



8-Port 10/100BASE-TX Hardened Ethernet Extender Switch

Quick Start Guide

Use this managed hardened switch plus VDSL extender in extreme environments.



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8-Port 10/100BASE-TX Ethernet Extender Switch Quick Start Guide

Quick Start Guide

This quick start guide describes how to install and use the 8-Port 10/100BASE-TX Ethernet Extender Switch. Use it in harsh environments where space is limited.

QS.1 Physical Description

Figure QS-1 illustrates the port status LEDs and power inputs. Tables QS-1, QS-2, and QS-3 describe these components.

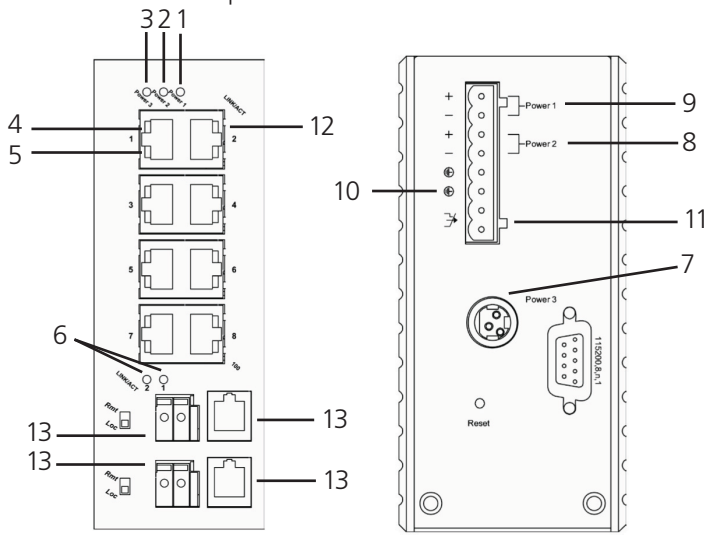


Figure QS-1. Port status LEDs and power inputs.

Table QS-1. Port status LEDs.

Number	Indicator	State	Indication
1	Power 1	Steady	Power on.
2	Power 2	Off	Power off.
3	Power 3		
10/100BASE-TX Port			
4	LINK/ACT	Steady	A valid network connection is established.
		Flashing	Transmitting or receiving data. ACT stands for Activity.
5	100	Steady	Connection at 100-Mbps speed.
		Off	Connection at 10-Mbps speed.
Ethernet Extender Port			
6	LINK/ACT	Steady	A valid network connection is established.
		Flashing	Transmitting or receiving data. ACT stands for Activity.

Table QS-2. Power input assignment.

Number	Input	Polarity	Voltage	Connector
7	Power 3		12 VDC	DC jack
8	Power 2	+	12–48 VDC	Terminal block
		-	Power ground	
9	Power 1	+	12–48 VDC	
		-	Power ground	
10			Ground	
11	Relay output rating			1 A @ 24 VDC

Table QS-3. Ports on the switch.

Number	Number of Ports	Description	Mode Selection
12	(8) RJ-45	10/100BASE-TX ports	10BASE-T full-duplex mode
			10BASE-T half-duplex mode
			100BASE-TX full-duplex mode
			100BASE-TX half-duplex mode
			Autonegotiating mode
13	(2) RJ-11 and terminal blocks	Ethernet Extender ports	Asymmetrical or symmetrical

DC Terminal Block Power Inputs:

You can use two power inputs to power on the Ethernet Extender Switch. Redundant power supplies are supported.

QS.2. Functional Description

The Ethernet Extender Switch:

- Meets NEMA TS1/TS2 environmental requirements, including temperature, shock, and vibration for traffic control equipment.
- Meets EN61000-6-2 and EN61000-6-4 EMC generic standard immunity for an industrial environment.
- Manageable via SNMP, Web browser, Telnet, and RS-232 console port.
- RS-232 console supports command-line interface.

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- Ethernet Extender ports are asymmetrical or symmetrical on the VDSL, full-duplex 59-Mbps downstream/31-Mbps upstream asymmetrical, or full-duplex 50-Mbps symmetrical communications link over an existing copper telephone line.
- Operates transparently to higher-layer protocols such as TCP/IP.
- Two DIP switches configure local (LOC) and remote (REM).
- Supports 802.3/802.3u/802.3x autonegotiating, 10-/100-Mbps, full-/half-duplex, Auto MDI-MDI-X Ethernet ports.
- Supports 8192 MAC addresses.
- Provides 2 MB of memory buffer.
- Relay output alarms indicate power and port link failure.
- Includes redundant 12–48-VDC power terminal block power inputs and 12 VDC jack with a 100–240-VAC external power supply.
- Operating voltage and maximum current consumption are: 0.92 A @ 12-VDC, 0.46 A @ 24 VDC, 0.23 A @ 48 VDC. Maximum power consumption is 11 W.
- Field Wiring Terminal Markings: Use copper conductors only. 60/75° C (140/167° F); wire range 12-24 AWG; torque value 7 lb./in.
- Operating temperature range is -40 to +167° F (-40 to +75° C). UL508 Industrial Control Equipment certified maximum surrounding air temperature @ 70° C (158° F).
- For use in Pollution Degree 2 Environment.
- Supports DIN rail and panel-mounting installation.

QS.3. Console Configuration

1. Connect to the Ethernet Extender Switch console: Connect the DB9 straight cable to the RS-232 serial port of the device and the RS-232 serial port of the terminal or computer running the terminal emulation application. For direct access to the administration console, connect a terminal or PC equipped with a terminal emulation program (such as Hyperterminal®) to the Ethernet Extender Switch console port.
2. Configure the settings for the terminal emulation program:
 - Baud rate: 115,200 bps
 - Data bits: 8
 - Parity: none

Stop bit: 1
Flow control: none

3. Press the Enter key. The Command Line Interface (CLI) screen should appear as shown in Figure QS-2.
4. Log on to Exec Mode (View Mode): At the "switch_a login:" prompt, type "root" and press "Enter" to log on to Exec Mode (or View Mode). The "switch_a>" prompt will show on the screen. See Figure QS-2.

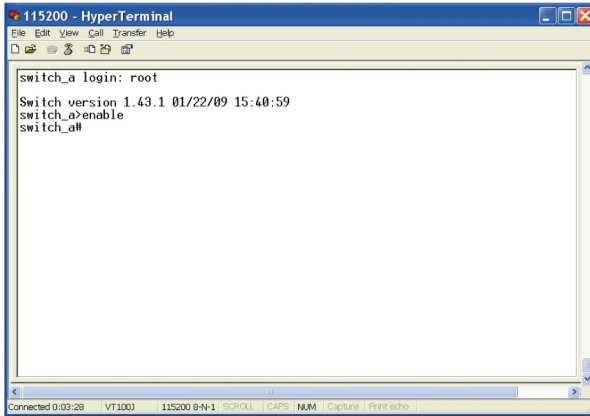


Figure QS-2. switch_a> prompt.

5. Log on to Privileged Exec Mode (Enable Mode): At the "switch_a>" prompt, type "enable" and press "Enter" to log on to Privileged Exec Mode (or Enable Mode). The "switch_all" prompt will show on the screen.
6. Log on to Configure Mode (Configure Terminal Mode): At the "switch_all" prompt, just type in "configure terminal" and press Enter to log on to Configure Mode (or Configure Terminal Mode). The "switch_a(config)#" prompt will appear on the screen as shown in Figure QS-3.

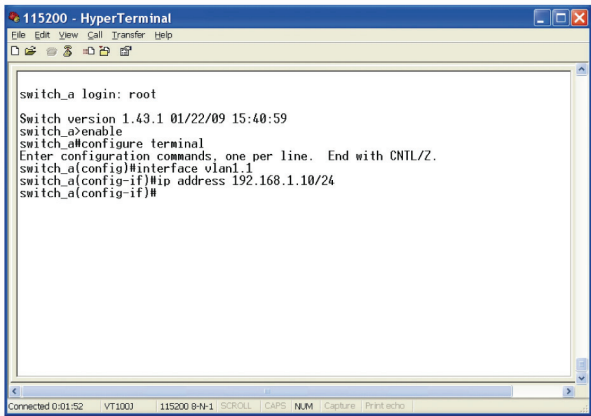


Figure QS-3. switch_a(config)# prompt.

QS.4 Web Configuration

- 1. Log in to the Ethernet Switch: Specify the default IP address (192.168.1.10) of the Ethernet Extender Switch in the Web browser. A login will appear as shown in Figure QS-4.

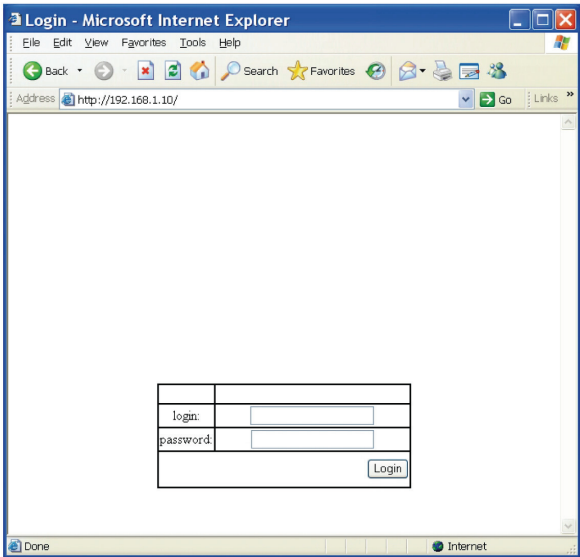


Figure QS-4. Login screen.

2. Enter the factory default login ID: root. Enter the factory default password (no password), then click on the “Login” button to log in to the Ethernet Extender Switch. You’ll then see the Welcome screen as shown in Figure QS-5.

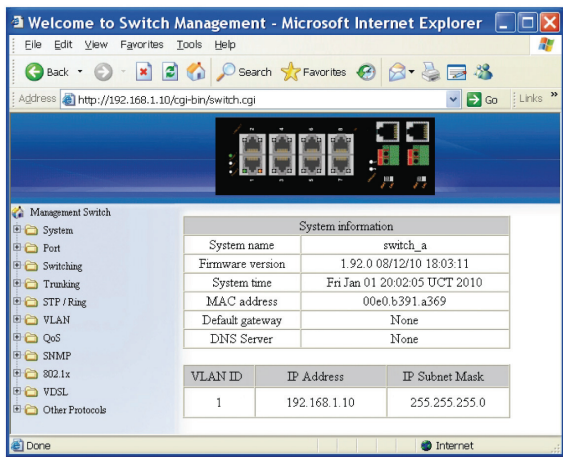


Figure QS-5. Welcome screen.

QS.5 Wiring Diagram

Field Wiring Terminal Markings: Use copper conductors only. 60/75° C (140/167° F); wire range 12-24 AWG; torque value 7 lb./in.

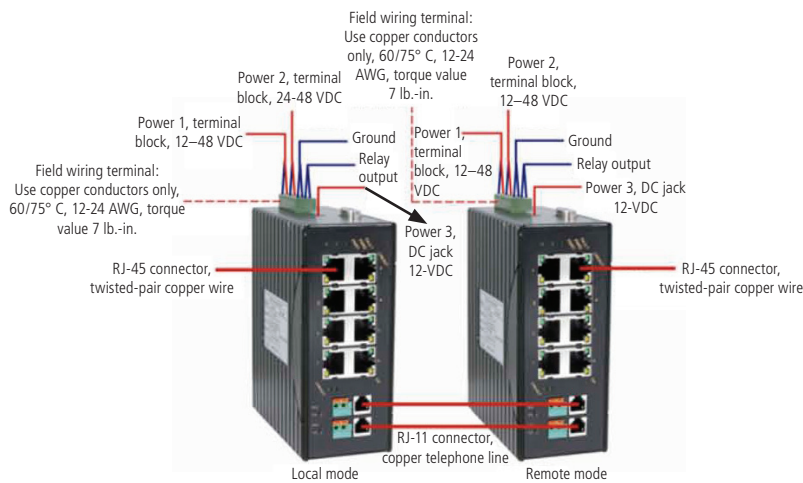


Figure QS-6. Wiring diagram using RJ-11 connector for copper telephone line.

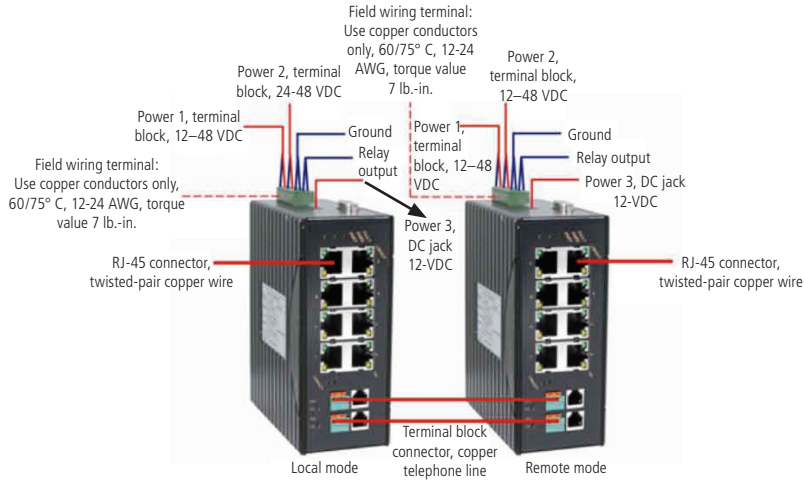


Figure QS-7. Wiring diagram using terminal block connector for copper telephone line.

QS.6 DIN Rail Mounting

- Fix the DIN rail attachment plate to the back panel of the Hardened Managed Ethernet Extender Switch.
- Installation: Place the Hardened Managed Ethernet Extender Switch on the DIN rail from above using the slot. Push the front of the Hardened Managed Ethernet Extender Switch toward the mounting surface until it audibly snaps into place.
- Removal: Pull out the lower edge and then remove the Hardened Managed Ethernet Extender Switch from the DIN rail.

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