

DATA SHEET

Celona Multimode LTE/5G Indoor Access Point AP 20

Enabling LTE or 5G NR cellular wireless connectivity for indoor environments.

AP 20 is an indoor multimode CBRS LTE/5G NR access point as a part of Celona's 5G LAN solution portfolio. AP 20 offers highly deterministic over the air performance including, up to 1 Gbps aggregate throughput, less than 10ms latency and exceptional coverage. With an enterprise ready operational model, Celona AP 20 access point is designed for mission critical use cases in indoor and semi-ruggedized environments. Like all Celona access points, the AP 20 supports plug and play deployment, remote provisioning, centralized cloud-based management and seamlessly integrates into the enterprise network.



celona

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Celona Indoor AP 20

Celona AP 20 is a fully integrated indoor access point that can be used for LTE or 5G NR operation in enterprise environments. The presence of both LTE and 5G radios allows enterprises to future proof their infrastructure as the device ecosystem evolves from LTE to 5G.

Bringing the speed, security, and reliability of 5G NR technology to enterprises and organizations across industries, Celona's AP 20 was purposely engineered to deliver pervasive cellular coverage in enterprise environments like warehouses, retail stores, manufacturing plants, hospitals, and offices. Ultra-low latency of < 10 msec can enable applications like wireless Programmable Logic Controllers (PLC), PROFINET

Key benefits of AP 20:

Multimode AP with support for LTE/5G

- Each Celona AP 20 can be configured to operate in either LTE or 5G NR AP mode. This provides enterprises a path to create a seamless upgrade to 5G NR without any hardware upgrades and deploy 4G and 5G NR devices simultaneously in the network as needed

Secure wireless communication

- Certificate based mutual authentication secures connection between AP and cloud
- Data at rest and in-transit secured by comprehensive encryption mechanisms
- Regular penetration tests of system components are conducted by 3rd party security labs

Enterprise friendly management and operations

- Out-of-the-box zero touch provisioning to bring up each AP in minutes without any manual operation
- Self-organizing spectrum management optimizes spectrum usage across the network to minimize interference and maximize capacity
- Integrated PTP timing source eliminates the need for external timing equipment

Built for indoor ruggedized environments

- IP-52 rated and built for indoor ruggedized environments with dust protection
- Seamless integration with existing network infrastructure with IEEE 802.3bt Type 4 PoE++
- Can be mounted on a T-bar, ceiling, or wall

Deterministic performance for mission critical applications

- Delivers predictable performance for mission critical apps via 5QI MicroSlicing™ with QoS enforcements on a per application flow
- Delivers up to 1 Gbps aggregate throughput (2x2 MIMO, up to 256 QAM modulation, sub-carrier space of 30 KHz) and supports various uplink/downlink slot configurations
- Operates in channel bandwidth of up to 40 MHz
- One-way application latency of less than 10ms (device to edge)
- Engineered for predictable high-speed mobility (>25 mph) of devices between access points

Celona 5G LAN

Unlike traditional small cells that require configuration of various radio parameters and integration with 5G mobile core from a third party vendor, AP 20 is included as a part of Celona's 5G LAN platform that integrates the essential elements including access points, LTE/5G core network edge hardware/software, radio resource management software and cloud-based orchestration tools specifically designed and developed for enterprise network use-cases.

5G LAN Value Prop

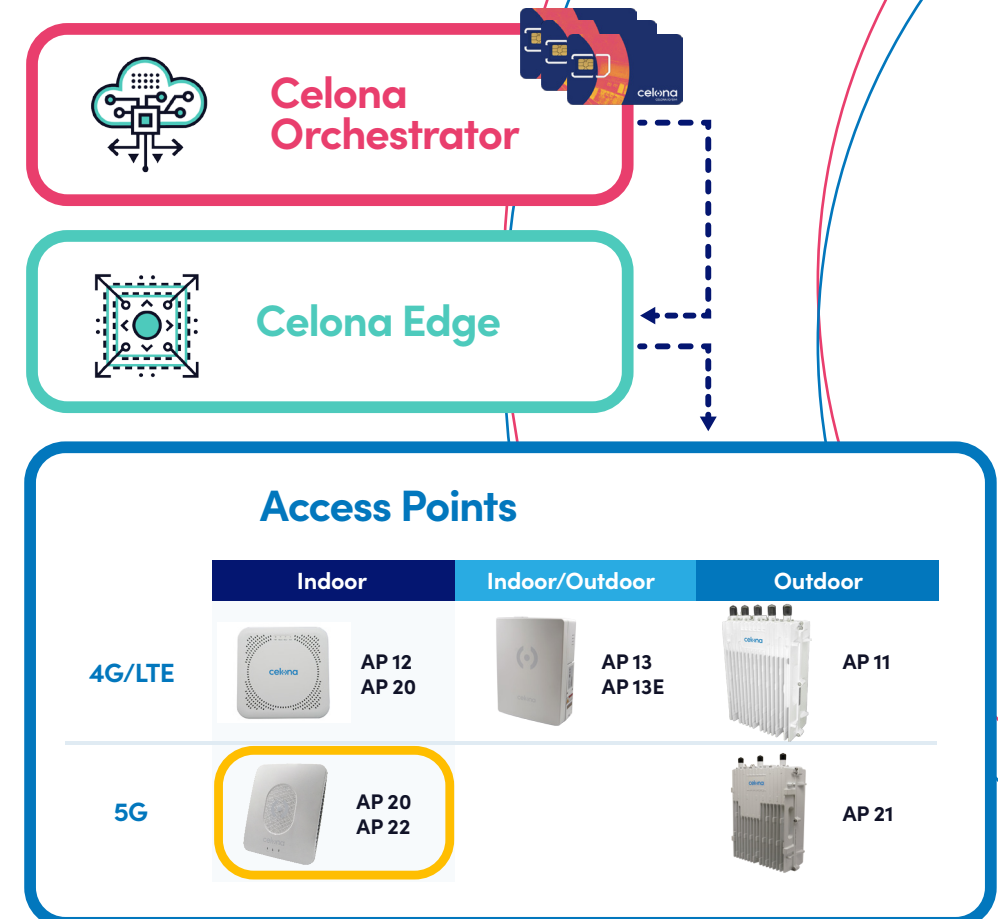
- Turn-key solution, designed for the enterprise
- Deterministic performance for mission-critical applications
- Enterprise friendly management and operations
- Support for global private wireless spectrums

Celona's Access Point Portfolio

Key benefits of Celona's 5G LAN Access Points

- Plug-and-play deployment
- Supports variety of global private 5G spectrums
- Deploy anywhere: Indoor/Outdoors, ceiling, wall, roof, poles
- Built for tough environments – Ruggedized, IP67 rated, C1D2 certified
- Built for critical communications – Microslicing, < 10ms latency, RAN mobility > 25 mph, Up to 1 Gbps
- Built-in PTP Grandmaster, eliminates external components
- End-End secure wireless communication

Celona's 5G LAN



Specifications

High Level Specifications

Type	5G Indoor Access Point (3GPP Rel. 15 TDD) 4G LTE Indoor Access Point (3GPP Rel. 13 TDD)
RF Specifications (5G)	5G: 2x2 MIMO UL/DL, up to 256 QAM Modulation LTE: 2x2 MIMO UL/DL, up to 64 QAM Modulation, Carrier Aggregation
Power (Rx/Tx)	Up to 24dBm max per port
Latency	<10ms one-way (between Device and Celona Edge)
Connected Devices	Active: 96 (LTE); 128 (5G) concurrent
Dimensions (WxDxH)	9.8 x 11.8 x 3.34 (inches) 250 x 300 x 85 (millimeters)
Weight	9.8 lbs 4.45 kg
Environmental	Operating Temperature: 0° to 45°C Storage Temperature: -10° to 50°C Humidity: 5% to 95% non-condensing
IP (Ingress Protection) Rating	IP52
Surge Protection	Yes
Installation	Wall or ceiling mount T-Bar mount kits (included in the AP package): Prelude, Suprafine, Interlude, Silhouette
Power Consumption	71 W (maximum), 802.3bt Type 4

Ports and Interfaces

Network Interfaces	1 RJ-45 Ethernet interface (1/2.5 GE)
Antenna	Built-in omni (max 6 dBi antenna gain)
Power Supply	PoE injector (AC to PoE power, included in the AP 20 package)
Timing	PTP grand master and IEEE 1588v2 PTP Option for external GPS antenna
LED Indicators	System, LTE, 5G

Compliance and Certifications

- AP20-48: FCC Cat A/B and OnGo Alliance in the United States

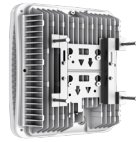
Frequency Band Support

AP20-48	3.55-3.7 GHz
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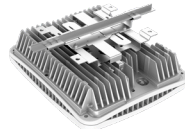
What's in the box?



AP 20



Wall and Ceiling Mount



T-Bar Mount



PoE injector

Ordering Information

Celona indoor AP 20 is included in the per AP Celona private mobile network subscription.

C-S-5G-48-NNM-X-3	3 year indoor 5G private wireless service subscription for one multi-mode indoor access point including management, SIM provisioning, mobile core services via Celona Edge software and Celona Orchestrator cloud service. Includes multi-mode category A CBRS (3550-3700 MHz) access point that can be used in 4G/5G modes, Celona express technical support, limited lifetime warranty and 20 private SIM cards.
C-S-5G-48-NNM-X-5	5 year indoor 5G private wireless service subscription for one multi-mode indoor access point including management, SIM provisioning, mobile core services via Celona Edge software and Celona Orchestrator cloud service. Includes multi-mode category A CBRS (3550-3700 MHz) access point that can be used in 4G/5G modes, Celona express technical support, limited lifetime warranty and 20 private SIM cards.
C-S-4G-48-NNM-X-3	3 year indoor 4G private wireless service subscription for one multi-mode indoor access point including management, SIM provisioning, mobile core services via Celona Edge software and Celona Orchestrator cloud service. Includes multi-mode category A CBRS (3550-3700 MHz) access point that can be used in 4G mode, Celona express technical support, limited lifetime warranty and 20 private SIM cards.
C-S-4G-48-NNM-X-5	5 year indoor 4G private wireless service subscription for one multi-mode indoor access point including management, SIM provisioning, mobile core services via Celona Edge software and Celona Orchestrator cloud service. Includes multi-mode category A CBRS (3550-3700 MHz) access point that can be used in 4G mode, Celona express technical support, limited lifetime warranty and 20 private SIM cards.
C-S-5G-48-NNM-X-M	Add-on 5G software upgrade for an existing indoor 4G private wireless service subscription for one multi-mode indoor access point including management, SIM provisioning, mobile core services via Celona Edge software and Celona Orchestrator cloud service.

Ordering Information

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CN-ANT-GPS-KIT

Celona Industrial grade GPS/GLNSS timing antenna with a GPS bullet 360 antenna, surge protector, cables (75 ft from PTP to surge protector, 15 ft from surge protector to antenna) and mounting brackets.

Warranty

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