UBIQUITI
NETWORKS

TOUGHCableCARRIER
OUTDOOR CARRIER CLASS SHIELDED

CAT5e | ENHANCED GIGABIT PERFORMANCE

1000 ft (304.8m)
24 AWG

TOUGHCablePRO
OUTDOOR CARRIER CLASS SHIELDED

CAT5e

1000 ft (304.8m)
24 AWG

TENSION
NONE
LOW
HIGH
CABLE REEL CONTROL

- 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

TOUGHCable™

Outdoor Carrier Class
Shielded Ethernet Cable

Models: PRO, CARRIER, TC-GND, TC-CON

Extreme Weatherproofing

ESD Damage Protection

Extended Cable Support

UBIQUITI®
N E T W O R K S

TOUGHCable™
OUTDOOR CARRIER CLASS SHIELDED

Protect your networks from harmful outdoor 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 Weatherproofing
TOUGHCables have been built to perform even in the harshest weather and environments.

ESD Damage Protection
Protect your networks from destructive electrostatic discharge (ESD) attacks.

Extended Cable Support
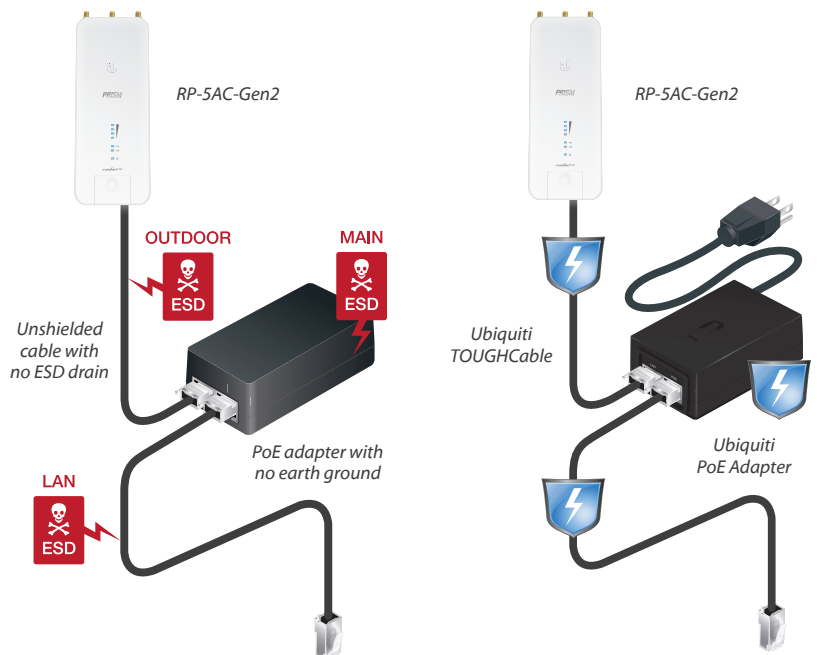TOUGHCables have been developed to increase power handling performance for extended cable run lengths.

TOUGHCable Connectors

Specifically designed for use with Ubiquiti TOUGHCables, TOUGHCable Connectors protect against ESD attacks and Ethernet hardware damage, while allowing rapid field deployment without soldering. The standard TOUGHCable Connectors are available in 100-packs, while the TC-GND versions include ground wires and are available in 20-packs.

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 features an integrated ESD drain wire.

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

Additional Details

• 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.
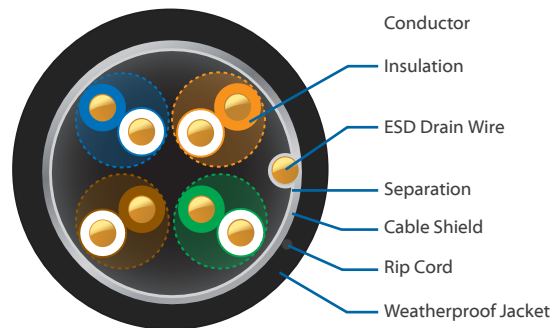
RP-5AC-Gen2

OUTDOOR — ESD
MAIN — ESD

Unshielded cable with no ESD drain

PoE adapter with no earth ground

LAN — ESD

RP-5AC-Gen2

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		
Level 2 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. 0.295 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

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

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