

Switches

9800 Series, Layer 3/4+ Fast Ethernet & Gigabit Ethernet Switches

AT-9812T

12 port 1000T (RJ45) Layer 3/4+ switch with 4 GBIC bays

AT-9816GB

Layer 3/4+ switch with 16 GBIC bays

Industry-leading features

The 9800 series reaches new heights in performance, flexibility, and reliability. Packaged in a 1.5RU standard rackmount chassis, the 9800 series incorporates a 32Gbps switching core that yields 24Mpps wirespeed Layer 3 IP and IPX switching performance.

Flexibility & reliability

GBIC interfaces provide ultimate port flexibility, supporting any combination of Gigabit copper or fibre for short haul and long haul. GBIC interfaces are hot-swappable, and an optional redundant power supply provides added reliability.

Policy-based Quality of Service

Combined with very low latency, wide-ranging Quality of Service features operating at wirespeed provide flow-based traffic management with full prioritisation and classification and min/max bandwidth profiles on each port. An ideal solution for high-end aggregation in multicasting and combined voice, video and data applications.

Power to perform

The 9800 series top-of-the-line Layer 3/4+ switches are built to meet the needs of high performance network services. Together with Allied Telesyn's advanced software feature set, AlliedWare™, the AT-9800 series is a superior switching solution in the mid-tier aggregation layer.

The 9800 series leads the market with an extensive suite of Layer 2 and Layer 3 features including IP/IPX/AppleTalk routing and filtering; routing protocols (RIP/RIPv2, OSPF, BGP4, IS-IS); multicast protocols (IGMP, IGMP Snooping, DVMRP, PIM-SM, PIM-DM); full 4096 VLANs; and flexible link aggregation.

Exceptional services

The 9800 includes a comprehensive set of features allowing simple configuration and control without compromising flexibility. The switches have a built-in DHCP server; TFTP for image and configuration downloads; Network Time Protocol client and server capabilities; advanced, customisable triggers with an e-mail client allowing unmatched flexibility in monitoring and controlling events; standard CLI and highly intuitive GUI device configuration tools plus full SNMP and MIB support for network management - accessed either in-band or out-of-band via an RS232 console.



Key features

- Extensive wirespeed traffic classification
- Non-blocking wirespeed under all circumstances
- 32Gbps core yields
- 24Mpps performance
- Full 4096 VLANs
- Low latency for voice support
- Up to 232,000 Layer 2/3 address table entries
- Policy-based QoS features
- GBIC modules enhance port flexibility
- Web-based management with GUI
- SNMP with extensive MIB support
- IPv6 support
- Advanced routing protocols
- OSPF, BGP4, RIP, RIPv2, DVMRP, PIM-SM, PIM-DM
- Port Trunking with link aggregation
- Secure SSH capability on management and access
- Limited Lifetime Warranty

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RELIABILITY

AT-9812T	480,000 hrs. MTBF
AT-9816GB	260,000 hrs. MTBF

POWER CHARACTERISTICS

Voltage	100-240V AC auto-ranging
Frequency	50-60Hz

Power consumption:

AT-9816Gx	132W (451BTU/hour) maximum 86W (294BTU/hour) typical
AT-9812Tx	131W (448BTU/hour) maximum 112W (383BTU/hour) typical

Maximum = with all T GBICs and CAM installed

Typical = with all SX fibre GBICs and CAM installed and measured with 230V AC supply

ENVIRONMENTAL SPECIFICATIONS

Operating Temp	0°C to 40°C (32°F to 104°F)
Storage Temp	-25°C to 75°C (13°F to 158°F)
Relative Humidity	5% to 95% non-condensing
Altitude	3,050 metres maximum (10,000 ft)

PHYSICAL CHARACTERISTICS

Height	6.6cm (2.6")
Width	44cm (17.3")
Depth	36.0cm (14.2")
Mounting	19" rackmountable, hardware included
Weight	AT-9816: 6.52kg or 8.5kg packaged AT-9812: 6.26kg or 8.3kg packaged

Redundant Power Supply:

Height	6.6cm (2.6")
Width	44cm (17.3")
Depth	36.0cm (14.2")
Mounting	19" rackmountable, 1.5RU form factor
Weight	(AT-RPS9000 with 1 power supply module) 6.6kg or 8.5kg packaged (AT-RPS9000 with 4 power supply modules) 10kg or 11.9kg packaged

ELECTRICAL/MECHANICAL APPROVALS

Emissions:	EN55022 Class B, FCC Class B, VCCI Class B (Use of T GBICs may cause class A compliance)
Immunity:	EN55024, EN61000-3-2/3
Safety:	UK60950, CAN/CSA-C22.2 No. 60950-00, EN60950, AS/NZS3260
Certification:	UL, cUL, TUV

COUNTRY OF ORIGIN

Singapore

STANDARDS & PROTOCOLS

GENERAL ROUTING

RFC 1918	IP Addressing
RFC 791	IP
RFC 950	Subnetting
RFC 1812	Router Requirements
RFC 1122	Internet Host Requirements
RFC 1582	RIP on demand circuits
	'IPX Router Specification', v.1., Novell, Inc. Part Number 107-000029-001

RFC 792	ICMP
RFC 1701	GRE
RFC 1702	GRE over IPv4
RFC 2131	DHCP
RFC 1542	BootP
RFC 826	ARP
RFC 925	Multi-LAN ARP
RFC 1700	Assigned Numbers
RFC 2661	L2TP
RFC 2822	Internet Message Format
RFC 903	Reverse ARP
RFC 1027	Proxy ARP
RFC 793	TCP
RFC 768	UDP
RFC 1144	Van Jacobson's Compression
	AppleTalk

IP MULTICASTING

RFC 2236	IGMPv2
PIM-SM Draft	IETF PIM Sparse Mode
IDMR DVMRP Draft	IETF Distance Vector Multicast Routing Protocol
RFC 1812	Router Requirements
RFC 2205	Reservation Protocol
RFC 2211	Controlled-Load
RFC 1112	Host Extensions

MANAGEMENT

RFC 1155	MIB
RFC 1157	SNMP
RFC 1213	MIB-II
RFC 1239	Standard MIB
RFC 1623	Ethernet MIB
RFC 1493	Bridge MIB
RFC 2790	Host MIB
RFC 2233	Interfaces Group MIB using SMIv2
RFC 2338	VRP
RFC 1757	RMON (groups 1,2,3 and 9)

OSPF

RFC 2328	OSPFv2
RFC 1245	OSPF protocol analysis
RFC 1246	Experience with the OSPF protocol

QUALITY OF SERVICE

RFC 1349	Type of Service in the IP Suite
IEEE 802.1D	
IEEE 802.1p	Packet Priority

RIP

RFC 1058	RIPv1
RFC 1723	RIPv2

SECURITY

RFC 1858	Fragmentation
RFC 1779	X.500 String Representation of Distinguished Names
RFC 2459	PKI X.509 Certificate
RFC 2511	PKI X.509 Format
RFC 2559	PKI X.509 LDAPv2
RFC 2587	PKI X.509 LDAPv2 Schema
RFC 2510	PKI X.509 Certificate Management Protocols
RFC 2585	PKI X.509 Operational Protocols
PKCS #10	
Draft IETF	Roadmap 05
Draft IETF	PKIX CMP Transport Protocols 01
RFC 2865	RADIUS
RFC 2866	RADIUS Accounting
RFC 1492	TACACS

BGP4

RFC 1771	Border Gateway Protocol 4
RFC 3065	Autonomous System Confederations for BGP
RFC 1657	Definitions of Managed Objects for BGP4 using SMIv2
RFC 1997	BGP Communities Attribute
RFC 1998	Multi-home Routing

IPSec (PAC card may be required)

RFC 2104	HMAC
RFC 2393	IPComp
RFC 2395	LZS
RFC 2401-2412	IPSec Security
RFC 1829	ESP DES-CBC

IPSec

RFC 2080	RIPng for IPv6
RFC 2461	Neighbour Discovery for IPv6
RFC 2463	ICMPv6

SERVICES

RFC 2821	SMTP
RFC 2049	MIME
RFC 1945	HTTP/1.0
RFC 1985	SMTP
RFC 1305	NTPv3
RFC 2156	MIXER
RFC 854-858,1091	Telnet
RFC 932	Subnetwork addressing scheme
RFC 1350	TFTP
RFC 1510	Network Authentication

ETHERNET

IEEE 802.1D	
IEEE 802.2	
IEEE 802.3 u, v, x, z, ab, ac, ad	
RFC 894	Ethernet II Encapsulation
RFC 1042	SNAP Encapsulation
IEEE 802.1Q	VLAN Tagging

ENCRYPTION

FIPS PUB 46	DES
ISO DEA-1	
ANSI X3.92	

ORDERING INFORMATION

AT-9816GB-xx

16 GBIC port Layer 3/4+ switch

AT-9812T-xx

4 GBIC + 12 ports Layer 3/4+ switch

Where xx =	10 for U.S. power cord*
	20 for no power cord*
	30 for U.K. power cord*
	40 for Australian power cord*
	50 for European power cord*
	80 for -48v power supply*

* 128MB SDRAM

RAM

AT-SD128A-nnn	128MB SDRAM
AT-SD256A-nnn	256MB SDRAM (upgrade)

Compact Flash

AT-CF032-nnn	32MB compact flash card
AT-CF128A-nnn	128MB compact flash card

Content Addressable Memory

AT-SB4262-00	192k entry line CAM daughter card
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Gigabit Interface Converter (GBIC) Modules

AT-G8SX

500m SX GBIC, based on 50 Micron fibre
220m SX GBIC, based on 62.5 Micron fibre

AT-G8LX10

10km LX GBIC, based on 9 Micron fibre

AT-G8LX25

25km LX GBIC, based on 9 Micron fibre

AT-G8LX40

40km LX GBIC, based on 9 Micron fibre

AT-G8LX70

70km LX GBIC, based on 9 Micron fibre

AT-G8T

1000T copper GBIC

Redundant Power Supplies

AT-RPS9000-xxx

RPS chassis for the AT-9816GB and AT-9812T, includes one power module

AT-PWR9000-xxx

Power supply module for the AT-RPS9000



Only nature can do better

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