

# Horizontal Polarized Omni Antenna



**Part Number: Horizontal - NWT-ANT-2458-4H**

**Product Description:** Our dual-band, horizontally 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:**

- 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**

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

**Mechanical Characteristics:**

<b>Antenna Size</b>	50mm x 300mm / 2" x 11.8"
<b>Mounting Type</b>	Pipe Mount (U bolt or Hose Clamp)
<b>Mounting Mast size</b>	30mm - 65mm / 1.18" - 2.55"
<b>Antenna Color</b>	Gray or customized
<b>Connectors</b>	N Female
<b>Vibration Testing</b>	IEC 60068-2-6 IEC 60068-2-64 IEC 60068-2-27 IEC 60068-2-31
<b>Weight</b>	0. 85kg / 1.87 lbs ( U bolt) ; 0.54kg / 1.19 lbs ( hose clamp)
<b>Packaging</b>	Carton
<b>Single Unit</b>	Retail Box: 110mm x 110mm x 400mm / 4.33" x 4.33" x 15.7"
<b>20 Units</b>	Carton Box: 420mm x 570mm x 470mm / 16.54" x 22.44" x 18.5"

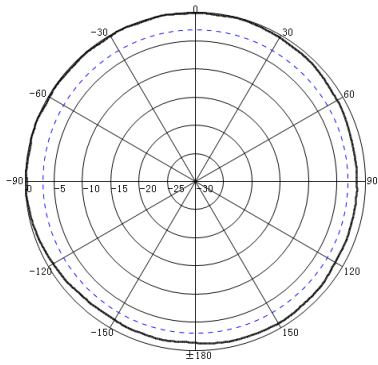
**Environment:**

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

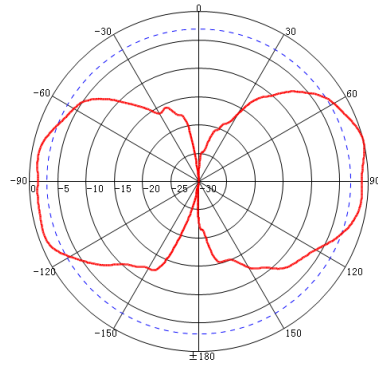
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# Pattern Plots



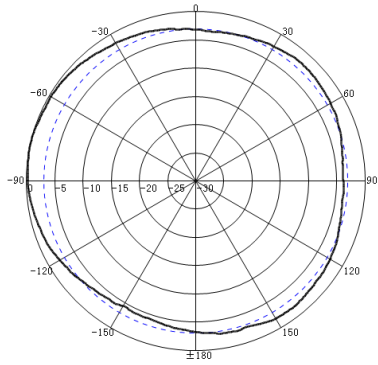
Freq 2450MHz  
 Date:2023-07-19  
 Elevation:H-plane  
 Polar-Across:Main  
 Polarization:Horizontal  
 Max:-16.70dB  
 HPBW(3dB):360.00°  
 FBR:0.88dB  
 Peak Gain:3.30dB



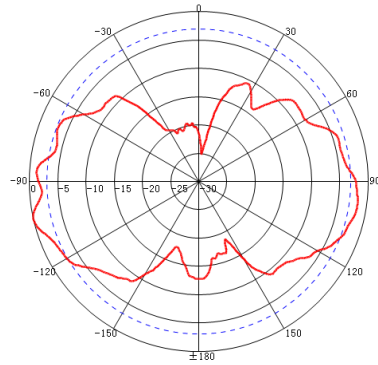
Freq 2450MHz  
 Date:2023-07-19  
 Elevation:V-plane  
 Polar-Across:Main  
 Polarization:Horizontal  
 Max:-16.64dB  
 HPBW(3dB):52.83°  
 FBR:12.26dB  
 Peak Gain:3.36dB

2450Mhz H-Plane

2450Mhz E-Plane



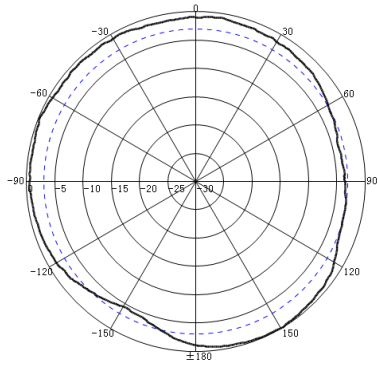
Freq 5200MHz  
 Date:2023-07-19  
 Elevation:H-plane  
 Polar-Across:Main  
 Polarization:Horizontal  
 Max:-27.93dB  
 HPBW(3dB):122.47°  
 FBR:1.87dB  
 Peak Gain:3.63dB



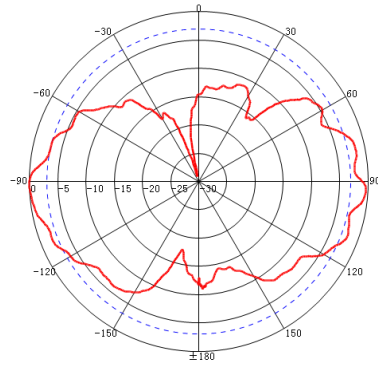
Freq 5200MHz  
 Date:2023-08-25  
 Elevation:V-plane  
 Polar-Across:Main  
 Polarization:Horizontal  
 Max:-27.97dB  
 HPBW(3dB):39.13°  
 FBR:11.29dB  
 Peak Gain:3.59dB

5200Mhz H-Plane

5200Mhz E-Plane



Freq 5800MHz  
 Date:2023-07-19  
 Elevation:H-plane  
 Polar-Across:Main  
 Polarization:Horizontal  
 Max:-37.52dB  
 HPBW(3dB):87.09°  
 FBR:0.02dB  
 Peak Gain:4.24dB



Freq 5800MHz  
 Date:2023-07-19  
 Elevation:V-plane  
 Polar-Across:Main  
 Polarization:Horizontal  
 Max:-37.69dB  
 HPBW(3dB):36.19°  
 FBR:7.42dB  
 Peak Gain:4.07dB

5800Mhz H-Plane

5800Mhz E-Plane

# Mechanical

