mimosa

Datasheet

The Industry's Most Versatile, Modular Radio

Mimosa's integrated C5x radio and modular N5-X antennas provide the ultimate flexibility for PTP and PTMP extended frequency operation.

4.9–6.4 GHz

Key Features

- Four Twist-On, Flexible Antenna Options
- PTP or PTMP Modes
  (feature key may be required)
- Extended Frequency 4.9–6.4 GHz
- Best-in-Class Noise Immunity
- Ultra Rugged
- Low-Power Consumption
- Ultra Reliable

The Mimosa C5x is the industry's most versatile, modular, radio solution with five gain options (8, 12, 16, 20 and 25 dBi). The ultra-rugged solution provides extended frequency operation from 4.9–6.4 GHz, with best-in-class noise immunity. Delivering the ultimate in flexibility and value, the C5x is the go-to solution for 5 GHz deployments. Out of the box, the C5x can be used in PTMP mode, with Ethernet link speeds of up to 100 Mbps. With the purchase of a PTMP speed feature key, speeds of up to 500 Mbps will be unlocked in PTMP mode. In order to unlock and utilize PTP mode, with speeds of up to 700 Mbps, a PTP feature key must be purchased.

Integrated Radio with Modular Antenna Options

The C5x radio's native 8 dBi gain can be increased to 12, 16, 20 or 25 dBi using Mimosa's modular, N5-X, twist-on antennas, offering the ease and simplicity of integrated radios, but with so much more flexibility!

Incredible RF Performance

Available with either Cassegrain or horn antenna options, the C5x reduces localized noise and provides immunity from interference with breakthrough front-to-back and front-to-side performance. Each antenna in the N5-X family is optimized to isolate noise with incredible sidelobe rejection.

Ultra Rugged

The C5x, with its die-cast aluminum metal enclosure, dual pole mounts, and industrial-grade twist-on antenna options, is custom-engineered to reduce noise, withstand the outdoor elements and stay mounted in harsh wind and extreme weather.

Extended Frequency 4.9–6.4 GHz

To escape the noise, the C5x lets you take advantage of licensed frequencies from 4.9 GHz up to 6.4 GHz, where allowed by local regulations, including the public safety band in the US. The custom-designed N5-X modular antennas are specifically optimized for C5x extended frequency support.

Key Applications

- Broadband service providers
- Public safety and first responders
- Enterprise and campus building interconnecting
- Multipoint distribution for WiFi, video security and Smart Cities

Technical Specifications

Performance

- **Max Throughput:**
  PTP: 700 Mbps IP (866 PHY)
  (requires PTP feature key)
  PTMP: 500 Mbps IP (866 PHY)
  (requires PTMP speed feature key to go faster than 100BASE-T)
- **Wireless Protocols:** Mimosa SRS; WiFi Interop
- **Modes:** PTP Backhaul (requires feature key); PTMP Client

Radio

- **MIMO and Modulation:** 2x2:2 MIMO OFDM, up to 256 QAM
- **Bandwidth:** 20/40/80 MHz channels, tunable to 5 MHz increments for Mimosa SRS and WiFi Interop mode
- **Frequency Range:** PTP/PTMP: 4900–6400 MHz (restricted by country of operation)
- **Max Output Power:** 27 dBm
- **Sensitivity (MCS0):**
  -87 dBm @ 80 MHz
  -90 dBm @ 40 MHz
  -93 dBm @ 20 MHz

Power

- **Max Power Consumption:** 9.2 W average; 12.9 W max
- **System Power Method:** Passive POE (24-56 VDC)
- **PoE Power Supply:** Passive POE compliant, 24-56 V Power over Ethernet supply (not included)

Physical

- **Dimensions:**
  Height: 175 mm (6.89")
  Width: 70 mm (2.75")
  Depth: 61 mm (2.40")
- **Weight:** 0.37 kg (0.82 lbs)
- **RF Connector Type:** Mimosa N5-X twist-on
- **Enclosure Characteristics:**
  Outdoor, die-cast aluminum, UV stabilized paint
- **Mounting:** Dual attached pole mount straps
- **Grounding:** Ground lug
- **Wind Survivability:** 200 km/h (125 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

Features

- **Gigabit Ethernet:** 10/100/1000-Base-T
- **Management Services:** Mimosa cloud monitoring and management; SNMPv2 & Syslog monitoring; HTTPS; HTML5-based web UI
- **Smart Spectrum Management:** Active scan monitors/logs ongoing RF interference across channels with no service impact; Dynamic auto-optimization of channel and bandwidth use
- **Security:** WPA2 PSK and Enterprise 802.1x, Radius provisioning, COA, DM (from A5); 128-bit AES with hardware acceleration
- **VLANs:** Per subscriber, VLAN, Q-in-Q, triple tagging, management VLAN
- **QoS:** Supports 4 pre-configured QoS levels

Regulatory and Compliance

- **Approvals:** FCC Part 15.405 and Part 90Y CE/ETSI
- **EMI/Safety:**
  FCC Part 15 Class B
  EN 55022 Class B
  IEC61000
  UL/IEC 60950-2
  IEC/EN 60905-1
- **WEEE/ROHS Compliance:** Yes

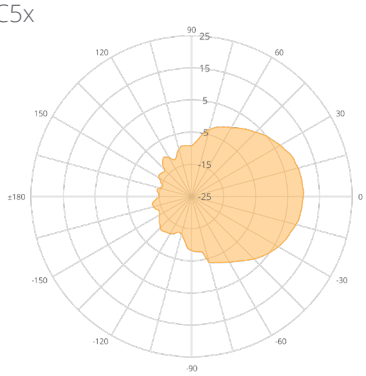
C5x with No Antenna

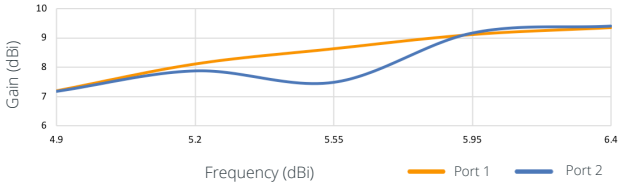
N5-X Modular Antenna Options for the C5x

Product	C5x (no antenna)	N5-X12 (horn)	N5-X16 (horn)	N5-X20 (dish)	N5-X25 (dish)
Gain	8 dBi	12 dBi	16 dBi	20 dBi	25 dBi
Polarization	Dual-slant 45°	Dual-slant 45°	Dual-slant 45°	Dual-slant 45°	Dual-slant 45°
Beamwidth, Symmetric (3 dB)	58°	38°	22°	12°	8°
Front-to-Back Ratio (min)	21 dB	29 dB	50 dB	35 dB	40 dB
Front-to-Side Ratio (min)	21 dB	27 dB	43 dB	37 dB	> 45 dB
Weight	0.37 kg (0.82 lbs)	0.16 kg (0.35 lbs)	0.61 kg (1.35 lbs)	0.77 kg (1.70 lbs)	0.98 kg (2.15 lbs)
Dimensions	Width: 70 mm (2.76″) Length: 175 mm (6.89″) Depth: 61 mm (2.40″)	Diameter: 76 mm (2.99″) Depth: 67 mm (2.63″)	Diameter: 160 mm (6.29″) Depth: 116 mm (4.57″)	Diameter: 270 mm (10.63″) Depth: 83 mm (3.27″)	Diameter: 429 mm (16.89″) Depth: 116 mm (4.57″)
Mount	Dual-pole clamps	Mimosa N5-X twist-on	Mimosa N5-X twist-on	Mimosa N5-X twist-on	Mimosa N5-X twist-on
Wind Survivability	200 km/h (125 mph)	200 km/h (125 mph)	200 km/h (125 mph)	200 km/h (125 mph)	200 km/h (125 mph)
Wind Loading	2.79 kg @ 160 km/h (6.14 lbs @ 100 mph)	3.27 kg @ 160 km/h (7.20 lbs @ 100 mph)	5.13 kg @ 160 km/h (11.30 lbs @ 100 mph)	14.55 @ 160 km/h (32.07 lbs @ 100 mph)	36.26 kg @ 160 km/h (79.95 lbs @ 100 mph)

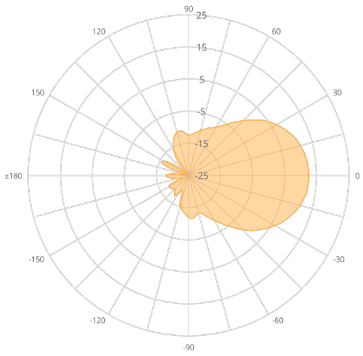
Polar Plots and Gain Across Frequency

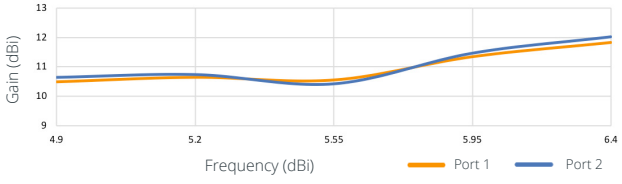
Native, Built-In (8 dBi)



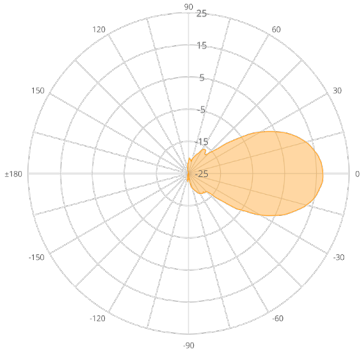


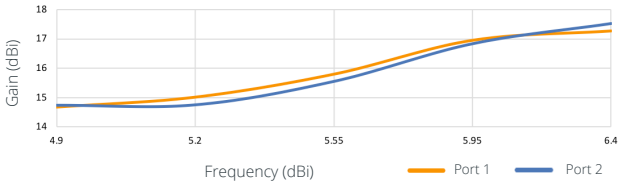
N5-X12 (12 dBi)



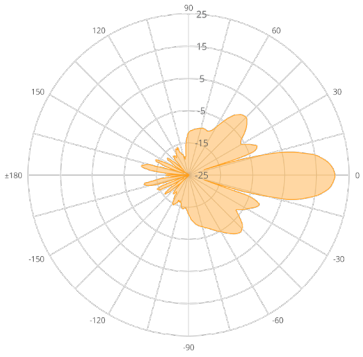


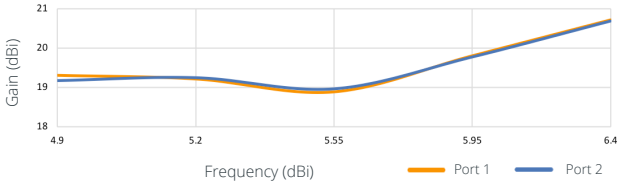
N5-X16 (16 dBi)



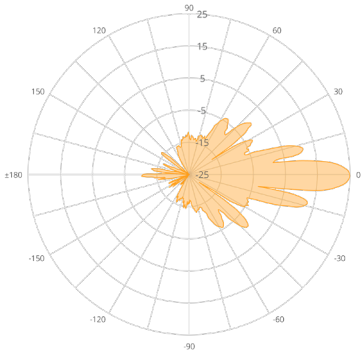


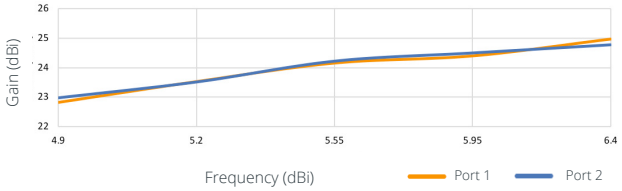
N5-X20 (20 dBi)





N5-X25 (25 dBi)





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