



### NGSM4T12

(12-Port 1G/2.5G/10Gbps SFP+ & 4-Port 10M/100M/1Gbps RJ45 Layer 2/3 Full Management Ethernet Switch)

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## **Product Specification**

#### Introduction

The NGSM4T12 switch is 4-port 10 Base-T /100 Base-TX /1000Base-T + 12 x 10 Gigabit SFP+ Ports Rack-mount L2/L3 Full Management Network Switch that is designed for medium or large network environment to strengthen its network connection. The switch supports 248G nonblocking switch fabric, the 4 gigabit ports and 12 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.

#### 12 10 Gigabit SFP+ Open Slots

The switch has 12 x 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 other attached devices which support 10G interfaces. The user can also aggregate the 10G ports as Trunk group to enlarge the bandwidth.

#### Full Layer 2/3 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... 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 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.

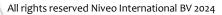


# **Specifications**

Interface				
1G/2.5G/5G/10Gbps SFP+ Slot		12		
10M/100M/1Gbps Copper Port		4		
Console Port for CLI Management		1		
System Performance				
Packet Buffer		32Mb		
NAND Flash Memory		2Gb		
NOR Flash Memory		256 Mb		
SDRAM Memory (DDR3)		4Gb		
MAC Address Table Size		32K		
Jumbo Frame		10KB		
Switching Capacity		248Gbps		
Forwarding Rate (64-byte)		184.512Mpps		
L2 Features				
Auto-Negotiation		•		
Auto MDI/MDIX		•		
Flow Control (Duploy)	802.3x (Full)	•		
Flow Control (Duplex)	Back-Pressure (Half)	•		
	IEEE 802.1D (STP)	•		
Spanning Tree	IEEE 802.1w (RSTP)	•		
	IEEE 802.1s (MSTP)	•		
	VLAN Group	4K		
	Tagged Based	•		
VLAN	Port-Based	•		
	Q-in-Q	•		
	Voice VLAN	Voice VLAN with OUI		
	IEEE 802.3ad with LACP	•		
	Static Trunk	•		
Link Aggregation	Max. Static Aggregation Group	8		
	Max. Port Per Static Aggregation Group	8		
	IGMP Snooping v1/v2/v3	Supports 1024 IGMP groups		
	IGMP Static Multicast Addresses	Supports 1024 static multicast addresses		
IGMP Snooping	IPv6 MLD Snooping	Supports 1024 MLD groups		
	MLD Static Multicast Addresses	Supports 1024 static multicast addresses		
	Querier, Lmmediate Leave	•		
Storm Control (Broadcast/Multi-cast/Un-known		•		
Unicast) Loop Protection		•		
QoS Features		· · · · · · · · · · · · · · · · · · ·		
		8 quoues/port		
Number of priority queue   Rate Limiting Ingress		8 queues/port Yes, 1KBps/1pps		
	Ingress	100, 110po/ 1ppo		



<b>F</b> arrage			
Egress	Yes, 1KBps/1pps		
DiffServ (RFC2474 Remarking)	•		
Scheduling (WRR, Strict, Hybrid)	•		
IEEE 802.1p			
CoS IP ToS precedence, IF 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, Account	ing) •		
TACACS+	•		
HTTP & SSL (Secure Web)	•		
SSH v2.0 (Secured Telnet Session)	•		
MAC/IP Filter	I		
L3 Features			
Static Route	•		
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/Server)	•		
System Event/Error Log	•		
TFTP (Trivial File Transfer Protocol)	•		
NTP/LLDP	•		
Cable Diagnostics	•		
IPv6 Configuration	•		
Port Mirroring	•		
Physical Characteristics			
Dimension (W x H x D)	Internal PSU: 330 x 44 x 210 mm		
Reset Button	1 Reset Button for resetting default		
LED	Power, Link/Act		
Cooling	Fan Cooling		
Enclosure	Metal		
Installation	Desktop / Rack Mount		
Weight	2.4kg		
System Power Requirement			
System Power Input	12Vdc		
Max. System Power Consumption	26W		
Power Supply Information			
Internal Power Supply	Input: 100-240V~, 50/60Hz, 2.0A MAX. Output: 12Vdc/8.33A		
Environment Limits			
Operating Temperature	0~50 °C		





Storage Temperature	-20~80 °C
Operating Humidity	Max. 90% RH (Non-condensing)
Storage Humidity	Max. 90% RH (Non-condensing)
Certifications	
FCC	•
VCCI	•
EMC	Class A
LVD	•
Standard	
IEEE 802.3 – 10BaseT	•
IEEE 802.3u - 100BaseTX	•
IEEE 802.3ab - 1000BaseT	•
IEEE 802.3z 1000BaseSX/LX	•
IEEE 802.3ae 10GBase SFP+	•
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	•
IEEE 1588v2 - Precision Time Protocol (PTP)	•

