



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, + 4*40G, SDVoE-ready
N10GSM8QF48 48P 10G SFP+L3 Managed Switch+ 8 100G QSFP28

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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.

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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	N10GSM8QF48
Ethernet Ports	- 24 * 100/1G/2.5G/5G/10GBASE-T - 2*100Gb QSFP28		- 48*1G/2.5G/5G /10G BASE-T - 4*4QSFP28	48*10G SFP+ + 8 x 100G QSFP 28
802.3BT POE++ Ports	24	N/A	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	Fixed single power supply
Management Ports	1*Console Port (RJ45) 1* Ethernet Management Port（RJ45） 1* USB Port			
Fans	2*Hot-swappable Fan Module （2 Fans Per Module）			4 fixed fans
Airflow	Front-to-Rear			
Flash Memory	8GB EMMC （OS） 4MB SPI Flash（Boot）		2GB (NAND)	
DRAM	2GB			
Switching Capacity	880Gbps		1.92Tbps	2.56Tbps
MAC address	98304		131072	131072

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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

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			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	IGMPv1/v2/v3 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	IPv4 Static Routes
			Black hole Routes

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			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

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			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
		Congestion management	SP(Strict Priority)scheduling
			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	Virtual gateway	VARP(Virtual-ARP) VARP subnet
Security and manage-ment	System Security	SSH	SSHv1/v2
			RSA Key generation
		RADIUS	RADIUS
		TACAS+	TACAS+
		AAA	Authentication
			Authorization
			Accounting

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		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
		Link-Flapping detection	Link-Flapping detection
	Network Management	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

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		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
Configurat-ion and Mainte-nance	Configurat-ion 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

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	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 Mainten-ance	Debug	per-module Debug features
			ICMP Debug
		BHM	Software process monitor: BHM(Beat Heart Monitor)
			Hardware Watch Dog
		Log & alarm	CPU usage display andalarm
			Memoryusage 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

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		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

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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				

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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 AV Switches



Wireless Networks



AVB SWITCHES



Business Switches



Fiber Accessories



UPS Systems



PDU's



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

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