SNS-MR2252-2C-POE Switch

Fast Ethernet L2/4 Power Over Ethernet Switch 52- ports; 48 10/100BASE-T (RJ-45), two 10/100/1000BASE-T ports and 2 Combo Tri mode ports -100FX SFP (Small Form Factor Pluggable), 1000FX SFP or built-in RJ45 10/100/1000T for uplink with virtual IP Stacking support.

SNS-MR2252-2C-POE Product Overview

The SNS-MR2252-2C-POE is a high performance Fast Ethernet intelligent switch, part of the winning SNS-MR series. The SNS-MR2252-2C-POE Power Over Ethernet Switch is an adaptive secure switch with IEEE 802.af Power Over Ethernet (POE) capabilities, It can transfer data and up to 15.4 Watts, to power devices such as VoIP phones, wireless access points, surveillance cameras, over existing CAT 5 cables to distances of up to 100 meters.

The SNS-MR2252-2C-POE is providing enhanced features such as an advanced security, quality of service (QoS), GVRP, VLANs and IGMP Snooping. The SNS-MR2252-2C-POE delivers wire-speed QOS, Security Filtering and Rate Limiting to the network edge ports. The hardware forwarding and ASIC based ACL policy ensure no effect and maintaining the simplicity of LAN switching of 17.5 Gbps. Using advanced IP Clustering, for a virtual stack of up to 36 switches into a single manageable unit. The SNS-MR2252-2C-POE is ideal as access layer switch for education, government and large/medium enterprise networks. SNS-MR2252-2C-POE provides widespread L2/4 features such as BPDU Guard, BPDU Filter, Private VLAN,MVR, IEEE 802.3ad (LACP) Link aggregation, L4 QoS features include 802.1p and DiffServ, port-based 802.1x, Access Control Lists, SSH security features, HTTPS/SSL, rate-limiting, WRR, strict scheduling, Unique SMTP function to send alerts to the administrator's email box. The SNS-MR2252-2C-POE offers multiple security algorithms such as TACACS+, 802.1x, Port Security, Web management Encryption, SSL, RADIUS and Web management Encryption.

Key Feature Highlights:

- IEEE 802.af Power Over Ethernet (POE) compliant
- Transfer data and up to 15.4 Watts, 370 Watts per switch
- Power devices such as VoIP phones, wireless access points, surveillance cameras, over existing CAT 5 cables to distances of up to 100 meters
- POE power management features including per port short circuit protection
- Provide remote RESET for POE Power devices for easy troubleshooting.
- Wire-speed and line-rate performance on all ports.
- Auto MDI/MDIX and Auto-sensing on all ports
- Two Tri-mode Combo ports -100FX /1000FX SFP or RJ45 10/100/1000T
- Port Mirroring - Many-to-One, MAC mirror and VLAN mirror
- Enhanced Management features include WEB Management, Standard CLI, interface, SNMP, RMON, Telnet, Access control list, Standard CLI interface, SNMP, Syslog, SMTP (Logging to eMail) and IPv6 Management
- Full Layer 2 features including:
- Four hardware queues per port to enable comprehensive L2/4 QOS: Rate Limiting TCP/UDP, Priority Queue Scheduling, Priority Queue Scheduling,
- Port-base VLAN, Protocol-based Vlan (802.1v), Generic VLAN Registration Protocol (GVRP), Q-in-Q, MAC-VLAN and subnet-VLAN
- Internet Group Management Protocol (IGMP) Snooping
- Spanning Tree IEEE 802.1d, Rapid Spanning Tree Protocol 802.1w, 802.1s Multiple Spanning Tree Protocol.
- Link aggregation 802.3ad, Traffic Load Balancing, GVRP and 802.1x for port security.
- Enhanced Security - Port Security, IEEE 802.1x port-based or MAC based access, powerful ACL, Security Shell and Secure Sockets Layer encrypt network management information via Telnet and web.

IEEE 802.3af compliant

The SNS-MR2252-2C-POE Power Over Ethernet Switch is an adaptive secure switch with IEEE 802.af Power Over Ethernet (POE) capabilities, It can transfer data and up to 15.4 Watts to power devices such as VoIP phones, wireless access points, surveillance cameras, over existing CAT 5 cables to distances of up to 100 meters. The SNS-MR2252-2C-POE POE power management features including per port short circuit protection, Provide remote RESET for POE Power devices for easy troubleshooting. The SNS-MR2252-2C-POE switch is IEEE 802.3af compliant and flexible to power multiple vendors' devices up to 370 Watts per switch,

High Performance and architecture

The SNS-MR2252-2C-POE switch provides wire-speed switching fabric capacity of 17.5 Gbps, on all gigabit ports, allowing users to take full advantage of existing high-performance, gigabit integrated Servers, by significantly improving the responsiveness of applications and file transfer times. The SNS-MR2252-2C-POE 4C is providing four Gigabit Ethernet ports with flexible uplink, interface.

Enhanced Security Features

The SNS-MR2252-2C-POE switch provide enhanced security by using multiple mechanism to protect network. Port Security ensures access to switch ports based on MAC address limits the total number of devices from using a switch port and protects against MAC flooding attacks. Security Shell (SSH) and Secure Sockets Layer (SSL/ HTTPS) encrypt network management information via Telnet and web, providing secure network management. Terminal Access Controller Access Control System (TACACS+) or Remote Access Dial-In User Service (RADIUS) Authentication enables centralized control of the switch and restricts unauthorized users from altering the configuration of the switch. IEEE 802.1x port-based or MAC-based access control ensures that all users are authorized before being granted access to the network. User authentication is carried out using any standard-based RADIUS server. The SNS-MR2252-2C-POE switch offers Private VLAN isolated edge ports to ensure user privacy.

Comprehensive QOS and Rate Limiting

Four hardware queues per port to enable comprehensive L2/4 QOS: Rate Limiting TCP/UDP, Priority Queue Scheduling and Priority Queue Scheduling of up to 4 traffic types. Traffic is prioritized according to 802.1p and DSCP, giving optimal performance to real-time applications such as voice and video. Asymmetric bidirectional rate-limiting, per port or per traffic class, preserves network bandwidth and allowing maximum control of network resources.

Network Availability

With IEEE 802.1s Multiple Spanning Tree Protocol, IEEE 802.1w Rapid Spanning Tree Protocol and IEEE 802.1d Spanning Tree Protocol provides a loop-free network and redundant links to the core network with rapid convergence, to ensure faster recovery from failed links, enhancing overall network stability and reliability. IEEE 802.3ad Link Aggregation Control Protocol (LACP) increases bandwidth by automatically aggregating several physical links together as a logical trunk and providing load balancing and fault tolerance for uplink connections. IGMP snooping prevents flooding of IP multicast traffic and limits bandwidth intensive video traffic to only the subscribers. Broadcast Storm Control prevents faulty end stations from degrading overall system performance.

Complete variety of optical links Using SFP

The SNS-MR2252-2C-POE switch provides complete variety of optical links using 100FX /1000FX SFP for both single mode and multi mode SFP. The SNS-MR2252-2C-POE is ideally for applications where security and reliability required. The switch uses SFP transceivers for connections, providing the flexibility of running any mix of 100BASE-FX /1000BASE-FX multimode fiber up to 1.2 miles or single-mode fiber up to 120Km, respectively for cost-effective enterprise network solutions.

Comprehensive Management

The SNS-MR2252-2C-POE switch with Industry standard Command Line Interface (CLI) via Telnet or console port provides a common user interface and command set for users to manipulate the switch. Embedded user friendly web interface helps users quickly and simply configure switches. The switch can be managed and monitored using SNMP and Four groups of RMON for traffic and analysis. When upgrading firmware or fine tuning configuration, the dual software images and multiple configuration files can be used for backup. TFTP can be used to backup or restore firmware and configuration files.

Virtual IP Stacking Architecture

The new generation virtual IP stacking allows connecting up to 36 units of SNS-MR2252-2C-POE or up to 1872 ports into a single entity with single IP address. By using IP clustering and communicate directly with the commander switch, you could manage the remote side from the management station via single IP address.

Feature Summary

48 10/100BASE-T (RJ-45)
2 10/100/1000BASE-T (RJ-45)
2 Combo Tri mode ports -100FX/1000FX SFP or RJ45 10/100/1000BASE-T
1 RS-232 DB-9 console port

L2 Features

Auto- MDI/MDIX on all 10/100Base-TX ports
8K MAC address entries
Flow Control:

- IEEE 802.3x for full duplex mode
- Back-Pressure for half duplex mode

Spanning Tree Protocol:

- IEEE 802.1D Spanning Tree Protocol (STP)
- IEEE 802.1w Rapid Spanning Tree Protocol (RSTP)
- IEEE 802.1s Multiple Spanning Tree Protocol (MSTP)
- Loop Back Detection
- BPDU Guard
- BPDU Filter
- Root Guard
- Auto Edge

VLANs:

- Supports 255 IEEE 802.1Q VLANs
- Port-based VLANs
- IEEE 802.1v Protocol-based VLANs
- Private VLAN
- GVRP

Link Aggregation:

- Static Trunk
- IEEE 802.3ad Link Aggregation Control Protocol
- Trunk groups: 4, Trunk links: 2~8

IGMP Snooping:

- IGMP v1/v2/v3* snooping
- IGMP Queried
- IGMP Filtering

MVR (Multicast VLAN Registration)
DHCP Option 82
DHCP Dynamic provision
Supports jumbo frames up to 10KB

QoS Features

Priority Queues: 4 hardware queues per port
Traffic classification based on IEEE 802.1p CoS, IP and DSCP.
Supports WRR and Strict scheduling
Bandwidth Control:

- Egress rate limiting: FE: 64K bits/sec - 100M bits/sec GE: 64K bits/sec - 1000M bits/sec
- Ingress rate limiting: FE: 64K bits/sec - 100M bits/sec GE: 64K bits/sec - 1000M bits/sec

Security

Supports IEEE 802.1X port based/MAC-based access control
Qos Assignment
RADIUS authentication
IP Source Guard
Dynamic ARP Inspection
Link Detection
MAC Filter
TACACS+ 3.0
Access Control List
SSH (v1.5/v2.0)
SSL

Management

Switch Management:

- CLI via console port or Telnet
- WEB management
- SNMP v1, v2c, v3

Firmware & Configuration:

- Dual firmware images
- Firmware upgrade via TFTP server
- Multiple configuration files
- Configuration file upload/download via TFTP server

Auto Upgrade via TFTP server
Supports RMON (groups 1, 2, 3 and 9)
Supports BOOTP, DHCP for IP address assignment
Supports SNTP
Event/Error Log/Syslog
Dynamic ARP Inspection
sFlow
MAC Based Mirror
Delay Reload

SNMP Standards

- RFC 1493 Bridge MIB
- RFC 3289 Differentiated Service MIB
- RFC 2742 SNMP Agents MIB
- RFC 2096 Forwarding Table MIB
- RFC 2933 IGMP MIB
- RFC 2233 Interface Group MIB
- RFC 2668 MAU MIB
- RFC 1213 MIB II

- RFC 2621 RADIUS Authentication Client MIB
- RFC 2819 RMON MIB
- RFC 2021 RMON II Probe Configuration Group
- RFC 2011 SNMPv2 IP MIB
- RFC 3584 SNMP Community MIB
- RFC 3411 SNMP Framework MIB
- RFC 3412 SNMP-MPD MIB
- RFC 3413 SNMP Target MIB, SNMP Notification MIB
- RFC 3414 SNMP User-Based SM MIB
- RFC 3415 SNMP View Based ACM MIB
- RFC 2013 TCP MIB
- RFC 1215 Trap
- RFC 2012 UDP MIB
- RFC 2013 TCP MIB
- RFC 1541 DHCP Client
- RFC 1112 IGMP
- RFC 2236 IGMPv2
- RFC 2618 RADIUS
- RFC 1757 RMON
- RFC 1157 SNMP
- RFC 2571 SNMPv2
- RFC 2030 SNTP
- RFC 1350 TFTP
- TACACS Authentication Client MIB
- Private MIB
- Quality of Service MIB

IEEE 802.3af POE Features

Power Over Ethernet Features
Compliant with IEEE802.3af.
Power feeding of Ethernet limited for fixed 10/100Base-T/TX ports only.
Provides power to the appliance over the Ethernet cable.
Centralized Power Distribution – Multiple access points can be connected to a single switch.
Automatic Load Sensing – Power control circuitry automatically detects Power Over Ethernet on access point before providing power.
Power start/stop (remote sense).
Maximum output power per port up to 15.4 Watts, 370 Watts per switch.
Provides power on all 48 ports.
Support 10/100Base-TX port on the management agent for the In-band management function such as Telnet.
Independent overload and short-circuit protection for each port.
LED indicators for power status per port.
Power on/off command for each port.
Support IEEE802.3af MIB for power over Ethernet function.

IEEE Standards

IEEE 802.1D Spanning Tree Protocol and traffic priorities
IEEE 802.1 w Rapid Spanning Tree Protocol
IEEE 802.1p Priority tags
IEEE 802.1Q VLAN
IEEE 802.1v Protocol-based VLANs

IEEE 802.1x Port Authentication
IEEE 802.3-2005
Ethernet, Fast Ethernet, Gigabit Ethernet
Full-Duplex flow control
Link Aggregation Control Protocol
IEEE 802.3ac VLAN tagging

Mechanical

Dimensions (H x W x D): 4.5 x 44 x 34.8 cm (1RU)
LED Indicators: Port, Uplink, System, Diagnostic

Safety

UL/ CUL ; CSA/CUS (UL60950-1, CSA 22.2.No 60950-1)
TUV/GS (EN60950-1) ; CB (IEC60950-1)

Electromagnetic Compatibility

CE Mark
FCC Class A
VCCI Class A
CISPR Class A

Temperature:

- IEC 68-2-14
- 0℃ to 40℃ (Standard Operating)
- -40℃ to 70℃ (Non-Operating)

Humidity: 10% to 90% (Non-condensing)
Vibration: IEC 68-2-36, IEC 68-2-6
Shock: IEC 68-2-29
Drop: IEC 68-2-32

Ordering Information

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* Future specification

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