




ROCKET *LINX* ES8510

Industrial Ethernet Switch



Quick Installation Guide

ES8510 | ES8510-XT | ES8510-XTE

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 and ES8510-XT: 10/100/1000BASE-TX (RJ45) or 100BASE-FX/1000BASE-SX/LX/LHX/XD/ZX (SFP) Gigabit ports
 - ES8510-XTE: 10/100BASE-TX (RJ45) or 100BASE-FX (SFP) ports



RocketLinX ES8510

When the SFP is active and installed, the corresponding RJ45 port is deactivated. For example, if an SFP is installed and active on the 8SFP port, 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 and ES8510-XTE are NEMA TS2 certified and provide an extended operating temperature

The RocketLinX ES8510, ES8510-XT, and ES8510-XTE are referred to as the ES8510 unless there is a difference between the models. See the Control web site for detailed specification information.

Installation Overview

You can refer to the *User Guide* for your specific ES8510 model for detailed installation and configuration procedures, which is available on the RocketLinX CD or you can download the latest version from the FTP site.

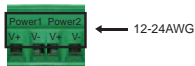
Mount the ES8510

You can mount the ES8510 to a DIN rail or use the wall/panel mounting plate.

Connect the Power

Power should be disconnected from the power supply before connecting it to the ES8510. 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). PW1 and PW2 support power redundancy and reverse polarity protection. You can connect a single power supply or both power supplies depending on your requirements.



2. Tighten the wire-clamp screws to prevent the wires from coming loose.
 - ▶ If both power inputs are connected, the RocketLinx ES8510-XTE is powered from the highest connected voltage.
 - The ES8510 and ES8510-XT recommended working voltage is 12 to 48VDC.
 - The ES8510-XTE recommended working voltage is 10 to 60VDC.
 - ▶ The ES8510-XTE can emit an alarm if PW1 or PW2 are no longer receiving power.
 - ▶ Positive and negative power system inputs are both accepted but PW1 and PW2 must apply the same mode.
 - ▶ The Power 1/2 LEDs turn red during the boot cycle and change to green with the ES8510 is ready.

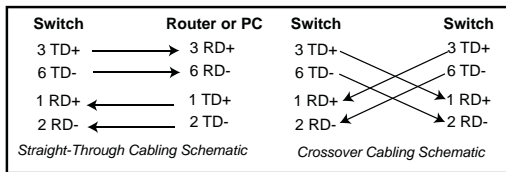
Connect the Ground

To ensure the system is not damaged by noise or any electrical shock, we suggest that you make a direct connection between the ES8510 and Earth Ground. On the bottom side of the ES8510, there is one earth ground screw. Loosen the earth ground screw with a screw driver; then tighten the screw after the earth ground wire is connected.

Connect the Ethernet Cables

Connect a standard Ethernet cable between an RJ45 port on the ES8510 and the network nodes.

The ports support 10BASE-T and 100BASE-TX, full- or half-duplex modes. All the Fast Ethernet ports auto-detect the signal from 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.

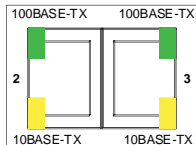


The Ethernet cables use Pins 1, 2, 3, and 6 of an 8-pin RJ45 connector. The signals of these pins are converted by the automatic MDIX function, as shown in the following table.

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

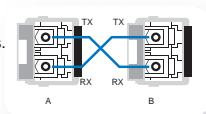
The LINK ACT LEDs are lit when the cable is correctly connected. The LINK ACT LED is lit yellow for a 10BASE-TX Ethernet connection or green for a 100BASE-TX Ethernet connection. Always make sure that the cables between the switches and attached devices (for example, switch, hub, or workstation) are less than 100 meters (328 feet).

- ▶ 10BASE-T: 2-pair UTP/STP Category 3, 4, 5 cable, EIA/TIA-568 100-ohm (100 meters)
- ▶ 100BASE-TX: 2-pair UTP/STP Category 5 cable, EIA/TIA-568 100-ohm (100 meters)



Connect the SFP Transceivers

You can optionally connect SFP transceivers. Comtrol recommends using approved SFP mini GBIC transceivers. Cross-connect the transmit channel at each end to the receive channel at the opposite end as illustrated in the figure.



Connect the Digital Input/Relay Output

The ES8510 provides two digital inputs, also known as relay outputs. It allows you to connect the termination units' digital output and manage/monitor the status of the connected unit. The Digital Input pin can be high or low; thus the connected equipments can actively drive these pins high or low. The embedded software user interface allows you to read and set the value to the connected device. The voltage level of logic low is 0 to 10VDC. Logic high is 11 to 30VDC.

The relay contacts are energized (open) for normal operation and will close for fault conditions. The fault conditions include power failure, a break in the Ethernet power link, or other pre-defined events which can be configured in the ES8510 management interface.

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

RocketLinx ES8510 Configuration

You can configure the RocketLinx ES8510 network information (IP address, subnet mask, and gateway or DHCP) using one of the following methods:

- ▶ NetVision
- ▶ Web browser
- ▶ Command Line Interface (CLI) using one of these methods:
 - Serial console port by connecting the RS-232 console cable that was shipped with the RocketLinx ES8510 to a system COM port
 - Telnet
 - Secure shell (SSH)

The default IP address of the RocketLinx ES8510 is **192.168.250.250**.

This document discusses using NetVision to program the network information into the ES8510 and a web browser to begin feature configuration. You can refer to the *RocketLinx ES8510 User Guide*, if you want to use one of the other configuration methods.

1. If necessary, install the latest version of the Java Runtime Environment on your PC.

Note: *NetVision is available on the RocketLinx CD or you can download the latest version from the Control ftp site.*

2. Copy the NetVision application to a host system with a Windows operating system. Make sure that you note the location as there is no installation wizard or process for NetVision.
3. Start NetVision.
4. Configure the RocketLinX ES8510 IP address for your network.
 - a. In NetVision, click the **Discovery** button. After five seconds the RocketLinX ES8510 should be listed.
 - b. Highlight the RocketLinX ES8510.
 - c. To configure a static IP address, double-click the **IP Address** field and enter a desired IP address.
 - d. Double-click the **Netmask** field and enter a desired subnet mask.
 - e. Select the **IP Settings/Modify IP** menu item to commit the IP address and Netmask change to the RocketLinX ES8510 switch.
5. Open a web browser and enter the IP address of the RocketLinX ES8510.
For example: **http://192.168.250.250** or **https://192.168.250.250**.
6. Click **Run** when Java prompts you to run the applet.
7. Enter **admin** for both the user name and the password when prompted.
You can refer to the *RocketLinX ES8510 User Guide* or help system for detailed feature configuration information.

Control Customer Service

Contact Method	Web Address or Phone Number
Support	http://www.control.com/pub/en/support
Downloads	ftp://ftp.control.com/html/es_switches_main.htm
Web Site	http://www.control.com
Phone	763.957.6000

