

Overview

The **NW-ISM-16G-X4** is a rugged 16-port managed Gigabit Ethernet switch designed for demanding industrial environments. This Layer 2 switch delivers reliable connectivity with redundant power inputs and operates in extreme temperatures from -40°C to 75°C, making it ideal for mission-critical applications.

Applications

- Industrial automation systems
- Critical infrastructure networks
- Harsh environment installations
- Secure communication backbones

Features

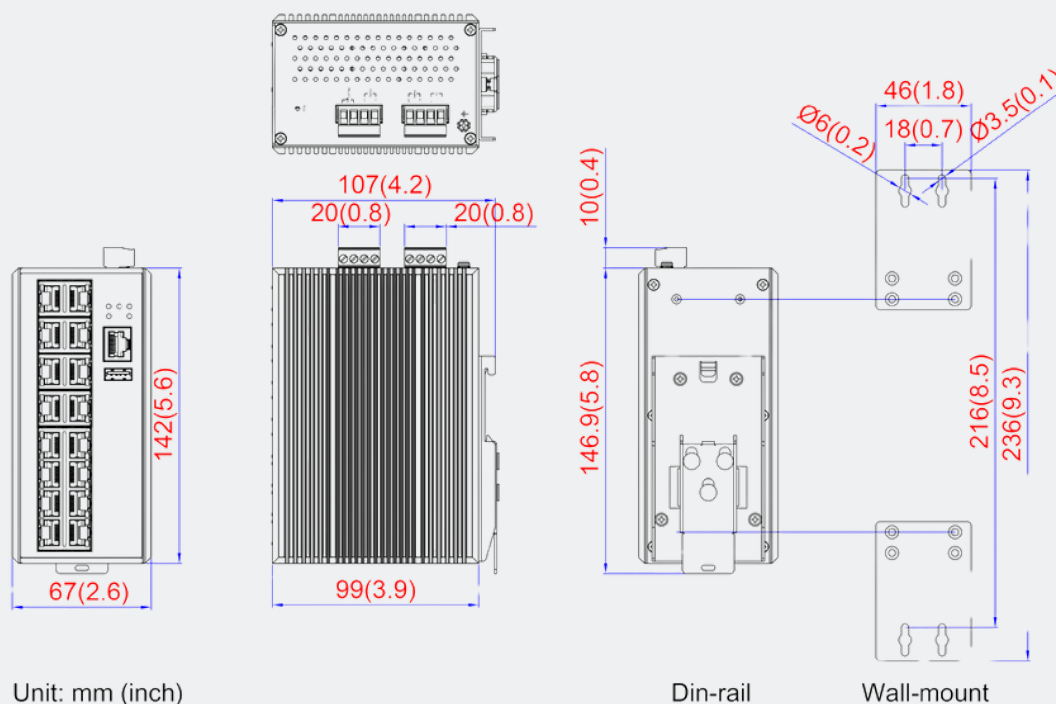
- 16 Gigabit Ethernet ports (10/100/1000Base-TX)
- Multi-user account management for enhanced security
- Multiple configuration methods: HTTP/HTTPS, CLI, Telnet, SNMP, SSH
- Advanced redundancy protocols: ERPS v2, STP, RSTP, MSTP
- Static routing capability for network segmentation
- Secure authentication via RADIUS and TACACS+
- Traffic management with QoS and LACP
- Comprehensive security: VLAN, SNMP, ACL, IP source guard
- Dual power inputs for redundancy
- Wide operating temperature range:
 - Standard: -10°C to 65°C
 - Extended: -40°C to 75°C

NW-ISM-16G-X4

Industrial 16 Port Gigabit Managed Switch



Dimensions



Specifications

Technology

Standards

IEEE 802.3 10Base-T Ethernet
 IEEE 802.3u 100Base-TX Fast Ethernet
 IEEE 802.3ab 1000Base-T Gigabit Ethernet
 IEEE 802.3z 1000Base-X Gigabit Fiber
 IEEE 802.3x Flow Control
 IEEE 802.1d STP (Spanning Tree Protocol)
 IEEE 802.1w RSTP (Rapid Spanning Tree Protocol)
 IEEE 802.1s MSTP (Multiple Spanning Tree Protocol)
 ITU-T G.8032 / Y.1344 ERPS v1/v2(Ethernet Ring Protection Switch)
 IEEE 802.1Q Virtual Local Area Network (VLAN)
 IEEE 802.1p QoS/CoS Protocol for Traffic Prioritization
 IEEE 802.1X Network Authentication
 IEEE 802.1AB Link Layer Discovery Protocol (LLDP)
 IEEE 802.3ad Link Aggregation (LACP)

Processing Type

Store and Forward

Flow Control

IEEE 802.3x flow control, back pressure flow control

Specifications

Network Management

Management

IPv4/IPv6, SNMP v1/v2c/v3, LLDP, LLDP-MED, HTTP, HTTPS, SSHv2 telnet, DHCP client, DHCPv6 client, DHCP server, Port Mirror, DNS client/proxy, IP based Access Filter, ICMPv6, syslog, Time Zone /Daylight Saving, NTP client, RMON, sFlow, Loop detection, Console Port, USB configuration backup/restore, Power lost warning, relay trigger

Security

Port-based/Single/Multi 802.1X, ACL(Port/Rate Limiters/ACE), MACbased Authentication, VLAN assignment, QoS Assignment, Private VLAN, Guest VLAN, RADIUS accounting, TACACS+, IP MAC binding, WEB/CLI authentication, Authorization (15 levels), Port Security Limit Control, ACLs for filtering/policing/port copy, IP source guard, ARP Inspection

L2 Switching

Port/MAC/Protocol/IP Subnet-based VLAN, GARP/GVRP, Loop Guard, Link Aggregation static/LACP, BPDU guard, Error disable recovery, IGMP snooping v2/v3, MLD snooping v1/v2, IGMP filtering, IPMC throttling / filtering leave proxy, DHCP snooping, G.8032 v1/v2

L3 Switching

DHCP option 82, static routes

QoS

802.1p Queueing, Input priority mapping, Storm control for Unicast/Multicast/Broadcast, Port/Queue/ACL policer, Port egress shaper, Queue egress shaper, DiffServ (DSCP), Tag remarking, Scheduler mode

Power Saving

ActiPHY, PerfectReach, IEEE 802.3az EEE power management

Network Redundancy

STP/RSTP/MSTP, port trunk with LACP, ERPS v1/v2 (<50ms)

Configuration

Http, Https, Telnet, SSH, CLI, TFTP, SNMP v3

System / Diagnostics

Dual Image Protection, PING, PING6

Specifications

Switch Properties

Back-Plane(Switching Fabric)	32Gbps
Priority Queues	8
Max. Number of VLANs	4095
VLAN ID Range	VID 1 to 4095
Memory Buffer	4Mbits
Jumbo Frame	9.6Kbytes
MAC Table Size	8K
IGMP Group	1024
Transfer Rate	14,880pps for Ethernet port
	148,800pps for Fast Ethernet port
	1,488,000pps for Gigabit Ethernet port

Specifications

Interface

RJ45 Ports

16*10/100/1000 Base-T(X)

Auto-Negotiation, Full/Half Duplex, Auto-MDI/MDI-X

LED Indicators

System: Power 1, Power 2, Master, Ring, Status

Ethernet ports: Speed/Link/Active

RS232 Serial Console

1*RS232 in RJ45 connector with console cable, baud rate 115,200bps,8,N,1

Configuration Backup

1*USB 2.0 host (type-A) for configuration backup/restore

Relay Contact

24 VDC, 1A resistive

DI

1* Digital Input (DI): State 0: -30~8VDC / State 1: 10~30VDC, Max. input current: 8mA

Network Cable

10Base-T: 2-pair UTP/STP Cat. 3, 4, 5 cable EIA/TIA-568 100-ohm (100m)

100Base-TX: 2-pair UTP/STP Cat. 5 cable EIA/TIA-568 100-ohm (100m)

1000Base-TX: 4-pair UTP/STP Cat.5/5E cable; EIA/TIA-568 100-ohm (100m)

Specifications

Power Requirements

Input Voltage	Dual 12-48VDC redundant power inputs
Power Connection	2*removable 4-contact terminal block
Overload Current Protection	Present (Slow-Blow Fuse)
Reverse Polarity Protection	Present
System Power Consumption	Max. 13.8W full loading

Mechanical Characteristics

Housing	Metal, IP30 protection
Dimensions (W x H x D)	67 x 142 x 99 mm (2.64 x 5.59 x 3.9 inch)
Weight	Unit weight: 1.2kg (2.76 lb), Shipping weight: 1.4kg (3.31 lb)
Mounting	DIN-Rail Mounting, Wall Mounting

Environmental Limits

Operating Temperature	Standard: -10°C ~ 65°C (14°C ~ 149°F)
	Extend: -40°C ~ 75°C (-40°C ~ 167°F)
Storage Temperature	-40°C ~ 85°C (-40°C ~ 185°F)
Ambient Relative Humidity	5 to 95%, (non-condensing)

Specifications

Regulatory Approvals

EMI

FCC Part 15 Subpart B Class A,

CE EN55032/EN61000-6-4 Class A

EMS

CE EN55035/EN61000-6-2 Class A:

IEC61000-4-2 (ESD), IEC61000-4-3 (RS), IEC61000-4-4 (EFT),

IEC61000-4-5 (Surge), IEC61000-4-6 (CS),

IEC61000-4-8 (Magnetic Field)

Free Fall

IEC60068-2-32

Shock

IEC60068-2-27

Vibration IEC60068-

EC60068-2-6

Green

RoHS Compliant

Safety

UL61010-1, UL61010-2-201

Substation

IEC 61850-3 Edition 2.0 (-I model)

MTBF (Telcordia SR-332, Issue 3, GB, 25°C)

481,511

Warranty

5 Years

Ordering Information

