

- 48-Port Gigabit Copper + 2 10 Gigabit SFP+ Ports
- 802.3az Energy Efficient Ethernet
- 136G Non-Blocking Switching Capability
- Layer 2+ Full Managed Software Features
- 4K VLAN, 8 queues QoS, Advanced VLANs
- · MSTP, LACP, LLDP, sFlow,
- 802.1X, RADIUS, TACAS+, ACL
- · IPv6, IPv4/v6 Multicast Filtering

# 48-Port 10/100/1000Base-T + 2 10 Gigabit SFP+ Ports Layer 2+ Full Management High Power PoE Switch

#### Introduction

The switch is 48-port 10/100/1000Base-T + 2 10 Gigabit SFP+ Ports Rack-mount L2+ Full Management Network Switch that is designed for medium or large network environment to strengthen its network connection. The switch supports 136G non-blocking switch fabric, the 48 gigabit ports and 2 uplink 10G ports can transmit and receive data traffic without any lost. The EEE feature reduces the power consumption when there is no traffic forwarding even port is still connected. The switch also supports Layer 2+ full management software features. These features are powerful to provide network control, management, monitor and security feature requests. Including rack-mount brackets, the 19" size fits into your rack environment. It is a superb choice to boost your network with better performance and efficiency.

#### 2 10 Gigabit SFP+ Open Slots

The switch equips with 2 10G SFP+ open slots as the uplink ports, the 10G uplink design provides an excellent solution for expanding your network from 1G to 10G. By 10G speed, this product provides high flexibility and high bandwidth connectivity to another 10G switch or the Servers, Workstations and other attached devices which support 10G interfaces. The user can also aggregate the 10G ports as Trunk group to enlarge the bandwidth.

### **Full Layer 2 Management Features**

The switch includes full Layer 2+ Management features. The software set includes up to 4K 802.1Q VLAN and advanced Protocol VLAN, Private VLAN, MVR...features. There are 8 physical queues Quality of Service, IPv4/v6 Multicast filtering, Rapid Spanning Tree protocol to avoid network loop, Multiple Spanning Tree Protocol to integrate VLAN and Spanning Tree, LACP, LLDP; sFlow, port mirroring, cable diagnostic and advanced Network Security features. It also provides Console CLI for out of band management and SNMP, Web GUI for in band Management.

## **Advanced Security**

The switch supports advanced security features. For switch management, there are secured HTTPS and SSH, the login password, configuration packets are secured. The port binding allows to bind specific MAC address to the port, only the MAC has the privilege to access the network. The 802.1X port based Access Control, every user should be authorized first when they want to access the network. AAA is the short of the Authentication, Authorization and Accounting with RADIUS, TACAS+ server. Layer 2+ Access Control List allows user to define the access privilege based on IP, MAC, Port number, and etc.

## **Technical Specifications**

Standard	Ethernet: IEEE 802.3, 802.3u, 802.3ab, 802.3ae
	IEEE 802.3az Energy Efficient Ethernet (EEE)
	Protocol: IEEE 802.3x - Flow Control, IEEE 802.1Q - VLAN, IEEE 802.1p - Class
	of Service, IEEE 802.1D - Spanning Tree, IEEE 802.1w - Rapid Spanning Tree,
	IEEE 802.1s - Multiple Spanning Tree, IEEE 802.3ad - Link Aggregation Control
	Protocol (LACP), IEEE802.1v - Protocol VLAN, IEEE 802.1AB - LLDP (Link Layer
	Discovery Protocol), IEEE 802.1X - Access Control
Interface	Number of Port: 50
	10/100/1000Base RJ-45 Port : 48, Auto-negotiation, Auto MDI/MDIX 10G SFP+ : 2
Performance	Switching Capacity: 136G bps
· Gridinando	MAC Address Table Size: 64K
	Forwarding Rate: 10G port – 14,880,000pps
	1000Mbps port - 1,488,000pps
	100Mbps port - 148,800pps
	10Mbps port - 14,880pps
	Packet Buffer: 64Mb
L2 Features	Flow Control: 802.3x (Full-duplex)ort/ Back-Pressure (Half-duplex)
	Spanning Tree:
	IEEE 802.1D-2004(Includes IEEE 802.1w): Rapid Spanning Tree Protocol
	802.1s Multiple Spanning Tree Protocol
	Loop Detection
	VLAN:
	IEEE 802.1Q Tagged Based, Max. VLAN Group: 4K
	QinQ
	Port-based VLAN
	Voice VLAN
	Private VLAN
	MVR
	MAC-Based VLAN
	Protocol-Based VAN
	Link Aggregation:
	IEEE 802.3ad with LACP: 26 trunks/ up to 8 port per trunk
	Static Trunk: 26 trunks/ up to 8 port per trunk
	Max. Group:26
	Max. Ports/Group:8  IGMP Snooping:
	IGMP Snooping v1/v2/v3
	IPv6 MLD Snooping v1/v2
	Queries support/ IGMP Filtering, IGMP Leave Proxy, Immediate Leave
	Storm Control: Broadcast/ Multi-cast/ Un-known Unicast
	Jumbo Frame Support: 10K
PoE Features	802.3af/at Compliant
I OL I GALUIGS	Max. Power Output Per Port: 30W
	Power Consumption: 400W Current Sharing
	Internal Power: Built-in Power Supply
	Internal Power: Built-in Power Supply

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	PD Classification
	Power Management:
	Enable/Disable per-port
	Priority Setting per-port
	Overloading Protection per-port
	Power Level Setting per-port
QoS Features	Number of Priority queue: 8 queues/ port
	Scheduling for priority queue : WRR/Strict Priority scheduling/Hybrid
	CoS:
	802.1p/ IP Precedence/ IP TOS Precedence
	IP DSCP/ Port based Priority
	Rate Limiting: Ingress/Egress: 1Kbps/ 1pps granularity
	DiffServ (RFC2474) remarking
Security	User Name / Password Protection
	User Privilege: up to 15 levels
	IEEE 802.1x: Port-based Access Control
	IP Source Guard
	MAC Based Authentication
	Web-based Authentication
	HTTPS
	SSHv2
	RADIUS: Authentication/ Accounting
	TACACS+: Authentication
	ACL (Access control list)
Management	Command Line Interface (CLI)
	Web Based Management
	Telnet
	Access Management Filtering: SNMP/ WEB/SSH/TELNET/
	SNMP: v1/v2c/v3
	<b>RMON:</b> RMON (1,2,3, & 9 groups)
	DHCP: Client/ Relay/ Option82/ Snooping
	Event/Error Log: Local Flash/ Remote Server
	Software Download/ Upgrade: HTTP
	Configuration Download / Upload
	sFlow
	Port Mirroring: One to One/ Many to One
	Remote Ping
	1.0
	NTP/LLDP
	NTP/LLDP UPnP
	UPnP
	UPnP EEE Configuration
	UPnP EEE Configuration Cable Diagnostics
Power Input	UPnP EEE Configuration Cable Diagnostics IPv6 Configuration
Power Input	UPnP EEE Configuration Cable Diagnostics IPv6 Configuration 100~240VAC
Power Input Mechanical	UPnP EEE Configuration Cable Diagnostics IPv6 Configuration  100~240VAC  Dimension mm(H*W*D): 44*440*331
	UPnP EEE Configuration Cable Diagnostics IPv6 Configuration 100~240VAC
Mechanical	UPnP EEE Configuration Cable Diagnostics IPv6 Configuration  100~240VAC  Dimension mm(H*W*D): 44*440*331 Weight: 4.97 kg

