COMTROL®

ROCKETLINX ES7110

ES7110/ES7110-VB

QUICK INSTALLATION GUIDE

2000550 Rev E | Release Date - August 2015

INTRODUCTION

The RocketLinx ES7110 series is an industrial Power over Ethernet (PoE) switch with eight Fast Ethernet ports and two Gigabit uplink ports to ensure high-bandwidth connection. The ES7110 is compliant with the IEEE 802.3af PoE standard to deliver a maximum of 15.4 W per port with a total output power budget of 65W. The ES7110 series offers the following models:

- ES7110 - with eight Fast Ethernet PoE ports and two RJ45 Gigabit uplink ports (48VDC)
- ES7110-VB - with eight Fast Ethernet PoE ports and two RJ45 Gigabit uplink ports (12-24VDC)

To ensure the high quality of 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. Refer to the Comtrol website for more information about specific ES7110 model features.

WIRE THE POWER

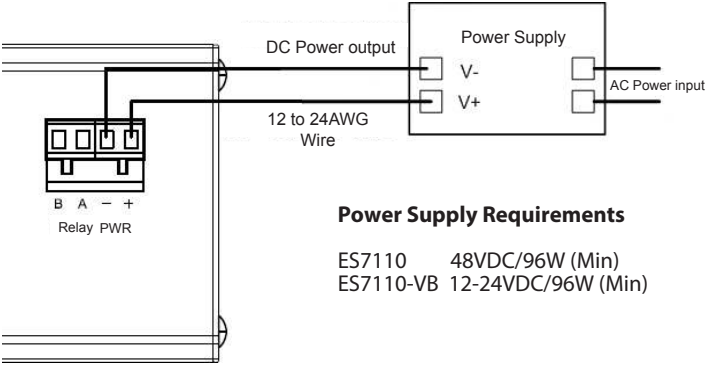
Use the following procedure to wire the power.

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

Note: *Power should be disconnected from the power supply before connecting it to the switch. Otherwise, your screwdriver blade can inadvertently short your terminal connections to the grounded enclosure.*

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

Electrical Specification	ES7110	ES7110-VB
Power Input	48VDC	12-24VDC
Power Consumption (without PD loading)	7W	11W@ 24VDC
Power Consumption (with PD loading)	75W	80W @ 24VDC
Maximum Output/Power PoE Port	15.4W	15.4W
Total PoE Power Budget	65W	65W



Power Supply Requirements

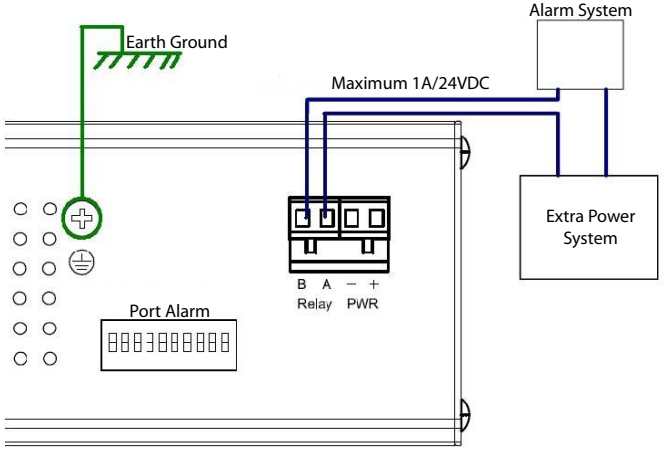
ES7110 48VDC/96W (Min)
ES7110-VB 12-24VDC/96W (Min)

WIRE THE ALARM RELAY OUTPUT AND GROUND

The ES7110 provides one alarm relay output. The relay contacts are energized (open) for normal operation and close under a faulty condition, such as an Ethernet port link break. Configure the alarm relay output with 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 ES7110 is not damaged by noise or electrical shock.

    a. Loosen the earth ground screw on the bottom of the ES7110 with a screw driver.
    b. Tighten the screw after the earth ground wire is connected.



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

The port break alarm is limited to an auto-negotiation 10/100 full-duplex device.

DIP Switch	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

MOUNT THE ES7110

The ES7110 can be mounted on a DIN rail or on a wall panel. The DIN rail clip is already attached to the ES7110 at the factory.

Note: *The ES7110 will disperse heat through the metal case during PoE port operation. The ES7110 should be installed and mounted onto a panel that provides good heat dispersion.*

You can use this procedure to mount the ES7110 on a DIN rail.

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 POE OR RJ45 UPLINK 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 1-8 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.

All 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.

Connect one side of an Ethernet cable into any switch port and connect the other side to your attached device. Make sure that the cables are less than 100 meters (328 feet).

- Uplink ports: 10BASE-T: 2-pair Category 3, 4, 5 cable
- Uplink ports: 100BASE-TX: 2-pair Category 5
- Uplink ports: 1000BASE-TX: 4-pair Category 5 cable
- PoE ports: 4-pair Category 5e / 6 cable

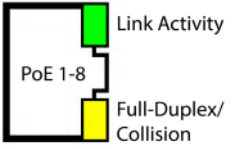
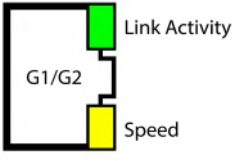
RJ45 Pin	10/100BASE-TX PoE (Alternative B)	1000BASE-TX
1	RX+	BI_DA+
2	RX -	BI_DA-
3	TX +	BI_DB+
4	Vport+	BI_DC+
5	Vport+	BI_DC-
6	TX -	BI_DB-
7	Vport-	BI_DD+
8	Vport-	BI_DD-

LEDs

This table provides information about the status LEDs.

LEDs	Status	Description
Power	Green	Valid DC input power applied
	Off	No power
Alarm	Red	A power link failure has occurred
	Off	No failure has occurred

This table provides details about the port status LEDs.

Port Status	LED		Description
PoE 1-8 **Link/ Activity**		Green	The port is connected
		Blinking	Transmitting or receiving packets
		Off	The port link is inactive
PoE 1-8 **Full-Duplex/ Collision**		Yellow	Full-duplex mode connection
		Blinking	Data collision
		Off	The link is inactive or operating in half-duplex mode
G1/G2 **Link/ Activity**		Green	The port is connected
		Blinking	Transmitting or receiving
		Off	The port link is inactive
G1/G2 **Speed**		Yellow	Full-duplex mode connection
		Blinking	3 blinks per cycle - 1000Mbps 2 blinks per cycle - 100Mbps 1 blink per cycle - 10Mbps
		Off	The link is inactive

COMTROL CUSTOMER SERVICE

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

Contact Method	Web Address or Phone Number
Support	http://www.comtrol.com/support
Downloads	http://downloads.comtrol.com/html/default.htm
Website	http://www.comtrol.com
Phone	+1 763.957.6000