



## NRS48T4XP

(48- Port 10/100/1000Base-T PoE + 4 10 Gigabit SFP+ L2+ Management PoE+ Switch)

**More information:**

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# Product Specification

## Introduction

The NRS48T4XP 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.



# Specifications

| Interface   |                                 |  |
|---|---------------------------------|--|
| 10 Base-T /100 Base-TX /1000 Base-T RJ45 Ports        |                                 | 48                                       |
| 100M/1G/10Gbps Base-X SFP+ Port                       |                                 | 4  |
| Console Port for CLI Management                       |                                 | 1  |
| System Performance                                    |                                 |  |
| Packet Buffer   |                                 | 32Mb                                     |
| MAC Address Table Size                                |                                 | 8K                                       |
| Switching Capacity                                    |                                 | 128Gbps                                  |
| Throughput  |                                 | 130.94Mpps@64bytes                       |
| PoE Features  |                                 |  |
| IEEE 802.3 af/at                                      |                                 | IEEE 802.3 af/at                         |
| Number of PSE Ports                                   |                                 | 48                                       |
| Max. PoE Budget                                       |                                 | 400W                                     |
| Power Feeding Detecting Capability on PD              |                                 | •  |
| PD Alive Check  |                                 | •  |
| PoE Scheduling  |                                 | •  |
| PD Classification                                     |                                 | •  |
| Power Management (per-port)                           | Enable/Disable PoE Per Port     | •  |
|   | Priority Setting Per Port       | •  |
|   | Power Level Setting Per Port    | •  |
|   | Overloading Protection          | •  |
| L2 Features   |                                 |  |
| Auto-negotiation, Auto MDI/MDIX                       |                                 | •  |
| Flow Control (duplex)                                 | 802.3x (Full)                   | •  |
|   | Back-Pressure (Half)            | •  |
| Spanning Tree   | IEEE 802.1D (STP)               | •  |
|   | IEEE 802.1w (RSTP)              | •  |
|   | IEEE 802.1s (MSTP)              | •  |
| VLAN  | VLAN Group                      | 4K                                       |
|   | Tagged Based                    | •  |
|   | Port-based                      | •  |
|   | Voice VLAN                      | Voice VLAN with OUI                      |
| Link Aggregation                                      | IEEE 802.3ad with LACP          | •  |
|   | Static Trunk                    | •  |
|   | Max. No. Static Trunk Group     | 14                                       |
|   | Max. Port per Aggregation Group | 8  |
| IGMP Snooping   | IGMP Snooping v1/v2/v3          | Supports 1024 IGMP groups                |
|   | IGMP Static Multicast Addresses | Supports 1024 static multicast addresses |
|   | IPv6 MLD Snooping               | Supports 1024 MLD groups                 |
|   | MLD Static Multicast Addresses  | Supports 1024 static multicast addresses |
|   | Querier, Immediate Leave        | •  |
| Storm Control (Broadcast/Multi-cast/Un-known Unicast) |                                 | •  |
| Jumbo Frame Support                                   |                                 | 9KB                                      |
| G.8032 - Ethernet Ring Protection Switching (ERPS)    |                                 | •  |
| QoS Features  |                                 |  |
| Number of priority queue                              |                                 | 8 queues/port                            |
| Rate Limiting   | Ingress                         | Yes, 1KBps/1pps                          |
|   | Egress                          | Yes, 1KBps/1pps                          |
| DiffServ (RFC2474 Remarking)                          |                                 | •  |
| Scheduling (WRR, Strict, Hybrid)                      |                                 | •  |
| CoS   | IEEE 802.1p                     | •  |
|   | IP ToS precedence, IP 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, Accounting)    |                                 | •  |



|   |                                   |
|---|-----------------------------------|
| TACACS+   | •                                 |
| HTTP & SSL (Secure Web)   | •                                 |
| SSH v2.0 (Secured Telnet Session)                               | •                                 |
| MAC/IP Filter   | •                                 |
| <b>L3 Features</b>  |                                   |
| Static Route  | •                                 |
| IPv6 neighbor discovery   | •                                 |
| 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 (Server/Client/Relay/Option82/Snooping)                    | •                                 |
| System Event/Error Log  | •                                 |
| NTP/LLDP  | •                                 |
| Cable Diagnostics   | •                                 |
| IPv6 Configuration  | •                                 |
| Port Mirroring  | •                                 |
| IEEE 1588v2 - Precision Time Protocol (PTP)                     | •                                 |
| <b>Physical Characteristics</b>                                 |                                   |
| Dimension (H*W*D)   | Please refer to Order Information |
| LED   | Power, Speed, Link/Act, PoE       |
| Reset Button  | 1 Reset Button for Reset Default  |
| <b>Power Requirement</b>  |                                   |
| Power Input   | Please refer to Order Information |
| Max. System Consumption   | 30W                               |
| <b>Environment Limits</b>                                       |                                   |
| Operating Temperature   | 0~50°C                            |
| Storage Temperature   | -20~80°C                          |
| Operating Humidity/Storage Humidity                             | Max. 90% RH (Non-condensing)      |
| <b>Standard</b>   |                                   |
| IEEE 802.3 – 10BaseT  | •                                 |
| IEEE 802.3u - 100BaseTX   | •                                 |
| IEEE 802.3ab - 1000BaseT  | •                                 |
| IEEE 802.3ae 10GBase SFP+                                       | •                                 |
| IEEE 802.3af Power over Ethernet (PoE)                          | •                                 |
| IEEE 802.3at Power over Ethernet (PoE+)                         | •                                 |
| 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                                    | •                                 |
| ITU-T G.8032/Y.1344 - Ethernet Ring Protection Switching (ERPS) | •                                 |
| IEEE 1588v2 - Precision Time Protocol (PTP)                     | •                                 |