

# IES-1160

## ➤ Industrial 16-port unmanaged Ethernet switch with 16x10/100Base-T(X)

### Features

- RJ-45 ports support Auto MDI/MDI-X switching function
- Provides Store-and-Forward switching architecture
- Provides 3.2Gbps Back-plane (Switching Fabric)
- Warning system by relay output
- Rigid IP-30 housing design
- DIN-Rail and wall mounting enabled

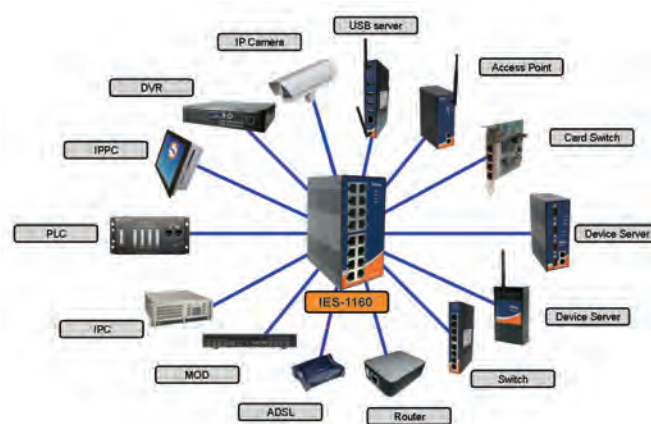


### Introduction

IES-1160 is the unmanaged Ethernet switch with 16x10/100Base-T(X) port. IES-1160 support redundant power inputs, relay output alarm, and surge protection. The wide operating temperature range from -40°C to 70°C can satisfy most of operating environments. Especially, IES-1160 features dual different redundant DC power inputs, two DC power inputs are on terminal block to avoid any unexpected fails on power on. Thus, IES-1160 could guarantee a non-stop operation. Therefore, the switch is one of the most reliable choice for highly-unmanaged Ethernet application.

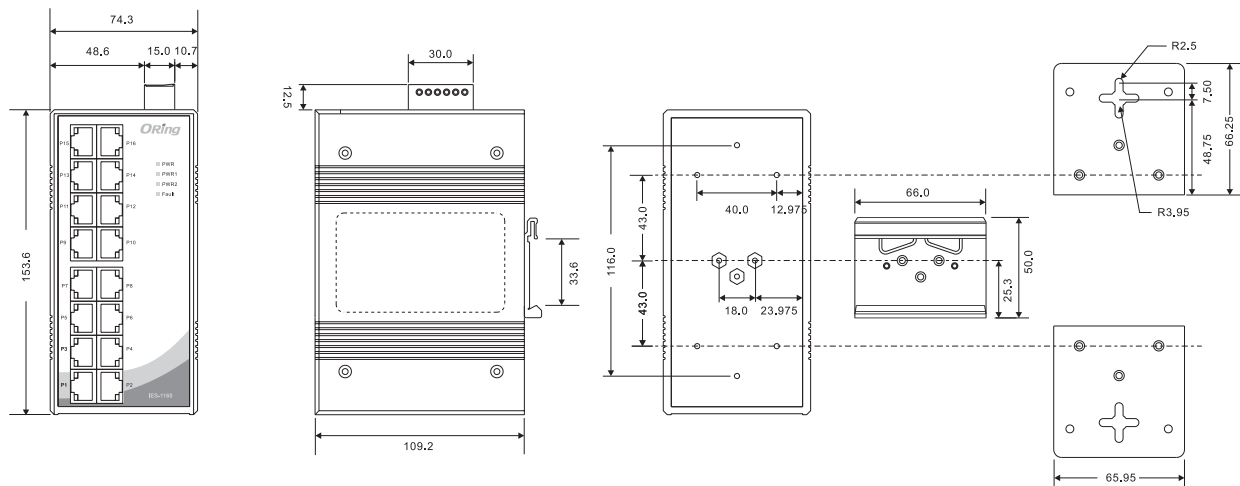
### Practical Operation

IES-1160 is usually deployed for connecting several Ethernet devices, such like Ethernet I/O, IP-Camera, etc. The designs of rugged housing and wide operating temperature, range from -40 ~ 70°C, makes IES-1160 reliably in any kinds of industrial applications.



Connections of Ethernet devices

## Dimensions



(Unit=mm)

## Specifications

ORing Switch Model	IES-1160
<b>Physical Ports</b>	
10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX	16
<b>Technology</b>	
Ethernet Standards	IEEE 802.3 for 10Base-T IEEE 802.3u for 100Base-TX IEEE 802.3x for Flow control
MAC Table	8192 MAC addresses
Priority Queues	4
Processing	Store-and-Forward
Switch Properties	Switching latency: 9 $\mu$ s Switching bandwidth: 3.2Gbps
<b>LED Indicators</b>	
Power Indicator	Green : Power LED x 3
Fault Indicator	Amber : Indicates power failure occurred
10/100Base-T(X) RJ45 Port Indicator	Green for port Link/Act. Amber for Duplex/Collision
<b>Fault Contact</b>	
Relay	Relay output to carry capacity of 1A at 24VDC
<b>Power</b>	
Redundant Input Power	Dual DC inputs. 12 ~ 48VDC on 6-pin terminal block
Power Consumption (Typ.)	9 Watts
Overload Current Protection	Present
Reverse Polarity Protection	Present on terminal block

Physical Characteristics	
Enclosure	IP-30
Dimensions (W x D x H)	74.3(W)x109.2(D)x153.6(H) mm (2.93 x 4.3 x 6.05 inch)
Weight (g)	1060 g
Environmental	
Storage Temperature	-40 to 85°C (-40 to 185°F)
Operating Temperature	-40 to 70°C (-40 to 158°F)
Operating Humidity	5% to 95% Non-condensing
Regulatory Approvals	
EMI	FCC Part 15, CISPR (EN55022) class A
EMS	EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11
Shock	IEC60068-2-27
Free Fall	IEC60068-2-32
Vibration	IEC60068-2-6
Safety	EN60950-1
MTBF (Hours) (MIL-HDBK-217F2, GB, GC, 25°C)	267,635
Warranty	5 years

## Ordering Information

IES-1 **AA** **B**

Code Definition	10/100Base-T(X) Port Number	Additional Port Number
<b>Option</b>	<b>- 16</b> : 16 ports	<b>- 0</b> : 0 ports

Available Model	Model Name	Description
	IES-1160	Industrial 16-port unmanaged Ethernet switch with 16x10/100Base-T(X)

### Packing List

- IES-1160
- DIN-Rail Kit
- Wall-mount Kit
- Quick Installation Guide

### Optional Accessories (Can be purchased separately)

- DR-45 series : 45 Watts DIN-Rail power supply
- DR-75 series : 75 Watts DIN-Rail power supply
- DR-120 series : 120 Watts DIN-Rail power supply
- SDR-240-48, 240W DIN-Rail power supply
- SDR-480-48, 480W DIN-Rail power supply