

# Switches

## 8800 Series, Intelligent Workgroup Switches

### AT-8824

24 port 10/100 TX Fast Ethernet switch with 2 GBIC bays, single PSU (Redundant Power Supply option available) and PAC connection

### AT-8848

48 port 10/100 TX Fast Ethernet switch with 2 GBIC bays, single PSU (Redundant Power Supply option available) and PAC connection



### Overview

The 8800 series intelligent workgroup switches deliver high performance switching in a compact 1RU form factor. Available with either 24 or 48 10/100TX 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 8800 series switches build upon proven Rapier™ and Rapier™ 'i' switch technology.

### Why is this switch right for my network?

The features on the 8800 series switches make it the perfect choice for your workgroup applications, incorporating ease of management, high bandwidth, proven security and traffic prioritisation in a slimline 1RU chassis. The 8800 series 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. Prioritisation 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.

### Features

The 8800 series 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, 8800 series switches provide the finest bandwidth granulation available in Layer 3 products.

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

A new feature for this software release, the IEEE 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, IEEE 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 Telesyn's Layer 3 switches come with the feature-rich AlliedWare™ operating system, and you can choose to add more. For advanced networking applications on 8800 series switches, Allied Telesyn 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, AppleTalk, DVMRP, PIM-DM/SM and RSVP. The Advanced Layer 3 upgrade enables a set of more specialised features comprising IPv6, BGP4, OSI, and Load Balancer.

### Key features

- Full wirespeed switching across all layers\*
- 400MHz processor
- 1RU
- Stateful Inspection Firewall option
- BGP4 option
- IPv6 option
- OSI option
- Load Balancer option
- Support for up to 255 VLANs
- Limited Lifetime warranty

\* On AT-8848 switches, with packets over 76 bytes in a 48 10/100 port configuration.

### ORDERING INFORMATION

#### AT-8824-XX

24 port 10/100TX Fast Ethernet switch with 2 GBIC bays, single PSU and PAC connection

#### AT-8848-XX

48 port 10/100TX Fast Ethernet switch with 2 GBIC bays, single PSU and PAC connection

# 8800 Series, Intelligent Workgroup Switches

The Security upgrade offers a Stateful Inspection Firewall as well as both SMTP and HTTP application gateways. These options allow you to tailor your chosen intelligent workgroup switch to suit your requirements.

The base software release on the 8800 intelligent workgroup switches offers you a suite of advanced switching features including:

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

## New and progressive features

The 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 IEEE 802.1x, DHCP6 & TACACS+.

## PERFORMANCE

AT-8824 11.8Gbps switch fabric  
6.6Mpps throughput

AT-8848 23.6Gbps switch fabric  
10.1Mpps throughput

## FEATURES

CPU 400MHz  
Advanced switching ASIC  
Non-volatile storage 128KB  
(battery backed SRAM)

SDRAM memory on DIMM 64MB (standard)  
128MB or 256MB (optional)

FLASH memory 32MB factory fitted  
Console port RS232  
VLANs 255  
MAC addresses 8,000  
Buffer Memory AT-8824: 32MB  
AT-8848: 64MB

Half/full-duplex  
Auto-negotiation  
Auto MDI/MDI-X

## INTERFACE CONNECTIONS

10/100TX Shielded RJ45  
1000SX Multi-Mode fibre SC  
1000LX Single-Mode SC  
1000T Shielded RJ45

## RELIABILITY

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

## POWER CHARACTERISTICS

Voltage 100-240V AC  
Frequency 50-60Hz  
Power consump max. 70W

## ENVIRONMENTAL SPECIFICATIONS

Op. Temp. 0°C to 50°C  
(32°F to 122°F)  
Non-Op. Temp. -25°C to 70°C  
(-13°F to 158°F)  
Relative Humidity 95% non-condensing

## PHYSICAL CHARACTERISTICS

Height 4.4cm (1.73") - fits 1U rack  
Height 5cm (1.97")  
(with rubber feet)  
Width 44cm (17.3")  
Depth 35cm (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

\*\* Available with the 2.6.1 software release.

### STANDARDS & PROTOCOLS

BGP-4  
RFC 1771 Border Gateway Protocol 4  
RFC 3065 Autonomous System Confederations  
for BGP  
RFC 1997 BGP Communities Attribute  
RFC 1998 Multi-home Routing

### ENCRYPTION

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

### ETHERNET

IEEE 802.1D-1990 MAC Bridges  
IEEE 802.1G Remote MAC Bridging  
IEEE 802.1x\*\*  
IEEE 802.2 Logical Link Control  
IEEE 802.3u-1995 100T  
IEEE 802.3x-1995 Full-duplex Operation  
IEEE 802.3z-1997 Gigabit Ethernet  
IEEE 802.3ab-1999 1000T  
IEEE 802.3ac-1998 VLAN TAG  
IEEE 802.1Q Virtual LANs  
RFC 894 Ethernet II Encapsulation



Only nature can do better

# 8800 Series, Intelligent Workgroup Switches

## GENERAL ROUTING

RFC 1918 IP Addressing  
RFC 791 IP  
RFC 950 Subnetting, ICMP  
RFC 1812 Router Requirements  
RFC 1055 SLIP  
RFC 1122 Internet Host Requirements  
RFC 1582 RIP on Demand Circuits  
RFC 792 ICMP  
RFC 1288 Finger  
RFC 1701 GRE  
RFC 1702 GRE over IPv4  
RFC 2131 DHCP  
RFC 1542 BootP  
RFC 826 ARP  
RFC 925 Multi-LAN ARP  
RFC 3232 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

'IPX Router Specification', v1.2, Novell, Inc.,  
Part Number 107-000029-001 IPX Router  
Specification

## APPLETALK

ISO 9542 End System to Intermediate System  
Protocol  
RFC 2390 Inverse Address Resolution Protocol  
ISO 10589, ISO 10589 Technical Corrigendums  
1, 2, 3,  
ISO Intermediate System-to-Intermediate  
System  
RFC 3022 Traditional NAT

## IP MULTICASTING

RFC 2236 IGMP v2  
draft-ietf-idmr-dvmrp-v3-09 DVMRP  
RFC 1112 Host Extensions  
RFC 1812 Router Requirements  
RFC 2715 Interoperability Rules for Multicast  
Routing Protocols

## IPSEC

RFC 2393 IPComp - IPsec Compression  
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 1829 IPsec algorithm  
RFC 2766 NAT-PT

## IPv6

draft-ietf-ngtrans-hometun-01  
IPv6 over IPv4 tunnels for home to Internet  
access  
RFC 1886 DNS Extensions to support IP  
version 6  
RFC 1981 Path MTU Discovery for IP version 6  
RFC 2362 PIM-SM  
RFC 2375 IPv6 Multicast Address Assignments  
RFC 2460 IPv6  
RFC 2080 RIPng for IPv6  
RFC 2373 IP Version 6 Addressing Architecture  
RFC 2461 Neighbour Discovery for IPv6  
RFC 2462 IPv6 Stateless Address Auto-  
configuration  
RFC 2463 ICMP v6  
RFC 2464 Transmission of IPv6 packets over  
Ethernet networks  
RFC 2472 IP version 6 over PPP  
RFC draft-vida-ml-d-v2  
Multicast Listener Discovery (MLD) for IPv6  
draft-ietf-pim-dm-new-v2-02 PIM-DM  
draft-ietf-pim-sm-v2-new-05 PIM-SM  
draft-ietf-pim-ipv6-03 PIM  
draft-ietf-ngtrans-introduction-to-ipv6-transition-  
06  
An overview of the introduction of IPv6 in the  
Internet  
draft-arkko-manual-icmpv6-sas-01  
Manual SA Configuration for IPv6 Link Local  
Messages  
RFC 2526 Reserved IPv6 Subnet Anycast  
Addresses  
RFC 2711 IPv6 Router Alert option  
RFC 3056 Connection of IPv6 domains via IPv4  
clouds  
RFC 3315 DHCPv6 & RFC 3633 IPv6 Prefix  
options for Dynamic Host Configuration  
Protocol

## ORDERING INFORMATION CONTINUED.

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

## Software Upgrade Options

### AT-ARRFLUPGRD

Rapier™ Full Layer 3 Upgrade

### AT-RPADVL3UPGRD

Rapier™ Series Advanced Layer 3 Upgrade

### AT-RPsecPK

Rapier™ Security Pack Upgrade

### AT-AR3DES 3DES

Encryption option (requires AR061)

## Optional Modules

### AT-AR061

EPAC encryption/compression card

## Gigabit Interface Converter modules

### AT-G8T

100m 1000T (RJ45) GBIC

### AT-G8SX

550m 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-G8ZX70

70km ZX GBIC, based on 9 Micron SMF

## Redundant Power Supplies

### AT-RPS8000-XX

4 slot Redundant Power Supply chassis  
(includes one power module)

### AT-PWR8000

Redundant Power Supply module



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