Allied Telesis

AT-8800 SERIES

Intelligent Workgroup Switches

AT-8824

24 port 10/100 TX Fast Ethernet
2 GBIC slots
Single PSU (Redundant PSU (RPS) is an optional extra)
PAC connection

AT-8848

48 port 10/100 TX Fast Ethernet
2 GBIC slots
Single PSU (Redundant PSU (RPS) is an optional extra)
PAC connection

The AT-8800 series Intelligent Workgroup Switches deliver high performance switching in a compact 1RU form factor. Available with either 24 or 48 10/100 Fast Ethernet ports, both models offer full wirespeed switching and IP routing across all layers, with two optional gigabit Ethernet uplink ports and redundant power supply. The AT-8800 Intelligent Workgroup Switches build upon proven Rapier and Rapier i switch technology.

Why is this Switch Right for my Network?

The features on the AT-8800 Intelligent Workgroup Switches make it the perfect choice for your workgroup applications, incorporating ease of management, high bandwidth, proven security and traffic prioritization in a slimline 1RU chassis. The AT-8800 Intelligent Workgroup Switches are ideal for environments like enterprise and educational institutions demanding reliable, high bandwidth Ethernet for services such as web conferencing and live video streaming. Prioritization of data streams with QoS ensures that mission critical traffic will enter the fastest queue. Combining this with the stateful inspection firewall, your network will remain safe and secure. Configure and manage these functions with our intuitive GUI and you have the ideal switch for your enterprise or educational institution.

AT-8800 Intelligent Workgroup Switch Features

AT-8800 Intelligent Workgroup Switches have asymmetric bidirectional bandwidth limiting, per port or per QoS traffic class. Bandwidth limiting lets you define throughput levels on an individual client basis. For example, you may want to assign more bandwidth to a campus library than student accommodation. Delivering an industry-leading implementation of this feature, AT-8800 Intelligent Workgroup Switches provide the finest bandwidth granulation available in Layer 3 products.

The Quality of Service (QoS) feature allows you to prioritize traffic according to its importance. You can be assured of reliable performance during peak usage periods, and continuous transmission of streaming media.

The 802.1x protocol enhances the already robust security on the switch. Authentication can be required for external devices wishing to access services behind a port before any Ethernet packets from the device are permitted to pass through it. In addition, 802.1x provides the ability to offer restricted services via the LAN for use by specific devices, such as a laptop connecting to a server on the LAN.

All Allied Telesis' Layer 3 switches come with the feature-rich AlliedWare operating system, and you can choose to add more. For advanced networking applications on AT-8800 Intelligent Workgroup Switches, Allied Telesis offers three optional feature licences: Full Layer 3 upgrade, Advanced Layer 3 upgrade, and Security upgrade. The Full Layer 3 upgrade enables a set of additional routing protocols and features such as IPX, DVMRP, PIM-DM/SM and RSVP. The Advanced Layer 3 upgrade enables a set of more specialized features comprising IPv6, BGP4, and Load Balancer. The Security upgrade offers a Stateful Inspection Firewall as well as both SMTP and HTTP application gateways.

Key Features

- Full wirespeed switching across all layers
- 400MHz Processor
- 1RU
- Stateful Inspection Firewall option
- Stacking with open standards based interfaces
- BGP-4 option
- IPv6 option
- Load Balancer option
- Support for up to 255 VLANs
- Private VLANs
- Asymmetric bandwidth limiting
- Broadcast and multicast traffic limiting
- MVR
- Port trunking with link aggregation
- IPsec
- L2TP
- IP RIP v1/v2 and RIPng
- OSPF v2
- VRRP
- TACACS+
- 802.1x
- DHCP Snooping
- DHCP Option 82
- DHCPv6
- SNMPv3
- Redundant power supply option
- RoHS complaint

These options allow you to tailor your chosen Intelligent Workgroup Switch to suit your requirements.

The base software release on the AT-8800 Intelligent Workgroup Switches offers you a suite of advanced switching features including:

- IEEE 802.1Q VLAN Tagging
- IGMPv2
- 802.1p Traffic Prioritization of packets at Layer 3 and Layer 4
- Broadcast and multicast traffic limiting.

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.

New and Progressive Features

The AT-8800 series brings exciting new features to the already comprehensive AlliedWare software suite. This ensures a breadth of functionality that is exactly right for a wide variety of applications. New software features include 802.1x, DHCPv6, TACACS+, SNMPv3.

Performance

AT-8824

Built from an 11.8Gbps switch fabric yielding a 6.6Mpps throughput

AT-8848

Built from a 23.6Gbps switch fabric yielding a 10.1Mpps throughput

Features

CPU 400 MHz
Advanced switching ASIC
128 Kbytes Non-Volatile Storage (battery backed SRAM)
64 (standard), 128 or 256 (optional) MB of SDRAM memory on DIMM
32 Mbytes of FLASH memory – factory fitted
Console Port – RS232
VLANs 255
MAC addresses 8K
Buffer Memory – AT-8824: 32 MB, AT-8848: 64MB
Half/Full Duplex
Auto-negotiation
Auto-MDI/MDIX

Interface Connections

10/100TX Shielded RJ-45
1000SX Multi-Mode fiber SC
1000LX Single-Mode SC
1000T Shielded RJ-45

Reliability

MTBF
AT-8824: 72,176 hours
AT-8848: 67,356 hours

Power Characteristics

Voltage: 100-240vAC
Frequency: 50-60Hz
Power: consumption max. 70W

Environmental Specifications

Operating Temp: 0°C to 50°C (32°F to 122°F)
Non-Operating Temp: -25°C to 70°C (-13°F to 158°F)
Relative Humidity: 95% noncondensing

Physical Characteristics

Height without rubber feet: 44mm (1.73") – fits 1U rack
Height with rubber feet: 50mm (1.97")
Width: 440mm (17.3")
Depth: 350mm (13.79")
Weight: – Not more than 6kg (13 lbs) (excluding the power cord and GBICs)

Electrical/Mechanical Approvals

UL 60950
CSA 22.2 No. 60950-00
EN 60950 (TUV)
FCC Part 15 Class A, FCC CRF47 Part 15 Class A
EN55022 Class A
VCCI Class A
CNS 13438 Class A
EN55024
EN61000-3-2 Class D
EN61000-3-3
AS/NZS CISPR 22 Class A
AS/NZS3260

Country of Origin

Singapore

Standards and Protocols

(Software Release 2.9.1)

BGP-4

RFC 1771 Border Gateway Protocol 4
RFC 1997 BGP Communities Attribute
RFC 1998 Multi-home Routing
RFC 2385 Protection of BGP Sessions via the TCP MD5 Signature Option
RFC 2439 BGP Route Flap Damping
RFC 2858 Multiprotocol Extensions for BGP-4
RFC 2918 Route Refresh Capability for BGP-4
RFC 3065 Autonomous System Confederations for BGP
RFC 3392 Capabilities Advertisement with BGP-4

Encryption

RFC 1321 MD5
RFC 2104 HMAC
RFC 2451 The ESP CBC-Mode Cipher Algorithms
FIPS 180 SHA-1
FIPS 186 RSA
FIPS 46-3 DES
FIPS 46-3 3DES

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 1055 SLIP
RFC 1122 Internet Host Requirements
RFC 1144 Van Jacobson's Compression
RFC 1256 ICMP Router Discovery Messages
RFC 1288 Finger
RFC 1332 The PPP Internet Protocol Control Protocol (IPCP)
RFC 1378 The PPP AppleTalk Control Protocol (ATCP)
RFC 1518 CIDR
RFC 1519 CIDR
RFC 1542 BootP
RFC 1552 The PPP Internetworking Packet Exchange Control Protocol (IPXCP)
RFC 1570 PPP LCP Extensions
RFC 1582 RIP on Demand Circuits
RFC 1661 The Point-to-Point Protocol (PPP)
RFC 1762 The PPP DECnet Phase IV Control Protocol (DNCP)

RFC 1812 Router Requirements
RFC 1877 PPP Internet Protocol Control Protocol Extensions for Name Server Addresses
RFC 1918 IP Addressing
RFC 1962 The PPP Compression Control Protocol (CCP)
RFC 1968 The PPP Encryption Control Protocol (ECP)
RFC 1974 PPP Stac LZS Compression Protocol
RFC 1978 PPP Predictor Compression Protocol
RFC 1990 The PPP Multilink Protocol (MP)
RFC 2125 The PPP Bandwidth Allocation Protocol (BAP) / The PPP Bandwidth Allocation Control Protocol (BACP)
RFC 2131 DHCP
RFC 2132 DHCP Options and BOOTP Vendor Extensions.
RFC 2390 Inverse Address Resolution Protocol
RFC 2516 A Method for Transmitting PPP Over Ethernet (PPPoE)
RFC 2822 Internet Message Format
RFC 2878 PPP Bridging Control Protocol (BCP)
RFC 2661 L2TP
RFC 3046 DHCP Relay Agent Information Option*
RFC 3232 Assigned Numbers
RFC 3993 Subscriber-ID Sub-option for DHCP Relay Agent Option*
"IPX Router Specification", v1.2, Novell, Inc., Part Number 107-000029-001
http://www.iana.org/assignments/bootp-dhcp-parameters BootP and DHCP parameters

General Routing and Firewall

RFC 3022 Traditional NAT
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 1075 DVMRP
RFC 1112 Host Extensions
RFC 1812 Router Requirements
RFC 2236 IGMPv2
RFC 2362 PIM-SM
RFC 2715 Interoperability Rules for Multicast Routing Protocols
RFC 3973 PIM-DM
draft-ietf-idmr-dvmrp-v3-9 DVMRP
draft-ietf-magma-snoop-02 IGMP and MLD snooping switches

IPsec

RFC 1828 IP Authentication using Keyed MD5
RFC 1829 IPsec algorithm
RFC 2395 IPsec Compression - LZS
RFC 2401 Security Architecture for IP
RFC 2402 AH - IP Authentication Header
RFC 2403 IPsec Authentication - MD5
RFC 2404 IPsec Authentication - SHA-1
RFC 2405 IPsec Encryption - DES
RFC 2406 ESP - IPsec encryption
RFC 2407 IPsec DOI
RFC 2408 ISAKMP
RFC 2409 IKE
RFC 2410 IPsec encryption - NULL
RFC 2411 IP Security Document Roadmap
RFC 2412 OAKLEY
RFC 3173 IPComp - IPsec compression

IPv6

RFC 1981 Path MTU Discovery for IPv6
RFC 2080 RIPng for IPv6
RFC 2365 Administratively Scoped IP Multicast
RFC 2375 IPv6 Multicast Address Assignments
RFC 2460 IPv6
RFC 2461 Neighbour Discovery for IPv6
RFC 2462 IPv6 Stateless Address Autoconfiguration
RFC 2463 ICMPv6
RFC 2464 Transmission of IPv6 Packets over Ethernet Networks
RFC 2465 Allocation Guidelines for Ipv6 Multicast Addresses Management Information Base for IP Version 6: Textual Conventions and General Group
RFC 2466 Management Information Base for IP Version 6: ICMPv6 Group
RFC 2472 IPv6 over PPP
RFC 2526 Reserved IPv6 Subnet Anycast Addresses
RFC 2529 Transmission of IPv6 over IPv4 Domains without Explicit Tunnels
RFC 2710 Multicast Listener Discovery (MLD) for IPv6
RFC 2711 IPv6 Router Alert Option
RFC 2851 Textual Conventions for Internet Network Addresses
RFC 2893 Transition Mechanisms for IPv6 Hosts and Routers
RFC 3056 Connection of IPv6 Domains via IPv4 Clouds
RFC 3307 Allocation Guidelines for IPv6 Multicast Addresses
RFC 3513 IPv6 Addressing Architecture
RFC 3315 DHCPv6
RFC 3484 Default Address Selection for IPv6
RFC 3587 IPv6 Global Unicast Address Format
RFC 3596 DNS Extensions to support IPv6
RFC 3810 Multicast Listener Discovery Version 2 (MLDv2) for IPv6

Management

RFC 1155 MIB
RFC 1157 SNMP
RFC 1212 Concise MIB definitions
RFC 1213 MIB-II
RFC 1493 Bridge MIB
RFC 1515 Definitions of Managed Objects for IEEE 802.3 MAUs
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 3289 Management Information Base for the Differentiated Services Architecture
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
RFC 3768 VRRP
draft-ietf-bridge-8021x-00.txt Port Access Control MIB
IEEE 802.1AB LLDP

OSPF

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

QoS

RFC 2205 Reservation Protocol
RFC 2211 Controlled-Load
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 RIPv2 MD5 Authentication

Security

RFC 959 FTP
RFC 1413 IDP
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 3280 X.509 Certificate and CRL profile
RFC 3580 IEEE 802.1X Remote Authentication Dial In User Service (RADIUS) Usage Guidelines
draft-grant-tacacs-02.txt TACACS+
draft-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
Diffie-Hellman

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 2156 MIXER
RFC 2217 Telnet Com Port Control Option
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-8824-xx

10/100TX 24 port, 2 GBIC with single PSU
Ordering number: 990-001112-xx

AT-8848-xx

10/100TX 48 port, 2 GBIC with single PSU
Ordering number: 990-001113-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

Redundant Power Supplies

AT-RPS8000

Redundant Power Supply Chassis
(includes one power module)
Order number: 990-11126-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

AT-PWR8000

Redundant Power Supply module
Order number: 990-11152-00

Software Upgrade Options

AT-AR-RPFL3UPGRD

Rapier Full Layer 3 Upgrade
- RSVP
- PIM DM
- PIM SM
- DVMRP

Order number: 980-10002-y

AT-RPADVL3UPGRD

Rapier Series Advanced Layer 3 Upgrade
- IPv6
- BGP-4
- Load balancing[1]

Order number: 980-10024-y

AT-RPSecPK

Rapier Security Pack Upgrade

AT-AR-3DES

3DES Encryption option (requires AR061)
Order number: 980-10000-yyy

Where yyy = 00 for 1 shot
01 for 1 licence
05 for 5 licenses
10 for 10 licenses
25 for 25 licenses
50 for 50 licenses
100 for 100 licenses
250 for 250 licenses

GBIC Modules[2]

AT-G8T

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

AT-G8SX-01

500m SX GBIC, based on 50 micron MMF
220m SX GBIC, based on 62.5 micron MMF
Order number: 990-02023-00

AT-G8LX10

10km LX GBIC, based on 9 micron SMF
Order number: 990-11138-00

AT-G8LX25

25km LX GBIC, based on 9 micron SMF
Order number: 990-11643-00

AT-G8LX40

40km LX GBIC, based on 9 micron SMF
Order number: 990-11644-00

AT-G8LX70

70km LX GBIC, based on 9 micron SMF
Order number: 990-11645-00

AT-G8ZX70/wwww

70km ZX GBIC, based on 9 micron SMF
Order number: 990-01999-xx
- Firewall
- SMTP Proxy
- HTTP Proxy

Order number: 980-10030-y

Where wwww=	Where xx=	CWDM Wavelength
1610	00	1610NM
1590	01	1590NM
1570	02	1570NM
1550	03	1550NM
1530	04	1530NM
1510	05	1510NM
1490	06	1490NM
1470	07	1470NM
1450	08	1450NM
1430	09	1430NM
1410	10	1410NM
1390	11	1390NM
1370	12	1370NM
1350	13	1350NM
1330	14	1330NM
1310	15	1310NM

[1] *Load Balancer requires release 2.5.1 or later and AT-RPSecPK*
[2] *Please check for availability*

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