

# 52 Port Layer 3 Lite Managed Gigabit PoE+ Switch with 10Gb Uplinks

The Alloy AS5152-P2 Layer 3 Lite Managed Gigabit POE+Switch consists of 48x 10/100/1000Mbps Gigabit Copper UTP Ports and 4x dual speed 10G/1000M SFP Ports. With a comprehensive range of the latest generation Layer 3 Lite, Layer 2+, QoS, Security, PoE and Management features, the AS5152-P2 switch is ideal for businesses of all sizes.

All SFP Ports support 1000M and 10Gb SFP modules allowing easy upgrade paths for existing cabling and network infrastructure.

The AS5152-P2 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 AS5152-P2 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
- 4x 10GbE SFP Ports for high speed desktop and backbone applications
- 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 1000M and 10Gb 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;  Standard Spanning Tree 802.1d  Rapid Spanning Tree (RSTP) 802.1w  Multiple Spanning Tree (MSTP) 802.1s   |
| Port Aggregation         | <ul> <li>Link Aggregation Control Protocol (LACP) IEEE 802.3ad</li> <li>Up to 26 groups</li> <li>Up to 4 ports per group</li> </ul>   |
| VLAN                     | Supports up to 4K VLANs simultaneously (4096 VLAN IDs)  Port-based VLAN  802.1Q tag-based VLAN  MAC-based VLAN  Management VLAN  Private VLAN Edge (PVE)  Q-in-Q (double tag) VLAN  Voice VLAN  GARP VLAN Registration Protocol (GVRP)  |
| 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> <li>Strict Priority and weighted round-robin (WRR)</li> <li>Queue assignment based on DSCP and Class of Service (COS)</li> </ul>   |
| Classification           | <ul> <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><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> <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                         | <ul> <li>Supports up to 512 entries. Drop or rate limitation based on:</li> <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> <li>Used by network devices for advertising their identities, capabilities, and neighbors on<br/>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   |
| Carrier Ethernet             |   |
| 1588v2 PTP                   | The Precision Time Protocol (PTP) is the latest in packet-based timing technology.  |
| ELPS (ITU-T G.8031)          | Ethernet linear protection switching  |
| ERPS (ITU-T G.8032)          | Ethernet ring protection switching  |

### **Specifications**

#### **Port Configuration**

| Total Ports | 10/100/1000Mbps RJ-45 Ports | SFP Ports     | Console Port |
|-------------|-----------------------------|---------------|--------------|
| 52          | 48                          | 4x 1000M/10Gb | RJ45         |

#### **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<br>802.3at; 30.0W | 7.7W                     |

#### **Hardware Performance**

| Forwarding Capacity | <b>Switching Capacity</b> | MAC Table | Jumbo Frames | Latency                             |
|---------------------|---------------------------|-----------|--------------|-------------------------------------|
| 130.944Mpps         | 176Gbps                   | 32K       | 10K          | 1000M TP: < 3.9ms                   |
|                     |                           |           |              | 1GB SFP: < 6.1ms; 10GB SFP: < 4.7μs |

#### **Memory and Processor**

| SDRAM | Flash |
|-------|-------|
| 128MB | 32MB  |

#### **Voltage and Frequency**

| Input Voltage | Frequency  |
|---------------|------------|
| 100-240 VAC   | 50 ~ 60 Hz |

#### **Environmental**

| Operatin   | g Temperature | Storage T   | emperature  | Alti    | tude   | Operating Humidity |
|------------|---------------|-------------|-------------|---------|--------|--------------------|
| Fahrenhei  | Centigrade    | Fahrenheit  | Centigrade  | Feet    | Metres | 10% to 90%         |
| 32° to 122 | ° 0° to 50°   | -4° to 158° | -20° to 70° | < 10000 | < 3000 | non-condensing     |

#### **Weights and Dimensions**

| Dimensions (WxHxD) |                     | Weig      | pht    |
|--------------------|---------------------|-----------|--------|
| Millimetres Inches |                     | Kilograms | Pounds |
| 442 x 44 x 375     | 17.4 x 1.73 x 14.76 | 5.62      | 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**

- AS5152-P2 Switch
- Power Cable
- Serial Console Cable
- Rackmount Kit and Rubber Feet
- Warranty Information

## **Ordering Information**

| Model     | <b>Description</b>  |                    |
|-----------|---|--------------------|
| AS5152-P2 | 52 Port Layer 3 Lite Managed PoE+ Switch with 48x 10/100/1000Mbps Ports + 4x 1000M/10Gb SFP Ports |                    |
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