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Niveo Professional NRS Series

NRS48T4XP / NRS48T4XPH

48-port Gigabit PoE+ managed switches with four 10GbE SFP+ ports.



PRODUCT DATASHEET

Product Specification

Introduction

The NRS48T4XP(H) is a 48-port 10/100/1000M PoE+ with 4-port 10G SFP+ Open Slot Rack-mount Full Managed PoE+ Switch. The switch supports IEEE 802.3at Power over Ethernet standard, with high power budget per system.
The switch is standard 1u, 19" rack-mount design to fit into the rack environment. With these features, the switch is a superb choice for medium or large network environment to strengthen its network connection and efficiency.

IEEE 802.3at Power over Ethernet (PoE) ports

This switch features 48 IEEE 802.3at Power over Ethernet (PoE+) ports supplying up to 30 watts per port. 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 compliant network accessories.

4 x 10 Gigabit SFP+ Open Slots

The switch equips with 4 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+ 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.

Multicasting To support Video-over-IP

The switch has a full set of multicasting feature, such as IGMP querier, snooping and Fast Leave. It will support any mainstream Video-over-IP platform out there.

IEEE-1588V2 PTP for advanced Audio

To support advanced audio features and protocols like AES67, the NRS48TXP switch support IEEE 1588V2 PTP

PD Alive Check

When this function is enabled, The NRS48T4XP will detect a network PoE powered device (for example, an IP CAM) with a set of IP address periodically.

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Specifications

Model	NRS48T4XP	NRS48T4XPH
Copper Ports	48-10/100/1000BASE-T RJ45 auto-MDI/MDI-X ports	
Fiber Ports	4x1G/10GBASE-X SFP interfaces, supports 1G/10Gbps dual mode	
PoE Ports	1~48-802.3af/802.3at PoE Injector Ports	
Console Ports	1 x RS-232-to-RJ45 serial port (115200, 8, N, 1)	
Switch Architecture	Store-and-Forward	
Switch Fabric	176 Gbps/non-blocking	
Throughput	130.94Mpps @64 bytes	
Address Table	32K entries	
Share Data Buffer	32 Mb	
Jumbo Frame	9600 Bytes	
SDRAM	2Gb	
Flash Memory	512Mb	
Flow Control	IEEE 802.3x pause frame for full-duplex, Back pressure for half-duplex	
Reset Button	>2 sec.: Factory default and reset	
Power Supply	100~240V AC, 50/60Hz, 13A (max.)	
Power Consumption	NRS48T4XP: Max.400 watts/1122 BTU	NRS48T4XPH:Max.1000 watts/1122 BTU
PoE Standards	IEEE 802.3af/at;	
PoE Budget	NRS48T4XP: 370W	NRS48T4XPH: 920W
LED Indicators	Power: Green Solid on- power work normal, off- power disconnected System: Green Blink-work normally, solid on- soft work abnormal, fast Blink - soft upgrade PoE: Yellow Solid on- PoE work normally, Off- PoE doesn't work, Blink - PoE overload 10/100/1000T RJ45 Interfaces (Port 1 to Port 48): 1000 LNK/ACT (Green) Blink - port connected with data transmission; Solid on- port connected without data transmission 1G/10G SFP Interfaces (Port 49 to Port 52): Blue Blink - port connected with data transmission; Solid on- port connected without data transmission	
EMC	Surge Immunity： 4KV Per: IEC61000-4-5 ESD Protection：ESD Level 4 Per: IEC61000-4-2; EFT Level 4 Per: IEC61000-4-4	
Dimension	440*290*44.5 mm	
Weight	6.5kg	
Working Temperature	-10 ℃to 45℃	

Layer 2+ functions

Port configuration	Auto-negotiation Flow Control Port Mirror: TX/RX/BOTH; Many-to-1 monitor Traffic statistics
Link Aggregation	Static link aggregation LACP Algorithm based on Source/Destination MAC Algorithm based on Source/Destination IP
MAC Table	Aging Time Static MAC address Dynamic MAC address management
VLAN	4094 Active VLANs 4094 VID 802.1Q Tag VLAN Port VLAN Protocol VLAN MAC VLAN Voice VLAN

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	802.1ad Q-in-Q tunneling Private VLAN (Protected port) GARP/GVRP
ACL	512 ACLs L2, L3 e L4 Time-based ACL
Spanning tree	802.1D Spanning Tree Protocol (STP) 802.1w Rapid Spanning Tree Protocol (RSTP) 802.1s Multiple Spanning Tree Protocol (MSTP) Loop Guard Root Guard TC-BPDU Guard BPDU Guard BPDU Filter
Ring Protection	<20ms G.8032 ERPS Ring
Multicast	1024 groups IGMP v1/v2/v3 Snooping, Fast Leave MLD Snooping Multicast VLAN
QOS	8 mapping IDs to 8 level priority queues CoS port-based CoS 802.1p-based CoS DSCP-based Scheduling algorithms SP, WRR, SP+WRR Storm Control (Broadcast, Multicast, Unknown Unicast) Bandwidth control per port
Security Features	Port Security MAC address filter ARP Association (Manual, ARP scanning, DHCP snooping) ARP Protection DoS (Denial of Service) Classification of packages based on: End.MAC, IP End, TCP / UDP Ports, Protocol Type; 802.1x Authentication (port-based e MAC-based) TACACS/TACACS+ Authentication RADIUS Authentication DHCP Filter Guest VLAN SSLv2/SSLv3/TLSv1 SSHv1/SSHv2 Restriction of WEB access based on: IP Address, And. MAC and Port; Port Isolation Loopback detection
Management	SNMP v1/v2c/v3 with Full Private MIBs RMON 4 groups WEB (HTTP/HTTPS) CLI (Telnet, Console, SSHv1/v2) Firmware upgrade via console/web/TFTP Configuration Backup/Reload Dual firmware LLDP
Synchronization, IEEE1588	Support IEEE1588v2 transparent clock
Other Features	DNS Client DHCP Relay DHCP Client DHCP Snooping DHCP Option 82 NTP/SNTP Client UPNP UDLD
PoE management	Total PoE power budget control Per port PoE function enable/disable PoE admin-mode control PoE port power feeding priority Per PoE port power limitation PD classification detection PD alive check PoE schedule Soft-Reboot POE Non-stop
Maintenance	Cable Diagnostics Ping

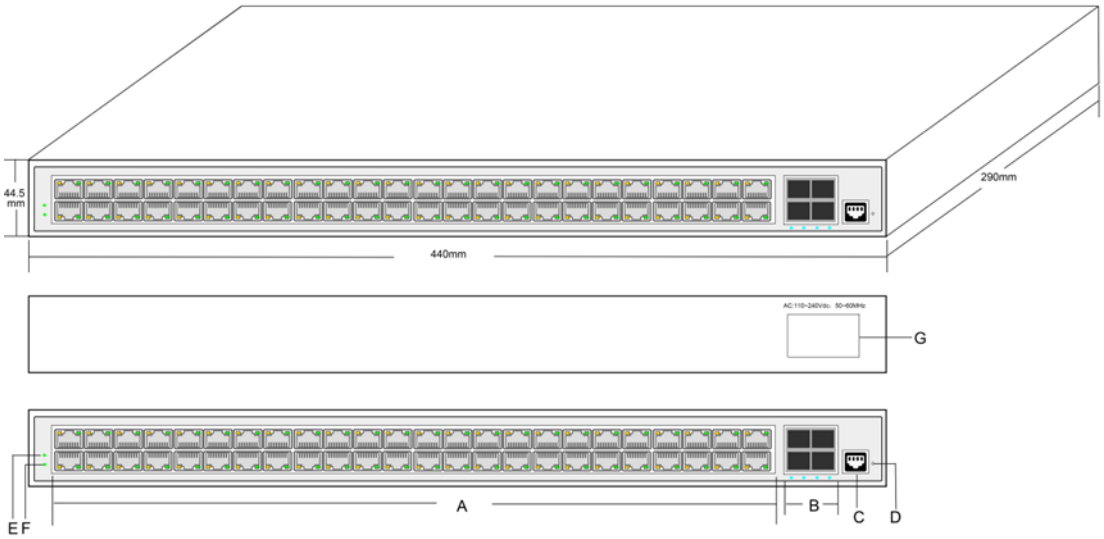
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	SFP DDM(Digital Diagnostics Monitoring) Thermal protection System log (Local and Remote) Memory and CPU Monitoring

Layer 3 functions

Static Routing	IPv4 Unicast: Static Routing(Software and hardware base) IPv6 Unicast: Static Routing(Software and hardware base)
IPV6	IPv6 neighbor discovery (ND) Path maximum transmission unit (MTU) discovery Internet Control Message Protocol (ICMP) version 6 TCPv6/UDPv6 Ping6 Telnet(v6) Http/Https Interface IPV6 ACL IPV6

Dimensions:



A: 48x 10/100/1000Mbps PoE RJ45 Ports
B: 4x 10G SFP+ Ports
C: Console Port
D: Reset Key
E: PWR LED Indicator
F: SYS Status Indicator
G: AC Power Input: 100~240V, 50~60Hz