



Niveo Professional 10GbE SDVoE-Ready switches

N10GSM24X – 24P 10G Base-T L3 Managed Switch, + 2*100G, SDVoE-ready

N10GSM24XP – 24P 10G Base-T L3 PoE++ Switch, + 2*100G, SDVoE-ready

N10GSM48X – 24P 10G Base-T L3 Managed Switch, + 2*100G, SDVoE-ready

More information:

WWW.NIVEOPROFESSIONAL.COM

INFO@NIVEOPROFESSIONAL.COM



Introduction

Our Niveo Professional N10GSM-series designed for Audio/Video, Security and Broadcast integrations. Series routing switches, high-performance Layer 3 Ethernet switch with 10G /Multi-Gigabit / 100G QSFP28 Ports compact 1U form factor. The switches provide a powerful Layer 3 routing solution for next generation enterprise, Wi-Fi 6 Access, Metro and HCI (Hyper Converged Infrastructure) networks and High density Video-over-IP solutions.

Supporting Video-Over-IP Solutions: Small to extremely large

Our Niveo Managed N10GSM(E)-Switches are optimized for Video-over-IP, providing multicasting with IPGM Querier and Fast Leave to support very crisp switching of channels. The switches support any mainstream Video-over-IP Solution up to 20Gbps:



Ultra-Long-Distance PoE++

The N10GSM24XP supports PoE++, with a reach up to 300m. Compatible 802.3af/at/bt standard.

System Design for Green and Energy Saving

Intelligent FAN adjustment and real-time power consumption monitoring technology are provided for the cost of maintenance reduction and to help build green and energy saving networks, whilst keeping fan noise to a minimum.

Advanced Features

The N10GSM-Series routing switches supports leading edge Data Center features: like Priority Flow Control (PFC), explicit Congestion Notification (ECN) and Data Center TCP. The MLAG feature (Multi-Chassis Link Aggregation) enables streams over 10Gbps and allows for true uncompressed 4K60 4.4.4 streams. Or can be used to facilitate multi-switch Video-over-IP designs for 400+ 10Gbps streams in a single design or 2000+ 1 Gbps endpoints in a setup.

Ultimate Installer Support

All Niveo Switches include lifetime access to software updates and support, without any additional costs for care packs. Niveo Switches come full installer support, making network design and configuration a breeze.



Our support team is proud to assist integrators with:

- Network design and best practices
- Configuration file creation and assistance
- Trouble shooting

Specifications

	N10GSM24XP	N10GSM24X	N10GSM48X
Ethernet Ports	- 24 * 100/1G/2.5G/5G/10GBASE-T - 2*100Gb QSFP28		- 48*1G/2.5G/5G/10G BASE-T - 4*40G QSFP28
802.3BT POE++ Ports	24	N/A	N/A
Power Supplies	2*600W PoE Hot-swappable Power Supplies	2*350W (1+1 Redundancy) Hot-swappable Power Supplies	2*350W (1+1 Redundancy) Hot-swappable Power Supplies
Management Ports	1*Console Port (RJ45) 1* Ethernet Management Port (RJ45) 1* USB Port		
Fans	2*Hot-swappable Fan Module (2 Fans Per Module)		
Airflow	Front-to-Rear		
Flash Memory	8GB EMMC (OS) 4MB SPI Flash (Boot)		2GB (NAND)
DRAM	2GB		1GB
Switching Capacity	880Gbps		1.92Tbps
MAC address	98304		131072



Software Features

Ethernet basic features	Ethernet	interface	Ethernet interface operating modes(full duplex, half duplex, and auto-negotiation)	
			Ethernet interface operating rates	
			Jumbo Frame	
			port-xconnect	
		Flow-control	Flow-control tx/rx	
		storm-control	Port based storm-control	
		Port-block	Port-block(know/unknown unicast; know/unknown multicast/broadcast)	
		Port-isolate	L2/L3/AllPort-isolate	
			Uni-direction isolate	
		L2 Protocol Tunnel	L2 Protocol Tunnel(support CDP/CFM/DOT1X/LLDP/SLOW-PROTO/STP/VTP	
		Forward mode	Store-and-forward	
			Cut-through	
		VLAN	VLAN Access mode	Access/Trunk
				Default VLAN
	VLAN Classification		VLAN Classification(port based/mac based/IP based/protocol based)	
	QinQ		Basic QinQ	
			Selective QinQ	
			VLAN Mapping('1:1 VLAN Translation')	
	VLAN Statistics		VLAN Statistics	
	Private VLAN		Private VLAN	
	Voice VLAN		Voice VLAN	
	Guest VLAN	Guest VLAN		
	MAC	MAC Address Table	Automatic learning and aging of MAC addresses	
			Hardware Learning	
			Static and dynamic MAC address entries	



			Blackhole MAC
		MAC Flapping detect	MAC Flapping detect
		Port Bridge	Port Bridge
	LAG	Link aggregation	Static-LAG & LACP
			LAG load balance(SLB)
			LAG load balance(DLB)
			LAG load balance(RR)
			LAG Self-healing
			Link aggregation weighting
Ethernet Ring protection features	xSTP	STP	Spanning-Tree Protocol
		RSTP	Rapid Spanning-Tree Protocol
		MSTP	Multi-instance Spanning-Tree Protocol
		Spanning-Tree Protocol Protection	BPDU Filter/Guard
			Root Guard
			Loop Guard
			Anti TC-BPDU attack
	ERPS	ERPS	Single ERPS ring
			tangent ERPS rings
			intersecting ERPS rings
			compatible with RRPP
	Loop back Detect	Loop back Detect	Loop back detection
	Layer2 Multicast	Layer2 Multicast	IGMP Snooping
Fast leave			
Static IGMP snooping group			
MVR			MVR(Multicast VLAN Registration)
IPv4 Forwarding	ARP	ARP	Static and dynamic ARP entries
			Aging of ARP entries
			Gratuitous ARP
		ARP proxy	basic ARP-Proxy
			local ARP-Proxy
		IPv4 Unicast Routing	IPv4 Static Routes
	Black hole Routes		



			co-work with IP SLA
			VRF(Virtual Routing and Forwarding)
			uRPF check
		RIP	RIPv1/v2
		Route policy	Route-map
			IPv4 prefix-list
		PBR	PBR(Policy-based Routing)
		ICMP	ICMP redirect
			ICMP unreachable
		ECMP	ECMP(SLB)
			ECMP(DLB)
			ECMP(RR)
			ECMP Self-healing
		IP unnumbered	IP unnumbered
	IPv4 Multicast Routing	IGMP	IGMPv1/v2/v3
			IGMP-Proxy
			IGMP SSM Mapping
IPv6 Forwarding	IPv6 Unicast Routing	VRRP v3	VRRP v3
	VRRP	VRRP	VRRP
			Track for VRRP
	Smart Link	Smart Link	multi-instance
			load balance
			Multi-Link
			Monitor-link
	MLAG	MLAG	MLAG basic
			MLAG orphan Port
QoS features	QoS	Traffic classification	Traffic classification based on COS/DSCP (simple classification)
			Traffic classification based on ACL (complex classification)
			Traffic classification based on inner header of the tunnel packets
		Traffic behaviors	Queue scheduling
			Remark the priority fields(COS/DSCP) of the packet based on ACL



			Remark the priority fields(COS/DSCP) of the packet based on Table Map
			Flow redirection
			Flow mirror
		Traffic policing	Traffic policing based on direction(in/out) of Port
			Traffic policing based on direction(in/out) of VLAN
			Traffic policing based on direction(in/out) of flow
			Traffic policing based on direction(in/out) of aggregated flow
		Traffic shaping	Queue based traffic shaping
			Port based traffic shaping
WDRR(Weighted Deficit Round Robin)scheduling			
SP + WDRR mixed scheduling			
Congestion avoidance	TD(Tail Drop)		
	WRED(Weighted Random Early Detection)		
Traffic statistics	Packet counts and bytes statistics based on traffic classification		
	Packet counts and bytes statistics based on the color after traffic policing		
	Forwarded and discarded packet counts and bytes statistics		
Data Center	VARP		
Security and management	System Security	SSH	SSHv1/v2
			RSA Key generation
		RADIUS	RADIUS
		TACAS+	TACAS+
		AAA	Authentication
			Authorization
			Accounting



		Dot1x	Port based dot1x	
			MAC based dot1x	
			Guest VLAN	
		ACL	MAC/IP ACL	
			Basic Mode ACL	
			Port-group ACL	
			VLAN-group ACL	
			IPv6 ACL	
			ACL UDF	
			Global ACL	
			Time Range	
			ARP Inspection	ARP Inspection
			IP Source Guard	IP Source Guard
		Port Security	Limitation on MAC address learning on interface	
		VLAN Security	Limitation on MAC address learning on VLAN	
		Control Plane Policy (COPP)	Black list/wihte list	
			Rate limit	
		CPU Traffic Limit	CPU Traffic Limit	
		Prevent DDOS attack	Prevent DDOS attack (ICMP Flood/Smurf/Fraggle/LAND/SYN Flood)	
		Login filter	Telnet/SSH ACL filtering	
Telnet/SSH IPv6 ACL filtering				
Network Management	Link-Flapping detection	Link-Flapping detection		
	DHCP	DHCP Server		
		DHCP Relay		
		DHCP Snooping		
		DHCP Client		
		DHCP Option82		
		DHCP Option252		
	RMON	RMON		
	sFlow	sFlow v4/v5		
	IP SLA	IP SLA		
EFD	Elephant Flow Detection			



		NTP	NTP(Network Time Protocol)
		Err-disable	Err-disable detection and recovery
		DNS	Static DNS Client
		LLDP	LLDP
	Terminal Services	Command Line Interface	Configurations through CLI (Command Line Interface)
		Help information	Banner configuration
			Help information in English
		Terminal service	Vty Terminal service
	Console Terminal service		
		Management interface	In-band management interface and configuration
			Out-band management interface and configuration
User privilege management		privileged user priority and privileged commands	
Configurati- on and Mainte- nance	Configurati- on Manage- ment	SNMP	Network management based on SNMPv1/v2c/v3
			Public and private MIB
			Public and private Trap
		WEB	Configuration and management based on WEB UI
		RPC-API	Configuration and management based on RPC-API
Smart Config	Smart Config(Automatically configuration at system start)		
		OVSDB	Configuration and management based on OVSDB
		system profile configuration	change the system specifications by choose different STM Profiles
		License control	Feature configuration based on License
		Restore factory default configuration	Restore factory default configuration



	File System	File system	File system(support directory and file management)
		Upload and download	Upload and download files through FTP or TFTP
Upload and download files through Xmodem			
Debugging And Maintenance	Debug		per-module Debug features
			ICMP Debug
	BHM		Software process monitor:
			BHM(Beat Heart Monitor)
			Hardware Watch Dog
	Log & alarm		CPU usage display and alarm
			Memory usage display and alarm
			Device temperature, PSU, FAN, status display and alarm
			User operation logs
			Management of logs, alarms, and debugging information
	VCT		VCT(Virtual Cable Test)
	system diagnostics		Detailed Diagnostic-information collection
	Reboot		Manual reboot
			Schedule Reboot
			Reboot Information logging
	network diagnostics		Ping
			IPv6 Ping
			Trace route
	mirror		Port mirror
			Flow mirror
		Remote mirror	
		Multi-destination mirror(m:n)	
		Use CPU as mirror source	
		Use CPU as mirror destination and analyze packet	
		ERSPAN	



		CPU statistics	To CPU/From CPU packets statistics
		L2 Ping	layer2 network connectivity detection - L2Ping (MAC Ping/Trace)
		UDLD	UDLD(Unidirectional Link Detection)
		unidirectional	unidirectional forwarding of the fiber
		Loop back	port loop back
			hardware loop back(internal/external)
		System time	Time configuration
			Timezone



Performance

Class	Feature	Sub Spec					
			Default Profile	Extended-buffer	IPv6 Profile	Layer3 Profile	Ipran Profile
Ethernet Basic	Jumbo frame	Maximum Jumbo frame size	9600	9600	9600	9600	9600
	Unicast MAC	MAC address Capacity	98304	12288	98304	98304	98304
		MAC Learning Rate (SW)	> 4000pps				
		MAC Learning Rate (HW)	> 10Gbps				
		Blackhole MAC address capacity	128				
	Multicast MAC	MAC address Capacity	2048	1024	1024	1024	2048
	VLAN	VLAN IDs	4094				
		VLAN Instances	4094				
		VLANs to enable statistics	256				



builds Network and Power products for AV and Security integrators, designed by and supported with AV and Security integrators.

Our aim is to make Network and Power as good as it can be with the application in mind. Selected proven technologies, combined with a range of proprietary feature, built with the best available chipsets and components make these products stand out against all its peers. The unparalleled support make it a class on its own!

Niveo Professional offers products in the following categories:

Enterprise Switches



Wireless Networks



AVB SWITCHES



Business Switches



Fiber Accessories



For more information, please contact your local representative or contact us at: info@niveoprofessional.com or visit our website:

UPS Systems



PDU's



www.niveoprofessional.com