8/16/24/48 Port PoE Switch

User's Manual V3

16 - 10/100M + 2 Gigabit Combo
Unmanaged PoE Switch

8 - 10/100/1000M + 2 Gigabit SFP
Managed PoE Switch

16 - 10/100M + 2 Gigabit Combo
Unmanaged PoE Switch

16 - 10/100M/1000M + 4 Gigabit Combo
Managed PoE Switch

16 - 10/100/1000M + 4 Gigabit Combo
Unmanaged PoE Switch

24 - 10/100M/1000M + 4 Gigabit Combo
Managed PoE Switch

24 - 10/100/1000M + 4 Gigabit Combo
Unmanaged PoE Switch

48 - 10/100/1000M + 4 Gigabit SFP
Managed PoE Switch

Important Safeguards & Warning

Attention:
Please read the following safeguards and warnings carefully before using the product in order to avoid demages and losses

Note:
Do not expose the device to soot,high humidity or dust.Doing so may cause fire or electric shock.
Do not install the device in direct sunlight as it may cause overheating and failure.
Installation of the units should be via the compatible rack mount or securely on a flat surface.
Do not place the device on carpet to or around the unit, Doing so may cause overheating.failure or fire.
Do not place stack or place objects on the unit
This unit contains o user serviceable parts,Servicing should only be performed by approved technicians.

Warning:
Do not use a power supply other than the provided manufacture power supply.Failure to do so may cause unit failure and or demage.

Special Announcements:
This manual is reference only.
All the designs and software here are subject to change without prior written notice

Product Overview

Features:

Introduction:

This 8/16/24/48 ports PoE switch(Managed switch) provides power and data from a single point, using Power over Ethernet(PoE) over a single Cat5 cable. It can be used for any 10/100/1000Mbps link PoE port with gigabit Uplink and supply industry-standard IEEE 802.3af /at power. Advanced auto-sensing algorithm gives power to 802.3af/at end devices, It also offer gigabit SFP Uplink which can be the most economic solution for long distance data transmission. In addition,the PoE switch automatically determines PoE requirements, speed, duplex. Easy to operate and reliable.

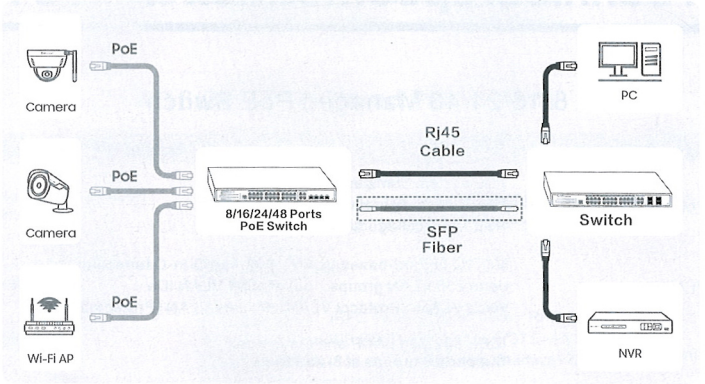
The WEB Smart managed gigabit PoE Switches fill the gap between unmanaged and fully managed switches.It is designed for growing businesses that want control over their network without the cost and complexity of a full Layer 2 management implementation. Web based management tool for quick and easy deployment and configuration making it ideal for deploying access points, VoIP phones and IP-based surveillance camera.

Common features:

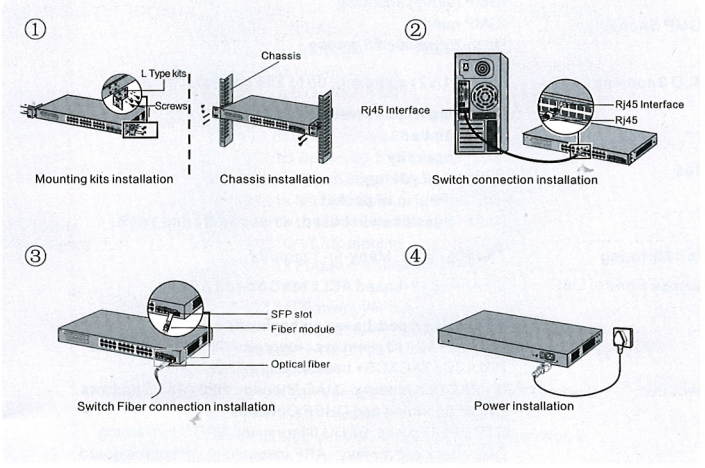
※ Two-layer commercial PoE switch.
※ Layer2 Web smart managent Features
※ Confirm to IEEE802.3i 、 IEEE802.3u、IEEE802.ab、IEEE802.z and IEEE802.3X standards
※ MAC auto study and aging,MAC address list capacity is 4K
※ All ports Self adapt MDI/MDIX mode
※ All the 10/100 and 10/100/1000Mbps self adaptive RJ45 PoE ports
※ support IEEE802.3af and IEEE802.3at standards
※ Commercial Wide temperature design
※ Support 6KV ESD protection on all Ports

Typical Application:

The typical application of the device is show as below



Switch installation :



Appendix 1
Technical specification

Model	16-10/100M+2 Gigabit Combo Unmanaged PoE Switch	24-10/100M+2 Gigabit Combo Unmanaged PoE Switch
Hardware Specifications		
Connector	16 10/100Base-T RJ45 2 10/100/1000Base-T RJ45 2 1000 Base-X SFP Combo	24 10/100Base-T RJ45 2 10/100/1000Base-T RJ45 2 1000 Base-X SFP Combo
PoE Port	16 10/100Mbps PSE port	24 10/100Mbps PSE port
LED indicators	Power Indicator: PWR(green).Network Indicator: Link(green) PoE Working Indicator: PoE(green).SFP Indicator: Link(green)	
Switch Architecture	Store and Forward	
Backplane bandwidth	12.8Gbps	12.8Gbps
Packet forwarding rate	8.34Mpps	9.52Mpps
MAC address	8k	8k
Power requirement	AC100-240V 50/60Hz	
ESD Protection	6KV ESD	
Dimension(W×D×H)	440mm x 290mm x 44.5mm	440mm x 290mm x 44.5mm
Weight	3.5Kg	4Kg
Power over Ethernet (PoE) Specifications		
Network standard	IEEE802.3i 10 BASE-T ; IEEE802.3u 100 BASE-TX IEEE802.3ab/z 1000 BASE-TX ; IEEE802.3x Flow Control	
PoE Standard	IEEE 802.3af Power over Ethernet/PSE IEEE 802.3at Power over Ethernet Plus/PSE	
PoE Supply Type	1/2(+), 3/6(-) End-span	
PoE Power Output	Per Port 52V DC, 300mA. max. 15.4 watts (IEEE 802.3af) Per Port 52V DC, 600mA. max. 30 watts (IEEE 802.3at)	
PoE Power budget	300W	400W
Environment		
Environment specification	Operating temperature: -20℃~55℃ , operating humidity: 5%~95% Storage temperature: -40℃~75℃ , storge humidity:5%~95%	
Safety	FCC Part15 Class A,CE.RoHs	

Appendix 2
Technical specification

Model	16-10/100/1000M+4 Gigabit Combo Unmanaged PoE Switch	24-10/100/1000M+4 Gigabit Combo Unmanaged PoE Switch
Hardware Specifications		
Connector	16 10/100/1000Base-T RJ45 4 10/100/1000Base-T RJ45 4 1000 Base-X SFP Combo	24 10/100/1000Base-T RJ45 4 10/100/1000Base-T RJ45 4 1000 Base-X SFP Combo
PoE Port	16 10/100/1000Mbps PSE port	24 10/100/1000Mbps PSE port
LED indicators	Power Indicator: PWR(green).Network Indicator: Link(green) PoE Working Indicator: PoE(green).SFP Indicator: Link(green)	
Switch Architecture	Store and Forward	
Backplane bandwidth	64Gbps	64Gbps
Packet forwarding rate	35.71Mpps	47.62Mpps
MAC address	16k	16k
Power requirement	AC100-240V 50/60Hz	
ESD Protection	6KV ESD	
Dimension(W×D×H)	440mm x 290mm x 44.5mm	440mm x 290mm x 44.5mm
Weight	4Kg	4.5Kg
Power over Ethernet (PoE) Specifications		
Network standard	IEEE802.3i 10 BASE-T ; IEEE802.3u 100 BASE-TX IEEE802.3ab/z 1000 BASE-TX ; IEEE802.3x Flow Control	
PoE Standard	IEEE 802.3af Power over Ethernet/PSE IEEE 802.3at Power over Ethernet Plus/PSE	
PoE Supply Type	1/2(+), 3/6(-) End-span	
PoE Power Output	Per Port 52V DC, 300mA. max. 15.4 watts (IEEE 802.3af) Per Port 52V DC, 600mA. max. 30 watts (IEEE 802.3at)	
PoE Power budget	300W	400W
Environment		
Environment specification	Operating temperature: -20℃~55℃ , operating humidity: 5%~95% Storage temperature: -40℃~75℃ , storge humidity:5%~95%	
Safety	FCC Part15 Class A,CE.RoHs	

Appendix 3
Technical specification

Model	8-10/100/1000M+2 Gigabit SFP Managed PoE Switch	16-10/100/1000M+4 Gigabit Combo Managed PoE Switch
Hardware Specifications		
Connector	8 10/100/1000Base-T RJ45 2 1000 Base-X SFP 1 x RS232-to-RJ45 serial port	16 10/100/1000Base-T RJ45 4 10/100/1000Base-T RJ45 4 1000 Base-X SFP Combo 1 x RS232-to-RJ45 serial port
PoE Port	8 10/100/1000Mbps PSE port	16 10/100/1000Mbps PSE port
LED indicators	Power Indicator: PWR(green).Network Indicator: Link(green) PoE Working Indicator: PoE(green).SFP Indicator: Link(green)	
Switch Architecture	Store and Forward	
Backplane bandwidth	32Gbps	64Gbps
Packet forwarding rate	14.88Mpps	35.71Mpps
MAC address	8k	16k
Power requirement	AC100-240V 50/60Hz	
ESD Protection	6KV ESD	
Dimension(W×D×H)	310mm x 180mm x 44.5mm	440mm x 290mm x 44.5mm
Weight	2Kg	4Kg
Power over Ethernet (PoE) Specifications		
Network standard	IEEE802.3i 10 BASE-T ; IEEE802.3u 100 BASE-TX IEEE802.3ab/z 1000 BASE-TX ; IEEE802.3x Flow Control	
PoE Standard	IEEE 802.3af Power over Ethernet/PSE IEEE 802.3at Power over Ethernet Plus/PSE	
PoE Supply Type	1/2(+), 3/6(-) End-span	
PoE Power Output	Per Port 52V DC, 300mA. max. 15.4 watts (IEEE 802.3af) Per Port 52V DC, 600mA. max. 30 watts (IEEE 802.3at)	
PoE Power budget	120W	300W
Environment		
Environment specification	Operating temperature: -20℃~55℃ , operating humidity: 5%~95% Storage temperature: -40℃~75℃ , storge humidity:5%~95%	
Safety	FCC Part15 Class A,CE.RoHs	

Appendix 4
Technical specification

Model	24-10/100/1000M+4 Gigabit Combo Managed PoE Switch	48-10/100/1000M+4 Gigabit SFP Managed PoE Switch
Hardware Specifications		
Connector	24 10/100/1000Base-T RJ45 4 10/100/1000Base-T RJ45 4 1000 Base-X SFP Combo 1 x RS232-to-RJ45 serial port	48 10/100/1000Base-T RJ45 4 1000 Base-X SFP 1 x RS232-to-RJ45 serial port
PoE Port	24 10/100/1000Mbps PSE port	48 10/100/1000Mbps PSE port
LED indicators	Power Indicator: PWR(green).Network Indicator: Link(green) PoE Working Indicator: PoE(green).SFP Indicator: Link(green)	
Switch Architecture	Store and Forward	
Backplane bandwidth	64Gbps	256Gbps
Packet forwarding rate	47.62Mpps	96.31Mpps
MAC address	16k	16k
Power requirement	AC100-240V 50/60Hz	
ESD Protection	6KV ESD	
Dimension(W×D×H)	440mm x 290mm x 44.5mm	440mm x 290mm x 44.5mm
Weight	4.5Kg	5.2Kg/6.5Kg
Power over Ethernet (PoE) Specifications		
Network standard	IEEE802.3i 10 BASE-T ; IEEE802.3u 100 BASE-TX IEEE802.3ab/z 1000 BASE-TX ; IEEE802.3x Flow Control	
PoE Standard	IEEE 802.3af Power over Ethernet/PSE IEEE 802.3at Power over Ethernet Plus/PSE	
PoE Supply Type	1/2(+), 3/6(-) End-span	
PoE Power Output	Per Port 52V DC, 300mA. max. 15.4 watts (IEEE 802.3af) Per Port 52V DC, 600mA. max. 30 watts (IEEE 802.3at)	
PoE Power budget	400W	600W/800W
Environment		
Environment specification	Operating temperature: -20℃~55℃ , operating humidity: 5%~95% Storage temperature: -40℃~75℃ , storge humidity:5%~95%	
Safety	FCC Part15 Class A,CE.RoHs	

Managed PoE Switch Technical specification 1

8/16/24/48 Managed PoE Switch

Layer 2 Functions	
PoE Management	PSE system Configuration PSE Port configuration PSE Timer configuration
VLAN	802.1Q tagged-based VLAN; 802.1ad Q-in-Q tunneling Up to 256 VLAN groups; out of 4094 VLAN IDs Voice VLAN; Protocol VLAN; Private VLAN (Protected port)
Link Aggregation	IEEE 802.3ad LACP and static trunk Supports 8 groups of 8-port trunk
Spanning Tree Protocol	STP, IEEE 802.1D Spanning Tree Protocol RSTP, IEEE 802.1w Rapid Spanning Tree Protocol MSTP, IEEE 802.1s Multiple Spanning Tree Protocol
IGMP Snooping	IGMP (v2/v3) snooping IGMP querier Up to 256 multicast groups
MLD Snooping	MLD (v1/v2) snooping, up to 256 multicast groups
Qos	8 mapping ID to 8 level priority queues - Port number - 802.1p priority - 802.1Q VLAN tag - DSCP field in IP packet Traffic classification based, strict priority and WRR
Port Mirroring	TX / RX / both, Many-to-1 monitor
Access Control List	IPv4/IPv6 IP-based ACL / MAC-based ACL
Security	IEEE 802.1X port-based authentication Built-in RADIUS client to co-operate with RADIUS server RADIUS / TACACS+ user access authentication IP-MAC port binding; MAC filtering; Static MAC address DHCP Snooping and DHCP Option82 STP BPDU guard, BPDU filtering and BPDU forwarding DoS attack prevention; ARP inspection; IP source guard

Managed PoE Switch Technical specification 2

8/16/24/48 Managed PoE Switch

Management Functions	
Basic Management Interfaces	Web browser / Telnet / SNMP v1, v2c, V3 Firmware upgrade by HTTP / TFTP protocol through Ethernet Remote / Local Syslog; System log; LLDP protocol; SNTP
Secure Management Interfaces	SSH; SSL; SNMP
SNMP MIBs	RFC 1213 MIB-I; IRFC 1215 Generic Traps; RFC 1493 Bridge MIB RFC 2674 Bridge MIB Extensions; RFC 2737 Entity MIB (Version 2) RFC 2819 RMON (1, 2, 3, 9); RFC 2863 Interface Group MIB RFC 3635 Ethernet-like MIB
Standards Conformance	
Regulation Compliance	FCC Part 15 Class A, CE
Standards Compliance	IEEE 802.3 10BASE-T IEEE 802.3u 100BASE-TX/100BASE-FX IEEE 802.3z Gigabit SX/LX IEEE 802.3ab Gigabit 1000T IEEE 802.3x flow control and back pressure IEEE 802.3ad port trunk with LACP IEEE 802.1D Spanning Tree protocol IEEE 802.1w Rapid Spanning Tree protocol IEEE 802.1s Multiple Spanning Tree protocol IEEE 802.1p Class of Service IEEE 802.1Q VLAN tagging IEEE 802.1x Port Authentication Network Control IEEE 802.1ab LLDP IEEE 802.3af Power over Ethernet IEEE 802.3at Power over Ethernet Plus RFC 768 UDP; RFC 793 TFTP; RFC 791 IP; RFC 792 ICMP RFC 2068 HTTP; RFC 1112 IGMP version 1; RFC 2236 IGMP version 2; RFC 3376 IGMP version 3 RFC 2710 MLD version 1; RFC 3810 MLD version 2

Managed PoE Switch Technical specification 2

8/16/24/48 Managed PoE Switch

Management Functions	
Basic Management Interfaces	Web browser / Telnet / SNMP v1, v2c, V3 Firmware upgrade by HTTP / TFTP protocol through Ethernet Remote / Local Syslog; System log; LLDP protocol; SNTP
Secure Management Interfaces	SSH; SSL; SNMP
SNMP MIBs	RFC 1213 MIB-I; IRFC 1215 Generic Traps; RFC 1493 Bridge MIB RFC 2674 Bridge MIB Extensions; RFC 2737 Entity MIB (Version 2) RFC 2819 RMON (1, 2, 3, 9); RFC 2863 Interface Group MIB RFC 3635 Ethernet-like MIB
Standards Conformance	
Regulation Compliance	FCC Part 15 Class A, CE
Standards Compliance	IEEE 802.3 10BASE-T IEEE 802.3u 100BASE-TX/100BASE-FX IEEE 802.3z Gigabit SX/LX IEEE 802.3ab Gigabit 1000T IEEE 802.3x flow control and back pressure IEEE 802.3ad port trunk with LACP IEEE 802.1D Spanning Tree protocol IEEE 802.1w Rapid Spanning Tree protocol IEEE 802.1s Multiple Spanning Tree protocol IEEE 802.1p Class of Service IEEE 802.1Q VLAN tagging IEEE 802.1x Port Authentication Network Control IEEE 802.1ab LLDP IEEE 802.3af Power over Ethernet IEEE 802.3at Power over Ethernet Plus RFC 768 UDP; RFC 793 TFTP; RFC 791 IP; RFC 792 ICMP RFC 2068 HTTP; RFC 1112 IGMP version 1; RFC 2236 IGMP version 2; RFC 3376 IGMP version 3 RFC 2710 MLD version 1; RFC 3810 MLD version 2