

## 48 Port Layer 3 Lite Managed Gigabit PoE+ Switch

The Alloy AS5048-P Layer 3 Lite Managed Gigabit POE+ Switch consists of 48x 10/100/1000Mbps Gigabit Copper UTP Ports and 4x paired dual speed 1000M/100M SFP Ports. With a comprehensive range of the latest generation Layer 3 Lite, Layer 2+, QoS, Security, PoE and Management features, the AS5048-P switch is ideal for businesses of all sizes.

All SFP Ports support both 100M and 1000M SFP modules allowing easy upgrade paths for existing cabling and network infrastructure.

The AS5048-P switch provides IEEE 802.3af and the latest 802.3at 'PoE+' Power over Ethernet. With all standalone RJ-45 ports supporting PoE+, devices such as IP Phones and Wireless Access Points can now be connected directly to the network with data and power supplied over a single UTP cable, reducing deployment and maintenance costs and making it much easier to install devices exactly where they are required. With support of 802.3at PoE+, up to 30 watts of power can be supplied per port, so power hungry devices such as Pan Tilt Zoom IP Security Cameras can be connected directly to the network.

The AS5048-P complies with the latest IEEE 802.3az Energy Efficient Green Ethernet standard to minimise power usage, with features such as Link Detection and Cable Length Detection. Link Detection automatically turns the power off/on to individual ports depending on link/idle traffic status. Cable Length Detection adjusts the signal strength based on the length of the cable - when using shorter cables the power consumption is reduced.

All of the Alloy AS Series switches feature Alloy's latest user friendly responsive Web GUI, allowing ease of configuration on all devices including PC, Tablet and Phones. Alloy have also included a bundle of unique features including a built in Device Management System (DMS), advanced PoE features and support for Alloy's Android and iOS Apps.

### Key Features

- Managed Layer 2+ and Layer 3 Lite GbE Connectivity
- Built in Device Management System (DMS)
- High performance
- Enterprise-class security features
- PoE Port configuration and scheduling
- 802.3at high power PoE plus standard
- IEEE 802.3az EEE Energy Efficient Ethernet standard for green Ethernet
- Dual Speed SFP ports supporting both 100M and 1000M SFP Modules
- Limited Lifetime Warranty

## Software Features

Layer 3 Lite Switching	
IPv4 Static Routes	IPv4 Unicast: Static routing
IPv6 Static Routes	IPv6 Unicast: Static routing
DHCP Server	Built in DHCP Server, allowing IP Address assignment to DHCP clients. Configurable DHCP Options.
Layer 2+ Switching	
Spanning Tree Protocol	Provides Redundat links and prevents network loops. Supports; <ul style="list-style-type: none"> <li>Standard Spanning Tree 802.1d</li> <li>Rapid Spanning Tree (RSTP) 802.1w</li> <li>Multiple Spanning Tree (MSTP) 802.1s</li> </ul>
Port Aggregation	Link Aggregation Control Protocol (LACP) IEEE 802.3ad <ul style="list-style-type: none"> <li>Up to 24 groups</li> <li>Up to 4 ports per group</li> </ul>
VLAN	Supports up to 4K VLANs simultaneously (4096 VLAN IDs) <ul style="list-style-type: none"> <li>Port-based VLAN</li> <li>802.1Q tag-based VLAN</li> <li>MAC-based VLAN</li> <li>Management VLAN</li> <li>Private VLAN Edge (PVE)</li> <li>Q-in-Q (double tag) VLAN</li> <li>Voice VLAN</li> <li>GARP VLAN Registration Protocol (GVRP)</li> </ul>
IGMP	IGMP Snooping, Querier and Proxy support; Controls and manages the flooding of multicast packets in a layer 2 network, supports 1024 multicast groups
MLD	Version 1 and 2, Snooping for IPv6; Controls and manages the flooding of IPv6 multicast packets in a layer 2 network
Loop Protection	Alternative to STP, Prevents network loops
Device Management System	
Graphical Monitoring	Provides a graphical representation of your network displaying all devices that are connected. Three different layouts are available: Topology View - Logical diagram of your physical devices, includes information such as port numbers, devices connected, devices disconnected, allows access to device web management etc. Floor View - Allows you to upload floor plan of your building, allowing you to place devices in their physical positions. Map View - Google Maps type view, allowing you to place devices in their physical locations, perfect for IP Cameras that are installed schools, streets etc.
Device Management	Easy access to management of IP Phones, IP Cameras, Wireless Access Points and Switches via their built in web manager.
Traffic Monitoring	Visual display of traffic on your switch, per port analysis.
Troubleshooting	Network diagnostic between switch and connected device.
Find My Switch	Same functionality as the Find My Switch App. Allows you to click on a switch in your network, select find my switch and all LED's on the front panel of the switch will light allowing you to find your switch in racks that are full of devices and at most times difficult to locate.
Quality of Service (QoS)	
Hardware Queues	Supports 8 Hardware Queues
Scheduling	<ul style="list-style-type: none"> <li>Strict Priority and weighted round-robin (WRR)</li> <li>Queue assignment based on DSCP and Class of Service (COS)</li> </ul>
Classification	<ul style="list-style-type: none"> <li>Port based</li> <li>802.1p VLAN priority based</li> <li>IPv4/IPv6 precedence / DSCP based</li> <li>Differentiated Services (DiffServ)</li> <li>Classification and tag re-marking ACLs</li> </ul>
Rate Limiting	<ul style="list-style-type: none"> <li>Ingress policer</li> <li>Egress shaping and rate control</li> </ul>

Security	
Secure Shell (SSH)	SSH secures Telnet traffic in or out of the switch, supports SSH v1 and v2
Secure Sockets Layer (SSL)	SSL encrypts http traffic, allows secure access to the web GUI
IEEE 802.1X	<ul style="list-style-type: none"> <li>• IEEE802.1X: RADIUS authentication, authorization and accounting, MD5 hash, guest VLAN, single/multiple host mode and single/multiple sessions</li> <li>• Supports IGMP-RADIUS based 802.1X</li> <li>• Dynamic VLAN assignment</li> </ul>
Private VLAN Edge	PVE (also known as protected ports) provides L2 isolation between clients in the same VLAN. Supports multiple uplinks
Port Security	Locks MAC addresses to ports, and limits the number of learned MAC address
IP Source Guard	Prevents illegal IP address from accessing specific ports on the switch
RADIUS / TACACS+	Supports RADIUS and TACACS+ authentication. Switch as a client
Storm Control	Prevents traffic on a LAN from being disrupted by a broadcast, multicast, or unicast storm
DHCP Snooping	Eliminates unauthorised DHCP Servers from offering IP Addresses to DHCP clients
ACLs	Supports up to 512 entries. Drop or rate limitation based on: <ul style="list-style-type: none"> <li>• Source and destination MAC, VLAN ID or IP address, protocol, port,</li> <li>• Differentiated services code point (DSCP) / IP precedence</li> <li>• TCP/ UDP source and destination ports</li> <li>• 802.1p priority</li> <li>• Ethernet type</li> <li>• Internet Control Message Protocol (ICMP) packets</li> <li>• TCP flag</li> </ul>
Management	
Web GUI	Built-in switch configuration utility for browser-based device configuration; IPv4 and IPv6 HTTP, HTTPS
CLI	Configure/manage switch in command line mode; Telnet, SSH, Console
Remote Monitoring (RMON)	Embedded RMON agent supports RMON groups 1,2,3,9 (history, statistics, alarms, and events) for enhanced traffic management, monitoring and analysis
UPnP	Supports UPnP to enable device to device interoperability
s-Flow	Supports s-Flow monitoring
IEEE 802.1ab (LLDP)	<ul style="list-style-type: none"> <li>• Used by network devices for advertising their identities, capabilities, and neighbors on an IEEE 802ab local area network</li> <li>• Support LLDP-MED extensions</li> </ul>
Dual Firmware Images	Independant primary and secondary firmware images
Multiple Configuration Files	Multiple versions of configuration can be saved on the switch. Config files can be backed exported and imported.
SNMP	SNMP version1, 2c and 3 with support for traps, and SNMP version 3 user-based security model (USM)
Power over Ethernet (PoE)	
Port Configuration	Supports per port PoE configuration; Set Priority; maximum power, enable/disable PoE
PoE Scheduling	Supports per port PoE scheduling to turn on/off the PoE devices (PDs)
PD Auto Checking	Check the link status of PDs. Reboot PDs if there is no response
Power Delay	Can setup time based delays on PD's to reduce PoE power overload due to power spike on boot up of PD
Diagnostics	
IPv4 Ping	Used to test connectivity to IPv4 devices
IPv6 Ping	Used to test connectivity to IPv6 devices
VeriPHY	Cable diagnostics to determine correct pin out and cable length
Traceroute	used to determine route to IP Address to Hostname

# Specifications

## Port Configuration

Total Ports	10/100/1000Mbps RJ-45 Ports	SFP Ports	Console Port
48	48	4x 100M/1000M	DB9

## Poe Power Capacity

Total PoE Power	PoE Pins	PoE Per Port	PoE Per Port (Full Load)
370W	1, 2, 3 & 6	802.3af; 15.4W 802.3at; 30.0W	7.7W

## Hardware Performance

Forwarding Capacity	Switching Capacity	MAC Table	Jumbo Frames	Latency
71.42Mpps	96Gbps	32K	10K	1000M Copper Ports: < 3ms 1000M SFP Ports: < 1.9ms

## Memory and Processor

SDRAM	Flash
128MB	32MB

## Voltage and Frequency

Input Voltage	Frequency
100-240 VAC	50 ~ 60 Hz

## Environmental

Operating Temperature		Storage Temperature		Altitude		Operating Humidity
Fahrenheit	Centigrade	Fahrenheit	Centigrade	Feet	Metres	
32° to 104°	0° to 40°	-4° to 158°	-20° to 70°	< 10000	< 3000	

## Weights and Dimensions

Dimensions (WxHxD)		Weight	
Millimetres	Inches	Kilograms	Pounds
442 x 44 x 385	17.4 x 1.73 x 15.2	5.8	12.8

## Mounting

Rackmount	Desktop
EIA-standard 19in rackmount brackets included	Rubber feet included for desktop mount

## Warranty Information

### Warranty

Limited Lifetime Warranty

## Package Contents

- AS5048-P Switch
- Power Cable
- Serial Console Cable
- Rackmount Kit and Rubber Feet
- Warranty Information

## Ordering Information

Model	Description
AS5048-P	48 Port Layer 3 Lite Managed PoE+ Switch with 48x 10/100/1000Mbps Ports + 4x Paired 100M/1Gb SFP Ports

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