

# AT-8000GS/24

## LAYER 2 STACKABLE GIGABIT ETHERNET SWITCH

One of a series of high performance Gigabit Ethernet stackable switches from Allied Telesis, the AT-8000GS/24 provides high performance Layer 2 switching in an affordable fixed configuration platform.



This switch offers 24 x 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.

### Near Silent Operation

Specifically designed to be usable in an open office or retail store environment the AT-8000GS/24 uses the latest in low power technologies to minimize both power consumption and the need for excessive cooling fans.

### Ideal 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. 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/24 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

### 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/24 | Layer 2 Stackable Gigabit 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: 100,000 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  
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

## 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/24 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](http://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: 3.15 kg / 6.94 lb

Mounting: 19" rack-mountable hardware included

## Power Characteristics

Voltage input: 100-240V AC / 50-60Hz  
Current: 3.25A  
Power supply efficiency: 75%  
Acoustic noise: 35.4dB  
Maximum heat dissipation: 135.1 BTU/hour

## Power Consumption

Maximum power consumption: 39.6W

# AT-8000GS/24 | Layer 2 Stackable Gigabit Ethernet Switch



## Ordering Information

### Gigabit Ethernet Switches

#### AT-8000GS/24-xx

24-port stackable 10/100/1000T 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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