Allied Telesis™
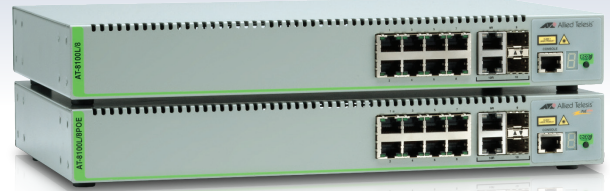
AT-8100L/8POE-E

RUGGEDIZED EXTENDED TEMPERATURE FAST ETHERNET SWITCH

Small form factor Layer 2-4 8-port Power over Ethernet switch.

PoE plus

eco friendly

The AT-8100L/8POE-E is a Layer 2 to 4 small form factor Ethernet switch designed for harsh environments. Unlike traditional DC powered industrial networking equipment, the -E Series products are optimized for the middle ground requirement that needs classic AC powered enterprise switches, that ensure high reliability and are tested to withstand higher temperatures, shock and vibration.

The AT-8100L/8POE-E switch offers 8 x 10/100TX Power over Ethernet ports plus two Gigabit combo 10/100/1000T-SFP ports. The 8 ports of PoE, each delivering up to 30 Watts per port make this product ideal for IP video surveillance applications, connectivity of localized clusters of wireless access points or PoE powered VoIP systems.

Rugged Compact AC Powered Form Factor

The AT-8100L/8POE-E compact form factor enables placement in locations where space is minimal and mounting options include rack and wall-mounting. The benefits are that this device can be mounted in a small enclosed wiring closet, installed in inaccessible places in large warehouses or even outdoor enclosures such as kiosks, ticket vending machines or NEMA enclosures in moderate climates.

Ease of Management

Designed for rapid deployment with the minimum of configuration time, the 8100L Series offers features such as Voice VLAN, LLDP-MED, Enhanced Stacking and Web management GUI that facilitates a simple and effective approach to network management. Voice VLAN segregates VoIP traffic from regular Ethernet traffic and applies to it a higher QoS. It takes the complexity out of VoIP deployments, ensures high voice quality and protects time sensitive voice traffic from being flooded by other data. LLDP-MED lets the user auto-configure end stations to send preconditioned traffic that adheres to Voice VLAN configured network policies.

Enhanced Stacking with the 8100L Series enables the user to make softwareupgrades for multiple switches with a single command, plus update all configurations in a single management session. The industry standard CLI of AlliedWare Plus™ combined with the simple and intuitive Web management GUI reduces the training needs for those who require granularity of control, by providing a familiar interface for advanced users.

Key Features

Rugged and Reliable
» Engineered for extended temperature operation the AT-8100L/8POE-E is built to withstand significant vibration and shock and uses high reliability power supplies and cooling systems. This rugged design delivers an edge Power over Ethernet access platform that will keep your devices powered and communicating.

Powering the Critical Edge
» The Power over Ethernet ports on the AT-8100L/8POE-E deliver the power and connectivity needed to ensure continued operation of the connected devices whether IP video surveillance cameras, kiosk mounted push to talk phones, wireless access points or remote monitoring devices.

Secure
» Enhanced access security such as device address filtering or network access control for wireless clients provides protection for the critical edge of the network.

Easy to Manage
» The industry standard CLI combined with the simple and intuitive Web management GUI reduces training needs. Enhanced Stacking enables up to 24 switches to be managed as a single entity or cluster using standard Ethernet. Benefits include a reduced number of IP management points, rapid system upgrades and a more unified management interface.

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Environmentally Friendly

In keeping with our commitment to environmentally friendly processes and products, the AT-8100L/8POE-E is designed to be green from the ground up, with reduced power consumption and minimal hazardous waste.

Effective Traffic Monitoring

In order to fully understand the performance of the network and ensure the ongoing smooth delivery of critical data you must be able to measure and analyse the traffic in real-time. sFlow, an industry-standard technology for monitoring high-speed switched networks gives complete visibility into the use of the network. Benefits such as performance optimization, accounting, billing for usage, or even defense against security threats can be realized by selecting an sFlow capable switch such as any of the 8100 Series.

Layer 3 Routing

The switch provides static IPv4 routing at the edge of the network as well as support for RIPv1 and RIPv2.

Gigabit and Fast Ethernet SFP Support

The AT-8100L/8POE-E support both Gigabit and Fast Ethernet Small Formfactor Pluggable optics (SFPs). This makes it ideal for environments where Gigabit fiber switches will be phased in over time. The AT-8100L/8POE-E allows for connectivity to the legacy 100FX hardware until it is upgraded to Gigabit.

Ideal Warehouse, Kiosk, NEMA Pod and Wiring Closet Connectivity

The line rate performance, rugged design and extended temperature characteristics of the AT-8100L/8POE-E enable the extension of the network from the typical conditioned environments of the office to the more demanding warehouse, hangar or kiosk. Applications including video surveillance, digital signage or even ticketing kiosks require systems that will continue to operate in adverse conditions and yet have the features such as advanced QoS and multicast support to ensure efficient management of the network traffic.

9000/28
Layer 2 Managed
Ethernet Switch

8100L/8POE
PoE *plus*

Ticket machines

Surveillance Cameras
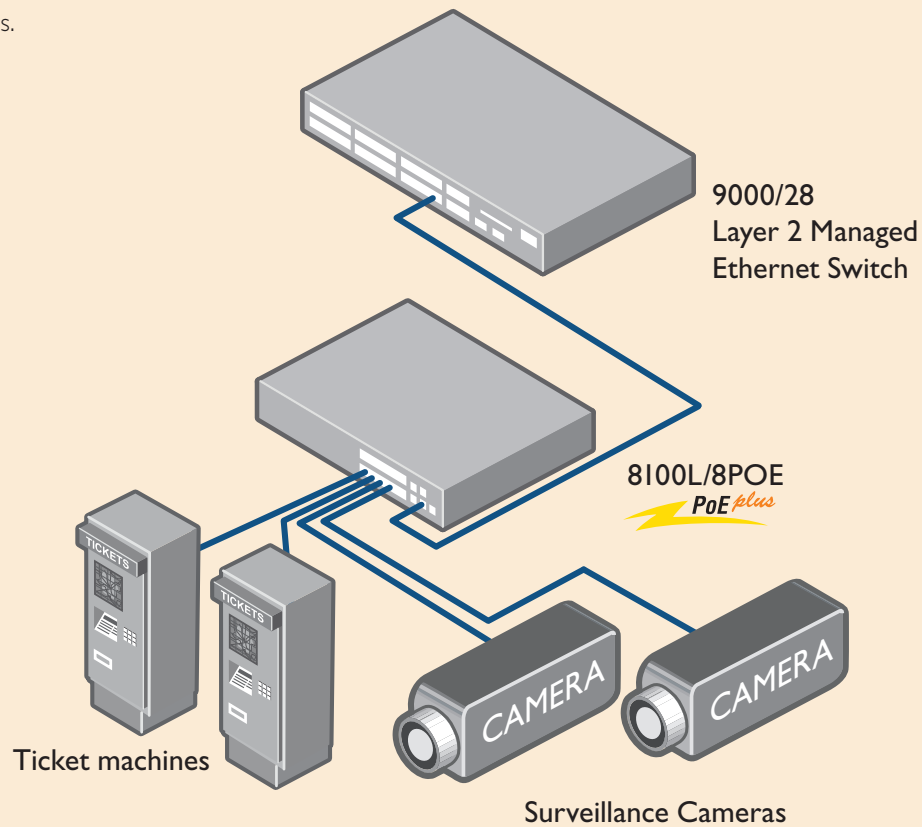
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Specifications

System Capacity
» 128MB RAM
» 16MB flash memory
» 16K MAC addresses
» 266MHz CPU

Maximum Bandwidth
» Non-blocking for all packet sizes

Wirespeed Switching (Layer 2/3) on all Ethernet Ports
» 14,880pps for 10Mbps Ethernet
» 148,800pps for 100Mbps Ethernet
» 1,488,000pps for 1000Mbps Ethernet

Environmental Specifications
» Operating temperature: 0ºC to 50ºC
» Storage temperature: -25ºC to 70ºC
» Operating humidity: 5% to 90% non-condensing
» Storage humidity: 5% to 95% non-condensing
» Max operating altitude: 3,048 m (10,000 ft)

Port Configuration
» Auto-negotiation, duplex, MDI/MDI-X, IEEE 802.3x flow control/back pressure
» Head of Line (HoL) blocking prevention
» Broadcast storm control
» Link flap protection
» Group link control
» Port mirroring

Ethernet Specifications
» RFC 894 Ethernet II encapsulation
» IEEE 802.1D MAC bridges
» IEEE 802.1Q Virtual LANs
» IEEE 802.2 Logical link control
» IEEE 802.3ac VLAN TAG
» IEEE 802.1ax-2008 (LACP) link aggregation
» IEEE 802.3u 100TX
» IEEE 802.3x Full-duplex operation
» IEEE 802.3z Gigabit Ethernet
» IEEE 802.3af Power over Ethernet class 3
» IEEE 802.3at Power over Ethernet class 4
» Jumbo frames (9198 bytes)

Quality of Service (QoS)
» Eight egress queues per port
» Engless rate limiting
» Voice VLAN
» Automatic QoS
» IEEE 802.1p Class of Service with strict and weighted round robin scheduling
» RFC 2474 DSCP for IP-based QoS
» RFC 2475 Differentiated services architecture
» Layer 2, 3 and 4 criteria

Link Aggregation
» IEEE 802.3ad LACP
» Static link aggregation

Link Discovery
» IEEE 802.1ab Link Layer Discovery Protocol (LLDP) Link Layer Discovery Protocol-Media Endpoint (LLDP-MED)

Spanning-Tree Protocol
» IEEE 802.1D Spanning-Tree Protocol
» IEEE 802.1D-2004 Rapid Spanning-Tree Protocol
» IEEE 802.1q-2005 Multiple Spanning-Tree Protocol (15 instances)
» BPDU guard
» Loop guard
» Root guard

Management
» RFC 854 Telnet server
» Console management port
» AlliedWare Plus CLI
» Web GUI
» Enhanced Stacking
» RFC 1866 HTML
» RFC 2068 HTTP
» RFC 2616 HTTPS
» RFC 1350 TFTP
» zModem
» RFC 1305 SNTP
» RFC 1155 MIB
» RFC 1157 SNMPv1
» RFC 1901 SNMPv2c
» RFC 3411 SNMPv3
» RFC 1757 RMON 4 groups: Stats, History, Alarms and Events
» RFC 3164 Syslog protocol (client)
» Event log
» RFC 3176 sFlow
» Auto config

MIB Support
» RFC 1213 MIB-II
» RFC 1215 TRAP MIB
» RFC 1493 Bridge MIB
» RFC 2863 Interfaces group MIB
» RFC 1643 Ethernet-like MIB
» RFC 2618 RMON MIB
» RFC 2674 IEEE 802.1Q MIB
» RFC 2096 IP forwarding table MIB
» Allied Telesis managed switch MIB

VLAN
» 4096 VLANs (IEEE 802.1Q)
» Port-based VLANs
» MAC-based VLANs – 256
» IP subnet-based VLANs – 256
» Port-based Private VLANs
» GARP VLAN Registration Protocol (GVRP)

General Protocols
» RFC 768 UDP
» RFC 791 IP
» RFC 792 ICMP
» RFC 793 TCP
» RFC 826 ARP

» RFC 950 Subnetting, ICMP
» RFC 1027 Proxy ARP
» RFC 1035 DNS
» RFC 1122 Internet host requirements
» DHCP client
» DHCP snooping
» DHCP option 82
» RFC 3046 DHCP relay
» RFC 951 BootP

IP Multicast
» RFC 1112 IGMPv1 snooping
» RFC 2236 IGMPv2 snooping
» IGMPv2 snooping querier
» Multicast groups – 255

Security / IEEE 802.1x
» TACACS+
» RFC 2865 RADIUS client
» RFC 2866 RADIUS accounting
» IEEE 802.1x port-based Network Access Control (NAC)
» Supplicant
» Authenticator
» IEEE 802.1x multiple supplicant mode
» Piggy-back mode
» Per port MAC address limiting
» Per port MAC address filtering
» MAC address security/lockdown
» RFC 1321 MD-5
» EAP, EAP-TLS, LEAP, PEAP, TTLS
» Dynamic VLANs
» Guest VLANs
» Secure VLANs
» Layer 2/3/4/ Access Control Lists (ACLs)
» SSLv3 for Web management
» SSL
» SSH
» SSH session Time out
» Microsoft NAP compliant
» Symantec NAC support

IPv6
» IPv6 host
» IPv6 ACL
» ICMPv6
» Dual-stack IPv4/IPv6 management
» IPv6 applications: WEB/SSL, Telnet server/SSH,

IP Routing
» Static IPv4 routing – 4K
» RIPv1, v2
» Proxy ARP

Compliance Standards
» IEEE 802.3 – 10T
» IEEE 802.3u – 100TX with auto-negotiation
» IEEE 802.3ab – 1000T Gigabit Ethernet
» 100FX SFP support
» 1000X SFP support

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AT-8100L/8POE-E | Ruggedized Extended Temperature Ethernet Switch

eco friendly

Safety and Electromagnetic Emissions Certifications

» EMI: FCC class A, CISPR class A, EN55022 class A, C-TICK, VCCI Class A, CE, EN601000-3-2, EN601000-3-3

» Immunity: EN55024

» Safety: UL 60950-1 (cUlus), EN60950-1 (TUV), EN60825

RoHS Standards

» Compliant with European and China RoHS standards

Package Description

» AT-8100L/8POE-E switch

» AC power cord

» Management cable (RJ-45 to DB-9)

» Rubber feet for desktop installation

» Install guide and CLI users guide available at alliedtelesis.com

PRODUCT	SWITCHING CAPACITY	FORWARDING RATE	LATENCY	
			10Mb	100MB
AT-8100L/8POE-E	5.6Gbps	8.3Mpps	80µs	10µs

Physical Specifications and MTBF Figures

PRODUCT	WIDTH	DEPTH	HEIGHT	WEIGHT	MTBF (HOURS)
AT-8100L/8POE-E	440 mm (17 in)	330 mm (13.0 in)	203 mm (8.1 in)	2.3 kg (5.1 lb)	130,000

Power and Noise Characteristics

PRODUCT	MAX POWER CONSUMPTION	MAX HEAT DISSIPATION	NOISE	VOLTAGE	FREQUENCY
AT-8100L/8POE-E	229.1W*	150 BTU/hr	51.8 dBA	100-240V AC (10% auto-ranging)	47-63Hz

* with maximum POE+ load

Power over Ethernet Specifications

POWER SUPPLY UNIT	POE POWER AVAILABLE	MAXIMUM POE PORTS SUPPORTED		
		IEEE 802.3af CLASS 2	IEEE 802.3af CLASS 3	IEEE 802.3at CLASS 4
AT-8100L/8POE-E	185W	8	8	6

IEEE 803.at PoE+ LLDP-MED classification requires PD to be fully compliant with IEEE 802.3at standard

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Ordering Information

8100L Series

Fast Ethernet Switches

AT-8100L/8POE-E-xx
8 x 10/100TX PoE RJ-45 ports
2 combo ports (2 x 10/100/1000T RJ-45 ports or 2 x 100/1000 SFP ports)
Internal single AC power supply

Small Form Pluggable Optics Modules

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

AT-SPSX/I
SFP, MMF, 1000Mbps, 220 / 550m, 850 nm, LC
    Extended temperature: -40°C to 85°C

AT-SPEX
SFP, MMF, 1000Mbps, 2 km, 1310 nm, LC

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

AT-SPLX10/I
SFP, SMF, 1000Mbps, 10 km, 1310 nm, LC
    Extended temperature: -40°C to 85°C

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

AT-SPZX80
SFP, SMF, 1000Mbps, 80 km, 1550 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-SPFX/2
SFP, MMF, 100Mbps, 2 km, 1310 nm, LC

AT-SPFXBD-LC-13
SFP, SMF, 100Mbps, 10 km, 1310/1510 nm, LC-BiDi

AT-SPFXBD-LC-15
SFP, SMF, 100Mbps, 10 km, 1510/1310 nm, LC-BiDi

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

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

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