

# Wi-Fi 6 VS Wi-Fi 6E



Today's networks are limited by available spectrum. As organizations increase the use of bandwidth-hungry video, cope with increasing numbers of client and IoT devices, and accelerate cloud adoption, Wi-Fi congestion increases and user experience suffers. Without sufficient capacity, organizations are unable to make use of wider channels to support their low-latency, high-bandwidth applications. Wi-Fi 6E, an extension of the current Wi-Fi 6 standard, more than doubles Wi-Fi capacity with wider channels for lower latency to meet today's needs and future proof your investment.



**6.2B**

client devices will be in use in 2021<sup>1</sup>



**15B+**

IoT devices will connect to enterprise infrastructure by 2029<sup>2</sup>

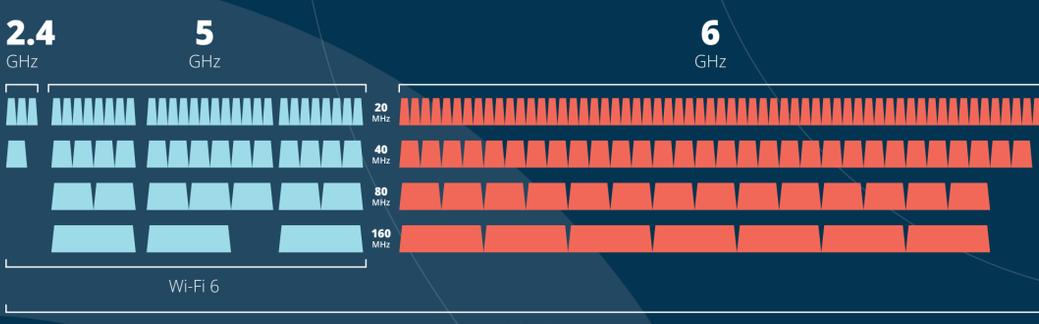


**80%+**

Wi-Fi channels deployed in 2020 were 20 MHz or 40 MHz width<sup>3</sup>

## What is Wi-Fi 6E?

Wi-Fi 6E is Wi-Fi 6 extended to the 6 GHz spectrum



### Wi-Fi 6

#### Features:

- ✓ Multi User efficiencies, bi-directional multi-user input/output (MU-MIMO) to remove bottlenecks
- ✓ OFDMA to create carpool lanes to piggyback smaller packets like voice data
- ✓ Target Wake Time (TWT) to allow APs to ping IoT devices at longer intervals & reduce traffic/extend battery life
- ✓ WPA3 and Enhanced Open to enhance guest access security

### Wi-Fi 6E

#### Includes all Wi-Fi 6 features, plus:

- ✓ More capacity in the 6 GHz band
- ✓ Wider channels, up to 160 MHz, which are ideal for high-def video and virtual reality
- ✓ No interference from microwaves, etc. because only Wi-Fi 6E enabled devices can use the 6 GHz band

## Introducing new device classes

Unlike Wi-Fi 6, Wi-Fi 6E breaks up its devices into 3 classes<sup>4</sup> for optimized capability

#### Low Power Indoor (LPI) AP

This fixed indoor-only class uses lower power levels and will be the first type of Wi-Fi 6E APs rolled out

#### Standard Power (SP) AP

Will support outdoor and indoor operations in the future, using an Automated Frequency Coordination service (AFC) to avoid interfering with incumbent services

#### Very Low Power (VLP) AP

Will provide indoor or outdoor usage from mobile clients in the future for use cases like small cell coverage, hotspots, etc.

## Prepare for the future with Wi-Fi 6E

Wi-Fi 6E represents the newest standard – it can be considered Wave 2 of Wi-Fi 6. As more countries adopt Wi-Fi 6E and more client devices are rolled out, Wi-Fi 6E is expected to grow dramatically.



**70**

countries with 3.4b people are adopting Wi-Fi 6E (May 2021)<sup>5</sup>



**200%**

predicted increase in Wi-Fi 6E APs for 2022<sup>6</sup>



**350m**

350 million Wi-Fi 6E capable devices will be sold in 2022<sup>7</sup>

## Expanded use cases

With Wi-Fi 6E, you can future-proof your investment and better support existing and emerging use cases like:



Multi-gigabit Wi-Fi capacity for large venues



Mission-critical applications with dedicated Wi-Fi 6E devices



Low-latency Wi-Fi calling



Next-gen experiences with AR/VR

## The Aruba difference

#### With our solution, you'll receive all the benefits of Wi-Fi 6E, plus

- ✓ Ultra tri-band filtering to prevent interference between the 5 GHz and 6 GHz bands
- ✓ Dual HPE Smart Rate ports for high availability data and power
- ✓ Advanced security capabilities like unified policy enforcement across wired and wireless
- ✓ IoT device inspection
- ✓ Wi-Fi optimization for client devices and radio frequencies

Learn more about Wi-Fi 6E and how to get started with Aruba at

<https://www.arubanetworks.com/wifi6e>

