

## AT-I0408XP

### 8 Port 10GbE Managed Layer 3 Aggregation Switch



#### AT-I0408XP

Enhanced 10Gbps Layer 3 switch  
8 x 10Gigabit XFP bays

#### Product Overview

The AT-I0408XP is a Layer 3 10Gigabit Ethernet switch with 8 XFP slots for 10Gbps backbone connectivity. It is designed to be a cost-effective 10GbE aggregation switch in conjunction with the 9400Ts/XP family of Layer 2 and the AT-9748Ts/XP Layer 3 switches with 10GbE uplinks. It has the performance and Layer 3 feature set required for high capacity backbones. The AT-I0408XP accepts XFP with different reaches for data-center, campus or metro applications. The small 1RU footprint and affordable price point of the AT-I0408XP allows organizations to maximize rack space, traffic capacity and budget.

#### Ideal for Data-center and Campus Backbone

Powerful line rate performance makes this switch ideal for data-center server consolidation and high-performance cluster and campus backbone application.

#### Ease of Management

Featuring industry standards like CLI significantly reduce learning time and minimize the cost of deployment.

#### Secure Management

Only authorized administrators can access the management interface of the AT-I0408XP. Protocols such as SSHv2 and SNMPv3 facilitate this protection of your network with local or remote connections.

#### Network QoS and IGMP for Video and VoIP

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-I0408XP 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-I0408XP, 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-I0408XP 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.

#### Long-term Relevance

The AT-I0408XP is the ideal choice for organizations seeking a long-term switching solution. The extensive Layer 2, Layer 3 and 10GbE support ensure the future flexibility and the capacity required to meet emerging needs. Optional redundant power supplies are also available to further increase the service life of this switch.

#### Key Features

##### 10 Gigabit Ethernet Support

- Eight integrated XFP bays for 10GbE

##### Physical

- 1RU form factor
- Internal redundant modular power options
- DC power supply support

##### Layer 3 Support

- Static Routing
- RIPv2
- OSPFv2
- ECMP

##### Performance

- Non-blocking line rate switching for all packet sizes
- Aggregate packet switching performance of 119Mpps
- 192Gbps switching fabric
- 9K jumbo frames support
- 16384 MAC address table

##### 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
- Port security
- SSH
- IEEE 802.1x
- ACL\*

##### Advanced Services\*

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

\*indicated features will not be available in first firmware release

# AT-I0408XP | 8 port 10GbE Managed Layer 3 Aggregation Switch

## Hardware Specifications

### Physical Characteristics

|             |                           |
|-------------|---------------------------|
| Dimensions  | 4.5cm x 44.1cm x 44.1cm   |
| (H x W x D) | (1.7in x 17.3in x 17.3in) |
| Weight      | 9.3kg (20.5lbs.)          |

### System Capacity

|                     |
|---------------------|
| 256MB RAM           |
| 32MB flash memory   |
| 266MHz PowerPC CPU  |
| 4096 VLANs          |
| 16384 MAC addresses |

### Performance

|  |         |
|--|---------|
| Wirespeed switching on all ports for all packet size |         |
| Aggregate throughput                                 | 119Mpps |
| Switch fabric  | 192Gbps |
| Supports 9216 byte jumbo frames                      |         |

### Power Characteristics

|                       |             |
|-----------------------|-------------|
| Voltage               | 100-240V AC |
| Current               |             |
| Frequency             | 50-60Hz     |
| Max power consumption | 38 Watts    |

### Environmental Specifications

|                        |                                  |
|------------------------|----------------------------------|
| Operating temperature  | 0°C to 40°C<br>(32°F to 104°F)   |
| Storage temperature    | -20°C to 60°C<br>(-4°F to 140°F) |
| Operating humidity     | Less than 80% non-condensing     |
| Storage humidity       | Less than 95% non-condensing     |
| Max operating altitude | 3,000m (9,843 ft)                |

### Electrical/Mechanical Approvals

|          |                                      |
|----------|--------------------------------------|
| Safety   | EN60950 (TUV), EN60950 (UL)          |
| EMI      | FCC Part 15 Class A, EN55022 Class A |
| Immunity | EN55024                              |

## Software Specifications

### Layer 3 Support

|                |                          |
|----------------|--------------------------|
| Static routing |                          |
| ECMP           |                          |
| RFC 1058       | RIP                      |
| RFC 1724       | RIP MIB                  |
| RFC 2082       | RIP-2 MD5 authentication |
| RFC 2453       | RIPv2                    |
| RFC 2328       | OSPFv2                   |
| RFC 2370       | OSPF Opaque LSA option   |
| RFC 1850       | OSPFv2 MIB               |
| RFC 3101       | OSPF NSSA option         |
| RFC 3768       | VRRP                     |

### Interface Standard

|              |              |
|--------------|--------------|
| IEEE 802.3ae | 10G Ethernet |
|--------------|--------------|

## General Standard

|              |                            |
|--------------|----------------------------|
| IEEE 802.1d  | Bridging                   |
| IEEE 802.3ac | VLAN tag frame extension   |
| IEEE 802.3x  | Back pressure/flow control |

## Redundancy

|  |                        |
|--|------------------------|
| IEEE 802.1D                                      | Spanning-Tree Protocol |
| IEEE 802.1w                                      | Rapid Spanning-Tree    |
| IEEE 802.1s                                      | Multiple Spanning-Tree |
| IEEE 802.3ad                                     | LACP link aggregation  |
| Static trunk group                               |                        |
| Router Redundancy Protocol (RRP) snooping        |                        |
| Multiple software images and configuration files |                        |

## QoS\*

|                                   |
|-----------------------------------|
| Port priority for untagged packet |
| Strict and WRR                    |
| IEEE 802.1p CoS                   |
| DiffServ                          |
| Policy-based queuing (ACL)        |

## 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                   | Interface group MIB                              |
| RFC 1573                   | Extended interface MIB                           |
| RFC 1643                   | Ethernet-like MIB                                |
| RFC 1757                   | RMON 4 groups: Stats, History, Alarms and Events |
| RFC 2674                   | IEEE 802.1Q MIB                                  |
| RFC 2933                   | IGMP MIB   |
| RFC 1724                   | RIPv2 MIB  |
| RFC 1850                   | OSPF 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                        |
| RFC 2030           | SNTP, Simple Network Time Protocol |

## Syslog client

Two event logs:

## Management Access Methods

Single IP address for management  
Out of Band Management (serial port)  
In-band Management using Telnet, SSH or SNMP

## Management Interfaces

CLI  
SNMP

## Security

|                       |                                   |
|-----------------------|-----------------------------------|
| Port security         |                                   |
| IEEE 802.1x           | Port-based Network Access Control |
| EAP pass-through      |                                   |
| EAP MD5               |                                   |
| RFC 2865              | RADIUS Client                     |
| SSHv2 for Telnet mgmt |                                   |
| DoS Attack Protection |                                   |

## ACL\*

|                      |
|----------------------|
| MAC dest/src address |
| IEEE 802.1p priority |
| VLAN                 |
| IP Dest/src address  |
| TCP/UDP port number  |
| TCP flags            |
| IP ToS               |
| DiffServ DSCP        |

## Fault Protection

Bad cable detection  
Broadcast storm control

\*indicated features will not be available in first firmware release

## Ordering Information

### AT-I0408XP-xx

Enhanced 10 Gbps Layer 3 switch  
8 x 10 Gigabit XFP bays

Where xx = 60 Factory fitted with 1 x AC power supply  
80 Factory fitted with 1 x DC power supply

### AT-PWR01

Optional redundant AC power supply

### AT-PWR01-80

Optional redundant DC power supply

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617-000247 RevA