



AT-9424Ts

24 Port 10/100/1000T Managed Layer 3 Switch with a Stacking Module Expansion Bay and 48Gbps Stack Backplane

AT-9424Ts-xx

Layer 3 stackable switch with 20 ports
10/100/1000T, 4 × 10/100/1000T / SFP
combo ports plus AT-StackXG module bay

Product Overview

The AT-9424Ts is a Layer 3 Gigabit Ethernet (10/100/1000) switch with a stacking bay capable of tapping into 48Gbps of stack bandwidth. It is an ideal Gigabit-to-the-desk switch and can be stacked with other 9400s family switches. It comes in a 1RU form factor and provides rich QoS and IGMP capabilities for voice and video enabled networks.

The relative affordability of the AT-9424Ts makes high performance Gigabit switching a reality for small to medium enterprises. It offers an extensive set of standards-based features to ensure ease of management and integration into existing networks.

Resilient Ring Stacking

The AT-9424Ts switch is designed to meet the growing bandwidth needs that advanced applications and connectivity options are requiring of networks. It features a stacking expansion bay capable of tapping in 48Gbps of stacking bandwidth. This switch can also be stacked with 10Gbps capable 9400s switches to further improve network performance while keeping costs down. It provides high bandwidth capacity making it an ideal investment for organizations that seek 7 to 10 years of service or more from their switches.

Network QoS and IGMP for Video and Voice-over-IP

A rich offering of voice and video networking features is incorporated to ensure support for demanding multimedia networking applications in the enterprise. Converged networking is enhanced with QoS/CoS including eight priority queues for IEEE 802.1p/ToS/DiffServ traffic.

The high performance hardware platform makes latency a non-issue. The IGMP implementation on the AT-9424Ts is capable of transmitting broadcast quality video throughout the enterprise network.

Network Security

To address the concern of network attacks in the form of Denial of Service (DoS), the AT-9424Ts, using Layer 2-4 intelligence, can be deployed to complement WAN firewalls and PC anti-virus protections to further fortify the network against malicious attacks. The AT-9424Ts comes pre-programmed to detect six well-known DoS attacks and supports security features such as IEEE 802.1x (port-based Network Access Control) and Radius/TACACS+.

Long-term Relevance

The AT-9424Ts is the ideal choice for organizations seeking a long-term switching solution. In addition to the extensive Layer 2 feature set this switch features Layer 3 switching for the future flexibility to meet emerging needs. Optional redundant power supplies are also available to further increase the service life of this switch.

Key Features

Stacking

- Simplified management
- Up to 48Gbps stacking bandwidth

Layer 3 Support

- RIPv2
- Static routing
- ECMP

Performance

- Throughput 71.424Mpps
- Switch fabric 96Gbps
- Stacking bandwidth 48Gbps
- 4K VLANs (static and dynamic)
- 256 static Layer 2 multicast groups
- 255 dynamic Layer 2 multicast groups
- 9K jumbo frame support

Layer 2-4 Intelligence

- Packet inspection and classification at MAC, IP, TCP/UDP layers
- Set QoS, ACL, mirroring, and rate-limiting using traffic classes

Security

- DoS attack protection
- Radius/TACACS+
- Port security
- SSH
- SSL
- IEEE 802.1x port-based network access control
- Access Control Lists (ACLs)

Advanced Services

- Rate limiting (ingress and egress)
- Eight QoS service levels
- IEEE 802.1p for MAC-based QoS
- DSCP for IP-based QoS

Resiliency

- IEEE 802.1s Multiple STP
- IEEE 802.3ad link aggregation
- IEEE 802.1D Spanning-Tree
- IEEE 802.1w Rapid STP
- Temperature threshold alert

Management

- Telnet
- Web GUI
- CLI
- Dedicated management port
- Compact flash slot

AT-9424Ts | 24 Port 10/100/1000T Managed Layer 3 Switch

Hardware Specifications

Physical Characteristics

| | |
|------------------------|---|
| Dimensions (H x W x D) | 4.4cm x 43.8cm x 30.48cm (1.75" x 17.3" x 12") |
| Weight | 4.21kg (9.35lbs.) |

System Capacity

| |
|---------------------|
| 128MB RAM |
| 16MB flash memory |
| 200MHz PowerPC CPU |
| 4096 VLANs |
| 16000 MAC addresses |
| 8MB file system |

Performance

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

| | |
|---------------------|------------|
| Ethernet throughput | 71.424Mpps |
| Switch fabric | 96Gbps |

Stacking with AT-StackXG stacking module
up to eight switches
Two 12Gbps full-duplex stacking port per module
Resilient bidirectional ring architecture

Power Characteristics

| | |
|------------------------|-------------|
| Voltage: | 100-240V AC |
| Current: | 4.0/2.0A |
| Frequency: | 50-60Hz |
| Max power consumption: | 54 Watts |

Environmental Specifications

| | |
|-------------------------|-----------------------------------|
| Operating temperature: | 0°C to 40°C (32°F to 104°F) |
| Storage temperature: | -25°C to 70°C (-13°F to 158°F) |
| Operating humidity: | 5% to 90% non-condensing |
| Storage humidity: | 5% to 90% non-condensing |
| Max operating altitude: | 3,048m (10,000 ft) |

| | |
|--|-----------|
| Recommended ventilation on all sides: | 10cm (4") |
|--|-----------|

| | |
|------|--------------|
| MTBF | 250,000 hrs. |
|------|--------------|

Electrical/Mechanical Approvals

Safety UL 60950-1, CSA C22.2 No. 60950-1-03,
EN60950-1, EN60825-2 (TUV)
EMI FCC Part 15 Class A, EN55022 Class A, EN55024
Immunity, VCCI Class A, C-TICK, EN61000-3-2,
EN61000-3-3, AS/NZS 3548 (Australia/New Zealand)
Immunity EN55024

Country of Origin

Singapore

Software Specifications

Layer 3 Support

| |
|-----------------------------------|
| RIPv1 |
| RIPv2 |
| ECMP |
| Static IPv4 routing (1024 routes) |

Interface Standards

| | |
|--------------|-----------------|
| IEEE 802.3 | 10T and 10FL |
| IEEE 802.3u | 100TX and 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

Static and dynamic port trunking (with six trunk
groups and up to eight ports per trunk)
IEEE 802.3ad LACP link aggregation
IEEE 802.1D Spanning-Tree Protocol
IEEE 802.1w Rapid Spanning-Tree
IEEE 802.1s Multiple Spanning-Tree
Router Redundancy Protocol (RRP) snooping
Dual software images, dual configuration files

Traffic Management Quality of Services (QoS)

Layer 2, 3 and 4 criteria
Flow groups, traffic classes and policies
DSCP replacement
IEEE 802.1Q priority replacement
Type of Service replacement
Type of Service to IEEE 802.1Q priority replacement
IEEE 802.1Q priority to Type of Service replacement
Maximum bandwidth control
Burst size control
Ingress rate limiting
Head of line blocking prevention
Support for ingress and egress ports
Eight egress queues per port
IEEE 802.1p Class of Service with Strict and Weighted
Round Robin Scheduling

Multicast

| | |
|----------|---|
| RFC 1112 | IGMP snooping (v1) |
| RFC 2236 | IGMP snooping (v2) |
| RFC 3376 | IGMP snooping (v3) |
| RFC 2710 | Multicast Listener Discovery (MLD) snooping (v1) |
| RFC 3810 | Multicast Listener Discovery (MLD) snooping (v2) |

Management and Monitoring

| | |
|----------------------------|---|
| RFC 1157 | SNMPv1 |
| RFC 1901 | SNMPv2 |
| RFC 3411 | SNMPv3 |
| 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 and Events |
| RFC 2674 | IEEE 802.1Q MIB |
| RFC 1866 | HTML |
| RFC 2068 | HTTP |
| RFC 2616 | HTTPS |
| RFC 854 | Telnet server |
| RFC 1350 | TFTP client |
| Allied Telesis Private MIB | |

| | |
|------------------------|---------------------------------------|
| IP address allocation: | |
| RFC 951 / RFC 1542 | BOOTP client |
| RFC 2131 | DHCP client manual |
| RFC 2030 | SNTP, Simple Network Time Protocol |

BootP/DHCP relay¹

Syslog client
Two event logs:
4,000 event capacity in temporary memory
2,000 event capacity in permanent memory

Management Access Methods

Single IP address for management
Out of band management (serial port)
In-band management (over the network) using Telnet,
Web browser or SNMP

Management Interfaces

Menus
AlliedWare Plus™ CLI¹
Multiple management sessions¹
(up to three administrators)
Command line
Web browser
SNMP v1/ v2/ v3

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Security

| | |
|-------------|---|
| RFC 1492 | TACACS+ |
| RFC 2865 | RADIUS client |
| RFC 2866 | RADIUS accounting |
| IEEE 802.1x | Port-based network access control with multiple supplicants per port ingress and egress control of broadcast, multicast and unknown unicast traffic |

MAC address security/lockdown
Layer 2/3/4/ Access Control Lists (ACLs)
64 ACL profiles
256 rules per ACL profile
ACLs based on:

- Ethernet frame type
- MAC address/VLAN ID/IEEE 802.1p
- Layer 2/3 protocol
- IP subnet/address/ToS/DSCP
- UDP/TCP port/flag

SSHv2 for Telnet mgmt
SSLv3 for Web mgmt
DoS attack protection
Smurf
SYN flood
Teardrop
Land
IP option
Ping of Death
SNMP attack
Microsoft NAP compliant¹
Symantec NAC support¹

Fault Protection

Bad cable detection
Broadcast storm control

AT-9424Ts -xx

Layer 3 stackable switch with 20 ports 10/100/1000T, 4 x 10/100/1000T / SFP combo ports, plus AT-StackXG module bay

| | |
|------------|------------------------------|
| Where xx = | 10 for US power cord |
| | 20 for no power cord |
| | 30 for UK power cord |
| | 40 for Australian power cord |
| | 50 for European power cord |

Accessories

Stacking Accessories

AT-STACKXG-00

Stacking module for the AT-9424Ts switch
One AT-StackXG/0.5-00 cable included

AT-STACKXG/0.5-00

0.5 meter cable for stacking

AT-STACKXG/1-00

1 meter cable for stacking

Redundant Power Supply

AT-RPS3204

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

AT-PWR3202

Additional 200 W redundant power supply with cable

Small Form Pluggables (SFPs)

AT-SPSX

Multi-mode fiber, GbE SFP, 850nm

AT-SPLX10

Single-mode fiber, 10km, GbE SFP, 1310nm

AT-SPLX40

Single-mode fiber, 40km, GbE SFP, 1310nm

AT-SPLX40/1550

Single-mode fiber, 40km, GbE SFP, 1550nm

AT-SPZX80

Single-mode fiber, 80km, GbE SFP, 1550nm

¹ New features supported in AT-S63 v4.0.0.

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