# COMTROL®

# ROCKET*LINX* ES9528-XT

*Industrial Managed Switch*

# QUICK INSTALLATION GUIDE

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# INTRODUCTION

The RocketLinx ES9528-XT is a rack mount 24+4G managed industrial Ethernet switch that is equipped with 24 10/100 BASE-TX ports plus four Gigabit RJ45 / mini GBIC combo ports. This special design is perfect for control rooms where high-port density and performance are required. The four Gigabit combo port design allows 10/100/1000BASE-TX Ethernet connections, and the SFP ports accept all types of Gigabit SFP transceivers, including Gigabit SX, LX, LHX, ZX, and XD for several connection types and distances.

*See the Comtrol web site for detailed product specifications for your model.*

# INSTALLATION OVERVIEW

You can use the following overview to install the ES9528-XT. If you need more information, you can download to the *RocketLinx ES9528-XT User Guide*, which contains installation and configuration information to install the ES9528-XT. Refer to the last page for download information.

**Connect the Power and Ground**

The ES9528-XT is intended for installation in a restricted access location.
1. Connect the power cord to the AC power input connector.

2. Mount the ES9528-XT into the rack

    a. Ground the ES9528-XT using the earth ground screw on the back of the unit. Loosen the ground screw with a screwdriver; then tighten the screw after earth ground wire is connected.
    b. Attach the brackets to the ES9528-XT by using the screws provided in the rack mount kit.
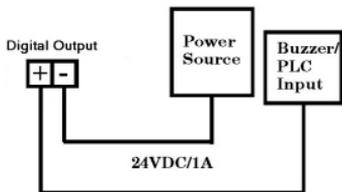    c. Mount the ES9528-XT in a 19-inch rack by using four rack mounting screws provided in the kit.

    **Note:** *When installing multiple switches in high temperature environments, reserve 0.5U-1U of free space between the switches.*

    **Temperature:** Verify that the rack environment temperature conforms to the specified operating temperature range.

    **Mechanical Loading:** Do not place any equipment on top of the switch. In a high vibration environment, additional rack mounting protection is necessary.

## Connect Digital Output

The ES9528-XT has a built-in alarm-relay for port link and power events notifications.
The relay contacts are normally open and remain open when there is no failure event.
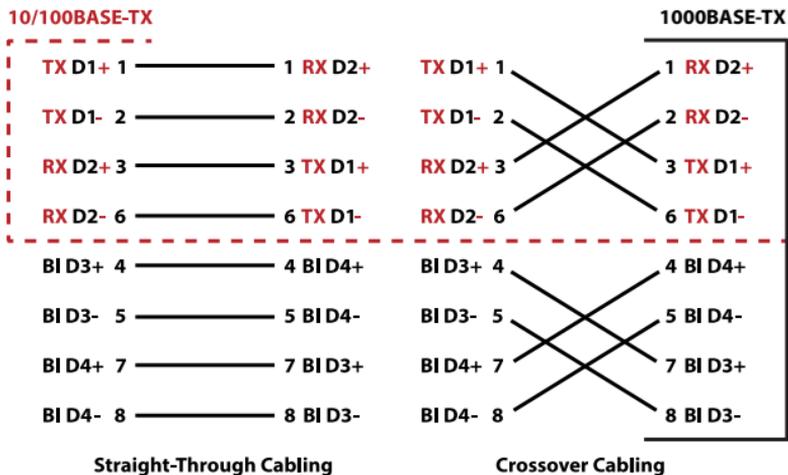The relay contacts close when there is a failure event to notify.



## Connect the Ethernet Ports

Connect one end of an Ethernet cable into the Ethernet port of the ES9528-XT and the other end to the attached networking device.

Ports 1-24 support 10/100BASE-TX half/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.

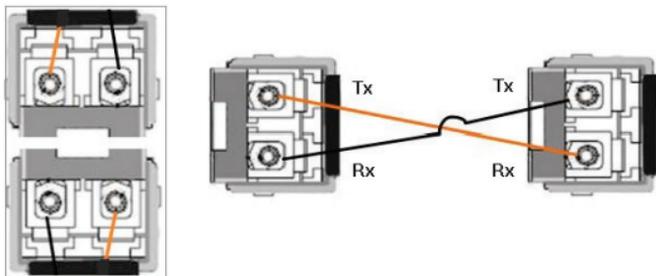Ports 25 through 28 are RJ45/SFP combo ports. The RJ45 ports support 10/100/1000BASE-TX and the SFP ports support 1000BASE-TX. When the SFP is active and installed on a combo port, the corresponding combo RJ45 port is deactivated. For example, if an SFP is installed and active on the SFP25 port, the corresponding RJ45 Port 25 becomes inactive.



**Straight-Through Cabling**          **Crossover Cabling**

**Connect the SFPs**

The ES9528-XT equips four Gigabit SFP ports combined with Gigabit Ethernet ports.  The SFP ports accept standard mini GBIC SFP transceivers that support 1000BASE-SX/LX/LHX/XD/ZX. To ensure system reliability, Comtrol recommends using a Comtrol certified Gigabit SFP transceiver. 100BASE-FX is not supported in Gigabit combo ports.

1.    Plug the SFP transceiver into the SFP fiber transceiver.
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 will have priority, thus no traffic will be sent or received over the corresponding RJ45 connection. To use the RJ45 connection, remove the corresponding SFP.*

**LEDs**

| LED Name | LED On | LED Blinking | LED Off |
|----------|--------|--------------|---------|
| **PWR (Power)** | Green: Power available | | No power |
| **R.S. (Ring Signal)** | Green: MSR Normal State Yellow: MSR Abnormal State | Green: Incorrect MSR Configuration Yellow: Break to be local to one of the ports | MSR Function Not Active |
| **LEDs 1-24 Link/Act** | Green: Link Yellow: Duplex | Green: Activity | Not Connected |
| **LEDs 25-28 Link/Act** | Green: Link Yellow: 1000Mbps | Green: Activity | Green: Not Connected Yellow: 10/100 Mbps |
| **G25-G28** | Green: Link | Green: Activity | Not connected |

# PROGRAMMING THE IP ADDRESS

Configure the IP address using one of the following methods:
- PortVision DX (http://downloads.comtrol.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 ES9528-XT is to use a Windows host and PortVision DX (see below). For information about using other configuration methods, refer to the *RocketLinx ES9258-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 ES9528-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 ES9528-XT in the *Device List* pane (lower) that you want to configure and click **Properties**.
6. Optionally, 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 ES9528-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.
12. You are now ready to configure the ES9528-XT features.

# FEATURE CONFIGURATION

The ES9528-XT provides both in-band and out-band configuration methods:

- **Out-band management** means that you configure the ES9528-XT using the RS-232 console cable and the Command Line Interface (CLI) to access the ES9528-XT without attaching an admin PC to the network. You can also use out-bound management, if you lost the network connection to the ES9528-XT.
- **In-band management** means that you connect remotely using the ES9528-XT IP address through the network. You can remotely connect with the ES9528-XT web interface or a Telnet console and the CLI.

The following procedure uses a web browser to configure ES9528-XT features. Refer to the *RocketLinx ES9528-XT User Guide* for other configuration methods.

1. Open a web browser and enter the IP address of the ES9528-XT.
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 *RocketLinx ES9528-XT User Guide* for information about configuring ES9528-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 | http://downloads.comtrol.com/html/ES9528-XT_main.htm |
| Website | http://www.comtrol.com |
| Phone | +1 763.957.6000 |