Alcatel·Lucent Enterprise

ALE Private 5G

DATA SHEET

Celona Indoor Access Point AP 22

Enabling 5G NR cellular wireless connectivity for indoor environments, within a wide range of global 5G NR bands.

AP 22 is an indoor 5G NR access point as a part of Celona's 5G LAN solution portfolio, supporting Sub-6 Ghz frequency bands (3.3–4.2 GHz). AP 22 offers highly deterministic performance over the air including up to 1 Gbps aggregate throughput, less than 10ms latency and exceptional coverage. With an enterprise ready operational model, Celona AP 22 access point is designed for mission critical use cases in indoor and semi-ruggedized environments. Like all Celona access points, the AP 22 supports plug and play deployment, remote provisioning, centralized cloud-based management and seamlessly integrates into the enterprise network.

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Celona Indoor AP 22

Celona AP 22 is a fully integrated 5G NR indoor access point designed for enterprise private wireless environments.

Bringing the speed, security, and reliability of 5G NR technology to enterprises and organizations across industries, Celona's AP 22 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 22:

Support for Global Private Wireless spectrums

- Operates in 3.3-4.2 GHz frequency bands, supporting global private wireless deployments
- Transmit power configurability to comply with local regulatory and compliance requirements

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 touch
- Self-organizing spectrum management enables selection of the best bands for interference free operation
- 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 3 PoE++
- Flexible mounting options including T-bar, ceiling or wall mounts

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 100 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

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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 22 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

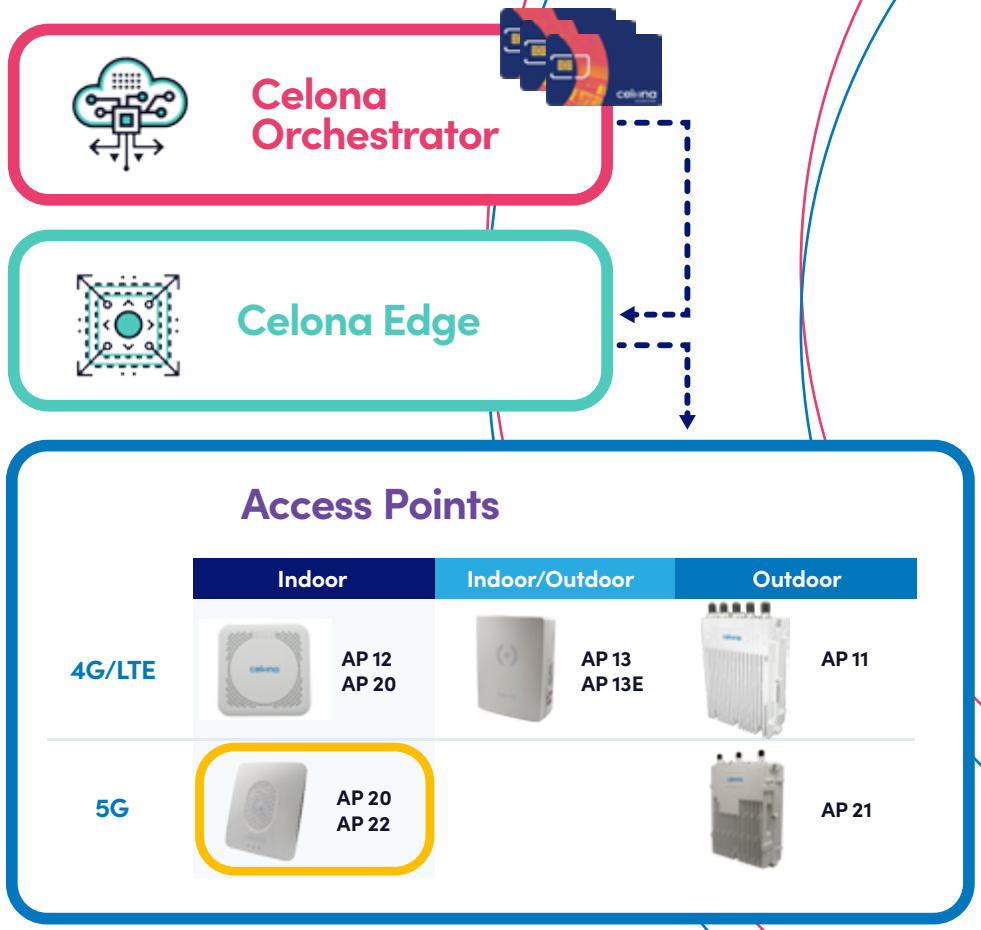
- Turn-key solution, designed for the enterprise
- Deterministic performance for mission-critical applications
- Enterprise friendly management and operations
- Support for global private wireless spectrums

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



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Specifications

High Level Specifications

Type	5G Indoor Access Point (3GPP Rel. 15 TDD)
RF Specifications (5G)	2x2 MIMO UL/DL, up to 256 QAM Modulation
Power (Rx/Tx)	Up to 24 dBm max per port
Latency	<10ms one-way (between Device and Celona Edge)
Connected Devices	Active: 128 (concurrent)
Dimensions (WxDxH)	9.8 x 9.8 x 2.9 (inches) 250 x 250 x 74 (millimeters)
Weight	7.1 lbs. | 3.22 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 • Prelude, Suprafine, Interlude, Silhouette
Power Consumption	51 W (maximum), 802.3 bt Type 3
MTBF	>70K hours
Channel Bandwidth	AP22-48: 20, 40MHz AP22-77/78: 40, 60MHz

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 22 package)
Timing	PTP grand master and IEEE 1588v2 PTP Option for external GNSS antenna
LED Indicators	System, 5G

Compliance and Certifications

- AP22-48: FCC Cat A/B and OnGo Alliance in the United States
- AP22-78: CE
- AP22-77: CE, CE-UK

Frequency Band Support (seperate SKUs)

AP22-48	3.55-3.7 GHz
AP22-78	3.3-3.8 GHz
AP22-77	3.8-4.2 GHz

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What's in the box?

AP 22

Wall and Ceiling Mount

T-Bar Mount

PoE injector

Ordering Information

Celona indoor AP 22 is included in the per AP Celona private mobile network subscription.

CS5G48NNX3	3YR 1AP indoor 5G private wireless subscription for management, SIM, mobile core via Celona Edge/ Orchestrator. Includes 5G cat A n48 (3550-3700 MHz) AP22, 20 SIM/ 20 eSIM, LLW and tech support.
CS5G48NNX5	5YR 1AP indoor 5G private wireless subscription for management, SIM, mobile core via Celona Edge/ Orchestrator. Includes 5G cat A n48 (3550-3700 MHz) AP22, 20 SIM/ 20 eSIM, LLW and tech support.
CS5G78NNX3	3YR 1AP indoor 5G private wireless subscription for management, SIM, mobile core via Celona Edge/ Orchestrator. Includes 5G n78 (3300-3800 MHz) AP22, 20 SIM/ 20 eSIM, LLW and tech support.
CS5G78NNX5	5YR 1AP indoor 5G private wireless subscription for management, SIM, mobile core via Celona Edge/ Orchestrator. Includes 5G n78 (3300-3800 MHz) AP22, 20 SIM/ 20 eSIM, LLW and tech support.

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CS5G77NNX3	3YR 1AP indoor 5G private wireless subscription for management, SIM, mobile core via Celona Edge/ Orchestrator. Includes 5G n77 (3800-4200 MHz) AP22, 20 SIM/ 20 eSIM, LLW and tech support.
CS5G77NNX5	5YR 1AP indoor 5G private wireless subscription for management, SIM, mobile core via Celona Edge/ Orchestrator. Includes 5G n77 (3800-4200 MHz) AP22, 20 SIM/ 20 eSIM, LLW and tech support.
CNANTGPSKIT	Industrial grade GPS/GLNSS timing antenna with a GPS bullet 360 antenna, surge protector, cables (75ft from PTP to surge protector, 15ft 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.

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