

**NETGEAR<sup>®</sup>**  
BUSINESS

---

WiFi 6E

for a Better Connected Business



# WiFi 6E

## Designed for Today's Demanding Business World

There is a new type of WiFi in town, and it is big news because it overcomes previous limitations of WiFi technology. Called WiFi 6E, this breakthrough in network capacity means that a much larger volume of devices can be connected via wireless, even in very dense usage areas, without compromising performance.

With WiFi 6E, there is less competition and interference between WiFi equipment, dramatically reduced network congestion, as well as smoother, faster connectivity without worrying about everything freezing or slowing down. This new industry standard builds on the existing WiFi 6 standard (the 'E' stands for extended), taking it into the much wider 6GHz radio spectrum..

In addition, nothing else operates on 6GHz: no other WiFi standards, no radar airports, nearby TV stations, nothing. So, WiFi 6E has all that extra radio spectrum to itself, with generous headroom for future WiFi usage growth. In practice, WiFi 6E can support up to four times the volume of devices compared to previous standards. It is also super-fast and secure. In practice, this means businesses can keep up with the growing demand for digital traffic.

The timing is right: to keep pace with the explosion of online traffic and the number of connected devices, research had already estimated that WiFi capacity worldwide must double by 2022. So WiFi 6E is needed right now. A significant bonus is its robust security, helping keep critical business information private and safe.

Plus, WiFi 6E is already here: many compatible smartphones, laptops, and other devices have already launched, including the Samsung Galaxy S21 Ultra, the Google Pixel 6, the Xiaomi 11 Ultra, or the ASUS Zenphone 8 smartphones, and many others.

Read on to find out more about why WiFi 6E is such a step forward and how it can help businesses communicate and compete better.



6 GHz

5 GHz

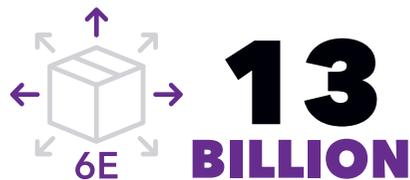
2.4 GHz

WiFi  
ADVANCED

# Why WiFi 6E is Needed

People may wonder why we needed yet another WiFi standard when WiFi 6 was only recently introduced. The bottom line is that while WiFi 6 was a massive step forward, and while it (and even WiFi 5) is still sufficient in many instances, there are increasing situations when they are no longer enough. Speed gains are not enough.

Many of us can relate to searching for available WiFi and seeing how many are in the near vicinity. Before WiFi 6E, they all share the same radio frequencies, and that can cause problems. If devices and networks compete for insufficient network capacity, networks can become congested and under-perform, with latency issues, freezing, or complete drop-outs.



devices with WiFi 6 and WiFi 6E are expected to be shipped by 2026

(Source: Research & Markets)

# Capacity Demands

Furthermore, WiFi demand keeps growing. The number of phones, laptops, tablets, printers, security cameras, other video equipment, smart building systems, and a whole host of other connected devices is accelerating fast.

On top of that, more advanced technologies can place extra pressure on networks. For instance, HD and 4K streaming video require far more data throughput compared to earlier standards. Other drivers include the virtualization of many businesses, with people working from home and relying on technology to communicate with colleagues and customers.

More capacity is needed, and while it depends on several factors, the starting point has to be the amount of radio spectrum available within a WiFi standard. Until recently, that was limited.

Worldwide WiFi connectivity needs to increase



**x2.2**

by 2022 to support demand

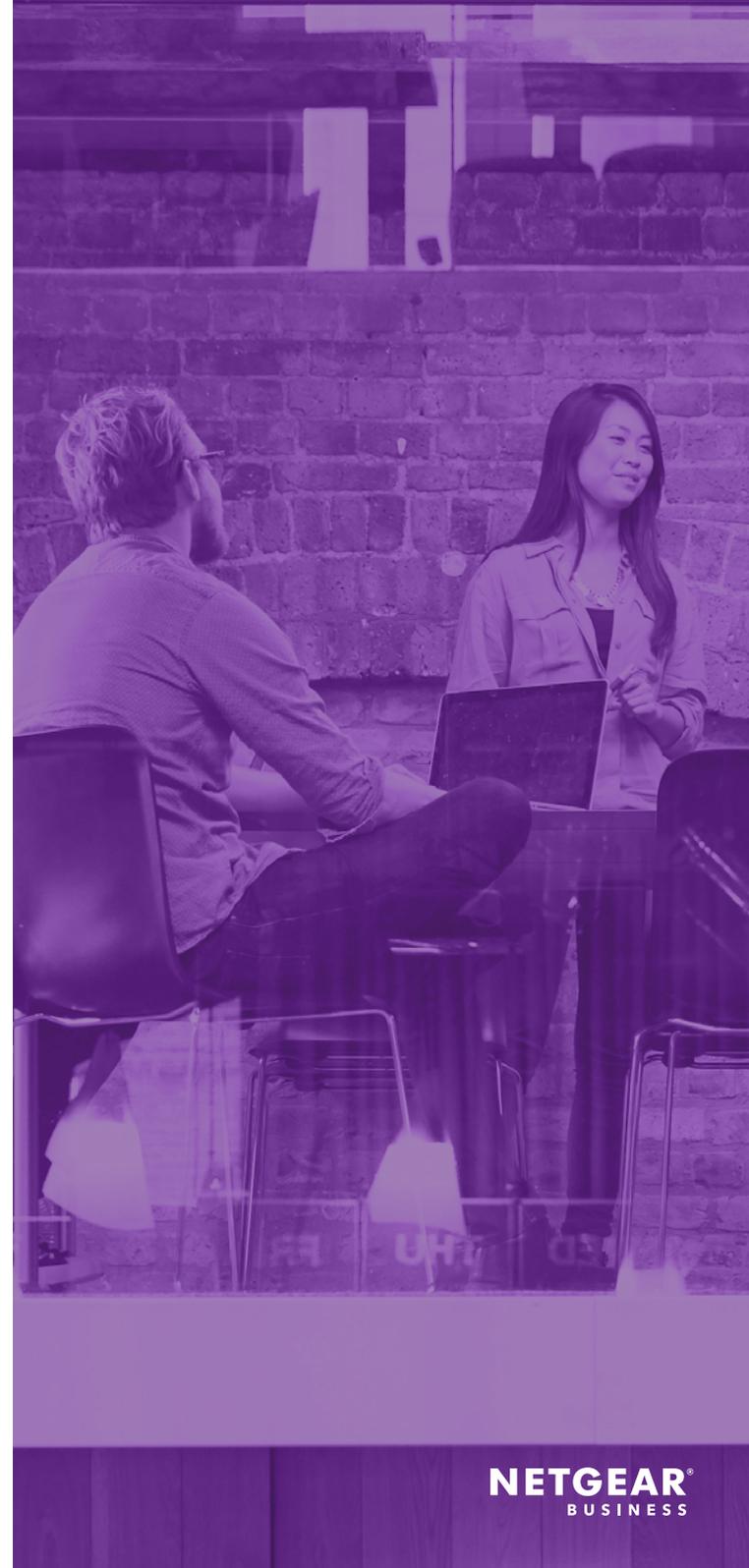
(Source: LogisticsIQ)



**80+**  
BILLION

connected devices - by 2030

(Source: Logistics IQ)



WiFi 6E

# So Much More Than Speed

WiFi 6E does not just mean fast speeds, it also means far more capacity, because it has been given the 6GHz radio spectrum, which is much wider than the 2.5GHz and 5GHz wireless bands used for existing WiFi standards. Furthermore, it is not sharing this new spectrum with anything else, so there is no risk of, for instance, antennae from TV companies or air traffic control causing interference or taking up valuable headroom. Also, WiFi 6E mandates WPA3, the latest WiFi security standard, adding extra safety and privacy.

While existing devices designed for previous WiFi standards will not be able to take full advantage of its benefits, WiFi 6E is compatible with legacy equipment, so it can be cost-effectively introduced into existing networks without having to rip-and-replace.



THE FUTURE  
OF WIFI

## WiFi 6E by numbers vs. WiFi 5:



**x4**  
MORE DEVICES THAT  
CAN BE CONNECTED  
SIMULTANEOUSLY



**x3**  
FASTER



**x3.5**  
MORE CHANNELS

**WiFi 6E is the key to taking business connectivity to a whole new level.**

# What Does WiFi 6E Mean for My Business?



**So is it time to jump ship to WiFi 6E? Very possibly, but there are a few factors to consider.**

The first step is working out what a business needs from WiFi, whether now or shortly. How to know? Think about what systems are connected, the volume of users and devices, and whether the business is experiencing connectivity issues. A managed service provider with network expertise can help a company evaluate the situation.

Another consideration is the availability of products designed for WiFi 6E. Many compatible products have already been introduced, with more being added all the time. So, it is a pretty safe bet that most new product introductions from now on will be WiFi 6E-capable.

It is essential to know that while WiFi 6E provides impressive capacity and performance, it won't reach quite as far as WiFi 6 by itself due to its shorter wavelengths and may be affected by physical barriers. However, that issue is overcome by using products that can also operate in the existing 2.4GHz and 5GHz spectrum bands, such as the NETGEAR WAX630E WiFi 6E Access Point.

Another consideration is WiFi 7, which is already being discussed in the network industry. Or if access speeds above 10Gbps are needed, is it better to buy an Ethernet network switch instead? Of course, in many situations, a switch is a great option. Still, if a business needs wireless, then it is essential to know that while WiFi 7 is on the horizon, it will not be a commercial reality for users for some years yet.

So, if a boost in capacity and quality is needed now or soon, then WiFi 6E is the market-ready choice for today.



# Here are a few examples of applications and devices that benefit from WiFi 6E

## Applications:



**High density, high volume** - lots of users and connected devices nearby needing WiFi

**Video streaming** - especially when supporting 4K and HD image quality, or AR/VR headsets

**Collaboration and video conferencing** - consistent access is essential to the user experience



## Types of Business:



**Retail outlets** - support PoS, back-office access, and visitor WiFi access, however high the footfall

**Apartment complexes** - support more employees or students working from home

**Schools** - interactive learning including AR/VR, digital signage, conferencing, and security systems

**Healthcare** - imaging, telemedicine, patient monitoring, remote patient consultations

**Entertainment** - digital signage, small auditoriums, AV in sports bars and restaurants

**Offices** - smart building and security systems, plus reliable WiFi access for multiple users

**Factories and warehouses** - robotics, drones, automatic guided vehicles, digital twins, and a connected workforce.

WiFi 6E Benefits  
All Kinds of  
Organizations

CHEESE BUTTERNUT, CHEESE & CINNAMON  
BACON, MUSHROOM & CHEESE

# NETGEAR<sup>®</sup> BUSINESS + WiFi 6E



To help SMBs make the most of WiFi 6E, NETGEAR has introduced the WAX630E, which builds on the features of its existing and popular WAX630 wireless access point. This affordable business-grade device means faster speeds, less network congestion and interference, and ultra-low latency so that businesses can enjoy a more consistent and higher-quality wireless experience.

The industry's first Tri-Band WiFi 6E access point for SMBs, WAX630E, delivers up to 7.8Gbps, by combining speeds across those three bands. It is also designed to take advantage of multi-gigabit connectivity (2.5GbE), leading to better streaming, conferencing, and collaboration.

The ability to create up to 8 separate WiFi networks (SSIDs) from one device enables businesses to address multiple requirements. For instance, there can be different sub-systems for employee types, visitors, and surveillance cameras, to help protect data and users. Security is taking a further step forward with VLAN support.

Designed for simple set-up out-of-the-box, the WAX630E is also supported by NETGEAR Insight, NETGEAR's cloud management portal for installing, monitoring, troubleshooting, and updating networks, whether in the same room or remotely.

To find out more information about WAX630E, go to [www.netgear.com/WAX630E](http://www.netgear.com/WAX630E).

For more information on WiFi 6E for business, go to [www.netgear.com/business/WiFi\\_6E](http://www.netgear.com/business/WiFi_6E)



**NETGEAR**<sup>®</sup>  
BUSINESS

**NETGEAR**<sup>®</sup>

NETGEAR, Inc  
408.907.8000  
350 E. Plumeria Drive  
San Jose, California 95134  
Tel: 866-480-2112 Option 2  
[www.netgear.com/business](http://www.netgear.com/business)

Follow us on:

 [linkedin.com/showcase/netgear-business-products](https://www.linkedin.com/showcase/netgear-business-products)

 [business.facebook.com/NetgearBiz](https://business.facebook.com/NetgearBiz)

 [twitter.com/NETGEAR](https://twitter.com/NETGEAR)

©2021 NETGEAR<sup>®</sup>, Inc. NETGEAR<sup>®</sup>, the NETGEAR<sup>®</sup> logo and Insight Pro<sup>™</sup> are trademarks and/or registered trademarks of NETGEAR<sup>®</sup>, Inc. and/or its subsidiaries in the United States and/or other countries. Other brand names mentioned herein are for identification purposes only and may be trademarks of their respective holder(s). Information is subject to change without notice. All rights reserved.