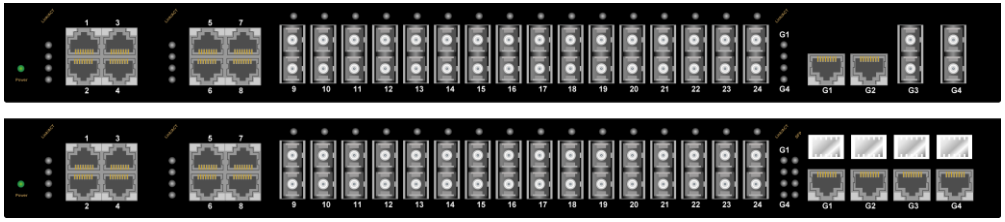
This quick start guide describes how to install and use the Hardened Managed Ethernet Switch. This is the switch of choice for harsh environments constrained by space.

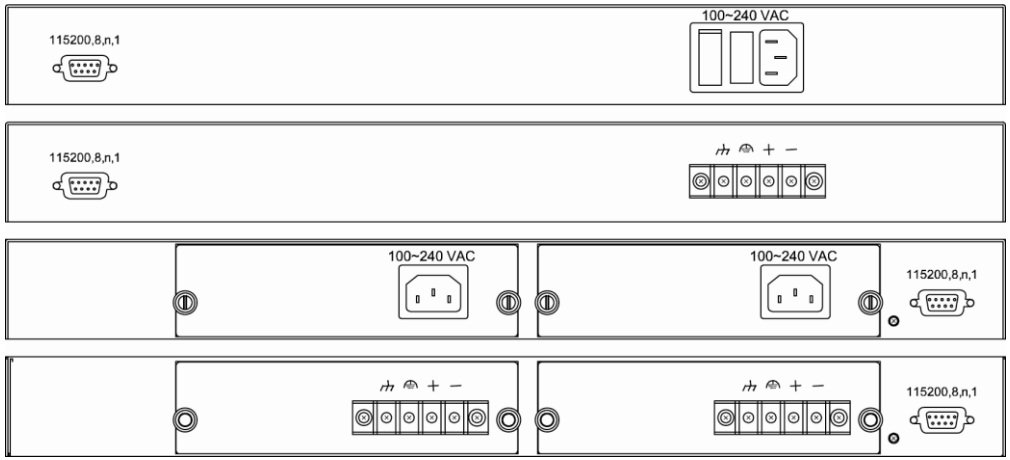
Functional Description

- Meets NEMA TS1/TS2 Environmental requirements such as temperature, shock, and vibration for traffic control equipment.
- Meets EN61000-6-2 & EN61000-6-4 EMC Generic Standard Immunity for industrial environment.
- RS-232 console, Telnet, SNMP v1 & v2c & v3, RMON, Web Browser, and TFTP management.
- Supports Command Line Interface in RS-232 console.
- Supports 8192 MAC addresses. Provides 3M bits memory buffer.
- Supports IEEE802.3/802.3u/802.3ab/802.3z/802.3x. Auto-negotiation: 1000Mbps-full-duplex; 10/100Mbps-full/half-duplex; Auto MDI/MDIX.
- 100Base-FX: Multi mode SC or ST type, Single mode SC or ST type; 100Base-BX: WDM Single mode SC type.
- 1000Base-SX/LX: Multi mode or Single mode SC type; 1000Base-BX: WDM Single mode SC type.
- SFP socket for Gigabit fiber optic expansion.
- Store-and-forward mechanism.
- Full wire-speed forwarding rate.
- AC inlet power socket: 100~240VAC, 50~60Hz internal universal PSU.
- Terminal Block power input: +48VDC, -48VDC, 88~370VDC, or 90~264VAC.
- Supports redundant power supplies for flexible application.
- -40℃ to 75℃ (-40℉ to 167℉) operating temperature range.
  Tested for functional operation @ -40℃ to 85℃ (-40℉ to 185℉).
- Hardened metal case.
- Supports Rack Mounting installation.

Physical Description

The Port Status LEDs and Power Inputs





LED	State	Indication
Power	Steady	Power on
	Off	Power off
10/100Base-TX, 100Base-FX/BX		
Link/ACT	Steady	A valid network connection established
	Flashing	Transmitting or receiving data ACT stands for ACTIVITY
10/100/1000Base-TX, SFP, 1000Base-SX/LX/BX		
Link/ACT	Steady	A valid network connection established
	Flashing	Transmitting or receiving data ACT stands for ACTIVITY
SFP		
SFP	Steady	A valid SFP connection established
	Off	Without SFP

Terminal Block Power Input

	+48VDC	-48VDC
–	0	-48
+	+48	0
⏚	Earth Ground	
⏚	Protect Ground	

	88~370VDC	90~264VAC
–	0	N
+	88~370	L
⏚	Earth Ground	
⏚	Protect Ground	

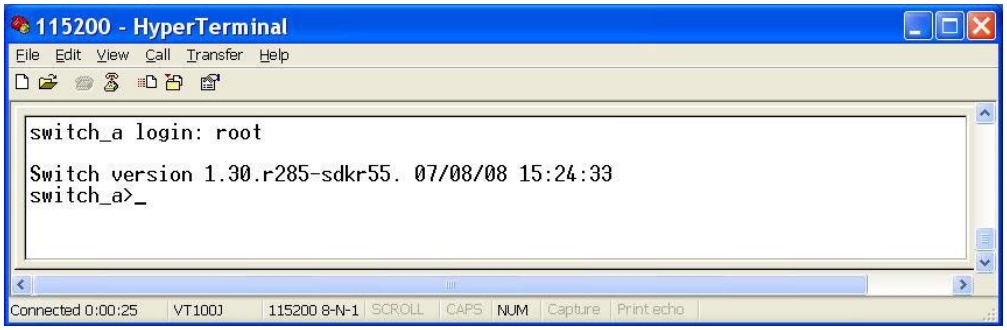
<Note> Dielectric withstand (Hipot) test for DC power input, must remove metal chip between Earth Ground and Protect Ground of the terminal block power input to avoid damage to the Switch.

Console Configuration

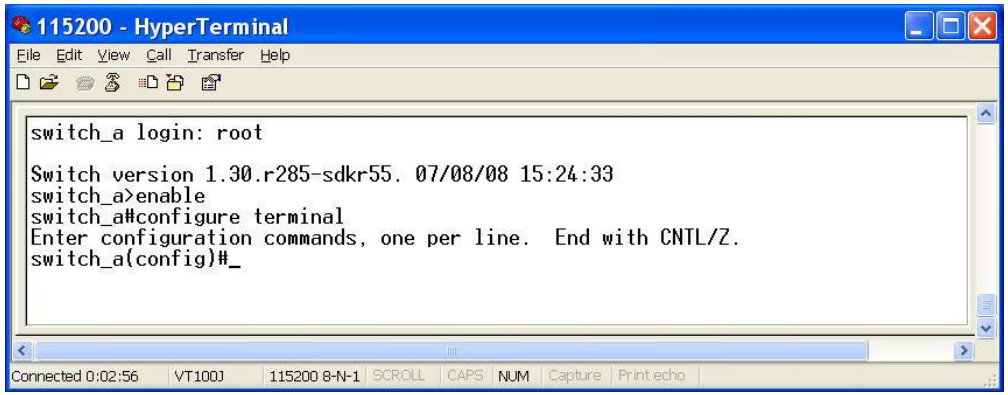
- Connect to the switch console:
  Connect the DB9 straight cable to the RS-232 serial port of the device and the RS-232 serial port of the terminal or computer running the terminal emulation application. Direct access to the administration console is achieved by directly connecting a terminal or a PC equipped with a terminal-emulation program (such as HyperTerminal) to the switch console port.
- Configuration settings of the terminal-emulation program:

Baud rate: 115,200bps, Data bits: 8, Parity: none, Stop bit: 1, Flow control: none.

- Press the “Enter” key. The Command Line Interface (CLI) screen should appear as below:
- Logon to Exec Mode (View Mode):
  At the “switch_a login:” prompt just type in “root” and press <Enter> to logon to Exec Mode (or View Mode). And the “switch_a>” prompt will show on the screen.

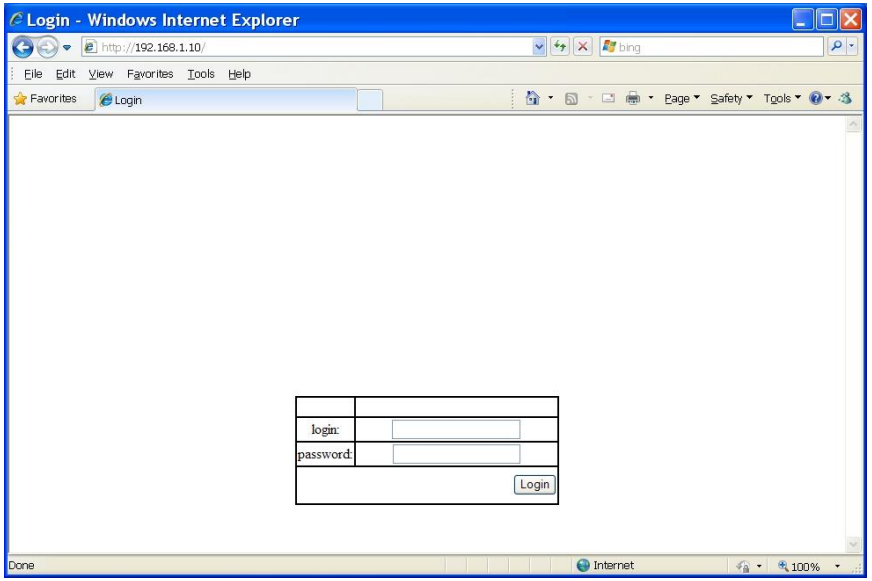


- Logon to Privileged Exec Mode (Enable Mode):
  At the “switch_a>” prompt just type in “enable” and press <Enter> to logon to Privileged Exec Mode (or Enable Mode). And the “switch_a#” prompt will show on the screen.
- Logon to Configure Mode (Configure Terminal Mode):
  At the “switch_a#” prompt just type in “configure terminal” and press <Enter> to logon to Configure Mode (or Configure Terminal Mode). And the “switch_a(config)#” prompt will show on the screen.
- Set new IP address and subnet mask for Switch:
  At the “switch_a(config)#” prompt just type in “interface vlan1.1” and press <Enter> to logon to vlan 1 (vlan1.1 means vlan 1). And the “switch_a(config-if)#” prompt will show on the screen.
  Command Syntax: “ip address A.B.C.D/M”. “A.B.C.D” specifies IP address. “M” specifies IP subnet mask. “M”= 8: 255.0.0.0, 16:255.255.0.0, or 24: 255.255.255.0.
  For example, At the “switch_a(config-if)#” prompt just type in “ip address 192.168.1.10/24” and press <Enter> to set new IP address (192.168.1.10) and new IP subnet mask (255.255.255.0) for Switch.



Web Configuration

- Login the switch:
  Specify the default IP address (192.168.1.10) of the switch in the web browser. A login window will be shown as below:



- Enter the factory default login ID: root.
  Enter the factory default password (no password).
  Then click on the “Login” button to log on to the switch.