Co přináší Cisco Wi-Fi 7?

Dominik Soukup – Wireless SE

4.2.2025

Agenda

1. Hlavní témata v oblasti Wi-Fi
2. Nasazení Wi-Fi 7
    - Aspekty nasazení Wi-Fi 7
    - První připojení Wi-Fi 7 AP do wireless infrastruktury
3. Cisco Wi-Fi 7 řešení a Wi-Fi portfolio

V případě jakýchkoliv otázek se neváhejte ozvat a napsat nám je do chatu meetingu.

6 GHz is the biggest Wi-Fi spectrum expansion ever

EU

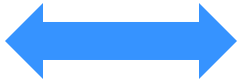
2.4 and 5GHz = **22x** 20MHz Channel

6GHz = **24x** 20MHz Channel

Band	Channels	Bandwidth	
2.4 GHz	3	20 MHz	60 MHz of spectrum and 3x 20-MHz channels
	1	40 MHz	
5 GHz	25	20 MHz	555 MHz of spectrum and 25x 20-MHz channels in US 455 MHz of spectrum and 19x 20-MHz channels in EU
	12	40 MHz	
	6	80 MHz	
	2	160 MHz	
6 GHz	59	20 MHz	1200 MHz of spectrum and 59x 20-MHz channels in US 500 MHz of spectrum and 24x20-MHz channel in EU
	29	40 MHz	
	14	80 MHz	
	7	160 MHz	

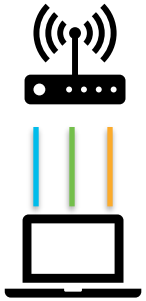
What is Wi-Fi 7 (and a bit of 11be)

TechClub odkaz (23.04.2024): Vše, co potřebujete vědět o Wi-Fi



320 MHz in 6 GHz

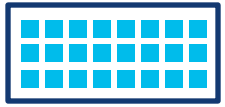
4K QAM



MLO

Enhanced Security

Multi-RU



Compressed Block Ack

(512 MPDUs)

Preamble puncturing

Mandatory in 6. Optional in 5

Min ch. width of 80

Triggered UL Access Optimization

EPCS

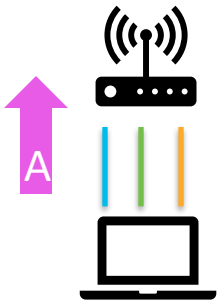
Note: Wi-Fi 6E explicitly includes 6 GHz, but Wi-Fi 7 does NOT require 6 GHz!

The many “modes” of MLO

…because clients have different hardware capabilities

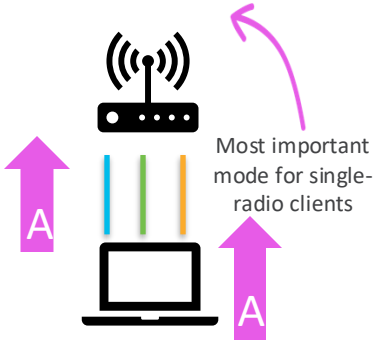
Single Radio

MLSR



Only one link operational at a given time

EMLSR

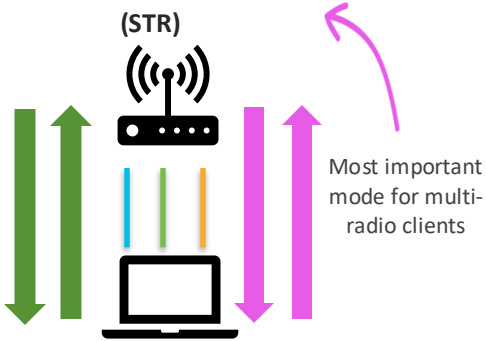


MLSR plus additional capability to listen to two links.

Acronyms:
MLMR *– Multi-link Multi Radio*
MLSR *– Multi-link Single Radio*
EMLSR *– Enhanced Multi-link Single Radio*

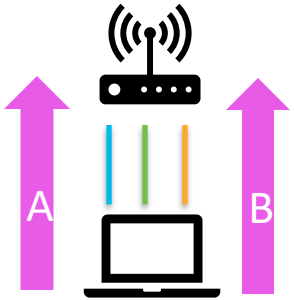
Multi Radio

MLMR
Simultaneous TX + RX (STR)



Each link operating independently for Tx and Rx

MLMR
Non-Simultaneous Tx+Rx (nSTR)



Tx or Rx at the same time on different links

(Not included in Wi-Fi 7 Certification)

Aspekty nasazení Wi-Fi 7

Cisco Wireless CW9178I/9176I/9176D Mechanical Design

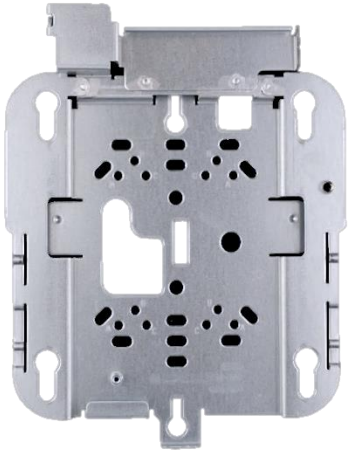
Brand New Design

Enlarged Recessed Area

Compatible with Standard Mounts:
AIR-AP-BRACKET-1 & AIR-AP-BRACKET-2

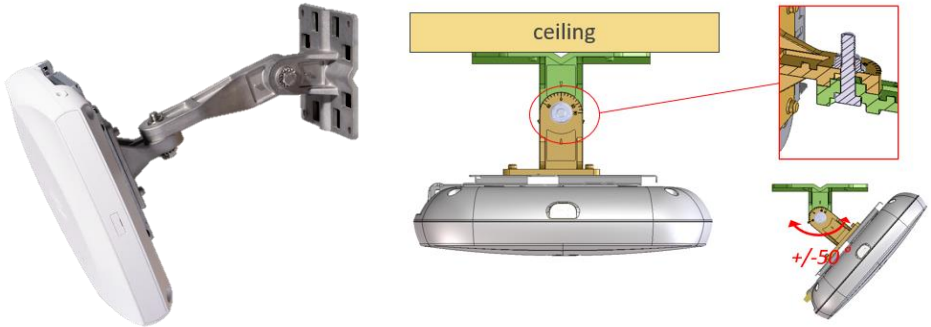
Improved Cabling Experience:
Larger Recessed Area

Cisco Wireless CW9176D1 Mounting brackets



AIR-AP-BRACKET-2

The default bracket shipped with the 9166D designed to adapt to electrical boxes ideal for ceiling or wall mounting. Adapts to Articulating Arm.

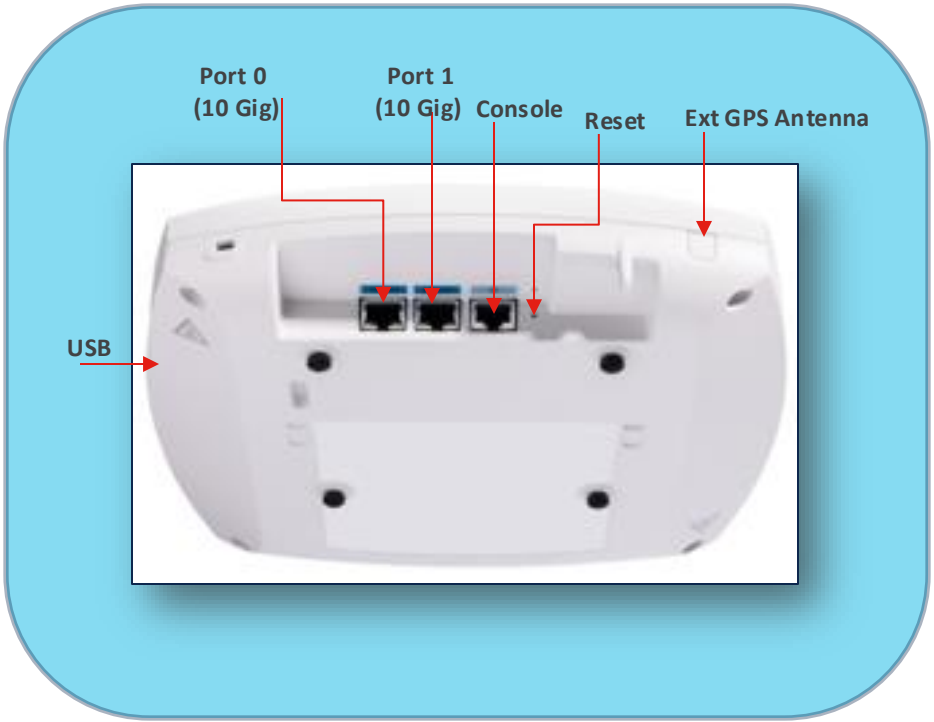


Articulating Arm (CW-MNT-ART2-00)

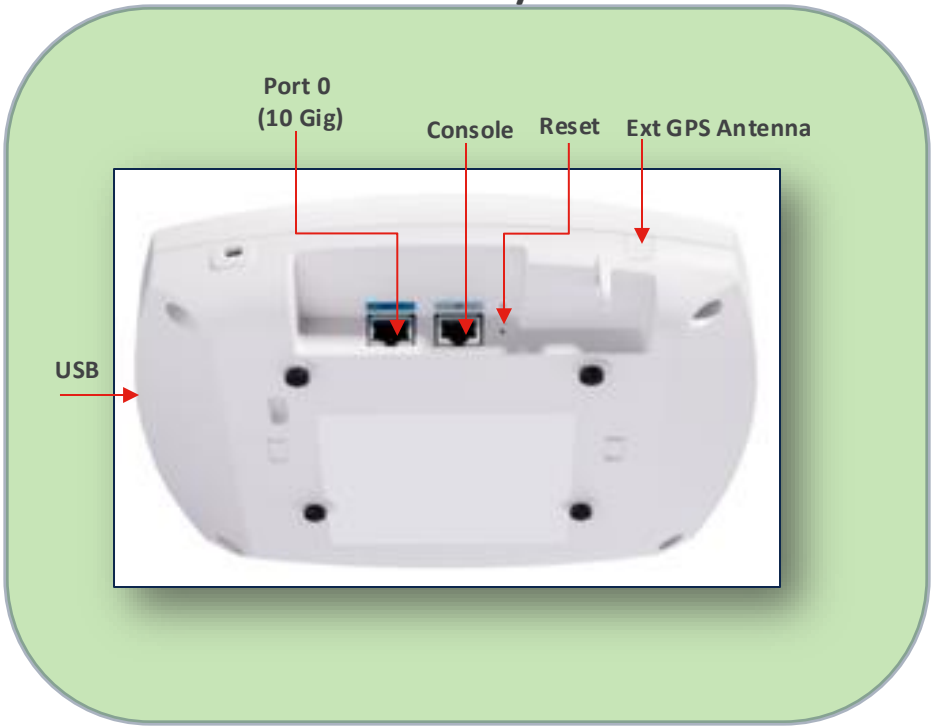
Optional bracket kit that attaches to AIR-AP-Bracket-2 allowing the AP to be articulated to cover many different mounting positions (left, right, up, down) etc. Recommended for the most flexibility in aiming the radio signal.

Cisco Wireless CW9178I/CW9176I/D Ports

CW9178I



CW9176I/D



Hardware and Software Matrix for CW917x APs

Supported Controller Platforms:

- Cisco Catalyst 9800-L
- Cisco Catalyst 9800-40
- Cisco Catalyst 9800-80
- Cisco Catalyst CW9800M
- Cisco Catalyst CW9800H1
- Cisco Catalyst CW9800H2
- Cisco Catalyst C9800-CL

Software Version:

IOS-XE : 17.15.2 or later
Meraki : R31.2 or later

Catalyst Center: 2.3.7.6*

*Note: * AP Inventory, AP360, Basic config support*
Wi-Fi 7 Assurance, Maps support in future s/w release

Deploying and migrating to Wi-Fi 7
Recommendations, tips, and tricks

Power considerations

Recommendation:
802.3bt (Cisco UPOE)
is the suggested
power input for full operation of AP

802.3at (PoE+) and 802.3af (PoE) are also supported by the CW9178I/CW9176I&D

Security requirements

Mandatory:
WPA3 is mandatory for 11be rates and MLO.

WPA3 was not required for prior Wi-Fi generations; hence, it must be top of mind.

Multigigabit switching

Recommendation:

Use a Multigigabit switch with 10G Capability.

Better user experiences with speeds beyond 1 Gbps. Cat 6/6A cabling recommended,

Wireless coverage

Recommendation:
Ensure uniform cell size for 5 and 6 GHz cells. 2.4 & 5 GHz does not need a new site survey

Review the current RF coverage of 5 GHz network to achieve similar coverage for 6 GHz network.

Review Global Use AP Functionality; especially for WLC Management Mode Deployments

Switching and Power Considerations

More advanced Wi-Fi ➔ More processing ➔ More Power

1. Enterprise grade, tri-band, tri-radio, Wi-Fi 7 4x4 APs will require more than 30W (peak) for all on features operation.
2. Aggregate AP throughput over 1G is a reality
3. Note: 802.3bt does not mean 60W(!). 30W 802.3bt is a thing(!!)

New deployments and refreshes should plan for >30W and mGig

Power Considerations

But first

802.3bt != More than 30W (!)

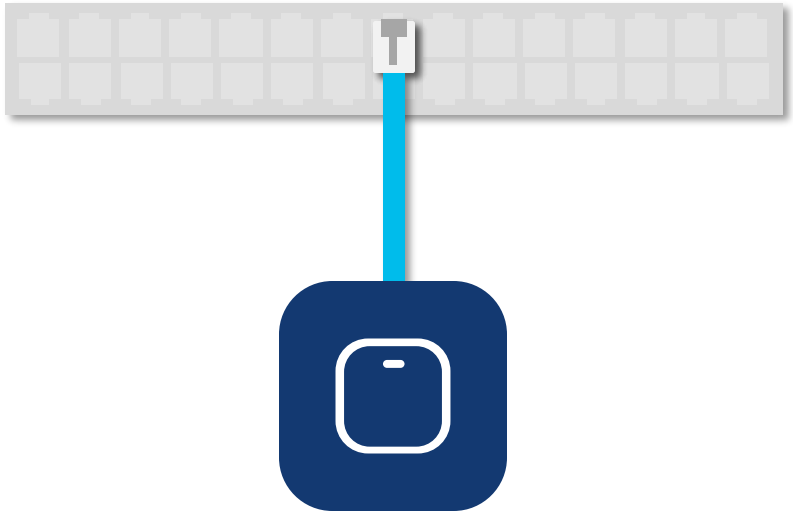
Key Definitions

UPoE: Cisco speak for > 30W

802.3at: Maximum of 30W

802.3bt: Can do 30W and >30W

AP Power Consumption



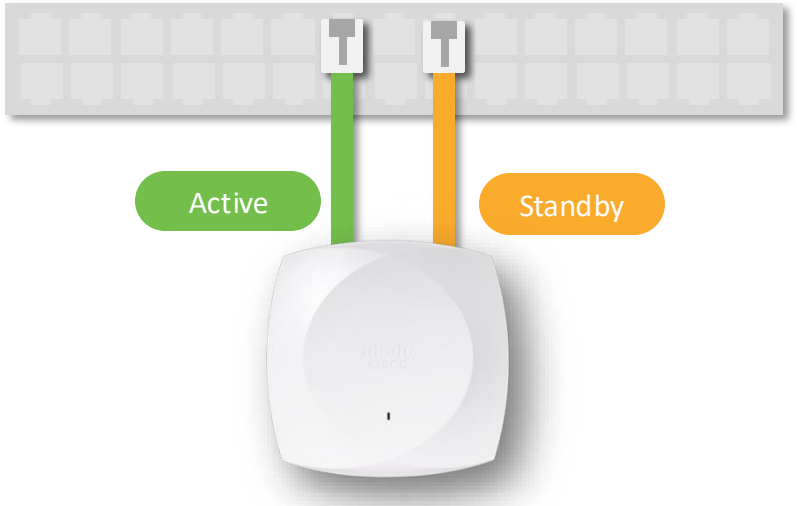
Power Allocated	Power Consumed
48.3 W	16.5 W

PoE Power Negotiation happens at boot time through CDP/LLDP

Power allocation is what you need to consider for power budget

Actual Power consumption is dependent on the AP operation

CW9178I Power Consumption (dual port)



	Power Allocated	Power Consumed
Port 0	54.4 W	16.5 W
Port 1	54.4 W	0.5 W

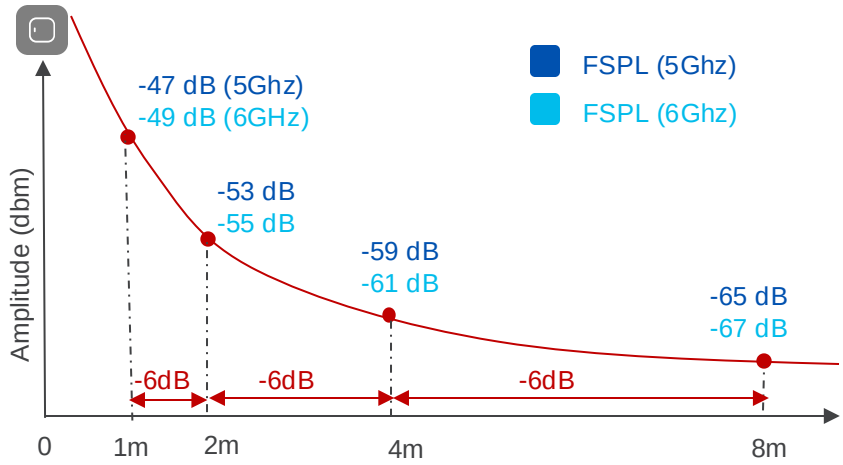
Both ports negotiate power and need to be considered for budget

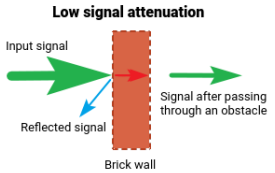
If no-LAG, Standby port consumes very little power

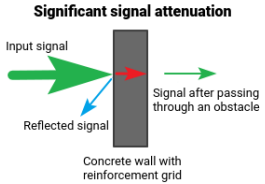
If LAG, both ports are active, and they both draw power

Wireless coverage / 6 GHz RF Design
What you need to consider?

- Path Loss (FSPL)* - Path loss in the first meter is on average 2dB higher at 6GHz vs. 5GHz. After that, the 6 dB rule applies: doubling the distance results in a 6 dB loss, regardless of the frequency
- Cell Size – At 6 GHz @ same power level cell is smaller vs. cell size at 5 GHz
- Absorption/Reflectance – 6 GHz will be attenuated more through wall or other surface
- Noise floor at 6 GHz is much lower than 5 GHz, at least for some time ☺
- Coverage type: Today 6GHz is indoor only





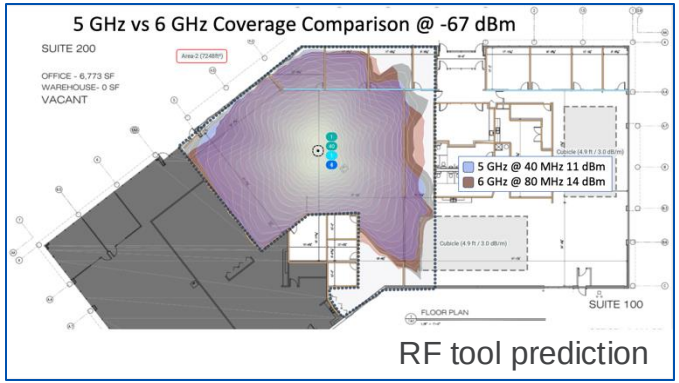


(*) FSPL = Free Space Path Loss: https://en.wikipedia.org/wiki/Free-space_path_loss

https://help.keenetic.com/hc/en-us/articles/213968869-Wi-Fi-signal-attenuation-coefficients-when-passing-through-different-materials

RF Design considerations

- AP antenna patterns at 6GHz are similar to 5GHz
- AP coverage between 5GHz and 6GHz will be similar, especially in open spaces BUT it does require to compensate with power > 3dB higher in 6GHz



RF tool prediction

5GHz @40 MHz 11dbm

6GHz @80 MHz 14 dbm

- With brick walls, elevator and other environments, you would probably need to measure and add few APs

Where are we then on 5 and 6 GHz assumptions?

Q1: Can a co-resident 6 GHz radio provide the same coverage as the 5 GHz cell while dramatically increasing performance?

A1: Yes!

Q2: Can a one for one replacement of Wi-Fi 6/5 APs with Wi-Fi 6E APs be achieved?

A2: Yes! / Assuming140-190 m2 of average AP density, carpeted office normal ceiling (3m)

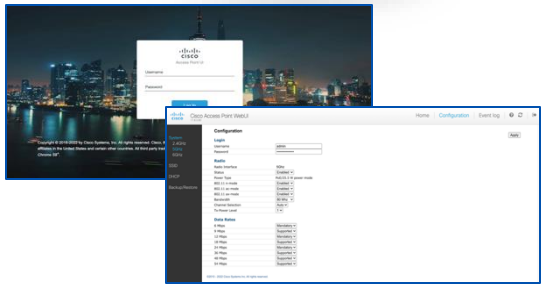
NEW SITE SURVEY RECOMMENDED!!!

ALSO, REVALIDATE ALL WIRELESS REQUIREMENTS

- **Business (Purpose, Objectives, Stakeholders, …)**
- **Technical (Covered Areas, Reg Domain limitations, …)**
- **RF/Deployment Specifics (Coverage, SNR, Throughput, ...)**

- 5 GHz network with RRM operating at power levels 3-4? >then equal 5 and 6 GHz coverage is possible with a one for one AP replacement in both ETSI and FCC. Assuming 80 MHz channel in FCC and 40 MHz channel in ETSI/UK
- If the power level is in 1-2, then you may need around 10 to 20% additional access points.

Assess environmental RF coverage using the CW9178I & CW9176I/D site survey mode

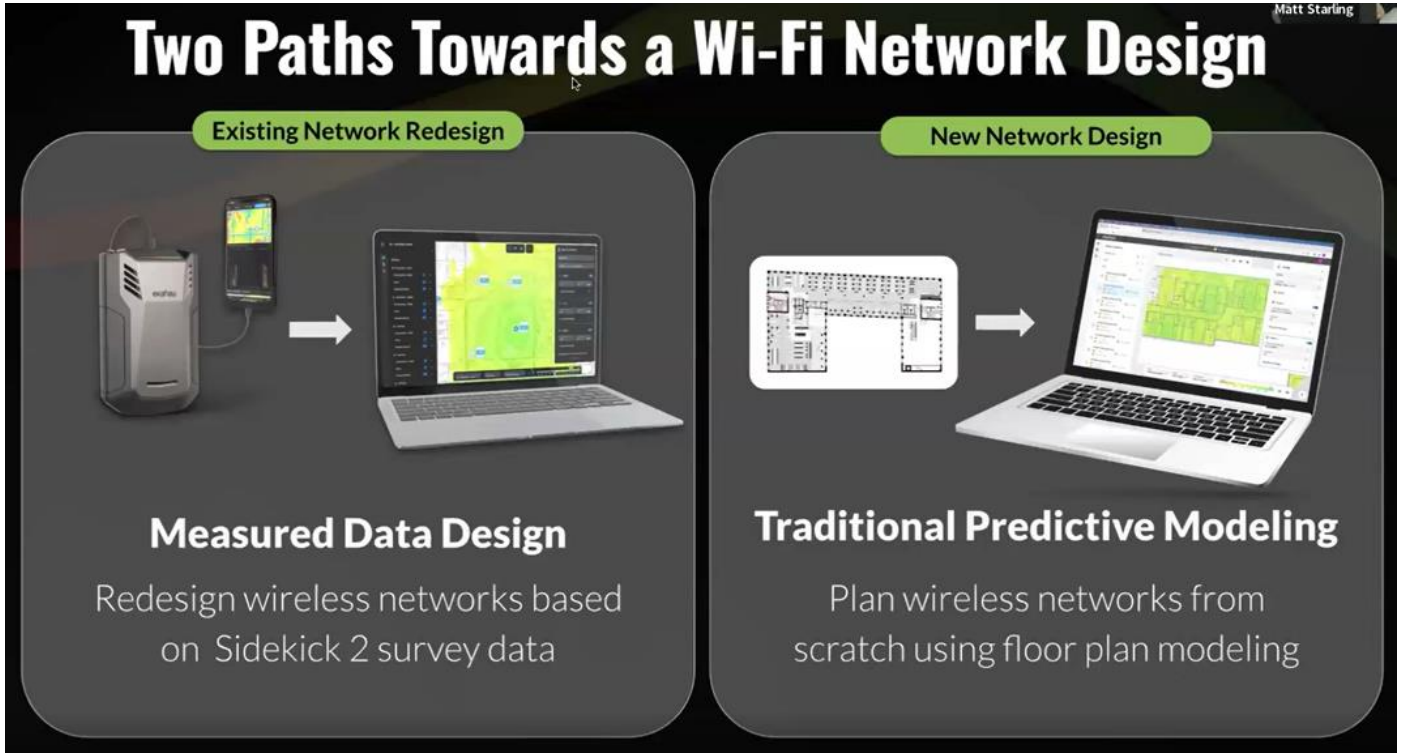


Puts AP in standalone mode and enables it to broadcast 2.4-, 5-, and 6-GHz SSIDs and have clients join via internal DHCP.

Supports WebUI access for easy configuration and viewing of various RF metrics for RF coverage and planning.

Supports configuration of channel number, channel width, Tx power, SSID, and data rates.

Ekahau – Paths Towards Wi-Fi Network Design



Source: Ekahau Webinar

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Exploring Wi-Fi 7 with Special Guests from Cisco

Starts in 31 days — Feb 20, 2025

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Exploring Wi-Fi 7 with Special Guests from Cisco

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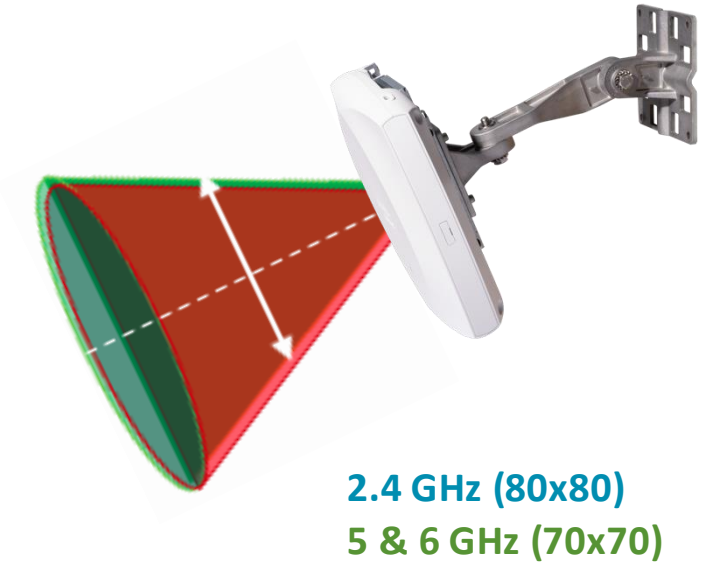
Registration link: https://www.ekahau.com/webinars/exploring-wi-fi-7-with-special-guests-from-cisco/

Antenna differences between CW9176I and CW9176D1

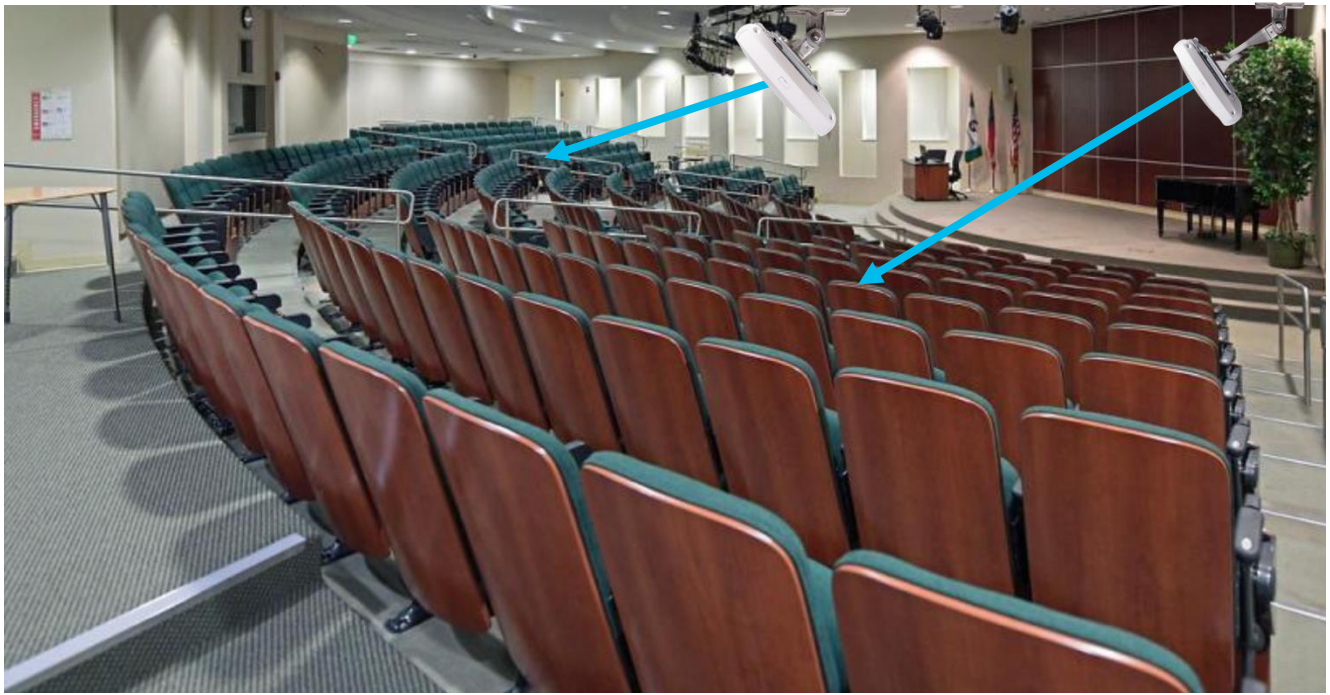


2.4 GHz (80x80)
5 & 6 GHz (70x70)

CW9176I designed with an integrated omni-directional antenna ceiling mount for a “360 degree” coverage pattern – ideal for offices, conventional buildings

CW9176D1 designed with an integrated directional antenna allowing the coverage pattern to favor the area the AP is facing - ideal for warehouse, auditoriums etc.

CW9176D1 Use cases - Auditoriums (Focused connectivity/ High Density)



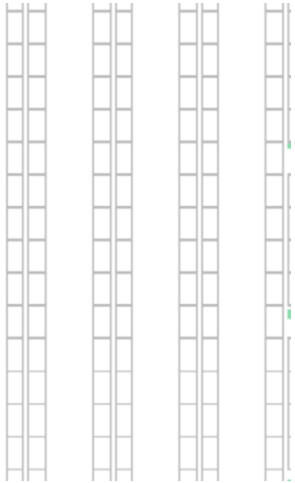
Focusing the direction of the signal improves range, increases signal strength and reduces retries improving overall performance

While an Omni-Directional would work, in this fashion, RF connectivity is optimized as each AP is focused into a specific area

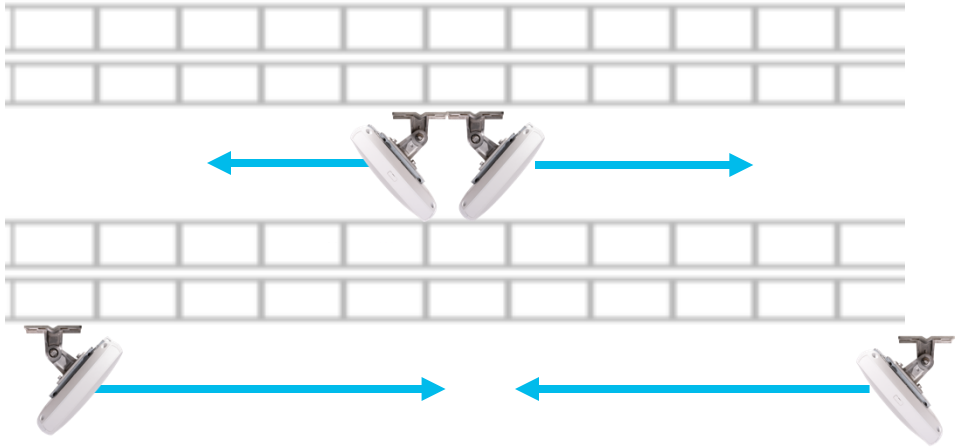
CW9176D1 Use cases - Warehouse (High ceilings / long aisles)

Warehousing challenges

- High Ceilings
- Long aisles
- Stock material changes (seasonal)
- AP (distance to client) & mounting



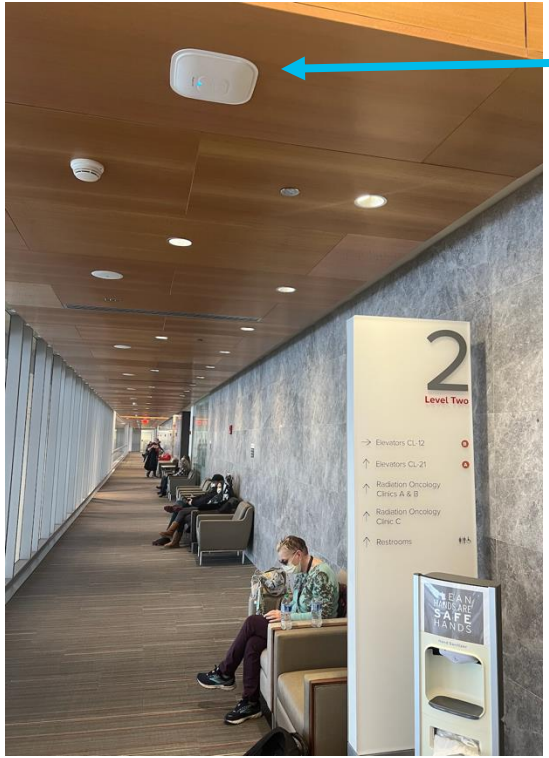
Back-to-Back units in center of aisle covering long aisles (Ability to adjust tilt)



Or perhaps at each end of the aisle shooting down the aisle

Omni-directional pattern is problematic in these areas as AP should be directional and located high to avoid tow motors, changing stock material etc.

CW9176D1 Use cases – Healthcare (Long hallways)



Long hallways are oftentimes handled with Omni-directional Access Points such as this Cisco Access Point flush mounted to a wooden ceiling.

When it becomes problematic or cost prohibitive to install multiple Access Points, a directional antenna unit can be installed on each end of the hallway assuming there are no metal doors or obstructions in the path

CW9176D1

Wi-Fi 7 Security

Wi-Fi 7 brings new AKM support for WPA3-SAE and new increased ciphers for OWE & SAE, WPA3 /OWE mandatory for EHT (11be MCS rates) & MLO

Cipher: GCMP 256 – Better Encryption & Speed; AKM: Better security

Legacy	Wi-Fi 6	Wi-Fi 6E (6 GHz)	Wi-Fi 7
Open	Open (OWE support required)	OWE (AKM: 18) (Cipher: CCMP 128)	OWE (AKM: 18) (Cipher: CCMP 128 or GCMP 256)
WPA1/WPA2/WPA3 Transition WPA3-Personal, PMF Optional	WPA2/WPA3 Transition/ WPA3-Personal, PMF Optional (WPA 2 - AKM – 2, 4 & 6) (WPA 3 – AKM – 8 & 9) (Cipher: CCMP 128 or AES)	WPA3-Personal, PMF Mandatory (AKM: 8 & 9) (Cipher: CCMP 128 or AES)	WPA3–Personal, PMF Mandatory (AKM: 24 & 25) (Cipher: CCMP128 or GCMP 256)
WPA1/WPA2/WPA3 Transition/ WPA3-dot1x (Enterprise), PMF Optional	WPA2/WPA3 Transition/ WPA3-dot1x (Enterprise), PMF Optional (AKM 1, 3 & 5, 11 & 12) (Cipher: AES, CCMP 128, GCMP128 GCMP256)	WPA3 Enterprise, PMF Mandatory (AKM: 3, 5, 11 & 12) (Cipher: CCMP128, GCMP 128 & GCMP 256)	WPA3 Enterprise, PMF Mandatory (AKM: 3, 5, 11 & 12) (Cipher: CCMP128, GCMP 128, GCMP 256)

Clients connecting to lower security, can connect to 2.4 & 5 GHz bands of Wi-Fi 7 AP, but restricted to 11ax or earlier. No 11be rates & MLO

Note: All devices since 2019 are required to support WPA3, regardless of generation
Note2: WPA3 is from 2018. FT/11r from 2008. Time to move on. All the latest OS on PC, Apple and Android support WPA3 and Enhanced Open.

Roaming

SAE-PSK (akm 8)

???

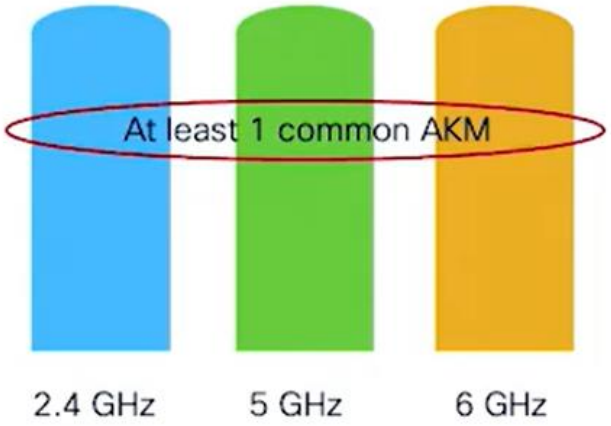
OK

SAE-PSK (akm 8)

SAE-PSK-EXT (akm 24)

Wi-Fi 7 - WPA3 (& 6GHz) WLAN Design Considerations

- Rule #1
  - To use 6 GHz, you must use WPA3 (OWE, SAE-PSK, 1x)
- Rule #2
  - For Wi-Fi 7/MLO – all link must use one common AKM
  - For SAE, this must be AKM 24 (SAE-EXT Key) – no WPA2-PSK. Possible roaming issue with AKM 24 -> AKM 8
- So, if you want Wi-Fi 7:
  - On the SSID: You must use WPA3!
  - You can mix in transition modes to bridge the gap



- Security requirements enforcement
  - Disconnect a client
  - Operating the AP in Wi-Fi6/6E mode

Source: WLPC / Nicholas Swiatecki (Cisco)

Wi-Fi 7 - WPA3 (& 6GHz) WLAN Design Considerations

Most likely your current WLAN design would prevent it from being supported on 6GHz

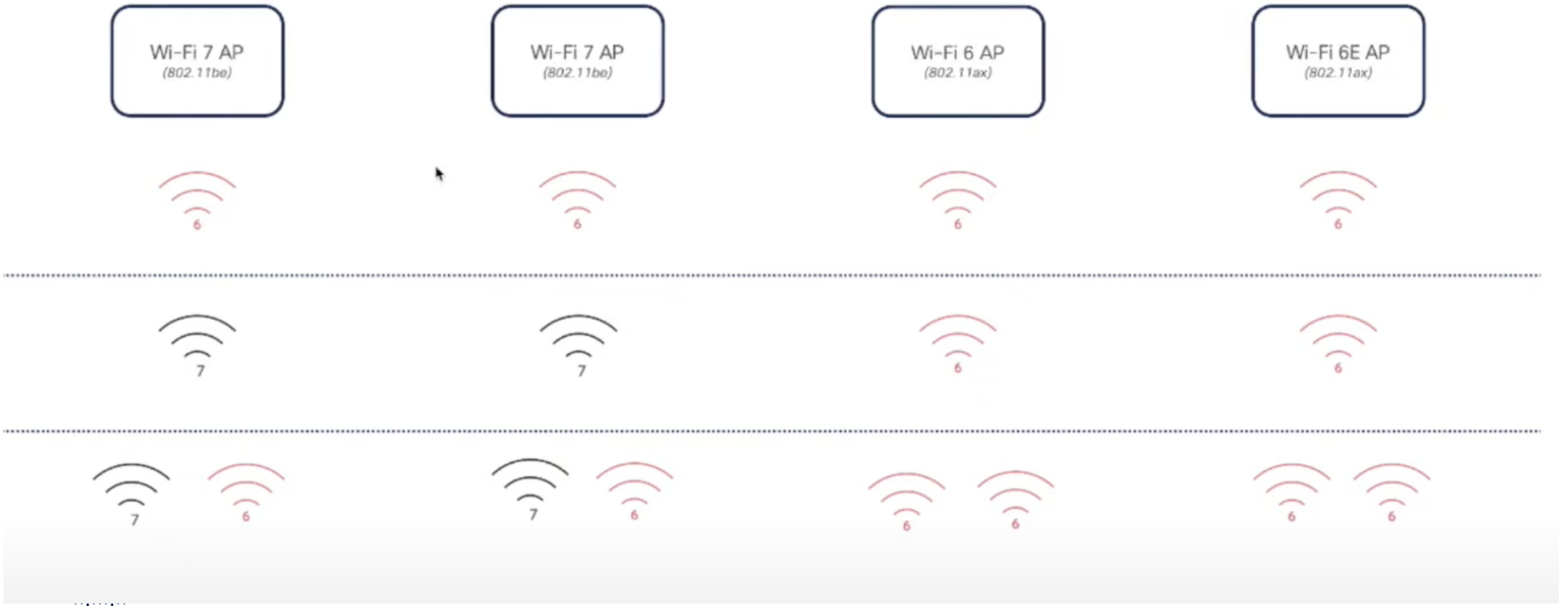
6GHz SSID Requirements

- L2 Security: **WPA3** or **OWE**
- Any other L2 security method is not allowed – **no mixed mode possible**
- **Protected Management Frame** (PMF) enabled

What options would you have?

1. Reconfigure the existing WLAN and move to WPA3 → one SSID for all radio policies **(2.4/5/6 GHz) – (Most unlikely … or not?)**
2. **Redesign your SSIDs, adding specific SSID/WLAN with specific security settings. (Most Safe and Recommended)**
3. **Use single SSID WLAN Profile and enable WPA3 Transition Mode (Most Flexible and the only solution in some cases, but …)**

Real deployment may not be greenfield



Current list of Wi-Fi7 clients

- Iphone 16
- Galaxy S24 Ultra
- Asus ROG phone 7
- Oneplus 11
- Pixel 8
- Playstation 5 Pro
- Sony Xperia 1
- Intel BE 200/202

Source: WLPC / Nicholas Swiatecki (Cisco)

Windows

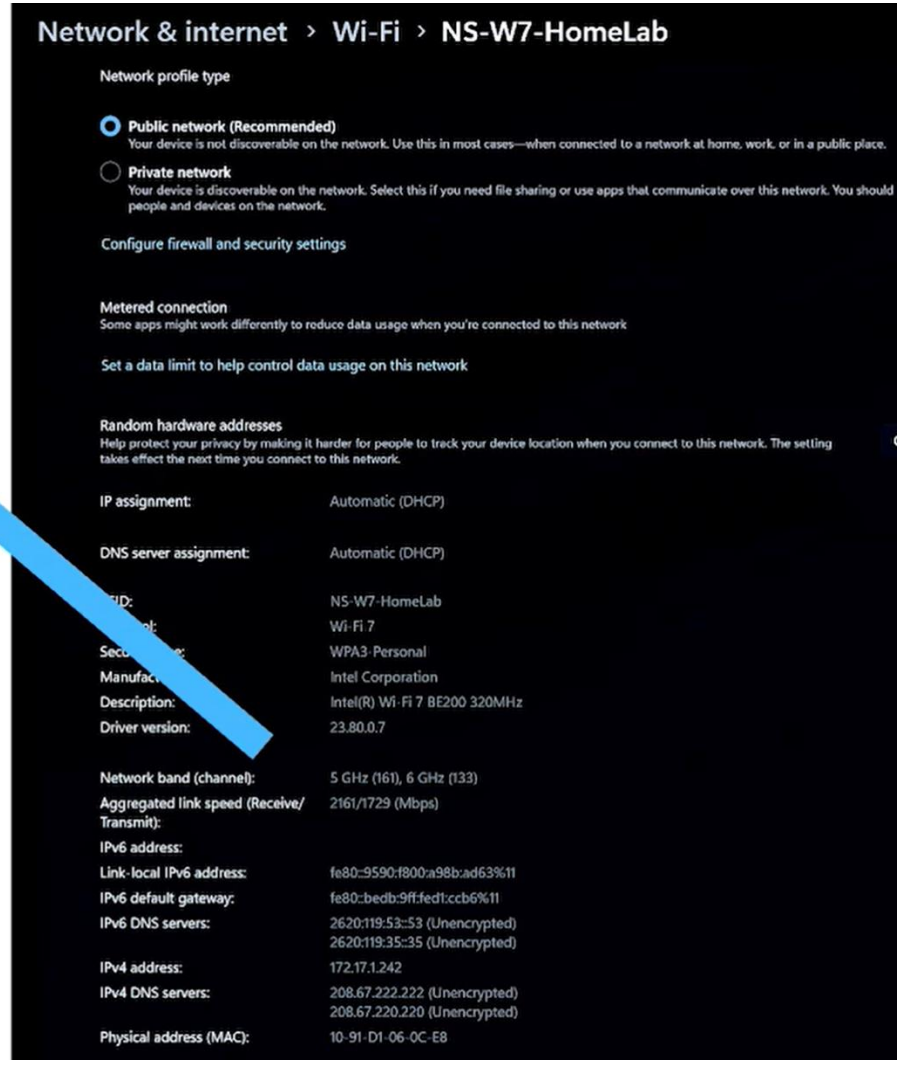
Network band (channel):	5 GHz (161), 6 GHz (133)
Aggregated link speed (Receive/	2161/1729 (Mbps)

“netsh show wlan interfaces” shows this as well

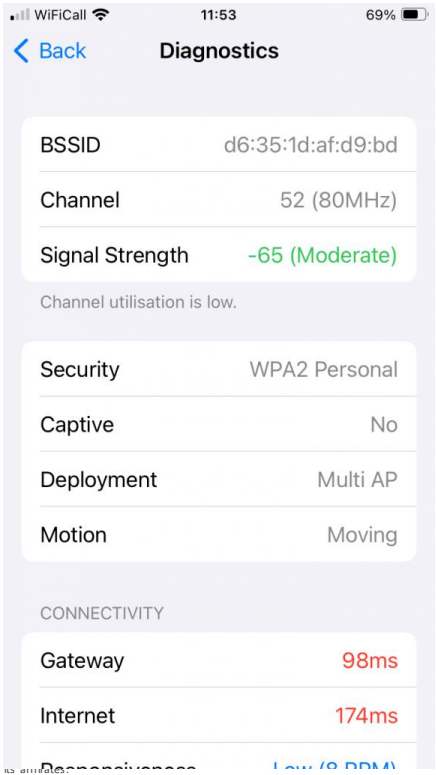
If you don’t see two (or more) channels:

- Update windows to 24H2
- Update Driver
- Check security settings (AKM/Pairwise cipher)
- Check that your AP actually is doing MLO 😅

Source: WLPC / Nicholas Swiatecki (Cisco)



Apple Diagnostic Profile



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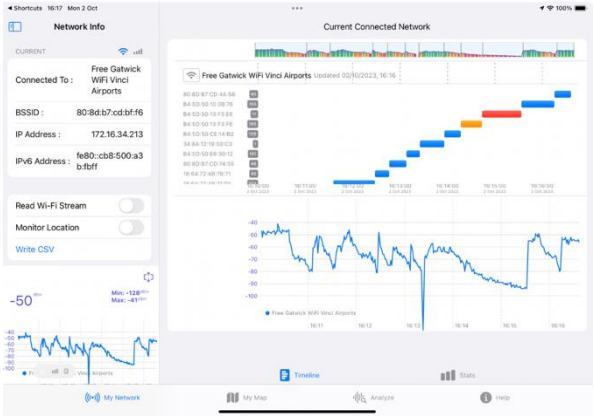
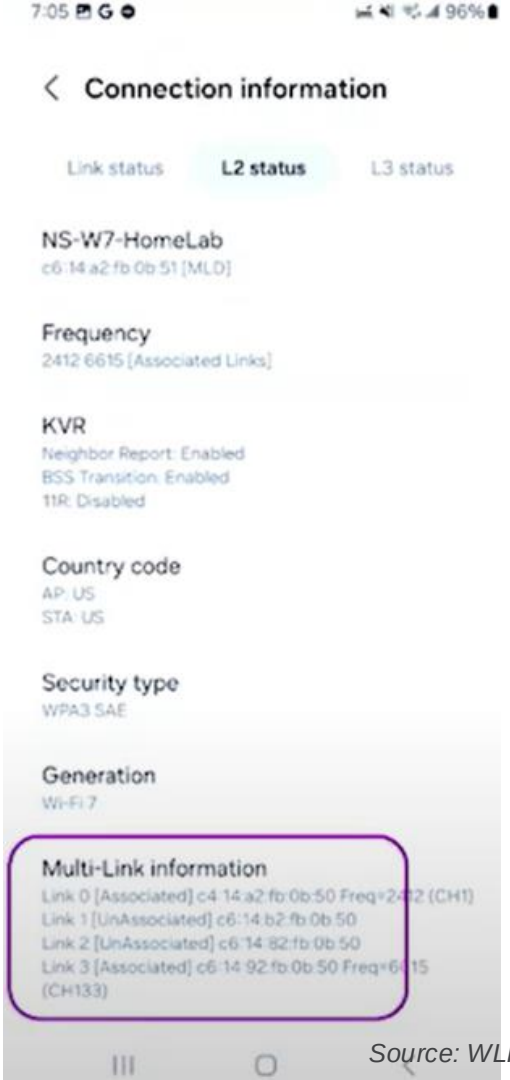


[Noversight link]

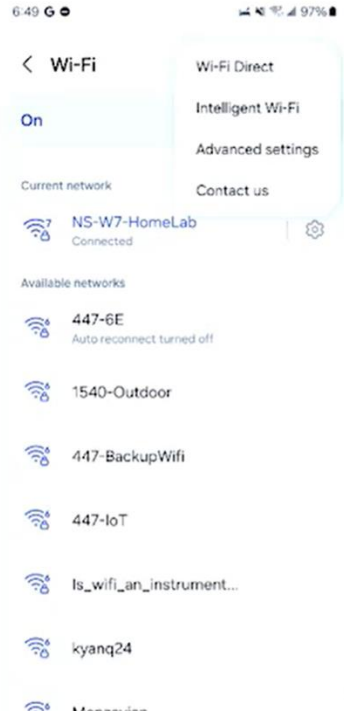
Samsung S24

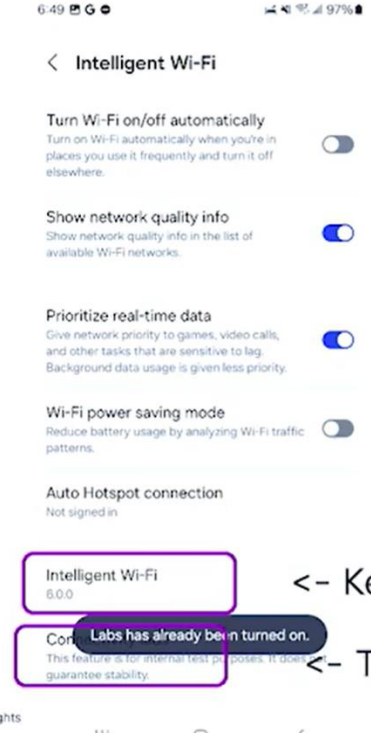


Source: WLPC / Nicholas Swiatecki (Cisco)

Samsung – how to enable this

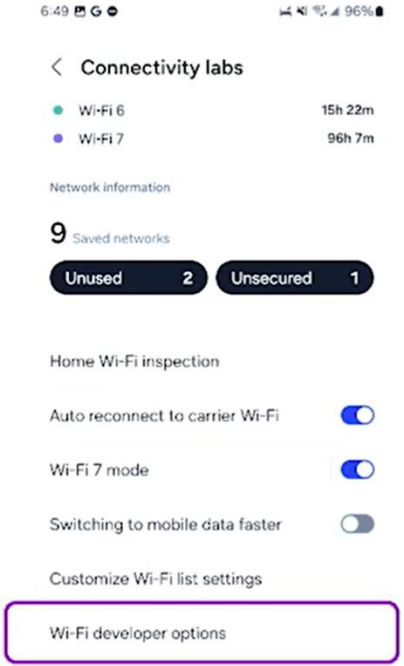
Reference





<- Keep tapping this (~7x times)

<- Then, this appears 🤯



Source: WLPC / Nicholas Swiatecki (Cisco)

Clients and MLO – What we have observed

- Intel BE200: Single Radio, eMLSR
- QCA 7800: Multi radio/STR, and MLSR
- iPhone 16 Pro: Multi radio/STR, and MLSR
- Samsung s24: Multi radio/STR, and MLSR
- Pixel 9: Multi radio/STR and eMLSR

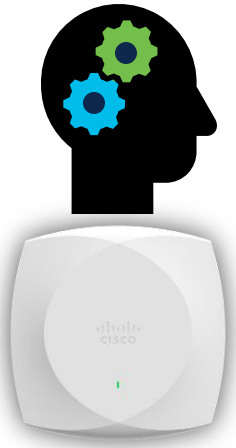
How was this observed? Want to go deeper?
Shameless promotion
“Inside Scoop on Wi-Fi 7 | Nicholas Swiatecki | WLPC Prague 2024”

První připojení Wi-Fi 7 AP do wireless infrastruktury

One Cisco Wireless Access Point

Global Use AP, Unified Product, Single SKU

Cisco Catalyst Management Mode
C9800 & Catalyst Center Stack



Meraki **Management Mode**
MR Dashboard Stack

Join WLC or Meraki stack on Day 0, based on Intent

Management Mode Change from Day 1 to N

Customer scenario 1: Catarina

Catarina is a “classic” Catalyst WLC customer, here is how she onboards Global Use APs.

1. Plug in APs.

2. APs detect that they are **not** claimed into a Meraki network or connected to the internet, and they then try to detect the presence of WLC (or CatC). If a compatible controller is found, They will reboot into WLC Mode, and join the WLC, using DHCP, DNS, Broadcast and PnP Mechanisms that exist today.

3. After joining WLC, AP determines which country it should operate in, through GPS/GNSS, Proximity based discovery or a manual way through Regulatory Activation file

Customer scenario 2: Miles

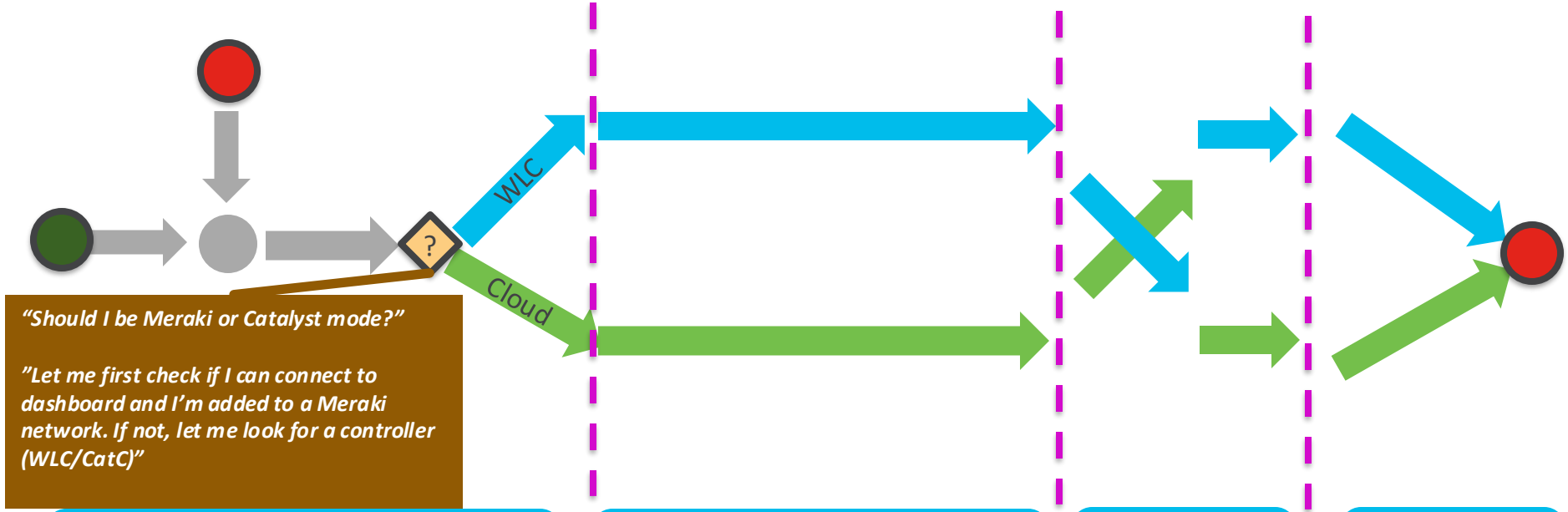
Miles is a Meraki customer, here is how he onboards Global Use APs

1. Claim AP via the Cloud ID in Dashboard
2. Plug in the AP, AP joins Meraki Dashboard
3. Done

In short: Nothing changes during onboarding for majority of Meraki Customers.

The only thing to pay attention to are deployments with both Meraki Mode APs and WLC or CatC in the same network

Map of a Global Use AP's journey



Fast Migration to Catalyst Mode using DHCPv4 Option 43 “F3”

- Customers can use this NEW option to do “Fast” migration without delay
- Reachability checks using ONE of the below (both are not checked)
  - ICMP
  - CAPWAP Discovery

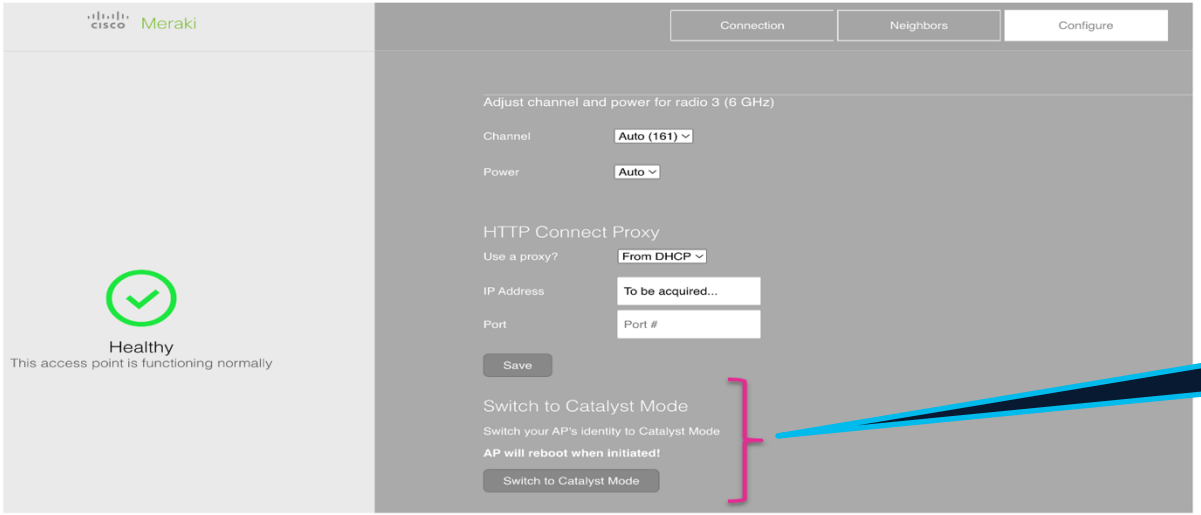
DHCPv4 Option 43 – F3

- F3 <size> <IP array> Mode Value=<1/2>
  - Meraki: Mode=1
    - IP array is not used
  - Catalyst: Mode=2
    - At least one IP of the IP array must be ICMP reachable
- Example
  - **WLC IP address**: 200.1.0.100
  - ip dhcp pool vlan200
    - option 43 hex F305c801006402

Local Status Page Migration to Catalyst

Reference

If device is not claimed then customer can trigger the migration to Catalyst from Local Status Page.
To do that, Customer will have to open local status page (see https://documentation.meraki.com/General_Administration/Tools_and_Troubleshooting/Using_the_Cisco_Meraki_Device_Local_Status_Page) and go to configure tab. Then, if migration is allowed customer will have to click on "Switch to Catalyst Mode" as in the screenshot below:



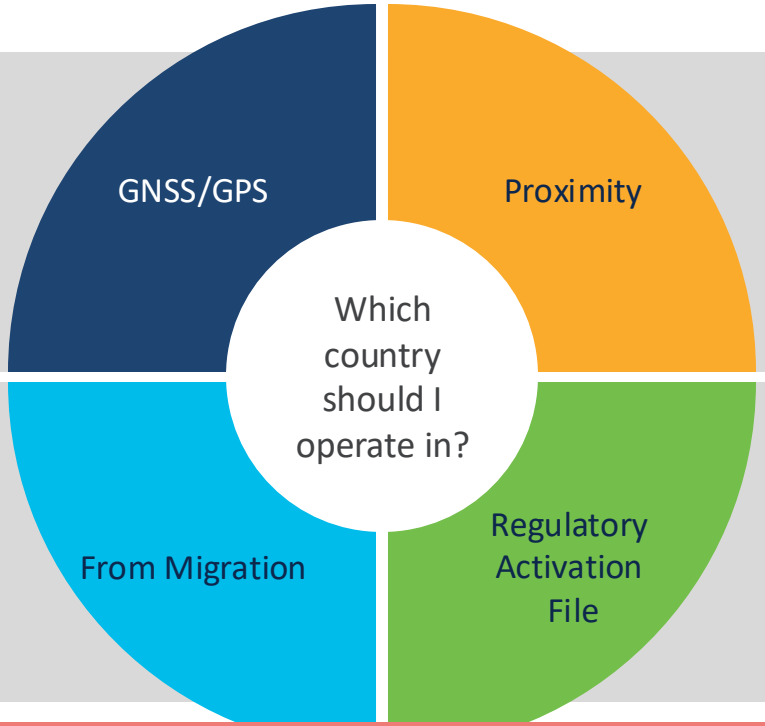
Useful for "Single AP" conversion (hence can't scale for Bulk migration)

Regulatory Compliance - “Country Code”

When APs are in **WLC mode**, APs will determine their Country Code in one of the following ways:

For APs with integrated GNSS/GPS – use this

Learn from nearby (RF) APs on same WLC



APs migrated from Dashboard will retain the country code they were operating in

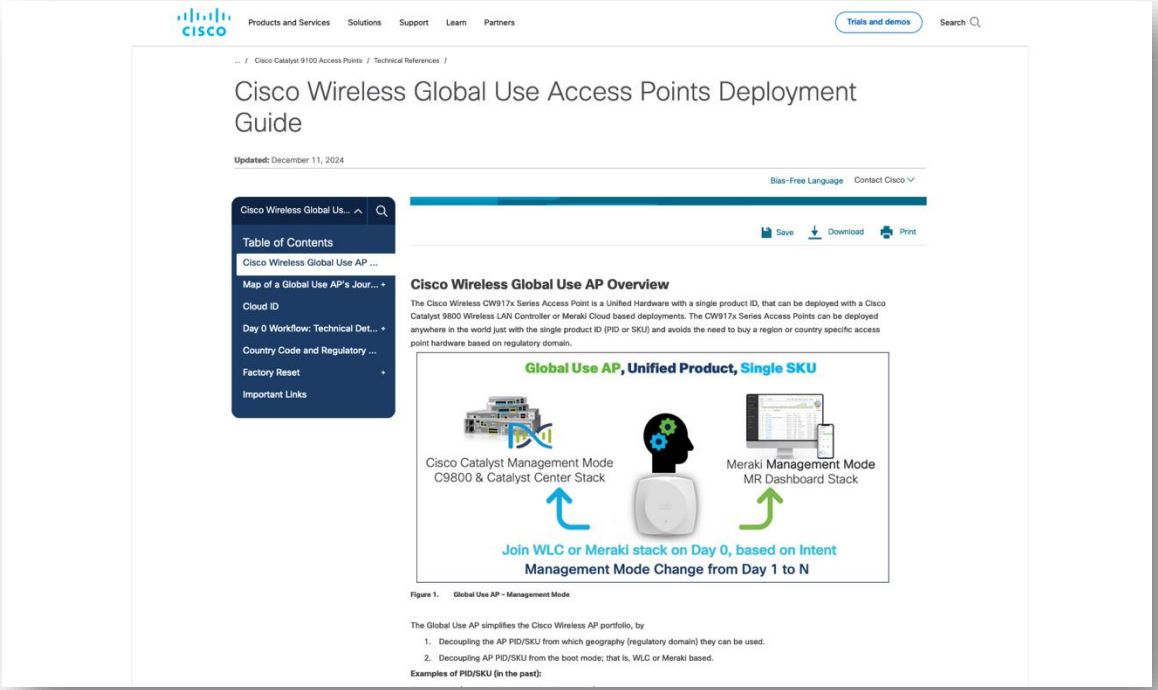
Download a Regulatory Activation File (RAF) from Dashboard, that can be installed on WLC

Country Code determination is only done once - unless the admin triggers a country reset.
I.e. APs will not auto-change country codes, but network admins can change it!

Resources: GUAP – Global Use AP Deployment Guide

Reference

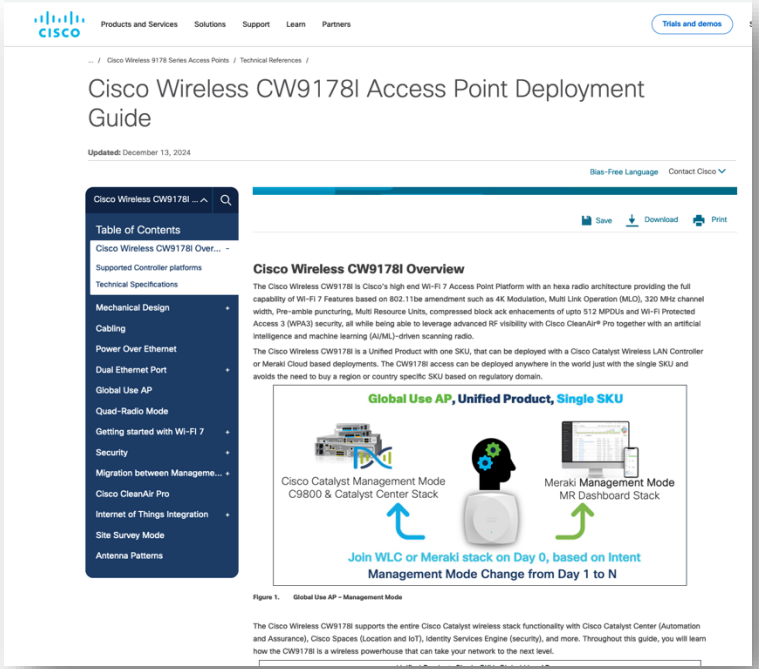
- Link: global-use-ap-dg.html



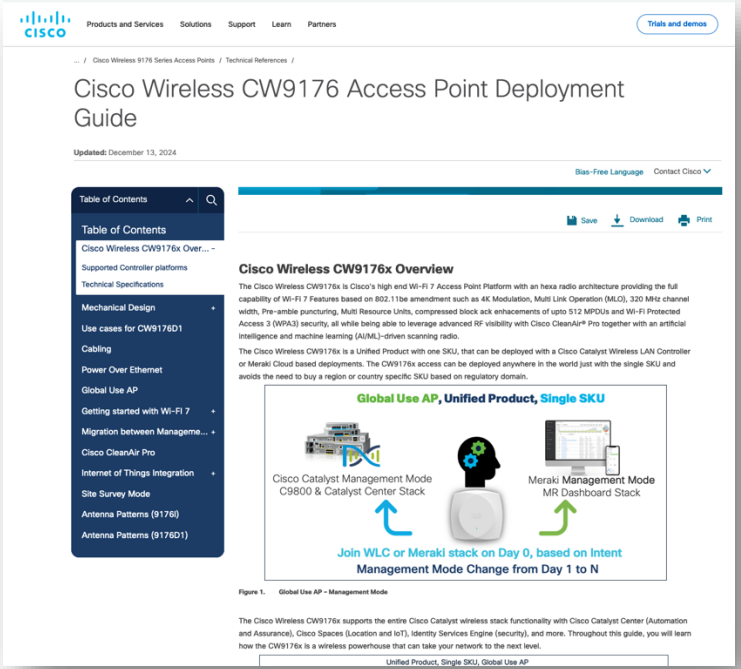
CW9178 & CW9176 Access Point Deployment Guides

Reference

Link: cw9178i-dg.html



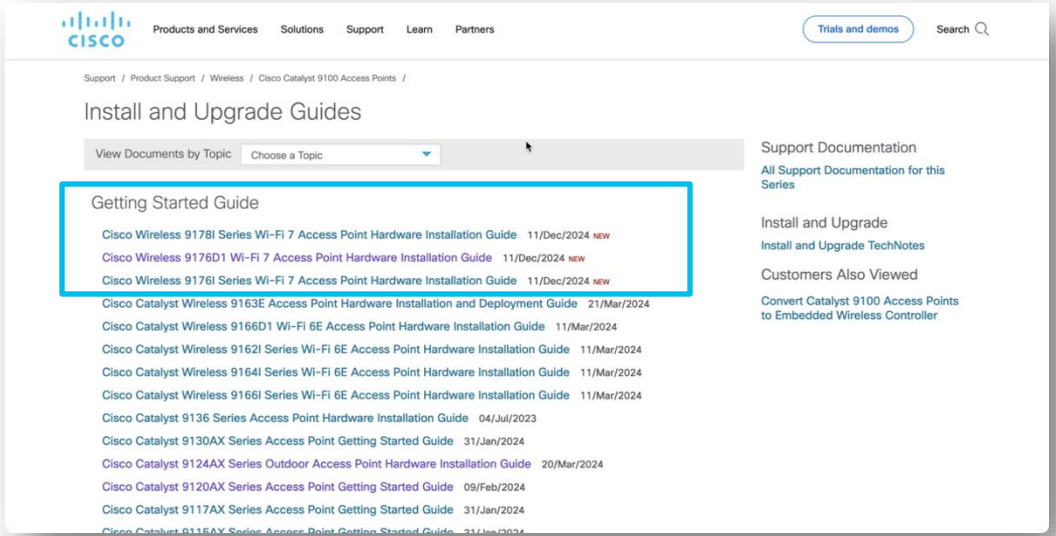
Link: cw9176-dg.html



CW9178 & CW9176 Hardware Installation Guide

Reference

- Link: https://www.cisco.com/c/en/us/support/wireless/catalyst-9100ax-access-points/products-installation-guides-list.html



Why Wi-Fi 7?

Cisco’s first Wi-Fi 7 products

Data Sheet -> link

CW9176I & CW9176D1

- Tri-radio, 4x4 (12ss); 2.4/5, 5, 6 GHz
- Dedicated scan radio & IoT Radio
- UWB, Accelerometer
- Built-in GNSS/GPS
- Single 10 Gbps port

Data Sheet -> link

CW9178I

- Quad radio, 4x4, 16ss (2.4, 5, 5,6)
- Dedicated scan radio & IoT Radio
- UWB, Accelerometer
- Built-in GNSS/GPS
- Dual 10 Gbps ports for redundancy

Both will require more than 30W of power for full radio operation

Cisco Wireless – Wi-Fi 7

One Simplified Product
for smart, secure, sustainable operations

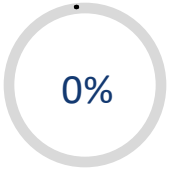
Resilient Wireless
for digital transformation

Wi-Fi, IOT Analytics
for Smart Workspaces

CleanAir® **Pro**

Simplified Product

Cisco Wireless Unified Product Evolution



Wi-Fi 6

1 SKU per model

17+ SKUs per model

Wi-Fi 6E

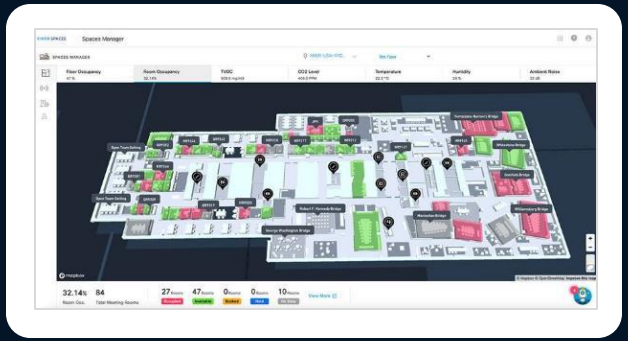
- Day0 Separate SKUs (~10)
- Initial management Mode determined at purchase.
- Post-purchase/Day N option to migrate
- Separate lead time/RMA/license
- Same Warranty

Wi-Fi 7
Global Use AP

Today!
Join any stack on Day 0; based on Intent
Management mode change from Day 1 to Day N

Wi-Fi licensing includes Cisco Spaces

+



Unified Licensing (UL):

UL – Essentials

- Meraki Enterprise
- DNA-E
- Spaces Extend

UL – Advantage

- Meraki Advanced
- DNA-A
- Spaces ACT

Resilient Wireless

Cisco Networking Cloud

TechClub odkaz (17.09.2024): Situace ze života IT správce

Unify the Services

AI Services (ex. AI RRM)

Policy

Analytics

APIs

User/Application Experience

Unify the Management

On prem Dashboard

Cloud Dashboard

Unify the Infrastructure

Common edge platform

Common platform

AIOps Main Services

Wi-Fi 6E/7 Integrations

Wireless 3D Analyzer

AI-Enhanced RRM

ThousandEyes

AI Network & Endpoint Analytics

Performance Advisories

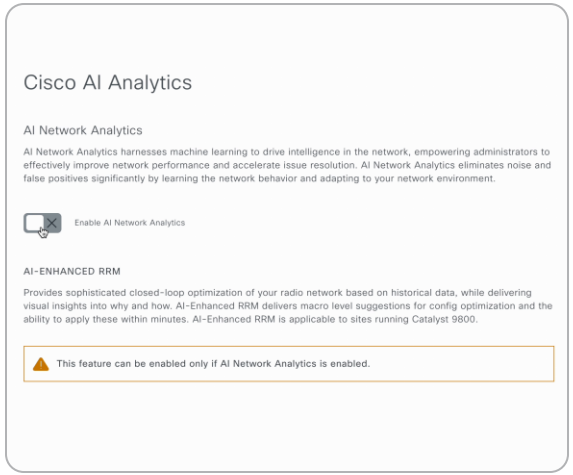
Device Ecosystem Partnerships

SAMSUNG

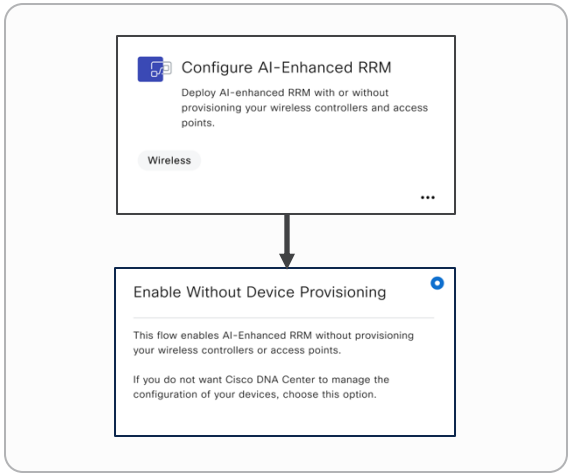
intel

AI-Enhanced RRM Now

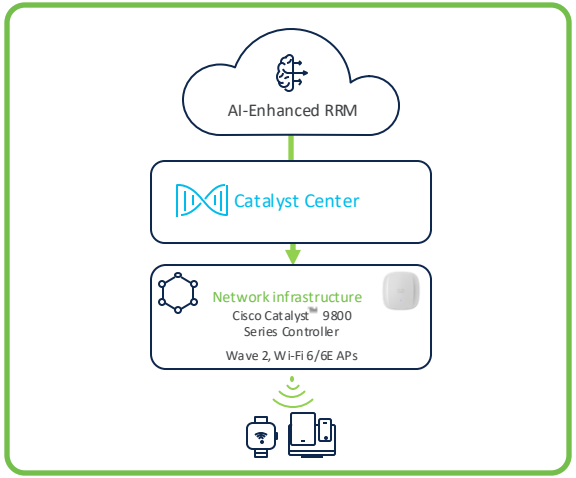
1 Enable AI-Enhanced RRM cloud access in Settings



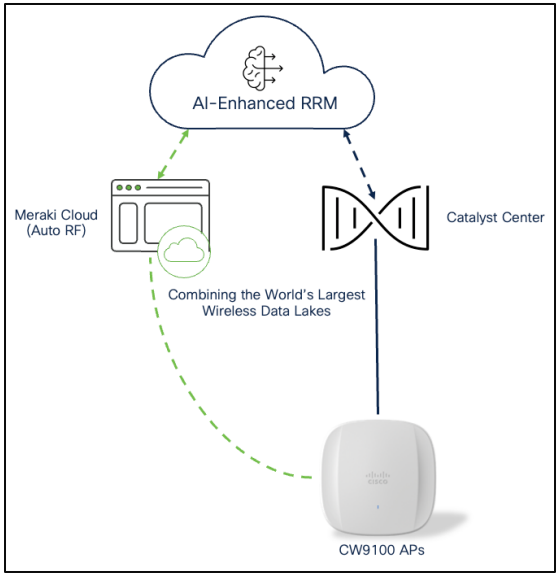
2 Select the newly designed workflow and deployment option!



3 AI-Enhanced RRM is enabled without device provisioning!



Best Enterprise Wi-Fi Solution



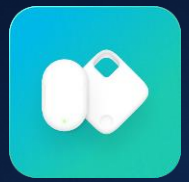
WiFi NOW AWARDS 2024

Wi-Fi and IoT Analytics

CISCO SPACES

The OS for Smart Spaces

A comprehensive set of software tools and services to make your buildings smart



Multi-sensor Connect

No gateways
Sensor & Partner Ecosystem

Advanced Location

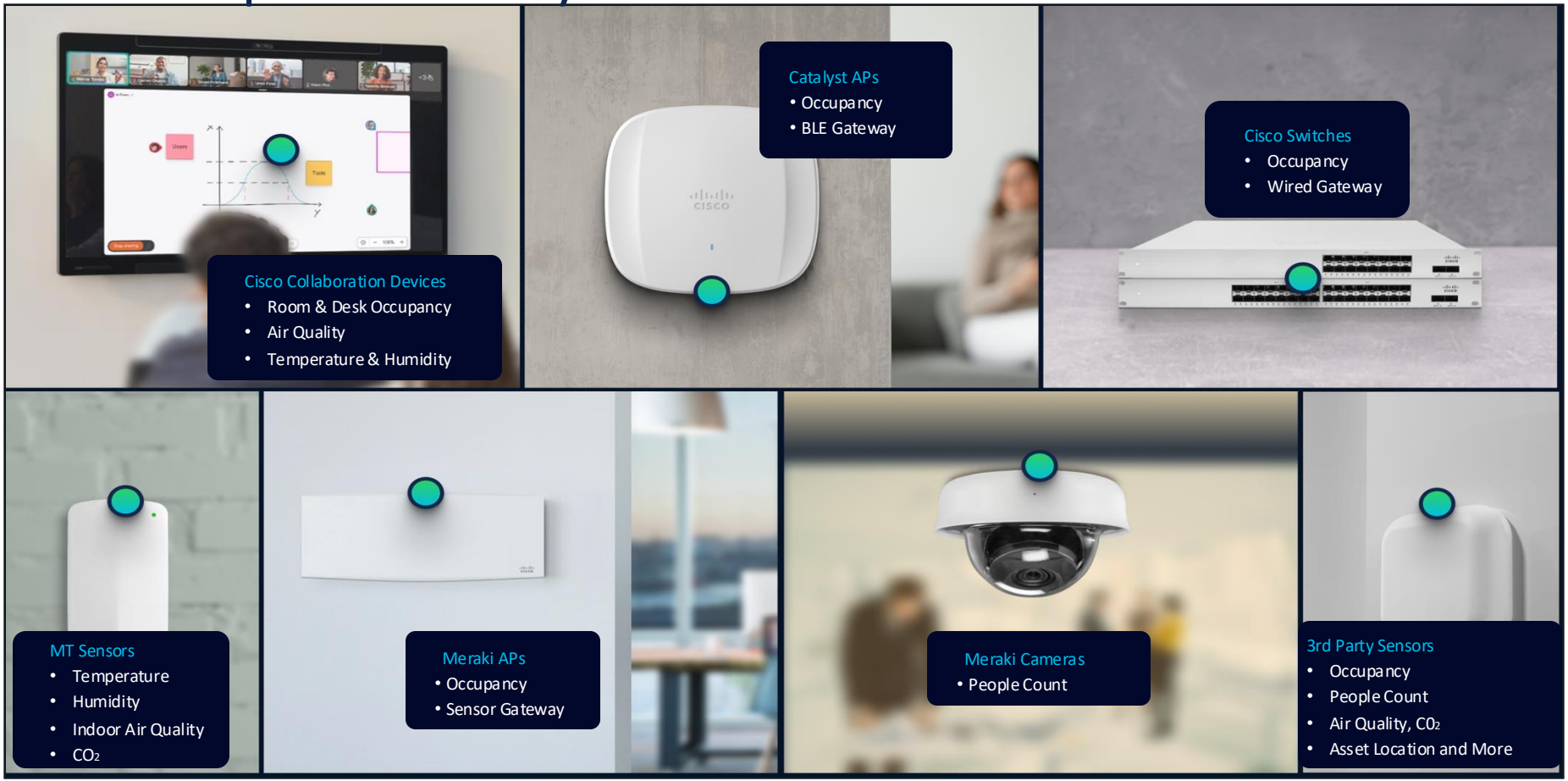
Wi-Fi | BLE | UWB
Presence, Occupancy & Identity

APIs & Integrations

One API for the building | Enterprise Integrations

Cisco Spaces Platform

Cisco Spaces turns your network into a sensor



Common Framework for

Location. Maps. IoT. API

Auto Placement of APs on map

for IT teams

Place Sensors on a map

for IT teams

Detect & Locate Clients & Devices

for IT/OT Teams

Asset Tracking

for Operations

Digital Signage Experience

for Employees & Facilities Teams

Occupancy Analytics

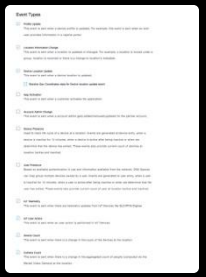
for Real-Estate & Facilities

Indoor Wayfinding

for Employees & WPR

Contextual Notifications

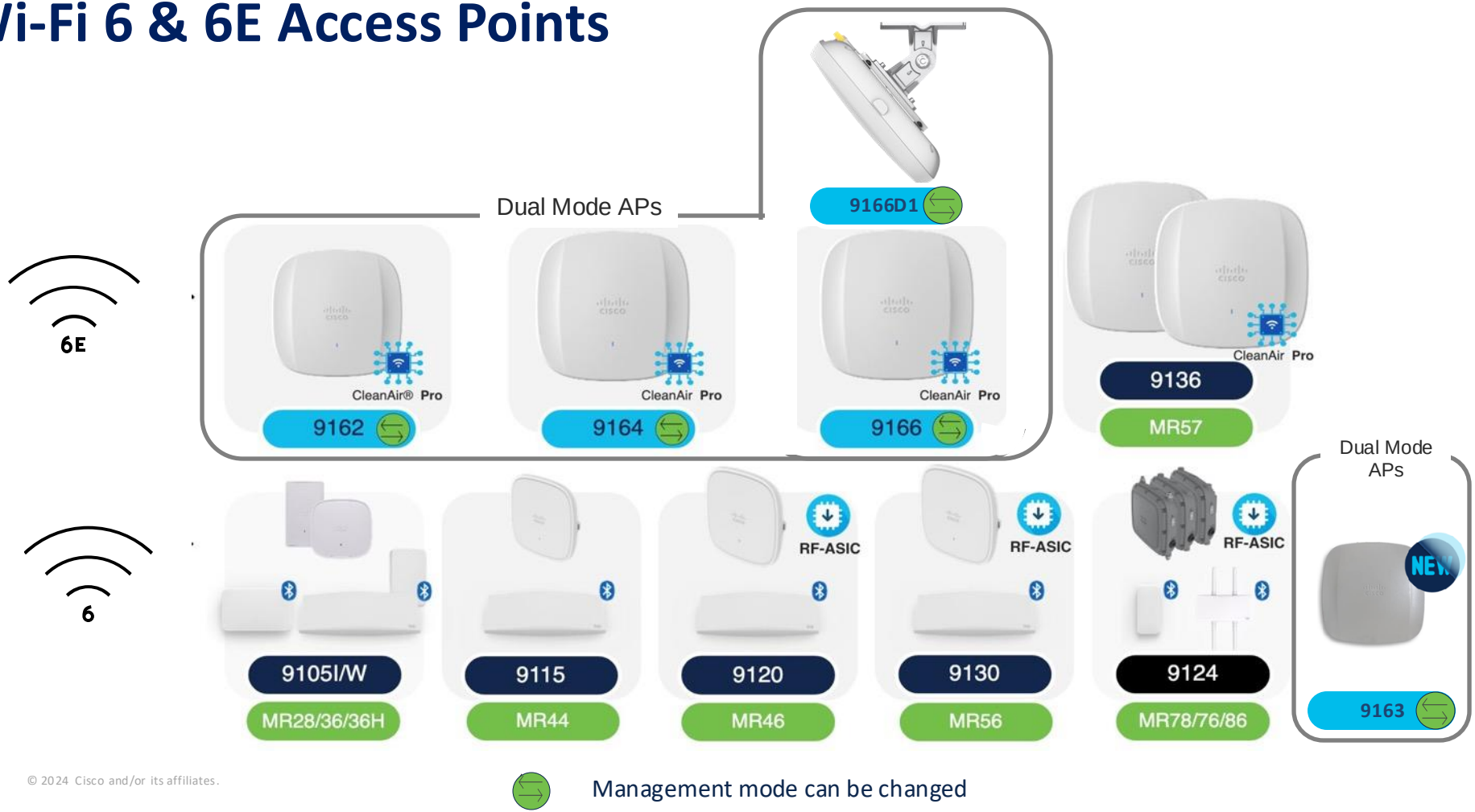
for Marketing & Loyalty



APIs

To extend to enterprise

Wi-Fi 6 & 6E Access Points



Cisco 9800 Wireless Infrastructure

EWC on AP EoS Link

Embedded Wireless
(Switch, SDA-only)
200 APs

C9800-L
250 APs, 5000 clients,

Embedded wireless controller
(EWC)- **Wi-Fi6 only**
50 APs*, 2000 clients

C9800-40 EoS Link

CW9800M
3000 APs, 32,000 clients

C9800-40
2000 APs, 32,000 clients

C9800-CL
1000 APs, 10,000 clients

C9800-80 EoS Link

CW9800H1 / CW9800H2
6000 APs, 64,000 clients,

C9800-80
6000 APs, 64,000 clients

C9800-CL
1K, 3K, or 6K APs
10K, 32K or 64K clients

* From Cisco IOS XE Dublin 17.12.1 onwards, EWC supports a reduced scale of APs and clients for AP 9120, 9124, 9130

Up to 50 APs | Up to 250 APs | Up to 1000 APs | Up to 3000 APs | Up to 6000 APs

Distributed branch and small campus | Medium campus | Large campus

C9800 Controller EoS Announcement! (Jan 9, 2025)

9800-40 and 9800-80 only! (9800-L is NOT EoS)

Milestone	Definition	Date
End-of-Life Announcement Date	The date the document that announces the end-of-sale and end-of-life of a product is distributed to the general public.	January 9, 2025
End-of-Sale Date: HW,OS SW,Accessory	The last date to order the product through Cisco point-of-sale mechanisms. The product is no longer for sale after this date.	December 31, 2025
Last Ship Date: HW,OS SW,Accessory	The last-possible ship date that can be requested of Cisco and/or its contract manufacturers. Actual ship date is dependent on lead time.	March 31, 2026
End of SW Maintenance Releases Date: HW,OS SW	The last date that Cisco Engineering may release any final software maintenance releases or bug fixes. After this date, Cisco Engineering will no longer develop, repair, maintain, or test the product software.	December 31, 2026
End of Vulnerability/ Security Support: HW	The last date that Cisco Engineering may release a planned maintenance release or scheduled software remedy for a security vulnerability issue.	December 31, 2030
End of Routine Failure Analysis Date: HW	The last-possible date a routine failure analysis may be performed to determine the cause of hardware product failure or defect.	December 31, 2026
End of New Service Attachment Date: HW,OS SW	For equipment and software that is not covered by a service-and-support contract, this is the last date to order a new service-and-support contract or add the equipment and/or software to an existing service-and-support contract.	December 31, 2026
End of Service Contract Renewal Date: HW,OS SW	The last date to extend or renew a service contract for the product.	March 31, 2030
Last Date of Support: HW,OS SW,Accessory	The last date to receive applicable service and support for the product as entitled by active service contracts or by warranty terms and conditions. After this date, all support services for the product are unavailable, and the product becomes obsolete.	December 31, 2030

HW = Hardware OS SW = Operating System Software App. SW = Application Software

- Link: https://www.cisco.com/c/en/us/products/collateral/wireless/catalyst-9800-series-wireless-controllers/catalyst-c9800-wireless-lan-controller-eol.html

Děkujeme za Vaši pozornost

Následující Tech Club webinář:

18.2. Cisco Licencování

Přednášející: Peter Morvay

Registrovat se můžete na oficiálním webu **Cisco Tech Club webináře**

The bridge to possible