

# *rocket* D I S H

AirMax Carrier Class 2x2 PtP Bridge Dish Antenna

Models: RD-2G-24, RD-3G-26, RD-5G-30, RD-5G-34

Ultimate in RF Performance

Integrated Mount lets you easily  
snap Rocket M into place

Incredible Range and Speed

# Overview

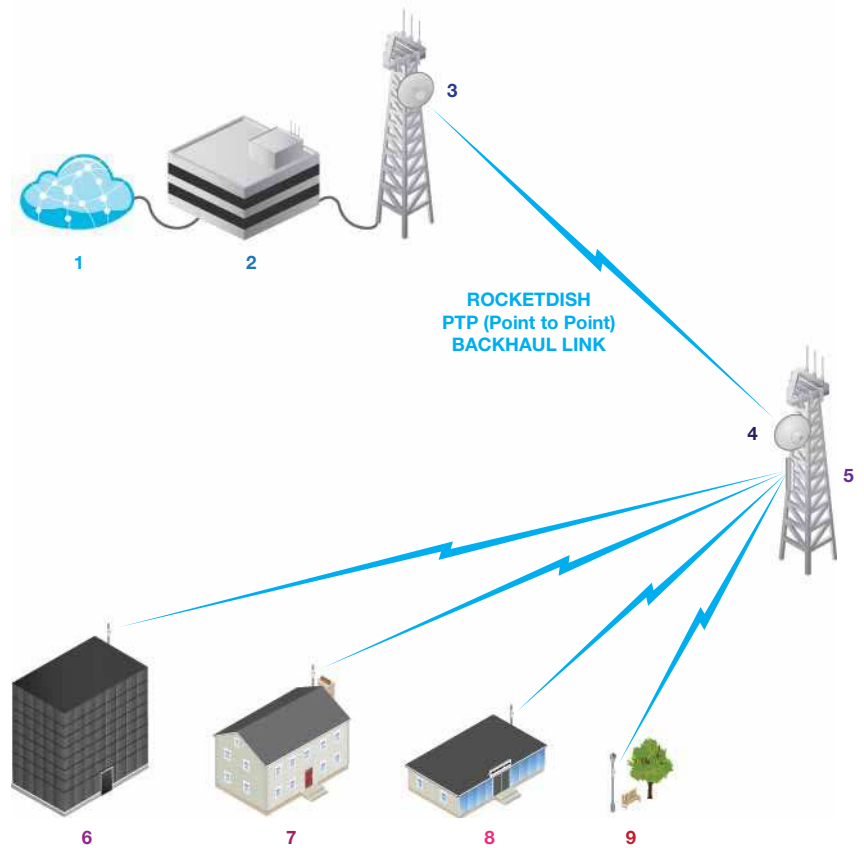
## AirMax 2x2 PtP Dish Antenna

RocketDish is a Carrier Class Dish Antenna that was designed to seamlessly integrate with Rocket M radios (sold separately).

Rocket M combines the “brains” in one robust unit; pair Rocket M with RocketDish to create powerful 2x2 MIMO PtP bridging applications. This seamless integration gives network architects unparalleled flexibility and convenience.

On the right is one example of how RocketDishes can be deployed:

- 1 Internet Backbone
- 2 ISP Network
- 3 RocketDish with Rocket M
- 4 RocketDish with Rocket M
- 5 AirMax BaseStation with Rocket M
- 6 Corporate building with NanoStation M client.
- 7 House with NanoStation M client.
- 8 Small business with NanoStation M client.
- 9 Lightpole with NanoStation M daisy-chained to a PicoStation M to create a wireless hotspot.



## Integrated AirMax Technology

Unlike standard WiFi protocol, Ubiquiti's Time Division Multiple Access (TDMA) AirMax protocol allows each client to send & receive data using pre-designated time slots scheduled by an intelligent AP controller.

This "time slot" method eliminates hidden node collisions & maximizes air time efficiency. It provides many magnitudes of performance improvements in latency, throughput, & scalability compared to all other outdoor systems in its class.

**Intelligent QoS** Priority is given to voice/video for seamless access.

**Scalability** High capacity and scalability.

**Long Distance** Capable of high speed 50km+ links

**Latency** Multiple features dramatically reduce noise.

## GPS Synchronization\*

Pair RocketDish with Rocket M GPS to utilize Ubiquiti AirSync GPS Synchronization technology. AirSync enhances the hardware and software of Rocket M to use GPS signals for precision timing.

**GPS Signal Reporting** AirOS was upgraded to take full advantage of the new GPS hardware in Rocket M GPS units; easily manage/monitor GPS satellite signals.

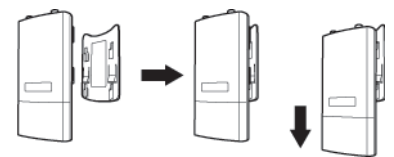
**No Co-location Interference** Synchronized transmission among Rocket M GPS powered BaseStations effectively eliminates co-location interference.

**Seamless AirMax Integration** Rocket M GPS units seamlessly integrate with AirMax BaseStation and RocketDish Antennas.

**Channel Re-use** Frequency reuse for increased scalability.

## Easy Installation

RocketDish Antennas and Rocket M radios have been designed to seamlessly work together.



Installing Rocket M on RocketDish requires no special tools, you simply snap it securely into place with the universal Rocket mount built into the antennas.

\* When paired with Rocket M GPS



**RocketDish\***

**RD-2G-24** (2.4 GHz, 24 dBi)

**RD-3G-26** (3.3-3.7 GHz, 26 dBi)

**RD-5G-30** (5 GHz, 30 dBi)

**RD-5G-34** (5 GHz, 34 dBi)



**RocketDish Radome\*\***

**RAD-2RD** (2 ft / 648 mm)

**RAD-3RD** (3 ft / 972 mm)

- Greatly Reduce Wind Load
- Protect Antenna Surfaces from Harsh Environments
- Conceal Antenna Equipment from Public view
- Designed specifically for RocketDish Antennas

\*RocketDish does not include Rocket M (sold separately)

\*\*RocketDish Radome does not include RocketDish (sold separately)

# Software\*

## airOS

AirOS is an intuitive, versatile, highly developed Ubiquiti firmware technology. It is exceptionally intuitive and was designed to require no training to operate. Behind the user interface is a powerful firmware architecture which enables hi-performance outdoor multipoint networking.

**Protocol Support**

**Ubiquiti Channelization**

**Spectral Width Adjust**

**ACK Auto-Timing**

**AAP Technology**

**GPS Signal Reporting\***



## airView

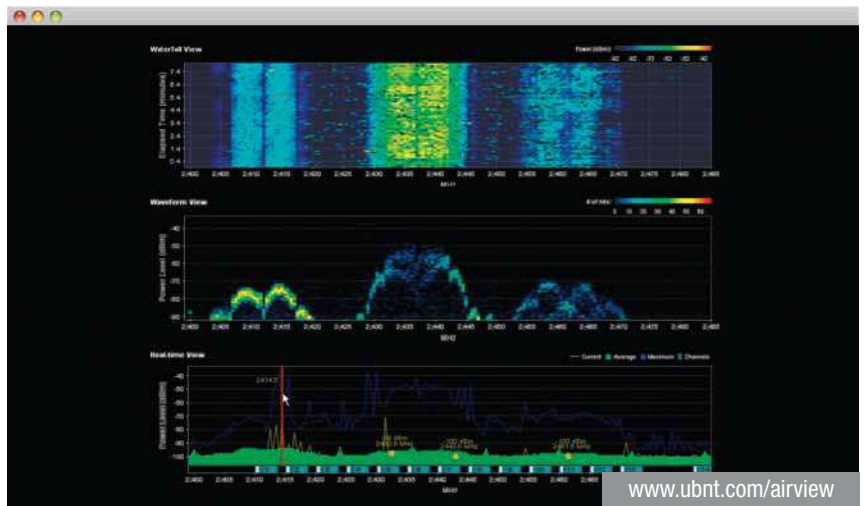
Integrated on all Ubiquiti M products, AirView provides Advanced Spectrum Analyzer Functionality: Waterfall, waveform, and real-time spectral views allow operators to identify noise signatures and plan their networks to minimize noise interference.

**Waterfall** Aggregate energy over time for each frequency.

**Waveform** Aggregate energy collected.

**Real-time** Energy is shown real-time as a function of frequency.

**Recording** Automize AirView to record and report results.



## airControl

AirControl is a powerful and intuitive web based server network management application which allows operators to centrally manage entire networks of Ubiquiti devices.

**Network Map**

**Monitor Device Status**

**Mass Firmware Upgrade**

**Web UI Access**

**Manage Groups of Devices**

**Task Scheduling**



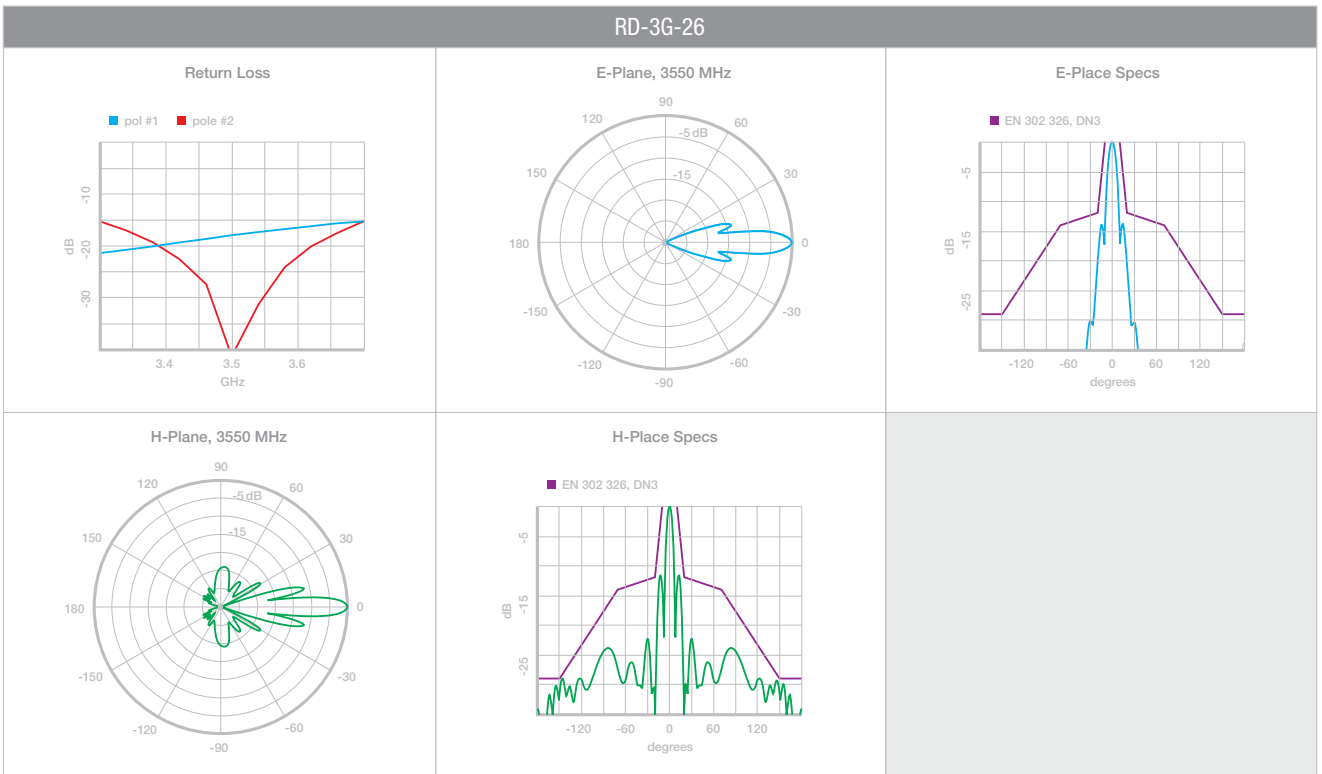
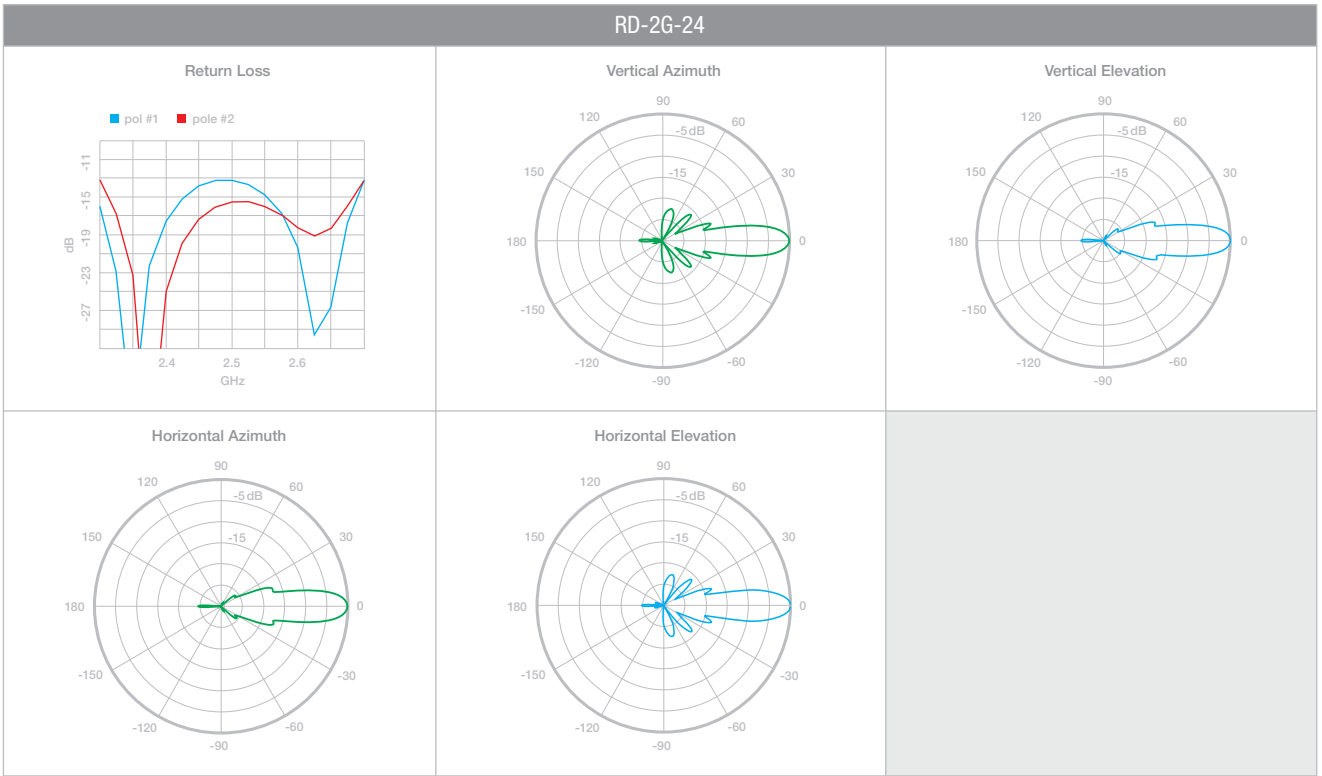
\* When RocketDish is paired with Rocket M

# Specifications

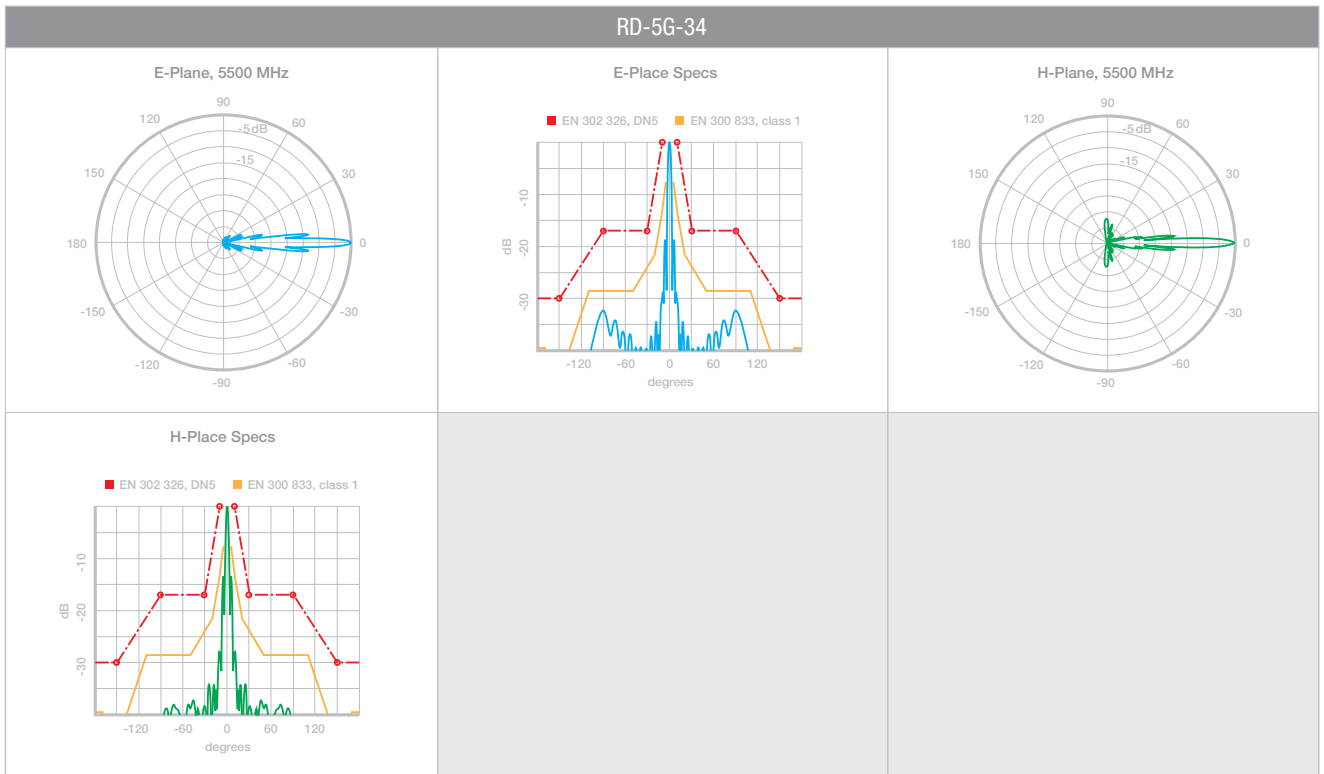
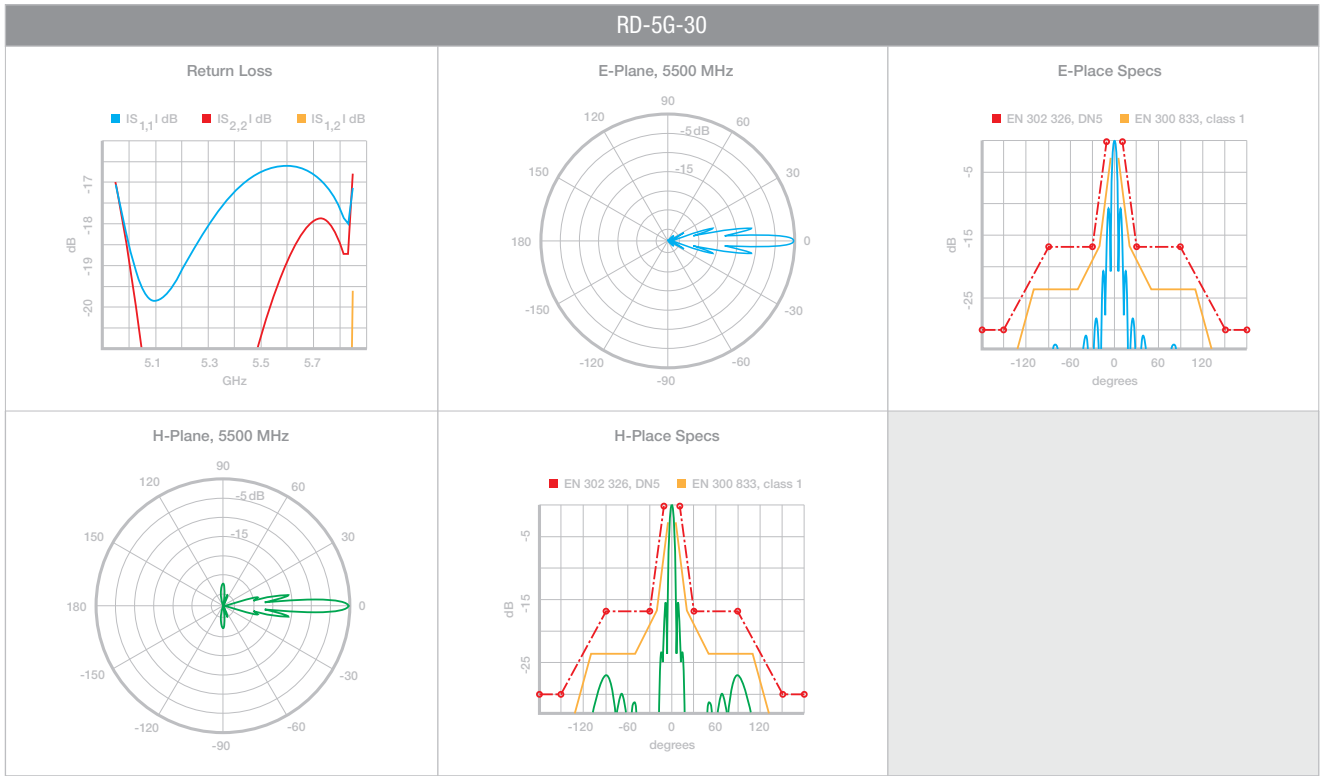
Antenna Characteristics				
	RD-2G-24	RD-3G-26	RD-5G-30	RD-5G-34
Frequency Range	2.3-2.7 GHz	3.3-3.8 GHz	5.1-5.8 GHz	
Gain	24 dBi	26 dBi	30 dBi	34 dBi
Hpol Beamwidth	3.8 deg. (Rx Dish) 6.6 deg. (Tx Dish)	7 deg. (6 dB)	5 deg. (3 dB)	3 deg. (3 dB)
Vpol Beamwidth	3.8 deg. (Rx Dish) 6.6 deg. (Tx Dish)	7 deg. (6 dB)	5 deg. (6 dB)	3 deg. (6 dB)
F/B Ratio	-50 dB (Rx Dish) -65 dB (Tx Dish)	-33 dB	-34 dB	-42 dB
Max VSWR	1.6:1	1.4:1		
Dimensions	648 mm diameter			1050 mm diameter
Weight	9.8 kg			13.5 kg
Wind Survivability	120 mph			125 mph
Wind Loading	113 lb @ 100 mph			256 lb @ 100 mph
Polarization	Dual Linear			
Cross-pol Isolation	35 dB min			
ETSI Specification	EN 302 326 DN2			
Mounting	Universal pole mount, Rocket M bracket, and weatherproof RF jumpers included			

RocketDish does not include Rocket M (sold separately)

# Specifications (cont.)



# Specifications (cont.)





# Misc

## TOUGH Cable

OUTDOOR CARRIER CLASS SHIELDED

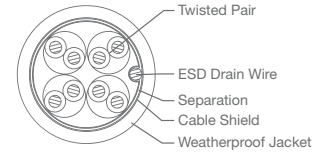
Protect your networks from the most brutal environments with Ubiquiti's industrial-grade shielded ethernet cable, TOUGH Cable.

**Increase Performance** Dramatically improve your ethernet link states, speeds, and overall performance with Ubiquiti TOUGH Cables.

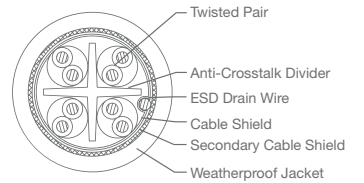
**Extreme Weatherproof** TOUGH Cables have been built to perform even in the harshest weather and environments.

**Eliminate ESD Attacks** Protect your networks from devastating ESD Attacks, TOUGH Cables eliminate ESD attacks and ethernet hardware damage.

**Extended Cable Support** TOUGH Cables have been developed to have increased power handling performance for extended cable run lengths.



**LEVEL 1**  
SHIELDING PROTECTION



**LEVEL 2**  
SHIELDING PROTECTION

### Bulletproof your networks

TOUGH Cable is currently available in two versions: Level 1 Shielding Protection and Level 2 Shielding Protection.

**Level 1** is a Category 5e (100Mbps Ethernet Support) Outdoor Carrier Class Shielded Cable.

**Level 2** is a Category 6 (1Gbps Ethernet Support) Outdoor Carrier Class Shielded Cable that is also capable of providing enhanced Category 5e performance.

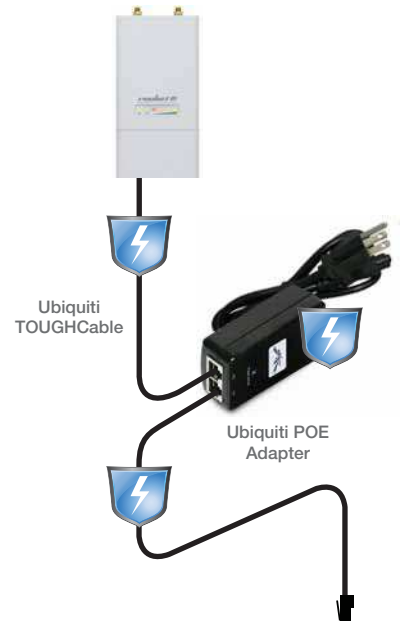
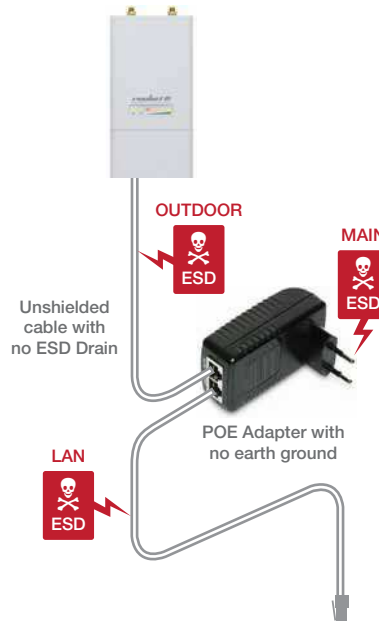
#### Additional Information:

- 24 AWG copper conductor pairs
- ESD Drain Wire: 26 AWG integrated ESD Drain wire to prevent ESD attacks & damage.
- PVC outdoor rated jacket
- 0.35um foil shield
- Multi-Layered Shielding
- 1000ft (304.8m) length

Learn more:  
[www.ubnt.com/toughcable](http://www.ubnt.com/toughcable)

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 POE adapter (included) along with Ubiquiti TOUGH Cable (sold separately), you can effectively eliminate ESD Attacks.







**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](http://www.ubnt.com).

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

RD-DS-08-24-11