

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 2021¹



15B+

IoT devices will connect to enterprise infrastructure by 2029²

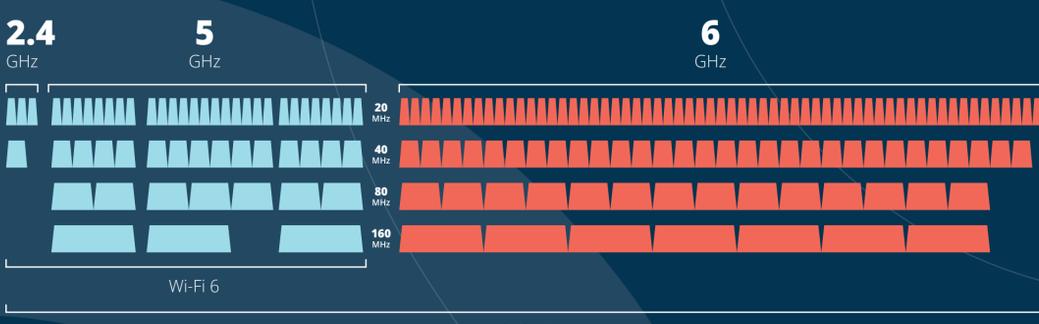


80%+

Wi-Fi channels deployed in 2020 were 20 MHz or 40 MHz width³

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 classes⁴ 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)⁵



200%

predicted increase in Wi-Fi 6E APs for 2022⁶



350m

350 million Wi-Fi 6E capable devices will be sold in 2022⁷

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>



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Sources:
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4. Use of these three classes is dependent on country
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6. 650 Group
7. 650 Group