# **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











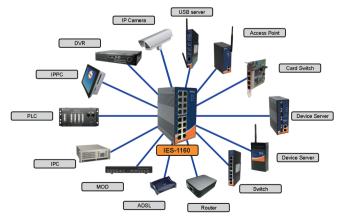


#### Introduction

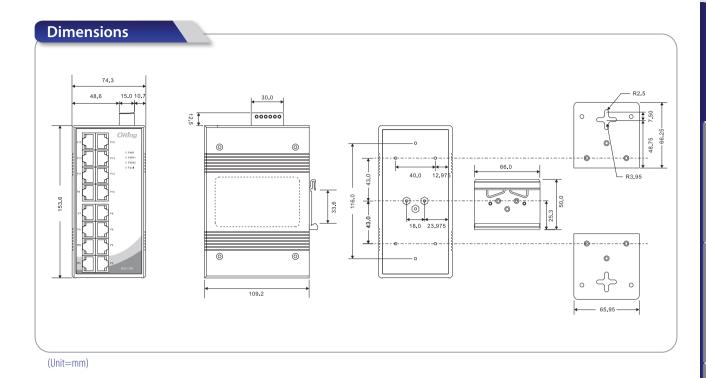
IES-1160 is the unmanaged Ethernet switch with 16x10/100Base-T(X) port. IES-1160 support redundant power inputs, relay output alarm, and surge protection. The wide operating temperature range from -40°C to 70°C can satisfy most of operating environments. Especially, IES-1160 features dual different redundant 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  $-40 \sim 70^{\circ}$ C, makes IES-1160 reliably in any kinds of industrial applications.



Connections of Ethernet devices



### Specifications

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ORing Switch Model	IES-1160
Physical Ports	
10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX	16
Technology	
Ethernet Standards	IEEE 802.3 for 10Base-T IEEE 802.3u for 100Base-TX IEEE 802.3x for Flow control
MACTable	8192 MAC addresses
Priority Queues	4
Processing	Store-and-Forward
Switch Properties	Switching latency: 9 µs Switching bandwidth: 3.2Gbps
LED Indicators	
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
Fault Contact	
Relay	Relay output to carry capacity of 1A at 24VDC
Power	
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 AAB

Code Definition	10/100Base-T(X) Port Number	Additional Port Number
Option	- <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

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