AT-8000 Series

Managed Switches with Expansion Bays

AT-8012M-xx
12-port 10/100TX managed switch plus 1 expansion bay

AT-8012M-QS-xx
L2 Managed Switch with 12 10/100Base-TX port and 1 expansion module slot, fanless

AT-8024M-xx
24-port 10/100TX managed switch plus 2 expansion bays

AT-8016F/SC-xx
16-port 100FX MMF managed switch with SC connectors plus 2 expansion bays

AT-8016F/MT-xx
16-port 100FX MMF managed switch with MT connectors plus 2 expansion bays

AT-8088/SC-xx
8-port 100FX MMF and 8-port 10/100TX managed switch with SC connectors plus 2 expansion bays

AT-8088/MT-xx
8-port 100FX MMF and 8-port 10/100TX managed switch with MT connectors plus 2 expansion bays

High-performance

Designed to handle heavy multicast and broadcast traffic effortlessly, Allied Telesis' AT-8000 Series of Fast Ethernet switches supports an 800K multicast or broadcast packet replication rate, a 50K multicast packet forwarding rate, and up to 10 IGMP leaves and joins per second. Providing exceptional performance, ease of use, and flexibility at an affordable price, the AT-8000 Series features broadcast-storm control and auto-negotiation on all ports. When you need high-performance, choose one of the combinations offered by the AT-8000 Series of Fast Ethernet switches.

Flexibility

Ideally suited for small and medium businesses, hotels, schools, and universities, the AT-8000 Series offers copper or fiber switches, and fixed or expandable configurations.

All AT-8000 Series models support the Allied Telesis signature feature Enhanced Stacking™, enabling up to 24 switches, 576 10/100TX ports—all managed remotely by a single IP address. The 24 switches can be any combination of any models of the AT-8000 Series, whether fixed-port or with expansion bays.

Management

Although a plug-and-play device, the AT-8000 Series also includes an extensive range of management features such as Web-based interfaces, command line interfaces, SNMP, and Telnet. Management is available through any tagged or untagged VLAN; and firmware and configuration files may be uploaded or downloaded via TFTP, XMODEM, or Enhanced Stacking™.

Rich Feature Set

Richly equipped with features normally found on higher-priced products, the AT-8000 Series supports Rapid Spanning Tree, port-based network access control, RADIUS, TACACS+, VLAN tagging, and more. Bandwidth-hungry networks can streamline traffic with the two priority queues found in the IEEE 802.1p prioritization feature. And high-traffic points can be addressed with the IEEE 802.1ad link aggregation feature supporting up to four Fast Ethernet ports or two Gigabit Ethernet ports.

Expansion Bay Alternatives

This data sheet focuses on the models with expansion bays. Please consult the AT-8000 Series, Managed Switches with Fixed Ports datasheet for information about models with fixed ports.

Fixed-port models include:

- AT-8024, 24-port 10/100TX managed switch
- AT-8026T, 24-port 10/100TX managed switch plus 2 copper Gigabit ports
- AT-8024GB, 24-port 10/100TX managed switch plus 2 GBIC bays
- AT-8026FC, 24-port 10/100TX managed switch plus 2 100FX ports with SC connectors

Key Features

- 9.6 Gbps switch fabric
- Non-blocking architecture
- Wirespeed performance
- Enhanced Stacking™
- Rapid Spanning Tree
- Port-based network access control
- L2 Redundancy
- RADIUS
- TACACS+, 802.1x
- Two priority queues
- Port Security
- Port-Mirroring
- Quiet operation (AT-8012M-QS only)
- Limited air flow environment (enclosed cabinet, AT-8012M-QS only)
- Free software upgrades

Performance

Wirespeed switching on all Ethernet ports
Up to 6.5Mpps throughput
14,880pps for 10Mbps Ethernet
148,800pps for 100Mbps Fast Ethernet
1,488,000pps for 1000Mbps Gigabit Ethernet

Store and forward mode
9.6Gbps switch fabric
Head-of-Line blocking prevention
Broadcast Storm control

RAM	24MB divided into 6MB Buffer Memory 18MB System Memory
MAC Addresses	Up to 4K
VLANs	32

Half/Full-Duplex
Auto Negotiation (10/100 Mbps)
Auto MDI/MDI-X on all ports

ARM	7 CPU
Low Latency:	< 15 µs for 10Mbps < 8 µs for 100Mbps < 3 µs for 1000Mbps

Reliability

MTBF	200,000+ hrs
MTTR	<1/2 hr DoA <1%

Interface Connections

10/100TX	RJ-45
100FX	SC or MT
RS232	DB9 pin, female port
Power supply	5-15 NEMA plug

Internal power supply

Power Characteristics

Voltage	100-240vAC
Current	4.0/2.0A
Power Consumption	63W Maximum
Frequency	50-60Hz

Environmental Specifications

Operating Temp.	0°C to 40°C (32°F to 104°F)
Storage Temp.	-25°C to 70°C (-13°F to 158°F)
Relative Humidity	5% to 95% non-condensing
Storage Humidity	5% to 95% non-condensing
Operating Altitude	maximum 3,000m (9,843ft)

Physical Characteristics

AT-8012M	4.4cm x 29.2cm x 21.0cm (1.8" x 11.5" x 8.3") 2.2kgs (4.9lbs)
AT-8012M-QS	4.4cm x 28.0cm x 25.0cm (1.8" x 11" x 9.8") 2.2kgs (4.9lbs)
AT-8024M	4.4cm x 43.8cm x 22.2cm (1.8" x 17.3" x 8.8") 3.5kgs (7.6lbs)
AT-8016F	4.4cm x 43.8cm x 22.2cm (1.8" x 17.3" x 8.8") 3.5kgs (7.6lbs)
AT-8088	4.4cm x 43.8cm x 18.4cm (1.8" x 17.3" x 7.3") 3.5kgs (7.6lbs)
Mounting	19" rack-mountable bracket included

Standards & Compliance

802.1d	Bridging
802.1D	Spanning Tree Protocol
802.1p	Class of service
802.1P	Traffic filtering, dynamic multicast filtering
802.1Q	VLAN bridge
802.1w	Rapid Spanning Tree
802.1x	Port-based network access control
802.3	10T Ethernet
802.3ab	1000T
802.3ac	VLAN tag frame extension
802.3ad	Link aggregation (static)
802.3u	100TX Ethernet
802.3x	Back pressure/flow control
802.3z	1000SX
RFC 1112	IGMP Snooping v1.0
RFC 2236	IGMP Snooping v2.0
RFC 2865	RADIUS
RFC 783	TFTP
RFC 951	BOOTP

TACACS+

SNMP Standards

RFC 1157	SNMPv1/v2
RFC 1213	MIB-II
RFC 1215	TRAP MIB
RFC 1493	Bridge MIB
RFC 1643	Ethernet-like MIB
RFC 1757	RMON 4 Groups: stats, history, alarms & events
RFC 2674	802.1Q MIB
RFC 2863	Interfaces Group MIB
Allied Telesis	Private MIB

Base System Capacity

2MB Flash Memory
Integrated LSI chipset with:
- 24MB SDRAM divided into:
  - 6MB Packet Buffer
  - 18MB System Memory
- ARM7 CPU

12 - 10/100Base-TX ports
- Auto MDI/ MDIX
- Duplex Auto Negotiation (Half/ Full Duplex)
- Speed Auto Negotiation (10Mbps/ 100Mbps)

32 VLANs
4K MAC Addresses

Management and Monitoring

Web, CLI, Telnet, Serial
SNMP v1 & v2c
RMON 1 (4 groups: 1, 2, 3, 9)

Electrical/Mechanical Approvals

Safety	UL 1950 (UL/cUL), EN60950 (TUV)
EMI	FCC Class A, EN55022 Class A, VCCI
Class A,	C-TICK, EN61000-3-2, EN61000-3-3
Immunity	EN55024

Country of Origin

Singapore, China

Expansion Module Options

AT-StackM
2 High-Speed Stacking Modules with 0.5m Stacking Cable

AT-A45/SC
1 - 100Base-FX port with SC connector for Multimode Fiber. Distance up to 2km in Full-Duplex

AT-A45/MT
1 - 100Base-FX port with MT connector for Multimode Fiber. Distance up to 2km in Full-Duplex

AT-A45/SC-SM15
1 - 100Base-FX port with SC connector for Singlemode Fiber. Distance up to 15km in Full-Duplex

AT-A46
1 - 10/100/1000Base-T port with RJ-45 connector for CAT5 twisted-pair. Distance up to 100m

AT-A47
1 unpopulated GBIC slot for the following approved GBICs:

550meter multimode GBIC (SC connector)	AT-G8SX
10km singlemode GBIC (SC connector)	AT-G8LX10
25km singlemode GBIC (SC connector)	AT-G8LX25
40km singlemode GBIC (SC connector)	AT-G8LX40
70km singlemode GBIC (SC connector)	AT-G8LX70
1000Base-T GBIC (RJ-45 connector)	AT-G8T
70km singlemode 1610nm color GBIC (for CWDM support)	AT-G8ZX1
70km singlemode 1590nm color GBIC (for CWDM support)	AT-G8ZX2
70km singlemode 1570nm color GBIC (for CWDM support)	AT-G8ZX3
70km singlemode 1550nm color GBIC (for CWDM support)	AT-G8ZX4
70km singlemode 1530nm color GBIC (for CWDM support)	AT-G8ZX5
70km singlemode 1510nm color GBIC (for CWDM support)	AT-G8ZX6
70km singlemode 1490nm color GBIC (for CWDM support)	AT-G8ZX7
70km singlemode 1470nm color GBIC (for CWDM support)	AT-G8ZX8
70km singlemode 1450nm color GBIC (for CWDM support)	AT-G8ZX9
70km singlemode 1430nm color GBIC (for CWDM support)	AT-G8ZX10
70km singlemode 1410nm color GBIC (for CWDM support)	AT-G8ZX11
70km singlemode 1390nm color GBIC (for CWDM support)	AT-G8ZX12
70km singlemode 1370nm color GBIC (for CWDM support)	AT-G8ZX13
70km singlemode 1350nm color GBIC (for CWDM support)	AT-G8ZX14
70km singlemode 1330nm color GBIC (for CWDM support)	AT-G8ZX15
70km singlemode 1310nm color GBIC (for CWDM support)	AT-G8ZX16

Ordering Information

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Where xx = 10 for U.S. power cord
20 for no power cord
30 for U.K. power cord
40 for Australia power cord
50 for Europe power cord
80 for DC version (8024M & 8016F only)

Modules

AT-A45/SC
1 100FX port with SC connector for multimode fiber, distance up to 2km in full-duplex.

AT-A45/MT
1 100FX port with MT connector for multimode fiber, distance up to 2km in full-duplex.

AT-A45/SC-SM15
1 100FX port with SC connector for singlemode fiber, distance up to 15km in full-duplex.

AT-A46
Single-port 10/100/1000T module.
Supports distance up to 100 meters.

AT-A47
Unpopulated GBIC module.
Use with Allied Telesis AT-G8 GBICs.

AT-STACKM
Two high-speed stacking modules with .5m stacking cable

Redundant Power Supply
(AT-8024M & AT-8016F only)

AT-RPS3004
Chassis for up to 4 redundant power supplies
(Chassis includes one power supply and cable)

AT-PWR3004
Additional AC redundant power supply with cable

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