AT-8700XL SERIES

Advanced Layer 2 - 4 Access Switches

AT-8724XL

24 x 10/100 Layer 2 - Layer 4 with essential Layer 3 functionality and 2 Uplink Bays

AT-8748XL

48 x 10/100 Layer 2 - Layer 4 with essential Layer 3 functionality and 2 Uplink Bays

Performance

The AT-8724XL and AT-8748XL are Layer 2 - Layer 4 devices with essential Layer 3 functionality. These desktop multi-media switches bring traffic control and high performance to the edge of the network.

With IP routing capabilities and flexible management tools, the AT-8700XL is designed to be a cost effective solution for today with the ability to expand as network demands grow - at no extra cost.

Specially designed for high-performance desktop edge connectivity, workgroup, mid-sized networks, campus and metro access edge, the AT-8700XL series provides Layer 4 functionality to support multi-media services like Voice and Video applications which are becoming more and more integrated into data networks.

The AT-8700XL intelligent switch includes Quality of Service (QoS) features such as wirespeed Layer 4 traffic classifiers, bandwidth limiting, Diffserv and Hardware Access control lists that are particularly useful for multi-tenant unit, multi business unit, Telco, or Network Service Provider applications.

Rich Feature Set

The AT-8700XL series of switches are some of the most powerful switches on the market. All AT-8700XL Layer 2 - Layer 4 switches include a suite of advanced switching features such as IEEE 802.1Q VLAN Tagging, IGMPv2, and 802.1p Traffic Prioritization of packets at Layer 2, and broadcast storm protection.

Bandwidth Limiting

All AT-8700XL series switches come with asymmetric bidirectional bandwidth limiting at no additional cost. This is an ideal feature for customers needing to allocate the amount of bandwidth on a per port basis. With bandwidth limiting, network administrators can define throughput levels for each port and control access based on type of end user. These features are ideal for managing different applications like VoIP, Web browsing, Video, email, and to regain control of traffic across the network. The AT-8700XL bandwidth limiting feature provides fine granularity with the ability to define ingress limits down to 64Kbps segments and egress limits down to 1Mbps segments. The segment definitions can be asymmetric and each port can be set to different values. An additional benefit is that loop back ports are not required.

Cost Effectiveness

The AT-8700XL enables a cost effective network by efficiently using bandwidth from the access edge to the core. The AT-8700XL accomplishes this with a combination of traffic prioritization and security filtering. With these features, rogue traffic is not forwarded thus preventing unnecessary load on the network backbone and central servers.

Key Features

- Full QoS for Multi-media applications
- Wirespeed Layer 2 - Layer 3 filtering
- Wirespeed Layer 2 switching
- Wirespeed Layer 3 IP routing
- Non-blocking at full line rate for all packet sizes (AT-8724XL)
- Port trunking with link aggregation
- Stacking with open standards based interfaces
- Support up to 255 VLANs
- Private VLANs
- Bandwidth limiting
- IP RIP v1 and v2
- OSPF v2 support
- VRRP support
- Rapid Spanning Tree Protocol
- SSH for management
- SSL
- TACACS+
- 802.1x
- SNMPv3
- Redundant power supply option
- 2 uplink bays

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Wirespeed Routing
A rich set of features is included to provide full support for multi-media Layer 4 applications. All switches include Layer 3 IP Static Routing, RIP, RIPv2, IGMPv2 and OSPFv2 routing protocols.

Manageability
The AT-8700XL offers an extensive suite of management capabilities allowing simple configuration, advanced customizable triggers with an e-mail client and full SNMP and MIB support for unmatched flexibility in monitoring and controlling events.

Stacking
Stacking provides Web and CLI based management of up to 9 switches with the same effort as for one switch. The Allied Telesis solution uses open standards interfaces as stacking links so that many switches can be stacked across different sites, which is not possible using the proprietary stacking cable solutions. Also the use of open standards interfaces avoids the use of expensive specialized hardware with limited topologies.

Performance
AT-8724XL 9.6Gbps switching fabric, 6.6Mpps forwarding rate
AT-8748XL 9.6 x 2 = 19.2Gbps switching fabric, 10.1Mpps forwarding rate
14,880pps for 10Mbps Ethernet
148,800pps for 100Mbps Ethernet
1,488,000pps for 1000Mbps Ethernet
MAC addresses 8K
Buffer Memory 4MB
VLANs 255
Auto-negotiation speed and duplex
Auto-MDI/MDIX

Reliability
AT-8724XL 2,860,000 hrs. MTBF
AT-8748XL 810,000 hrs. MTBF

Interface Connections
10/100TX Shielded RJ-45
100FX Multi-Mode fiber SC or MT
1000SX Multi-Mode fiber SC
1000LX Single-Mode fiber SC
1000T Shielded RJ-45

Power Characteristics
Voltage: 100-240vAC
Frequency: 50-60Hz
Power consumption max: 95W

Environmental Specifications
Operating Temp: 0°C to 40C (32°F to 104°F)
Non-Operating Temp: -25°C to 70°C (-13°F to 158°F)
Relative Humidity: 95% noncondensing

Physical Characteristics
Height: 6.6cm (2.6")
Width: 44cm (17.3")
Depth: 35.6cm (14")
Weight: 5.5kg (12 lbs.)
Mounting: 19" rackmountable, hardware included

Electricals/Mechanical Approvals
UL 1950
CSA 22.2 No. 950
EN 60950 (TUV)
FCC Class A
EN55022 Class A
EN500082-1
VCCI Class A

Country of Origin
Singapore

Summary of Features
Operation
- RADIUS
- TACACS
- CLI
- Flash
- HTTP client/server
- GUI
- Remote Security Officer
- User Authentication Database
- Editor
- Mail
- Release/patch licences
- LOAD via ASYN, TFTP, HTTP, LDAP

Switching
- Layer 2 Switching (port settings like ageing timer, mirroring, learning, trunking, link aggregation, broadcast storm protection, port security)
- STP
- VLANs
- VLAN Relay
- Layer 2 filtering
- Hardware Packet filters (classifier-based, L3 filters)
- RSTP
- Bandwidth limiting
- Broadcast forwarding
- DSCP classification (Diffserv)
- Egress queues = 4
- MAC addresses = 8K
- GARP
- Classifier
- QoS

IP
- DHCP
- RIP
- OSPF
- DNS Relay
- PING, Traceroute, Finger
- BOOTP
- Static multicast forwarding
- Traffic/route/priority filtering

IP Multicasting
- MVR
- IGMP
- IGMP snooping
- IGMP proxy

Logging
Test Facility
NTP
Trigger Facility
Scripting
SNMP v2c
VRRP
Secure Shell (SSH)
PKI
SSL

Standards and Protocols

Software Release 2.9.1

Encryption

RFC 1321 MD5
RFC 2104 HMAC
FIPS 180 SHA-1
FIPS 186 RSA
FIPS 46-3 DES

Ethernet

RFC 894 Ethernet II Encapsulation
IEEE 802.1D MAC Bridges
IEEE 802.1Q Virtual LANs
IEEE 802.2 Logical Link Control
IEEE 802.3ab 1000BASE-T
IEEE 802.3ac VLAN TAG
IEEE 802.3ad (LACP) Link Aggregation
IEEE 802.3u 100BASE-T
IEEE 802.3x Full Duplex Operation
IEEE 802.3z Gigabit ethernet
GARP
GVRP

General Routing

RFC 768 UDP
RFC 791 IP
RFC 792 ICMP
RFC 793 TCP
RFC 826 ARP
RFC 903 Reverse ARP
RFC 925 Multi-LAN ARP
RFC 950 Subnetting, ICMP
RFC 1027 Proxy ARP
RFC 1035 DNS Client
RFC 1055 SLIP
RFC 1122 Internet Host Requirements
RFC 1144 Van Jacobson's Compression
RFC 1256 ICMP Router Discovery Messages
RFC 1288 Finger
RFC 1518 CIDR
RFC 1519 CIDR
RFC 1542 BootP
RFC 1812 Router Requirements
RFC 1918 IP Addressing
RFC 2131 DHCP
RFC 2132 DHCP Options and BOOTP Vendor Extensions.
RFC 2390 Inverse Address Resolution Protocol
RFC 2822 Internet Message Format
RFC 3046 DHCP Relay Agent Information Option
RFC 3232 Assigned Numbers
RFC 3993 Subscriber-ID Sub-option for DHCP Relay Agent Option
http://www.iana.org/assignments/bootp-dhcp-parameters BootP and DHCP parameters

General Routing and Firewall

draft-ietf-ipsec-nat-t-ike-08.txt Negotiation of NAT-Traversal in the IKE
draft-ietf-ipsec-udp-encaps-08.txt UDP Encapsulation of IPsec Packets

IP Multicasting

RFC 2236 IGMPv2
draft-ietf-magma-snoop-02 IGMP and MLD snooping switches

Management

RFC 1155 MIB
RFC 1157 SNMP
RFC 1212 Concise MIB definitions
RFC 1213 MIB-II
RFC 1493 Bridge MIB
RFC 2011 SNMPv2 MIB for IP using SMIv2
RFC 2012 SNMPv2 MIB for TCP using SMIv2
RFC 2096 IP Forwarding Table MIB
RFC 2576 Coexistence between V1, V2, and V3 of the Internet-standard Network Management Framework
RFC 2578 Structure of Management Information Version 2 (SMIv2)
RFC 2579 Textual Conventions for SMIv2
RFC 2580 Conformance Statements for SMIv2
RFC 2665 Definitions of Managed Objects for the Ethernet-like Interface Types
RFC 2674 Definitions of Managed Objects for Bridges with Traffic Classes, Multicast Filtering and Virtual LAN Extensions (VLAN)
RFC 2790 Host MIB
RFC 2819 RMON (groups 1,2,3 and 9)
RFC 2856 Textual Conventions for Additional High Capacity Data Types
RFC 2863 The Interfaces Group MIB
RFC 3164 Syslog Protocol
RFC 3410 Introduction and Applicability Statements for Internet-Standard Management Framework
RFC 3411 An Architecture for Describing SNMP Management Frameworks
RFC 3412 Message Processing and Dispatching for the SNMP
RFC 3413 SNMP Applications
RFC 3414 User-based Security Model (USM) for SNMPv3
RFC 3415 View-based Access Control Model (VACM) for the SNMP
RFC 3416 Version 2 of the Protocol Operations for SNMP
RFC 3417 Transport Mappings for the SNMP
RFC 3418 MIB for SNMP
RFC 3636 Definitions of Managed Objects for IEEE 802.3 MAUs
CDP
IEEE 802.1AB LLDP
draft-ietf-bridge-8021x-00.txt Port Access Control MIB

OSPF

RFC 1245 OSPF protocol analysis
RFC 1246 Experience with the OSPF protocol
RFC 2328 OSPFv2
RFC 3101 The OSPF Not-So-Stubby Area (NSSA) Option

QoS

RFC 2474 DCSP in the IPv4 and IPv6 Headers
RFC 2475 An Architecture for Differentiated Services
IEEE 802.1p Priority Tagging

RIP

RFC 1058 RIPv1
RFC 2453 RIPv2
RFC 2082 RIP-2 MD5 Authentication

Security

RFC 1492 TACACS
RFC 1779 X.500 String Representation of Distinguished Names.
RFC 1858 Fragmentation
RFC 2284 EAP
RFC 2510 PKI X.509 Certificate Management Protocols
RFC 2511 X.509 Certificate Request Message Format
RFC 2559 PKI X.509 LDAPv2
RFC 2585 PKI X.509 Operational Protocols
RFC 2587 PKI X.509 LDAPv2 Schema
RFC 2865 RADIUS
RFC 2866 RADIUS Accounting
RFC 2868 RADIUS Attributes for Tunnel Protocol Support
RFC 3580 IEEE 802.1X Remote Authentication Dial In User Service (RADIUS) Usage Guidelines
RFC 2459 X.509 Certificate and CRL profile
RFC 3280 X.509 Certificate and CRL profile
draft-grant-tacacs-02.txt TACACS+
Diffie-Hellman
Ddraft-IETF-PKIX-CMP-Transport-Protocols-01 Transport Protocols for CMP
draft-ylonen-ssh-protocol-00.txt SSH Remote Login Protocol
IEEE 802.1x Port Based Network Access Control
PKCS #10 Certificate Request Syntax Standard

Services

RFC 854 Telnet Protocol Specification
RFC 855 Telnet Option Specifications
RFC 856 Telnet Binary Transmission
RFC 857 Telnet Echo Option
RFC 858 Telnet Suppress Go Ahead Option
RFC 932 Subnetwork addressing scheme
RFC 951 BootP
RFC 1091 Telnet terminal-type option
RFC 1179 Line printer daemon protocol
RFC 1305 NTPv3
RFC 1350 TFTP
RFC 1510 Network Authentication
RFC 1542 Clarifications and Extensions for the Bootstrap Protocol
RFC 1945 HTTP/1.0
RFC 1985 SMTP Service Extension
RFC 2049 MIME
RFC 2068 HTTP/1.1
RFC 2156 MIXER
RFC 2821 SMTP

SSL

RFC 2246 The TLS Protocol Version 1.0
draft-freier-ssl-version3-02.txt SSLv3

STP / RSTP

IEEE 802.1Q - 2003 MSTP (802.1s)
IEEE 802.1t - 2001 802.1D maintenance
IEEE 802.1w - 2001 RSTP

About Allied Telesis

Allied Telesis was founded in 1987 and now has offices around the globe, more than 2,800 employees and over $500M of worldwide annual revenue. The attributes which have led Allied Telesis to achieve its leading position in the enterprise, operator and connectivity business segments can be summarised by four key elements: its business focus on networking technology for professional markets, where Allied Telesis has proved to be the only company capable of providing a total end-to-end solution at a high price/performance ratio; the ability to handle every aspect of its own products from design to marketing; the development of components and solutions which accommodate flexible, efficient and reliable network construction; and support from sound warranty terms and quality services. Allied Telesis connects the IP world efficiently thanks to affordable and highly reliable network solutions. For more information see: www.alliedtelesis.com

Service and Support

Allied Telesis provides value-added support services for its customers under its Net.Cover℠ programs. For more information on Net.Cover℠ support programs available in your area, contact your Allied Telesis sales representative or visit our website. www.alliedtelesis.com

Ordering Information

AT-8724XL
10/100TX 24 port managed Layer 2 - Layer 4 switch with essential Layer 3 functionality with RJ-45 connectors, 2 expansion bays
Order number: 990-001347-xx (RoHS Compliant)

AT-8748XL
10/100TX 48 port managed Layer 2 - Layer 4 switch with essential Layer 3 functionality with RJ-45 connectors and 2 expansion bays
Order number: 990-11142-xx (Not RoHS compliant)

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 48v power supply

Uplink Modules

AT-A35SX/SC
1 x 1000SX (SC) Gigabit fiber
Order number: 990-001086-00)

AT-A35LX/SC
1 x 1000LX (SC) Gigabit fiber
Order number: 990-001091-00

AT-A39/T
1 x 10/100/1000T (RJ-45) Gigabit copper
Order number: 990-11345-00

AT-A40/SC
1 x 100FX (SC) multimode fiber
Order number: 990-11920-00

AT-A40/MT
1 x 100FX (MT) multimode fiber
Order number: 990-11921-00

AT-A41/SC
1 x 100FX (SC) singlemode fiber
Order number: 990-11922-00

AT-A41/MT
1 x 100FX (MT) singlemode fiber
Order number: 990-11923-00

AT-A42
1 x Unpopulated GBIC module
Order number: 990-001092-00

GBIC Modules

For use with AT-A42

AT-G8T
1000T GBIC Copper
Order number: 990-97208-00

AT-G8SX-01
550m SX GBIC, based on 50 Micron fiber
220m SX GBIC, based on 62.5 Micron fiber
Order number: 990-02023-00

AT-G8LX10
10km LX GBIC, based on 9 Micron fiber
Order number: 990-11138-00

AT-G8LX25
25km LX GBIC, based on 9 Micron fiber
Order number: 990-11643-00

AT-G8LX40
40km LX GBIC, based on 9 Micron fiber
Order number: 990-11644-00

AT-G8LX70
70km LX GBIC, based on 9 Micron fiber
Order number: 990-11645-00

Redundant Power Supplies

AT-RPS8000
4 slot redundant power supply chassis (includes one power module)
Order number: 990-11126-xx

AT-PWR8000
Redundant Power Supply module
Order number: 990-11152-xx

Where xx = 10 for U.S. power cord
20 for no power cord
30 for U.K. power cord
40 for Asia/Pacific power cord
50 for European power cord

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