CAT5e ENHANCED GIGABIT PERFORMANCE
1000 ft (304.8m) 24 AWG

UBIQUITI NETWORKS
TOUGHCable
OUTDOOR CARRIER CLASS SHIELDED

LEVEL 1
SHIELDING PROTECTION

LEVEL 2
SHIELDING PROTECTION

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

TOUGHCable, Level 1, Category 5e Enhanced Gigabit Performance (1Gbps Ethernet Support) Outdoor Carrier Class Shielded Cable

TOUGHCable CONNECTORS
Specifically designed for use with Ubiquiti TOUGHCable
100 pcs
- Protects Against ESD Attacks
- Rapid field deployment without soldering

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

TOUGHCable™

Outdoor Carrier Class Shielded Ethernet Cable

Models: Level 1/Level 2, TOUGHCable Connectors

Increase Performance

Extreme Weather-Proof

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 have increased 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: Level 1 Shielding Protection and Level 2 Shielding Protection.

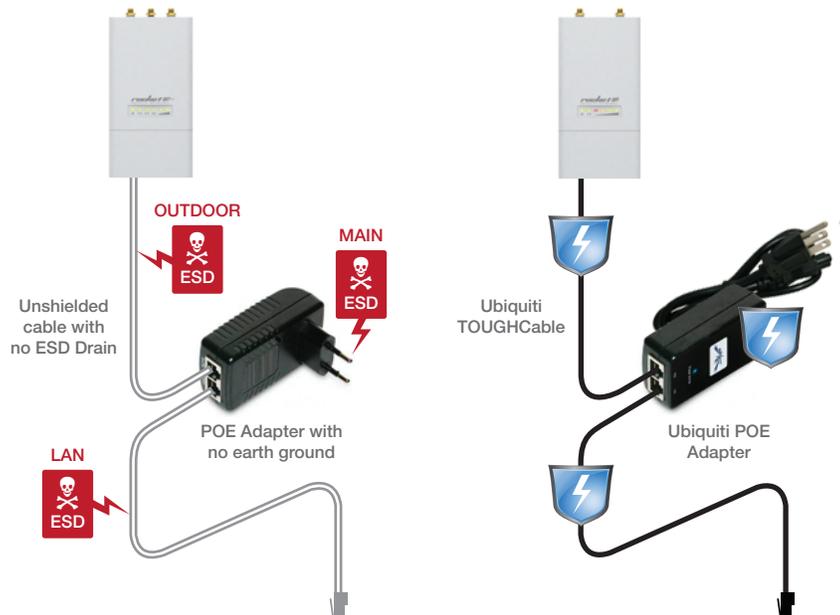**Level 1** is a Category 5e outdoor carrier-class shielded cable.

Level 2 is a Category 5e outdoor carrier-class shielded cable that features an Anti-Crosstalk Divider, additional shielding and 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 & damage
* PE outdoor-rated weatherproof jacket
* Multi-layered shielding
* Available in 1000 ft (304.8 m) length

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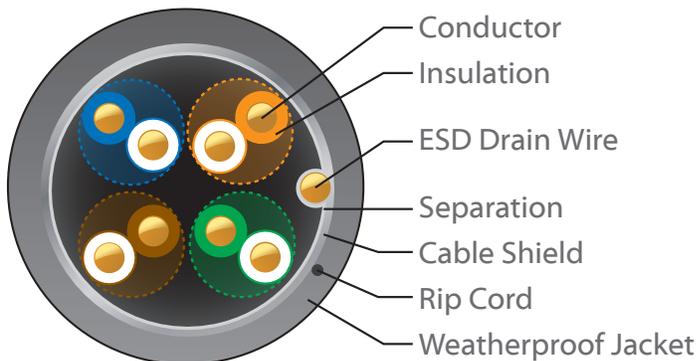

OUTDOOR
MAIN
☠ ESD
☠ ESD
Unshielded cable with no ESD Drain
Ubiquiti TOUGHCable
LAN
☠ ESD
POE Adapter with no earth ground
Ubiquiti POE Adapter

  www.ubnt.com/toughcable

Specifications

Level 1 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: 0.26mm, MIN: 0.25 mm
Insulation Diameter	1.04±0.03 mm
Separation (Polyester Wrapping)	Thick: 0.025mm, 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: 0.50mm, MIN: 0.46 mm
Jacket Outer Diameter	6.0±0.30 mm
Jacket Color	Gray
Reference Standard	ISO/IEC 11801, TIA/EIA568B.2

(Left vertical label: Level 1 Shielding Protection)

Level 1 Performance					
Frequency (MHz)	RL (dB) min.	Attenuation (dB/100m)	NEXT/PSNEXT (dB)	ACR (dB)	ELFEXT/PSELFEXT (dB/100m)
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

LEVEL 1
SHIELDING PROTECTION

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

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Specifications

Level 2 Specifications		
	Cable	CAT5e, Shielded
	Ethernet Support	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: 0.295mm, MIN: 0.29 mm
Level 2 Shielding Protection	Insulation Diameter	1.16±0.02 mm
	Separation (Polyester Wrapping)	Thick: 0.025mm, 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: 0.52mm, MIN: 0.46 mm
	Jacket Outer Diameter	6.8±0.30 mm
	Jacket Color	Gray
	Reference Standard	ISO/IEC 11801, TIA/EIA568B.2

Level 2 Performance					
Frequency (MHz)	RL (dB) min.	Attenuation (dB/100m)	NEXT/PSNEXT (dB)	ACR (dB)	ELFEXT/PSELFEXT (dB/100m)
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	17.78/14.98W

LEVEL 2
SHIELDING PROTECTION

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

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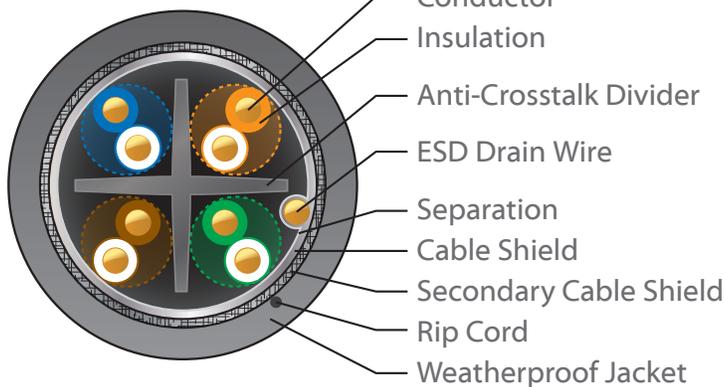
UBIQUITI
NETWORKS

TERMS OF USE: The Ubiquiti radio device must be professionally installed. Shielded ethernet cable and earth grounding must be used as conditions of product warranty. It is the installers responsibility to follow local country regulations including operation within legal frequency channels, output power, 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.   MA072211

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