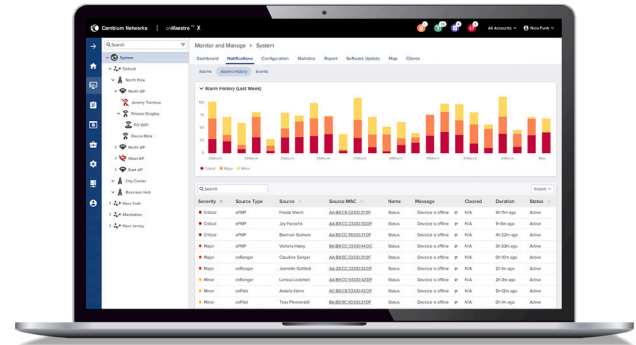


# cnMaestro™ Management System

## QUICK LOOK:

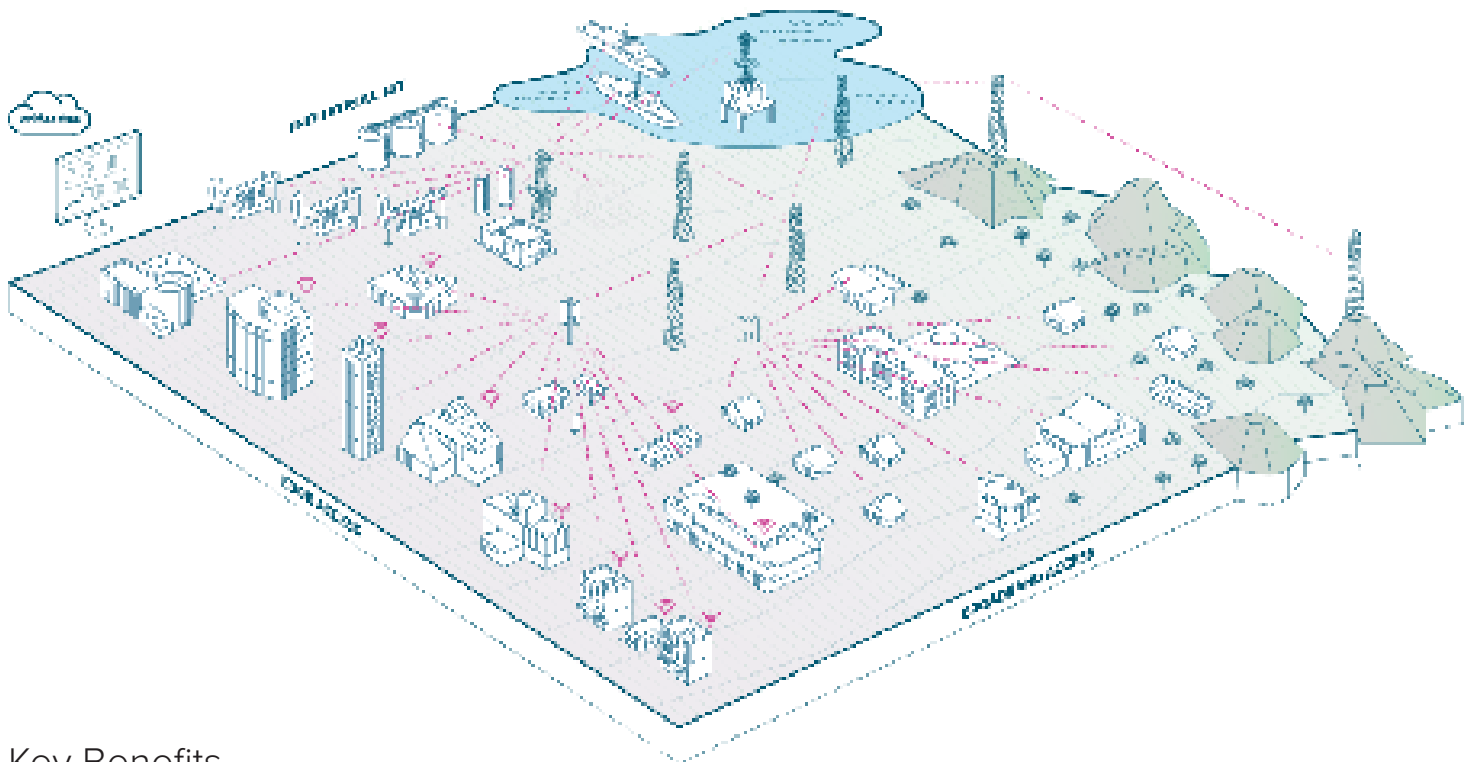
**cnMaestro** is a simple, yet sophisticated cloud-first next-generation network management solution for Cambium Networks wireless and wired solutions. cnMaestro offers elastic scalability and single-pane-of-glass management to deliver secure, end-to-end network and wireless lifecycle management with zero-touch provisioning, monitoring, and troubleshooting capabilities. It simplifies operations and ongoing maintenance. This license-free cloud option delivers a disruptive Total Cost of Ownership (TCO) for organizations of all sizes.



## Key Highlights

- Unified management platform via a single dashboard for Cambium's wireless and wired portfolio: Enterprise Wi-Fi, Switching, Fixed Wireless Broadband and Industrial IoT products.
- Zero-touch provisioning: Create, provision, monitor and manage the entire network of wireless and wired devices from a single dashboard login with key performance metrics, alarms and alerts. The cloud-first UI design is easy to learn and applies across the portfolio, helps network administrators simplify operations and allows them to deliver an optimal client experience.
- Deployment flexibility and TCO: Choice of public cloud, private cloud or on-premises deployment with best TCO. cnMaestro helps reduce operating cost and accelerate return on investment. Comprehensive Cloud and On-Premises management is included with the hardware.
- Tailored views for Enterprise, Managed Service Provider (MSP), Access and Backhaul and Industrial Internet View.

## cnMaestro™ Management System



### Key Benefits

**cnMaestro's** multi-site, multi-product cloud management spans long-range fixed wireless broadband, enterprise Ethernet, enterprise Wi-Fi and service provider residential Wi-Fi for the most comprehensive and powerful single-pane-of-glass system in the industry. Ideal for any service provider or enterprise network operator. The cnMaestro cloud dashboard can be tailored to the exact network need from managed service providers (MSPs), to fixed wireless service providers and enterprise networks. cnMaestro provides centralized visibility and control for Cambium Networks' wireless and wired products. Network administrators can quickly and easily deploy networks with minimal training. Whether small sites or large distributed networks with thousands of sites, cnMaestro makes deployment and operations easy.

cnMaestro architecture is built for scale and security at all levels. Devices connect to cnMaestro cloud using SSL-enabling deployments without changes to the firewall configuration. Cambium Intelligent edge architecture enables fault-tolerant networks where the network continues to operate even when the cloud is unreachable due to a WAN outage. cnMaestro management is included with the price of the wireless or wired device to manage a broadband-to-Ethernet and Wi-Fi network at no additional cost.

cnMaestro delivers everything you need from zero-touch provisioning to enterprise-grade automatic RF management for networks up to thousands of sites, and up to 10,000 managed devices from a single cnMaestro account. Experience the power, redundancy, resilience and simplicity of a cloud-first network management.

cnMaestro eliminates the need for Wi-Fi controllers, thereby reducing complexity and total cost of ownership while increasing reliability of the network. cnMaestro delivers the best TCO on-premises and in-cloud for Fixed Wireless Broadband, Enterprise Wi-Fi and Switching customers. Flexible deployment options allow customers to choose a model that fits their organizational needs: public cloud, private cloud or on-premises deployment.

cnMaestro provides a bird's eye view of the health of the network with insights on performance, connectivity and client experience. Administrators can quickly identify potential trouble spots and drill down from network-to-client level details. Automatic network monitoring and alerts allow for proactive management of the network. cnMaestro provides visibility into devices and users and while giving administrators the information needed to enforce

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Welcome, Nico Funk (Administrator) Cambium ID: CN0000640512

### Devices

30 TOTAL    13 OFFLINE    10 ONBOARDING

### Alarms

30 CRITICAL    13 MAJOR    10 MINOR

Last 24 Hours

### Metrics

Account Capacity: 6,000

Recommended Software: 20%

### rms

epoldo Terry device is offline 10h 1m ago

racey Wolf device is offline 13h 33m ago

bigayle Paucek device is offline 15h 36m ago

mmet Ebert device is offline 15h 3m ago

ulus Mills device is offline 19h 4m ago

Jvah Muller device is offline 19h 1m ago

ete Schmidt device is offline 19h 22m ago

### Accounts

7

13

18

32

23

31

32

342

21

3

8

Managed User: 32

### Device By Type

Wi-Fi: 11 (Enterprise), 9 (Home)

ePMP: 4 (AP), 8 (SM)

PMP: 32 (AP), 15 (SM)

cnRanger: 2 (BBU), 22 (SM)

PTP: 3

cnMatrix: 12

### Connection Health (Total Vs Offline)

Line graph showing connection health over time.

### Top Networks

| NAME                | TOTAL | OFFLINE | DEVICES BY TYPE | ALARMS |
|---------------------|-------|---------|-----------------|--------|
| Edyth Robel         | 56    | 5       |                 |        |
| Leon Ryan           | 81    | 8       |                 |        |
| Ayana Jenkins       | 24    | 3       |                 |        |
| Edgardo Rosenbaum   | 34    | 2       |                 |        |
| Joanie Pfannerstill | 13    | 5       |                 |        |

### Top Wi-Fi APs by Throughput

| NAME                | CLIENTS | THROUGHPUT |
|---------------------|---------|------------|
| Edyth Robel         | 56      |            |
| Leon Ryan           | 81      |            |
| Ayana Jenkins       | 24      |            |
| Edgardo Rosenbaum   | 34      |            |
| Joanie Pfannerstill | 13      |            |

### Top Point-to-Multipoint APs

| NAME            | TYPE | SMS | THROUGHPUT |
|-----------------|------|-----|------------|
| Vanessa Wehner  | PMP  | 56  |            |
| Oren Eritsch    | PMP  | 81  |            |
| Aniyah Nitzsche | ePMP | 24  |            |

### Top Busy APs

| NAME            | BUSY INDEX |
|-----------------|------------|
| Gilda Nikolaus  |            |
| Lydia Gutmann   |            |
| Carlotta Gibson |            |
| Keven Fell      |            |

### Subscriptions

| TIER   | AVAILABLE | USED  | EXPIRING SOON | EXPIRED |
|--------|-----------|-------|---------------|---------|
| Tier 1 | 0         | 6,000 | 100           | 100     |
| Tier 2 | 1,000     | 3,000 | -             | 100     |
| Tier 3 | 1,000     | 2,000 | -             | 100     |

policies and optimize performance. Remote support capability is integrated into the architecture, along with powerful help desk tools to debug remote issues without going onsite. Troubleshooting tools such as ping, traceroute, throughput, and live packet captures are included, dramatically reducing resolution times and enabling remote troubleshooting.

cnMaestro supports custom network hierarchy which enables easy configuration, monitoring and debugging at network nodes, reducing operational costs. This specially becomes critical for large networks or small distributed networks with small on-site IT staff.

cnMaestro provides Enterprise, MSP, Access and Backhaul and Industrial Internet views.

**MSP-Ready Platform:** MSPs can differentiate their brand to address specific sub-markets in their service area. The multi-tier customization gives the MSP tenant cloud tools to create an additional layer of guest portal customization – all managed from the cloud. MSP views consolidate the MSP tenant statistics, while allowing the MSP to drill down and support a tenant directly, without impacting data from other tenants or end users on the system.

Access and Backhaul view provide visualization and control of devices from tower-to-edge. This includes PTP and PMP devices.

## cnMaestro™ Management System

### Management System Details

**Deployment** Cloud-Hosted Web Portal  
Customer-Hosted VMware OVA  
Amazon Marketplace AMI

**Visualization** Full Visibility Across Network  
Supports cnRanger™, cnReach™, cnMatrix™, cnPilot-R™, Enterprise Wi-Fi, ePMP™, Machfu, PMP and PTP devices  
Multiple Product Views

- Access and Backhaul View
- Enterprise Wireless View
- Industrial Internet View

Hierarchical Device Tree  
PMP/ePMP Sector Display

**Configuration and Monitoring** Managed Service Provider Accounts  
High Availability (1+1) for On-Premise  
Redundant Cloud Services  
Multi-Region Cloud  
Scheduled System Backup  
Configuration Lock  
Automatic Bulk Software Update  
Dedicated Device Dashboards  
Statistics and Trending  
Email Alerts, Webhooks, Syslog

**Managed Service Provider** Branded Services  
Regional User Databases  
(Allows one to specify a regional manager who has access to a subset of Tenants)

Tenant View  
(Ability to easily assume the UI of each Tenant)

Cross Account Visualization

**Data and Reporting** Statistics Reports Exported in CSV  
RESTful Monitoring/Provisioning API  
Export UI Tables in CSV or PDFtes

**Administration** Role-Based Access  
Audit Logs  
RADIUS, TACACS+, LDAP, AD Login

**Onboarding and Provisioning** Zero-Touch Onboarding  
Template Configuration  
Object Configuration (cnPilot and cnMatrix)  
Automatically Claim PMP SMs Associated with AP

**Network Services** Branded Guest Access Portal  
Social Login and SMS Authentication  
Access Vouchers  
PayPal Payment Gateway  
GRE Tunneling

**Management** Simplified Enterprise View  
AP Group and WLAN Configuration  
Site Support for Collocated APs

**Troubleshooting and Forensics** Tower-to-Edge Presentation  
Technical Support Dump  
Rogue AP Detection  
Wi-Fi Packet Capture  
ePMP/PMP Link Test

**Security** Communication Over SSL  
No Inbound Internet Access  
Data Termination for L2GRE  
Disaster Recovery

**On-Premises Scaling (8 vCPU with 16 GB RAM)** **Total number of devices supported:** 10,000 (cnRanger, cnReach, cnMatrix, cnPilot, ePMP, PMP and PTP)

**Number of wireless clients supported:** 150,000

**Number of WLAN and AP Groups supported:** Unlimited

**Number of templates supported for cnMatrix, cnPilot R, ePMP and PMP devices:** Unlimited

**Number of Guest Portals:** 4

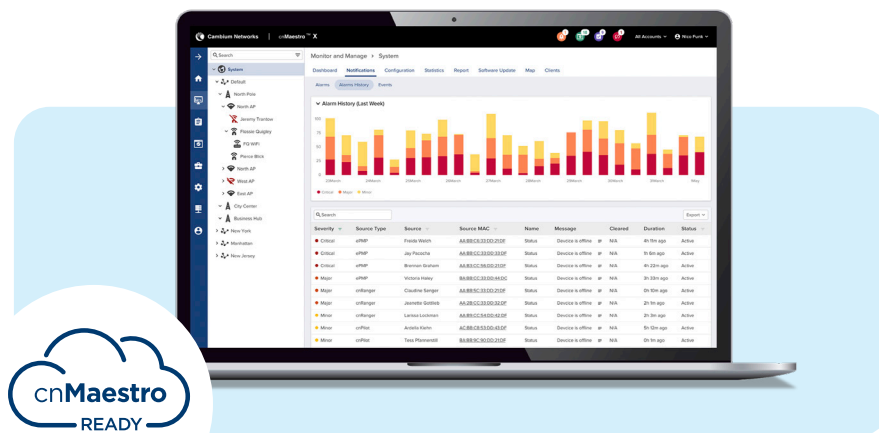
**Max number of concurrent sessions:** 1,000

**Max number of login events:** 2,000 event records for 7 days

**Number of ePSK supported:** 300

**Maximum number of tenants and users:** 10 each

# cnMaestro™ Management System



**GET STARTED at**  
**[cloud.cambiumnetworks.com](https://cloud.cambiumnetworks.com)**

## ABOUT CAMBIUM NETWORKS

Cambium Networks empowers millions of people with wireless connectivity worldwide. Its wireless portfolio is used by commercial and government network operators as well as broadband service providers to connect people, places and things. With a single network architecture spanning fixed wireless and Wi-Fi, Cambium Networks enables operators to achieve maximum performance with minimal spectrum. End-to-end cloud management transforms networks into dynamic environments that evolve to meet changing needs with minimal physical human intervention. Cambium Networks empowers a growing ecosystem of partners who design and deliver gigabit wireless solutions that just work.

[cambiumnetworks.com](https://cambiumnetworks.com)