

# NNVVSSP-360S-FM



14-port quasi-omni antenna, 4x 698–896, 4x 1695–2690, 4x 3400–3800 and 2x 5150–5925 MHz, 360° horizontal beamwidth. Fixed and manual tilt.

## General Specifications

<b>Antenna Type</b>	Small Cell
<b>Band</b>	Multiband
<b>Grounding Type</b>	RF connector inner conductor and body grounded to reflector and mounting bracket
<b>Performance Note</b>	Outdoor usage   Wind loading figures are validated by wind tunnel measurements described in white paper WP-112534-EN
<b>Radome Material</b>	ASA, UV stabilized
<b>Radiator Material</b>	Aluminum   Low loss circuit board
<b>Reflector Material</b>	Aluminum
<b>RF Connector Interface</b>	4.3-10 Female
<b>RF Connector Location</b>	Bottom
<b>RF Connector Quantity, high band</b>	10
<b>RF Connector Quantity, low band</b>	4
<b>RF Connector Quantity, total</b>	14

## Dimensions

<b>Length</b>	730 mm   28.74 in
<b>Net Weight, without mounting kit</b>	12.1 kg   26.676 lb
<b>Outer Diameter</b>	305 mm   12.008 in

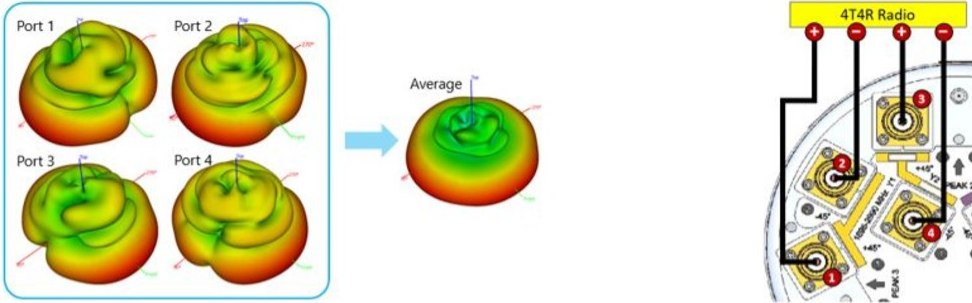
## 5 GHz Port Power Table

5 GHz FCC Power Requirements				
U-NII Band	U-NII 1	U-NII 2A	U-NII 2C	U-NII 3
Frequency (MHz)	5150 - 5250	5250 - 5350	5470 - 5725	5725 - 5850
Max Input power per port to align with FCC Title 47 Part 15 (Watts)	0.5	0.125	0.125	0.5

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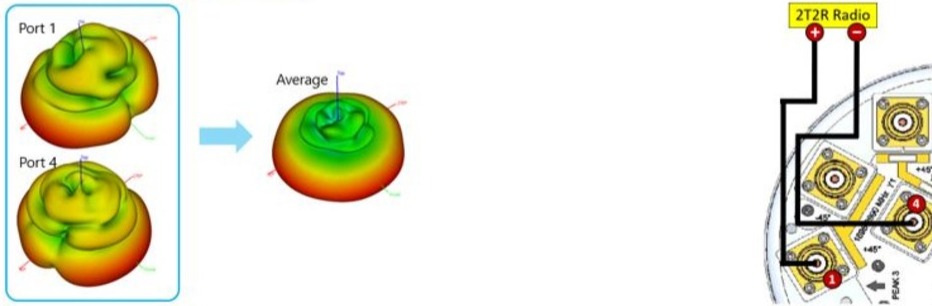
## Port Configuration

### 4X Port Configuration:



- When using a 4T4R radio, use ports 1 – 4 of the pattern diversity antenna

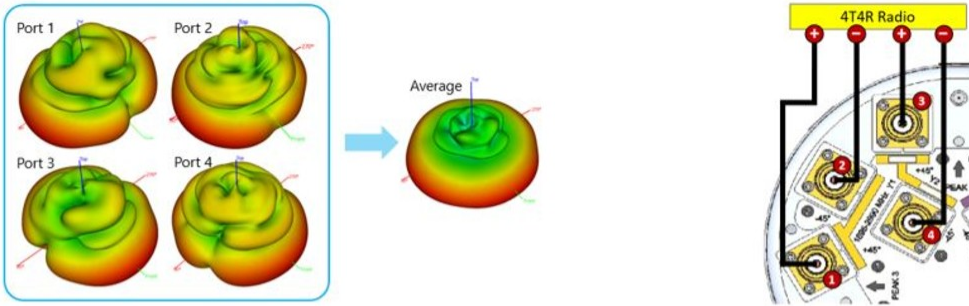
### 2X Port Configuration:



- When using a 2T2R radio, use ports 1 & 4 of the pattern diversity antenna
- Using ports 2 & 3 yields the same result
- This ensures that both orientations and both polarizations are used
- When using this antenna in 2T2R, then this antenna does not have full polarization diversity

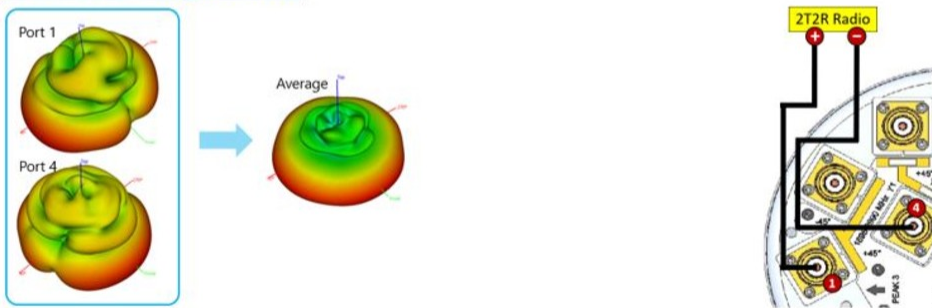
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## Electrical Specifications

<b>Impedance</b>	50 ohm
<b>Operating Frequency Band</b>	1695 – 2690 MHz   3400 – 3800 MHz   5150 – 5925 MHz   698 – 896 MHz
<b>Polarization</b>	±45°

## Electrical Specifications

Frequency Band, MHz	698–806	806–896	1695–1920	1920–2180	2300–2690	3400–3800	5150–5925
<b>Gain, dBi</b>	5.1	5.1	7.1	7.8	8.3	6.7	4
<b>Beamwidth, Horizontal, degrees</b>	360	360	360	360	360	360	360
<b>Beamwidth, Vertical, degrees</b>	62.3	55.1	19.2	16.9	14.3	38.2	20.9
<b>Beam Tilt, degrees</b>	0	0	5–15	5–15	5–15	0	0
<b>Isolation, Cross Polarization,</b>	25	25	25	25	25	25	25

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dB

<b>Isolation, Inter-band, dB</b>	25	25	25	25	25	25	25
<b>VSWR   Return loss, dB</b>	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0
<b>PIM, 3rd Order, 2 x 20 W, dBc</b>	-153	-153	-153	-153	-150		
<b>Input Power per Port at 50°C, maximum, watts</b>	75	75	75	75	75	35	5

## Electrical Specifications, BASTA

Frequency Band, MHz	698–806	806–896	1695–1920	1920–2180	2300–2690	3400–3800	5150–5925
<b>Gain by all Beam Tilts, average, dBi</b>	4.6	4.6	6.3	7.1	7.6	6.3	3.2
<b>Gain by all Beam Tilts Tolerance, dB</b>	±0.7	±0.7	±1.1	±1	±0.8	±0.7	±0.9
<b>Gain by Beam Tilt, average, dBi</b>			5° 8.4 10° 8.5 15° 8.4	5° 8.9 10° 9.3 15° 9.3	5° 9.2 10° 9.5 15° 9.5		
<b>Beamwidth, Vertical Tolerance, degrees</b>	±12.9	±12.3	±2.4	±1.6	±1.6	±5.5	±5.3

## Mechanical Specifications

<b>Wind Loading @ Velocity, frontal</b>	122.0 N @ 150 km/h (27.4 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, maximum</b>	122.0 N @ 150 km/h (27.4 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, rear</b>	122.0 N @ 150 km/h (27.4 lbf @ 150 km/h)
<b>Wind Speed, maximum</b>	241 km/h (150 mph)

## Packaging and Weights

<b>Width, packed</b>	418 mm   16.457 in
<b>Depth, packed</b>	404 mm   15.906 in
<b>Length, packed</b>	1000 mm   39.37 in
<b>Weight, gross</b>	16.7 kg   36.817 lb

## Regulatory Compliance/Certifications

Agency	Classification
CHINA-ROHS	Above maximum concentration value
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system
ROHS	Compliant/Exempted
UK-ROHS	Compliant/Exempted

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\* Footnotes

**Performance Note**      Severe environmental conditions may degrade optimum performance