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DATA SHEET

Celona Private Mobile Network Subscriptions

Industry's first 5G LAN solution, laser focused on enterprise environments

With the arrival of private spectrum options, such as CBRS in the United States, cellular wireless technology can be made accessible to enterprise IT organizations and accelerate adoption of critical applications on an express lane of wireless communication.

Celona's private mobile network subscription is an end-to-end solution that can integrate with an existing enterprise network and simplify cellular wireless operations. It is purpose built for use by enterprise IT teams and managed service providers who serve them. It removes the complexity of integrating point components from multiple vendors.

The solution comprises of indoor/outdoor access points (APs), a cloud-native network operating system named Celona Edge and the cloud-hosted Celona Orchestrator with AI-powered operational tools along with app level visibility to Key Performance Indicators (KPIs).
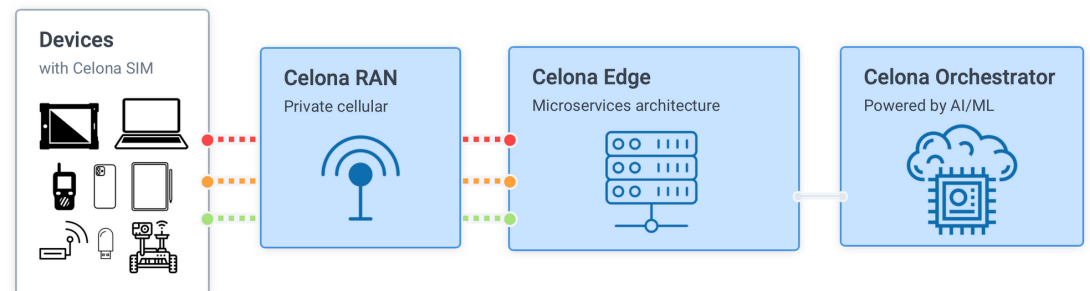
Private mobile network solution components included in the subscription

Key Benefits

Modern software architecture at the enterprise edge

- First cloud-native operating system for enterprise wireless to deliver predictable application performance, powered by the unique Celona MicroSlicing™ technology
- All components of Celona's architecture are centrally managed via cloud-hosted Celona Orchestrator, enabling zero-touch install within the enterprise network and ongoing remote provisioning
- Automated enforcement of service level requirements (latency, jitter, packet error rate and throughput) for critical applications - elevating network operations to service delivery rather than element management

Predictable reliability for enterprise wireless

- Interference-free operation across very large coverage indoor and outdoor areas
- Infrastructure control for client device traffic transmissions and handover events
- QoS enforcement with guaranteed throughput, latency, jitter and error rate metrics

Simplicity at scale across the campus, branch and remote

- Build your own private cellular network without the need to integrate point products
- Easily and elastically scale to the largest campuses and highly distributed enterprises
- Deploy as overlay on the existing network without requiring a separate L2/L3 IP backbone

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What is included?

Cellular Access Point Hardware

Indoor and outdoor access point hardware is included as part of Celona private mobile network subscriptions. Indoor subscription includes 20 and outdoor subscription include 40 SIM cards for connected devices on a Celona network. Detailed specifications for the indoor and outdoor access point hardware can be found at celona.io/access-points.

Celona Edge Software

Celona Edge helps translate the cellular wireless data and control plane functions to an existing enterprise L2/L3 network infrastructure. It enables direct integration with enterprise network and security services, instead of requiring a separate network backbone. It allows high levels of data privacy and security by utilizing centralized encryption of the client device traffic on a Celona cellular wireless network.

Policy Enforcement and Enterprise Network Integration with Celona MicroSlicing
MicroSlicing is industry's first implementation of "network slicing" within enterprise networks. It allows the enterprise to create virtual overlays on the physical infrastructure on a per application and device group basis.

High Performance Data Plane
Each node of the Celona Edge delivers multiple gigabits of application throughput on commercial off-the-shelf hardware. In addition, the cloud-native implementation of all network services ensures that resources are allocated dynamically to the data and control plane in real time.

As the load on the network grows, Celona Edge dynamically reallocates data and control plane resources to different network functions and critical applications on the network.

Dynamic Service Scaling
As a private cellular network grows in size and sophistication, the Celona Edge scales from one node to many and supports large campus wide deployments via additional Celona Edge nodes. These nodes automatically form clusters to provide increased capacity as well as redundancy, removing complexity of operations during moves, adds and changes.

Enterprise Packet Core
Celona Edge helps translate the cellular wireless data and control plane functions to an existing enterprise L2/L3 network infrastructure. It enables direct integration with enterprise network and security services, instead of requiring a separate network backbone. It allows high levels of data privacy and security by utilizing centralized encryption of the client device traffic on a Celona network.

Such MicroSlicing policies are used to offer secure network segmentation for private cellular wireless connectivity and to guarantee service levels for throughput, latency, jitter and error rate metrics. Microservices architecture for Celona Edge is also designed to dedicate "micro-instances" of the control and data plane functions for such applications per policy.

Self Organizing Network (SON)

Domain Proxy with Celona Edge consolidates the interaction of all Celona APs with the Spectrum Access Service (SAS) systems for CBRS spectrum allocation on their radios. Via dynamic fequency and power assignments to each AP, Celona Edge optimizes coverage and capacity of a Celona network in real-time given channel, power, neighbor list and relevant parameters from SAS.

Flexible Deployment Options

Celona Edge can be deployed as an individual server node (Celona Edge Express), as a high-performance node (Celona Edge Enterprise), a three-server cluster (Celona Edge Cluster) or as a downloadable virtual machine (VM) that runs on existing server hardware / cluster. Additional specifications for the hardware-based deployment options can be found at celona.io/platform. When deployed with more than a single server appliance, Celona Edge software is enabled with high availability by default.

Celona Orchestrator

Enabling centralized network operations for enterprise IT administrators and managed service providers, Celona Orchestrator allows plug-n-play installation of Celona SIMs, APs and Edge. By being tightly integrated into the entire solution from the radio layer to the network core, it offers highest levels of details and correlated insights to network infrastructure, client device and critical application behavior.

Operational insights

Integrated to the Celona Orchestrator, Celona Assistant provides contextual information to IT administrators about the health of their network. It offers helpful tips on recommended actions to take the next steps during an initial installation and shares notes on operational best practices.

Celona Assistant is first of its kind to pre-emptively report on the operational state of a private cellular network, further simplifying the deployment at scale. Collected for each MicroSlicing policy network wide, key performance indicators (KPI) take the mystery out of private cellular wireless metrics and turns them to actionable insights – delivering greater operational efficiency.

Policy based automation

Coupled with Celona Edge, Celona Orchestrator includes a policy management framework that's capable of translating application level requirements to end to end optimization of all components of a Celona network, in real-time.

From access points to control and data plane, from security controls to dynamic spectrum management, Celona MicroSlicing technology provides KPI level visibility within the Orchestrator. Such detailed KPI monitoring helps Orchestrator to automatically update all Celona network elements with the appropriate functional and configuration changes.

Subscriber/SIM management

Administrators can manage the lifecycle of Celona SIM cards remotely from the Celona Orchestrator, without requiring manual touch to the SIM cards beyond the initial install. This includes remotely activating, de-activating and mapping individual SIM cards to specific devices and device groups.

Celona's private mobile network subscription for indoor access points comes with 20 SIM cards in two 10-packs. Subscription for outdoor access points includes 40 SIM cards.

Support and Warranty

Celona private mobile network subscription includes 24x7 online technical support, phone support from 8am to 5pm Pacific Time, and free access to software updates for Celona Orchestrator, Edge and APs. Limited hardware warranty for Celona APs is included in the subscription. Optional Celona Edge hardware appliances come with 1-year limited hardware warranty and RMA with advanced replacement.

Ordering Information

Celona private mobile network subscription is required for any Celona network installation and comes with 3- and 5-year term options. Access point capacity licensed can be shared across multiple sites that are part of the deployment. Below are the product SKUs and descriptions for Celona private mobile network and additional Celona SIM subscription options.

SKU	Description
CN-SUB-INDI-3	3-year cloud subscription for one indoor AP including Celona MicroSlicing technology, network management, SIM provisioning, mobile core services via Celona platform software. Also includes indoor access point hardware with integrated antennas, Celona express technical support, limited lifetime warranty and 20 Celona SIM cards.
CN-SUB-INDI-5	5-year cloud subscription for one indoor AP including Celona MicroSlicing technology, network management, SIM provisioning, mobile core services via Celona platform software. Also includes indoor access point hardware with integrated antennas, Celona express technical support, limited lifetime warranty and 20 Celona SIM cards.
CN-SUB-OUTE-3	3-year cloud subscription for one outdoor AP including Celona MicroSlicing technology, network management, SIM provisioning, mobile core services via Celona platform software. Also includes outdoor access point hardware, Celona express technical support, limited lifetime warranty and 40 Celona SIM cards. Separate external antenna purchase required.
CN-SUB-OUTE-5	5-year cloud subscription for one outdoor AP including Celona MicroSlicing technology, network management, SIM provisioning, mobile core services via Celona platform software. Also includes outdoor access point hardware, Celona express technical support, limited lifetime warranty and 40 Celona SIM cards. Separate external antenna purchase required.
CN-SUB-SIM-10-3	3-year subscription for an additional pack of 10 Celona SIM cards to be used on a Celona network with an active private mobile network subscription.
CN-SUB-SIM-10-5	5-year subscription for an additional pack of 10 Celona SIM cards to be used on a Celona network with an active private mobile network subscription.

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10080 North Wolfe Road SW3-250 Cupertino CA 95014 United States

hello@celona.io

celona.io