Datasheet

NanoBridge® M

NanoBridge® M

High-Performance airMAX® Bridge

Models: NBM9, NB-2G18, NBM3, NBM365, NB-5G22, NB-5G25

High Performance, Long Range

Completely Integrated CPE in Antenna Feed

Easy Assembly and Installation

UBIQUITI™ NETWORKS

Overview

With the NanoBridge®, Ubiquiti Networks™ pioneered the all-in-one design for an airMAX® product functioning as a CPE (Customer Premises Equipment).

The NanoBridge combines Ubiquiti's InnerFeed™ and airMAX technologies to create a simple, yet powerful wireless unit capable of up to 100+ Mbps real outdoor throughput and up to 30+ km range.

InnerFeed Technology

Ubiquiti's revolutionary InnerFeed technology integrates the radio into the feedhorn of an antenna, so there is no need for a cable*. This improves performance because it eliminates cable losses.

Providing high performance and robust all-in-one mechanical design at a low cost, the NanoBridge is extremely versatile and cost-effective to deploy.

airMAX Technology

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

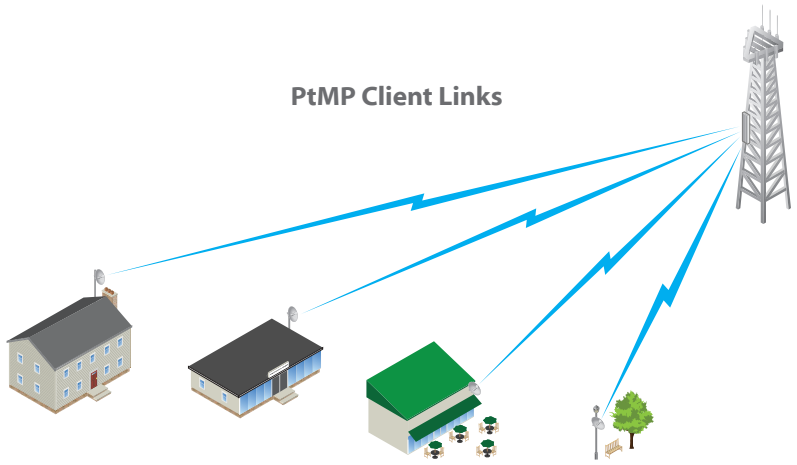
This "time slot" method eliminates hidden node collisions and maximizes airtime efficiency. It provides significant performance improvements in latency, throughput, and scalability compared to all other outdoor systems in its class.

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

Scalability High capacity and scalability.

Long Distance Capable of high-speed, carrier-class links.

Application Examples

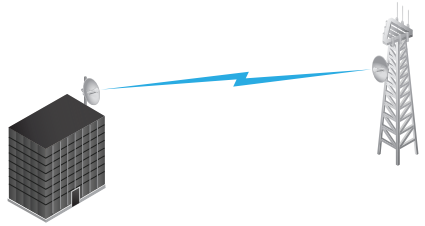


The NanoBridge used as a CPE device for each client in an airMAX PtMP network.

Wireless Client

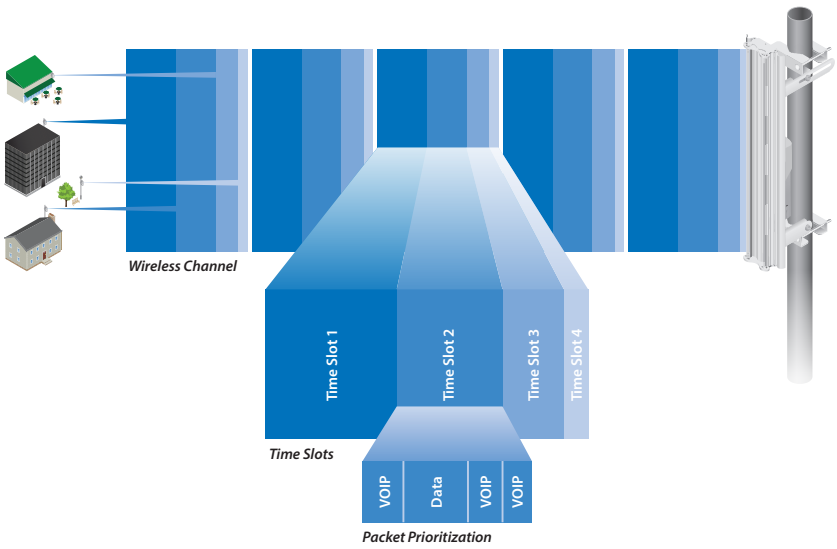
The NanoBridge as a powerful wireless client.

PtP Link



Use a NanoBridge on each side of a PtP link.

airMAX TDMA Technology



Up to 100 airMAX stations can be connected to an airMAX Sector; four airMAX stations are shown to illustrate the general concept.

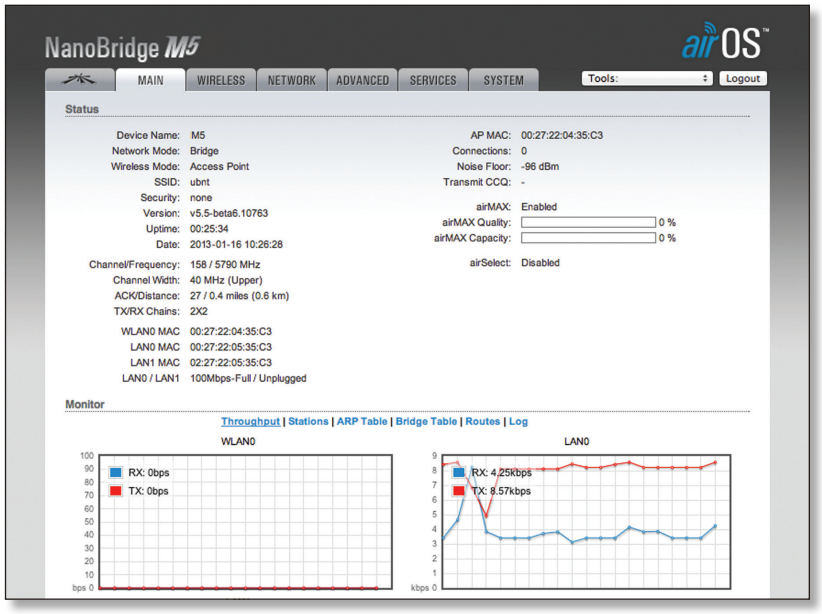
* *NanoBridgeM2 and M5 models only.*

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 high-performance, outdoor multi-point networking.

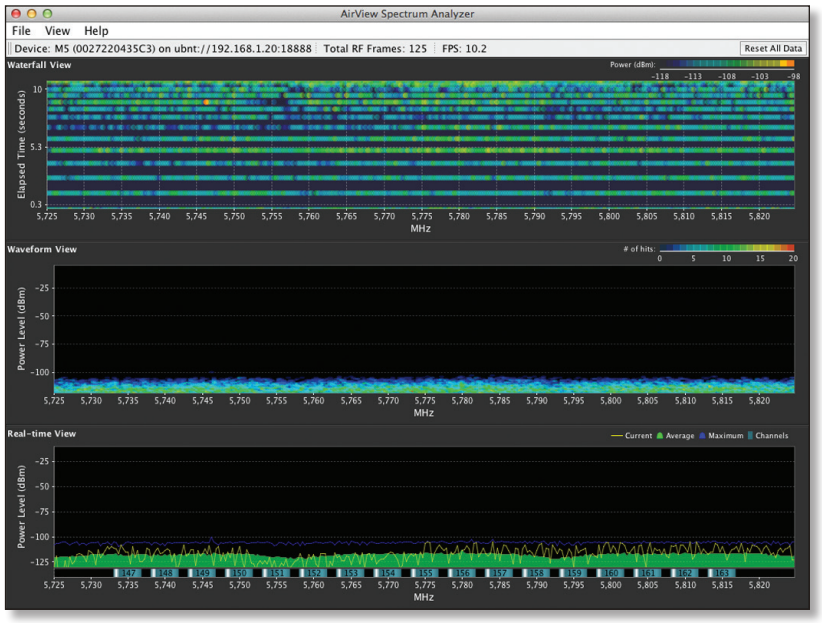
- Protocol Support
- Ubiquiti Channelization
- Spectral Width Adjustment
- ACK Auto-Timing
- AAP Technology
- Multi-Language Support



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.

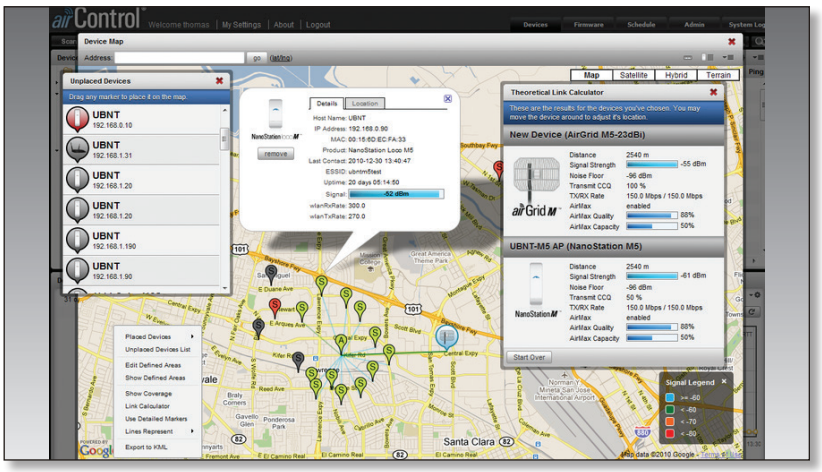
- **Waterfall** Aggregate energy over time for each frequency.
- **Waveform** Aggregate energy collected.
- **Real-time** Energy is shown in real time as a function of frequency.
- **Recording** Automate airView to record and report results.



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



Models

NanoBridge® M9

Model	Frequency	Gain
NBM9	900 MHz	10.6 - 11.3 dBi

NanoBridge® M2
NanoBridge® M5

Model	Frequency	Gain
NB-2G18	2.4 GHz	18 dBi
NB-5G22	5 GHz	22 dBi
NB-5G25	5 GHz	25 dBi

NanoBridge® M3
NanoBridge® M365

Model	Frequency	Gain
NBM3	3.3 - 3.7 GHz	21.5 - 22.5 dBi
NBM365	3.65 - 3.675 GHz	21.5 - 22.5 dBi

Specifications

System Information			
Model	NBM9	NB-2G18/NB-5G22/NB-5G25	NBM3/NBM365
Processor Specs	Atheros MIPS 24KC, 400 MHz	Atheros MIPS 24KC, 400 MHz	Atheros MIPS 24KC, 400 MHz
Memory	64 MB SDRAM, 8 MB Flash	32 MB SDRAM, 8 MB Flash	32 MB SDRAM, 8 MB Flash
Networking Interface	(1) 10/100 Ethernet Port	(1) 10/100 Ethernet Port	(2) 10/100 Ethernet Ports

Regulatory/Compliance Information				
Model	NBM9	NB-2G18/NB-5G22/ NB-5G25	NBM3	NBM365
Wireless Approvals	FCC, IC	FCC, IC, CE	–	FCC
RoHS Compliance	Yes			

Physical/Electrical/Environmental			
Model	NBM9	NB-2G18/NB-5G22/NB-5G25	NBM3/NBM365
Dimensions (mm)	543 x 440 x 725	NB-2G18: 400 diameter NB-5G22: 326 mm diameter NB-5G25: 400 mm diameter	492 x 440 x 705
Weight (Dish and Mount Included)	5.098 kg	NB-2G18: 2.346 kg NB-5G22: 1.904 kg NB-5G25: 2.304 kg	NBM3: 4.656 kg NBM365: 4.660 kg
Power Supply	24V, 1A PoE	24V, 0.5A PoE	24V, 0.5A PoE
Power Method	Passive PoE (Pairs 4, 5+; 7, 8 Return)	Passive PoE (Pairs 4, 5+; 7, 8 Return)	Passive PoE (Pairs 4, 5+; 7, 8 Return)
Max. Power Consumption	6.5 W	5.5 W	8 W
Gain	10.6 - 11.3 dBi	NB-2G18: 18 dBi NB-5G22: 22 dBi NB-5G25: 25 dBi	21.5 - 22.5 dBi
LEDs	(1) Power, (1) LAN, (4) WLAN	(1) Power, (1) LAN, (4) WLAN	(1) Power, (2) LAN, (4) WLAN
Wind Loading	105 lbf @ 125 mph	NB-2G18: 77 lbf @ 125 mph NB-5G22: 45 lbf @ 125 mph NB-5G25: 77 lbf @ 125 mph	105 lbf @ 125 mph
Wind Survivability	125 mph		
LEDs	(1) Power, (1) LAN, (4) WLAN		
Signal Strength LEDs	Software-Adjustable to Correspond to Custom RSSI Levels		
Enclosure	Outdoor UV Stabilized Plastic		
Mounting	Pole-Mount Kit Included		
Operating Temperature	-30 to 75° C		
Operating Humidity	5 to 95% Non-Condensing		
Shock & Vibration	ETSI300-019-1.4		

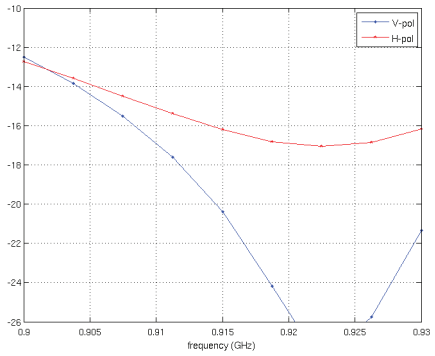
Operating Frequency Summary (MHz)					
Model	NBM9	NB-2G18	NBM3	NBM365	NB-5G22/NB-5G25
Worldwide	902 - 928	2402 - 2462	3370 - 3730	3650 - 3675	5170 - 5875
USA					5725 - 5850

Specifications

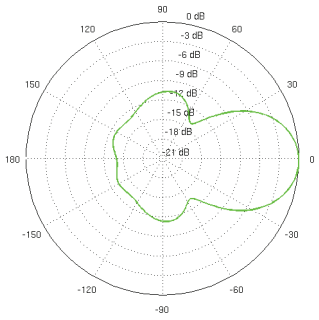
NBM9 – Output Power: 28 dBm							
900 MHz TX POWER SPECIFICATIONS				900 MHz RX POWER SPECIFICATIONS			
	Data Rate	Avg. TX	Tolerance		Data Rate	Sensitivity	Tolerance
11n/airMAX	MCS0	28 dBm	± 2 dB	11n/airMAX	MCS0	-96 dBm	± 2 dB
	MCS1	28 dBm	± 2 dB		MCS1	-95 dBm	± 2 dB
	MCS2	28 dBm	± 2 dB		MCS2	-92 dBm	± 2 dB
	MCS3	28 dBm	± 2 dB		MCS3	-90 dBm	± 2 dB
	MCS4	28 dBm	± 2 dB		MCS4	-86 dBm	± 2 dB
	MCS5	24 dBm	± 2 dB		MCS5	-83 dBm	± 2 dB
	MCS6	22 dBm	± 2 dB		MCS6	-77 dBm	± 2 dB
	MCS7	21 dBm	± 2 dB		MCS7	-74 dBm	± 2 dB
	MCS8	28 dBm	± 2 dB		MCS8	-95 dBm	± 2 dB
	MCS9	28 dBm	± 2 dB		MCS9	-93 dBm	± 2 dB
	MCS10	28 dBm	± 2 dB		MCS10	-90 dBm	± 2 dB
	MCS11	28 dBm	± 2 dB		MCS11	-87 dBm	± 2 dB
	MCS12	28 dBm	± 2 dB		MCS12	-84 dBm	± 2 dB
	MCS13	24 dBm	± 2 dB		MCS13	-79 dBm	± 2 dB
	MCS14	22 dBm	± 2 dB		MCS14	-78 dBm	± 2 dB
	MCS15	21 dBm	± 2 dB		MCS15	-75 dBm	± 2 dB

NBM9 Antenna Information	
Gain	10.6 - 11.3 dBi
Max. VSWR	1.6:1

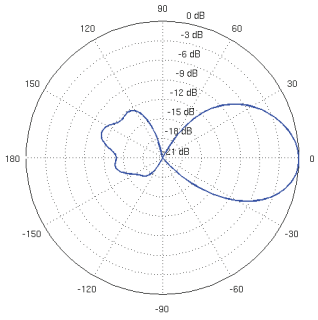
Return Loss



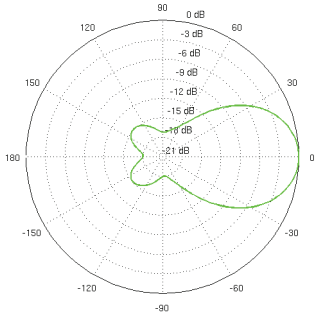
Vertical Azimuth



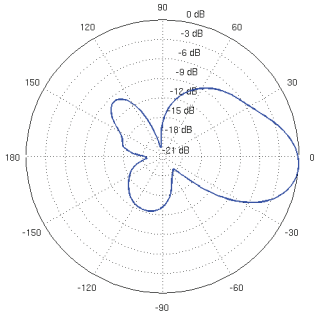
Vertical Elevation



Horizontal Azimuth



Horizontal Elevation

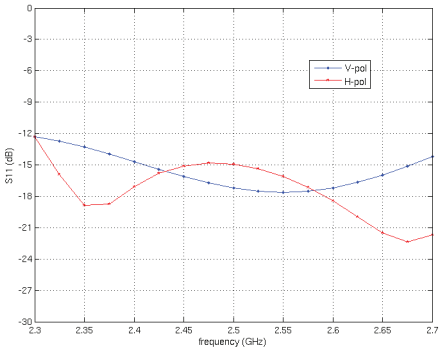


Specifications

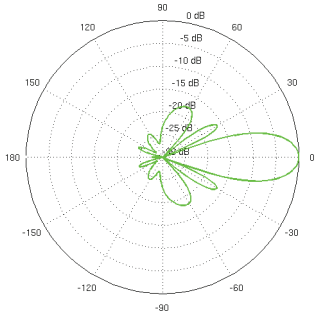
NB-2G18 – Output Power: 23 dBm							
2.4 GHz TX POWER SPECIFICATIONS				2.4 GHz RX POWER SPECIFICATIONS			
	Data Rate	Avg. TX	Tolerance		Data Rate	Sensitivity	Tolerance
11n/airMAX	MCS0	23 dBm	± 2 dB	11n/airMAX	MCS0	-94 dBm	± 2 dB
	MCS1	23 dBm	± 2 dB		MCS1	-93 dBm	± 2 dB
	MCS2	23 dBm	± 2 dB		MCS2	-90 dBm	± 2 dB
	MCS3	23 dBm	± 2 dB		MCS3	-89 dBm	± 2 dB
	MCS4	22 dBm	± 2 dB		MCS4	-86 dBm	± 2 dB
	MCS5	20 dBm	± 2 dB		MCS5	-83 dBm	± 2 dB
	MCS6	19 dBm	± 2 dB		MCS6	-77 dBm	± 2 dB
	MCS7	18 dBm	± 2 dB		MCS7	-74 dBm	± 2 dB
	MCS8	23 dBm	± 2 dB		MCS8	-93 dBm	± 2 dB
	MCS9	23 dBm	± 2 dB		MCS9	-91 dBm	± 2 dB
	MCS10	23 dBm	± 2 dB		MCS10	-89 dBm	± 2 dB
	MCS11	23 dBm	± 2 dB		MCS11	-87 dBm	± 2 dB
	MCS12	22 dBm	± 2 dB		MCS12	-84 dBm	± 2 dB
	MCS13	20 dBm	± 2 dB		MCS13	-79 dBm	± 2 dB
	MCS14	19 dBm	± 2 dB		MCS14	-78 dBm	± 2 dB
	MCS15	18 dBm	± 2 dB		MCS15	-75 dBm	± 2 dB

NB-2G18 Antenna Information	
Gain	18 dBi
Max. VSWR	1.6:1

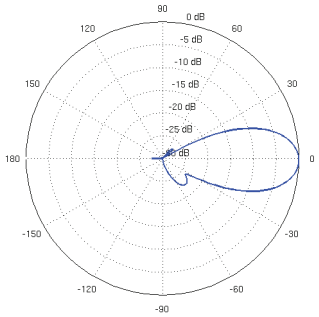
Return Loss



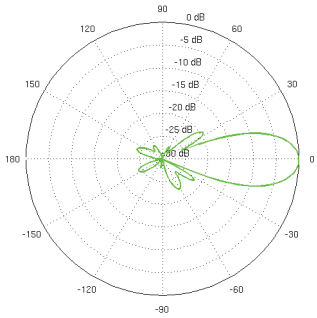
Vertical Azimuth



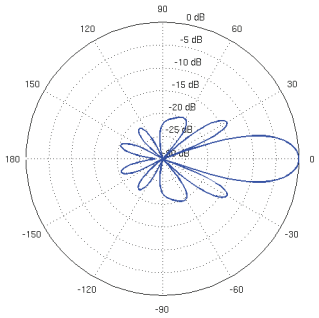
Vertical Elevation



Horizontal Azimuth



Horizontal Elevation

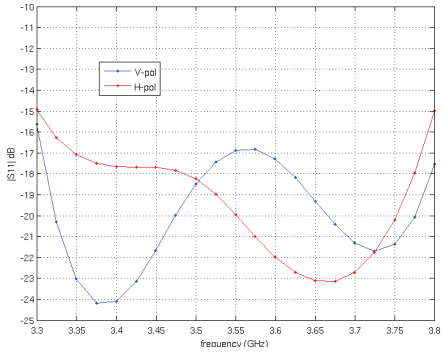


Specifications

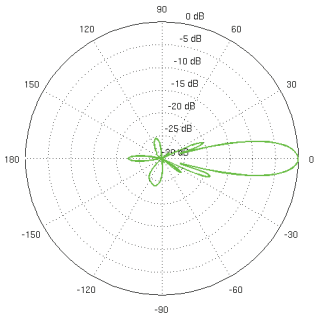
NBM3/NBM365 – Output Power: 25 dBm							
3 GHz TX POWER SPECIFICATIONS				3 GHz RX POWER SPECIFICATIONS			
	Data Rate	Avg. TX	Tolerance		Data Rate	Sensitivity	Tolerance
11n/airMAX	MCS0	25 dBm	± 2 dB	11n/airMAX	MCS0	-94 dBm	± 2 dB
	MCS1	25 dBm	± 2 dB		MCS1	-93 dBm	± 2 dB
	MCS2	25 dBm	± 2 dB		MCS2	-90 dBm	± 2 dB
	MCS3	25 dBm	± 2 dB		MCS3	-89 dBm	± 2 dB
	MCS4	24 dBm	± 2 dB		MCS4	-86 dBm	± 2 dB
	MCS5	23 dBm	± 2 dB		MCS5	-83 dBm	± 2 dB
	MCS6	22 dBm	± 2 dB		MCS6	-77 dBm	± 2 dB
	MCS7	20 dBm	± 2 dB		MCS7	-74 dBm	± 2 dB
	MCS8	25 dBm	± 2 dB		MCS8	-93 dBm	± 2 dB
	MCS9	25 dBm	± 2 dB		MCS9	-91 dBm	± 2 dB
	MCS10	25 dBm	± 2 dB		MCS10	-89 dBm	± 2 dB
	MCS11	25 dBm	± 2 dB		MCS11	-87 dBm	± 2 dB
	MCS12	24 dBm	± 2 dB		MCS12	-84 dBm	± 2 dB
	MCS13	23 dBm	± 2 dB		MCS13	-79 dBm	± 2 dB
	MCS14	22 dBm	± 2 dB		MCS14	-78 dBm	± 2 dB
	MCS15	20 dBm	± 2 dB		MCS15	-75 dBm	± 2 dB

NBM3/NBM365 Antenna Information	
Gain	21.5 - 22.5 dBi
Max. VSWR	1.5:1

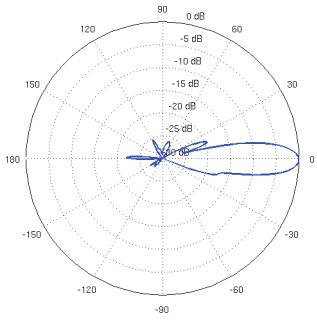
Return Loss



Vertical Azimuth



Vertical Elevation



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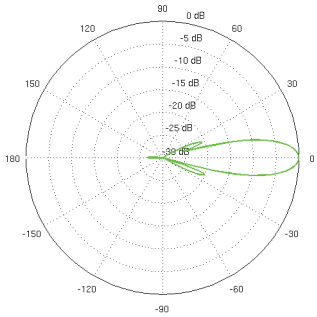
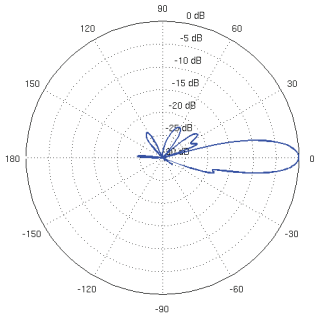


Horizontal Elevation

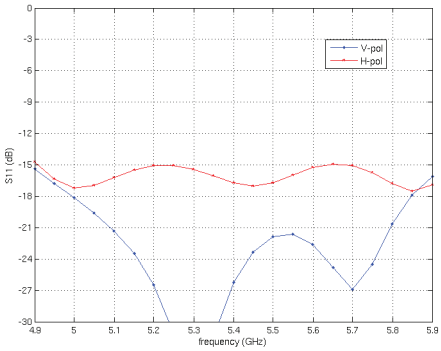


Specifications

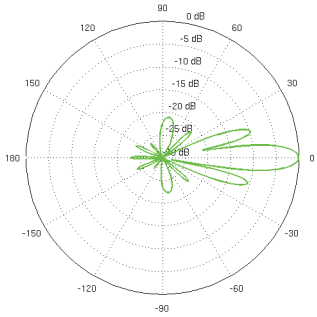
NB-5G22 – Output Power: 23 dBm							
5 GHz TX POWER SPECIFICATIONS				5 GHz RX POWER SPECIFICATIONS			
	Data Rate	Avg. TX	Tolerance		Data Rate	Sensitivity	Tolerance
11n/airMAX	MCS0	23 dBm	± 2 dB	11n/airMAX	MCS0	-96 dBm	± 2 dB
	MCS1	23 dBm	± 2 dB		MCS1	-95 dBm	± 2 dB
	MCS2	23 dBm	± 2 dB		MCS2	-92 dBm	± 2 dB
	MCS3	23 dBm	± 2 dB		MCS3	-90 dBm	± 2 dB
	MCS4	22 dBm	± 2 dB		MCS4	-86 dBm	± 2 dB
	MCS5	20 dBm	± 2 dB		MCS5	-83 dBm	± 2 dB
	MCS6	19 dBm	± 2 dB		MCS6	-77 dBm	± 2 dB
	MCS7	18 dBm	± 2 dB		MCS7	-74 dBm	± 2 dB
	MCS8	23 dBm	± 2 dB		MCS8	-95 dBm	± 2 dB
	MCS9	23 dBm	± 2 dB		MCS9	-93 dBm	± 2 dB
	MCS10	23 dBm	± 2 dB		MCS10	-90 dBm	± 2 dB
	MCS11	23 dBm	± 2 dB		MCS11	-87 dBm	± 2 dB
	MCS12	22 dBm	± 2 dB		MCS12	-84 dBm	± 2 dB
	MCS13	20 dBm	± 2 dB		MCS13	-79 dBm	± 2 dB
	MCS14	19 dBm	± 2 dB		MCS14	-78 dBm	± 2 dB
	MCS15	18 dBm	± 2 dB		MCS15	-75 dBm	± 2 dB

NB-5G22 Antenna Information	
Gain	22 dBi
Max. VSWR	1.5:1

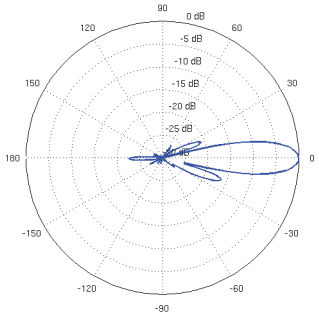
Return Loss



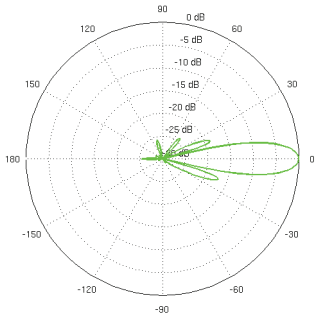
Vertical Azimuth



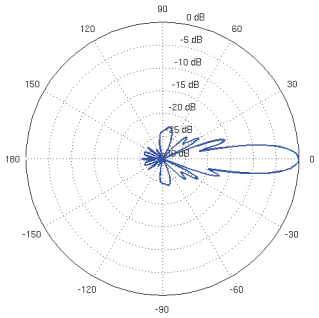
Vertical Elevation



Horizontal Azimuth



Horizontal Elevation

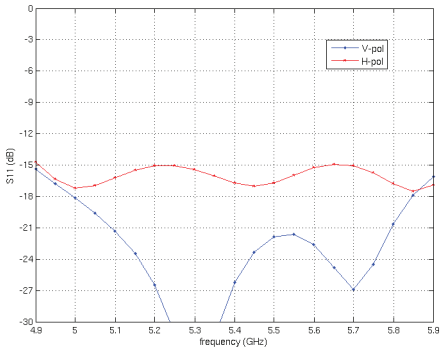


Specifications

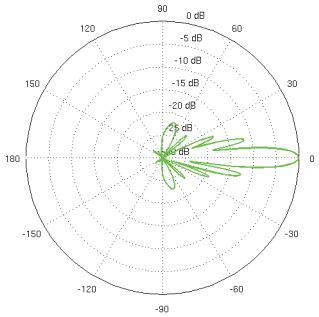
NB-5G25 – Output Power: 23 dBm							
5 GHz TX POWER SPECIFICATIONS				5 GHz RX POWER SPECIFICATIONS			
	Data Rate	Avg. TX	Tolerance		Data Rate	Sensitivity	Tolerance
11n/airMAX	MCS0	23 dBm	± 2 dB	11n/airMAX	MCS0	-96 dBm	± 2 dB
	MCS1	23 dBm	± 2 dB		MCS1	-95 dBm	± 2 dB
	MCS2	23 dBm	± 2 dB		MCS2	-92 dBm	± 2 dB
	MCS3	23 dBm	± 2 dB		MCS3	-90 dBm	± 2 dB
	MCS4	22 dBm	± 2 dB		MCS4	-86 dBm	± 2 dB
	MCS5	20 dBm	± 2 dB		MCS5	-83 dBm	± 2 dB
	MCS6	19 dBm	± 2 dB		MCS6	-77 dBm	± 2 dB
	MCS7	18 dBm	± 2 dB		MCS7	-74 dBm	± 2 dB
	MCS8	23 dBm	± 2 dB		MCS8	-95 dBm	± 2 dB
	MCS9	23 dBm	± 2 dB		MCS9	-93 dBm	± 2 dB
	MCS10	23 dBm	± 2 dB		MCS10	-90 dBm	± 2 dB
	MCS11	23 dBm	± 2 dB		MCS11	-87 dBm	± 2 dB
	MCS12	22 dBm	± 2 dB		MCS12	-84 dBm	± 2 dB
	MCS13	20 dBm	± 2 dB		MCS13	-79 dBm	± 2 dB
	MCS14	19 dBm	± 2 dB		MCS14	-78 dBm	± 2 dB
	MCS15	18 dBm	± 2 dB		MCS15	-75 dBm	± 2 dB

NB-5G25 Antenna Information	
Gain	25 dBi
Max. VSWR	1.5:1

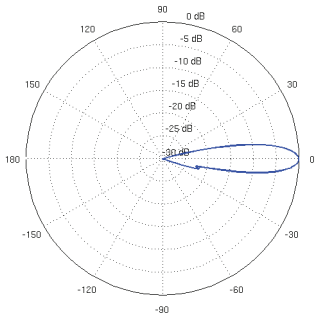
Return Loss



Vertical Azimuth



Vertical Elevation



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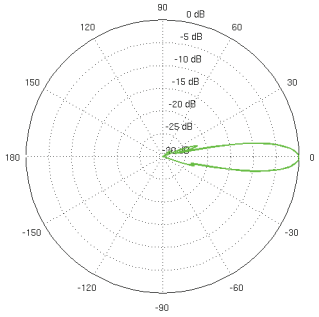
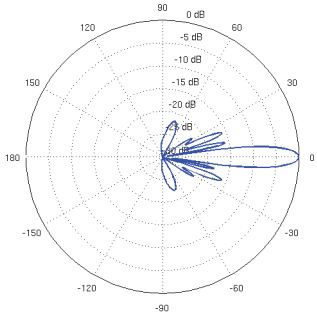


Horizontal Elevation



TOUGHCable™

OUTDOOR CARRIER CLASS SHIELDED

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

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

Extreme Weatherproof
Designed for outdoor use, 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

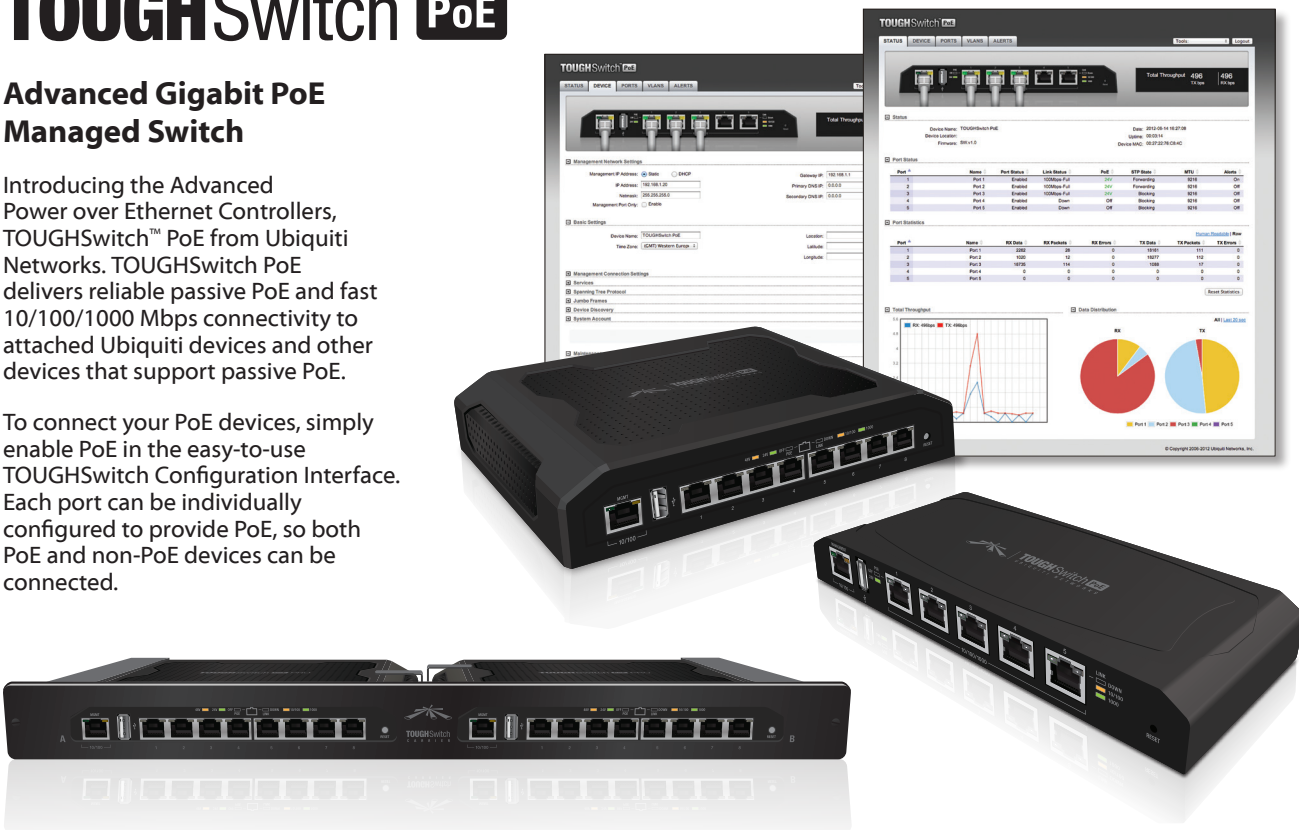
Specifically designed for use with Ubiquiti TOUGHCables, TOUGHCable Connectors protect against ESD attacks and Ethernet hardware damage, while allowing rapid field deployment without soldering. The standard TOUGHCable Connectors are available in 100-pc. bags, while the TC-GND versions include ground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

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.



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