COMTROL®

ROCKET*LINX* ES7510-XT

Industrial 10-Port Managed PoE Plus Switch

QUICK INSTALLATION GUIDE

2000569 Rev B | Release Date - June 2014

INTRODUCTION

The RocketLinx ES7510-XT is a ten port managed PoE Plus switch that provides:

- Eight 10/100BASE-TX PoE Plus ports that are IEEE 802.3af (15.4W) and IEEE 802.3at two-event and IEEE 802.3at LLDP (30W) compliant. The product also supports a forced powering feature to support non-standard Power Devices (PDs).
- Two Gigabit RJ45/SFP combo ports. The SFP ports support 100BASE-FX and Gigabit fiber.

The ES7510-XT provides features needed for network control and security in an industrial network environment. See the Comtrol website for detailed product specifications.
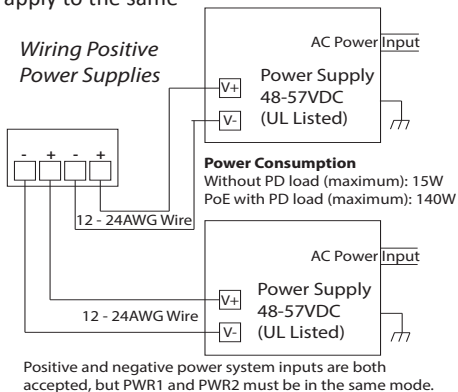
INSTALLATION OVERVIEW

You can use the following overview to install the ES7510-XT. If you need more detailed information, you can refer to the *RocketLinx ES7510-XT User Guide*, which contains detailed installation and configuration information.

Connecting the Power

The ES7510-XT provides redundant power inputs (PWR 1/2), which supports reverse polarity protection, and accepts a positive or negative power source. However, PWR1 and PWR2 must apply to the same mode.

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 PWR+ and PWR- contacts. You can connect a single power supply or both power supplies depending on your requirements.

Wiring Positive Power Supplies

AC Power Input

Power Supply 48-57VDC (UL Listed)

V+
V-

12 - 24AWG Wire

Power Consumption
Without PD load (maximum): 15W
PoE with PD load (maximum): 140W

AC Power Input

Power Supply 48-57VDC (UL Listed)

V+
V-

12 - 24AWG Wire

Positive and negative power system inputs are both accepted, but PWR1 and PWR2 must be in the same mode.

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

3. Connect an appropriate ground wire between the chassis ground screw and earth ground to ensure that the ES7510-XT is not damaged by noise or electrical shock.

   a. Loosen the chassis ground screw on the bottom of the unit.
   b. Tighten the screw after the ground wire is connected.

Electrical Specifications		Value
Power Input Voltage PWR1/PWR2	IEEE 802.3af	48-57VDC
	IEEE 802.3at	50-57VDC
Maximum PoE Power/Port	IEEE 802.3af	15.4W
	IEEE 802.3at	30W
Power Budget	PWR1/PWR2	120W
Power Consumption	Without PD load (max)	15W
	PoE with PD load (max)	140W

Wiring the Relay Output (DO)

The relay output alarm contacts are on the terminal block connector on the bottom of the ES7510-XT.

The relay contact supports up to 0.5A at 24VDC. Do not apply voltage and current higher than the specifications.

The relay output (DO) is controlled by the pre-defined operating rules. To activate relay output function, refer to the *RocketLinx ES7510-XT User Guide.*

Wiring the Digital Input (DI)

The Digital Input (DI) contacts are on the terminal block connector on the bottom of the ES7510-XT. The contacts accept one

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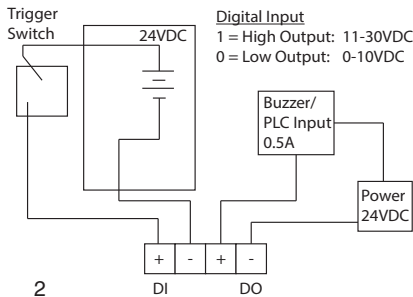
external DC type signal input and can be configured to send alert message through Ethernet when the signal is changed.

The DI accepts DC type signal and supports isolated input circuit with digital high level input 11VDC to 30VDC and digital low level input 0VDC to 10VDC. Do not apply a higher voltage than the specification; it may cause internal circuit damage or cause an incorrect DI action.

Connecting the Surge/Lightning Protection
Connect a ground wire between the earth ground (surge) screw and earth ground to provide enhanced surge and lightning immunity.

1. Loosen the earth ground screw located on the back of the unit next to the compliance label.
2. Tighten the screw after the ground wire is connected.

Make sure that you remove the surge ground screw before insulation/Hi-pot testing.

Mounting the ES7510-XT
You can mount the ES7510-XT to a DIN rail or use the wall/panel mounting plate.

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

Connecting the Ethernet Ports
The ES7510-XT provides RJ45/SFP combo Gigabit ports (Ports 9-10). The Gigabit Ethernet ports support 10BASE-T, 100BASE-TX and 1000BASE-T. The SFP ports support 100BASE-FX and Gigabit fiber. When an SFP port is active and installed on a combo port, the corresponding combo RJ45 port is deactivated.

Ports 1-8 are Fast Ethernet 10/100BASE-TX PoE ports that are IEEE 802.3af (PoE) and IEEE 802.3t (PoE Plus) compliant.

All the 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.

Straight-Through Cabling   **Crossover Cabling**
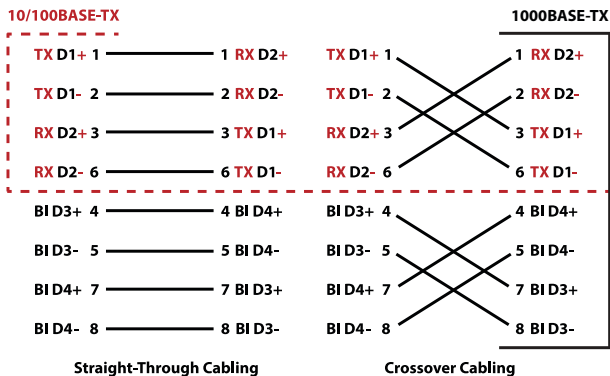
Connect one side of an Ethernet cable into any switch port and connect the other side to your attached device. The LINK/ACT LED is lit when the cable is correctly connected. Always make sure that the cables between the switches and attached devices (for example, switch, hub, or workstation) are less than 100 meters (328 feet).

The wiring cable types are as follows:

- 1000BASE-T/802.3af: Cat 5
- 802.3at: Cat 5e/6

Connecting the SFP Transceivers
You can optionally connect SFP transceivers. Comtrol recommends using Comtrol-approved SFP mini GBIC transceivers. The SFP ports also provide Digital Diagnostic Monitoring, which can assist you in monitoring the quality of the optical signal, and diagnose the transmission. This function is only available for Comtrol certified DDM SFP transceivers, and does not support

third party transceivers. Cross-connect the transmit channel at each end to the receive channel at the opposite end as illustrated in the figure.
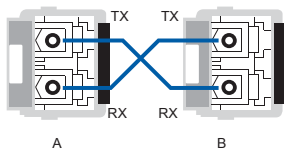
LED INDICATORS

You can also view the LEDs for the ES7510-XT through the web interface using the *Device Front Panel* page.

LEDs	LED Lit	LED Blinking	LED Off
Sys	System is ready	Firmware is uploading	System not ready
Power 1/2	Power is on	Not applicable	Power is not applied
RS (Ring Status)	Green: Ring is normal Amber: Abnormal Ring	Green: Ring with the wrong port Amber: The device's ring port failed	Switch working in slave mode
DO (Red)	Relay is active and contacts have been shorted	Not applicable	DO not activated
DI (Green)	High digital signal is detected	Not applicable	DI not activated
LINK/ACT	Port is linked	Port active	Port link down or port not connected
1000M	Port is linked at 1000Mbps	Not applicable	Not applicable
PoE	PoE is applying power	Detecting	PoE disabled: power output over current, a cable short, or PoE is disabled for that port

PROGRAMMING THE IP ADDRESS

Configure the IP address using one of the following methods:

- PortVision DX (available on the RocketLinx CD shipped with the product
- 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 ES7510-XT is to use a Windows host and PortVision DX (see below). For information about using other configuration methods, refer to the RocketLinx ES7510-XT User Guide.

Note: *Optionally, you can use NetVision if you are accustomed to using NetVision. PortVision DX is replacing NetVision. NetVision is not documented in the RocketLinx ES7510-XT 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 *RocketLinx ES7510-XT User Guide.*
2. Start PortVision DX. PortVision DX can be started from **Start --> All Programs --> Comtrol --> PortVision DX.**
3. Click the **Scan** button.
4. Select the Comtrol product families that you want to locate and click the **Scan** button.
5. Right-click the ES7510-XT in the *Device List* pane (lower) that you want to configure and click **Properties.**
6. Enter a user-friendly Device Name, which displays a friendly device name in the *Device List* pane on the main page.
7. Optionally, enter the ES7510-XT serial number.
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.

You are now ready to configure the ES7510-XT features.

FEATURE CONFIGURATION

The ES7510-XT provides both in-band and out-band configuration methods:

Out-band management means that you configure the ES7510-XT using the RS-232 console cable and the Command Line Interface (CLI) to access the ES7510-XT without attaching an admin PC to the network. You can also use out-band management, if you lose the network connection to the ES7510-XT.

In-band management means that you connect remotely using the ES7510-XT IP address through the network. You can remotely connect with the ES7510-XT Java applet web interface or a Telnet console and the CLI.

The following procedure uses a web browser to configure ES7510-XT features. Refer to the *RocketLinx ES7510-XT User Guide* for other configuration methods.

1. If necessary, install the latest version of the Java Runtime Environment, which is required to run the web management interface.
2. Open a web browser and enter the IP address of the ES7510-XT.
3. Click **Run** when Java prompts you to run the applet.
4. Enter **admin** for both the user name and the password when prompted.
5. Use the web interface to configure your device as needed for your network.

You can use the help system or the *RocketLinx ES7510-XT User Guide* for information about configuring ES7510-XT features.

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	ftp://ftp.comtrol.com/html/ES7510_XT_main.htm
Website	http://www.comtrol.com
Phone	+1 763.957.6000