DIGITUS®

24 Port L2 Managed Gigabit Ethernet PoE Switch

Quick Installation Guide

DN-95359

1. Introduction

The DN-95359 is a manageable 24 +2 port PoE switch with L2 features. It is mainly used in the structural LAN area. With a total PoE power budget of 430 watts, the DN-95359 supplies up to 24 connected PoE devices such as IP security cameras or VoIP telephones with up to 30 watts per port. Due to the large backplane bandwidth of 52 Gbps, data can be processed and forwarded quickly. Furthermore, features such as ICMPv6, IGMP & MLD snooping, port mirroring, broadcast storm filter and many more are supported.

2. Features

1. Provides 24 10/100/1000 Base-TX ports + 2 gigabit SFP ports, Provides 24 PoE injector.
2. Build-in power supplies, 450W, High back-plane bandwidth 52Gbps.
3. Support ICMPv6, IPv6 Neighbor Discovery,MLD Snooping, IPv6. Telnet, standard IP/ Extend IP / MAC IP / ARP ACL, IGMP snooping for multi-media application.
4. Support Port mirror and bandwidth control, IEEE802.3x Flow control.
5. Support Port Based VLAN / 802.1Q Tag VLAN, IEEE802.3ad Port. Trunk with LACP.
6. Support Spanning tree protocol IEEE802.1d/802.1w/802.1s.
7. Support IEEE 802.1p class of service, IEEE 802.1x user authentication.
8. Support Broadcast storm filter, System event log, command line interface management.
9. Management by Web / SNMP / SSH / Telnet (IPv6 ready) / Console.

3. Package Contents

- 1 x DN-95359 24 Port PoE Switch
- 1 x User Manual
- 1 x Power Cord
- 1 x DB9 to RJ45 Cable
- 1 x Rack Mount Kit
- 4 x Rubber Feet

4. Specification

Networking Interfaces	24 x 10/100/1000 Mbps RJ45 Ethernet Ports 2 x 1 Gbps SFP Ethernet Ports
Management Interface	Console
LED Indicators	Power, Link/Act, PoE
Performance	
Switching Capacity	52 Gbps
Forwarding Capacity	38.7 Mpps
Forwarding Mode	Store and Forward
Packet Buffer Memory	4.1 Mbit
RAM for CPU	1 Gbit
Flash Memory	128 Mbit
MAC Address Table	8K
Max. Jumbo Frame size	16K
VLAN Quantity	4K
ACL Table	512
L3 Interface	32
Port Queues	8
PoE Budget	430W
Physical	
Dimensions	440 x 200 x 44 mm

Operating Temperature	0 to 40℃
Storage Temperature	-10 to 70℃
Operating Humidity	5 to 95% Noncondensing
Power Method	100-240VAC, 50/60Hz
Max. Power Consumption	Including PoE Output: 450W Excluding PoE Output: 20W
Power over Ethernet	
PoE Interfaces	Ports 1-24
PoE Standard	IEEE802.3af, IEEE802.3at
Max. PoE Wattage per Port	30W
PoE Voltage	52VDC
PoE Pin Assignment	V- (RJ45 Pin1,2), V+ (RJ45 Pin 3,6)
PoE Management	Port-base PoE status view and control, PoE Schedule, PD Alive Auto Check
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
Voice VLAN	Support
Guest VLAN	Support
Private VLAN	Support
VLAN Mapping	Support 1:1 mapping
Double VLAN Markup	Support basic QinQ
Reliability Protocol	
Spanning Tree	Support STP/RSTP/MSTP
BPDU Guard	Support
BPDU Filter	Support
Port Loop Detection	Support
EAPS Protocol	Support RFC3619
ERPS Protocol	Support G.8032/Y.1344

LLDP Protocol	Support LLDP and LLDP-MED
UDLD Protocol	Totally compatible with UDLD protocol of CISCO
Host Routing	
Static ARP	Support
Static Routing	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
Sorting Based on ACL Data Flow	Support
QoS Strategy	Support packet mapped to the corresponding output queue Support to modify the packet's COS and DSCP sign

	Support limit of data flow Support statistics of data flow Support mirroring of data flow
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
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
TACACS+	Support TACACS+ server remote user name and password authentication Support PAP and CHAP password encryption Support TACACS+ server command authorization
Log Management	Support
RMON	Support RMON 1,2,3,9 group
Cluster Management	Support neighbor discovery protocol Support topology discovery protocol Support manual and automated join cluster group Support cluster unification management

OAM	Support 802.3ah Support 802.1ag
DHCP Client	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

5. Panel infomation

Front panel

PWR LED： The Power LED lights up when the Switch is connected to a power source.

Link/Act LED: The Link/Act LED flashes which indicates a network link through the corresponding port. Blinking indicates that the Switch is either sending or receiving data to the port.

PoE LED:

- Green: Indicates the PoE powered device (PD) is connected and the port supplies power successfully.
- Light off: Indicates no powered device (PD) connected.

Real panel

Power input: Supports input voltages 100-240VAC, 50/60Hz.

Switch: turn on the switch after inserting the power cord, “I” means to turn on, “O” means closing.

Grounding: use specialized ground lead connect

6. Hardware installation

This chapter provides unpacking and installation information for the switch.

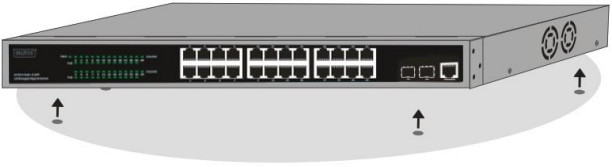
6.1 Switch installation

For safe switch installation and operation, it is recommended that you:

- Visually inspect the power cord to see that it is secured fully to the AC power connector.
- Make sure that there is proper heat dissipation and adequate ventilation around the switch.
- Do not place heavy objects on the switch.

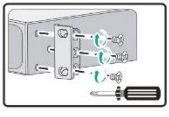
6.2 Desktop or Shelf Installation

When installing the switch on a desktop or shelf, the rubber feet included with the device must be attached on the bottom at each corner of the device's base. Allow enough ventilation space between the device and the objects around it.

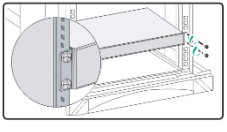


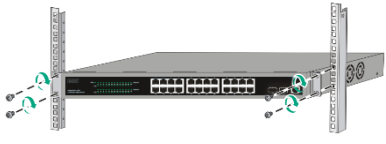
6.3 Rack Installation

The switch can be mounted in an EIA standard size 19-inch rack, which can be placed in a wiring closet with other equipment. To install, attach the mounting brackets to the switch's side panels (one on each side) and secure them with the screws provided (please note that these brackets are not designed for palm size switches).



Then, use the screws provided with the equipment rack to mount the switch in the rack.

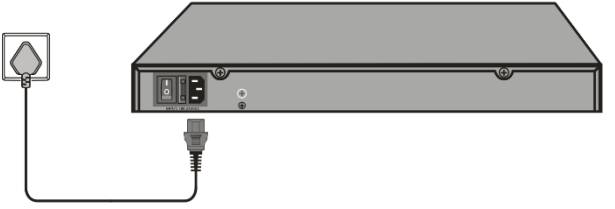




6.4 Plugging in the AC Power Cord

You can connect AC power supply cord to switch back and the other side connect the power outlet. (Power outlet might as well grounding and support over voltage protection).

Warning: Do not turn on the power switch before power cables are connected. Power surge may cause damage to the Switch.



6.5 Power failure

As a precaution, the switch should be unplugged in case of power failure. When power is resumed, plug the switch back in.

Please be aware of following safety Instructions when installing:

A) Elevated Operating Ambient - If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the maximum ambient temperature (Tma) specified by the manufacturer.

B) Reduced Air Flow - Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised.

C) Mechanical Loading - Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.
D) Circuit Overloading - Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.
E) Reliable Earthing - Reliable earthing of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (e.g. use of power strips)."

7. Getting Started

This chapter introduces the management interface of switch.

7.1 Using Web-based Management

After a successful physical installation, you can configure the Switch, monitor the network status, and display statistics using a web browser.

7.2 Supported Web Browser

The embedded Web-based Management currently supports the following web browsers:

- Internet Explorer 6 or higher version
- Netscape 8 or higher version
- Mozilla
- Firefox 1.5/2.0 or higher version

7.3 Connecting to the Switch

You will need the following equipment to begin the web configuration of your device:

1. PC with a RJ-45 Ethernet connection
2. Standard Ethernet cable

Connect the Ethernet cable to any of the ports on the front panel of the switch and to the Ethernet port on the PC.

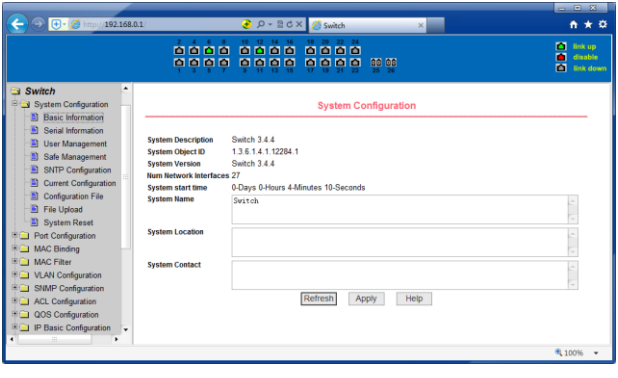
Connected Ethernet cable

7.4 Login Web-based Management

To access the GUI of the switch, open a browser and type the default management address **http://192.168.0.1** in the address field of the browser, then press the Enter key.

When the following logon dialog box appears, enter the password then click **OK**. By default, the username is **admin** and the password is **admin**.

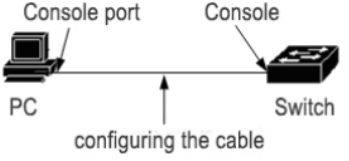
After a successful login, the main page will appear as follows, and you can click the menu on the left side to configure the corresponding functions.



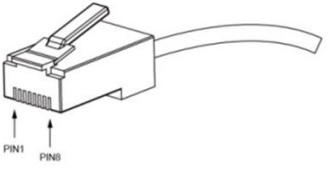
8. Console Port Interface

The smart switch has a monitor port (Console port). Rate 9600bps, standard RJ45 plug.

Use a dedicated monitoring cable to lead the port to the PC serial port connection, as follows:



The RJ45 connector used by the Console port is shown in the figure below, and the RJ45 plug corresponds to the RJ45 socket, from left to right numbered from 1 to 8.



This cable is used to connect the console port of the switch to the external monitoring terminal. One end of the RJ45 eight-pin plug, the other end is a 25-hole plug (DB25) and 9-hole plug (DB9), RJ45 head into the switch's console port socket, DB25 and DB9 can be used according to the requirements of the terminal serial port, the cable internal connection schematic as follows:

RJ45<===>DB9
NC1-------8CTS
NC2-------6DSR
TXD3------2RXD
GND4------5GND
GND5------5GND
RXD6------3TXD
NC7-------4DTR
NC8-------7RTS

This is a Class A product. In home environment, this product may cause radio interference.
In this case, the user may be required to take appropriate measures.

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