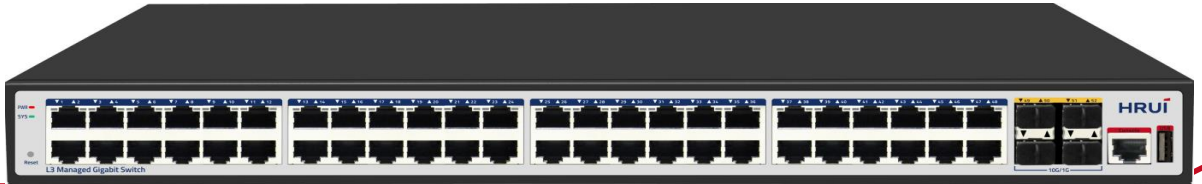


# 52 Port 10G Uplink 48 Port Gigabit Layer 3 Managed Ethernet Switch



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52-port 10 Gigabit uplink 48-port Gigabit Layer 3 managed Ethernet switch. Support 48 \* 10/100/1000 adaptive electrical ports, 4 \* 10 Gb SFP+ ports, 1 console port, and 1 USB serial port. Perfect security control strategy and CPU protect policy improve fault tolerance and ensure stable operation of the network and load balancing of the interconnection; The device supports automatic DoS attack defense and SNMP, IEEE 802.1, STP, RSTP, Link aggregation, and other functions. With advanced security functions and quality of service (QoS), it can be used as core layer, distribution layer, and access layer switch with high density port and easy management, is an ideal choice for various business network applications.

## Main Features

- Support IEEE 802.1d、IEEE 802.1w、IEEE 802.1s、IEEE 802.1p、IEEE 802.3、IEEE 802.3u、IEEE 802.3x、IEEE 802.3z、IEEE 802.3ab、IEEE 802.3ae standards ;
- L3 management, support DHCP Server, QoS, ACL, SNMP V1/V2/V3, IGMP Snooping v1/v2;
- Support STP/RSTP/MSTP (ERPS), Support loop detection and self-healing, support remote loopback monitoring and control (802.3ah OAM) ; Support IPV4/IPV6,RIP v1/v2,OSPF v2
- Support multiple VLAN division, MAC VLAN, Protocol VLAN, Private VLAN;
- Support IP address + MAC address + VLAN+Port binding, DHCP Snooping, support IP source and DAI protection;
- Surge Protection: General 6KV (level B) , ESD 8KV air, 6KV contact (level C)

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## Application Environment

### **Metro Optical Broadband Network:**

Data network operators such as telecommunications, cable TV, and network system integration,etc.

### **Broadband private network:**

Suitable for financial, government, oil, railway, electric power, public security, transportation, education and other industries

### **Multimedia transmission:**

Integrated transmission of images, voice and data, suitable for remote teaching, conference TV, videophone and other applications

### **Real-time monitoring:**

Simultaneous transmission of real-time control signals, images and data

Specifications	
<b>I/O Interface</b>	
Power	AC 100-240V/50/60Hz
Ethernet	48 * 10/100/1000Mbps RJ45 Port 4 * 10G SFP+ Port 1 * RJ45 Console Port 1 * USB Port
<b>Performance</b>	
Bandwidth	176Gbps
Packet Buffer Memory	131Mpps
DDR SDRAM	512MByte
Flash Memory	32MByte
Package cache	16Mbit
MAC Address	16K
Jumbo frame	10Kbytes
VLANs	VLAN range 1-4094, with a maximum active VLAN of 4K
<b>Standard</b>	
Network protocol	IEEE 802.3: Ethernet MAC Protocol IEEE 802.3i: 10BASE-T Ethernet IEEE 802.3u: 100BASE-TX Fast Ethernet IEEE 802.3ab: 1000BASE-T Gigabit Ethernet IEEE 802.3z: 1000BASE-X Gigabit Ethernet (optical fiber) IEEE 802.3ae: 10G Ethernet (optical fiber) IEEE 802.3az: Energy Efficient Ethernet IEEE 802.3ad: Standard method for performing link aggregation IEEE 802.3x: Flow control IEEE 802.1ab: LLDP/LLDP-MED (Link Layer Discovery Protocol) IEEE 802.1p: LAN Layer QoS/CoS Protocol Traffic Prioritization(Multicast filtering function) IEEE 802.1q: VLAN Bridge Operation IEEE 802.1x: Client/Server Access Control and Authentication Protocol IEEE 802.1d: STP IEEE 802.1s: MSTP IEEE 802.1w: RSTP

Industry Standard	EMS: EN61000-4-2 (ESD) EN61000-4-5 (Surge)
Network Medium	10BASE-T: Cat3、4、5 or above UTP( $\leq 100$ M) 100BASE-TX: Cat5 or above UTP( $\leq 100$ M) 1000BASE-TX: Cat5 or above UTP( $\leq 100$ M) Multi-mode Fiber: 50/125、62.5/125、100/140um Single-mode Fiber: 8/125、8.7/125、9/125、10/125um
<b>Certification</b>	
Safety Certificate	CE、FCC、RoHS
<b>Environment</b>	
Working Environment	Working Temperature: $-10\sim 50^{\circ}\text{C}$ Storage Temperature: $-40\sim 70^{\circ}\text{C}$ Working Humidity : 10%~90%, non-condensing Storage Temperature: 5%~95%, non-condensing
<b>Indication</b>	
LED Indicators	PWR(Power indicator), SYS(System lights), Link/ACT(Link light/data light)
<b>Mechanical</b>	
Structure Size	Product Dimensions: 440*280*44mm Package Dimensions: 500*365*85mm Product N.W: 3.87KG Product G.W: 4.70KG
Packing Info	Carton Dimensions: 520*445*385mm Packing Quantity: 5psc Packing weight: 24.6KG
Power Voltage	Input Voltage: AC100-240V/50-60Hz Power supply: 12V8A
Power Consumption	maximum 46W
Package List	Ethernet switch: 1 Set, Instruction manual: 1 PCS, Certificate: 1 PCS, Power cord: 1PCS Serial cable: 1PCS, Rack ear: 1 Pairs

L3 Function	
IPv4	IPv4 VLAN Interface
	IPv4 Static Routes
	ARP
IPv6	IPv6 VLAN Interface
	IPv6 Static Routes
	IPv6 ND
RIP	V1/V2
OSPF	Router-ID
	Authentication
	v2
L2 Function	
Port	Port Switch
	Port Description
	Port Speed
	Port Duplex
	Port Flow Control
	Jumbo, Up to 10K
	Support 10G/2.5G (2023.3.2)
	Fiber Module(DDM)
Link Aggregation	Supports load balance policy; Base on MAC and IP-MAC
	Static and Dynamic Group
	Supports LACP
	Up to 8 groups
Storm Control	Boardcast
	Unknown Multicast
	Unknown Unicast
Port Mirroring	One to one monitor
	Many to one monitor
	Ingress/Egress/Both
	Up to 4 session groups
Port Security	MAC Address Constraints
	Port Security MAC Address
	Protect/Restrict/Shutdown
Port Isolation	
Port Rate-limit	
Loopback Detection	
VLAN	Access/Trunk/Hybrid
	VLAN Tunnel (Q-in-Q Tunnel)
	Congurable VID from 1 - 4094; Max. 4K static VLAN groups
	Voice VLAN
	MAC VLAN
	Surveillance VLAN
	Protocol VLAN
	GVRP

MAC Address	Dynamic Address
	Static Address
	Filtering Address
Spnning Tree Protocol	STP/RSTP/MSTP
	BPDU Filter
	BPDU Guard
	Edge Port
ERPS	Only SFP port
	ALL Port
LLDP	LLDP
	LLDP MED
Multicast	IGMP Snnoping
	IGMP V1/V2/V3
	Router Port
	Static IGMP group address
	IGMP groups filtering
	Querier
	MLD Snooping
MVR	
QoS	Traffic classification based, Strict priority and WRR
	Port Priority
	802.1P Priority
	IP TOS Priority
	IP DSCP Priority
	Supports up to 8 queues per port
Priority Remarking	
<b>Services</b>	
DHCP	DHCP Server
	IP Pool
	Static Binding
	DHCP Relay
	Option 43
Access Protocol	HTTP
	HTTPS
	Telnet
	SSHv2
	Manager ACL
	Session Timeout
	Password Retry Count
Silent Time	
<b>Security</b>	
AAA	RADIUS
	TACACS+
	802.1X
	Base on port/MAC/local/WEB

DHCP Snooping	Global/VLAN
	Option 82
	Circuit ID
IP Source Guard	
Dynamic ARP Inspection	
DoS	
ACL	MAC ACL
	IPv4 ACL
	IPv6 ACL
<b>Diagnostics</b>	
Syslog	Logging Message
	Remote Server
Ping	
Traceroute	
Copper Test	
UDLD	
<b>Managemnet</b>	
Manager Access	Console
	HTTP/HTTPS
	Telnet
	SSH
	SNMP
Manager IP	Static Address
	DHCP Client
	Supports IPv4 and IPv6 address
	Manager VLAN
	DNS
Time Synchronization	SNTP
	Manual Time
SNMP	V1/V2C/V3
	Community
	V3 User
	Group
	Trap Host
SNMP MIB	RFC 1213 MIB-II
	RFC 1493 Bridge MIB
	RFC 1643 Ethernet MIB
	RFC 2819 RMON MIB (Groups 1, 2, 3 and 9)
	RFC 2863 Interface MIB
	LLDP
	Private MIB

RMON	Statistics
	History
	Event
	Alarm
User	
Firmware	Double Image; Swap between Active and Alternate firmware image.
	Firmware Upgrade
Configuration	Upload and download
	Upload and download via USB interface
Save	
Restart	
Factory Defaults	
<b>Standards Compliance</b>	
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	
RFC 768 UDP	
RFC 793 TFTP	
RFC 791 IP	
RFC 792 ICMP	
RFC 2068 HTTP	
RFC 1112 IGMP v1	
RFC 2236 IGMP v2	
RFC 3376 IGMP v3	
RFC 2710 MLD v1	
RFC 3810 MLD v2	
RFC 2328 OSPF v2	

Product Picture



Product structure drawing

