COMTROL®

ROCKET*LINX* ES8509-XT

Industrial 9-Port Gigabit Managed Switch

QUICK INSTALLATION GUIDE

2000555 Rev E | Release Date - May 2014

INTRODUCTION

The RocketLinx ES8509-XT is an industrial Gigabit managed Ethernet switch with nine Gigabit ports that include:

- Four 10/100/1000BASE-TX RJ45 ports
- Five 10/100/1000BASE-TX RJ45 or 100BASE-FX Single-Mode/Multi-Mode and 1000BASE-X Single-Mode/Multi-Mode SFP transceiver with SFP Digital Diagnostic Monitoring (DDM)

See the Comtrol web site for detailed product specifications.

INSTALLATION OVERVIEW

You can use the following overview to install the ES8509-XT. If you need more detailed installation and configuration information, you can refer to the *RocketLinx ES8509-XT User Guide*, which is available on the RocketLinx CD or you can download the latest version from the FTP site.
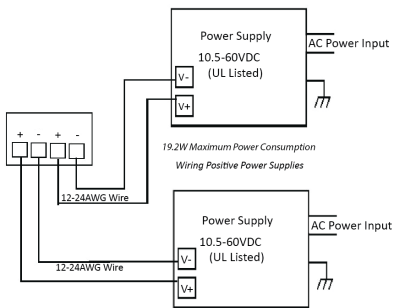
Wiring the Power Inputs

The ES8509-XT provides redundant power, reverse polarity protection, and accepts a positive or negative power source. However, PW1 and PW2 must apply to the same mode.

1. Insert the positive and negative wires into PW+ and PW- contacts (PW1 and PW2). You can connect a single power supply or both power supplies depending on your requirements.

If both power inputs are connected, the ES8509-XT is powered from the highest connected voltage.

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

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.

Wiring the Relay Output (DO)
The relay output alarm contacts are on the terminal block connector on the bottom of the ES8509-XT.

The relay contact supports up to 1A at 30VDC. 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 ES8509-XT User Guide.*
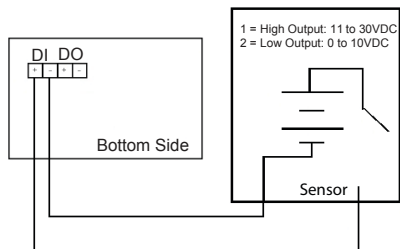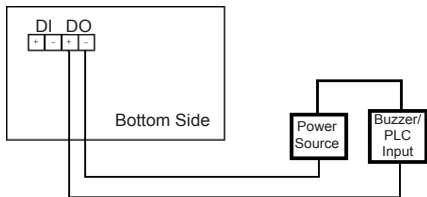

Wiring the Digital Input (DI)
The Digital Input (DI) contacts are on the terminal block connector on the bottom of the ES8509-XT. The contacts accept one external DC type signal input and can be configured to send alert message through Ethernet when the signal is changed.

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.

Wiring the Ground

Wire the earth ground. To ensure the system is not damaged by noise or any electrical shock, we recommend that you to make a direct connection between the ES8509-XT and earth ground.
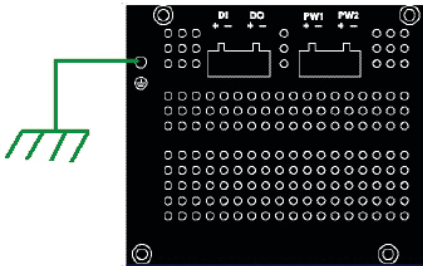
On the bottom side of the ES8509-XT, there is one earth ground screw. Loosen the earth ground screw with a screw driver, then tighten the screw after the earth ground wire is connected.
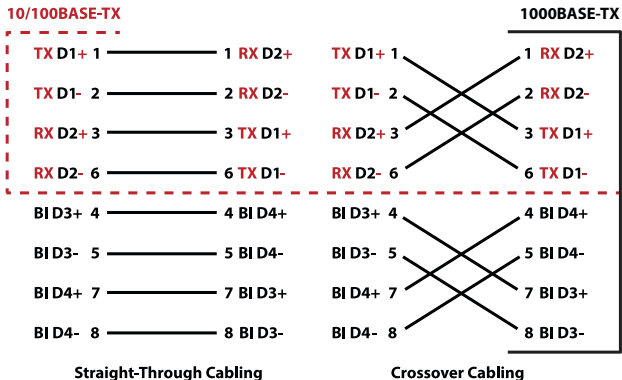
Mounting the ES8509-XT

The DIN rail clip is already attached to the ES8509-XT when packaged.

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 RJ45 Ports

Connect one end of an Ethernet cable into the Ethernet port of the ES8509-XT and the other end to the attached networking device. The RJ45 ports support 10/100Mbps half/full-duplex, 1000Mbps full-duplex. All RJ45 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.

Ports 1 through 5 are RJ45/SFP combo ports. The SFP ports support 100/1000Mbps. When the SFP is active and installed on a combo port, the corresponding combo RJ45 port is deactivated. For example, if an SFP is installed and active on the SFP1 port, the corresponding RJ45 Port 1 becomes inactive.

10/100BASE-TX

					1000BASE-TX
TX D1+ 1 ——— 1 RX D2+		TX D1+ 1		1 RX D2+	
TX D1- 2 ——— 2 RX D2-		TX D1- 2		2 RX D2-	
RX D2+ 3 ——— 3 TX D1+		RX D2+ 3		3 TX D1+	
RX D2- 6 ——— 6 TX D1-		RX D2- 6		6 TX D1-	
BI D3+ 4 ——— 4 BI D4+		BI D3+ 4		4 BI D4+	
BI D3- 5 ——— 5 BI D4-		BI D3- 5		5 BI D4-	
BI D4+ 7 ——— 7 BI D3+		BI D4+ 7		7 BI D3+	
BI D4- 8 ——— 8 BI D3-		BI D4- 8		8 BI D3-	

Straight-Through Cabling   **Crossover Cabling**

LED	Function	Description
Link/Act	Indicates the traffic status and link status.	On: Port is linked to another device. Blinking: The traffic is active.
Speed	Indicates the copper port link speed.	On: Port link is 1000Mbps. Off: Port link is 100Mbps or 10Mbps.
1000	SFP transceiver speed indicator.	On: The SFP supports 1000Mbps.

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). You should use the following cables:

- 1000BASE-TX: 4-pair UTP/STP Cat. 5e Cable
- 10/100BASE-TX: 4-pair UTP/STP Cat. 5 Cable
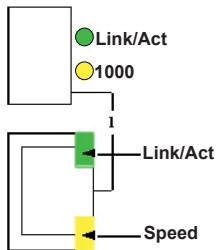
Connecting the Fiber Port

The SFP socket supports optical fiber communications that can support a 100Mbps and 1000Mbps SFP Transceiver with Digital Diagnostic Monitor (DDM) to achieve fiber signal quality control. The SFP ports support 100BASE-FX and 1000BASE-SX/LX standard mini GBIC SFP transceivers.

Connect the fiber port on the ES8509-XT to another fiber Ethernet device, by following the figure below. A wrong connection will cause the fiber port to not work properly. LED activity is discussed in Connecting the Ethernet Port.

ATTENTION

This is a Class 1 Laser/LED product.
Do not stare into the Laser/LED Beam.

Cable Wiring(SC to SC)
TX A ———— RX B
RX A ———— TX B
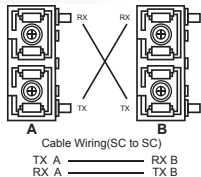
PROGRAMMING THE IP ADDRESS

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 ES8509-XT is to use a Windows host and PortVision DX (see below). For information about using other configuration methods, refer to the *RocketLinx ES8509-XT Series 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 ES8509-XT Series 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 ES8509-XT Series 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 ES8509-XT 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 ES8509-XT 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 ES8509-XT features.

FEATURE CONFIGURATION

The ES8509-XT provides both in-band and out-band configuration methods:

Out-band management means that you configure the ES8509-XT using the RS-232 console cable and the Command Line Interface (CLI) to access the ES8509-XT without attaching an admin PC to the network. You can also use out-bound management, if you lost the network connection to the ES8509-XT.

In-band management means that you connect remotely using the ES8509-XT IP address through the network. You can remotely connect with the ES8509-XT Java applet web interface or a Telnet console and the CLI.

The following procedure uses a web browser to configure ES8509-XT features. Refer to the *RocketLinx ES8509-XT Series 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 ES8509-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 ES8509-XT Series User Guide* for information about configuring ES8509-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/ES8509_XT_main.htm
Website	http://www.comtrol.com
Phone	+1 763.957.6000