



Key Features

- 8*10/100/1000Base-T RJ45 ports, 4*100/1000Base-X SFP slots, 4*1G/2.5G Base-X SFP slots
- Redundant DC12-58V power input with polarity reverse/over-current protection
- Support one digital output for relay alarm (terminal block Pin 5/6)
- Layer 3 features: Support IPv4/IPv6 static routing, DHCP server
- Layer 2 features: VLAN/VLAN Classification/QinQ/STP, RSTP, MSTP
Port Mirroring/DHCP/Multicast/ACL/IGMP/QoS/LLDP/802.1X/Dying Gasp
SFP DDM/IPV6 management/Web/SNMP/Telnet/TFTP/Web upgrading
- Support G.8032 ERPS protocol, recovery time $\leq 20\text{ms}$
- Support 6KV surge protection and ESD: Air-15kV, Contact-8kV Protection
- IP40 fan-less and Din-rail hardware design
- Operation temperature: $-40^{\circ}\text{C} \sim +75^{\circ}\text{C}$

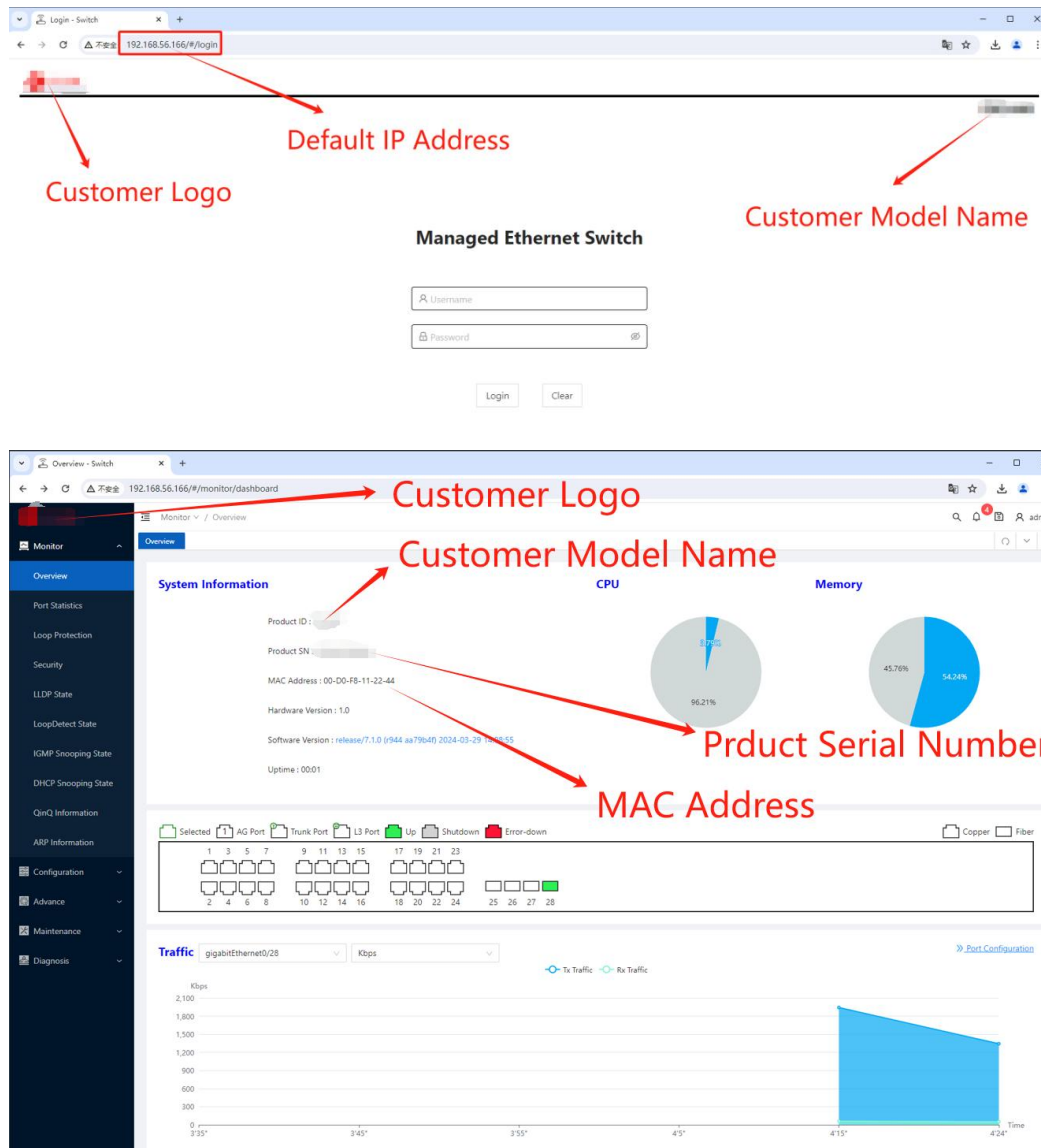
It is an ideal solution for IP Surveillance, wind, electricity, assembly automation, subway PIS, power SCADA, sewage treatment, metallurgy, intelligent transportation, rail transportation, military and other industries

Specification

Product Name	12 Port Hybrid Rate Layer 2+ Managed Industrial Ethernet Switch
Port	8*10/100/1000Base-T RJ45 4*1G/2.5GBase-X SFP (9-12 ports) 4*100/1000Base-X SFP(13- 16 ports) 1*RJ45 Console port(115200,8,N,1)
Alarm Port	One digital output for relay alarm Alarm relay current carry ability: 1A@24VDC
Network Medium	10BASE-T: Cat3, 4, 5 or above UTP(≤100 meters) 100BASE-TX: Cat5 or above UTP(≤100 meters) 1000BASE-TX: Cat5 or above UTP(≤100 meters)
Network Protocol	IEEE 802.3 10Base-T Ethernet IEEE 802.3u 100Base-TX Ethernet IEEE 802.3ab 1000Base-T Ethernet IEEE 802.3z 1000Base-X Ethernet IEEE802.3x Flow Control and Back Pressure IEEE 802.1D Spanning Tree Protocol IEEE 802.1w Rapid Spanning Tree Protocol IEEE 802.1Q VLAN ITU-T G.8032 ERPS IEEE 802.1X Port Authentication Network Control IEEE 802.1ab LLDP IEEE 802.3ad LACP
Fiber Option	SFP Plug-able Module(LC) SM: 1310nm/1550nm, 20Km; 1490nm/1550nm, 40~100Km MM: 1310nm, 2Km; 850nm, 500-meter
Switching Capacity	44Gbps
Throughput	65.4Mpps
Packet Buffer	12M
MAC Address	16K
VLAN	4K
Jumbo Frame	10Kbytes
Transfer Mode	Store and forward, forwarding delay<5us
MDX/MIDX	Support
Watchdog	Support
MTBF	200,000 hours
Input Voltage	DC12-58V, Redundant Input, Typically DC12V/DC24V/DC48V Removable 6 PIN Industrial Terminal Block, pin 5/6 for relay alarm output
Input Current	1.5A Max
Total Power Consumption	Full loading≤18W
Reverse Polarity Protection	Support
Over-current Protection	Support
Industry Standard	EMI: FCC Part 15B Class A Surge protection of power: IEC 61000-4-5 6KV/4KV(8/20us) Surge protection of Ethernet ports: IEC 61000-4-5 6KV/2KV(10/700us) RS: IEC 61000-4-3 80 MHz-1 GHz: 10 V/m EFT: IEC 61000-4-4 power interface: 4K; Ethernet ports: 2K CS: IEC 61000-4-6 10V ESD: IEC 61000-4-2 Level 4(8K/15K) Shock: IEC 60068-2-27 Free fall: IEC 60068-2-32 Vibration: IEC 60068-2-6
Protection Level	IP40(Currently IP66/IP67/IP68 rated models are NOT available)
Installation	Din Rail or Wall Mounted(1pc mounting hanger is offered)

Certification	CE/FCC/RoHS/Reach/UKCA
Working Environment	Working Temperature: -40°C~75°C Storage Temperature: -40°C~85°C Relative Humidity: 5%~95%, non-condensing
LED Indicator	PWR(Power indicator), Green Color On: power status is normal Off: power off or power connection failure S(System indicator), Red Color On: Normal operation Off: Connection failure Blinking: Device initialization Ethernet Port 1. Green Indicator On: port link up Off: port link down Blinking: data is in normal transmission 2. Yellow Indicator On: port speed is 1000M Off: port speed is 10/100M Fiber port, Green Color On: port link up Off: port link down Blinking: data is in normal transmission

Web UI



Above changes are free of cost(even for 1 piece only)

Default IP: 192.168.56.166

User Name/Password: admin/admin

Please contact us if you need to check

- Web Manual
- CLI Manual
- Full Software Function List

Unavailable features

Below features are not available for now, and we are NOT going to develop it in 2 or 3 years

- NAT
- Stacking
- SD-WAN
- TSN
- MPLS
- Cloud Management

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L3 Function

ARP	ARP table aging
DHCP Server	
IPv4/IPv6	Static routing

L2 Function

Port Aggregation	Support GE port aggregation Support 2.5GE aggregation Support static aggregation Support LACP dynamic aggregation Up to 64 aggregation groups and up to 8 ports per group
Port Features	Support IEEE802.3x flow control, Support interface counters, Support port isolation, Port mirroring(One-to-One, Many-to-One) Support loop detection(Port-based; VLAN-based) Support broadcast storm suppression(broadcast; unknown multicast; unknown unicast)
Mac-address Table Management	Support static Mac-address management Support dynamic Mac-address Management Support filtering Mac-address Support MAC limit based on port and VLAN Support MAC flapping based on port and VLAN
VLAN	Support access mode Support trunk mode Support hybrid mode
VLAN Classification	Mac Based VLAN IP Based VLAN Protocol Based VLAN
GVRP	Normal mode Fixed mode Forbidden mode
QinQ	Port-based QinQ VLAN-based QinQ(VLAN-stacking; VLAN-mapping) Flow-based QinQ
LLDP	LLDP(Link Layer Discovery Protocol)
Ring Network Protocol	Support IEEE802.1D-STP Support IEEE802.1W-RSTP Support IEEE802.1S-MSTP Support G.8032 ERPS protocol, single ring, sub Ring and major ring Recovery time $\leq 20\text{ms}$(based on Marvell switching chipset under ring topology with Rapid Ring Protocol enabled) Typical ring topologies: single ring, dual ring, tangent ring, intersecting ring, nested ring(ring-in-ring), chain-type and hybrid structures

L2 Multicast

IGMP Snooping	Support
Group Address	Support

Security Function

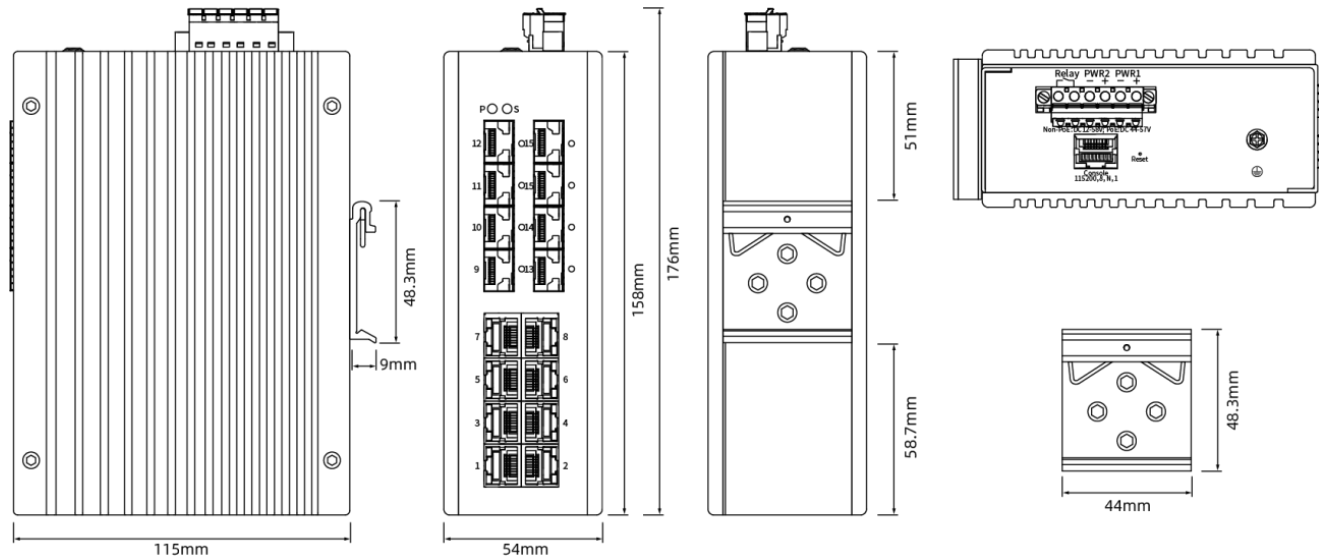
ACL	IP Standard ACL MAC extend ACL IP extend ACL IPv6 ACL
QoS	Support QoS Class, remarking

	Support SP, WRR queue scheduling Ingress port-based rate-limit Egress port-based rate-limit Support policy-based QoS
802.1x	Port access control Mac-address access control RADIUS server
Port-security	Port-security
IP Source Guard	IP Port/MAC binding
ARP-check	Support ARP-check and ARP packet filtering for illegal users
Access Control	Support Telnet/SSH/HTTP/HTTPS user access control
Management & Maintenance Function	
User Management	Support password protection Support user authorization management
SNMP	Supporting SNMP V1/V2C/V3 version
Web Management	Web Management Support HTTP V1.1 Support HTTPS
CLI Management	Console/Telnet command line management
RMON	Support RMON(Remote Monitoring)alarm
Firmware Upgrade	Firmware upgrade
Fault Detection	Ping/Tracerout Dying gasp Support optical transceiver DDM function
Cable Detection	Support copper port cable detection
NTP	Network Time Protocol
Syslog/Debug	Syslog/Debug Syslog send to two servers
Configuration Import/Export	Support FTP/TFTP remote import/export SFTP is supported
Dual Partition Management	Support dual partition switching
Application Protocol Function	
DHCP Snooping	DHCP snooping trust port Support remote-id/circuit-id configuration DHCP option-82
DHCP Client	Support DHCP client
Telnet Server	Support telnet server
Telnet Client	Support telnet client
SSH Server	Support SSH server
TACACS	Support TACACS(the terminal access controller accesses the control system)
sFlow	Support network traffic analysis
TFTP	Support TFTP Client

Application

- Any network utilizing a mixture of copper and fiber
- IP connectivity and communication
- CCTV system such as network camera, access control

Mechanical Drawing



Remark

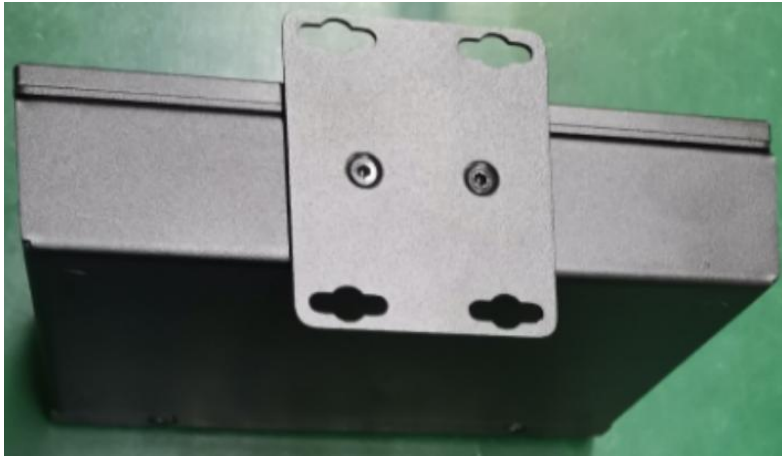
Please contact us if the source file is needed

Packing Information

- 1pc switch(neutral device)
- 1pc wall hanger(shared holes with DIN Rail Kit)
- 1pc user manual(including QIG information)
- 1pc console cable(USB2.0 to RJ45 connector)

Please know that there is NOT a warranty card in the packing box

A “Warranty Certificate” will be issued to indicate the order information and warranty coverage



Shipping box information(**Below information is approximately accurate**)

Product size: 158*115*54mm

Inner box size: 230*180*70mm

Product weight: 1.2Kg

Packing weight: 1.4Kg

Master box size: 440*375*250mm

Packing quantity: 12Pcs

Packing weight: 18Kg

Remark

Accessories(DIN rail bracket, optical module, power supply, network cable, patchcord etc.)are NOT included in the packing box

Please prepare it by yourself or purchase a whole set from us

Product Picture



Remark

Please let us know if you need to check the PCBs