

# GS950 Series

## Gigabit WebSmart Edge Switches

The Allied Telesis GS950 Series of WebSmart network switches demonstrates the Allied Telesis commitment to environmentally-friendly processes and products, minimizing power consumption through the use of a high efficiency power supply and a low power chipset. Featuring PoE+, GS950 Series switches at the network edge are the ideal cost-effective solution for small businesses.



### Ease of management and high performance

These advanced Allied Telesis WebSmart switches combine the simplicity of unmanaged switches with the performance and reliability of managed switches. This provides a cost-effective, secure and reliable solution for integrated management at the network edge. With user-friendly web-based management, the GS950 Series is ideal for integrating simple management and security into your network solution.

### Power over Ethernet (PoE)

The GS950/8POE, 10PS, 16PS, 28PS, 48PS switches are available in PoE configurations. What's more, the GS950/10PS, 16PS, 28PS, 48PS switches support PoE+ (IEEE 802.3at), with the capability of delivering up to 30W per port.

PoE allows users to connect and power a device using a single Ethernet cable, thus eliminating the need for additional power outlets and simplifying installation. Furthermore, this system is unaffected by any local variance in AC power, offering a standardized power infrastructure.

## Key Features

### VLAN

- ▶ IEEE 802.1Q tagged
- ▶ Port-based
- ▶ Up to 256 groups

### Quality of Service Classification

- ▶ IEEE 802.1p tagging
- ▶ Port-based priority
- ▶ Four priority queues per port

### IP Multicast Support (IPv4)

- ▶ IGMP snooping (v1/v2)
- ▶ Static multicast group (up to 256)
- ▶ Spanning-Tree, IEEE 802.1d/w/s

### IEEE 802.3ad Link Aggregation

- ▶ Manual
- ▶ LACP (not on GS950/8, 16, 24, 48)

### IEEE 802.1x Port-based, MAC-based and Network Access Control

- ▶ Local authentication server (MD5 only)
- ▶ Remote authentication through RADIUS
- ▶ Dynamic VLAN assignment
- ▶ RADIUS Client

### Other

- ▶ IEEE 802.3x flow control or HOL\* blocking prevention (\* when flow control is off)
- ▶ Port mirroring
- ▶ Destination MAC filtering
- ▶ Ingress/egress rate limiting
- ▶ Broadcast storming control
- ▶ 100 FX SFP support
- ▶ Jumbo Frames - up to 10K

### Management Features

- ▶ Web-based configuration
- ▶ CLI configuration on GS950PS Series
- ▶ SNMP trap view
- ▶ LLDP
- ▶ Firmware upgrade by FTP and HTTP
- ▶ Configuration backup/restore by FTP and HTTP
- ▶ Factory reset
- ▶ Password access control and restricted
- ▶ IP access list
- ▶ SNMPv1/v2c/v3
- ▶ DHCP client
- ▶ Syslog support
- ▶ System time configuration (SNTP, manual)
- ▶ Statistics Charts in Web

### MIBs

- ▶ RFC 1213 MIB-II
- ▶ RFC 1643 Ethernet MIB
- ▶ RFC 1493 Bridge MIB
- ▶ RFC 2131 DHCP client
- ▶ Private Enterprise MIB (Allied Telesis provides the spec)

### RMON Groups (1, 2, 3, 9)

- ▶ Stats
- ▶ History
- ▶ Alarms
- ▶ Events

### ACL

- ▶ 240 entries (shared)

**Specifications**

**Product specifications**

PRODUCT	10/100/1000T COPPER PORTS	100/1000X SFP PORTS	TOTAL PORTS	POE+ ENABLED PORTS	SWITCHING FABRIC	FORWARDING RATE
GS950/8	6 + 2 (Combo)	2 (Combo)	8	-	16 Gbps	11.90 Mpps
GS950/8POE	6 + 2 (Combo)	2 (Combo)	8	4 <sup>1</sup>	16 Gbps	11.90 Mpps
GS950/10PS	8 + 2 (Combo)	2 (Combo)	10	8	20 Gbps	14.88 Mpps
GS950/16	14 + 2 (Combo)	2 (Combo)	16	-	32 Gbps	23.80 Mpps
GS950/16PS	14 + 2 (Combo)	2 (Combo)	16	16	32 Gbps	23.80 Mpps
GS950/24	20 + 4 (Combo)	4 (Combo)	24	-	48 Gbps	35.71 Mpps
GS950/28PS	24	4 <sup>2</sup>	28	24	56 Gbps	41.66 Mpps
GS950/48	44 + 4 (Combo)	4 (Combo)	48	-	96 Gbps	71.42 Mpps
GS950/48PS	44 + 4 (Combo)	4 (Combo)	48	24	96 Gbps	71.42 Mpps

<sup>1</sup> Only POE (15.4W) can be supported

<sup>2</sup> Only 1000X SFP can be supported

**Power characteristics** 100-240V AC, 50-60Hz(GS950/8POE: 90-240V)

PRODUCT	NO POE LOAD			FULL POE+ LOAD			POE POWER BUDGET(W)	POE SOURCING PORTS		
	MAX POWER CONSUMPTION (W)	MAX HEAT DISSIPATION (BTU/h)	MAX NOISE (dBA)	MAX POWER CONSUMPTION (W)	MAX HEAT DISSIPATION (BTU/h)	MAX NOISE (dBA)		POE (7.5W)	POE (15.4W)	POE+ (30W)
GS950/8	8.7	29.69	Fanless	-	-	-	-	-	-	-
GS950/8POE	10	34.12	Fanless	87.5	298.56	Fanless	61.6	4	4	-
GS950/10PS	14.44	49.27	Fanless	92.7	316.31	Fanless	75	8	4	2
GS950/16	12.92	44.08	Fanless	-	-	-	-	-	-	-
GS950/16PS	21.8	74.38	47 dB@98% >25C 38.2dB@52% <25C	228.5	779.67	47 dB@98% >25C 38.2dB@52% <25C	185	16	12	6
GS950/24	17.35	59.20	Fanless	-	-	-	-	-	-	-
GS950/28PS	28.6	97.59	58.5dB >25C 55.2dB <25C	238	812.09	58.5dB >25C 55.2dB <25C	185	24	12	4 <sup>3</sup>
GS950/48	42.97	146.62	47dB@98% >25C 38.5dB@58% <25C	-	-	-	-	-	-	-
GS950/48PS	55.6	189.72	51.6dB >25C 38.7dB <25C	446	1521.82	51.6dB >25C 38.7dB <25C	370	24	24	12

Note: Noise values are dependent on the ambient temperature, not POE load. Above 25C the fan runs at full speed.

<sup>3</sup>It supports between port-1 and port-4 (Only 4 ports can be used with 30W PoE power budget).

**Physical specifications**

PRODUCT	HEIGHT	WIDTH	DEPTH	WEIGHT
GS950/8	44 mm (1.73 in)	280 mm (11.02 in)	180 mm (7.09 in)	1.50 Kg (3.30 lbs)
GS950/8POE	43 mm (1.70 in)	330 mm (13.00 in)	230 mm (9.06 in)	2.54 Kg (5.60 lbs)
GS950/10PS	44 mm (1.73 in)	330 mm (13.00 in)	200 mm (7.90 in)	1.90 Kg (4.20 lbs)
GS950/16	44 mm (1.73 in)	330 mm (13.00 in)	200 mm (7.90 in)	2.10 Kg (4.60 lbs)
GS950/16PS	44 mm (1.73 in)	430 mm (17.00 in)	250 mm (9.80 in)	3.56 Kg (7.85 lbs)
GS950/24	44 mm (1.73 in)	330 mm (13.00 in)	200 mm (7.90 in)	2.30 Kg (5.10 lbs)
GS950/28PS	44 mm (1.73 in)	450 mm (17.71 in)	250 mm (9.80 in)	3.60 Kg (7.93 lbs)
GS950/48	43.2 mm (1.70 in)	444 mm (17.48 in)	257 mm (10.12 in)	4.10 Kg (9.00 lbs)
GS950/48PS	44 mm (1.73 in)	440 mm (17.32 in)	430 mm (17.00 in)	6.62 Kg (14.60 lbs)

**Performance**

14,880pps for 10Mbps Ethernet  
 148,800pps for 100Mbps Ethernet  
 1,488,000pps for 1000Mbps Ethernet  
 MAC addresses: 8K  
 VLAN IDs available: 4K  
 Max VLANs: 256  
 Packet buffer: 1MB  
 DRAM: 64MB  
 Flash: 16MB

**Interface connections**

10/100/1000T: RJ-45  
 SFP: 100TX, 100FX, 1000T, 1000SX or 1000LX

**Technical specifications**

Wall-mount or desktop  
 All units come with wall /19 in rack-mount brackets

**Environmental specifications**

Operating temperature: 0°C to 45°C (32°F to 113°F)  
 Non-operating temperature: -25°C to 70°C (-13°F to 158°F)  
 Operating humidity: 5% to 90% non-condensing  
 Storage humidity: 5% to 95% non-condensing  
 Vibration: IEC 68-2-36  
 Shock: IEC 68-2-29  
 Drop: IEC 68-2-32  
 Flammability: UL94V-0  
 (GS950/10PS, 16PS, 28PS, 48PS only)

**Environmental compliance**

RoHS  
 China RoHS  
 WEEE  
 Eu-RoHS (GS950/10PS, 16PS, 28PS, 48PS only)

**Electrical/mechanical approvals**

**GS950/8, 8POE, 16, 24, 48**  
 UL 1950  
 FCC/EN55022 Class A  
 VCCI Class A  
 C-Tick  
 EN60950 (TUV)  
 EN55024  
 CE  
 CSA / CUL

**GS950/10PS, 16PS, 28PS, 48PS**

UL60950-1 2nd edition (UL)  
 FCC/EN55022/CISPR 22 Class A  
 VCCI Class A  
 C-Tick  
 EN60950 (TUV)  
 EN55024  
 CE Mark  
 CSA / CUL

**Standards and compliance**

- RFC792 ICMP
- RFC1213 MIB-II
- RFC1350 TFTP
- RFC1492 TACACS
- RFC1769 SNMP (Simple Network Time Protocol)
- RFC2131 DHCP client
- RFC2236 IGMP
- RFC2461 NDP (Neighbor Discovery protocol)
- RFC2616 HTTP
- RFC2866 RADIUS
- RFC4330 SNMP
- RFC5343 SNMP
- RFC6101 SSL
- IEEE 802.3 CSMA/CD
- IEEE 802.3i 10T
- IEEE 802.3u 100TX
- IEEE 802.3z 100SX/LX
- IEEE 802.3z/ab 1000T
- IEEE 802.3x Flow control
- IEEE 802.1p Prioritization (four queues)
- IEEE 802.1x Authentication
- IEEE 802.1x Local authentication server(MD5)
- IEEE 802.1x Remote authentication through RADIUS
- IEEE 802.1x Dynamic VLAN assignment
- IEEE 802.1x MAC-based authentication
- IEEE 802.1x RADIUS
- IEEE 802.1d Bridging
- IEEE 802.3ad Link aggregation
- IEEE 802.3ad Port trunking and LACP
- IEEE 802.1Q Tagged VLAN
- IEEE 802.1d Spanning-Tree
- IEEE 802.1w Rapid Spanning-Tree
- IEEE 802.1s Multiple Spanning-Tree
- IEEE 802.3af PoE
- IEEE 802.3at PoE+
- IEEE 802.3az Energy Efficient Ethernet

**Ordering information**

- AT-GS950/8-xx**  
8-port 10/100/1000T eco-friendly WebSmart switch with 2 SFP combo ports
- AT-GS950/16-xx**  
16-port 10/100/1000T eco-friendly WebSmart switch with 2 SFP combo ports
- AT-GS950/24-xx**  
24-port 10/100/1000T eco-friendly WebSmart switch with 4 SFP combo ports
- AT-GS950/48-xx**  
48-port 10/100/1000T eco-friendly WebSmart switch with 4 SFP combo ports
- AT-GS950/8POE-xx**  
8 port 10/100/1000T PoE fanless WebSmart switch with 2 SFP combo ports
- AT-GS950/10PS-xx**  
10-port 10/100/1000T POE+ (8 POE+ Enabled) WebSmart switch with 2 SFP combo ports
- AT-GS950/16PS-xx**  
16-port 10/100/1000T POE+ WebSmart switch with 2 SFP combo ports
- AT-GS950/28PS-xx**  
24-port 10/100/1000T POE+ WebSmart switch with 4 SFP ports
- AT-GS950/48PS-xx**  
48-port 10/100/1000T POE+ (24 POE+ Enabled) WebSmart switch with 4 SFP combo ports

**Package contents**  
 Switch unit  
 Rack-mount brackets and screws  
 Power cord  
 Rubber feet  
 User manual/install guide on CD (GS950/8POE only)

**Small Form Pluggable Optics Modules**

- AT-SPSX**  
SFP, MMF, 1000Mbps, 220/500 m, 850 nm, LC
- AT-SPLX10**  
SFP, SMF, 1000Mbps, 10 km, 1310 nm, LC
- AT-SPFX/2<sup>4</sup>**  
SFP, MMF, 100Mbps, 2 km, 1310 nm, LC
- AT-SPFX/15<sup>4</sup>**  
SFP, SMF, 100Mbps, 15 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

<sup>4</sup>Not supported on GS950/28PS

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