



**Secure Reliable Predictable**

## What is cnVision?

**A wireless connectivity platform designed for the demands of mission critical video surveillance backhaul.**

- Predictable performance
  - **Wireless transmission algorithm optimized for video.**
  - **High resiliency and supporting mission critical deployments.**
  - **Highly scalable architecture.**
- Security
  - **Proprietary over the air protocol.**
  - **User access security, device authentication.**
- Reliability, ease of use
  - **Easy to plan, install and configure with companion tools.**
  - **VMS integration, ONVIF client support for improved troubleshooting.**
  - **Ruggedization, 24x7 support, 3 year warranty.**
  - **Professional grade at an affordable price**





## cnVision value proposition


Video Surveillance where needed – quickly, efficiently, reliably


- ✓ **Labor costs**
- ✓ **Time to install**
- ✓ **Permits, permissions, right of way are all challenges to offering quick connectivity**
- ✓ **Sometimes just impossible due to obstructions**
- ✓ **With the right wireless products, un-licensed spectrum becomes a breeze to use**


## The cnVision Difference

 **Security:** Data security via AES128/256 bit encryption; Protocol security via proprietary beacon, signaling; Session security via multiple user level definitions; Access security via SSH, HTTPs, Radius

 **Transmission:** Over the air proprietary protocol with QOS support and adaptive modulation minimizing packet loss. High resiliency to interference and dedicated spectrum analyzer

 **CCTV integration:** Built in ONVIF client allowing camera detection. Additional stream detection ability to view and assess image within the client units

 **Deployment assistant:** Discovery, configuration & wireless planning tool to make management & deployment easier

 **Ruggedization:** IP55 & IP67 models with -30C to +55C temperature range outdoor models. Built in heater functionality for extreme cold deployments.

 **VMS integration:** Integration with leading VMS vendors to provide additional statistics for the backhaul.

# Simple intuitive GUI, ONVIF and VMS Integration

**Download Speed**  
87.9 Mbps

**Upload Speed**  
48.2 Mbps

Authentication	MAC Address	IP Address	Hardware	Camera name	Camera Location	Probe time
	58:03:FB:56:28:0D	172.22.120.139	DS-2DE2A204IW-DE3	HIKVISION DS-2DE2A204IW-DE3	city/hangzhou	05/06/19 12:51:06 PM
	58:03:FB:56:28:0D	172.22.120.139	DS-2DE2A204IW-DE3	HIKVISION DS-2DE2A204IW-DE3	city/hangzhou	05/06/19 12:51:06 PM
	58:03:FB:56:28:0D	172.22.120.139	DS-2DE2A204IW-DE3	HIKVISION DS-2DE2A204IW-DE3	city/hangzhou	05/06/19 12:51:06 PM
	58:03:FB:56:28:0D	172.22.120.139	DS-2DE2A204IW-DE3	HIKVISION DS-2DE2A204IW-DE3	city/hangzhou	05/06/19 12:51:06 PM

**Status**

Device Name	ePMP1000_c1cc96
Operating Frequency	5160 MHz
Operating Channel Bandwidth	40 MHz
Transmitter Output Power	-2 dBm
Antenna Gain	13 dBi
Country	United States
Network Mode	Bridge
Downlink RSSI	-84 dBm
Downlink SNR	-57 dB

09-13-2019 Fri 09:26:18

Camera 01

*cnVision simple GUI interface. View connected cameras and stream video for confirmation*



*Built in ONVIF client allowing camera detection with ONVIF Conformant cameras*

cnVision client in device hierarchy

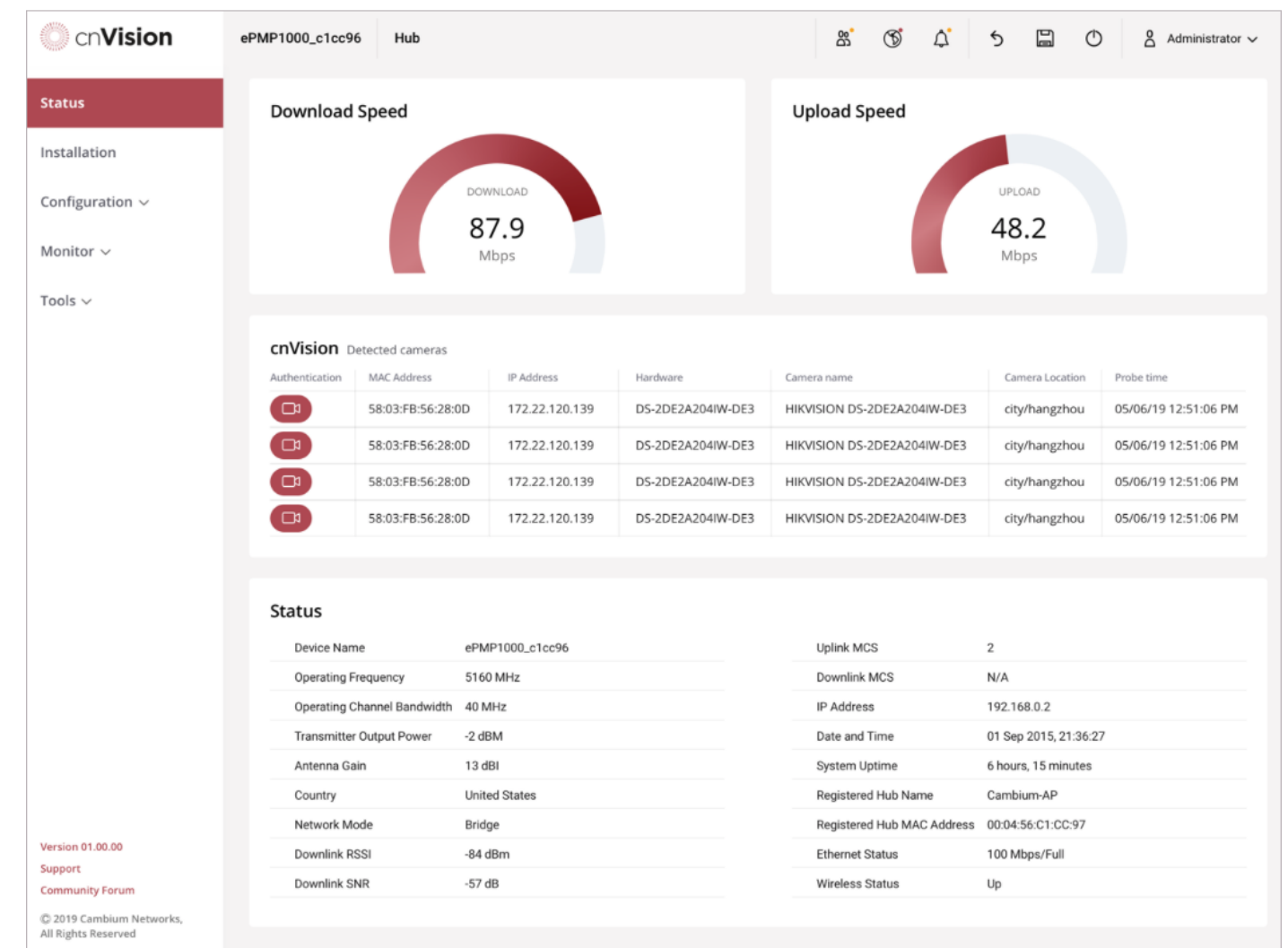
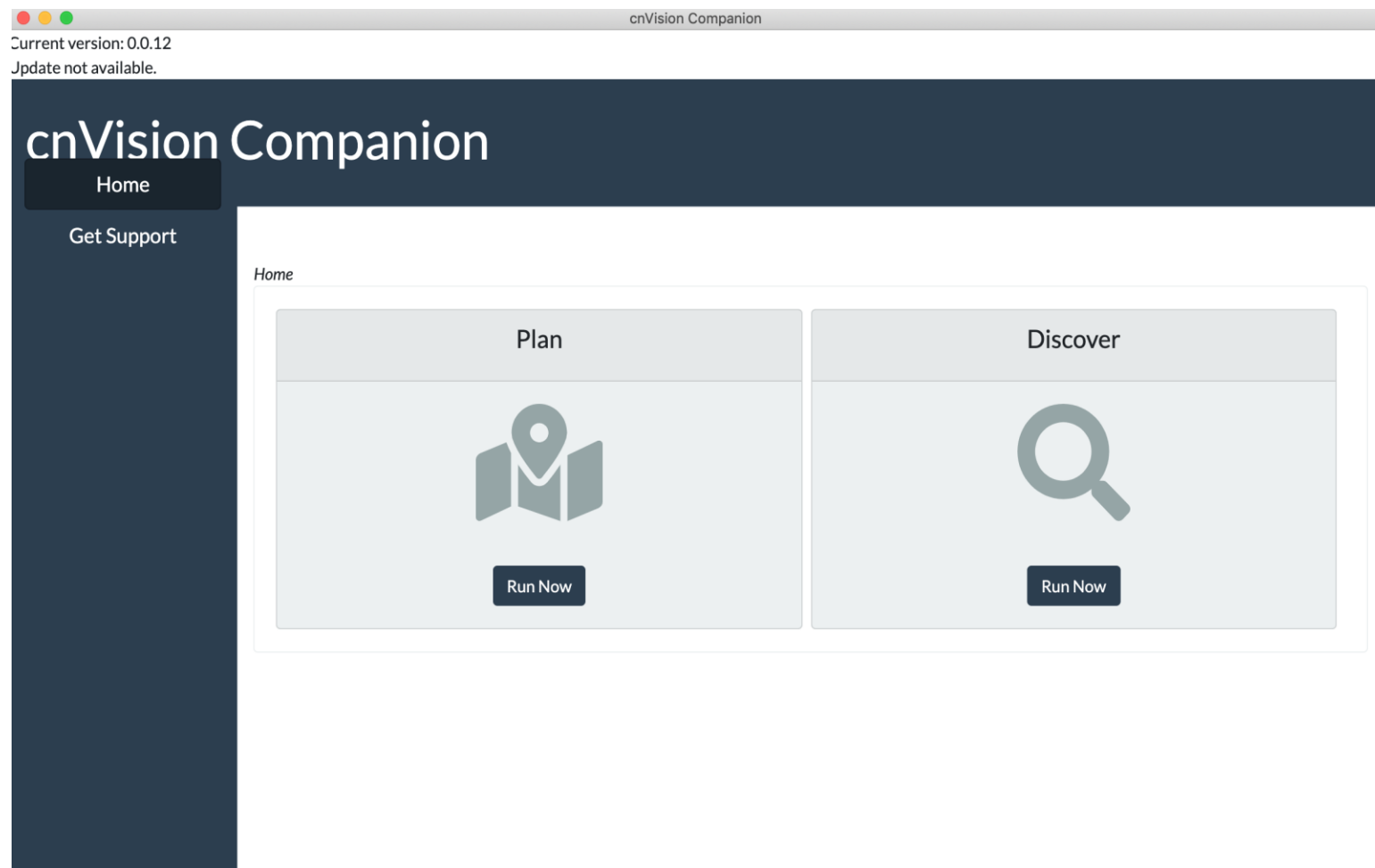
cnVision GUI Tile embedded into VMS

Key events displayed in VMS.



*Single pane-of-glass monitor with VMS systems. Event based triggers from radio displayed on VMS. Basic parameters such as device up/down*






# Easy to Design, Easy to Manage, Easy to Troubleshoot



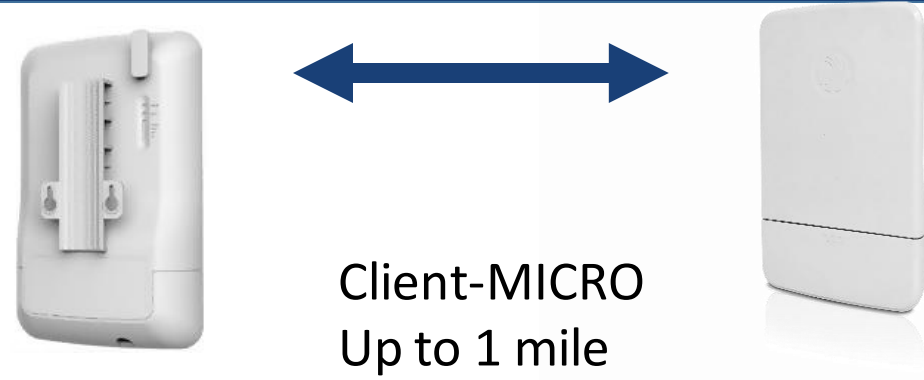
*cnVision Plan Tool - makes planning for wireless connectivity easy*  
*cnVision Discover Tool – makes network discovery and setup simple*

*cnVision GUI gives instant feedback on network performance related directly to CCTV performance*

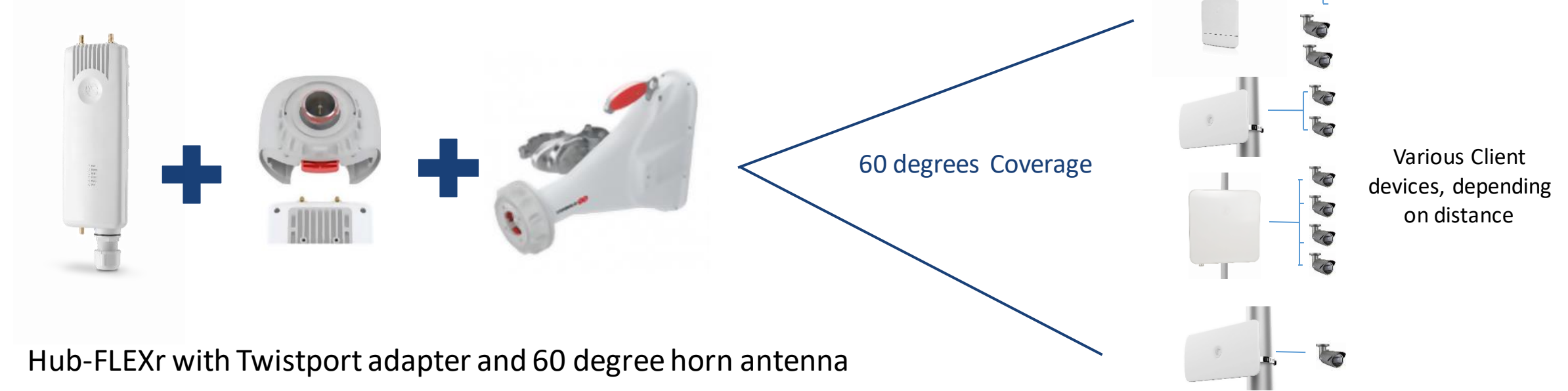
## Product Selection Matrix and Key Specs

	Hubs		Hub or Client		Client
Product	Hub FLEXr	Hub 360	Client MICRO	Client MINI	Client MAXr
					
Typical Range	Long	Short/Medium	Short (up to 1 mile)	Medium (up to 4 miles)	Long (up to 8 miles)
Antenna Gain / Coverage	Antenna sold separately (60° horn or 90° sector typ.)	9 dBi 360 degrees	13 dBi 30 degrees	16 dBi 16 degrees	19 dBi 14 degrees
Sales Model(s)	CV-HC2RPUSA-US (United States) CV-HC2RPUSA-IC (Canada)	CV-H00RPUSA-US (United States) CV-H00RPUSA-IC (Canada)	CV-D13SPUSA-US (United States) CV-D13SPUSA-IC (Canada)	CV-D16SPUSA-US (United States) CV-D16SPUSA-IC (Canada)	CV-C19RPUSA-US (United States) CV-C19RPUSA-IC (Canada)

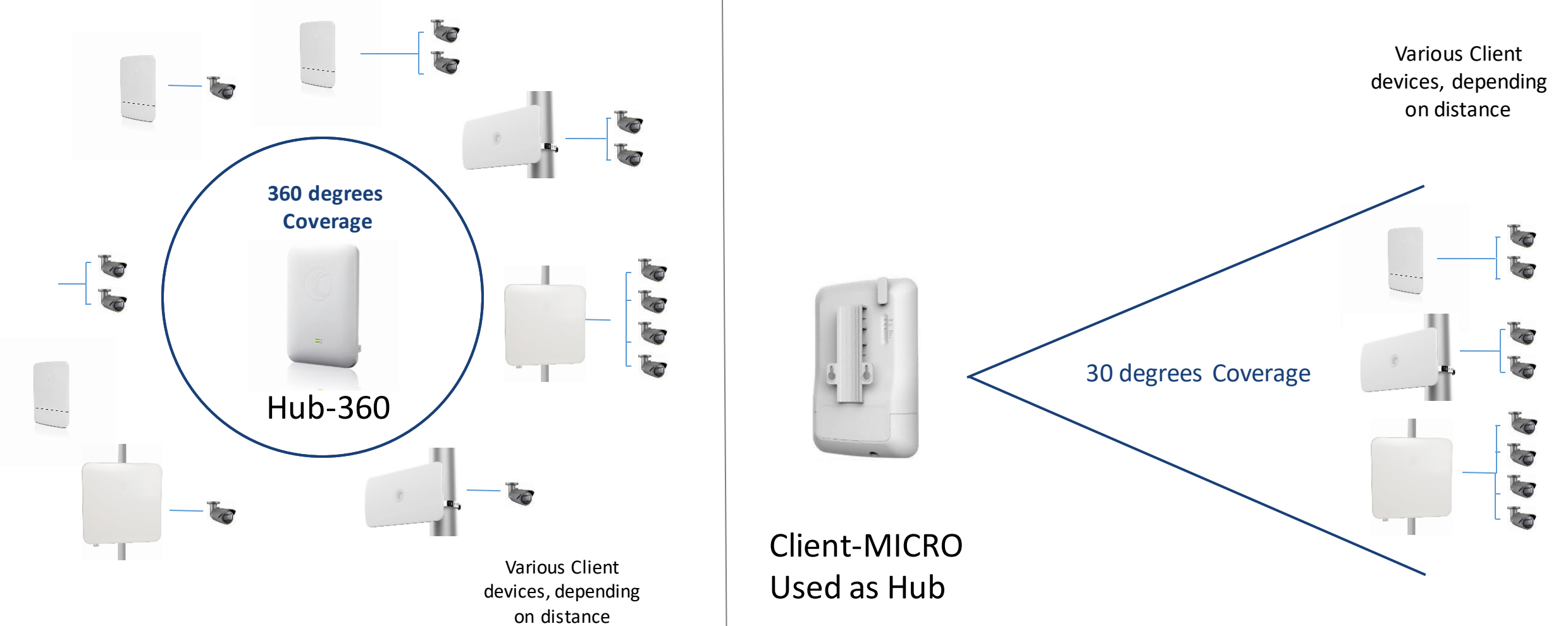
- Radios operate from 4.910 to 5.970 GHz with channels widths of 20/40/80 MHz delivering up to 600 Mbps
- Client MAXr is the best solution for government projects and scenarios with highest degree of ruggedization and security
- **All models include:** Expanding list of VMS integration with ONVIF support; 3-year warranty, planning software tool, Built-in GUI configuration, pole-mount bracket (wall-mount optional); -30C to +60C (-22F to +140F) operation.



Hub & Spoke (Point to Multipoint) GPS Synced for multiple co-located Hubs

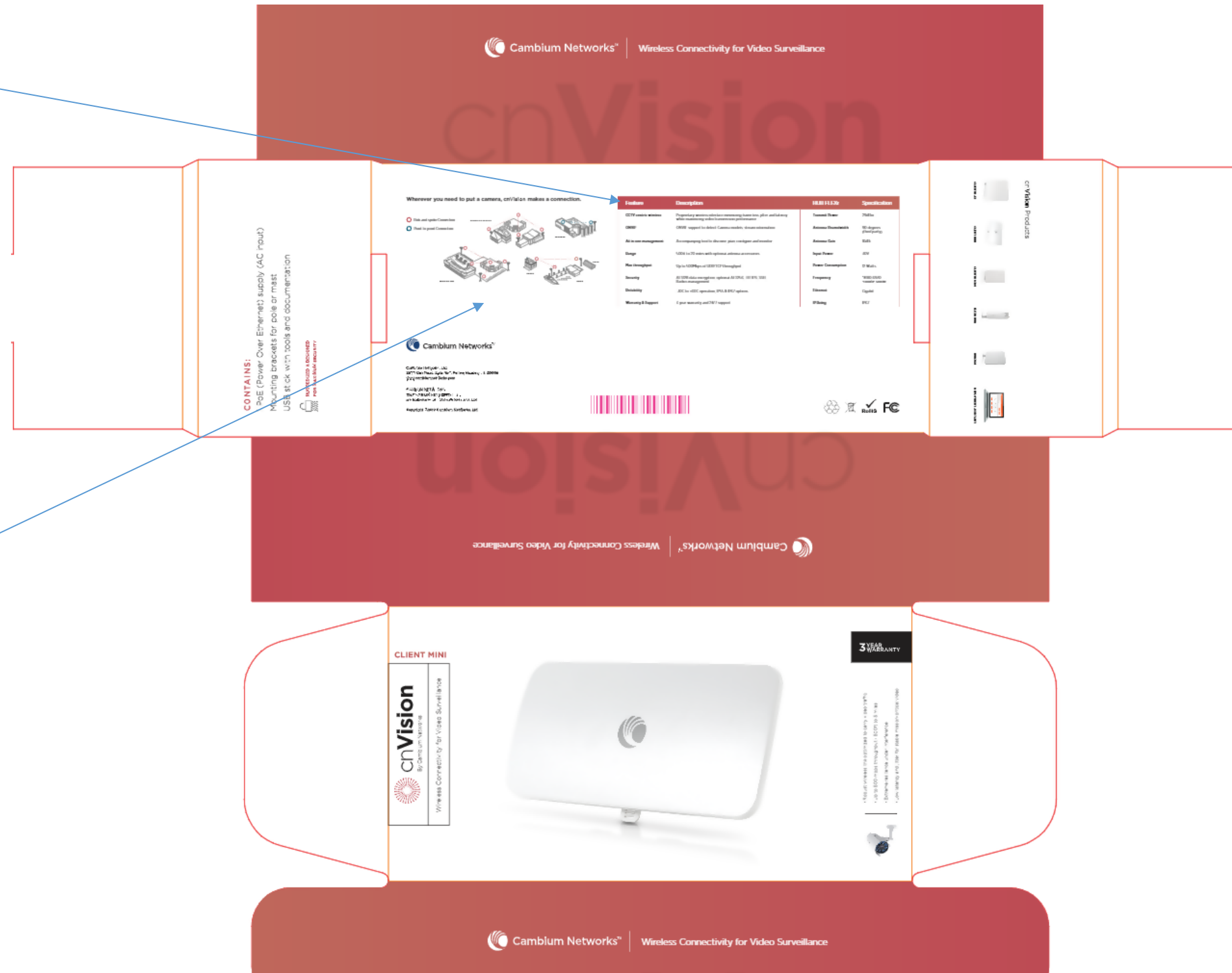


Hub & Spoke (Point to Multipoint)

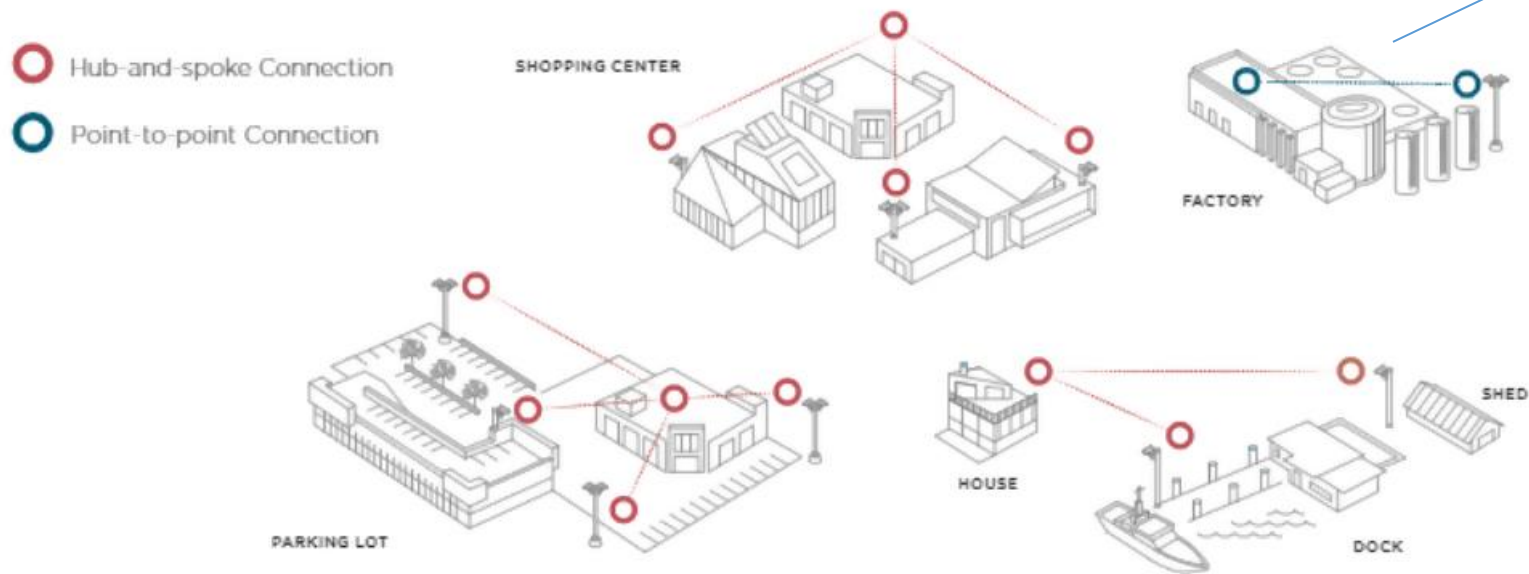




# Packaging



Wherever you need to put a camera, cnVision makes a connection.



# Training and Support



## Cambium Community

Learning doesn't just happen in a classroom or online, it happens when we share ideas and communicate with others sharing our experiences. In the community you can share your expertise in Forums, find answers in the Knowledge Base, and submit Ideas on how we can improve our products and solutions to continue to connect to the unconnected.



## Cambium Certification Exams

Validate your knowledge and become a Cambium Certified Engineer. We offer certification exams across our portfolio providing an opportunity through an online testing experience for you to validate your knowledge and become Cambium certified. Certifications are valid for 2 years.



## Certified Instructors

Cambium Certified Instructors around the world are some of the leading experts in our industry and across the Cambium Network portfolio. These individuals bring expertise beyond the product and maximize the training experience by engaging participants in real world application discussions and best practices.

## Cambium University

Industry first end to end CCTV deployment centric wireless certification class.

## Cambium Support

### Pre-Sales Support: Sales, Design & Engineering support



**PLEASE NOTE** - Online requests for technical support must be made via our Support Center Portal. See below for details.

#### Submit a Request

To submit a request for technical support or RMA assistance online, log into the portal with your Cambium Single Sign-On (SSO) and password, then click on "Submit a request". Select the appropriate request form, complete it, and a ticket will be opened.

#### Contact Support

Online requests for Cambium Networks technical support must be made via our Support Center portal. See below for details.

#### RMA Requests

Online RMA requests must be made via our Support Center portal. See below for details.

**Post Sales Support:**  
24x7 support (Phone, email, chat)  
3 year standard warranty  
Online forum support.

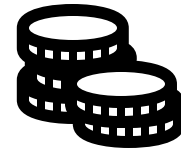
## Best in Class Channel Program



Cambium Networks award winning channel program



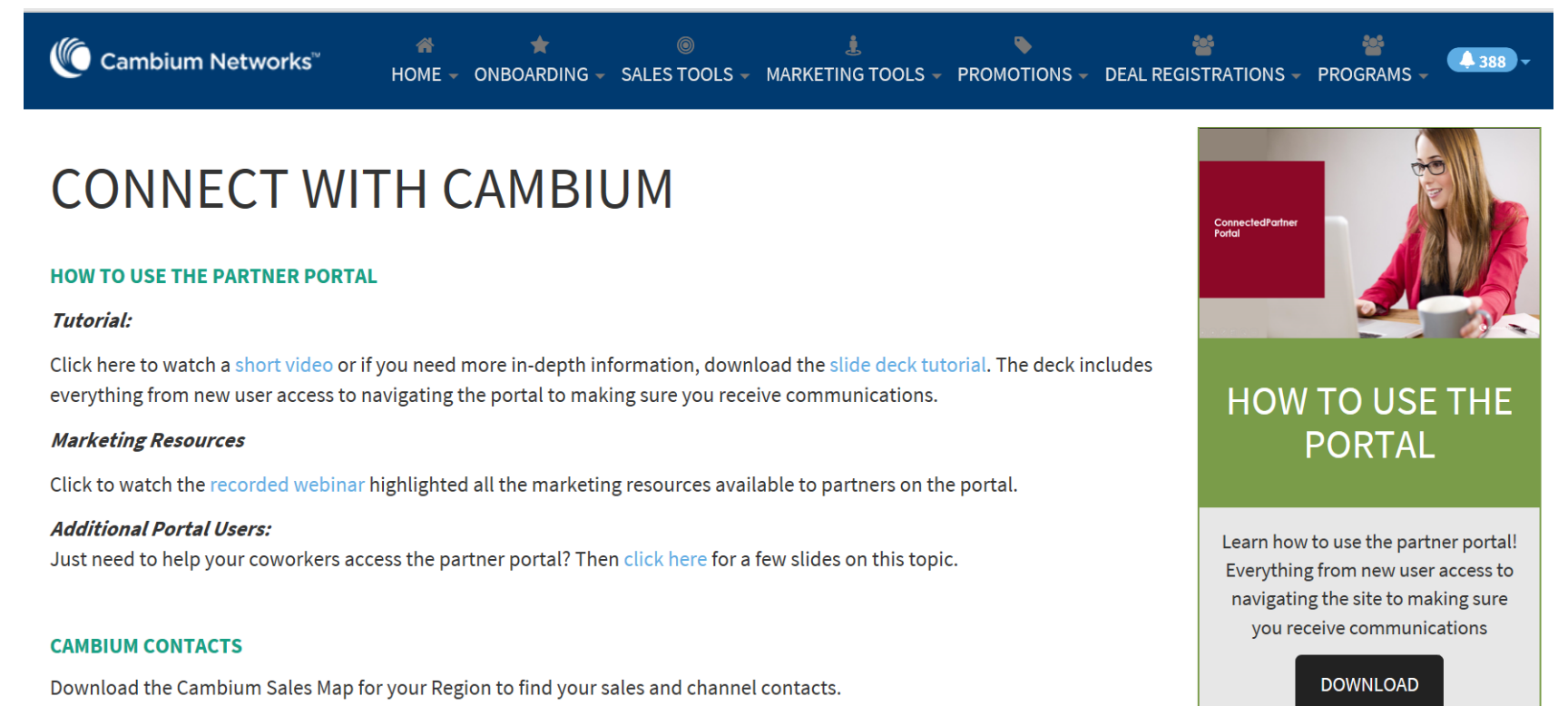
Partner program members have access to collateral, **resources, marketing material,...**



**Minimum Advertised Price (MAP) and strict policies ensure maximum value for partners**



cnVision SI program is a special program within the ConnectedPartner Program, for the CCTV specific market focus



The screenshot shows the Cambium Networks partner portal. The navigation bar includes links for HOME, ONBOARDING, SALES TOOLS, MARKETING TOOLS, PROMOTIONS, DEAL REGISTRATIONS, and PROGRAMS, along with a notification bell icon showing 388 alerts. The main heading is "CONNECT WITH CAMBIUM". Below this, there are three sections: "HOW TO USE THE PARTNER PORTAL" with a "Tutorial" section (linking to a short video and a slide deck tutorial), "Marketing Resources" (linking to a recorded webinar), and "Additional Portal Users" (linking to a slide deck for helping coworkers). At the bottom, there is a "CAMBIUM CONTACTS" section with a link to download a sales map. On the right side, there is a sidebar with a video thumbnail titled "HOW TO USE THE PORTAL" and a "DOWNLOAD" button.

## cnVision System Integrator (SI) Program

- cnVision SI is a specialty program (exclusive) within the Cambium ConnectedPartner program
- Requires a separate application and approval (see Partner Portal for separate application form). Submit application at [cnVision@cambiumnetworks.com](mailto:cnVision@cambiumnetworks.com)
- Requirements for joining cnVision SI Program
  - Proven experience in designing, selling, installing and maintaining CCTV systems.
  - Access, experience and the ability to sell cameras and video management systems.quote, sell, configure, install and maintain CCTV systems
- Benefits of joining the cnVision SI Program
  - cnVision SI's buy from cnVision distributors
  - Access to exclusive cnVision SI webinars with direct Q&A to engineering team and peer-to-peer sharing of success stories.
  - Excellent Margins

## Selling cnVision – Probing Questions

### **Prospect is new to wireless?**

- Did you know wireless solutions are available to deliver hundreds of megabits per second reliably carrying high resolution feeds from multiple cameras?
- What are the biggest challenges you face extending the network to a new camera location? How much could you save by eliminating fiber or copper runs from your next project?
- Do you have a need to place cameras 50m to 5 miles away from your wired network connection?

### **Prospect using another wireless solution?**

- How do you currently determine if a video signal problem is the camera or the network? Can you remotely isolate the issue from either end of the network?
- How do you currently isolate camera issues from network issues?
- What tool are you using to determine how many cameras and at what frame-rate the wireless network can carry?
- Can you currently view the wireless network performance within your VMS?
- What is the warranty and support you are getting from your current solution?

[See the cnVision Battlecard on the Portal](#)

## Initial Hook:

### **Built for Purpose Wireless Video Surveillance –**

Long range up to 5 miles

Predictable performance

High capacity up to 600 Mbps

**VMS integration** – troubleshoot the hub/client right from same VMS you use for the camera

**ONVIF client** integration and stream replay

Discover and see camera information right in the client UI. Replay camera feed right on the UI to assist fault isolation.

**Rapid deployment** without trenching data cables

## Key Selling Points / Differentiation:

- Reliable Transmission with a **wireless protocol tailored for video** with QoS support and techniques minimizing frame loss. Highly resilient to interference.
- Auto detect camera model, type and configuration with **Built-in ONVIF Client** and **Stream Detection** ability to view and assess image within the client.
- **VMS Integration** - Rapid Fault Isolation and integrated monitoring
- Highly secure with built-in **AES encryption** and **secure management** (HTTPS, RADIUS, SSH)
- **Free of charge deployment companion** for planning, deploying and managing
- **3-Year warranty on all hardware**
- **24/7 technical support**

See the cnVision Battlecard on the Portal



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