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Niveo Professional Enterprise Series

NGSME8F2xu

8-port 2.5GbE managed PoE++ switch with two 10GbE SFP+ ports.



PRODUCT DATASHEET

NGSME8F2xu

Product Specification

Introduction

The switch is 8-port 100M/1G/2.5G Base-T + 2-port 1G/2.5G/10G SFP+Open Slot Rack-mount L2+ Full Management Network Switch that is designed for medium or large network environment to strengthen its network connection. The switch supports 80G non-blocking switch fabric, its eight 2.5G ports and two 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 10G uplink port design is available and important for high bandwidth uplink request when cascaded with other switch. The switch also supports Layer 2/3 full management software features. These features are powerful to provide network control, management, monitor and security feature requests. With 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.

IEEE 802.3at/af/bt Power over Ethernet (PoE) Ports

This product can convert standard 100~240V/AC power into low-voltage DC that runs over existing LAN cable to power up IEEE 802.3at/af/bt compliant network accessories. It also features PoE awareness to verify whether the network device receive power is IEEE 802.3at/af/bt compliant, or only the data will be sent through LAN cable. By adding the switch to the existing networking, installing networking products such as Access Points and IP cameras can be easily managed and set up. Wireless device deployments are easily located with available power outlets and network administrators don't need to use heavy AC power adapters anymore.

IEEE 802.3bz NBASE-T 2.5G Ports

Based on the existing Gigabit Ethernet and 10 Gigabit Ethernet standards, all 8 of NGSME8F2xu's RJ45 ports' transmitting speed can reach 2.5G with CAT-5E cables, far exceeding the 1 Gigabit transmitting speed that is common seen in other switches.

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 interface. The user can also aggregate the 10G ports as Trunk group to enlarge the bandwidth.

Full Layer 2/3 Management Features

The switch includes full Layer 2/3 Management features. The software set includes up to 4K 802.1Q VLAN and advanced Protocol VLAN, Private VLAN, MVR… advanced VLAN 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

binding 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 2/3 Access Control List allows user to define the access privilege based on IP, MAC, Port number… etc.

PD Alive Check

When this function is enabled, NGSME8F2xu will detect a network PoE powered device (for example, an IP CAM) with a set of IP address periodically. If the switch doesn't get any replies from the network PoE powered device, NGSME8F2xu will do a power cycle (PoE power OFF, and PoE power ON) to the port that connects the network PoE powered device, allowing that device to reboot. You can set the frequency of detecting, number of times of detecting, and the time period to perform power cycle when there's no reply via the switch's PoE configuration web page.

Specifications

Interface		
100M/1G/2.5G Base RJ45 Ports		8
1G/2.5G/10G Base-X SFP+ Port		2
Console Port for CLI management		1
System Performance		
MAC Address Table Size		32K
Buffer Memory		16Mb
RAM Memory		4GB
Flash Memory		32MB
Switching Capacity		80Gbps
Forwarding Rate		59.52Mpps
PoE Features		
IEEE 802.3 af/at/bt		•
Number of PSE Ports		8 Ports, up to 90W per port
PoE Mode		Mode A (1&2 DC+, 3&6 DC-)
Max. Power Consumption		310W
External/Internal Power		Internal Power
Power Feeding Detecting Capability on PD		•
PD Alive Check		•
PD Classification		•
PoE Scheduling		•
Power Management (per port)	Enable/Disable PoE per port	•
	Priority setting per port	•
	Power Level Setting per port	•
	Overloading Protection	•
L2 Features		
Auto-negotiation,		•
Auto MDI/MDIX		•
Flow Control (duplex)	802.3x (Full)	•
	Back-Pressure (Half)	•
Spanning Tree	IEEE 802.1D (STP)	•
	IEEE 802.1w (RSTP)	•
	IEEE 802.1s (MSTP)	•
VLAN	VLAN Group	4K
	Tagged Based	•
	Port-based	•

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	Q-in-Q	•
	Voice VLAN	•
Link Aggregation	IEEE 802.3ad with LACP	•
	Static Trunk	•
	Max. LACP Link Aggregation Group	5

IGMP Snooping	IGMP Snooping v1/v2/v3	•
	IPv6 MLD Snooping	Supports 1024 MLD groups
	Querier, Immediate Leave	•
Storm Control (Broadcast/Multi-cast/Un-known Unicast)		•
DHCP Server by VLAN		•
Jumbo Frame Support		9.6KB
Static Routing		Up to 16 Static Routes
QoS Features		
Number of priority queue		8 queues/port
Rate Limiting	Ingress	Yes, 1KBps/1pps
	Egress	Yes, 1KBps/1pps
DiffServ (RFC2474 Remarking)		•
Scheduling (WRR, Strict, Hybrid)		•
CoS	IEEE 802.1p	•
	IP ToS precedence, IP DSCP	•
Security		
Management System User Name/Password Protection		•
User Privilege		Set user privilege up to 15 Level
Port Security (MAC-based)		•
IEEE 802.1x Port-based Access Control		•
ACL (L2/L3/L4)		•
IP Source Guard		•
RADIUS (Authentication, Authorization, Accounting)		•
TACACS+		•
HTTP & SSL (Secure Web)		•
SSH v2.0 (Secured Telnet Session)		•
MAC/IP Filter		•
Management		
Command Line Interface (CLI)		•
Web Based Management		•
Telnet		•
Access Management Filtering		SNMP/WEB/SSH/TELNET
Firmware Upgrade via HTTP		•
Dual Firmware Images		•
Configuration Download/Upload		•
SNMP (v1/v2c/v3)		•
RMON (1,2,3,&9 groups)		•
DHCP (Client/Relay/Option82/Snooping)		•
System Event/Error Log		•
NTP/LLDP		•
Cable Diagnostics		•
IPv6 Configuration		•
Port Mirroring		•
Physical Characteristics		
Dimension (H*W*D)		44 × 330 × 210 mm
LED		Power, PoE, Link/Act, SFP
Power Requirement		
Power Input		100~240VAC, Internal Power Supply
Environment Limits		
Operating Temperature		0~50°C

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Storage Temperature	-10~70°C
Operating Humidity	10~90% (non-condensing)
Storage Humidity	10~90% (non-condensing
Certifications	
Safety	FCC Class A, CE mark, Commercial, VCCI Class A IEC 61000-4-5 (surge) Lv.5: Line to Earth 6kV
Standard	
IEEE 802.3 – 10Base-T	•
IEEE 802.3u – 100Base-TX	•
IEEE 802.3ab – 1000Base-T	•
IEEE 802.3z – 1000 Base-SX/LX	•
IEEE 802.3ae – 10G Base Ethernet	•
IEEE 802.3bz – NBASE-T	•
IEEE 802.3af – Power over Ethernet (PoE)	•
IEEE 802.3at – Power over Ethernet (PoE+)	•
IEEE 802.3bt – Power over Ethernet (PoE++)	•
IEEE 802.3az - Energy Efficient Ethernet (EEE)	•
IEEE 802.3x - Flow Control	•
IEEE 802.1Q – VLAN	•
IEEE802.1v - Protocol 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)	•
IEEE 802.1AB - LLDP (Link Layer Discovery Protocol)	•
IEEE 802.1X - Access Control	•