



# ROCKET *LINX* ES8510

*ES8510 | ES8510-XT | ES8510-XTE*

## QUICK INSTALLATION GUIDE

2000515 Rev G | Release Date - October 2016

# INTRODUCTION

The RocketLinx ES8510, ES8510-XT, and ES8510-XTE are managed industrial Ethernet switches with:

- Seven 10/100BASE-TX ports
- Three combo RJ45/SFP ports
  - **ES8510/ES8510-XT:** 10/100BASE-TX (RJ45) or 100BASE-FX/1000BASE-SX/LX/LHX/XD/ZX (SFP) Gigabit ports (standard mini GBIC SFPs)
  - **ES8510-XTE:** 10/100BASE-TX (RJ45) or 100BASE-FX (SFP) ports (standard mini GBIC SFPs)

When the SFP is active and installed, the corresponding RJ45 port is deactivated. For example, if an SFP is installed and active on the SFP Port 8, the corresponding RJ45 Port 8 becomes inactive.

The ES8510 is encased with a rugged aluminum housing for industrial environments:

- ES8510 provides a wide operating temperature
- ES8510-XT/ES8510-XTE are NEMA TS2 certified and provide an extended operating temperature

The ES8510, ES8510-XT, and ES8510-XTE are referred to as the ES8510 unless there is a difference between the models.

*See the Control website for complete product specifications.*

## INSTALLATION OVERVIEW

If you need more detailed installation and configuration information, you can download the appropriate User Guide, which can be located at <http://downloads.comtrol.com>

### Wiring the Power Inputs

The ES8510 provides redundant power, reverse polarity protection, and accepts a positive or negative power source but PW1 and PW2 must apply to the same mode. The ES8510 can be configured to signal an alarm for loss of power in either PW1 or PW2 using the web interface or Command Line Interface (CLI).

**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.

1. Insert the positive and negative wires into PW+ and PW- contacts (PW1 and PW2). You can connect a single power supply or two power supplies depending on your requirements.
2. If both power inputs are connected, the ES8510 is powered from the highest connected voltage.
  - ES8510/ES8510-XT: 12 to 48VDC.
  - ES8510-XTE: 10 to 60VDC.

The Power 1/2 LEDs turn red during the boot cycle and change to green when the ES8510 is ready.

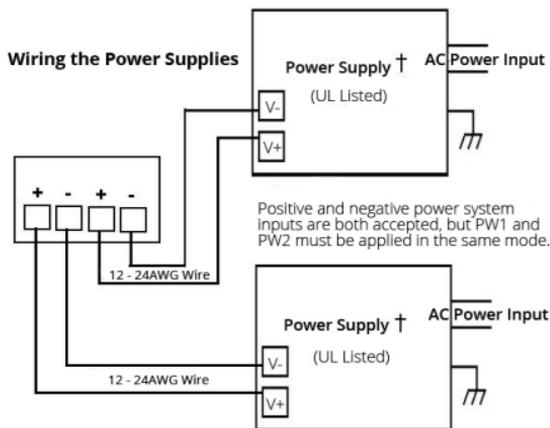
3. Tighten the wire-clamp screws to prevent the wires from being loosened.

### Wiring the Alarm Relay Output

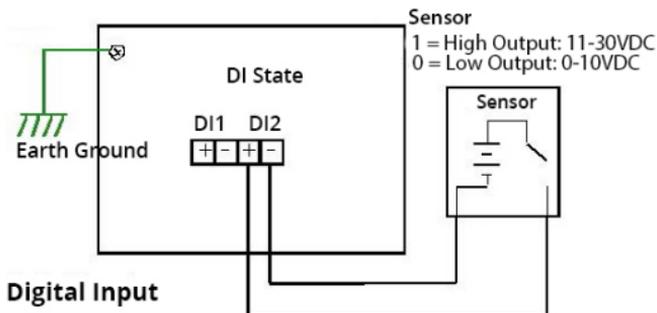
The ES8510 provides two digital inputs and two digital outputs (dry relay output) on terminal block connectors on the bottom of the unit. Fault conditions can be

configured in the web interface or Command Line Interface (CLI).

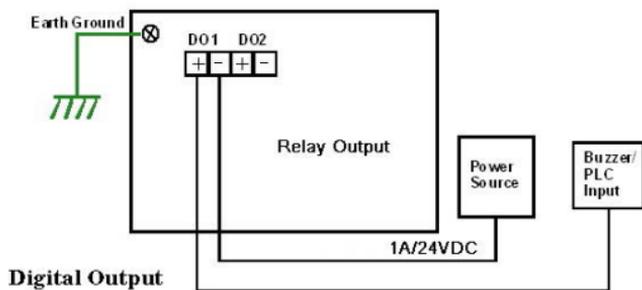
The Digital Input pin can be pulled high or low so that the connected equipment can actively drive these pins. The web interface allows you to read and set the value to the connected device.



†The recommended working voltage for the ES8510 | ES8510-XT is 12 - 48VDC.



The power input voltage of logic low is 0 to 10VDC and logic high is 11 to 30VDC. Do not apply a higher voltage than the specification; it may cause internal circuit damage or cause an incorrect DI action.



Digital output relay contacts are energized (open) for normal operation and close for fault conditions. The digital output relay contacts support up to 1A at 24VDC. Do not apply voltage and current higher than the specifications.

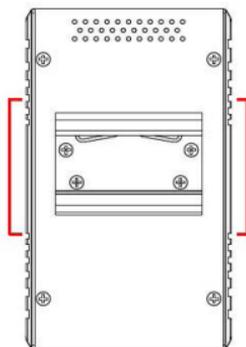
1. Insert the positive and negative wires (12-24 AWG) into V+ and V-.
2. Tighten the wire-clamp screws to prevent the wires from coming loose.

### Mounting the ES8510

You can mount the ES8510 onto a DIN rail or optionally a panel or wall.

Follow the steps below to install the ES8510 with the wall mounting plate:

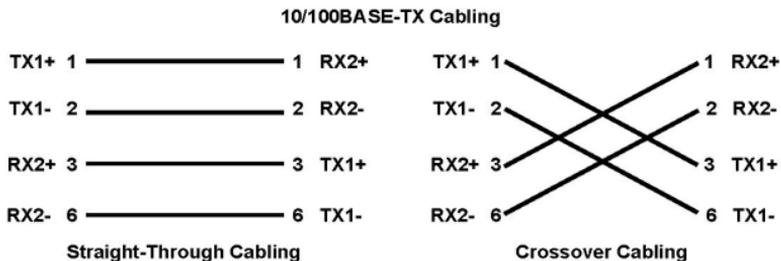
1. To remove the DIN rail clip from the ES8510, loosen the screws from the DIN rail clip.
2. Place the wall mounting plate on the rear panel of the ES8510.
3. Use the screws to attach the wall mounting plate to the ES8510.
4. Use the hook holes at the corners of the wall mounting plate to hang the ES8510 onto the wall.



## Connecting Ethernet Ports

Connect one end of an Ethernet cable into the Ethernet port of the ES8510 and the other end to the attached networking device. The Ethernet ports support 10/100Mbps half/full-duplex. All ports auto-detect the signal from connected devices to negotiate the link speed and duplex mode. Auto MDI/MDIX allows users to connect another switch, hub, or workstation without changing straight through or crossover cable.

Link/Act LED are lit to indicate traffic and link status. See the LED subsection for more information.



Always make sure that the cables between the switches and attached devices (for example, switch hub, or workstation) are less than 100 meters (328 feet).

- **10BASE-T:** Category 3, 4, or 5 cable
- **100BASE-TX/1000BASE-TX:** Category 5 or 5e cable

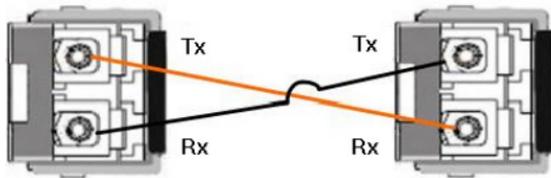
## Connecting the SFP Transceivers

To ensure system reliability, Control recommends using Control certified SFP transceivers.

1. Plug the SFP transceiver into the SFP port.
2. Connect the transmit channel to the receive channel at each end.
3. Check the direction/angle of the fiber transceiver and the fiber cable.

**Note:** *This is a Class 1 Laser/LED product. Do not stare at the Laser/LED beam.*

The SFP port does not function until the fiber cable is linked to another active device. The SFP and corresponding RJ45 ports work in an exclusive mode. Traffic sent or received through the SFP module has priority thus no traffic is sent or received over the corresponding RJ45 connection. To use the RJ45 connection, remove the corresponding SFP.



Multi-Mode cables should not exceed 2KM and Single-Mode cables should not exceed 30km.

## PROGRAMMING THE IP ADDRESS

Configure the IP address using one of the following methods:

- PortVision DX (<http://downloads.control.com>)
- Web browser
- Telnet
- Command line interface (CLI) using the RS-232 console cable

The easiest way to configure a static IP address for your network in the ES8510 is to use a Windows host and PortVision DX (see below). For information about using other configuration methods, refer to the appropriate *RocketLinx ES8510 User Guide*.

The following procedure uses PortVision DX to program network settings.

1. Install PortVision DX on a host system with a Windows operating system. If you need assistance installing PortVision DX, see the appropriate *RocketLinx ES8510 User Guide*.
2. Start PortVision DX. PortVision DX can be started from **Start --> All Programs --> Control --> PortVision DX**.
3. Click the **Scan** button.
4. Select the Control product families that you want to locate and click the **Scan** button.
5. Right-click the ES8510 in the *Device List* pane (lower) that you want to configure and click **Properties**.
6. Enter a user-friendly Device Name.
7. Optionally, enter the ES8510 serial number, which displays a friendly device name in the *Device List* pane on the main page.

8. Select **DHCP IP** or **Static IP** for the *IP Mode*.
  - If you select **DHCP IP**, go to Step 9.
  - If you select **Static IP**, enter an IP address, Subnet Mask, and Default Gateway value for your network.
9. Optionally, select the appropriate **Network Topology**, which is an informational field.
10. Click the **Apply Changes** button.
11. Click **Close** to return to the main screen.
12. You are now ready to configure the ES8510 features.

## FEATURE CONFIGURATION

The ES8510 provides both in-band and out-band configuration methods:

**Out-band management** means that you configure the ES8510 using the RS-232 console cable and the Command Line Interface (CLI) to access the ES8510 without attaching an admin PC to the network. You can also use out-bound management, if you lost the network connection to the ES8510.

**In-band management** means that you connect remotely using the ES8510 IP address through the network. You can remotely connect with the ES8510 web interface or a Telnet console and the CLI.

The following procedure uses a web browser to configure ES8510 features. Refer to the appropriate *RocketLinx ES8510 User Guide* for other configuration methods.

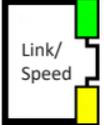
1. Open a web browser and enter the IP address of the ES8510.
2. Enter **admin** for both the user name and the password when prompted.
3. Use the web interface to configure your device as needed for your network.

You can use the help system or the appropriate User Guide for information about configuring other ES8510 features.

## LED INDICATORS

You can also view the LEDs for the ES8510 through the web interface using the *Device Front Panel* page.

LEDs	LED On	LED Blinking	LED Off
Power 1, Power 2	Green: Power available	Not applicable	No power
DO1, DO2	Red: DO activated	Not applicable	DO not activated
DI1, DI2	Green: DI activated	Not applicable	DI not activated
R. M. (ring master)	Green: working as ring master	Green: ring failed	Ring function disabled or ES8510 is on a ring but not the ring master
1 - 7	Green: Linked to another device Amber: Full-Duplex	Green: Active traffic	Not connected Collision
8 - 10 SFP RJ45	Green: Connected Green: Active connection	Green: Active connection Green: Active connection	Plugged in but not linked up Not connected



## CONTROL CUSTOMER SERVICE

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

Contact Method	Web Address or Phone Number
Support	<a href="http://www.comtrol.com/support">http://www.comtrol.com/support</a>
Downloads	<a href="http://downloads.comtrol.com/html/default">http://downloads.comtrol.com/html/default</a>
Website	<a href="http://www.comtrol.com">http://www.comtrol.com</a>
Phone	+1 763.957.6000

