



C6 | Gigabit PTMP Client Radio

Line of Sight, Near Line of Sight and Non Line of Sight Operation

Gigabit PTMP Client with Integrated 4x4 Patch Array Antenna

The C6 is Mimosa's latest Point-to-Multipoint (PTMP) client radio, designed to tackle challenging connectivity scenarios. Equipped with a powerful 4x4 patch array integrated antenna supporting beamforming, the C6 leverages 4 spatial streams and 8T8R chains to deliver near and non-line-of-sight (NLOS) connections. Ideal for deployments where standard line-of-sight (LOS) is obstructed by terrain or other obstacles, the C6 ensures reliable, high-performance connections. Utilizing the latest OFDM/OFDMA technology and access to the expanded 6 GHz spectrum, the C6 achieves ultra-low latency and speeds up to 2.5 Gbps, all while incorporating advanced noise mitigation features for enhanced signal reliability.

Integrated 4x4 Antenna with 8Tx8R Radio

The C6 radio brings ease of installation and simplicity with an integrated patch antenna with 8T8R radio, supporting Near and Non-LOS deployments.

Non-Line of Sight Support

LoS, Near-LoS (nLoS), and Non-LoS (NLoS) connectivity powered by:

- Integrated 4x4 patch array antenna supporting beamforming with interference suppression
- Beamforming at both the C6 (client) and A6 (AP) for mitigating Fresnel Zone obstructions
- Multipath processing for reflections and diffractions in NLoS scenarios
- AI-driven interference management (ACS) across spatial, time, frequency, and power domains

Incredible Speed and PTMP Scale

In PTMP setups, the C6 pairs with the A6 access point's multi-user OFDM/OFDMA scheduling and beamforming to enable large-scale subscriber growth, advanced noise management, and access to the low-noise 6 GHz band.

Carrier Grade

The C6's rugged IP67 design withstands harsh conditions, while carrier-grade management via Mimosa Cloud and MMP allows operators to easily deploy and monitor networks. With advanced noise-fighting features and support for the low-noise 6 GHz band, the C6 ensures reliable connectivity.

For more information visit: mimosa.co

- Outdoor 6 GHz availability varies by country regulations. USA/FCC may only allow PTMP client mode.
- Additional purchase of a PTP license key required for PTP operation.
- Automatic Frequency Coordination database support via firmware update, once formally approved by the FCC

Technical Specifications

Performance

- Max Throughput: 2.5 Gbps Aggregate (DL+UL at Wireless Interface)
- Wireless Protocols: Wi-Fi Interop; PTMP TDMA
- Modes: PTMP Client 2.5 Gbps

Radio

- MIMO & Modulation: 4 Spatial Streams, 8T8R, PTMP, MU-MIMO client support, BPSK-to-1024QAM with OFDM/OFDMA
- Bandwidth: 20/40/80/160 MHz channels, tunable in 5 MHz increments
- Frequency Range: PTMP: 5150-6425 MHz (restricted by country of operation)
- Max Output Power: 24 dBm
- Rx Sensitivity (MCS 11):
 - -47 dBm @ 160 MHz
 - -50 dBm @ 80MHz
 - -53 dBm @ 40 MHz
 - -56 dBm @ 20 MHz

Power

- Max Power Consumption: 35 W
- System Power Method: PoE
- System Lightning & ESD Protection: 6 kV
- PoE Power Requirements: Passive, 50 Vdc @ 700 mA

Integrated Antenna

- Gain: 14 dBi*
- Beamwidth: 90° Azimuth, 15° Elevation
- Front-to-Back Ratio: >30 dB
- Cross-Polar Isolation: >20 dB
- Polarization: Dual-linear XPIC

*Up to 20 dBi with software beamforming

Physical

- Dimensions: 215 mm (Height) x 275 mm (Width) x 80 mm (Depth)
- Weight: 2.5 kg
- Enclosure Characteristics: Outdoor UV-stabilized, engineered polymer radome with integrated metal mounting
- 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: 5-100% Condensing
- Operating Altitude: 4,420 m (14,500') maximum
- Shock and Vibration: ETS 300-019 2-4 class 4M5

Regulatory and Compliance [Pending]

- Approvals(Pending): FCC Part 15.407; IC RSS210; CE (RED, EMCD, LVD, RoHS); ETSI 301 893/3020502
- RoHS Compliance: Yes
- Safety(Pending): EN 62638-1

Features

- Gigabit Ethernet: 100/100/1000-BASE-T Copper PoE
- 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
- VLAN: Q-in-Q; double tagging, management VLAN, PTMP per client VLAN

Mimosa Networks, a division 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.