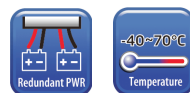## Quick Installation Guide

IES-1162GC

Industrial Unmanaged Switch

Introduction

IES-1162GC is unmanaged Ethernet switch with 16x10/100Base-T(X) and 2xGigabit Combo ports. **IES-1162GC** support redundant power inputs and relay output alarm. The wide operating temperature range from -40℃ to 70℃ can satisfy most of operating environments.

Features

▷ **Provides 16x10/100Base-T(X) and 2xGigabit Combo ports**
▷ **RJ-45 port support Auto MDI/MDI-X switching function**
▷ **SFP supports 1000Base-X Mode**
▷ **Provides Store-and-Forward switching architecture**
▷ **Provides 7.2Gbps Back-plane (Switching Fabric)**
▷ **Warning system by relay output**
▷ **Rigid IP-30 housing design**
▷ **DIN-Rail and wall mounting enabled**

Practical Operation

IES-1162GC 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 form -40 ~ 70℃, makes **IES-1162GC** reliably in any kinds of industrial applications. Especially, **IES-1162GC** features redundant DC power inputs on terminal block, to avoid any unexpected fails on power. Thus, **IES-1162GC** could guarantee a non-stop operation.
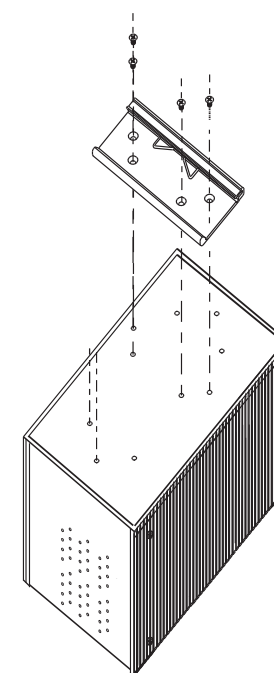
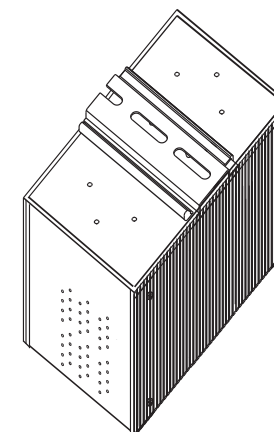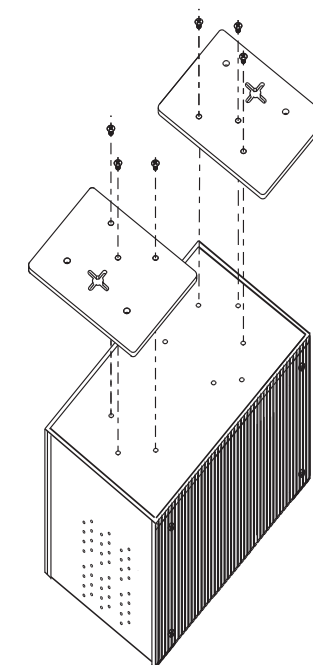● **Connections of Ethernet devices**
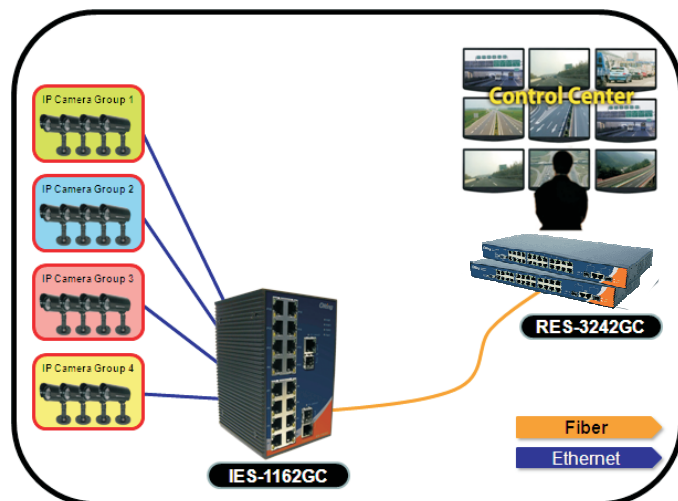
Specifications

ORing Switch Model	IES-1162GC
Physical Ports	
10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX	16
Gigabit combo Port in RJ-45 and SFP	2
Technology	
Ethernet Standards	IEEE 802.3 for 10Base-T, IEEE 802.3u for 100Base-TX IEEE 802.3z for 1000Base-X IEEE 802.3ab for 1000Base-T IEEE 802.3x for Flow control
MAC Table	8192 MAC addresses
Priority Queues	4
Processing	Store-and-Forward
Switch Properties	Switch latency: 9 us Switch bandwidth: 7.2Gbps
LED Indicators	
Power Indicator	Green: Power LED x3
Fault Indicator	Amber: Indicate power failure occurred
10/100 Base-T(X) RJ45 Port Indicator	Green for port Link/Act. Amber for Duplex/Collision
10/100/1000Base-T(X) RJ45 Port Indicator	Green for port Link/Act. Amber for 100Mbps indicator
1000Base-X/Fiber Port Indicator	Green for port Link/Act.
Fault Contact	
Relay	Relay output to carry capacity of 1A at 24 VDC
Power	
Redundant Input power	Dual DC input 12-48VDC on 6-pin terminal block
Power consumption(Typ.)	12 Watts
Overload current protection	Present
Reverse polarity protection	Present on terminal block
Physical Characteristic	
Enclosure	IP-30
Dimension (W x D x H)	96.4(W)x108.5(D)x154(H) mm (3.8x4.27x6.06 inch.)
Weight (g)	1210g
Environmental	
Storage Temperature	-40 to 85℃ (-40 to 185℉)
Operating Temperature	-40 to 70℃ (-40 to 158℉)
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
Warranty	5 years

Installation

● **DIN-Rail Install Step**   ● **Wall-mountedl Install Step**

Quick Installation Guide

SWITCH INDUSTRIAL

IES-1162GC

Industrial Unmanaged Switch

Power Connection Guide

Power Supply

+24V   GND

Warning Device

Power Supply 12-48 VDC   V+ V-

V- V+   Power Supply 12-48 VDC

PWR-2   Fault   PWR-1
1A@24V
V2- V2+   V1- V1+   DC12-48V

Frame Ground

Front Panel

P15   P16
P13   P14
P11   P12

G2 LNK/ACT
G2

P9   P10
P7   P8
P5   P6

G2 LNK/ACT

P3   P4
P1   P2

10/100M   Gigabit Combo   IES-1162GC

A

PWR   Power LED
PWR1   Power 1 LED
PWR2   Power 2 LED
Fault   Fault LED

SFP Fiber Port LNK / ACT LED
SFP 1000Base-X Fiber Port
LNK/ACT LED (Green)
10/100/1000 Base-T(X) Port
100Mbps indicator (Amber)

LNK/ACT LED (Green)
10/100 Base-T(X) LAN Port
Full Duplex LED (Amber)

Accessory

① 6-Pin Terminal block

② Dust Cover (RJ-45)

③ Dust Cover (SFP)

④ Flat Screw (M3 X5)

⑤ Wall-mounted kit

⑥ 88mm DIN-Rail kit

⑦ QIG

ORing Industrial Networking Corp.

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RoHS   FC   CE

TEL: +886-2-2918-3036   Website: www.oring-networking.com
FAX: +886-2-2918-3084   E-mail: support@oring-networking.com

Packing list

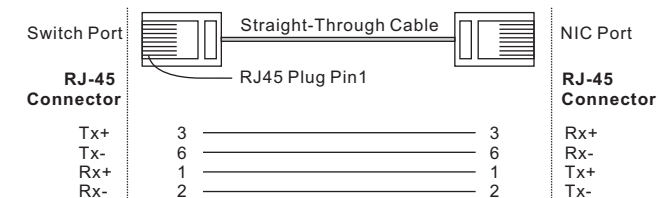| Model name	Front Panel	Model Description	Accessory
IES-1162GC	A	Industrial 18-port unmanaged Ethernet switch with 16x10/100Base-T(X) and 2xGigabit combo ports, SFP socket	① X 1, ② X 18, ③ X 2, ④ X 6, ⑤ X 2, ⑥ X 1, ⑦ X 1

Communication Connections

⦿ 10/100Base-T(X) Ethernet Port Connection

■ RJ45 (8-pin, MDI) Port Pinouts

Pin	Single
1	Tx+
2	Tx-
3	Rx+
6	Rx-

1   8

■ RJ45 (8-pin, MDI-X) Port Pinouts

Pin	Single
1	Rx+
2	Rx-
3	Tx+
6	Tx-

1   8

⦿ 1000Base-T Ethernet Port Connection

■ RJ45 (8-pin, MDI) Port Pinouts

Pin	MDI
1	BI_DA+
2	BI_DA-
3	BI_DB+
4	BI_DC+
5	BI_DC-
6	BI_DB-
7	BI_DD+
8	BI_DD-

1   8

■ RJ45 (8-pin, MDI-X) Port Pinouts

Pin	MDI-X
1	BI_DB+
2	BI_DB-
3	BI_DA+
4	BI_DD+
5	BI_DD-
6	BI_DA-
7	BI_DC+
8	BI_DC-

1   8

■ RJ45 (8-pin) to RJ45 (8-Pin) Straight-Through Cable Wiring

Switch Port   Straight-Through Cable   NIC Port
RJ-45 Connector   RJ45 Plug Pin1   RJ-45 Connector

Tx+	3	3	Rx+
Tx-	6	6	Rx-
Rx+	1	1	Tx+
Rx-	2	2	Tx-

■ RJ45 (8-pin) to RJ45 (8-Pin) Cross-Over Cable Wiring

Switch Port (NIC Port)   Cross-Over Cable   Switch Port (NIC Port)
RJ-45 Connector   RJ45 Plug Pin1   RJ-45 Connector

(Rx+)	Tx+	3	1	Rx+	(Tx+)
(Rx-)	Tx-	6	2	Rx-	(Tx-)
(Tx+)	Rx+	1	3	Tx+	(Rx+)
(Tx-)	Rx-	2	6	Tx-	(Rx-)
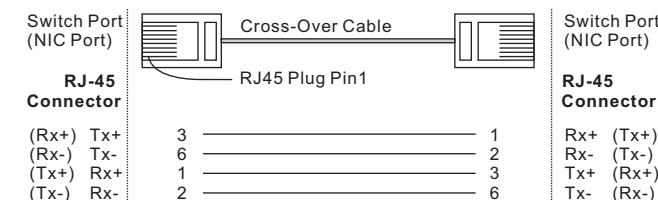
⦿ 1000Base-X SFP Port Connection

LC-Port Pinouts   LC-Port Pinouts

LC-Port to LC-Port Cable Wiring

Tx   Rx
Rx   Tx

Tx	Cable Wiring	Rx
Rx		Tx