



TOUGH Switch™ PoE

Advanced Power over Ethernet Controllers

Models: TS-5-POE, TS-8-PRO, TS-16-CARRIER

Gigabit PoE Ports

Intuitive Configuration Interface

Advanced Switch Management Features



TOUGHSwitch™ PoE

Advanced Gigabit PoE Managed Switch

Introducing the Advanced Power over Ethernet Controllers, TOUGHSwitch™ PoE from Ubiquiti Networks. TOUGHSwitch PoE delivers reliable passive PoE and fast 10/100/1000 Mbps connectivity to attached Ubiquiti devices and other devices that support passive PoE.

To connect your PoE devices, simply enable PoE in the easy-to-use TOUGHSwitch Configuration Interface. Each port can be individually configured to provide PoE, so both PoE and non-PoE devices can be connected.

TOUGHSwitch is available in multiple versions to meet your deployment needs.

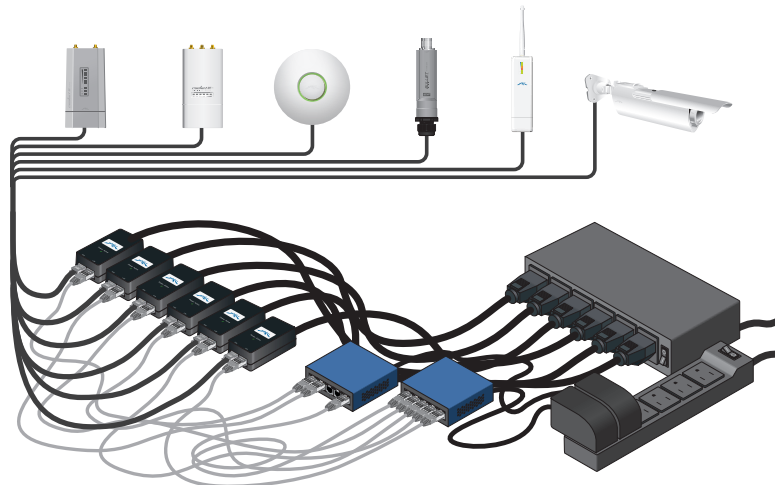
- TOUGHSwitch PoE is a cost-effective, 5-port Gigabit switch with 24V PoE support.
- TOUGHSwitch PoE PRO is an industrial-strength, 8-port Gigabit switch with 150 watts of power capable of powering 24V or 48V devices. Output voltage is controlled by the software.
- TOUGHSwitch PoE CARRIER features dual TOUGHSwitch PoE PRO systems in a rack-mountable, 1U form factor with 300 watts of power supporting up to 16 devices.

Simplify Your Deployment

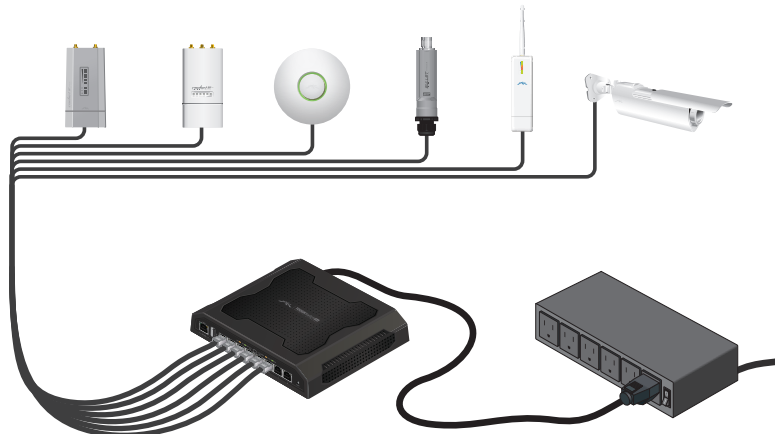
TOUGHSwitch PoE allows network architects to design cleaner, less cluttered deployments. For example, integrating one TOUGHSwitch PoE PRO can eliminate the need for the following:

- 8 PoE adapters
- 8 power cords
- 8 power outlets
- 8 Ethernet patch cables

TOUGHSwitch PoE deployments increase efficiency and greatly reduce potential failure points – resulting in faster installations and less maintenance and troubleshooting.



Deployment without TOUGHSwitch



TOUGHSwitch 8-Port PoE PRO Deployment

Intuitive Configuration Interface

TOUGHSwitch PoE provides a user-friendly configuration interface designed for efficient setup and control. Accessed via a secured management port and web browser, the TOUGHSwitch Configuration Interface provides intuitive management with a virtual view of the ports, showing physical connectivity, speed, and PoE status.

The screenshot displays the TOUGHSwitch PoE configuration interface. At the top, there are navigation tabs for STATUS, DEVICE, PORTS, VLANS, and ALERTS. A 'Tools' dropdown and 'Logout' button are also present. Below the navigation is a visual representation of the switch with five ports connected. A summary box shows 'Total Throughput' with '496 TX bps' and '496 RX bps'.

Status

Device Name: TOUGHSwitch PoE
 Device Location:
 Firmware: SW.v1.0
 Date: 2012-06-14 18:27:08
 Uptime: 00:03:14
 Device MAC: 00:27:22:76:C8:4C

Port Status

Port	Name	Port Status	Link Status	PoE	STP State	MTU	Alerts
1	Port 1	Enabled	100Mbps-Full	24V	Forwarding	9216	On
2	Port 2	Enabled	100Mbps-Full	24V	Forwarding	9216	Off
3	Port 3	Enabled	100Mbps-Full	24V	Blocking	9216	Off
4	Port 4	Enabled	Down	Off	Blocking	9216	Off
5	Port 5	Enabled	Down	Off	Blocking	9216	Off

Port Statistics

Port	Name	RX Data	RX Packets	RX Errors	TX Data	TX Packets	TX Errors
1	Port 1	2282	28	0	18161	111	0
2	Port 2	1020	12	0	18277	112	0
3	Port 3	18735	114	0	1058	17	0
4	Port 4	0	0	0	0	0	0
5	Port 5	0	0	0	0	0	0

Total Throughput and **Data Distribution** charts are also visible, showing traffic trends and pie charts for RX and TX data across ports.

Advanced Features

TOUGHSwitch PoE is loaded with a variety of advanced features, including:

- Port monitoring
- System connection and management services
- Virtual Local Area Network (VLAN) configuration
- Spanning Tree Protocol (STP)/ Rapid Spanning Tree Protocol (RSTP)
- Jumbo Frame Support
- Ping Watchdog
- Configurable alerts

The screenshot displays the TOUGHSwitch PoE configuration interface for advanced settings. It features the same navigation tabs as the status page. The 'Management Network Settings' section includes fields for Management IP Address (Static/DHCP), IP Address (192.168.1.20), Netmask (255.255.255.0), Management Port Only (checkbox), Gateway IP (192.168.1.1), Primary DNS IP (0.0.0.0), and Secondary DNS IP (0.0.0.0).

Basic Settings

Device Name: TOUGHSwitch PoE
 Time Zone: (GMT) Western Europi
 Location, Latitude, and Longitude fields are also present.

Management Connection Settings

- Services
- Spanning Tree Protocol
- Jumbo Frames
- Device Discovery
- System Account

A 'Save Changes' button is located below these settings.

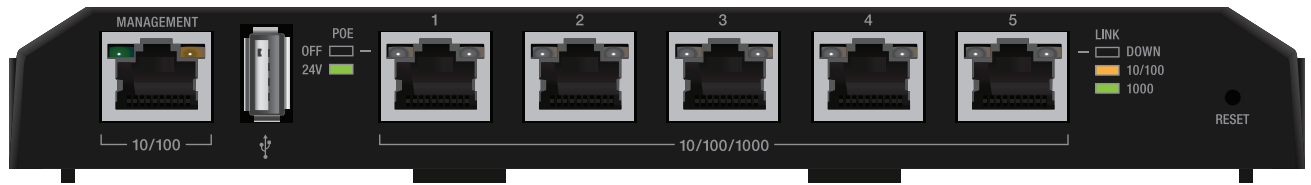
Maintenance

Firmware Version: SW.v1.0
 Build Number: 13507
 Update Firmware: Update
 Back Up Configuration: Download...
 Upload Configuration: Choose File, no file selected, Upload

Buttons for Reboot Device, Reset to Factory Defaults, and Support Info are at the bottom.

Models

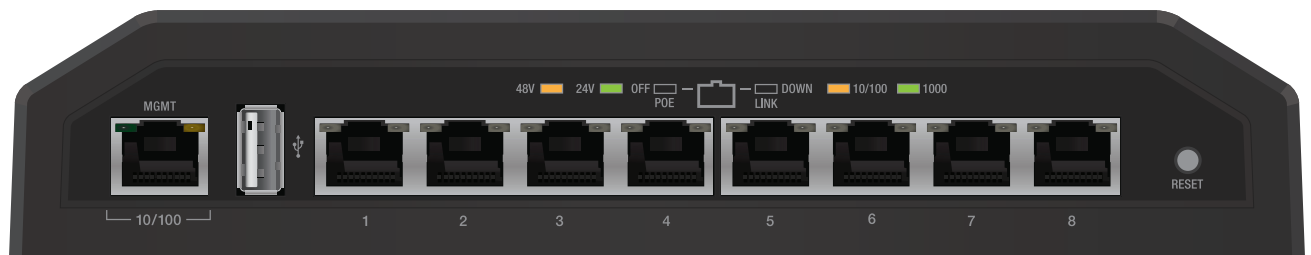
TOUGHSwitch™ PoE



Features:

- 5 Gigabit PoE Ports
- 24V Configurable Passive PoE
- TOUGHSwitch PoE Configuration Interface
- Wall-Mountable

TOUGHSwitch™ PoE PRO



Features:

- 8 Gigabit PoE Ports
- 24V/48V Configurable Passive PoE
- 150 W Power
- TOUGHSwitch PoE Configuration Interface
- Tough Full Metal and Rubber Casing

TOUGHSwitch™ PoE CARRIER



Features:

- 16 Gigabit PoE Ports
- 24V/48V Configurable Passive PoE
- 300 W Power
- TOUGHSwitch PoE Configuration Interface
- 1U Rack-Mount Form Factor

Specifications

5-Port TOUGHSwitch PoE	
Dimensions	197 x 87.5 x 27.3 mm
Weight	250 g
Power Input	24VDC, 2.5A Power Adapter (Included)
Max. Power Consumption	60 W
PoE Out Voltage Range	22-24VDC
Max. PoE Wattage Per Data Port	11.5 W
ESD Rating	24 kV Air / 24 kV Contact
PoE Method	Passive
Button	Reset
USB Port	2.0 Type A (Reserved for Future Use)
Processor	MIPS 24K, 400 MHz
System Memory	64 MB
Code Storage	8 MB
Certifications	CE, FCC, IC
Wall-Mount	Yes
Operating Temperature	-25 to 55°C (-13 to 131° F)
Operating Humidity	90% Non-Condensing
PoE Configurable Per Port	
Management Port	N/A
Data Ports	Off/24V
LEDs Per Port	
Management Port	Power /Link/Activity
Data Ports	PoE, Speed/Link/Activity
Networking Interfaces	
Management Port	(1) 10/100 Ethernet Port
Data Ports	(5) 10/100/1000 Ethernet Ports



Front Panel



Back Panel



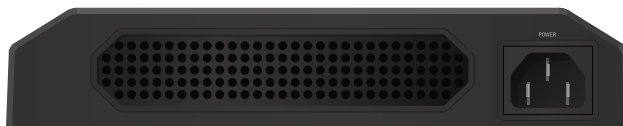
Top View

Specifications

8-Port TOUGHSwitch PoE PRO	
Dimensions	210 x 185 x 41 mm
Weight	1.24 kg
Power Input	110-120VAC / 210-230VAC
Max. Power Consumption	150 W
PoE Out Voltage Range	45-48VDC / 22-24VDC
Max. PoE Wattage Per Data Port	11.5 W (24 V), 23 W (48V)
ESD Rating	24 kV Air / 24 kV Contact
PoE Method	Passive
Button	Reset
USB Port	2.0 Type A (Reserved for Future Use)
Processor	MIPS 24K, 400 MHz
System Memory	64 MB
Code Storage	8 MB
Certifications	CE, FCC, IC
Operating Temperature	-25 to 55°C (-13 to 131° F)
Operating Humidity	90% Non-Condensing
PoE Configurable Per Port	
Management Port	N/A
Data Ports	Off/24V/48V
LEDs Per Port	
Management Port	Power/Link/Activity
Data Ports	PoE, Speed/Link/Activity
Networking Interfaces	
Management Port	(1) 10/100 Ethernet Port
Data Ports	(8) 10/100/1000 Ethernet Ports



Front Panel



Back Panel



Top View

Specifications

16-Port TOUGHSwitch PoE CARRIER	
Dimensions	480 x 44.5 x 186 mm
Weight	3.95 kg
Hardware Configuration	(2) 8-Port TOUGHSwitch PoE PROs
Mounting	Integrated 1U Rack-Mount



Front Panel



Back Panel



Top View

TOUGH Cable™

OUTDOOR CARRIER CLASS SHIELDED

Protect your networks from the most brutal environments with Ubiquiti Networks' industrial-grade, shielded Ethernet cable, TOUGH Cable.

Increase Performance

Dramatically improve your Ethernet link states, speeds, and overall performance with Ubiquiti TOUGH Cables.

Extreme Weatherproof

Designed for outdoor use, TOUGH Cables have been built to perform even in the harshest weather and environments.

ESD Damage Protection

Protect your networks from devastating electrostatic discharge (ESD) attacks.

Extended Cable Support

TOUGH Cables have been developed to increase power handling performance for extended cable run lengths.

Bulletproof your networks

TOUGH Cable is currently available in two versions: PRO Shielding Protection and CARRIER Shielding Protection.

TOUGH Cable PRO is a Category 5e, outdoor, carrier-class shielded cable with an integrated ESD drain wire.

TOUGH Cable CARRIER is a Category 5e, outdoor, carrier-class shielded cable that features an integrated ESD drain wire, anti-crosstalk divider, and secondary shielding. It is rated to provide optimal performance on Gigabit Ethernet networks.

Additional Information:

- 24 AWG copper conductor pairs
- 26 AWG integrated ESD drain wire to prevent ESD attacks and damage
- PE outdoor-rated, weatherproof jacket
- Multi-layered shielding
- Available in lengths of 1000 ft (304.8 m)

TERMS OF USE: Ubiquiti radio devices must be professionally installed. Shielded Ethernet cable and earth grounding must be used as conditions of product warranty. TOUGH Cable is designed for outdoor installations. It is the installer's responsibility to follow local country regulations, including operation within legal frequency channels, output power, indoor cabling requirements, and Dynamic Frequency Selection (DFS) requirements.

For further information, please visit www.ubnt.com.

All specifications in this document are subject to change without notice.

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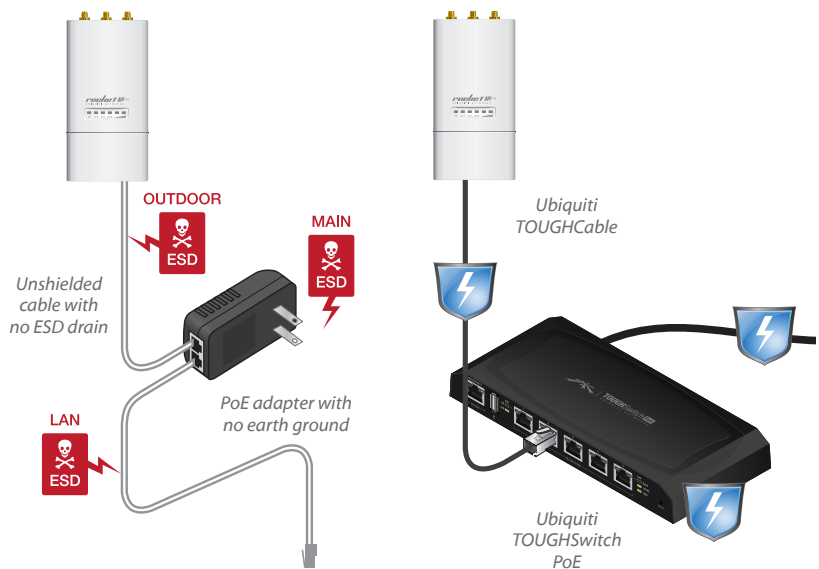


TOUGH Cable Connectors

Specifically designed for use with Ubiquiti TOUGH Cables and available in 100-pc. bags, TOUGH Cable Connectors protect against ESD attacks and Ethernet hardware damage, while allowing rapid field deployment without soldering.

ESD attacks are the leading cause for device failures. The diagram below illustrates the areas vulnerable to ESD attacks in a network.

By using a grounded Ubiquiti TOUGH Switch PoE with Ubiquiti TOUGH Cable and TOUGH Cable Connectors, you can effectively protect against ESD attacks.



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