TOUGHCable™

TOUGHCablePRO
OUTDOOR CARRIER CLASS SHIELDED

CAT5e

1000 ft (304.8m)
24 AWG

CableCARRIER
CARRIER CLASS SHIELDED

CAT5e | ENHANCED GIGABIT PERFORMANCE

1000 ft (304.8m)
24 AWG

- Improved Ethernet link states, speeds and performance
- Increased power handling performance for extended cable run lengths
- Prevents against ESD attacks and Ethernet hardware damage
- Built to withstand harsh outdoor environments

LEVEL1
SHIELDING PROTECTION

LEVEL2
SHIELDING PROTECTION

Conductor
Insulation
Anti-Crosstalk Divider
ESD Drain Wire
Separation
Cable Shield
Secondary Cable Shield
Rip Cord
Weatherproof Jacket

TOUGHCable
CONNECTORS
100 pcs

TOUGHCable™
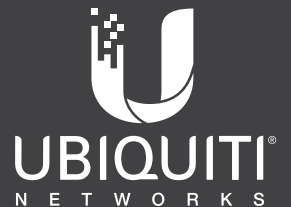
Outdoor Carrier Class Shielded Ethernet Cable

Models: PRO, CARRIER, Connectors

Increase Performance

Extreme Weatherproof

ESD Damage Protection

Extended Cable Support

UBIQUITI®
NETWORKS

TOUGHCable™

OUTDOOR CARRIER CLASS SHIELDED

Protect your networks from the most brutal environments with Ubiquiti's industrial-grade shielded Ethernet cable, TOUGHCable™.

Increase Performance
Dramatically improve your Ethernet link states, speeds, and overall performance with Ubiquiti TOUGHCables.

Extreme Weatherproof
TOUGHCables 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
TOUGHCables have been developed to increase power handling performance for extended cable run lengths.

TOUGHCable Connectors

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

Bulletproof your networks

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

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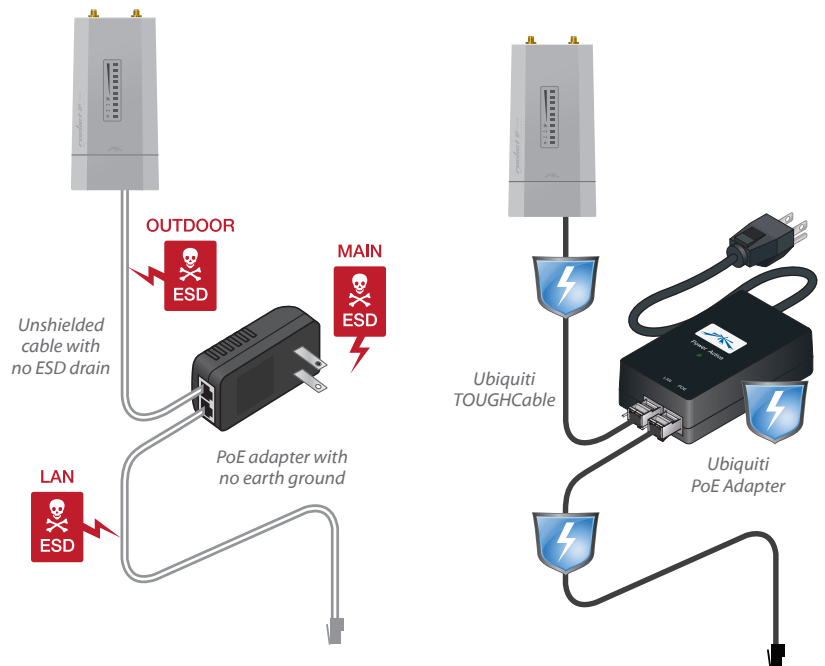
TOUGHCable CARRIER
A Category 5e, outdoor, carrier-class shielded cable that features an integrated ESD drain wire, anti-crosstalk divider, and secondary shielding. It is rated to provide optimal performance on Gigabit Ethernet networks.

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)

ESD attacks are the leading cause for device failures. The diagram below illustrates the areas vulnerable to ESD attacks in a network.
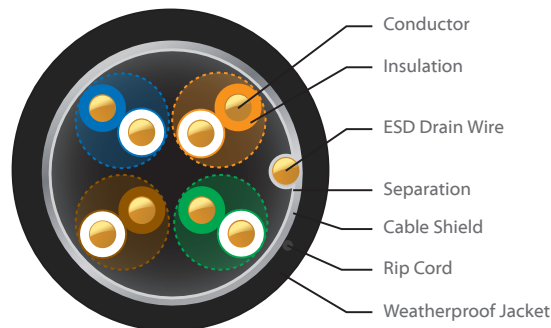
By using a grounded Ubiquiti Power over Ethernet (PoE) Adapter along with Ubiquiti TOUGHCable and TOUGHCable Connectors, you can effectively protect against ESD attacks.

OUTDOOR

MAIN

ESD

ESD

Unshielded cable with no ESD drain

LAN

ESD

PoE adapter with no earth ground

Ubiquiti TOUGHCable

Ubiquiti PoE Adapter

TOUGHCablePRO

Specifications

TOUGHCable PRO Specifications		
Level 1 Shielding Protection	Cable	CAT5e, Shielded
	Ethernet Support	Up to 1 Gbps
	Conductor Wire Gauge	24 AWG
	Conductor	Solid Bare Copper
	Conductor Diameter	0.500 ± 0.005 mm
	Insulation Type	Solid PE
	Insulation Thickness	AVG: 0.26 mm, MIN: 0.25 mm
	Insulation Diameter	1.04 ± 0.03 mm
	Separation (Polyester Wrapping)	Thick: 0.025 mm, Extent: 20 mm
	Anti-Crosstalk Divider	None
	Cable Shield (Aluminum Foil)	Thick: 0.060 mm, Extent: 18 mm
	ESD Drain Wire	0.4 CCS
	Rip Cord	Yes
	Jacket Material	PE
	Jacket Thickness	AVG: 0.50 mm, MIN: 0.46 mm
	Jacket Outer Diameter	6.0 ± 0.30 mm
	Jacket Color	Black
	Reference Standard	ISO/IEC 11801, TIA/EIA568B.2

PRO Performance					
Frequency (MHz)	RL (dB) min.	Attenuation (dB/100 m)	NEXT/PSNEXT (dB)	ACR (dB)	ELFEXT/PSELFEXT (dB/100 m)
1	17.0	2.03	62.30	60.30	60.75
4	18.8	4.04	53.26	49.20	48.71
8	19.7	5.76	48.75	43.00	42.69
10	20.0	6.46	47.30	40.80	40.75
16	20.0	8.24	44.30	36.10	36.67
20	20.0	9.26	42.78	33.50	34.73
25	19.3	10.41	41.33	30.90	32.79
31.25	18.6	11.72	39.87	28.20	30.86
62.5	16.5	16.99	35.36	18.40	24.83
100	15.1	21.97	32.29	10.30	20.75
150	13.80	23.40	18.60/30.30	8.30	17.60/18.50

Conductor
Insulation
ESD Drain Wire
Separation
Cable Shield
Rip Cord
Weatherproof Jacket

TOUGHCableCARRIER

Specifications

TOUGHCable CARRIER Specifications	
Cable	CAT5e, Shielded
Ethernet Support	Up to 1 Gbps
Conductor Wire Gauge	24 AWG
Conductor	Solid Bare Copper
Conductor Diameter	0.500 ± 0.005 mm
Insulation Type	Solid PE
Insulation Thickness	AVG: 0.295 mm, MIN: 0.29 mm
Insulation Diameter	1.16 ± 0.02 mm
Separation (Polyester Wrapping)	Thick: 0.025 mm, Extent: 20 mm
Anti-Crosstalk Divider	LDPE: 4.2*0.3 mm
Cable Shield (Aluminum Foil)	Thick: 0.060 mm, Extent: 20 mm
ESD Drain Wire	0.4 TC
Rip Cord	Yes
Secondary Cable Shield (Braid)	16*8*0.16AA Density: 95%
Jacket Material	PE
Jacket Thickness	AVG: 0.52 mm, MIN: 0.46 mm
Jacket Outer Diameter	6.8 ± 0.30 mm
Jacket Color	Black
Reference Standard	ISO/IEC 11801, TIA/EIA568B.2

Level 2 Shielding Protection (row label spanning table)

CARRIER Performance					
Frequency (MHz)	RL (dB) min.	Attenuation (dB/100 m)	NEXT/PSNEXT (dB)	ACR (dB)	ELFEXT/PSELFEXT (dB/100 m)
1	18.0	1.93	65.30	60.30	61.00
4	19.9	3.90	56.27	49.20	48.96
8	20.7	5.50	51.75	43.00	42.94
10	21.0	6.30	50.30	40.80	41.00
16	21.0	8.00	47.24	36.10	36.92
20	21.0	9.00	45.78	33.50	34.98
25	20.3	10.20	44.33	30.90	33.04
31.25	19.5	11.50	42.88	28.20	31.10
62.5	19.0	16.70	38.36	18.40	25.08
100	18.3	21.70	35.30	10.30	21.00
200	16.5	32.20	30.78/27.78	7.60	17.78/14.98

- Conductor
- Insulation
- Anti-Crosstalk Divider
- ESD Drain Wire
- Separation
- Cable Shield
- Secondary Cable Shield
- Rip Cord
- Weatherproof Jacket