

CISCO *Live!*



#CiscoLive



The bridge to possible

# What's New with Cisco Wireless and Wi-Fi 6E

A look into the future

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Leader, Global Enterprise Networking specialists

PSOENT-1006



#CiscoLive

# Cisco Webex App

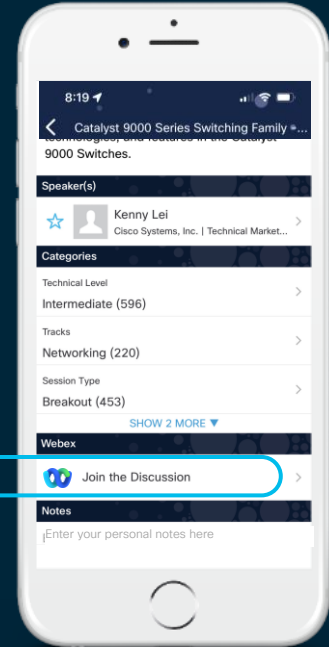
## Questions?

Use Cisco Webex App to chat with the speaker after the session

## How

- 1 Find **PSOENT-1006** in the Cisco Live Mobile App
- 2 Click “Join the Discussion”
- 3 Install the Webex App or go directly to the Webex space
- 4 Enter messages/questions in the Webex space

Webex spaces will be moderated by the speaker until June 17, 2022.



<https://ciscolive.ciscoevents.com/ciscolivebot/#PSOENT-1006>

# About @theJasonGrant

- 3 years end user
- 1 years as a Cisco SE
- 8 years security & wireless specialist
- 7 years EN (and DNA) specialist
- 6 years global sales enablement

- › Dad
- › Soccer ref
- › Kung-fu
- › Road-tripper
- › Cook
- › Wi-Fi enthusiast
- › YouTube Channel





- What's so E about Wi-Fi 6E?

# Agenda

**E**xperiences

**E**nhanced

**E**fficiencies

**E**mbracing

**E**xtended

**E**nterprising

# Wi-Fi 6E is about the wireless **EXPERIENCE**

Experience

Efficiency

Extended

Enhanced

Embraced

Enterprising

- ❖ Laptops
- ❖ Phones
- ❖ Tablets
- ❖ Sensors
- ❖ Cameras
- ❖ Gaming
- ❖ Cars
- ❖ Lighting
- ❖ Doorbells
- ❖ Robots
- ❖ Relays

# It's is about **EFFICIENCY**

Experience

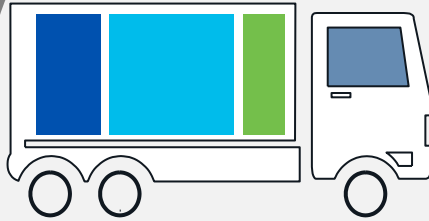
Efficiency

Extended

Enhanced

Embraced

Enterprising



## **OFDMA**

Orthogonal Frequency Division  
Multiple Access

Makes sure the  
whole truck is full



## **TWT**

Target Wake Time

Allows the device  
to sleep when not  
in-use



## **WPA3**

Wi-Fi Protected Access 3

Stronger, faster  
encryption

ISM

UNI-1

UNI-2A

UNI-2C

UNI-3

-10

-20

-30

-40

-50

-60

-70

-80

-90

-10

-20

-30

-40

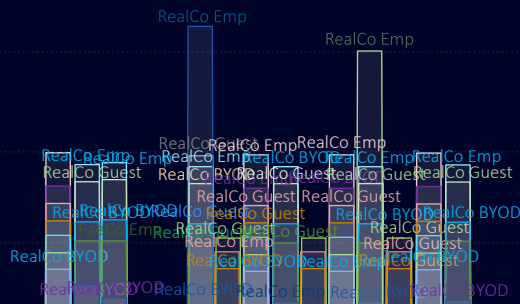
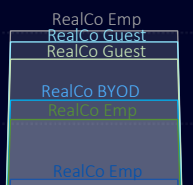
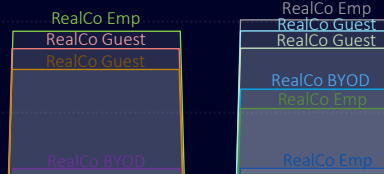
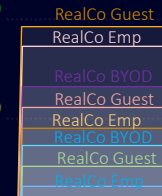
-50

-60

-70

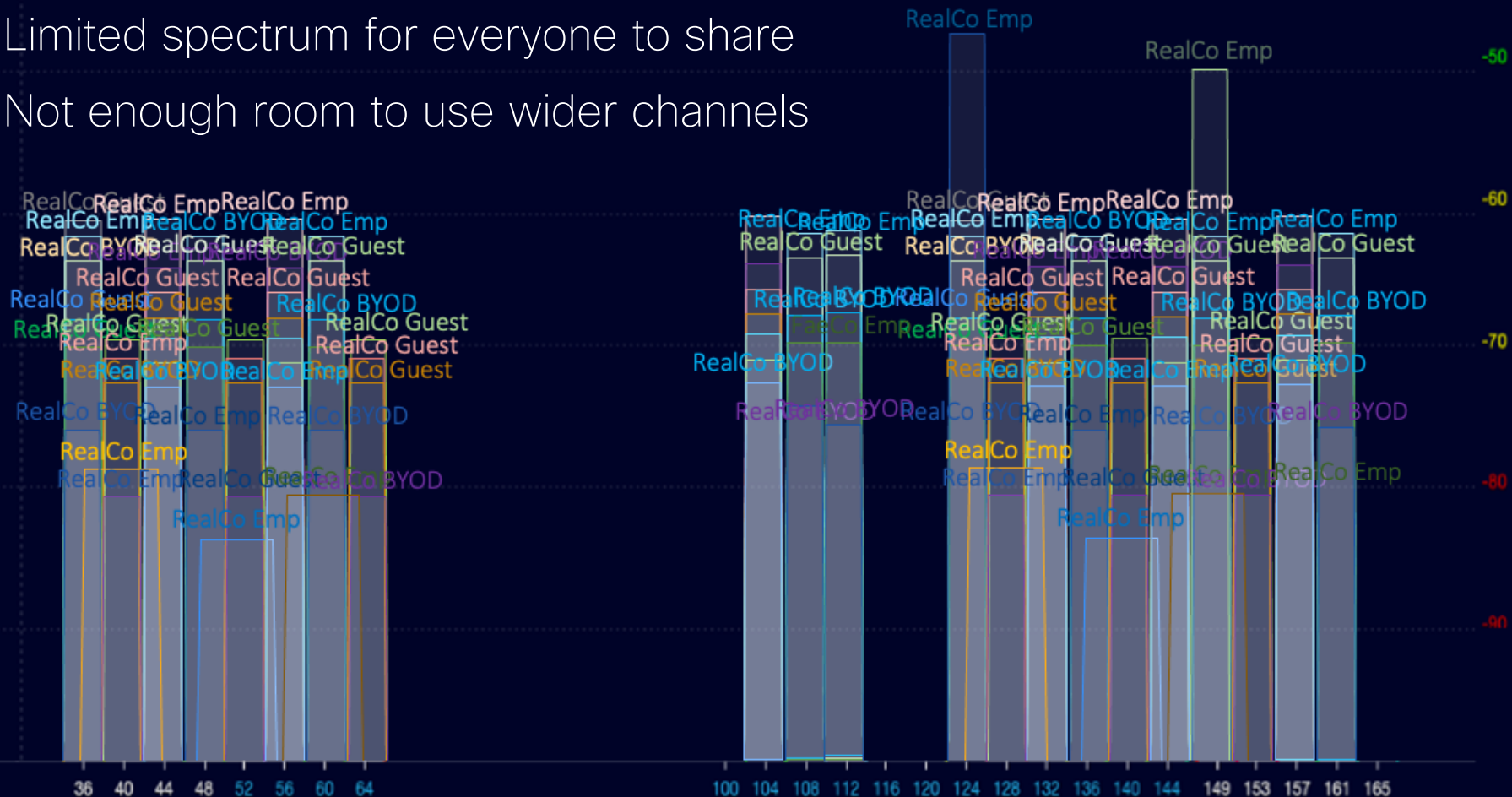
-80

-90

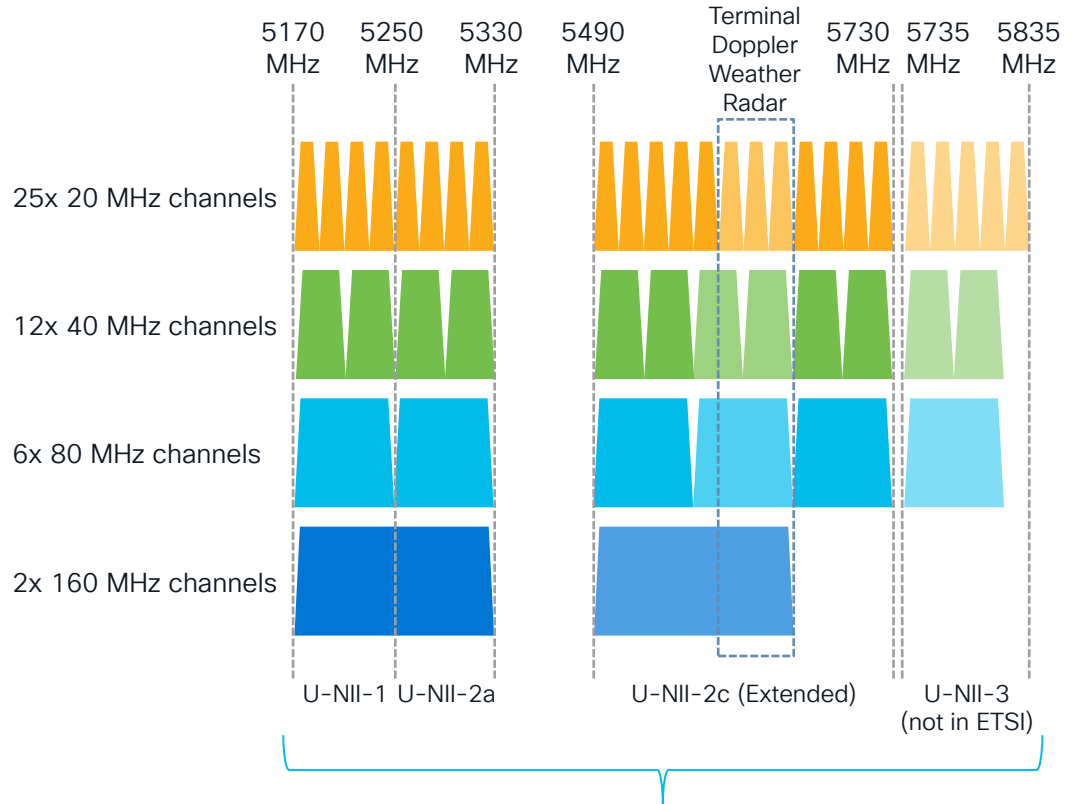




- Limited spectrum for everyone to share
- Not enough room to use wider channels



# The 2.4 GHz and 5 GHz bands today



# Wi-Fi 6E **EXTENDS** with 7 high-speed channels

Experience

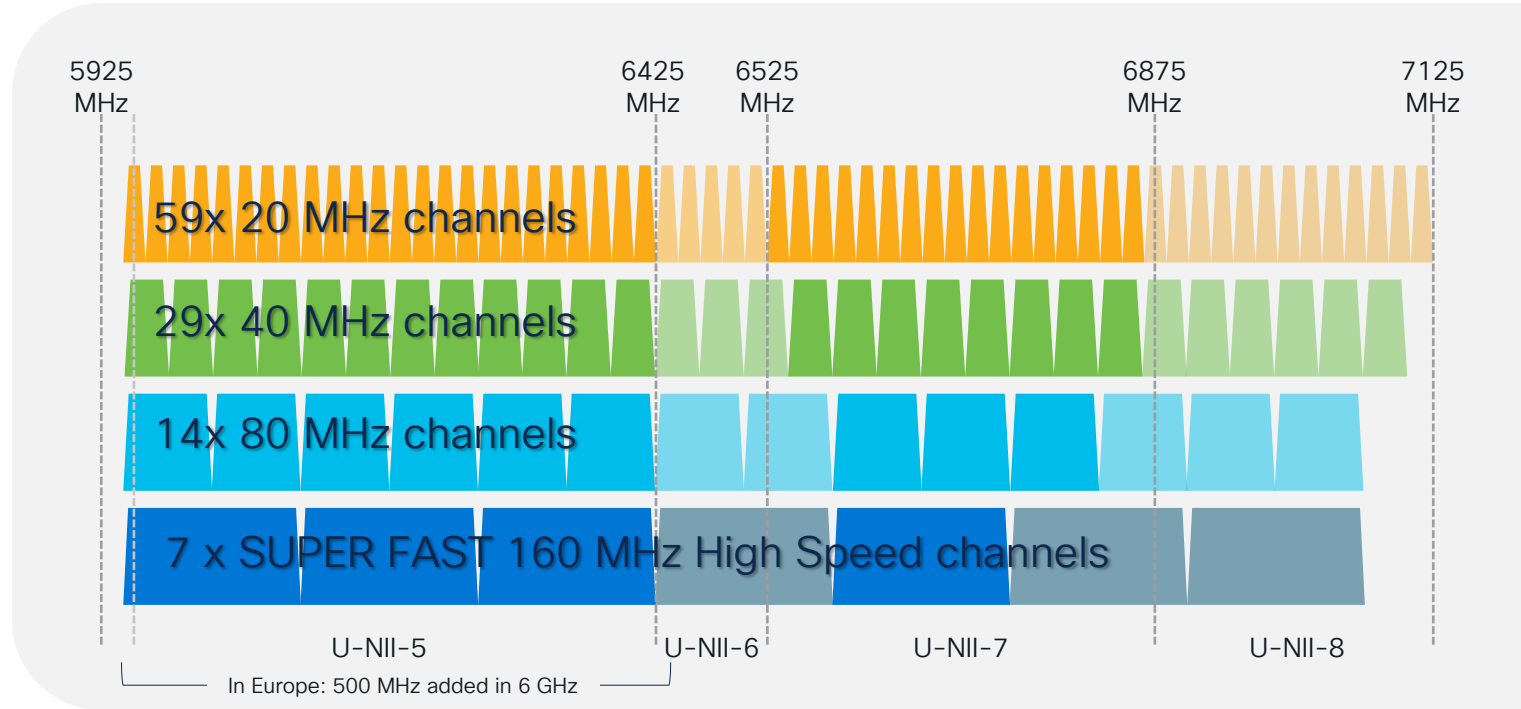
Efficiency

Extended

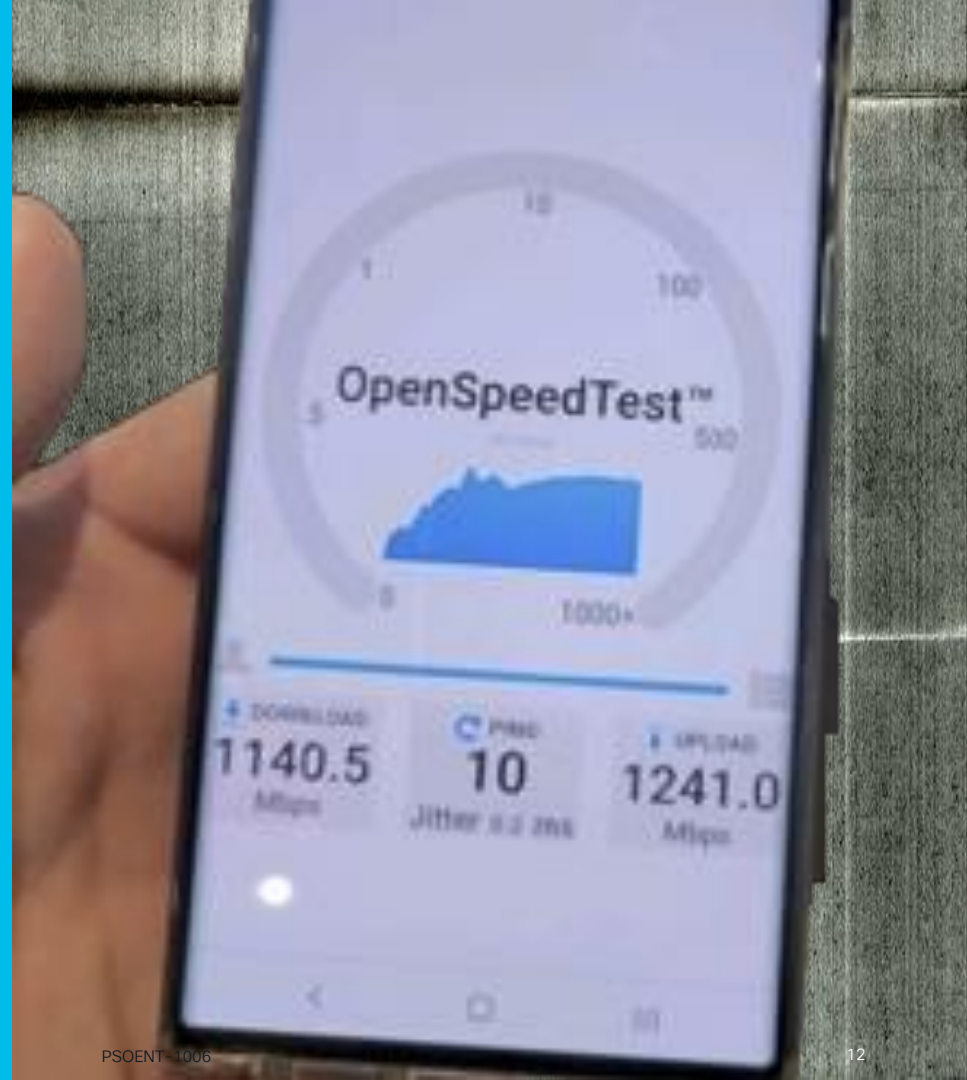
Enhanced

Embraced

Enterprising



Breaking the  
1 Gbps barrier in  
the REAL world!



# **ENHANCED** experience for every vertical

Experience

Efficiency

Extended

Enhanced

Embraced

Enterprising

# Enhanced experience for every vertical

Experience

Efficiency

Extended

Enhanced

Embraced

Enterprising

Public Venues



High resolution video,  
cellular offload, Wi-Fi calling,  
Sidelines communication

Hybrid  
Workspaces



Digital collaboration  
(video conference, digital  
white boards, etc.),  
teleworking

Healthcare



Telemedicine, robotics,  
smart IoT devices and  
wearables, asset tracking

Manufacturing



Automated and digitized  
operations and supply  
chain, robots

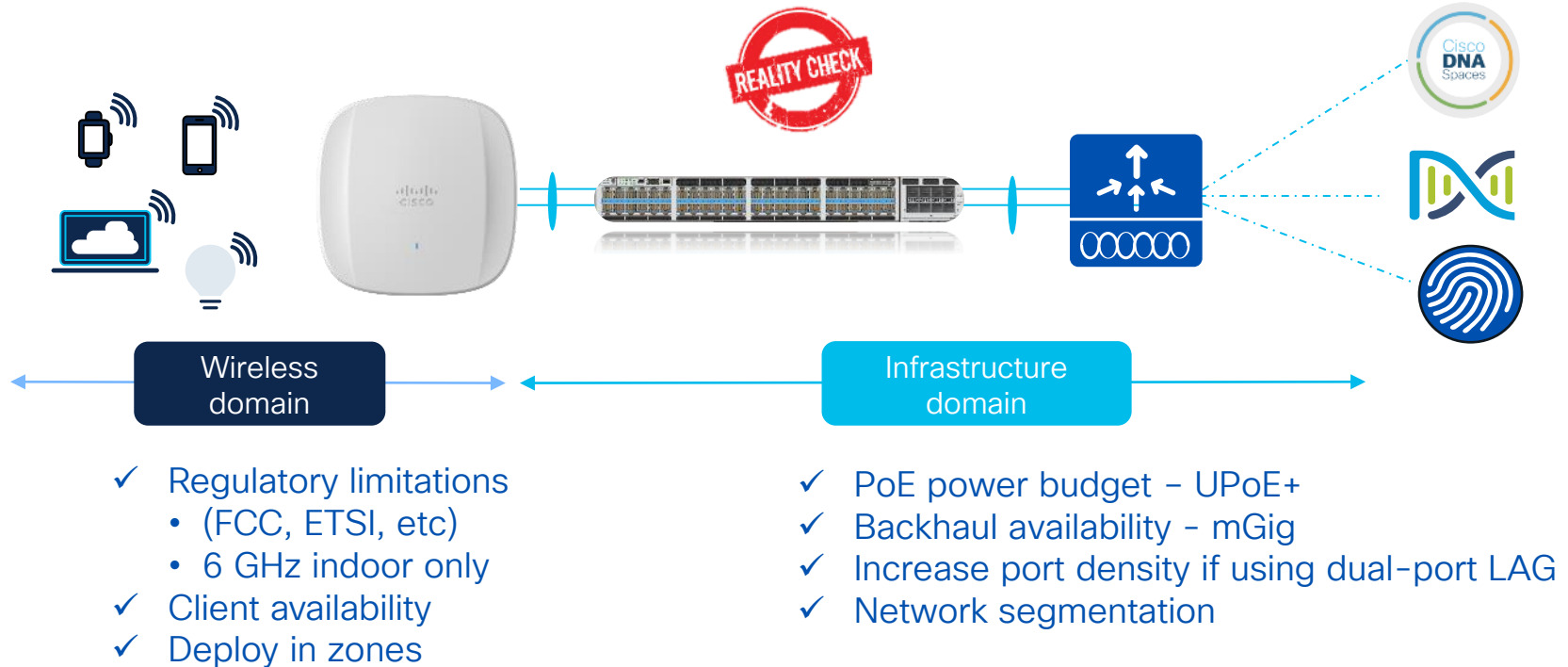
Capacity

High Density

Performance

Low latency

# Ready to **EMBRACE** Wi-Fi 6E?



# Cisco Wi-Fi 6E portfolio



Meraki MR57



	Transmitters	Receivers
2.4 GHz	4	4
5 GHz	4	4
6 GHz	4	4



- Dual 5G mGig Uplinks with failover
- PoE+ and UPoE+ compliant
- IoT Radio
- Monitor Radio



Catalyst 9136



	Transmitters	Receivers
2.4 GHz	4	4
5 GHz	4	4
	8	8
6 GHz	4	4



- Dual 5G mGig Uplinks with failover
- PoE+ and UPoE+ compliant
- IoT Radio
- Scanning Radio
- Environmental sensors



# Welcoming the Catalyst 916x Access Points



# One platform. Your choice.



**On Premises**  
Catalyst 9800 controller  
& Cisco DNA Stack



**Cloud Managed**  
Meraki Dashboard Stack



# Environmental sensors on Catalyst 9136 & 9166



## Air quality



The built-in Gas Sensor Module will enable the reading of Total Volatile Organic Compound (TVOC) concentration into an Indoor Air Quality (IAQ) rating



## Humidity



The built-in module is a fully calibrated sensor with the ability to measure the humidity in the air.



## Temperature



The built-in module can also capture the temperature to provide a reading of the environment remotely.

**Note:** The temperature generated by the AP will be considered during temperature and IAQ readings.

# Cisco Catalyst 916x portfolio



## Catalyst 9162

	Tx	Rx
2.4 GHz	2	2
5 GHz	2	2
6 GHz	2	2



- 2.5Gbps mGig Uplink
- PoE+ and UPoE compliant
- IoT Radio
- CleanAir Pro Radio



## Catalyst 9164

	Tx	Rx
2.4 GHz	2	2
5 GHz	4	4
6 GHz	4	4



- 2.5Gbps mGig Uplink
- PoE+ and UPoE compliant
- IoT Radio
- CleanAir Pro Radio



## Catalyst 9166

	Tx	Rx
2.4 GHz	4	4
5 GHz	4	4
6 GHz	4	4



- 5Gbps mGig Uplink
- PoE and UPoE+ compliant
- IoT Radio
- CleanAir Pro Radio
- XOR radios (low band/high band)
- Environmental sensors

# Introducing Cisco CleanAir Pro on Catalyst 916x

15 years of innovations and excellence carried forward



## Cisco CleanAir Pro

### Evolving Wi-Fi excellence into 6 GHz

- Multiradio architecture: 2.4, 5, & 6 GHz
- AI enhanced scanning radio
- Classification of interferers using machine learning

# Catalyst stack innovation advantage



- **DNA value to 6GHz band:** Automation and Assurance (Device 360, iCap, etc.) Rogue, aWIPS, etc.
- **Smart Building** – Env Sensors + DNA Spaces = innovative use cases without an overlay network.
- **AI Driven at every layer:** AI Driven scan radio, AI Enhanced RRM, Endpoint, Policy, Network, and Trust Analytics.
- **Client ecosystem** – Working with Apple, Samsung, Intel on beyond-standards Wi-Fi 6E steering mechanisms

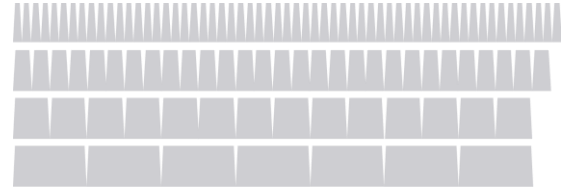
AI/ML assisted at every layer

Catalyst Full Stack Innovations

Intent Based Networking

# With Wi-Fi 6E

- **E**xperiences are upgraded
- **E**fficiencies are gained
- **E**xtending the spectrum
- **E**nhancing use cases
- **E**mbracing your new devices
- **E**nterprising dual personas



# Technical Session Surveys

- Attendees who fill out a minimum of four session surveys and the overall event survey will get Cisco Live branded socks!
- Attendees will also earn 100 points in the Cisco Live Game for every survey completed.
- These points help you get on the leaderboard and increase your chances of winning daily and grand prizes.





# Cisco learning and certifications

From technology training and team development to Cisco certifications and learning plans, let us help you empower your business and career. [www.cisco.com/go/certs](https://www.cisco.com/go/certs)

## Pay for Learning with Cisco Learning Credits

(CLCs) are prepaid training vouchers redeemed directly with Cisco.



## Learn

### Cisco U.

IT learning hub that guides teams and learners toward their goals

### Cisco Digital Learning

Subscription-based product, technology, and certification training

### Cisco Modeling Labs

Network simulation platform for design, testing, and troubleshooting

### Cisco Learning Network

Resource community portal for certifications and learning



## Train

### Cisco Training Bootcamps

Intensive team & individual automation and technology training programs

### Cisco Learning Partner Program

Authorized training partners supporting Cisco technology and career certifications

### Cisco Instructor-led and Virtual Instructor-led training

Accelerated curriculum of product, technology, and certification courses



## Certify

### Cisco Certifications and Specialist Certifications

Award-winning certification program empowers students and IT Professionals to advance their technical careers

### Cisco Guided Study Groups

180-day certification prep program with learning and support

### Cisco Continuing Education Program

Recertification training options for Cisco certified individuals

Here at the event? Visit us at **The Learning and Certifications lounge at the World of Solutions**



# Continue your education

- See the Catalyst 9160 access points in the Cisco Showcase
- Book your one-on-one Meet the Engineer meeting
- Attend the interactive education with DevNet, Capture the Flag, and Walk-in Labs
- Visit the On-Demand Library for more sessions at [www.CiscoLive.com/on-demand](https://www.CiscoLive.com/on-demand)



The bridge to possible

# Thank you

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