ROCKETLINX ES7110

Industrial PoE Switch

Quick Installation Guide

ES7110 | ES7110-VB

2000550 Rev D

www.comtrol.com

Overview

The RocketLinx ES7110 and ES7110-VB are industrial Power over Ethernet (PoE) switches with eight Fast Ethernet PoE ports and two Gigabit uplink ports to ensure a high-bandwidth connection. The ES7110 and ES7110-VB are compliant with the IEEE 802.3af PoE standard to deliver a maximum of 15.4W per port. The ES7110 and ES7110-VB are referred to as ES7110 in the remainder of the Guide unless model-specific information is required.

To ensure high quality video data transmission, the ES7110 not only provides Gigabit bandwidth uplink for large image traffic, but also supports QoS to adjust the priority of data transfer. Using the Fault Relay, the ES7110 can automatically warn the administrator if there are any failures. The compact IP30 rigid aluminum case allows the ES7110 to be reliably operated in an extreme environment (-25° to 70°C). Refer to the Comtrol web site.

Set the DIP Switch

The ES7110 has a 10-pin DIP switch located on the bottom panel to configure the Port Link Alarm for the Ethernet ports. The following table shows the DIP switch number mapping to the corresponding PoE and Gigabit ports as follows:

Port G2	Port G1	Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8
DIP 1	DIP 2	DIP 3	DIP 4	DIP 5	DIP 6	DIP 7	DIP 8	DIP 9	DIP 10

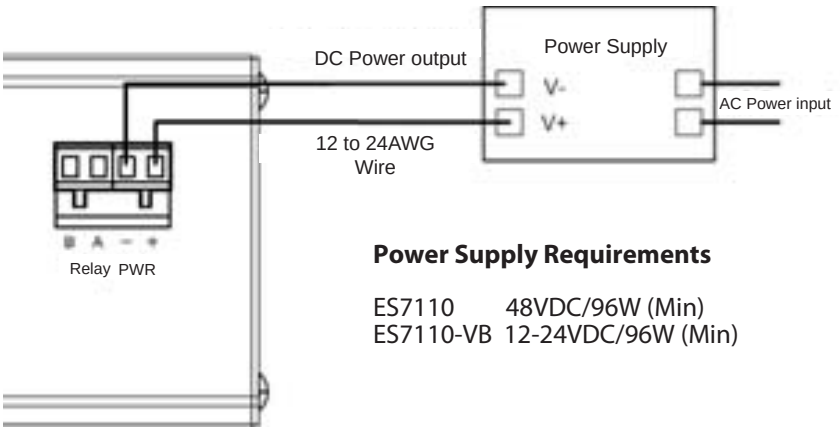
DIP Switch Number	Status	Description
1-2	On	Enables the Gigabit port failure alarm for this port.
	Off (Default)	Disables the Gigabit port failure alarm for this port.
3-10	On	Enables the PoE port failure alarm for this port.
	Off (Default)	Disables the PoE port failure alarm for this port.

Wire the Power

Use the following procedure to wire the power and ground.

1. Disconnect the terminal block from the ES7110.

2. Insert the positive and negative wires (12-24AWG) into the **PWR+** and **PWR-** contacts.



Power Supply Requirements

ES7110	48VDC/96W (Min)
ES7110-VB	12-24VDC/96W (Min)

Note: *Make sure that the power supply is OFF before connecting it to the switch. Otherwise, your screwdriver blade can inadvertently short your terminal connections to the grounded enclosure.*

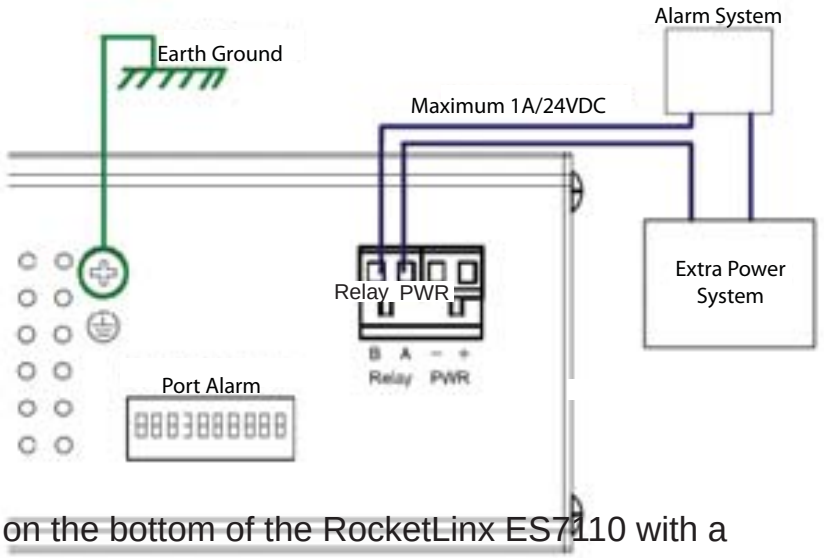
3. Tighten the wire-clamp screws to prevent the wires from coming loose.

4. Plug the terminal block into the ES7110.

Wire the Relay Output and Ground

The ES7110 provides Relay Output. The relay contacts are energized (open) for normal operation and will close under a faulty condition, such as, an Ethernet port link break. The Relay alarm can be configured by the DIP switches.

1. Insert positive and negative wires into **Relay A** and **Relay B**.
2. Tighten the wire-clamp screws to prevent the wires from coming loose.
3. Connect a ground wire between the chassis and earth ground using 12-24AWG wire to ensure that the RocketLinx ES7110 is not damaged by noise or electrical shock.
   a. Loosen the earth ground screw on the bottom of the RocketLinx ES7110 with a screw driver.
   b. Tighten the screw after the earth ground wire is connected.



DIN Rail Mount

The DIN rail clip is already attached on the rear side of the ES7110.

1. Insert the upper end of the DIN rail clip into the back of the DIN rail track from its upper side.
2. Lightly push the bottom of the DIN rail clip into the track.
3. Verify that the DIN rail clip is tightly attached to the track.

Connect the Ethernet or PoE Ports

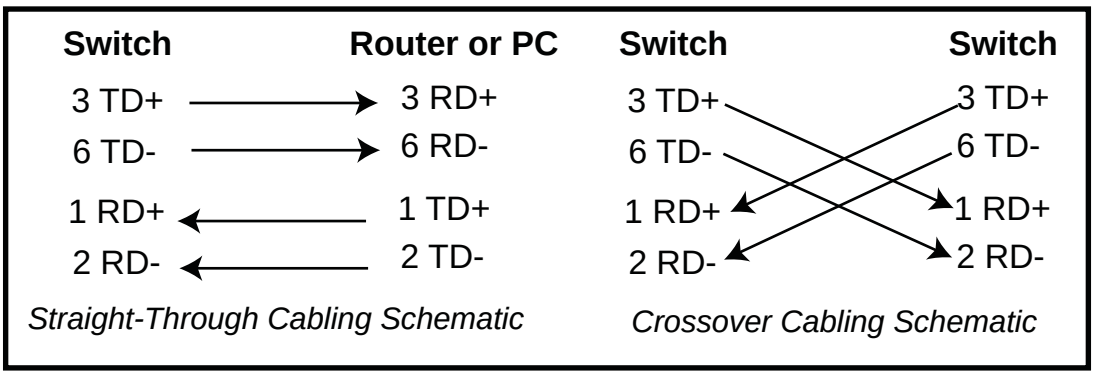
You can use the following information to connect Ethernet cables between the ES7110 ports and the network nodes.

- Ports G1 and G2 are Gigabit Ethernet ports that support 10BASE-T, 100BASE-TX, and 1000BASE-TX.
- Ports 3-10 are Fast Ethernet 10/100BASE-TX PoE ports that are IEEE 802.3af (PoE) compliant. The Fast Ethernet ports support 10BASE-T and 100BASE-TX, full- or half-duplex modes.

The following table shows the RJ45 pin-out assignments for the PoE and Gigabit ports:

RJ45 Pin Number	10/100BASE-TX PoE Signal	1000BASE-TX Signal
1	RX +-	BI_DA+
2	RX -	BI_DA-
3	TX +	BI_DB+
4	Vport+	BI_DC+
5	Vport+	BI_DC-
6	TX -	BI_DB-
7	Vport-	BI_DD+
8	Vport-	BI_DD-

All the Fast Ethernet ports automatically detect the signal from the connected devices to negotiate the link speed and duplex mode. Auto MDI/MDIX allows you to connect another switch, hub, or workstation without changing straight-through or crossover cables. Crossover cables cross-connect the transmit lines at each end to the received lines at the opposite end.



The Ethernet cables use Pins 1, 2, 3, and 6 of an 8-pin RJ45 connector. The signals of these pins are converted by the automatic MDIX function, as shown in the following table:

Pin	MDIX Signals	MDI Signals
1	RD+	TD+
2	RD-	TD-
3	TD+	RD+
6	TD-	RD-

Connect one side of an Ethernet cable into any switch port and connect the other side to your attached device. The wiring cable types and maximum cable length are as follows.

- Uplink ports: 10BASE-T: 2-pair UTP/STP Category 3, 4, 5 cable, EIA/TIA-568 100-ohm (100 meters)
- Uplink ports: 100BASE-TX: 2-pair UTP/STP Category 5 cable, EIA/TIA-568 100-ohm (100 meters)
- Uplink ports: 1000BASE-TX: 4-pair UTP/STP Category 5 cable, EIA/TIA-568 100-ohm (100 meters)
- PoE ports: 4-pair UTP/STP Category 5e / 6 cable, EIA/TIA-568 100-ohm (100 meters)

Comtrol Customer Service

You can use one of the following methods to contact Comtrol Corporation.

Contact Method	Web Address or Phone Number
Support	http://www.comtrol.com/pub/en/support
Downloads	**ES7110**: ftp://ftp.comtrol.com/html/ES7110.htm **ES7110-VB**: ftp://ftp.comtrol.com/html/ES7110-VB.htm
Web Site	http://www.comtrol.com
Phone	763.957.6000