

# 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	SNTP (Simple Network Time Protocol)
RFC2131	DHCP client
RFC2236	IGMP
RFC2461	NDP (Neighbor Discovery protocol)
RFC2616	HTTP
RFC2866	RADIUS
RFC4330	SNTP
RFC5343	SNMP
RFC6101	SSL
IEEE 802.3	CSMA/CD
IEEE 802.3i	10T
IEEE 802.3u	100TX
IEEE 802.3z	1000SX/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