 80 km, 1550 nm, LC



the solution : the network

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617-000267 Rev.M

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