

DATA SHEET

Celona Outdoor Access Point AP 11

Enabling cellular wireless connectivity for enterprise environments, within private spectrum options

Celona outdoor AP 11 hardware is part of Celona's private mobile network subscription. It is optimized for outdoor environments where predictable performance and low latency for wireless connectivity is required. With an enterprise friendly operational model, Celona access points are designed to accelerate the adoption of mission-critical devices and applications on enterprise wireless. They support plug and play deployment, remote provisioning, dynamic spectrum management and centralized cloud-based management.

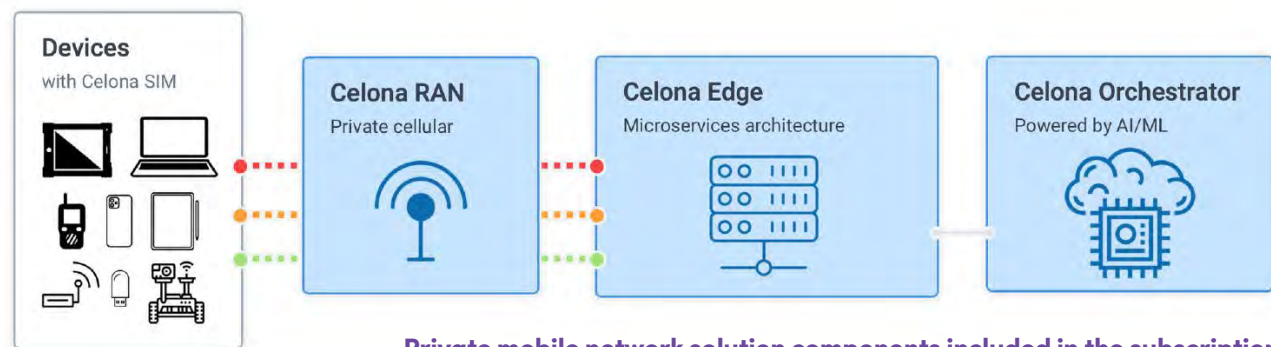
celona

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Celona Outdoor AP 11 is a highly ruggedized hardware for use within private cellular spectrum (e.g. Category B for CBRS in the US) with external antenna support. It enables coverage across very large outdoor areas: between 0.3- 1M SQFT coverage with omni-directional antennas, and between 2500-5000 FT range with directional antennas.

It is optimized for installation on rooftops, light poles, towers or other such outdoor installation options. It is designed to connect to an existing enterprise IT network using standard Ethernet or fiber connectivity.



Private mobile network solution components included in the subscription

Key Benefits

Unlike traditional small cells that require configuration of various radio parameters and integration with a separate Evolved Packet Core (EPC), Celona access points auto-discover the Celona Edge and Celona Orchestrator over any enterprise IP network to enable a plug-n-play deployment model. Celona APs then leverage secure, standards-based interfaces (S1 and TR-069 over IPSec) to establish data and control plane communications with the Celona Edge software. They are configured and monitored via the cloud-hosted Celona Orchestrator.

Built tough

- Up to 5000 FT range for wireless coverage with directional antennas
- IP-66 rated and operating temperature range between -40°C to 55°C
- Ruggedized design for installation in challenging environments

Plug-n-play at scale

- Simplified operations to make private cellular wireless accessible for enterprise IT users
- Coordinated spectrum management algorithm to optimize system wide performance
- Adapts to existing enterprise IT network configuration across remote, branch and campus

Predictable reliability

- Interference free operation with self-organizing wireless on private spectrum
- Highly reliable connectivity by leveraging advanced cellular wireless features
- Infrastructure control for traffic scheduling and mobility events for client devices

Application aware

- Support Celona's unique MicroSlicing™ technology to enforce service level objectives for minimum throughput, maximum latency / jitter / packet error rate
- Assign radio resources in real-time to MicroSlicing policies on a per application basis and device group basis

AP 11 Specifications

High Level Specifications

Type	4G LTE Access Point 3GPP Release 13, TDD
Frequency	3550 - 3700 MHz
Simultaneously Active Devices	Up to 96

RF Specifications

Channel Bandwidth	10, 20 MHz per carrier With Carrier Aggregation up to 40MHz
Antennas	Omnidirectional or directional Two (2)2-port, or one (1)4-port per AP
Max Transmission Power	30dBm per port

Ports and Interfaces

Network Interfaces	10/100/1000 Mbps Ethernet (RJ-45), or Optical (SFP adapters are included)
Power	+/- 48V DC (AC adapter and power surge protector are included)
Timing	GPS (antenna included) and IEEE 1588v2 PTP

Performance Specifications

TDD Config 1 Peak Data Rates	Download: 150 Mbps, with Carrier Aggregation Upload: 25 Mbps per radio, 50 Mbps per AP
TDD Config 2 Peak Data Rates	Download: 200 Mbps,with Carrier Aggregation Upload: 12 Mbps per radio, 24 Mbps per AP

AP 11 Other Specifications

Dimensions (WxDxH)	12.2 x 9.41 x 4.13 (inches) 31 x 23.9 x 10.5 (cm)
Weight	17.6 lbs 8 kg
Environmental	Operating Temperature: -40° to 55°C Storage Temperature: -45° to 70° C Humidity: 5% to 95% non-condensing
Ingress Protection Rating	IP66
Power Interface Lighting Protection	Differential mode: ±10 KA Common mode: ±20 KA
Mounting and Installation	Pole or wall mount
Power Consumption	< 60 W
MTBF	> 17 years
Hazardous Locations	AP 11H has UL Class 1 Division 2 certification

Ordering Information

Celona Outdoor AP 11 is included in the Celona private mobile network subscription, which scales with the number of access points in the network.

CNSUBOUTE3	3YR 1AP outdoor 4G private wireless subscription for management, SIM, mobile core via Celona Edge/Orchestrator. Includes 4G cat B b48 (3550-3700 MHz) AP11, 40 SIM/40 eSIM, LLW and tech support. Separate external antennas purchase required.
CNSUBOUTE5	5YR 1AP outdoor 4G private wireless subscription for management, SIM, mobile core via Celona Edge/Orchestrator. Includes 4G cat B b48 (3550-3700 MHz) AP11, 40 SIM/40 eSIM, LLW and tech support. Separate external antennas purchase required.
CNANTOMNIKIT	Omni antenna 3.3-3.8GHz, H/V polarization, 13dBi gain, 7-deg Vertical bw, 360-deg Horizontal bw, 1-deg electrical downtilt, 30dB port isolation, 2x Type N Female connectors. Includes 2x surge protect and 2x 10-ft LMR400 antenna cable.
CNANT33DKIT	33-deg sector antenna 3.5-4.2GHz, polarization type of 45-deg slant, 18.8dBi gain, 8-deg Vertical bw, 33-deg Horizontal bw, 4-deg electrical downtilt, 35dB front to back ratio, 2x Type N Female connectors. Includes 2x surge protect and 2x 10-ft LMR400 antenna cable.
CNANT90DKIT	90-deg sector antenna 3.5-3.8GHz, polarization type of 45-deg slant, 16.7dBi gain, 6.5-deg Vertical bw, 45-deg Horizontal bw, 2-deg electrical downtilt, 31dB front to back ratio, 2x Type N Female connectors. Includes 2x surge protect and 2x 10-ft LMR400 antenna cable..
CNANT120DKIT	120-deg sector antenna 3.5-3.8GHz, polarization type of 45-deg slant, 14.5dBi gain, 7-deg Vertical bw, 120-deg Horizontal bw, 3.5-deg electrical downtilt, 30dB front to back ratio, 2x Type N Female connectors. Includes 2x surge protect and 2x 10-ft LMR400 antenna cable.
CNANT65DKIT	65-deg sector antenna 3.5-3.8GHz, polarization type of 45-deg slant, 17dBi gain, 6-deg Vertical bw, 62-deg Horizontal bw, 38dB front to back ratio, 2x Type N Female connectors. Includes 2x surge protect and 2x 10-ft LMR400 antenna cable..
CNANT90D4P	4-port 90-deg sector antenna 3.5-3.8GHz, polarization type of 45-deg slant, 17dBi gain, 6-deg V bw, 90-deg H bw, 30dB front to back ratio, 4x Type N Female connectors. Includes 4x surge protect and 4x 10-ft LMR400 antenna cable..

Compliance and Certifications

The Celona Outdoor AP conforms to the following:

- FCC Part 96 Class B
- 3GPP Rel12 Technical Specifications 36.104 and 36.141

Warranty

Limited lifetime warranty coverage for Celona Outdoor access points is included as part of an active Celona Private Mobile Network subscription.