

N5-45x4 Sector Antenna

All the beamforming gain and ground coverage of a sector.
All the sidelobe rejection of a horn.



The Mimosa N5-45x4 is the industry's first sector antenna to deliver the best of both worlds — incredible noise rejection and long-distance performance, with wideband 4.9–6.4 GHz operation for fixed wireless broadband. This 4-port, dual-slant polarization, 45° sector is designed for use with the Mimosa A5c 4x4 MIMO radio, delivering gain-enhancing beamforming for the best possible channel reuse, range and noise rejection at collocation and tower sites.

Reject Noise and Synchronize

Overcoming noise at tower sites is key to scaling capacity. The N5-45x4 delivers industry-leading side lobe rejection and an unprecedented 43 dB front-to-back (FTB) performance — the highest FTB ratio of any sector or horn antenna in the industry. When used in combination with the Mimosa A5c access point, there's no higher performance tower solution to deliver full, 2x spectrum reuse.

Wideband Operation

Supporting 4.9 GHz public safety applications and multipoint licensed operation up to 6.4 GHz (where regulations allow), the N5-45x4 provides an additional 800 MHz of spectrum beyond the crowded 5.15–5.85 GHz unlicensed channels.

Go the Distance

The Mimosa N5-45x4 offers the best of both worlds — a long distance, high-gain sector with the superior noise

Key Features

- Industry-Leading Front-to-Back Ratio for 2x Spectrum Reuse
- World-Class Noise Rejection
- Beamformed High-Gain for Long Distances
- Wideband 4.9–6.4 GHz Sector

isolation of a horn. Competitive sectors offer high-gain, but fail to reduce side lobe and front-to-back noise. Symmetric horn antennas achieve good noise isolation, but typically offer lower gain and inefficient symmetrical ground coverage patterns.

Compatible with Third-Party Radios

In addition to the 4x4 MIMO Mimosa A5c, the N5-45x4 will support two concurrent third-party 2x2 MIMO radios operating on separate channels to double the coverage capacity at a tower site and avoid the congestion of the unlicensed 5 GHz band.

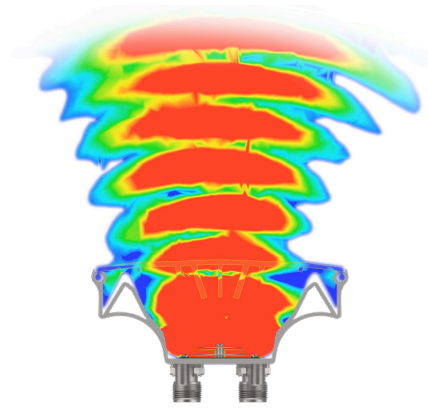
Designed for Beamforming

Paired with the 4x4 MIMO Mimosa A5c, the Mimosa N5-45x4 provides an easy-to-aim, 9° vertical beamwidth coverage area with a narrow, 4.5° signal and +3 dB gain per client. In the uplink direction, the A5c's digital phasing works with the 4 port N5-45x4, adding +3 dB of receive gain.

Technical Specifications

Antenna

- **Gain:** 22 dBi (+3 dBi from beamforming)
- **Polarization:** Dual-slant 45°
- **Azimuth Beamwidth (4 dB):** 45°
- **Azimuth Beamwidth (3 dB):** 42°
- **Elevation Beamwidth (3 dB):** 9°
- **Electrical Downtilt:** 2°
- **Front-to-Back Ratio (min):** 43 dB
- **Cross-Polar Isolation:** >30 dB
- **Port-to-Port Isolation:** >10 dB
- **Impedance:** 50 Ω
- **Max Input Power:** 30 dBm



Physical

- **Dimensions:**
Height: 734 mm (28.88")
Width: 143 mm (6.63")
Depth: 76 mm (3.0") including connectors
- **Shipping Box Dimensions:**
Height: 981 mm (38.62")
Width: 166 mm (6.53")
Length: 105 mm (4.13")
- **Weight:** 4.08kg (9.0 lbs)
- **RF Connectors:** 4 N-type female
(includes four 1 meter LMR 240 Type-N to Type-N cables)
- **RF Connectors Position:** Back of antenna, near center
- **Enclosure Characteristics:**
Outdoor, UV stabilized, engineered polymer
- **Mounting:** Galvanized steel, dual attached pole mount with 20° mechanical up or down tilt. Two mounting brackets included. For pole sizes, maximum is 3.5" (90 mm) and minimum is 1.5" (38 mm).
- **Wind Survivability:** 200 km/h (125 mph)
- **Wind Loading:** 4.77 kg @ 160 km/h
(10.49 lbs @ 100 mph)

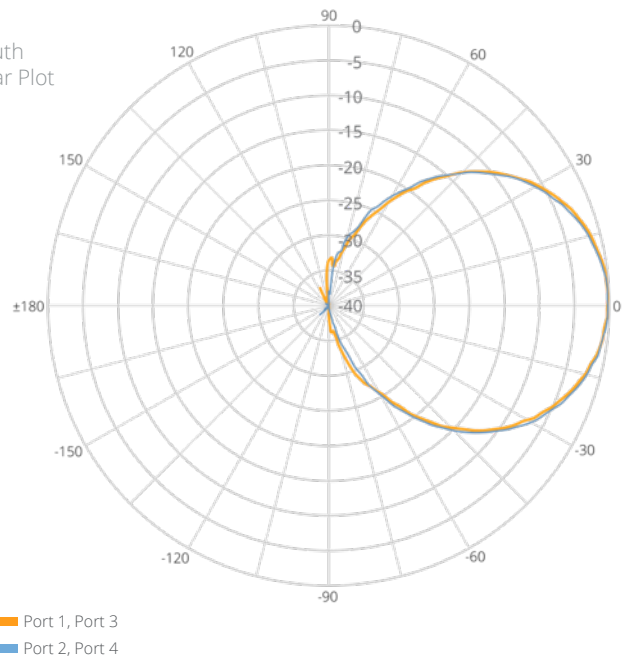
Environmental

- **Outdoor Ingress Protection Rating:** IP55
- **Operating Temperature:** -40°C to +55°C
(-40°F to 131°F)
- **Operating Humidity:** 5 to 100% condensing
- **Operating Altitude:** 4,420 m (14,500') max
- **Shock & Vibration:** ETS 300-019-2-4 class 4M5

Regulatory and Compliance

- **RoHS Compliance:** Yes

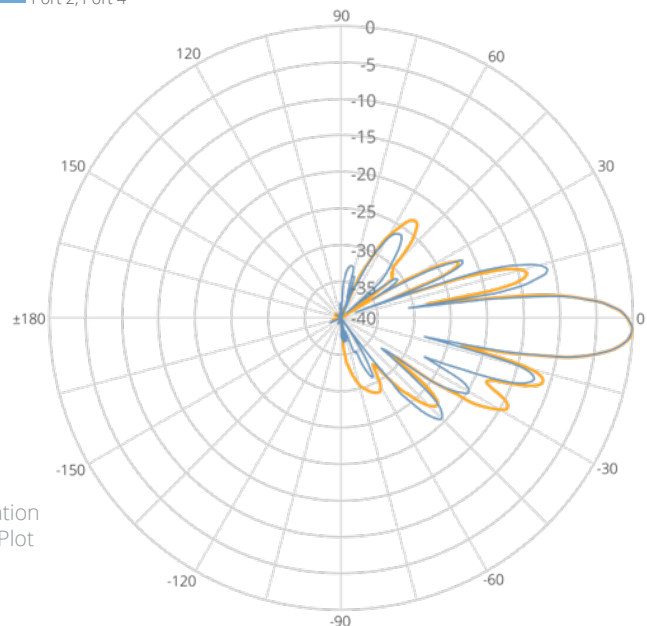
N5-45x4 Azimuth
Horizontal Polar Plot

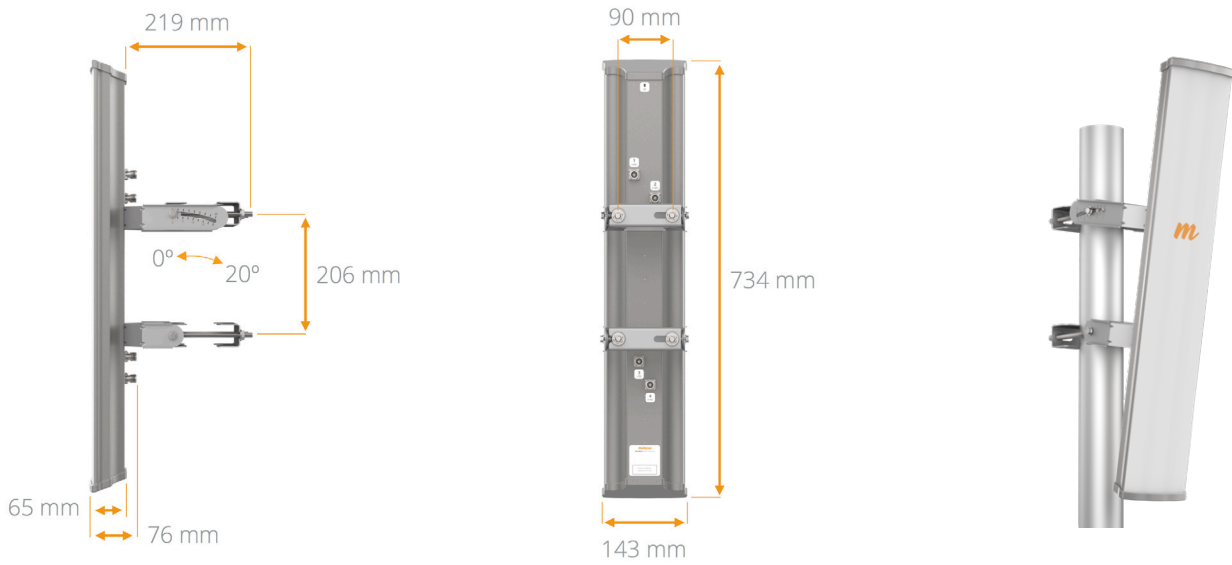


Port 1, Port 3

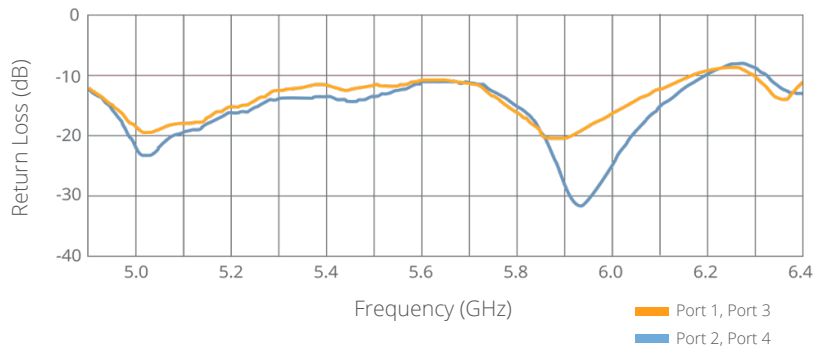
Port 2, Port 4

N5-45x4 Elevation
Vertical Polar Plot

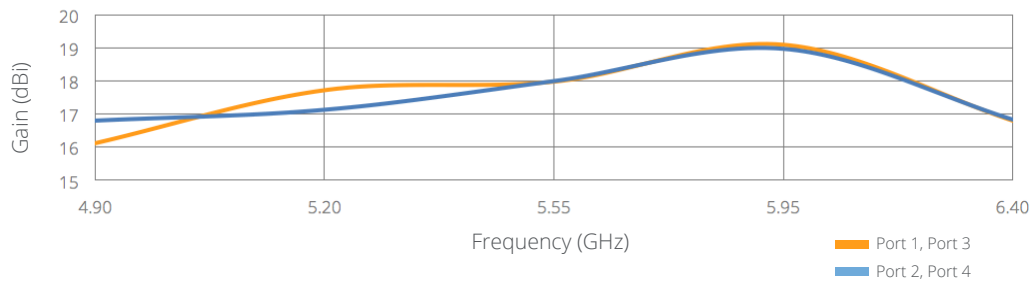




N5-45x4 Return Loss



N5-45x4 Gain Across Frequency



Mimosa Networks, a wholly owned subsidiary of Radisys, is the global technology leader in wireless broadband solutions, enabling service providers to connect dense urban and hard-to-reach rural homes at a fraction of the cost of fiber. Mimosa Networks was acquired in 2023 by Radisys, the global leader in open telecom solutions.