mimosa
a Radisys Company

Datasheet

C6x - Super Flexible, Super Fast, Super Value

Gigabit PTMP Client with Modular Antennas

5.150-6.425 GHz

1.75 Gbps

Wi Fi 6E

1 ms Latency

OFDMA

6 GHz AFC[4]

IP67

Building on the popular N5-X family of modular directional antenna options for flexible distance deployments, the new rugged C6x sets a new bar for affordable speed and interference reduction. With the latest in Wi-Fi 6E OFDMA technologies, and access to new 6 GHz bands, the C6x achieves extremely low latency speeds of up to 1.75 Gbps and high reliability with new noise fighting features. Supporting the Wi-Fi 5/6/6E standards, the C6x can be deployed as a standard Wi-Fi interoperable client, and provide smooth transitioning in the field for legacy Mimosa and standard Wi-Fi deployments.

Integrated Radio with Modular Antenna Options

The C6x radio's native 8 dBi gain can be increased using modular twist-on antennas, offering the ease and simplicity of integrated radios, but with so much more flexibility.

Noise Just Met Its Match

The link reliability of the C6x starts with the high isolation design of the N5-X antennas—but there's so much more that's new. Based on Wi-Fi 6E OFDMA technologies, the C6x reduces in-band noise impact across the operating channel with dramatically smaller 2 MHz resource units (RU) sizes instead of legacy OFDM solutions, where any noise impacted the full channel.

Incredible Speed and PTMP Scale

Previous OFDM technologies limited the scale of client deployments and the ability to deploy in dense, noisy areas. In PTMP client deployments, the C6x pairs together with new multi-user OFDMA scheduling and beamforming technologies on the A6 access point to enable massive subscriber scaling, advanced noise management, and access to the new low-noise 6 GHz band.

Carrier Grade

The C6x has a robust IP67 design, engineered to endure harsh environmental conditions. Its carrier-grade management capabilities, facilitated by Mimosa Cloud and MMP, enable operators to effortlessly deploy and monitor networks. Together with next-gen RF noise fighting features and new low-noise 6 GHz band support, C6x leads the way in dependable connectivity.

Need more information?
Get in touch with the Mimosa sales team by visiting
https://mimosa.co/contact-us

Technical Specifications

Performance

- **Max Throughput:**
  1.75 Gbps IP aggregate UL/DL (2402 Mbps PHY)
- **Wireless Protocols:**
  WiFi Interop; Auto-TDD (future release); PTMP TDMA (future release)
- **Modes:**
  PTMP client 1.75 Gbps

Radio

- **MIMO & Modulation:**
  2x2, PTMP MU-MIMO client support, OFDMA, BPSK-1024QAM
- **Bandwidth:**
  20/40/80/160 MHz channels, tunable to 5 MHz increments
- **Frequency Range:** PTMP: 5150–6425 MHz (restricted by country of operation)
- **Max Output Power:** 24 dBm
- **Sensitivity (MCS 0):**
  - 87 dBm @ 80 MHz
  - 90 dBm @ 40 MHz
  - 93 dBm @ 20 MHz

Power

- **Max Power Consumption:** 20 W
- **System Power Method:** Passive PoE
- **PoE Power Supply:**
  Passive POE compliant 24 V (PoE injector not included)

Physical

- **Dimensions:**
  Height: 178mm (5”)
  Width: 113mm (4.5”)
  Depth: 67mm (2.6”)
- **Weight:** 0.7 kg (1.54 lbs)
- **RF Connector Type:** N5-X twist-on
- **Enclosure Characteristics:**
  Die-cast aluminum, UV stabilized paint, with outdoor UV stable plastic radome lens
- **Mounting:**
  Dual pole strap capable
- **Grounding:** Ground lug

Environmental

- **Outdoor Ingress Protection Rating:** IP67
- **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’) maximum
- **Shock and Vibration**: ETS 300-019-2-4 class 4M5

Regulatory and Compliance

- **Approvals:**
  FCC Part 15.407; IC RSS210; CE (RED, EMCD, LVD, RoHS); ETSI 301 893/302 502
- **RoHS Compliance:** Yes
- **Safety:** EN 62638-1

Features

- **Gigabit Ethernet:** 10/100/1000-BASE-T
- **Management Services:**
  MMP support; Netconf (future support); SNMPv2c/v3; Syslog; HTTPS; HTML 5 based Web GUI; IPv4 and IPv6
- **Smart Spectrum Management:**
  Active scan monitors/logs ongoing RF interference across all channels (no service impact); Dynamic auto-optimization of channel and bandwidth use
- **Security:** AES; RADIUS; 802.1x authorization
- **QoS:** WiFi Interop Mode WMM;
  SRS mode supports 4 user configurable QoS levels supporting both CBWFQ and PQ
- **VLAN:** Q-in-Q, double tagging, management VLAN, PTMP per client VLAN

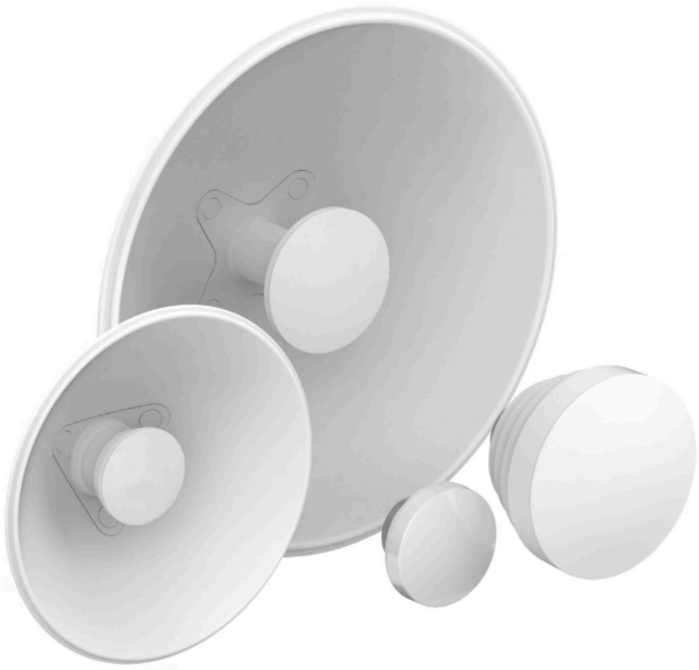
- **Part Number:** 100-00111

[1] Outdoor 6 GHz availability varies by country regulations. USA/FCC may only allow PTMP client mode.
[2] Additional purchase of a speed license key required for PTMP client mode speeds above 100 Mbps.
[3] Additional purchase of a PTP license key required for PTP operation.
[4] Automatic Frequency Coordination database support via firmware update, once formally approved by the FCC

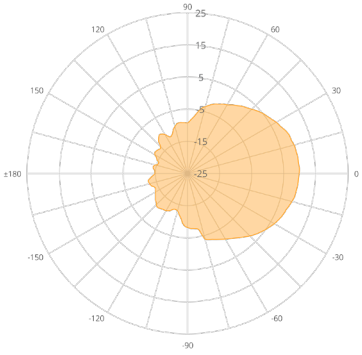
N5-X Modular Antenna Options for the C6x

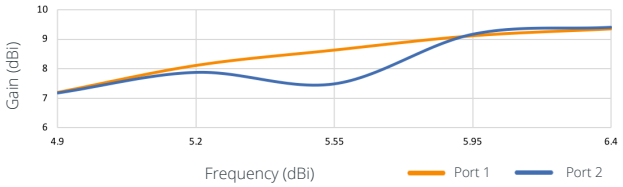
Product	C6x (Without antenna)	N5-X12 (horn)	N5-X16 (horn)	N5-X20 (dish)	N5-X25 (dish)
Part Number	100-00111	100-00086	100-00087	100-00088 - 2PK 100-00090 - 8PK	100-00091 - 8PK
Gain	8 dBi Native	12 dBi	16 dBi	20 dBi	25 dBi
Polarization	Dual-slant 45°	Dual-slant 45°	Dual-slant 45°	Dual-slant 45°	Dual-slant 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 d
Weight		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		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 Straps	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)
Wind Loading		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 Frequencies

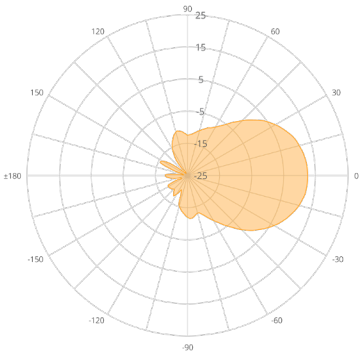


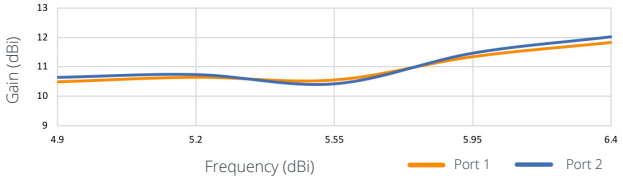
Native,
Built-In (8 dBi)



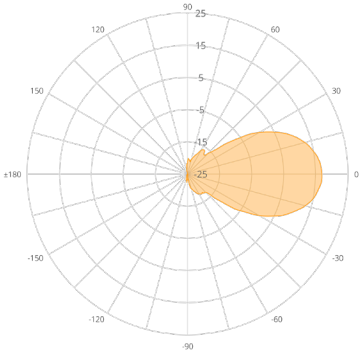


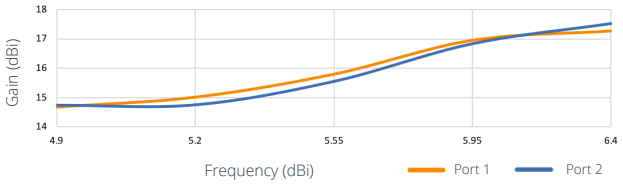
N5-X12 (12 dBi)



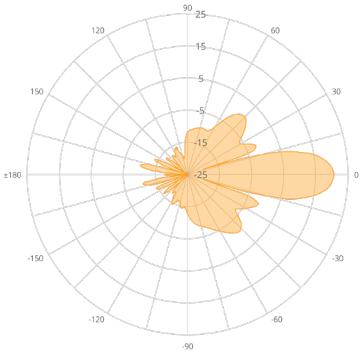


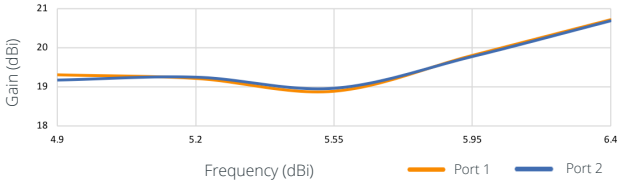
N5-X16 (16 dBi)



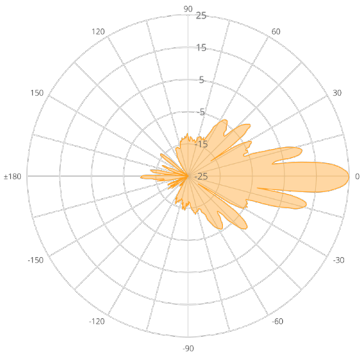


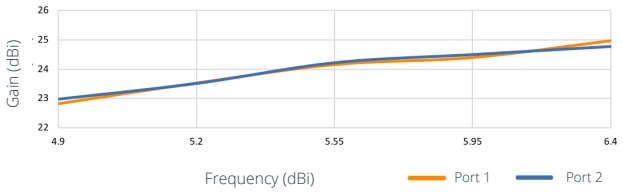
N5-X20 (20 dBi)





N5-X25 (25 dBi)





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.

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