

IDS7012X

12 Ports 10G SFP+ L3 Managed Industrial Switch



Product Description:

The IDS7012X is a robust L3 Managed Ethernet Switch designed for industrial rolling stock applications, offering high reliability, advanced networking features, and rugged performance. Here's a breakdown of its key specifications and capabilities:

Key Features:

1. High-Speed Connectivity:

12 x 10G SFP+ Ports – Supports fiber or copper SFP+ modules for high-bandwidth aggregation.

Wire-speed L2/L3 Switching – Ensures full throughput with advanced routing capabilities.

2. Industrial-Grade Reliability:

<20ms Ring Recovery – Supports ultra-fast redundancy (e.g., ERPS, MRP, or proprietary protocols) for mission-critical networks.

Wide Operating Temperature Range (–40°C to +70°C) – Suitable for harsh environments (railways, outdoor deployments, etc.).

3. Advanced Security & Management:

L3 Routing (Static, RIP, OSPF, etc.) for scalable network segmentation.

Security Features – ACLs, port security, IEEE 802.1X, DoS protection, and more.

Management Options – CLI, Web GUI, SNMP, RMON.

Typical Applications:

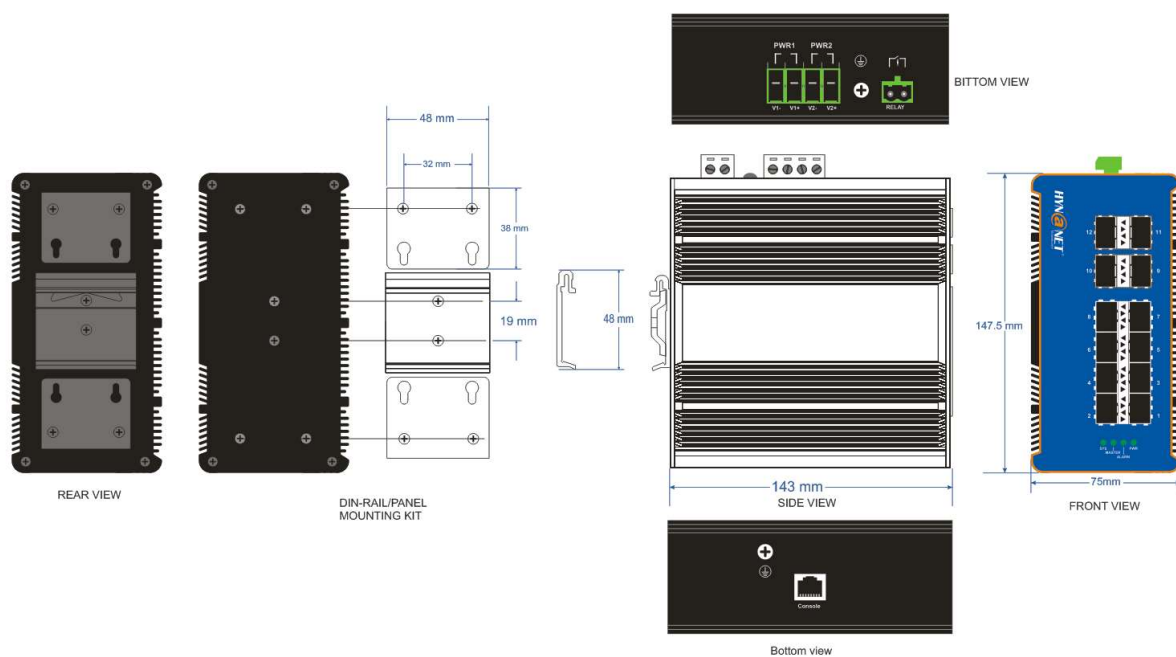
- **Onboard Train Networks** (TCMS, CCTV, passenger infotainment).
- **Industrial Automation** (SCADA, substations, power systems).
- **Transportation & Traffic Control** (metro, tram, signaling systems).

Product Features:

- IEEE802.3, IEEE 802.3u, IEEE802.3ab, IEEE802.3z, IEEE802.3ae
- Provides 12 10G SFP+ ports
- High back-plane bandwidth 240Gbps
- Support MLD Snooping

- Support standard IP/ Extend IP / MAC IP / ARP ACL
- Support IGMP snooping for Multi-media application
- Support Port mirror and bandwidth control
- Support IEEE802.3x Flow control
- Support Port Based VLAN / 802.1Q Tag VLAN
- Support IEEE802.3ad Port trunk with LACP
- Support Spanning tree protocol IEEE802.1d/802.1w/802.1s
- Support IEEE 802.1p class of service
- Support IEEE 802.1x user authentication
- Support Broadcast storm filter
- Support Static Route, Policy Route, RIP, OSPF, VRRP
- Support System event log
- Support command line interface management
- Management by Web / SNMP / SSH / Telnet / Console

Product Dimemnsions:



Product Specification:

Attributes	
Networking Interfaces	12 x 10Gbps SFP+ Ethernet Ports
Management Interface	Console
LED Indicators	Power, Link/Act
Performance	
Switching Capacity	240 Gbps
Forwarding Capacity	178.6 Mpps
Forwarding Mode	Store and Forward
Packet Buffer Memory	16 Mbit

RAM for CPU	1 Gbit
Flash Memory	128 Mbit
MAC Address Table	16K
Max. Jumbo Frame size	16K
VLAN Quantity	4K
ACL Table	512
Routing Host	768 (IPv4) or 384 (IPv6)
Routing Entries	64
Port Queues	8
Physical	
Dimensions	147.5 x 142.5 x 80 mm
Weight	4KG
Operating Temperature	-40 to 70℃
Storage Temperature	-40 to 70℃
Operating Humidity	5 to 95% Noncondensing
Power Method	12~57VDC
Max. Power Consumption	50W
EMC Safety	FCC, CE, RoHS
Port Configuration	
Enable and Disable	Support control enable and disable
Auto-Negotiation	Support force port mode and speed
Flow Control	Support IEEE802.3x full-duplex Support half-duplex backpressure
Storm Control	Support broadcast, multicast and DLF package rate limit
Port Mirroring	Support many to one mirroring
Rate Limit	Support Port input and output rate limit
Link Aggregation	Support manual Link Aggregation Support LACP Up to 8 maximum aggregation groups, each containing up to 8 ports
Aggregation Strategy	Source MAC / Destination MAC / Source Destination MAC Source IP / Destination IP / Source Destination IP
Port Protection	Each port can be configured into isolated protected port from each other
MAC Configuration	
MAC Address Table Management	Support
Transfer Mode	Support IVL transfer mode
Static MAC Address	Support
MAC Binding	Support
MAC Address Filter	Support
MAC Quantity Limitation	Support limit the number of MAC-addresses Learning per port
VLAN Configuration	
VLAN Based on 802.1Q	Support
MAC-Based VLAN	Support
IP-Based VLAN	Support
Protocol-Based VLAN	Support
Guest VLAN	Support
Private VLAN	Support
Reliability Protocol	

Spanning Tree	Support STP/RSTP/MSTP
BPDU Guard	Support
BPDU Filter	Support
Port Loop Detection	Support
EAPS Protocol	Support RFC3619
LLDP Protocol	Support LLDP and LLDP-MED
UDLD Protocol	Totally compatible with UDLD protocol of CISCO
L3 Routing	
Static ARP & Dynamic ARP	Support
Static Routing	Support
Policy Routing	Support
RIP	Support RIP v1/v2
OSPF	Support OSPF v2
VRRP	Support
Multicast	
Static Multicast MAC Address	Support
IGMP SNOOPING	Support
MVR	Support
GMRP	Support
Access Control List (ACL)	
Based on Standard IP	Support
Based on Extend IP	Support
Based on MAC IP	Support
Based on MAC ARP	Support
Based on time	Support
Port Filtering	Support
Quality of Service (QOS)	
Scheduling Mode	Support WRR, SP, WFQ
Sorting Based on Port	Support
Sorting Based on 802.1p	Support
Sorting Based on DSCP(DiffServ)	Support
DHCP	
DHCP Client	Support
DHCP Relay	Support
DHCP Server	Support
DHCP option 82	Support
DHCP Snooping	Support
Security	
Administrative Security	Support start and end TELNET, WEB and SNMP serve Support TELNET, WEB and SNMP serve binding with Standard IP ACL Support control the number of user for TELNET
CPU Protect	Switch self-security protect, forbid flow attack
IP-MAC Address Binding	Support binding between static configuration IP, MAC and Port
AAA	Support 802.1x protocol Support RADIUS protocol Support RADIUS server authentication authorization and bill Support MAC-based 802.1X authentication.

	Support 802.1x guest VLAN
DHCP SNOOPING	Support dynamic ARP binding to prevent ARP spoofing Support dynamic IP, MAC port binding Support stationary port connect to DHCP server, to prevent privately connect to DHCP sever
Prevent ARP Spoofing	Support manual configure ACL rule based on MAC ARP prevent ARP spoofing Support DHCP SNOOPING function, switch dynamically binding ARP and port, when the DHCP get IP address , to prevent ARP spoofing
IPv6	
ICMPv6	Support
IPv6 Neighbor Discovery	Support
MLD Snooping	Support
IPv6 Telnet	Support
IPv6 Static Route	Support
Management Feature	
CLI Management	Support serial port management Support TELNET management Support SSH management
WEB Management	Support
SNMP Management	Support SNMP protocol Support SNMP TRAP Support standard and private MIB
User management	Support multi-user management
Show CPU Utilization	Support
Show RAM Utilization	Support
Log Management	Support
Configuration Download / Upload	Support
Upgrade Firmware	Support
Timer Management	Support local timer management Support SNTP protocol get clock
Debugging Tools	
PING	Support
TRACEROUTE	Support
TELNET Client	Support
Package List	
Switch	1pcs
User Manual	1pcs
DB9 to RJ45 Cable	1pcs

Order Information:

Switch Models	
IDS7012X	12 Ports 10G SFP+ L3 Managed Industrial Switch
SFP Modules	
GSFP-RJ45	1000M SFP module, RJ45 port
GSFP-M-LC-R5	1000M SFP module, multi-mode, 500M, 850nm, LC

GSFP-S-LC-20	1000M SFP module, single-mode, 20km, 1310nm , LC
GSFP-S-LC-40	1000M SFP module, single-mode, 40km, 1310nm, LC
GSFP-S-LC-80	1000M SFP module, single-mode, 80km, 1550nm, LC
XGSFP-RJ45	10G SFP module, RJ45 port
XGSFP-M-LC-01	10G SFP module, multi-mode, 500M, 850nm, LC
XGSFP-S-LC-20	10G SFP module, single-mode, 20km, 1310nm , LC
XGSFP-S-LC-40	10G SFP module, single-mode, 40km, 1310nm, LC
XGSFP-S-LC-80	10G SFP module, single-mode, 80km, 1550nm, LC