

KIEN2000

Overview

KIEN2000 is an unmanaged 8-port industrial Ethernet rail switch. It offers two redundant 100Mbit/s fiber ports and six 10/100Base-T/TX TP ports. With the plug-and-play feature, it is started up shortly. KIEN2000 offers 24V redundant power inputs.



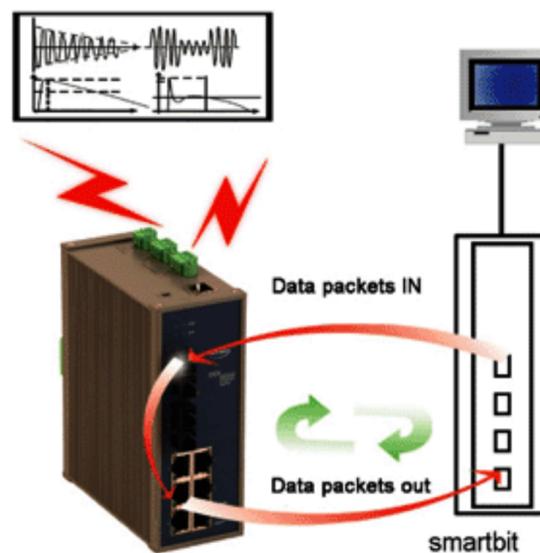
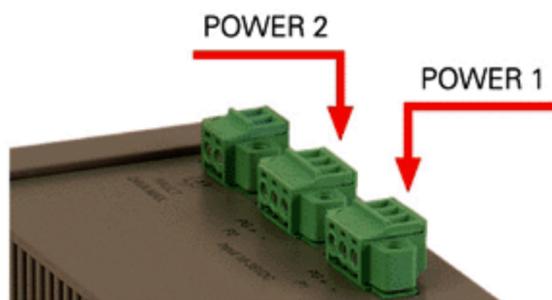
Features

High-performance Industrial Ethernet Switch

1. 10/100Base-T/TX Ethernet ports, adaptive, full/half duplex, Auto MDI/MDI-X connection
2. 100Base-FX fiber ports, single mode/multimode, full duplex
3. High speed redundant ring network (recovery time < 300ms)
4. Alarm relay output for power.
5. Store-and-forward switching mode conforms to IEEE802.3/802.U/802.3X

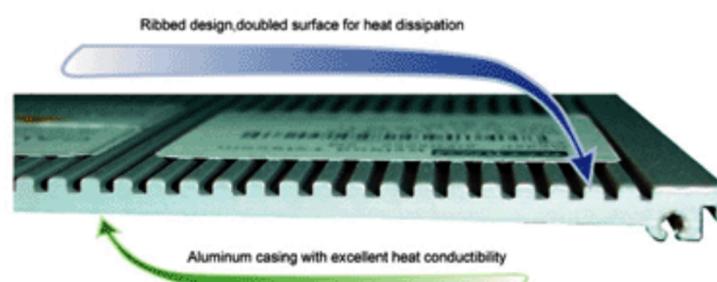
Industrial Power

1. Industrial power input of DC24V (DC18V ~ 36V) .
2. Reliable protection for EMC and against over-current/over-voltage.
3. Redundant power input.



Rugged Design

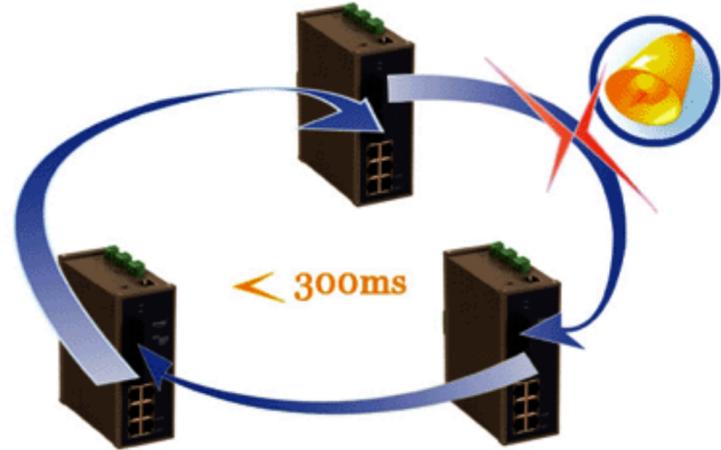
1. Ribbed heat-removal design (fanless); operation at -35°C to +75°C
2. Solid IP40 housing
3. Easy DIN-Rail mounting or optional wall-mounting



➤ Main Functions

100Mbit/s Optical Fiber Redundancy

It is critical for network to re-configure immediately once disconnection occurs in the industrial fields. Accordingly, KIEN2000 comes with DT-Ring, which is 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.



LED Indicator

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

Layer-2 Switching

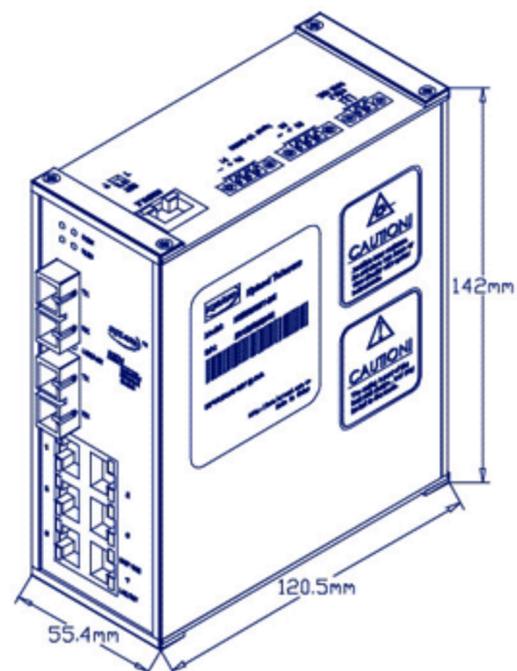
Switches work in two ways: Cut-Through and Store-and-Forward. In Cut-Through, a data packet is immediately relayed further after detecting the target address; in Store-and-Forward, a data packet is first read-in completely and checked for errors before the switch relays the same. KIEN2000 employs Store-and-Forward that is a switching mode widely used.

Power Alarming

Any power of KIEN2000 fails, alarm signal will be sent out by alarm terminal. The terminal is open when there is no alarm and is closed when alarm occurs



Dimensions: 55.4mm x 142mm x 120.5mm(W x H x D)



Parameters

Product Description

Model: KIEN2000

Description: Unmanaged Industrial Ethernet Rail Switch, store and forward switching mode, Ethernet (10 Mbit/s) and Fast-Ethernet (100 Mbit/s)

Port Type and Quantity:

2 x 100Base-FX, optical fiber cable, redundant, duplex

6 x 10 /100Base-T/TX, TP cable, RJ45 Socket (shielded), auto-negotiation, auto-polarity

More Interface

Power Terminal: 2 x DC power terminal, 3-core

Alarm Terminal: 1 x alarm output terminal, 2-core

Network size – length of cable

Twisted pair (TP): 100m

Multimode fiber: Distance: 2–5km ,Wavelength: 1310nm

Optical power: >-20dbm

Singlemode fiber: Distance: 40km(60km, 80km for special requirement), Wavelength: 1310/1550nm, Optical power: >-13dbm

Network size – cascability

Line / star topology: Any

Ring structure (DT-Ring): 50 switches

(recovery time < 300ms)

Power requirements

Power input: 18V – 36V redundant DC power input

Power consumption: <6W

Performance

Transfer Rate: 148810pps

MAC Address Table Size: 1K

Service

Diagnostics: LEDs (power, link status, port rate), fault relais (24VDC/1A)

Redundancy

Redundancy functions: DT-Ring (ring structure), redundant 24V power supply

Ambient conditions

Operating temperature: -35°C to +75°C

Storage/transport temperature: -45°C to +85°C

Relative humidity (non-condensing): 10% to 95%

MTBF: 10 years

Mechanical construction

Dimensions (W x H x D) : 55.4mm x 142mm x 120.5mm

Mounting: Din-rail or Wall-mounting

Protection class: IP40

EMC interference immunity

EN 61000-4-2 electrostatic discharge (ESD): ±4 kV contact discharge, ±8 kV air discharge

EN 61000-4-3 electromagnetic field: 10 V/m (80 – 1000 MHz)

EN 61000-4-4 fast transients (burst) : ±2 KV power line, ±1 kV data line

EN 61000-4-5 surge voltage: Power line: ±2 kV (line/earth), ±1 kV (line/line), ±1 kV data line

EN 61000-4-6 conducted immunity: 3 V (10 kHz – 150 kHz), 10 V (150 kHz – 80 MHz)

EMC emitted immunity

FCC CFR47 Part 15: FCC CFR47 Part 15 Class A

EN 55022: EN 55022 Class A

Approvals

Certificate: FCC, CE, UL

Order Information

Model	Description
KIEN2000-2S	2 x 100Mbit/s, single mode, redundant; 6 x 10 /100Base-T/TX
KIEN2000-2M	2 x 100Mbit/s, multimode, redundant; 6 x 10 /100Base-T/TX