# L3 Managed Industrial Switch

## FNS420-824TF4-TGB-SFP-AR

**Din-Rail**

**Terminal Block**

## Introduction

FNS420-824TF4-TGB-SFP-AR is a high performance 10G SFP+ L3 core switch. It provides Static routing and dynamic routing with advanced hardware processing capacity. Supports up to 4 Port 10G SFP+, and retains the expansion ability to further support 10GE when realizing gigabit convergence or access. It supports IPv4/IPv6 hardware double stack and line speed forwarding, so that customers can easily cope with the coming IPv6 era, which provides high capacity exchange capacity. It has the operating temperature of -40℃ ~ 75℃, has the super firmness to adapt to all kinds of harsh environment, can also be very convenient to install in the machine room cabinet. The rack-mounted characteristics and wide temperature operation make the switch a plug and play industrial-grade device, providing a reliable and convenient solution for users to network their Ethernet devices.

**Industrial-grade Design**

▶ Metal casing, IP40 protection level

▶ Wide range operating temperature (-40ºC~75ºC)

**Stability & Reliability**

▶ Support QoS (IEEE 802.1p/1Q) and TOS/DiffServ to increase network stability

**Standard & Convenience**

▶ Support STP/RSTP/ERPS, SNMPv1/v2/v3 to ensure network security

▶ Support Rack-mounte

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**High Performance**

▶ Data control: support 802.3x full duplex flow control, support network storm suppression

▶ Redundant network: support STP/RSTP/MSTP, support ERPS (self-healing time <20ms)

▶ Support IPv6, static routing, Dynamic routing (RIP,OSPF)

▶ Support RIPng, OSPFv3, DHCP Server, DHCP replay, Qos

▶ Multicast management: Support IGMP Snooping V1/V2/V3

▶ VLAN: support IEEE 802.1q VLAN, effectively isolated broadcast domain

▶ Link aggregation: support link static/dynamic aggregation, provide perfect bandwidth utilization

▶ QoS: Support COS\DSCP, 4 queues, support WRR\SP scheduling mode

▶ Security management: support ACL access control list, support 802.1x, support user classification management

▶ Management function: support Web, SNMP management mode

▶ Monitoring maintenance: support port mirroring, interface status monitoring, log management

## Production Specification

| Standard | | |
|---|---|---|
| Model | FNS420-TGB-AR | |
| Item | Content | |
| Ethernet Standard | IEEE 802.3ad, Link aggregation protocol;<br><br>IEEE 802.3,10BASE-T Ethernet;<br><br>IEEE 802.3u, Fast Ethernet standard;<br><br>IEEE 802.3ab, Gigabit Ethernet standard;<br><br>IEEE 802.3z, Gigabit Ethernet fiber standard;<br><br>IEEE 802.3ae, 10G Ethernet standard;<br><br>IEEE 802.3x, full duplex Ethernet Data link layer flow control;<br><br>IEEE 802.3az, IEEE Efficient and Energy Efficient Ethernet Standard | |
| Industry Standard | EMI：FCC Part 15 Subpart B Class A，EN 55022 Class A<br><br>EMC:<br><br>IEC(EN)61000-4-2(ESD): ±6kV Contact discharge, ±8kV Air discharge<br><br>IEC(EN)61000-4-3(RS) : 10V/m(80 ~ 1000MHz)<br><br>IEC(EN)61000-4-4(EFT): ethernet port: ±2kV CM//±1kV DM.<br><br>IEC(EN)61000-4-5(Surge): ethernet port: ±2kV CM//±1kV DM.<br><br>IEC(EN)61000-4-6(Radio frequency conduction) : 3V(10kHz ~ 150kHz),10V(150kHz ~ 80MHz)<br><br>IEC(EN)61000-4-16(Common mode conduction): 30V cont. 300V,1s<br><br>IEC (EN)61000-4-8<br><br>Shock：IEC 60068-2-27<br><br>Freefall：IEC 60068-2-32<br><br>Vibration：IEC 60068-2-6 | |

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| Switching Characteristics | |
|---|---|
| **Model** | **FNS420-TGB-AR** |
| **Item** | **Content** |
| **Buffer Memory** | 64Mbit |
| **Transmission Method** | Store-and-forward |
| **Backplane Bandwidth** | 598G |
| **Switching Latency** | <10μs |
| **MAC Address** | 32K |
| **Item** | **Content** |
| **Input Voltage** | 36 to 72V DC |
| | 110 ~ 240V/50 ~ 60Hz AC |
| **Access Terminal** | Phoenix terminal block |
| **Characteristics** | Support dual power supply redundancy |
| | Support built-in over-current protection |
| | Support reverse connection protection with 4.0 A |

**Operating Environment**

| **Item** | **Content** |
|---|---|
| **Operating Temperature** | -40 ºC ~75ºC |
| **Storage Temperature** | -40 ºC ~85ºC |
| **Relative Humidity** | 5~95% (Non-condensing)) |

**Interfaces**

| **Item** | **Content** |
|---|---|
| **SFP Slot** | Number：8-Port 10/100/1000Mbps SFP(combo),4-Port 10G SFP+ |
| | Type：1000BaseFX port (SFP slot),10GBaseFX port (SFP+ slot) |
| **Ethernet Port** | Number：24-Port gigabit RJ45 |
| | 8-Port gigabit RJ45 combo |
| | Type：RJ45, 10/100/1000M automatic detection, full/half duplex MDI/MDI-X adaptive |
| **Optical Fiber** | Support single-mode/multi-mode fiber |
| | Multi-mode fiber: 550M |
| | Single-mode optical fiber: 20/40/60/80/100KM |

# L3 Managed Industrial Switch
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| Other | |
|---|---|
| Model | FNS420-TGB-AR |
| Item | Content |
| Shell | IP40 protection level, metal casing |
| Characteristic | Support the Console, Telnet, SSH, WEB management<br>Support SNMP v1 / v2c/v3 |
| Dimension | 442×325×44mm |
| Weight | <4.2Kg |
| Installation Method | Rack-mounte |
| Heat-dissipating Method | Natural cooling, no fan |
| Redundant Technology | Support STP/RSTP/MSTP<br>Support ERPS |
| Multicast Technology | MLD Snooping v1/v2,Multicast VLAN Registration (MVR)<br>IGMP Snooping v1/v2, Max 1024 multicast groups, Fast log out |
| Switching Function | Support the port speed limit<br>Support port truck<br>Support port flow control<br>port VLAN, IEEE 802.1 Q VLAN<br>Support broadcast storm suppression<br>Support IPv6 management |
| Port Mirroring | Bidirectional data mirroring based on port |
| QoS | SP（Strict Priorty）<br>WFQ (Weighted Fair Queuing)<br>WRR (Weighted Round Robin)<br>Random Early Detect (RED)<br>WeightedRandomEarlyDetection (WRED)<br>Head Of Line<br>Best-Effort Service<br>First come first served<br>802.1p<br>Cos/Tos，QOS<br>Differentiated Service |
| ACL | Port-based Issuing ACL,ACL based on port and VLAN<br>L2 to L4 packet filtering, matching first 80bytes message.<br>Provide ACL based on MAC, Destination MAC address, IP Source,<br>Destination IP, IP Protocol Type, TCP/UDP Port, TCP/UDP Port Range,and VLAN, etc. |

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| | |
|---|---|
| **Security** | Support IP ACL，MAC ACL，Vlan ACL,support ACL based on L3 L4 |
| | IP+MAC Port binding |
| | Support IP Source Guard, RP Detection |
| | Support IEEE 802.1x port verification, support Radius |
| **DHCP** | DHCP Client, DHCP Snooping, DHCP Server, DHCP Relay |
| **IP routing** | Supports port-based input/output bandwidth management. |
| | Supports static routes. IPV6 |
| | Supports the virtual route redundancy protocol VRRP. |
| | Dynamic routes such as RIP, RIPng, OSPF, and OSPFv3 are supported. |
| **System maintenance** | Supports configuration file uploading and downloading. Upload the upgrade package. |
| | Supports factory restore on WEB, Supports the system log function. |
| | Support Ping 、tracert、cable detection and other diagnostic functions. |
| | Supports WEB management (HTTP and HTTPS). |
| | Supports CLI management. Supports Telnet remote management. |
| | Supports SSH 2.0. Supports SNMP network management. |
| | Support RMON; Supports NTP clients. |
| **LED** | Power: Red,Fiber: Link 2(Green),Ethernet: Yellow Port indicator: POE port, SFP port (Link/ACT) |

## Dimension （mm）：442 x 325x 44mm
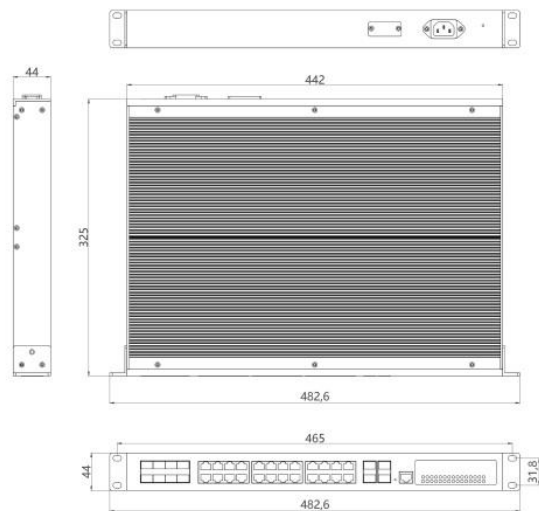
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## Order Information

| Model | Description |
|---|---|
| **FNS420-824TF4-TGB-SFP-AR** | L3 Managed Industrial Switch: 24-Port gigabit RJ45 +8G SFP combo+4-Port 10G SFP, AC110~240,DC36-72V power supply, wide temperature (-40 ° C -75 ° C), WEB/CLI management, SNMP-VLAN |