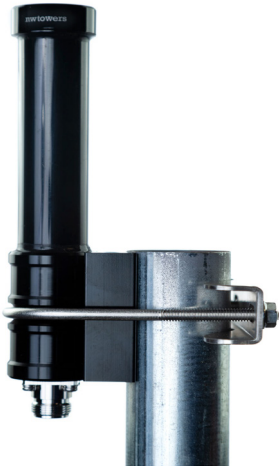




# Vertical Polarized Omni Antenna DATASHEET



## Part Number

Vertical - NWT-ANT-2471-3V

## Product Description

Our dual-band, vertically polarized omnidirectional wifi antenna provides the perfect balance between gain and vertical coverage. The wide vertical beamwidth allows it to reach great depths in open pit mining and similarly challenged topologies. The rugged design and build quality were created with heavy machinery in mind. These antennas are purpose built for industrial networks.

## Product Overview

- Ultra-wide tri-band frequency coverage (2.4ghz, 5ghz, 6ghz) WiFi-6E Ready
- Single model for both 2.4ghz and 5ghz reduces stocking SKUs for spare inventory by 50%
- Wide vertical beamwidth, ideal in topology with broad variations in elevation
- Low VSWR, and stable gain across entire working frequency range
- Optimal pattern plots across entire working frequency range, which ensures excellent RF coverage in all directions

## ELECTRICAL SPECIFICATIONS

Frequency Band	MHz	2400-2500	5100-5900
Gain (Average)	dBi	3.5	4
Polarization		Horizontal	Horizontal
H-Plane 3dB Beamwidth	Degree	360°	360°
E-Plane 3dB Beamwidth Avg/Max	Degree	50°/63°	50°/62°
Azimuth Plane Ripple	dB	3	5
VSWR		<1.5typ / <2.0 max	1.5 typ / <2.0 max
Return Loss (typical)	dB	-13.9	-13.9
Max Input Power per Port	W	30	30
Impedance	Ohms	50	50

## MECHANICAL CHARACTERISTICS

Antenna Size	25mm x 150mm / 1" x 5.9"
Mounting Type	Pipe Mount (U bolt or Hose Clamp)
Mounting Mast size	30mm - 65mm / 1.18" - 2.55"
Antenna Color	Gray or customized
Connectors	N Female
Ice-load	25mm
Weight	0.42 kg / 0.9 lbs (U bolt) ; 0.13 kg / 0.29 lbs (hose clamp)
Packaging	Carton
Single Unit	Retail Box: 95mm x 65mm x 330mm / 3.74" x 2.56" x 13"
20 Units	Carton Box: 510mm x 345mm x 280mm / 20.07" x 13.58" x 11.02"

## ENVIRONMENT

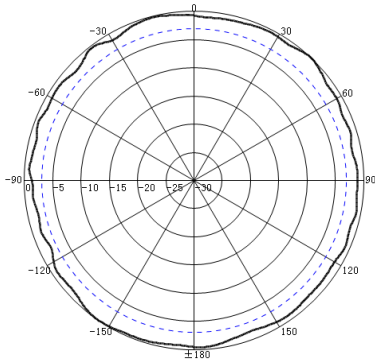
Waterproof level	IP66
Operating Temp Range	-40°C To +60°C / -40°F To 140°F
Salt Fog Exposure	120 hour
Wind Velocity Survival Rating	100 mph / 160km/h
Wind Velocity Operational	100 mph / 160km/h

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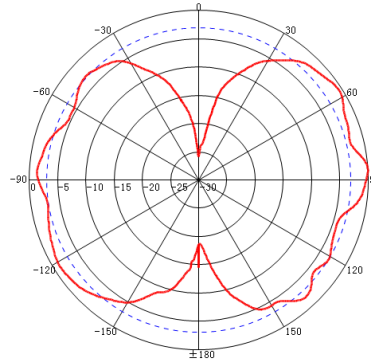


# Pattern Plots



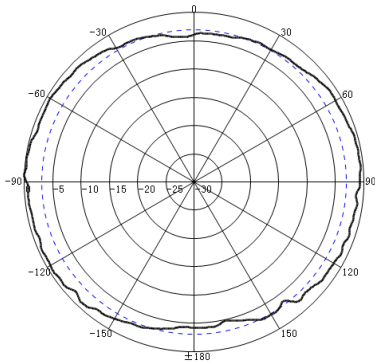
Freq: 2450MHz  
 Date: 2023-04-23  
 Elevation: H-plane  
 Polar: Across Main  
 Polarization: Vertical  
 Max: -13.38dB  
 HPBW(3dB): 360.00°  
 FBR: 0.12dB  
 Peak Gain: 2.84dB

**2450Mhz H-Plane**



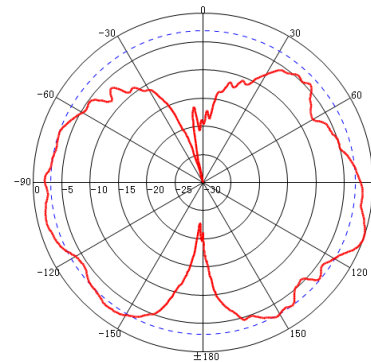
Freq: 2450MHz  
 Date: 2023-04-23  
 Elevation: V-plane  
 Polar: Across Main  
 Polarization: Vertical  
 Max: -13.35dB  
 HPBW(3dB): 63.09°  
 FBR: 4.29dB  
 Peak Gain: 2.85dB  
 Obliquity: 14.31°

**2450Mhz E-Plane**



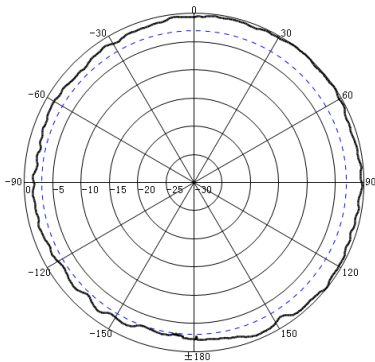
Freq: 5200MHz  
 Date: 2023-04-21  
 Elevation: H-plane  
 Polar: Across Main  
 Polarization: Vertical  
 Max: -27.73dB  
 HPBW(3dB): 144.28°  
 FBR: 2.07dB  
 Peak Gain: 2.93dB

**5200Mhz H-Plane**



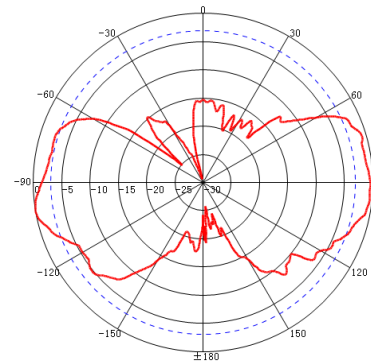
Freq: 5200MHz  
 Date: 2023-04-23  
 Elevation: V-plane  
 Polar: Across Main  
 Polarization: Vertical  
 Max: -27.65dB  
 HPBW(6dB): 101.68°  
 FBR: 2.87dB  
 Peak Gain: 3.01dB  
 Obliquity: 16.82°

**5200Mhz E-Plane**



Freq: 5800MHz  
 Date: 2023-04-21  
 Elevation: H-plane  
 Polar: Across Main  
 Polarization: Vertical  
 Max: -37.59dB  
 HPBW(3dB): 327.28°  
 FBR: 0.77dB  
 Peak Gain: 3.87dB

**5800Mhz H-Plane**



Freq: 5800MHz  
 Date: 2023-04-23  
 Elevation: V-plane  
 Polar: Across Main  
 Polarization: Vertical  
 Max: -37.71dB  
 HPBW(6dB): 71.39°  
 FBR: 14.41dB  
 Peak Gain: 3.75dB  
 Obliquity: 7.91°

**5800Mhz E-Plane**

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