



KIEN6000

8 Port Managed
Industrial Ethernet Switch

CE, FCC, UL, RoHS

Overview

KIEN6000 is an 8-port Managed DIN-Rail Industrial Ethernet Switch comes with a DT-Ring technology, which is developed by Kyland and used to set up a redundant Ethernet ring network. KIEN6000 also has 24V redundant power inputs. KIEN6000 offers two optical fiber ports, and six TP ports. With a web-based configuration interface, KIEN6000 ensures an easy installation and management of your switches.

Features

- 10/100Base-T/TX Ethernet ports, adaptive, full/half duplex
- DT-Ring, recovery time <100ms
- DT-Ring+, RSTP ring network redundant protocols
- Support QoS, SNMP, MIB V1/V2/V3, RMON
- Supports VLAN to control broadcasting and flow, port trunking, port mirroring, prioritization and IGMP.
- Alarm relay output for power supply and portlink.
- Store-and-forward switching mode conforms to IEEE802.3/802.U/802.3X
- EMC industrial level 4, complies with IEC61850 standard.
- Dual redundant 24VDC power supply (DC 18V~36V)
- Ribbed Aluminum housing for heat dissipation (fanless); Operation at -40 to 75°C(-40 to 167°F)
- IP40 protection class
- Easy DIN-Rail mounting or optional wall-mounting

Functions

100Mbit/s Optical Fiber Redundancy

In industrial fields, it is critical for the network to re-configure immediately once disconnection occurs. Accordingly, KIEN6000 comes with DT-Ring, developed by KYLAND, and offers 2 redundant fiber ports to realize the redundant ring network. The system will be able to re-configure within 300ms after connection fault.

100Mbit/s TP Cable Redundancy

KIEN6000 offers 2 redundant Ethernet ports to be connected into redundant ring network through TP cable. The system will be able to re-configure within 300ms once disconnection occurs.

Configuration and Management

KIEN6000 offers 3 login options for users to do configuration, control and management including RS232 serial port (CONSOLE), Telnet and WEB browser.

LED Indicator

The LEDs indicate the port status correctly including transmission rate, link status and system status.

VLAN

VLAN will divide one network into multiple logical subnets. Data packets can not be transmitted between different VLANs so as to control the broadcast domain and segment flow and improve the reliability, security and manageability. KIEN6000 supports IEEE802.1q. It can divided into up to 4094 VLANs based on ports. The VLAN section can be finished by control station or WEB station easily.

802.1p Prioritization

KIEN6000 conforms to 802.1p, which is used the most widely in the LAN environment. The end-users of KIEN6000 can make use of this function to configure the port-based prioritization when 802.1p is not supported at the user's end and different priority is necessary for different ports' services. Only the data package without Prioritization in the Packet in the ports can be affected by this function. Each port of KIEN6000 supports 2 levels of prioritization (high and low).

Layer-2 Switching

Switches work in two ways: Cut-Through and Store-and-Forward. In Cut-Through, a data packet is immediately relayed after detecting the target address; in Store-and-Forward, a data packet is first read-in completely and checked for errors before the switch relays the same. KIEN6000 employs Store-and-Forward—a switching mode widely used.

Multicasting (IGMP)

IGMP stands for Internet Group Multicast Protocol. KIEN6000 offers IGMP monitor and query functions. Data packets can be transmitted to multiple host computers to prevent overloading. This solves the problems of bandwidth occupied when multicasting.

Port Trunking

KIEN6000 provides port trunking functions to aggregate multi ports into one logical port with the same transmission rate, duplex mode and VLAN ID. Up to 6 ports of trunking can finished in one single switch. Thus, network flow congestion is relieved and tolerance ability is improved.

Port Mirroring

This function enables the copying of data at one port to another port in order to monitor the transmitted data in real time.

Setting for Working Mode of Port

KIEN6000 is able to configure the working mode of all ports through management: full/half duplex, auto-sensing, enforced full/half duplex, enforced 10M/100M etc.

STP (Spanning Tree Protocol)

KIEN6000 supports Spanning Tree Protocol of IEEE802.1d. STP enables the switch of double paths to make use of the paths without circulation. It determines the optimum path and blocks others in order to prevent circulation of data packets.

Broadcast Storm Control

When over broadcast data packets are sent in the network and occupy much space, the time of transmission will be prolonged; this is the so-called network storm. KIEN6000 supports broadcast data packets, multicast data packets and broadcast storm control. Out-of-date data packets will be abandoned.

Static MAC Address Binding

In KIEN6000, ports and static MAC addresses can be bind. When the end devices' MAC address is not in accordance with the binding address, the switch will close the port in order to prevent an unauthorized visit from the other end.

Alarming

KIEN6000 comes with alarm functions for power supply and port link. In the event of a power failure in KIEN6000, the alarm signal will be sent out by the alarm terminal. The alarm of port link can be set through management. The terminal is open when there is no alarm and is closed when the alarm sounds.

Technical Specifications

Standard

IEEE802.3
IEEE802.3U
IEEE802.3X
Store and forward switching mode

Network

Ring, chain and star network topology.

Service

Diagnostics: LEDs (power, link status, port rate, management status), fault relays (24VDC/1A)
Configuration: Web page, Telnet, Console
Security: Port security (MAC based and IP based), SNMP v3
Other services: Prioritization (IEEE 802.1D/p), VLAN (802.1Q), multicast (IGMP snooping/querier, GMRP), broadcast limit, flow control (IEEE802.3x)

Interface

2 x 100Mbit/s, optical fiber, redundant
2 x 100Mbit/s, TP cable, redundant
4 x 10/100Base-T/TX, TP cable, RJ45 Socket (shielded), self-adapting

Power Requirements

Power input: 24VDC (18-36VDC) dual redundant, 110VDC, 220VAC
Power consumption: <6W

Physical Characteristics

Casing: IP40 protection
Ribbed Aluminum housing fanless design
Dimensions(WxHxD): 55.4x142x120.5 mm (2.18x5.59x4.74 in.)
Weight: 1000g (2.205 pounds)
Installation: DIN-Rail or wall mounting

Environmental Limits

Operating Temperature: -40 to 75°C (-40 to 167°F)
Storage Temperature: -45 to 85°C (-49 to 185°F)
Ambient Relative Humidity: 0 to 95% (non-condensing)

Approvals

EMC interference immunity:
IEC61000-4-2(ESD): ±4KV contact discharge, ±15KV air discharge
IEC61000-4-3(RS): 10V/M (80-1000MHz)
IEC61000-4-4(EFT): ±4KV power line, ±4KV data line
IEC61000-4-5(Surge): ±4KV(line/earth), ±2KV (line/line)power line, ±2KV data line
IEC61000-4-6(CS): 3V(10KHZ~150KHZ), 10V(150KHZ~80KHZ)

EMC emitted immunity:

FCC CFR47 Part15: FCC CFR47 Part 15 Class A
EN55022: EN55022 Class A
UL60950, CE, FCC, UL, ROHS

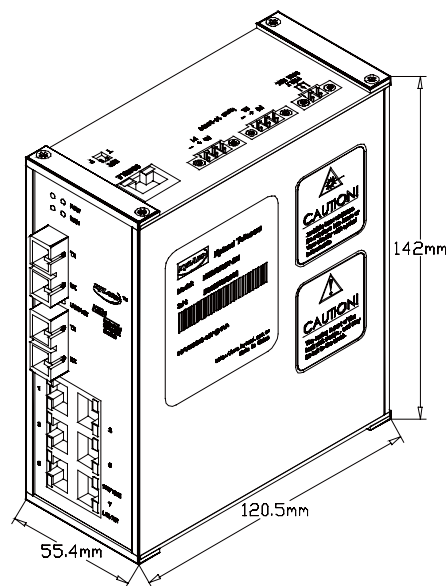
MTBF

35 years

Warranty

5 Years

Mechanical Drawing



Ordering Information

Model	Description
KIEN6000-2S	2 x 100Base-FX, single mode, redundant 6 x 10/100Base-T self-adapting
KIEN6000-2M	2 x 100Base-FX, multimode, redundant 6 x 10/100Base-T self-adapting