



## NGSM24G4S

(24-Port 10/100/1000Base-T + 2-Port 10G SFP+ Full Management Stackable Switch, with optional 500 Watt PoE plus( NGSME24G4s)

- \* 24-Port Gigabit Copper + 2-port 10G SFP+
- \* 2-port 10G SFP+ for Stacking
- \* 1G SFP/10G SFP+ Available
- \* Stack up to 16 switches into one single switch
- \* 802.3az Energy Efficient Ethernet
- \* 88G 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

**More information:**

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# Product Specification

## Introduction

The NGSM24G4S 24-port 10/100/1000Base-T and 2 10G SFP+ for Stacking and 2 10G SFP+ Open Slot Rack-mount L2+ Full Management Network Switch is designed for medium or large network environments to strengthen the network connectivity. The switch supports 136G non-blocking switch fabric, the 24 gigabit ports and 2 10G ports can transmit and receive data traffic without any lost. The EEE feature reduces the power consumption automatically when there is no traffic forwarding, even when the port is still connected.

The 10G uplink port design is available and important for high bandwidth uplink request when cascaded with other switches. The switch also supports Layer 2+ full management software features 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 NGSM24G4S has 2 10G SFP+ open slots as uplink ports. The 10G uplink design provides an excellent solution for expanding your network from 1G to 10G. At 10G speed, this switch provides high flexibility and high bandwidth connectivity to another 10G switch or tServers, Workstations and other attached devices supporting 10G interface. The user can also aggregate the 10G ports as Trunk group to enlarge the bandwidth.

## Stacking Features

The switches include a stacking feature by using 2 SFP+ ports that allows multiple switches to operate as a single unit. A single switch in the stack can manage all the units in the stack and uses a single IP address which allows the user to manage every port in the stack from this one address. These stacks can include up to 16 switches, or a total 384 gigabit ports plus 32 10G ports in a switch.

## 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 loops, 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.

## 802.3az Energy Efficient Ethernet

The EEE feature reduces the power consumption automatically when there is no traffic forwarding, even when the port is still connected



## Optional PoE Features (NGSME24G4S)

The PoE switch is 802.3af/at Compliant, with a maximum power Output Per port of 30W, Total Power Consumption is **500W** Current Sharing.

### 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... etc.

## Specifications

<b>Standards</b>	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
<b>Interface</b>	Number of Port: 28 10/100/1000Base RJ-45 Port : 24, Auto-negotiation, Auto MDI/MDIX 1G SFP/10G SFP+: 2 Stacking slot : 2 10G
<b>Performance</b>	<b>Switching Capacity:</b> 136G bps <b>MAC Address Table Size:</b> 32K <b>Forwarding Rate:</b> 95.2Mpps <b>Packet Buffer:</b> 32Mb
<b>L2 Features</b>	<b>Flow Control:</b> 802.3x (Full-duplex)ort/ Back-Pressure (Half-duplex) <b>Spanning Tree:</b> IEEE 802.1D-2004(Includes IEEE 802.1w): Rapid Spanning Tree Protocol 802.1s Multiple Spanning Tree Protocol <b>Loop Detection</b> <b>VLAN:</b> IEEE 802.1Q Tagged Based, Max. VLAN Group: 4K QinQ Port-based VLAN Voice VLAN



	<p>Private VLAN MVR MAC-Based VLAN Protocol-Based VAN</p> <p><b>Link Aggregation:</b> IEEE 802.3ad with LACP: 14 trunks/ up to 8 port per trunk Static Trunk: 14 trunks/ up to 8 port per trunk Max. Group:14 Max. Ports/Group:8</p> <p><b>IGMP Snooping:</b> IGMP Snooping v1/v2/v3 IPv6 MLD Snooping v1/v2 Queries support/ IGMP Filtering, IGMP Leave Proxy, Immediate Leave</p> <p><b>Storm Control:</b> Broadcast/ Multi-cast/ Un-known Unicast</p> <p><b>Jumbo Frame Support:</b> 10K</p>
PoE Features	<p><b>802.3af/at Compliant</b> <b>Max. Power Output Per Port:</b> 30W <b>Power Consumption :</b> 250W / 500W Current Sharing <b>Internal Power:</b> In <b>PD Classification</b> <b>Power Management:</b> Enable/Disable per-port Priority Setting per-port Overloading Protection per-port Power Level Setting per-port</p>
QoS features	<p><b>Number of Priority queue:</b> 8 queues/ port <b>Scheduling for priority queue :</b> WRR/Strict Priority scheduling/Hybrid</p> <p><b>CoS :</b> 802.1p/ IP Precedence/ IP TOS Precedence IP DSCP/ Port based Priority</p> <p><b>Rate Limiting:</b> Ingress/Egress: 1Kbps/ 1pps granularity <b>DiffServ (RFC2474) remarking</b></p>
Security	<p><b>User Name / Password Protection</b> <b>Stacking Unit:</b> max 16 <b>User Privilege:</b> up to 15 levels <b>IEEE 802.1x:</b> Port-based Access Control <b>IP Source Guard</b> <b>MAC Based Authentication</b> <b>Web-based Authentication</b> <b>HTTPS</b> <b>SSHv2</b> <b>RADIUS:</b> Authentication/ Accounting <b>TACACS+:</b> Authentication <b>ACL (Access control list)</b></p>



<b>Management</b>	<b>Command Line Interface (CLI)</b> <b>Web Based Management</b> <b>Telnet</b> <b>Access Management Filtering: SNMP/ WEB/SSH/TELNET/</b> <b>SNMP: v1/v2c/v3</b> <b>RMON: RMON (1,2,3, &amp; 9 groups)</b> <b>DHCP: Client/ Relay/ Option82/ Snooping</b> <b>Event/Error Log: Local Flash/ Remote Server</b> <b>Software Download/ Upgrade: HTTP</b> <b>Configuration Download / Upload</b> <b>sFlow</b> <b>Port Mirroring: One to One/ Many to One</b> <b>Remote Ping</b> <b>NTP/LLDP</b> <b>UPnP</b> <b>EEE Configuration</b> <b>Cable Diagnostics</b> <b>IPv6 Configuration</b>
<b>Power Input</b>	100~240VAC
<b>Mechanical</b>	Dimension mm(H*W*D) : 44*440*331 Weight :4.7 kg
<b>Operating Temperature</b>	0~40°C/32~104 °F
<b>Humidity</b>	5~90% (non-condensing)
<b>Certifications</b>	FCC Class A, CE, c-UL-us