IMMUNITY

Model:

C-122: Immunity Managed L3 Switch

Reliable Connectivity, Powerful Performance

It is designed to deliver seamless connectivity, efficient performance, and future-ready expansion.

Supports IEEE 802.3, 802.3ae, 802.3z.

Provides 12 10Gbps SFP+ fiber ports.

Store and forward mode operation

Supports MAC address auto-learning and auto-aging.

LED indicators for monitoring power, link/activity.

Supports QoS, port mirroring, link aggregation protocol.

High throughput to even the most demanding edge-of-network workgroups.

LED Indicators

12x10G SFP

Fiber Ports

PRODUCT **OVERVIEW**

The **C-122** is a L3 managed switch which is purpose-built to meet the evolving networking needs of growing businesses. Equipped with a comprehensive suite of advanced management and security features, it ensures reliable performance and secure operations. Designed to be cost-effective and it offers an ideal solution for small and medium-sized businesses, making it adaptable to a wide range of network scenarios.

STRONG BUSINESS PROCESS CAPABILITY

- With IEEE 802.1Q VLAN support, the VLANs can be flexibly partitioned according to your needs.
- Supports voice VLAN, configure QoS parameters for voice data streams, enhance the transmission priority of voice data streams, and ensure call quality.
- Supports QoS, three priority modes based on Endpoint, 802.1P and DSCP, and four queue scheduling algorithms: Equ, SP, WRR and SP+WRR.
- Supports ACL, according to configure matching rules, processing actions, and temporal permissions to filter packets, and provide flexible security access control policies .
- Supports IGMP V1/V2 multicast protocol and IGMP Snooping for multi-terminal HD video surveillance and video conference access.
- Supports multicast VLAN and multicast filtering for efficient data transmission, saving network bandwidth and reducing network load.
- Supports port monitoring by copying a copy of the monitored port's packets to the monitoring port to enable network monitoring.

DIVERSE RELIABILITY PROTECTION

- Supports STP/RSTP/MSTP spanning tree protocols, eliminating layer 2 loops and enabling link backup.
- Supports spanning tree security to prevent all forms of malicious attacks on devices in the spanning tree network.
- Static and dynamic aggregation are supported to effectively increase link bandwidth, achieve load balancing, link backup, and improve link reliability.

EASY OPERATION AND MAINTENANCE

- It supports a variety of management and maintenance methods such as Web-based management, CLI commands (Console, Telnet), and SNMP (V1/V2/V3).
- Supports HTTPS, SSL V3, TLSV1, SSHV1/V2 encryption for more secure management.
- RMON, system logs, and end-to-end traffic statistics for network optimization and transformation.
- Supports cable detection, Ping detection, and Tracert detection to easily analyze the faulty network nodes.
- LLDP is supported to facilitate the network management system to query and judge the communication status of the link.
- Supports CPU monitoring, memory monitoring, Ping detection, and Tracert detection.

COMPLETE SECURITY PROTECTION MECHANISM

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L3 Switching Features

- Static Routing: IPv4/IPv6
- Address Resolution Protocol (ARP)
  - Static ARP
- 16MAC Address Table
- 12K Jumbo Frame
- Flow Control: 802.3x (Full-duplex) &
  - Back-Pressure (Half-duplex)
- Spanning Tree
  - IEEE 802.1D (STP)
  - IEEE 802.1w (RSTP)
  - IEEE 802.1s (MSTP)/16 instances
  - Auto Edge Port
  - BPDU Filtering
  - ERPS
- Link Aggregation
  - EEE 802.3ad LACP
  - Static Trunk
  - Max 8 Group
  - Max 8 Ports/Group
  - Traffic Load Balancing

VLAN

- Surveillance VLAN
  - 16 OUI Mode (Auto/Manual)
- Voice VLAN
  - 16 OUI Mode (Auto/Manual)
- QinQ (IEEE 802.1ad): Basic
- GARP VLAN Registration Protocol (GVRP)
- 4096 Static VLAN
- 8 groups Protocol-based
- 256 MAC-based
- IEEE 802.1Q Tagged-based

Multicast

- Common
  - 256 Multicast Groups
  - Immediate Leave
  - Static/Forbidden Router Port
  - Static/Forbidden Forward Port
  - 128 profiles Filtering
  - Throttling
- IGMP Snooping
  - IGMP v1/v2
  - IGMP v3 Basic (BISS)
  - GMP v2/v3 Querier
- MLD Snooping
  - MLD v1/v2
- Multicast VLAN Registration (MVR)
  - IPv4

Quality of Service (QoS)

- Trusted QoS
- Queue Scheduling
  - WRR
  - WFQ
  - Strict Priority
  - Hybrid (WRR+SP or WFQ+SP)
- Class of Service
  - Port-based
  - 802.1p
  - IP TOS Precedence
  - IP DSCP
- Rate Limit
  - Port-based (Ingress/Egress)

Access Control List (ACL)

- ACL Type
  - L2/L3/L4
  - 512 MAC
  - based
  - 512 IPv4-based
  - 512 IPv6-based
- Access Rules
  - 1024

Security

- AAA Authentication
- 8 TACACS+
- 8 RADIUS
- Authentication Manager
  - IEEE 802.1X
  - MAC Auth
  - Web Auth
  - Guest VLAN
  - Port-based
  - Host-based
- Account Manager
  - Local Authentication
  - 8 Multiple User Account
  - Multi-Level Security (Manager/Operator)
  - Password Recovery Procedures
- Management Access
- Management VLAN
  - 256Management ACL
- SSL
  - SSLv2
  - SSLv3
  - TLSv1
- WebUI
  - HTTPS
- CLI
  - SSH v1/v2
- Port Security
  - 256 Dynamic Lock
- Storm Control
  - Broadcast
  - Unknown Multicast
  - Unknown Unicast
- Spanning Tree
  - BPDU Guard
- Protected Port (Port Isolation)
- Black Hole MAC
- CPU Defense Engine
- DoS Prevention
- DHCP Snooping (with Option 82)
- Dynamic ARP Inspection
- 256 IP Source Guard
- IP/MAC/Port Binding (IMPB)
- Dynamic VLAN Assignment

IPv6

- IPv6 Host
  - Auto Configuration
  - Static IPv6 Address and Prefix Length
  - Static IPv6 Default Gateway
  - IPv6 Neighbor Discovery (ND)
  - IPv6 Duplicate Address Detection
  - ICMPv6
- IPv6 Application
  - HTTP/HTTPS
  - TELNET
  - SSH
  - SNMP
  - TFTP
  - Syslog
  - PING
  - DHCPv6

Discovery

- IEEE 802.1AB Link Layer Discovery Protocol (LLDP)
- ANSI/TIA-1057 LLDP Media Endpoint Discovery (LLDP-MED)

MIB

- RFC1213 MIBII (System & Interface groups)
- RFC2819 RMON I (1,2,3, & 9 groups)
- RFC1215 Generic Traps
- RFC1493 Bridge
- RFC2674 Bridge MIB Extensions
- RFC2737 Entity
- RFC3635 Ethernet-Like
- RFC2863 Interface Group
- SNMP-Community-MIB
- SNMPv3-MIB

Management

- CLI
  - 3 sessions Console
  - 3 sessions Telnet (RFC854)
- WebUI
  - HTTPS
- SNMP(v1,v2c,v3)
- File Management
  - Firmware Upgrade/Backup
  - Dual Images
  - Configuration Download/Backup
  - Multiple Configurations
- Upload/Download
  - TFTP (RFC783)
  - HTTP
  - UART
- Time Management
  - Local
  - SNTP
- Port Management
  - Friendly Port Name (Port Description)
  - Error Disabled Recovery
- Line Management
  - Console
  - Telnet (RFC854)
  - SSH v1/v2
- DHCP
  - Client
- DNS
  - Client
- Software Reset Button
- IEEE (802.3az)
- 32 entries / type RMON Management

Diagnostics

- UDLD
- Mirroring
  - 4 sessions port-based (Many to One)
- Syslog (RFC3164)
  - Local RAM
  - Local Flash
  - 8 Remote Server
- System Diagnostics
  - CPU Utilization
  - Memory Utilization
  - Port Utilization
  - Technical Support Log
- Port Diagnostics
  - Cable Test
  - Fiber Module Status
- Network Diagnostics
  - Ping Test - Traceroute

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PRODUCT **SPECIFICATIONS**

Detailed technical parameters defining the system performance, input/output ports, and mechanical & environmental characteristics of the netwrok switch.

HARDWARE FEATURES

Component	Specification
Ports	12 x 10Gbps SFP+ fiber ports, 1x Console port
Power Supply	AC100−240V 50/60Hz
Protocol Standard	IEEE 802.3, IEEE 802.3z, IEEE 802.3ae
Indicator light	12 link/Act indicators, power input indicator, system operation indicator
Network medium	1000BASE-SX: 62.5um MMF (min. range: 2m−275m) or 50um MMF (min. range: 2m−550m) 1000BASE-LX: 62.5um/50um MMF (min. range: 2m−550m) or 9um SMF (min. range: 2m−5000m) 10GBASE-SR: OM1/OM2/OM3 or above MMF (operating range: 2m − 300m) 10GBASE-LR: IEC's B1.1 and B1.3 SMF (min. range: 2m − 10,000m)
Dimensions	312×200×44.5 mm
Forwarding mechanism	Store-and-Forward
Switching Capacity	240Gbps
Forwarding Rate	178.56Mpps
MAC Address Table	16K
Cache	16Mbit
Jumbo Frame	12KBytes
Environment	Operating Temperature: 0℃ −45℃ (32℉−113℉) Storage Temperature: -40℃ −70℃ (-40℉−158℉) Operating Humidity: 10%−90% non-condensing Storage Humidity: 5%−95% non-condensing

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