

Switches

9400 Series, Layer 2+ Managed Gigabit Ethernet Switches

AT-9424T/GB

Layer 2+ switch with 22 ports of 10/100/1000T plus 2 active GBIC slots (unpopulated) and 2 standby 10/100/1000T ports

AT-9424T/SP

Layer 2+ switch with 22 ports of 10/100/1000T plus 2 active SFP slots (unpopulated) and 2 standby 10/100/1000T ports



Overview

Targeting the growing Layer 2+ market segment, the 9400 series is the latest addition to Allied Telesyn's comprehensive family of switching solutions. With the LAN aggregation and core layers' successful migration to Gigabit Ethernet, many network administrators demand easy to manage, cost effective and more intelligent switches at the LAN edge. Layer 2+ switches answer such demands, offering the optimal balance of features, performance and value. More intelligence than simple Layer 2 switches, the 9400 series is also far more cost-effective than the Layer 3 switches.

The 9400 series provides the perfect solution for:

- Traditional Enterprise LAN (Wiring closet)
- Service-provisioned Leased Offices or MTUs
- Security-conscious Government Institutions
- Security-conscious Financial Institutions
- Cost and security-conscious Educational Institutions

Intelligent Layer 2+ switch

The 9400 series packs a lot of features in one RU. Offering a highly-integrated chipset capable of deep packet examination, the 9400 series can look at packet format and content from the MAC-layer, IP-layer or TCP/UDP-layer:

After the parameters of those layers are defined and detected, the switch can trigger network decisions, such as accessing control lists for protection against DoS attacks, establishing rate-limits for excessive bandwidth usage, and altering QoS priorities for services.

Key features

- **Layer 2 - Layer 4 Intelligence**
 - Packet look-up at MAC, IP, TCP/UDP layers
 - For QoS, ACL, Mirroring, Rate-limiting
- **Advanced Security**
 - DoS Attack Protection
 - Radius/ TACACS+
 - Port Security
 - Secure Telnet
 - IEEE 802.1x
 - Layer 2 - Layer 4 ACL
- **Advanced Services**
 - Rate-limiting (Ingress and Egress)
 - Eight levels of Services
 - IEEE 802.1p for MAC-based QoS
 - DiffServ for IP-based QoS
- **L2 Redundancy**
 - IEEE 802.1s Multiple STP (compatible with PVST+)
 - IEEE 802.3ad Link Aggregation (static)
 - IEEE 802.1D Spanning Tree
 - IEEE 802.1w Rapid STP

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Securing the LAN Edge

To address the heightened concern of network attacks in the form of Denial of Services (DoS), Allied Telesyn now makes 'Security' features its primary focus. Assisted by the Layer 2 - Layer 4 intelligence, network administrators can deploy the 9400 series to complement WAN firewall and PC anti-virus protections to fortify the network against malicious attacks. The 9400 series switches come pre-programmed to detect six well-known DoS attacks.

Coupled with other security features such as IEEE 802.1x (Port-based Network Access Control) and Radius/TACACS+, the 9400 series provides 'Tiered Security' on each port. Deploying 'Tiered Security' in unsecured areas such as visitors' meeting rooms and lounges provide cost-effective protections at the network layer.

Service features for revenue generation

In a global economic climate, network administrators must focus on managing capital spending—a concern that forces resource utilisation to centre stage. Allied Telesyn designed the 9400 series to allow smart management of network resources with two key features:

- ingress and egress rate-limiting to provision bandwidth intelligently
- QoS support with IEEE 802.1p and DiffServ for priority traffic

Network administrators can configure the 9400 series to control bandwidth-wasting traffic - such as music streaming to desktops - by dynamically lowering the priority and limiting bandwidth to a trickle. Such features benefit metropolitan providers by enabling them to change a fee, to provision different bandwidth and QoS priorities as value added services for customers.

About Allied Telesyn

Allied Telesyn International is a member of the Allied Telesyn Group (ATI) who, founded in 1987, now has offices throughout the globe, over 3,000 employees worldwide and over \$600M of worldwide annual revenue. The attributes which have led ATI to achieve its leading position in both the enterprise, operator and connectivity business segments can be summarised by four key elements: its business focus on networking technology for professional markets, where ATI 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; support from sound warranty terms and quality services. Allied Telesyn connects the IP world efficiently thanks to affordable and highly reliable network solutions. For more information see: www.alliedtelesyn.com <<http://www.alliedtelesyn.com>>

Service & Support

Allied Telesyn 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 Telesyn sales representative or visit our website.

www.alliedtelesyn.com

PHYSICAL CHARACTERISTICS

AT-9424T/GB and AT-9424T/SP

Dimensions: (H x W x D)
4.4cm x 43.8cm x 18.4cm
(1.75 in x 17.25 in x 7.25 in)

Weight: 3.6 kg (8 lbs)

SYSTEM CAPACITY

32MB RAM
16MB Flash Memory
200MHz PowerPC CPU
4096 VLANs
16000 MAC Addresses

PERFORMANCE

Latency: <81 microseconds latency between 10Mbps ports
<11 microseconds latency between 100Mbps ports
<4 microseconds latency between 1000Mbps ports

Wirespeed switching on all Ethernet ports:
14,880pps for 10Mbps Ethernet
148,800pps for 100Mbps Fast Ethernet
1,488,000pps for 1000Mbps Gigabit Ethernet

Throughput: AT-9424T/GB and AT-9424T/SP:
35.7Mpps (64-byte packets)

Chipset: AT-8524M:
48Gbps (full-duplex)

MANAGEMENT AND MONITORING

Web, CLI, Telnet, Serial
SNMP v1 & v2
RMON 1 (4 groups)

INTERFACE STANDARDS

IEEE 802.3 10T & 10FL
IEEE 802.3u 100TX & 100FX
IEEE 802.3z 1000SX
IEEE 802.3ab 1000T

GENERAL STANDARDS

IEEE 802.1d Bridging
IEEE 802.3ac VLAN Tag Frame Extension
IEEE 802.3x BackPressure/Flow control

REDUNDANCY STANDARDS

IEEE 802.1D Spanning Tree Protocol
IEEE 802.1w Rapid Spanning Tree
IEEE 802.1s Multiple Spanning Tree (compatible with PVST+)
IEEE 802.3ad Link Aggregation (Static)

QUALITY OF SERVICE AND CLASSIFIERS

IEEE 802.1p Class of Service
RFC 2474 DiffServ Precedence, including 4 queues/port *
Rate-limiting (Ingress and Egress) *
Layer 1-4 Qualifiers *
IEEE 802.1p and DiffServ Mapping at Ingress and Remarking at Egress

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VLANS

IEEE 802.1Q VLAN Tagging
IEEE 802.1v VLAN classification by Protocol and Port
Port-based VLANs
MAC-based VLANs *
Protocol-based VLANs *

MULTICAST STANDARDS

RFC 2236 IGMP Snooping (Ver. 2.0)
RFC 1112 IGMP Snooping (Ver. 1.0)

MANAGEMENT

Enhanced Stacking™
RFC 1866 HTML
RFC 2068 HTTP
RFC 854 Telnet
RFC 783 TFTP
RFC 951 BOOTP
RFC 1542 BOOTP
RFC 2030 SNTP, Simple Network Time Protocol
SSHv2 for Telnet mgmt
SSL for Web mgmt
Dual Software Images, Dual Configuration Files

SNMP STANDARDS

RFC 1157 SNMPv1/v2c
RFC 1213 MIB-II
RFC 1215 TRAP MIB
RFC 1493 Bridge MIB
RFC 2863 Interfaces Group MIB
RFC 1643 Ethernet-like MIB
RFC 1757 RMON 4 groups: Stats, History, Alarms & Events
RFC 2674 IEEE 802.1Q MIB
Allied Telesyn Private MIB

SECURITY

SSHv2 for Telnet mgmt
SSL for Web mgmt
SNMPv3
RFC 1492 TACACS+
RFC 2138 RADIUS Authentication
RFC 2139 RADIUS Accounting *
IEEE 802.1x Port-based Network Access Control
Authenticator
Multiple supplicants
MAC Address Security/Lockdown
Layer 1/2/3/4/ Access Control Layer (ACLs)

FAULT PROTECTION

DoS Attack Protection
Smurf
SYN Flood
Teardrop
Land
IP option
SNMP Attack
Bad Cable Detection
Broadcast Storm Control

POWER CHARACTERISTICS

Voltage 100-240V AC
Current 4.0/2.0A
Frequency 50-60Hz
Power consumption max. 65W

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)
Operating Humidity 5% - 80% non-condensing
Storage Humidity 5% - 95% non-condensing

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

China

ORDERING INFORMATION

AT-9424T/GB-xx

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AT-9424T/SP-xx

Layer 2+ switch with 22 ports of 10/100/1000T plus 2 active SFP slots (unpopulated) and 2 standby 10/100/1000T ports

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 -48VDC version

Redundant Power Supply

AT-RPS5004

Chassis for up to 4 redundant power supplies (chassis includes one power supply and one cable)

AT-PWR5004

Additional AC redundant power supply with cable

GBICs

AT-G9T

1000T GBIC Copper

AT-G8SX-01

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