

# US-16 Port PoE Managed Switch Datasheet



## Features

### Comprehensive L2 Features

US-16MP supports comprehensive list of L2 features like 802.1Q VLANs, QinQ, Port Mirroring, STP/RSTP/MSTP, Link Aggregation Control Protocol (LACP), 802.3x Flow Control, Loopback detection and cable diagnostics. IGMP Snooping intelligently forwards multicast streams to only the relevant subscribers thus improving the efficiency of the network. Subscribers are restricted on a port level through IGMP Throttling and Filtering, which prevent access to inappropriate streams.

### Secure Networking

US-16MP offers wide range of secure networking features like IP-MAC-Port Binding, Port Security, Storm Control and DHCP Snooping defend against broadcast storms, ARP attacks, and other threats. In addition, the Access Control Lists feature stops sensitive network resources from being shared by denying packets based on source/destination MAC address, IP address, TCP/UDP ports and VLAN ID. 802.1X authentication used together with a RADIUS server prevents unwanted network access by requesting information prior to authentication. Guest VLAN provides a way for non-802.1X clients to access specified network resources.

### Advanced QoS Features

Data hungry clients need advanced QoS policies to improve the efficiency of the network. Administrators can designate the priority of traffic through a variety of functions including Port Priority, 802.1p Priority and DSCP Priority to deliver crystal clear voice calls and jitter-free video streams. A specialized Voice VLAN is provided to exclusively serve voice applications.

### Enterprise Level Management Features

Management of US-16MP is made easy via a web-based Graphical User Interface (GUI) or industry-standard Command Line Interface (CLI), with administration traffic protected via SSL or SSH encryptions. SNMP (v1/v2c/v3) and RMON support enables the switch to be polled for valuable status information and allows it to send traps when abnormal events occur.

**US-16MP is a Layer-2 managed switch equipped with 16 gigabit RJ-45 ports and 2 SFP slots. All RJ-45 ports support the 802.3af/at (PoE+) standard, supplying total PoE power of 300 Watts.**

The PoE switch is designed to provide high throughput in demanding situations and forms a backbone for the edge devices. It is designed exclusively for networking needs of enterprise and carrier grade networks. US-16MP offers abundant L2 management features needed for supporting growing management and security needs for modern enterprises. It comes with 8 IEEE 802.3af/at compliant POE ports powered by 300Watts built-in power supply. It provides adequate DC power to power wireless access points, surveillance cameras, IP phones and other PoE enabled devices.

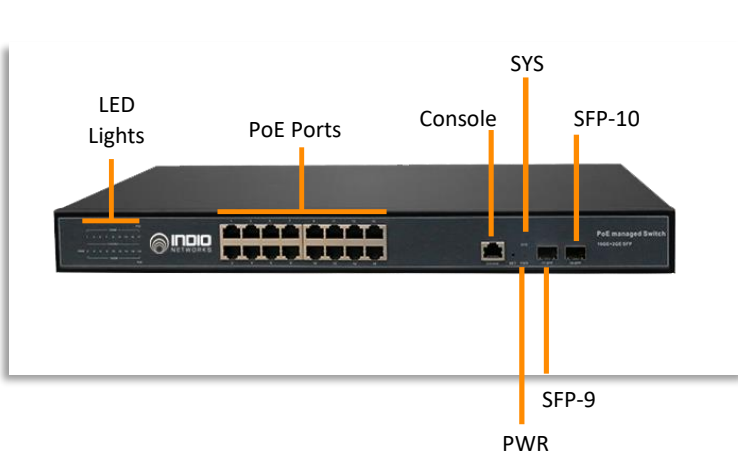
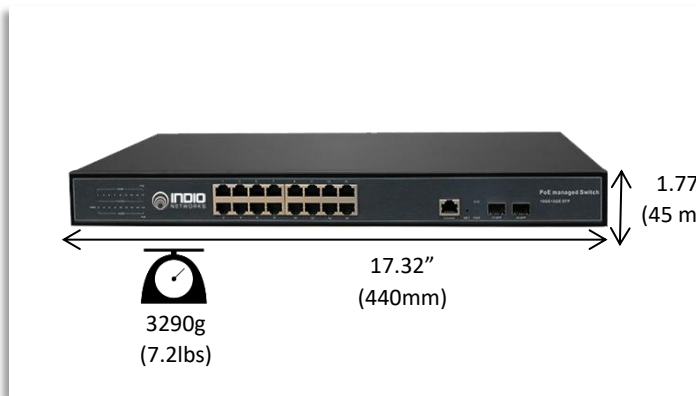
## Key Points:

- 16-Port Gigabit with 2 SFP Slots.
- 300W power budget
- Supports up to 4K VLANs simultaneously (out of 4K VLAN IDs).
- Advanced security features including IP-MAC-Port Binding, ACL, Port Security, DoS Defend, Storm Control, DHCP Snooping, 802.1X and Radius Authentication.
- L2/L3/L4 QoS and IGMP snooping optimize voice and video applications.
- CLI Telnet, TFTP Console, management based on Remote configuration and maintenance using Telnet SNMP V1/V2/V3; SSH V1/V2; RMON V1/V1.

<b>Switch Characteristics</b>	
<b>Port Type</b>	PoE 802.3af/at
<b>PoE Ports</b>	16 PoE Ports
<b>PoE Specifications</b>	16 802.3af/at POE with 120W power supply, per port up to 30W.
<b>Switching Capacity</b>	56 Gbps
<b>Packet Forwarding Rate</b>	12Mbps
<b>MAC Address Table</b>	4K
<b>Packet Buffer Memory</b>	1.5 MB
<b>Jumbo Frame</b>	15KB
<b>Quality of Service</b>	<ul style="list-style-type: none"> <li>• 802.1p CoS/DSCP priority</li> <li>• 8 priority queues</li> <li>• Queue scheduling: SP, WRR, SP+WRR</li> <li>• Port/Flow- based Rate Limiting</li> <li>• Voice VLAN</li> </ul>
<b>L2 Features</b>	<ul style="list-style-type: none"> <li>• IGMP Snooping v1/v2/v3</li> <li>• MLD v1/v2 Snooping</li> <li>• 802.3ad LACP(Up to 8 aggregation groups, containing 8 ports per group)</li> <li>• Spanning Tree STP/RSTP/MSTP</li> <li>• EPPS ring network protocol</li> <li>• EAPS ring network protocol</li> <li>• Port isolation</li> <li>• BPDU filtering/guard</li> <li>• TC/Root protect</li> <li>• Loop back detection</li> <li>• 802.3x Flow Control</li> <li>• LLDP/LLDP-MED</li> </ul>
<b>VLAN</b>	<ul style="list-style-type: none"> <li>• Supports up to 4K VLANs simultaneously (out of 4K VLAN IDs)</li> <li>• MAC/Protocol-based VLAN</li> <li>• Management VLAN configuration</li> </ul>
<b>Access Control List</b>	L2~L4 package filtering based on source and destination MAC address, IP address, TCP/UDP ports, 802.1p, DSCP, protocol and VLAN ID; Time Range Based
<b>Security</b>	<ul style="list-style-type: none"> <li>• Support 256 groups of ACL</li> <li>• Teams that support 4 different priorities per port</li> <li>• User port + IP address + MAC</li> <li>• ACL based on IP and MAC</li> <li>• Security properties of port-based MAC address quantities</li> <li>• Support system CPU self-protection</li> </ul>
<b>Management</b>	<ul style="list-style-type: none"> <li>• Web-based GUI and CLI management</li> <li>• SNMP v1/v2c/v3, compatible with public MIBs and private MIBs</li> <li>• RMON (1, 2, 3, 9 groups)</li> <li>• DHCP/BOOTP Client, DHCP Snooping</li> <li>• DHCP Option82</li> <li>• CPU Monitoring</li> <li>• Port Mirroring</li> <li>• Time Setting: SNTP</li> <li>• Integrated NDP/NTDP feature</li> <li>• Firmware Upgrade: TFTP &amp; Web</li> <li>• System Diagnose: VCT</li> <li>• SYSLOG &amp; Public MIBs</li> </ul>

**Hardware Specifications**

<b>PoE Type</b>	Gigabit Ethernet
<b>Switch Type</b>	L2 Managed Switch
<b>Supported Protocols</b>	IEEE 802.3i, IEEE 802.3u, IEEE 802.3ab, IEEE802.3z, IEEE 802.3ad, IEEE 802.3x, IEEE 802.1d, IEEE 802.1s, IEEE 802.1w, IEEE 802.1q, IEEE 802.1x, IEEE 802.1p, IEEE 802.3af, IEEE 802.3at
<b>Interfaces</b>	16 10/100/1000Mbps RJ45 ports, all supporting PoE+ 2 Gigabit SFP Optical Slots 1 RJ45 Console Port
<b>SFP Ports</b>	2 SFP Gigabit Ports
<b>Network Media</b>	<ul style="list-style-type: none"> <li>• 10BASE-T: UTP category 3, 4, 5 cable (maximum 100m)</li> <li>• 100BASE-TX/1000Base-T: UTP category 5, 5e or above cable (maximum 100m)</li> </ul>
<b>Fanless Operation</b>	Yes
<b>Power Supply</b>	100~240VAC, 50/60Hz
<b>Dimensions (W X D X H)</b>	440*290*44 mm
<b>Max Power Consumption</b>	300W



Switch Deployment

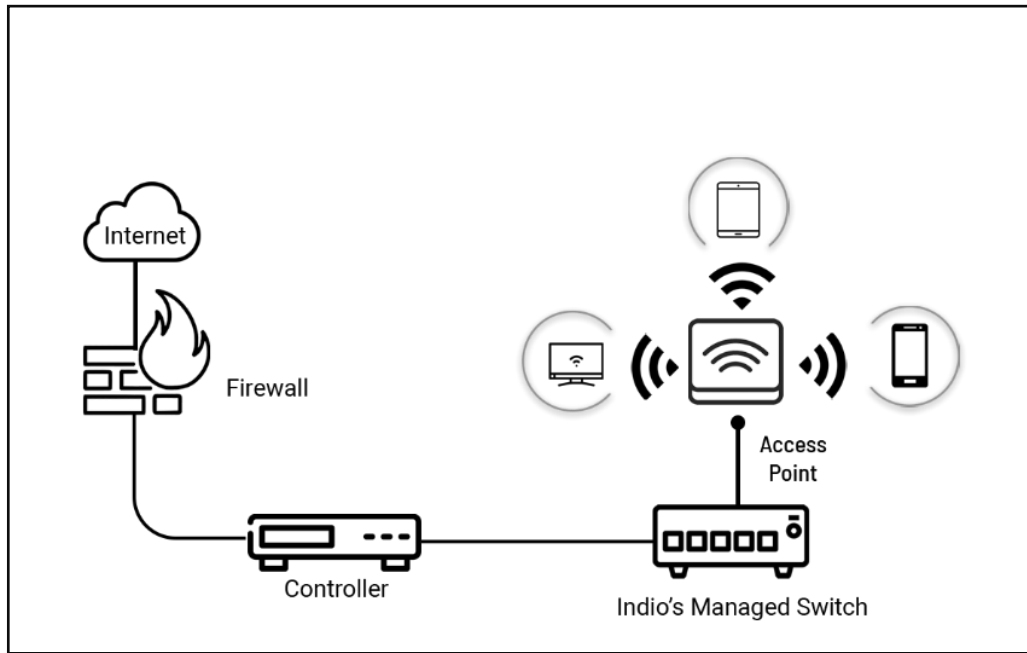


Figure 1. Indio's managed switch connected between controller and access point.

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