

L3 Managed Industrial Switch

FNS420-TGB



Introduction

FNS420-TGB 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. FNS420-TGB has the operating temperature of $-40^{\circ}\text{C} \sim 75^{\circ}\text{C}$, 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 ($-40^{\circ}\text{C} \sim 75^{\circ}\text{C}$)



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

Tel: 400-8838-199

Web: www.fourfaith.com

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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

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Production Specification

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

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Switching Characteristics

Model	FNS420-TGB
Item	Content

Buffer Memory 64Mbit

Transmission Method Store-and-forward

Backplane Bandwidth 598G

Switching Latency <10μs

MAC Address 32K

Item	Content
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Input Voltage 36 to 72V DC
110 ~ 240V/50 ~ 60Hz AC

Access Terminal Phoenix terminal block
Support dual power supply redundancy

Characteristics Support built-in over-current protection
Support reverse connection protection with 4.0 A

Operating Environment

Item	Content
Operating Temperature	-40 °C ~75°C
Storage Temperature	-40 °C ~85°C
Relative Humidity	5~95% (Non-condensing))

Interfaces

Item	Content
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SFP Slot Number: 8-Port 10/100/1000Mbps SFP(combo),4-Port 10G SFP+
24-Port gigabit SFP 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

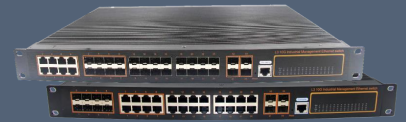
Optical Fiber Support single-mode/multi-mode fiber
Multi-mode fiber: 550M
Single-mode optical fiber: 20/40/60/80/100KM

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Other	
Model	FNS420-TGB
Item	Content
Shell	IP40 protection level, metal casing
Characteristic	Support the Console, Telnet, SSH, WEB management 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 Support ERPS
Multicast Technology	MLD Snooping v1/v2, Multicast VLAN Registration (MVR) IGMP Snooping v1/v2, Max 1024 multicast groups, Fast log out
Switching Function	Support the port speed limit Support port truck Support port flow control port VLAN, IEEE 802.1 Q VLAN Support broadcast storm suppression Support IPv6 management
Port Mirroring	Bidirectional data mirroring based on port SP (Strict Priority) WFQ (Weighted Fair Queuing) WRR (Weighted Round Robin) Random Early Detect (RED) WeightedRandomEarlyDetection (WRED)
QoS	Head Of Line Best-Effort Service First come first served 802.1p Cos/Tos, QOS Differentiated Service
ACL	Port-based Issuing ACL, ACL based on port and VLAN L2 to L4 packet filtering, matching first 80bytes message. Provide ACL based on MAC, Destination MAC address, IP Source, Destination IP, IP Protocol Type, TCP/UDP Port, TCP/UDP Port Range, and VLAN, etc.

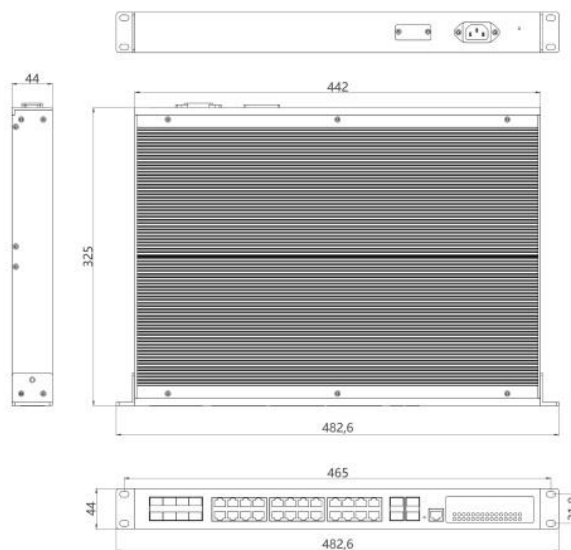
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Other

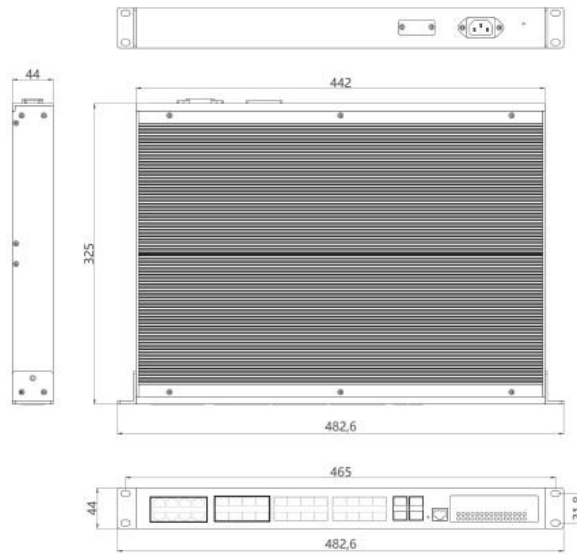
Model	FNS420-TGB
Item	Content
Security	Support IP ACL, MAC ACL, Vlan ACL, support ACL based on L3 L4 IP+MAC Port binding Support IP Source Guard, RP Detection
DHCP	Support IEEE 802.1x port verification, support Radius DHCP Client, DHCP Snooping, DHCP Server, DHCP Relay
IP routing	Supports port-based 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. 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.
System maintenance	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



FNS420-824TF4-TGB-SFP

L3 Managed Industrial Switch FNS420-TGB



FNS420-248TF4-TGB-SFP

Order Information

Model	Description
FNS420-824TF4-TGB-SFP	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
FNS420-248TF4-TGB-SFP	L3 Managed Industrial Switch:24-Port gigabit SFP +8G RJ45 combo+4-Port 10G SFP+, AC110~240,DC36-72V power supply, wide temperature (-40 ° C -75 ° C), loop network (STP/RSTP/ERPS), WEB/CLI management