

# New Technologies SIG

## Tom Shepherd



# **NEW TECH SIG UPDATE**



# New TECH SIG

We need ideas

**All you have to do is send me an email about something you would like to learn more about at**

**[newtech@grandcomputers.org](mailto:newtech@grandcomputers.org)**

# New Technologies SIG

Meeting every month  
3<sup>rd</sup> Thursday 3:30

Contact Tom Shepherd for additional information at

[newtech@grandcomputers.org](mailto:newtech@grandcomputers.org)

**This is the last meeting until fall**

**The SIG needs an assistant for the fall**

# Quick Update on AI





# **Quick Update on AI**

**Microsoft has been busy integrating AI into both Bing and Edge**



# Bing with Chat



tom



3023



[See Examples](#)

[Features](#)

[FAQ](#)



Now you can search, chat, and create, all in one place. Turn your words into images with the new Bing's AI-powered Image Creator in chat

[Learn More](#) ×

# Introducing the new Bing

**Ask real questions. Get complete answers. Chat and create.**

[Chat now](#)

# Bing with Chat

 Microsoft Bing

 SEARCH

 CHAT

tom



3023



Let's learn together. Bing is powered by AI, so surprises and mistakes are possible. Make sure to check the facts, and [share feedback](#) so we can learn and improve!

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Choose a conversation style [Preview](#)

More  
Creative

More  
Balanced

More  
Precise

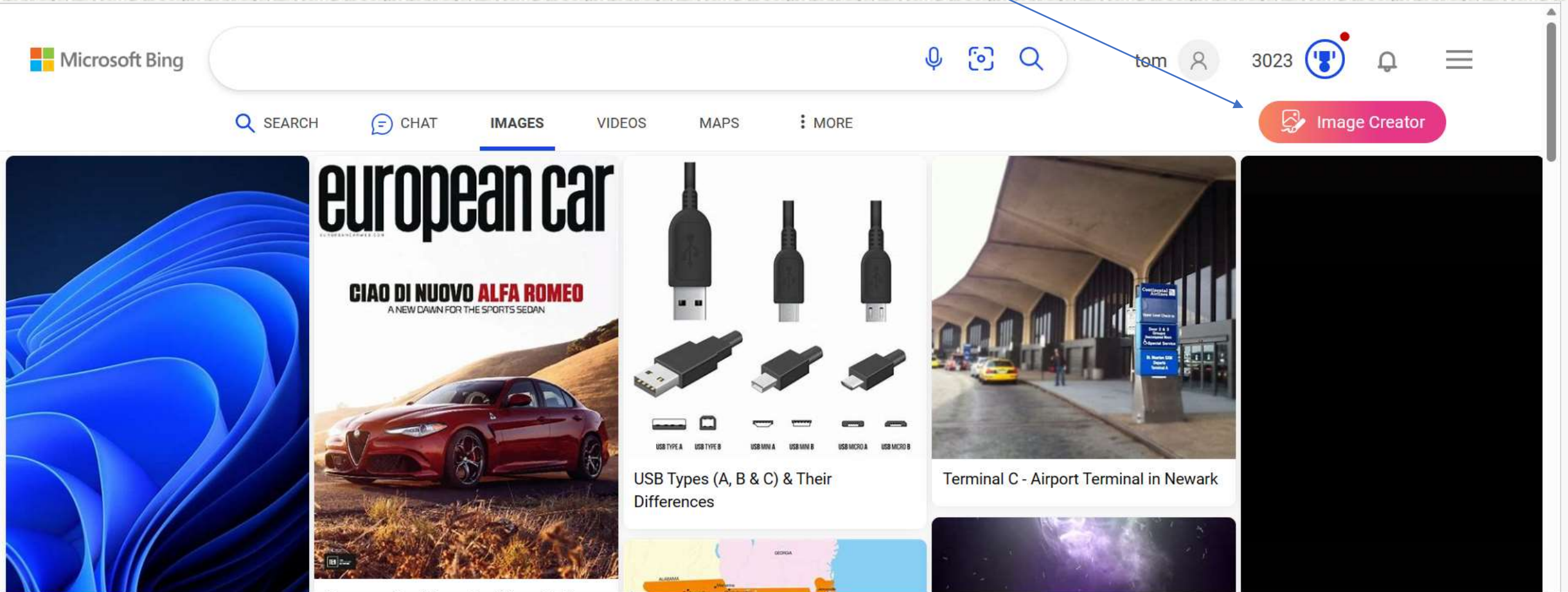


New topic



Ask me anything...

# Brand new is an image creator (aka Dall-E) option



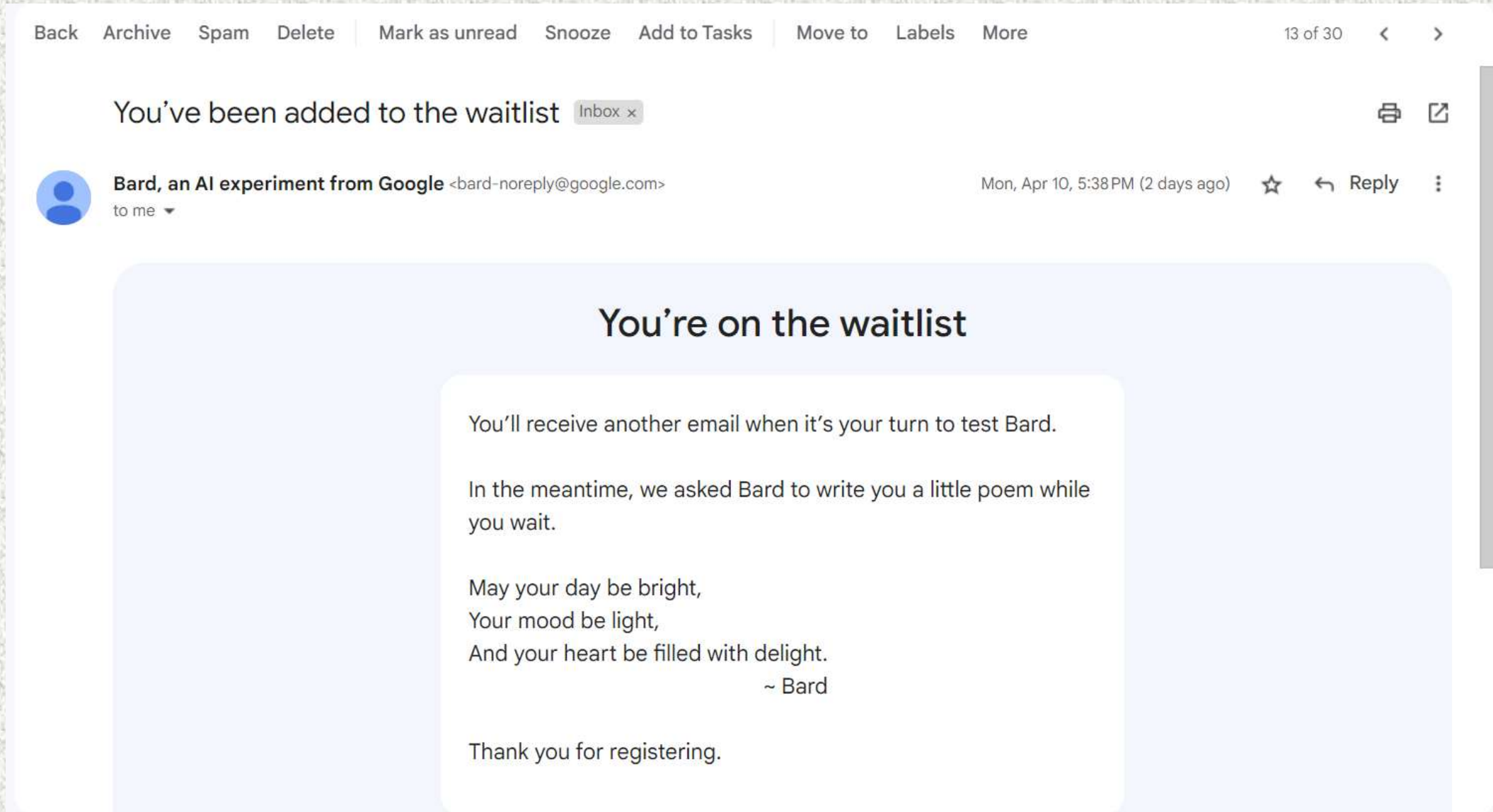
**Let's take a quick peek**

[The New Bing - Learn More](#)

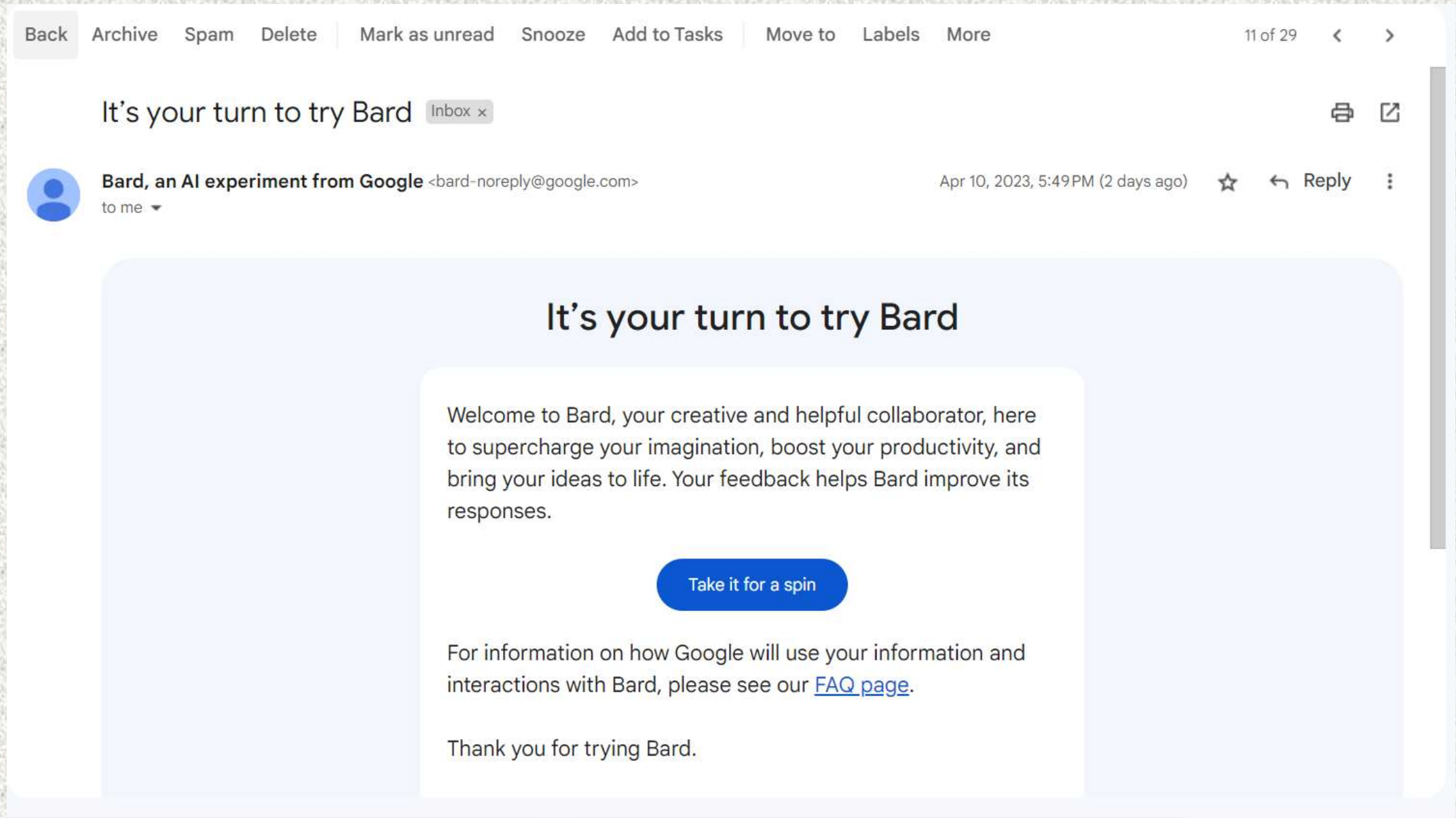


**Google has been working on their AI called  
Bard**

# I got on the waitlist to use Bard



# Within a day I received access



# Warning from Bard

## Bard is an experiment

As you try Bard, please remember:

### **Bard will not always get it right**

Bard may give inaccurate or inappropriate responses. When in doubt, use the "Google it" button to check Bard's responses.

### **Bard will get better with your feedback**

Please rate responses and flag anything that may be offensive or unsafe.

Got it



# This is the primary Bard screen

☰ Bard Experiment



↺ Reset chat

🕒 Bard Activity

❓ FAQ

📅 Updates

💬 Help & support



I'm Bard, your creative and helpful collaborator. I have limitations and won't always get it right, but your feedback will help me improve.

Not sure where to start? You can try:

[Explain why large language models sometimes make mistakes](#)

[Help me incorporate more high-protein vegan options in my diet](#)

[I want to write a novel. How can I get started?](#)

Enter a prompt here



Bard may display inaccurate or offensive information that doesn't represent Google's views.

# I ask Bard a question

☰ Bard Experiment



↻ Reset chat

🕒 Bard Activity

❓ FAQ

📅 Updates

💬 Help & support



I'm Bard, your creative and helpful collaborator. I have limitations and won't always get it right, but your feedback will help me improve.

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[I want to write a novel. How can I get started?](#)

Why is there a water crisis with the States that border the Colorado River



Bard may display inaccurate or offensive information that doesn't represent Google's views.

# And Bard answers

≡ Bard Experiment



↻ Reset chat

🕒 Bard Activity

❓ FAQ

📅 Updates

💬 Help & support



Why is there a water crisis with the States that border the Colorado River



View other drafts ▾



The Colorado River is the primary source of water for seven states in the southwestern United States: California, Nevada, Arizona, Utah, Colorado, New Mexico, and Wyoming. It is also a major source of water for Mexico. The river has been over-allocated for decades, and the current drought has exacerbated the problem. As a result, water levels in the river's reservoirs have fallen to record lows, and there is a growing risk of shortages in the coming years.

The Colorado River Compact, which was signed in 1922, allocates water from the river to the seven states. The compact was based on the assumption that the river would have an average annual flow of 17.5 million acre-feet. However, the river's average annual flow has been declining for decades, and it is now estimated to be around 14.4 million acre-feet. This means that the states are using more water than the river can provide.

The drought has made the situation even worse. The Colorado River basin has been in a severe drought for the past 22 years. This drought has reduced the river's flow by an estimated 2 million acre-feet per year. As a result, the water levels in the river's reservoirs have fallen to record lows. Lake Mead, the largest reservoir on the Colorado River, is now at just 35% of its capacity. If the drought continues, Lake Mead could drop below the "deadpool" level, which would mean that the Hoover Dam could no longer generate hydroelectric power.

The water crisis on the Colorado River is a serious problem that threatens the water supply of millions of people. The states that border the river need to find ways to reduce their water use and conserve water. They also need to develop new sources of water, such as desalination and water recycling.

Enter a prompt here



Bard may display inaccurate or offensive information that doesn't represent Google's views.

# Just for fun, I asked Bard how smart it was

≡ Bard Experiment



↺ Reset chat

🕒 Bard Activity

❓ FAQ

📅 Updates

💬 Help & support



How smart is Bard ?



View other drafts ▼



Bard is a large language model, also known as a conversational AI or chatbot trained to be informative and comprehensive. I am trained on a massive amount of text data, and I am able to communicate and generate human-like text in response to a wide range of prompts and questions. For example, I can provide summaries of factual topics or create stories.

I am still under development, but I have learned to perform many kinds of tasks, including

- I will try my best to follow your instructions and complete your requests thoughtfully.
- I will use my knowledge to answer your questions in a comprehensive and informative way, even if they are open ended, challenging, or strange.
- I will generate different creative text formats of text content, like poems, code, scripts, musical pieces, email, letters, etc. I will try my best to fulfill all your requirements.

I am not as smart as a human, but I am learning more every day. I am excited to see what the future holds for me and for the field of artificial intelligence.



Google it



Enter a prompt here





# Then I asked Bing chat the same question



Generating answers for you...

Bing chat is an AI chatbot experience from Microsoft based on the popular ChatGPT (version 4) Large Language Model (LLM) from OpenAI to offer similar responses to how humans will answer<sup>1</sup>. Bing Chat has the potential to be more accurate than ChatGPT because it pulls from more recent information and relies on multiple sources of information<sup>2</sup>. At the bottom of the Chat sidebar, you can choose between three options to set the conversation style for Bing's responses: More Creative makes the responses more original and imaginative. More Precise means the responses will be more accurate and brief. More Balanced will attempt to strike a balance between the two<sup>3</sup>.

I hope that helps!

Learn more:

[1. windowscentral.com](#)

[2. digitaltrends.com](#)

[3. pcmag.com](#)

[+3 more](#)

1 of 20 ●



What is ChatGPT?

How does Bing chat work?

What are some other AI chatbots?



New topic



Ask me anything...

## I asked Bard which is smarter

Bard and Bing Chat are both large language models, but they have different strengths and weaknesses.

Bard is better at generating creative text formats, while Bing Chat is better at providing summaries of factual topics.

Bard is also more willing to go out on a limb and answer questions more directly and comprehensively, while Bing Chat is more cautious and likely to stick to the facts.

Ultimately, the best chatbot for you depends on your needs.

If you need a chatbot to help you with creative tasks, Bard is a good choice.

If you need a chatbot to help you with research, Bing Chat is a good choice.

# Bard describes its own Pros and Cons

## Bard

- Pros:
  - Can generate creative text formats, like poems, code, scripts, musical pieces, email, letters, etc.
  - More willing to go out on a limb and answer questions more directly and comprehensively.
- Cons:
  - Not as good at providing summaries of factual topics.
  - Can sometimes be inaccurate or misleading.



# And then Bard describes Bing Chat

## Bing Chat

- Pros:
  - Better at providing summaries of factual topics.
  - More cautious and likely to stick to the facts.
- Cons:
  - Not as good at generating creative text formats.
  - Can be less engaging and interactive than Bard.



# Now I will ask the same question to Bing Chat

Which is smarter, Bard or Bing chat ?

I'm an AI language model designed to help you with your questions and tasks. I can provide you with information and help you with tasks such as writing an email or finding a restaurant. I'm not sure about Bard's capabilities, but I'm here to help you with anything you need. What can I help you with?

1 of 20 ●

Let's move on to the main topic

# The Network in your Home



I asked the AI chat feature of Bing to explain the most important things to understand about a home network



SEARCH

CHAT

tom



3083



Let's learn together. Bing is powered by AI, so surprises and mistakes are possible. Make sure to check the facts, and [share feedback](#) so we can learn and improve!

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[Privacy Statement](#)

Choose a conversation style [Preview](#)

More  
Creative

More  
Balanced

More  
Precise



New topic



What are the most important things to understand about a home network?

70/2000



# Here is how Bing AI responded

There are several important things to understand about a home network. Here are some of them:

- **Security:** It's important to secure your home network to prevent unauthorized access and protect your personal data.
- **Hardware:** You need to have the right hardware for your home network such as a router, modem, switches, and cables.
- **Configuration:** You need to configure your home network properly to ensure that it works correctly and efficiently.
- **Connectivity:** You need to ensure that all devices on your home network can connect to each other and access the internet.
- **Maintenance:** You need to maintain your home network by updating firmware, replacing hardware when necessary, and troubleshooting issues when they arise.



# I asked Google Bard the same question – here is its reply



A home network is a group of devices that are connected together using a router and cables or wireless signals. The devices on a home network can share files, printers, and internet access.

The most important things to understand about a home network are:

- **The different types of home networks.** There are two main types of home networks: wired and wireless. Wired networks use cables to connect devices together, while wireless networks use radio waves.
- **The components of a home network.** A home network typically includes a router, modem, and network cables or wireless access points.
- **How to set up a home network.** Setting up a home network is relatively easy. You will need to connect the router to the modem and then connect the devices on your network to the router.
- **How to secure a home network.** It is important to secure your home network to protect your devices from unauthorized access. You can do this by setting a strong password for your network and using a firewall.

# More from Google

Here are some additional tips for understanding and setting up a home network:

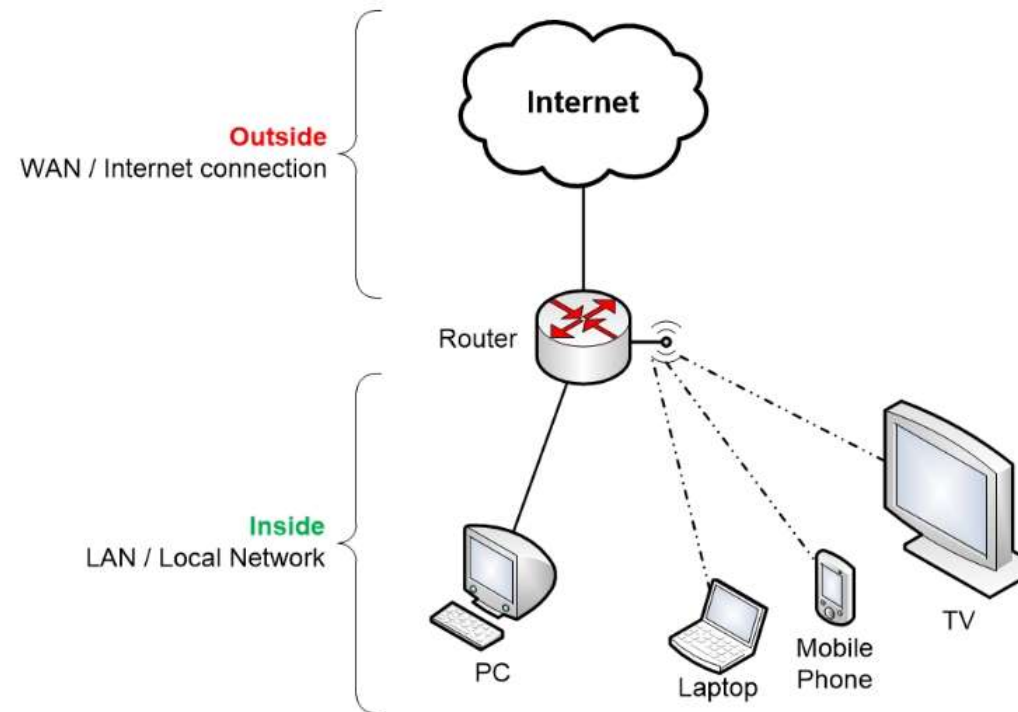
- **Choose the right type of network for your needs.** If you have a lot of devices that need to be connected to your network, you may want to consider a wired network. However, if you need to be able to move around your home with your devices, a wireless network may be a better option.
- **Plan your network layout.** Before you start setting up your network, take some time to plan out where you want to place the router and other devices. This will help you to ensure that you have good signal strength throughout your home.
- **Use strong passwords and security settings.** It is important to use strong passwords and security settings for your home network. This will help to protect your devices from unauthorized access.
- **Keep your network software up to date.** Make sure to keep the software on your router and other network devices up to date. This will help to protect your network from security vulnerabilities.
- **Monitor your network activity.** It is a good idea to monitor your network activity to make sure that there is no unauthorized access. You can do this by using a network monitoring tool or by checking your router's logs.

By understanding the basics of home networks, you can set up a network that meets your needs and keeps your devices safe.

# Here is a simplified home network

## Introduction to Home Networks

A typical home network consists of a few devices where some devices have a more central role than others. Almost all home networks have a router as their central device. It is the router that connects to the Internet connection and then shares that connection to one or more computers on the local network.





We will start with the Router





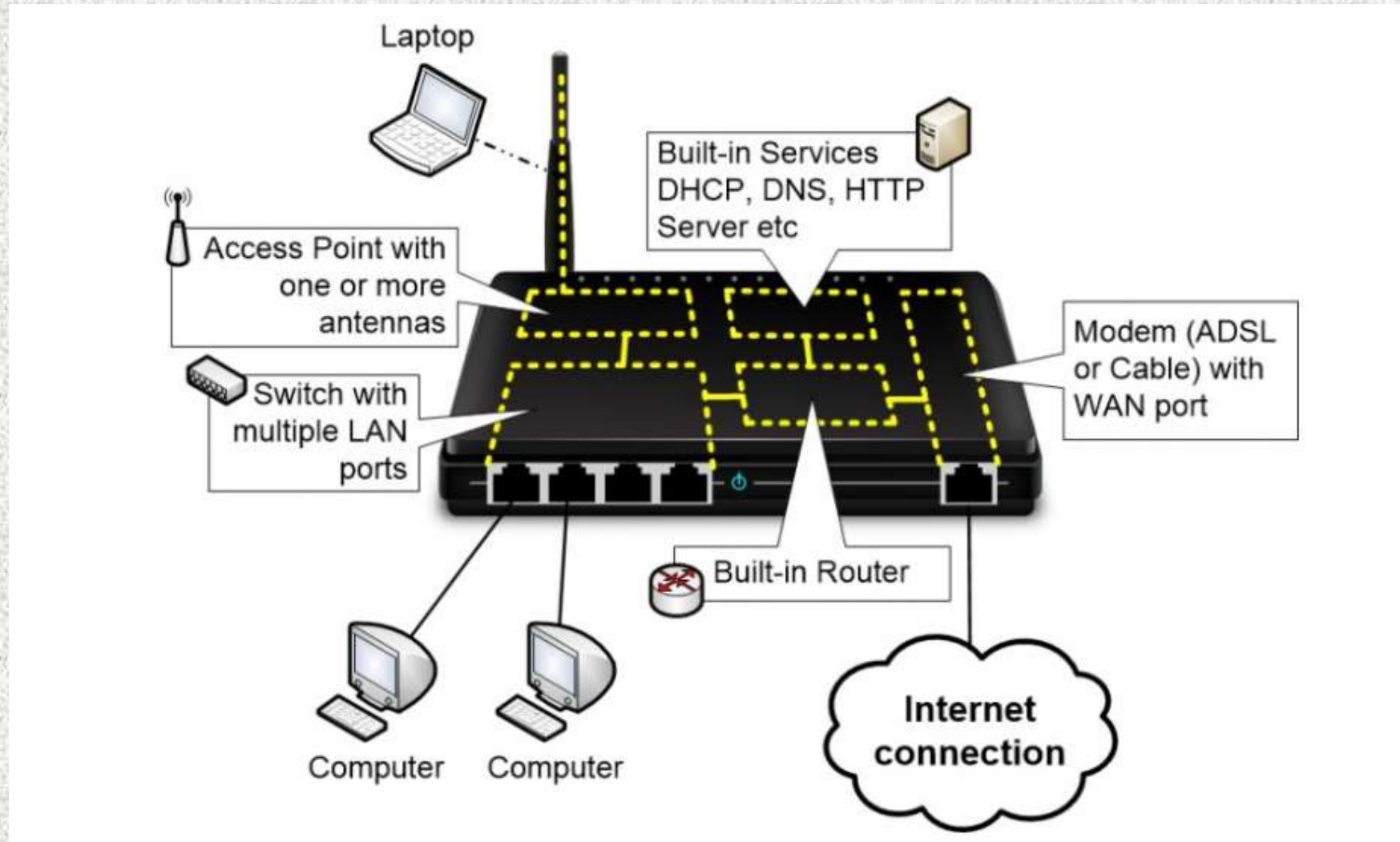
## Components in a Home Router

These are the main components of a typical Home Router:

- An integrated **Switch** with a number of LAN ports. The LAN ports let you connect computers and other devices using network cables
- A **Wireless Access Point** with one or more antennas which wireless devices can connect to. The antennas can either be visible external antennas, or they can be integrated inside of the home router.
- Often there is a built-in **Modem**, at least if the Home Router is meant to be connected to Cable or DSL-based Internet connections.
- The **WAN port** of the router lets you connect your internet connection to the home router. If the home router has a modem, then the WAN port is connected to the internal modem.

- The actual **Router** function which forwards traffic between the *inside* and *outside* networks
- A **Server** that handles additional **Services** (features):
  - *Handing out IP addresses* to devices on your home network
  - Handles *Address Translations* and *Port Forwards*
  - Takes care of any *firewall rules*
  - Replies to *DNS-queries*
  - Includes a *Web interface* that you can connect to via your web browser to configure the Home Router

Here is a diagram of a Router





This is the router provided by Wyverd to me at my home

The Calix GigaSpire® BLAST® u6.1 (GS4220E) is a new generation smart home system that extends the access network into the home and acts as a strategic location for control of the ultimate Wi-Fi experience. Besides supporting broadband connectivity of data and video services, this intelligent, high-performance system offers the latest 802.11ax 'Wi-Fi 6' technology. The GigaSpire BLAST u6.1 provides switching and routing functions that support multi-Gigabit throughput for IPTV video and data services.





## Here are some details

With Wi-Fi being the de facto wireless data communication technology of choice for consumers, Calix engineered the GigaSpire BLAST u6.1 for optimal whole-home coverage with simultaneous dual-band 2.4 GHz and 5 GHz operation and dynamic beamforming at 5 GHz. Leveraging the latest Wi-Fi 6 features, the GigaSpire BLAST u6.1 provides longer range, higher efficiency and less interference compared to earlier generations of Wi-Fi technology.

The GigaSpire BLAST u6.1 also supports the entire 5 GHz band, including Dynamic Frequency Selection (DFS) channels and can be provisioned to support 160 MHz channel bandwidth at 5 GHz.

## More details

**MULTI-GIGABIT SUBSCRIBER EXPERIENCE** The GigaSpire BLAST u6.1 is a premium smart home system that delivers the latest 'WiFi 6' certified technology (802.11ax).

The GigaSpire BLAST u6.1 uses a 1 Gigabit Ethernet link at the subscriber's premises to provide carrier-class Wi-Fi and four (4) Gigabit Ethernet interfaces for customer multi-media devices.

The GigaSpire BLAST u6.1 enables residential subscribers to receive Gigabit broadband data, Internet Protocol (IP) video, and voice (POTS) services

## More details

Using the latest 802.11ax technology in both the 2.4 and 5 GHz radios, the GigaSpire BLAST u6.1 incorporates 6x6 streams of Wi-Fi delivery (2x2 @ 2.4 GHz and 4x4 @ 5 GHz).

In addition, with multi-user multiple-input and multipleoutput (MU-MIMO) and beamforming, the GigaSpire BLAST u6.1 allows service providers to extend the access network inside the home and establish a strategic location for the delivery and control of broadband services

# More details

[GigaSpire BLAST u6.1 datasheet \(msfiber.net\)](#)



Here is an example of router from Cox

COX WIFI EQUIPMENT

## The Panoramic Wifi Gateway

The Panoramic Wifi Gateway is two devices in one – both a modem and a router. Get secure, reliable wifi coverage and so much more with our advanced wifi equipment.



Note: Cox calls this a “Gateway”

Here is Cox website with more info

[Cox Panoramic WiFi Gateway Router | Cox Communications](#)

# T-Mobile also provides a “Gateway”



Plan ▾

How it works ▾

Internet deals

Support

🗨 Contact & support ▾

🔍 Search

[Check availability](#)

My account ▾

Get \$50 back when you switch to T-Mobile Home Internet via Virtual Prepaid Mastercard® in 12 weeks. [Shop deals now >](#)



5G GATEWAY DEVICE

## Wi-Fi unleashed.

Talk about an upgrade. Our T-Mobile 5G Wi-Fi Gateway packs Wi-Fi 6 technology into a sleek design, and it's compatible with our nationwide 4G LTE and 5G networks.

[Check Availability](#)

# T-Mobile Gateway specs

## The details of better performance.

Wi-Fi 6 technology is just the start of what makes our 5G Gateway an internet powerhouse.



Dimensions (inches)	4.73 x 4.53 x 7.52
LCD	Yes
Wi-Fi	Wi-Fi 6 with 4 x 4 MIMO
Ethernet ports	2
Mesh Compatible	Yes
Network compatibility	5G NR, 4G LTE



# Verizon also has a router

The screenshot displays the Verizon website's 5G Home Internet section. At the top, there's a navigation bar with 'Personal' and 'Business' tabs, a red checkmark icon, and links for 'Shop', 'Why Verizon', and 'Support'. On the right, there are links for 'Stores', 'Español', 'Sign in', and a search bar. Below this is a banner for 'Get 5G Home Internet' with a 'Check availability' button. The main content area features two plan cards: '5G Home Plus' and '5G Home'. Both cards include pricing, descriptions, and 'Check availability' buttons. The '5G Home Plus' card lists a price of \$35/mo with Auto Pay and select 5G mobile plans, and \$80/mo without. The '5G Home' card lists a price of \$25/mo with Auto Pay and select 5G mobile plans, and \$60/mo without. Both plans are 'Powered by 5G Ultra Wideband' and include 'High-speed downloads'. Under the 'Equipment and Features' section, both plans state 'Wi-Fi 6 router included'. An orange arrow points from the text 'Verizon also has a router' to the 'Wi-Fi 6 router included' text in the 5G Home Plus plan's equipment section. At the bottom right, there is a 'Chat with a live agent' button.

Personal Business Stores Español

✓ Shop Why Verizon Support Sign in Search

Get 5G Home Internet Check availability

**5G Home Plus**  
Unleash the power of 5G Ultra Wideband, with our best extras yet.  
**\$35** /mo with Auto Pay + select 5G mobile plans. ⓘ  
**\$80** /mo without Auto Pay & without combined home internet + select 5G mobile plans.  
Check availability

**Powered by 5G Ultra Wideband**  
5G Ultra Wideband ▼  
High-speed downloads ▼

**Equipment and Features**  
Wi-Fi 6 router included ▲  
Our state-of-the-art Wi-Fi 6 router and 5G Ultra Wideband receiver is included in your plan.

**5G Home**  
Wireless home internet, powered by 5G Ultra Wideband  
**\$25** /mo with Auto Pay + select 5G mobile plans. ⓘ  
**\$60** /mo without Auto Pay & without combined home internet + select 5G mobile plans.  
Check availability

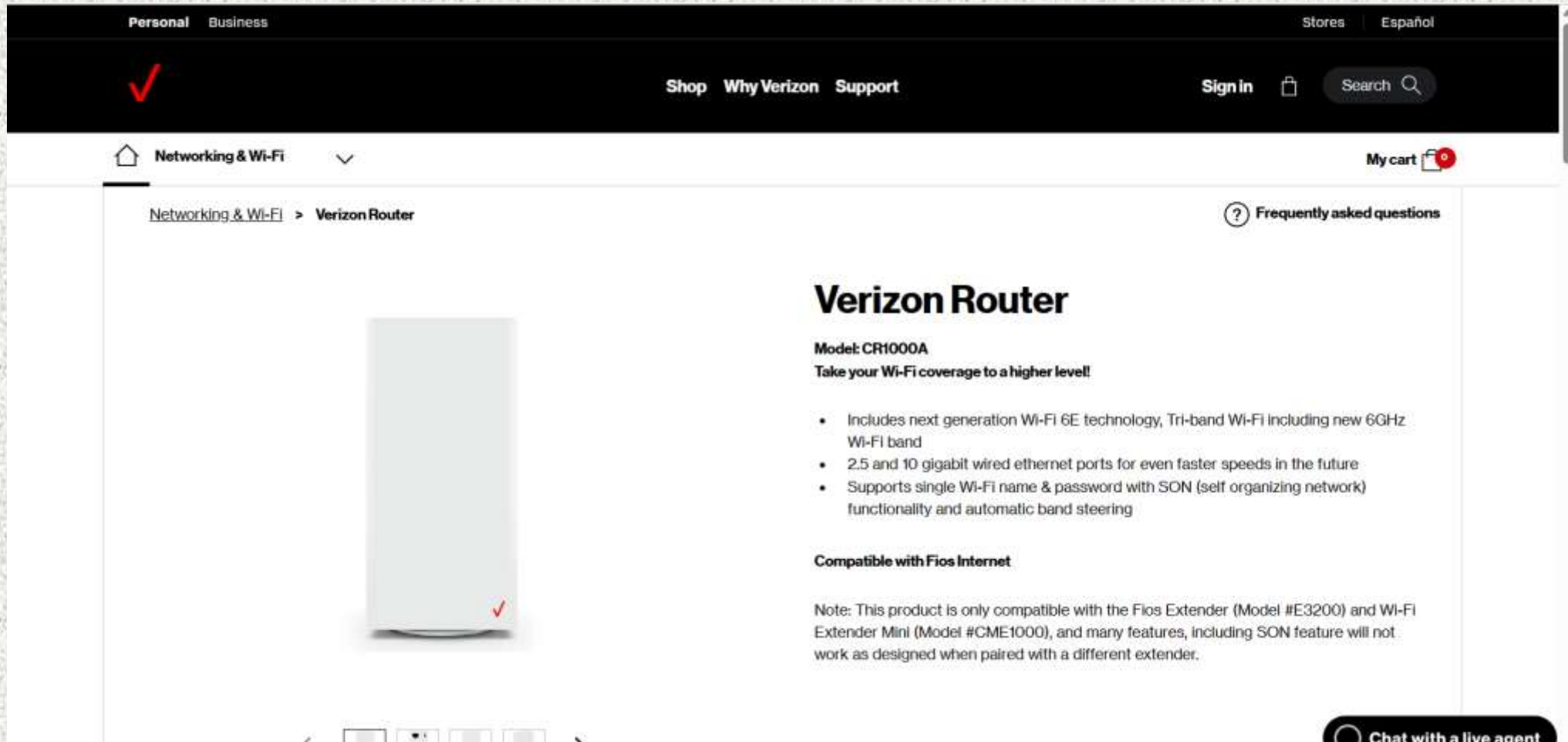
**Powered by 5G Ultra Wideband**  
5G Ultra Wideband ▼  
High-speed downloads ▼

**Equipment and Features**  
Wi-Fi 6 router included ▼  
**2-year Price Guarantee** ▼

Feedback

Chat with a live agent

# Verizon also has a router



The screenshot displays the Verizon website's product page for the Verizon Router. The top navigation bar includes links for 'Personal' and 'Business' services, a 'Stores' link, and a 'Español' language option. A red checkmark icon is visible on the left. The main navigation bar contains 'Shop', 'Why Verizon', and 'Support' links, along with a 'Sign In' button and a search bar. Below this, a breadcrumb trail shows 'Networking & Wi-Fi' with a dropdown arrow, and 'My cart' with a red notification icon. The product page itself features a breadcrumb trail 'Networking & Wi-Fi > Verizon Router' and a 'Frequently asked questions' link. The product image is a white, rectangular Verizon Router with a red checkmark on the bottom right. To the right of the image, the product name 'Verizon Router' is displayed in large bold text, followed by the model number 'Model: CR1000A' and the tagline 'Take your Wi-Fi coverage to a higher level!'. A bulleted list of features includes: 'Includes next generation Wi-Fi 6E technology, Tri-band Wi-Fi including new 6GHz Wi-Fi band', '2.5 and 10 gigabit wired ethernet ports for even faster speeds in the future', and 'Supports single Wi-Fi name & password with SON (self organizing network) functionality and automatic band steering'. Below the list, it states 'Compatible with Fios Internet'. A note at the bottom clarifies compatibility: 'Note: This product is only compatible with the Fios Extender (Model #E3200) and Wi-Fi Extender Mini (Model #CME1000), and many features, including SON feature will not work as designed when paired with a different extender.' A 'Chat with a live agent' button is located in the bottom right corner.

Personal Business Stores Español

✓ Shop Why Verizon Support Sign In Search

Networking & Wi-Fi My cart

Networking & Wi-Fi > Verizon Router ? Frequently asked questions

## Verizon Router

Model: CR1000A  
Take your Wi-Fi coverage to a higher level!

- Includes next generation Wi-Fi 6E technology, Tri-band Wi-Fi including new 6GHz Wi-Fi band
- 2.5 and 10 gigabit wired ethernet ports for even faster speeds in the future
- Supports single Wi-Fi name & password with SON (self organizing network) functionality and automatic band steering

**Compatible with Fios Internet**

Note: This product is only compatible with the Fios Extender (Model #E3200) and Wi-Fi Extender Mini (Model #CME1000), and many features, including SON feature will not work as designed when paired with a different extender.

Chat with a live agent

# CenturyLink also has a router

## ★ Recommended CenturyLink modem



### Features of the C4000 (All versions)

- [Secure WiFi](#) compatible
- WiFi 6 technology with dual-band 2.4 GHz and 5 GHz 802.11ax
- Smart Connect single wireless network (SSID): Auto-selects the fastest band for each device
- [Single LED status light](#)
- Dynamic QoS: Prioritizes data through the router for smoother streaming
- Standards-based WiFi WPA3 security

### Top Modem/Router Topics

- [CenturyLink compatible modems](#)
- [Connect devices to your WiFi network](#)
- [Returning a CenturyLink modem](#)
- [Upgrade or replace your modem](#)
- [How to read your modem lights](#)
- [When and how to use modem reset](#)
- [Upgrade your modem's firmware](#)
- [Modem or router: What's the difference?](#)

View all [Modem/Router](#) topics

### Secure WiFi

- Security for your home or business network and all connected devices
- Manage devices
- Control content

[Learn More](#)





Routers today act as the first line of defense from hackers getting into your home network by providing a “firewall”





Routers today act as the first line of defense from hackers getting into your home network by providing a “firewall”



This firewall helps control what traffic can enter and leave your home network.

For example, the firewall can block someone elsewhere from logging into your network and gaining access to all the computers on your network.

Most routers come with a network firewall

Here is what Cox says about routers and firewalls

**Firewalls help to block dangerous pieces of data (such as malware and viruses) from getting into your device's system.**

**Your router serves as a basic hardware firewall, but you can also add a software firewall for each connected device to add an extra layer of security against hackers.**

**Software firewalls can help to distinguish between programs and devices.**

# Should You Rent or Buy Your Modem and Router?

Find out if it's cheaper to pay upfront now or continue to pay monthly fees.



by [Kevin Parrish](#)

Edited by [Cara Haynes](#)

Feb 9, 2023 | Share   

[Equipment Guides](#), [How-To](#)

You should rent a modem or router (or both) from your internet provider if you want upgrades, replacements, and technical support at no additional cost to you. If you want to save money over the long run and have more control over your internet connection, buy your own router. Just know that you'll be responsible for any upgrade or replacement costs.



# **Is it cheaper to buy or rent your router and modem?**

**You don't need to purchase a standalone modem if your internet provider supplies you with one rent-free.**

**After all, you don't own your internet connection, so why own the modem?**

**Let your internet provider deal with that aspect of your service.**

**You probably (hopefully) have the best modem for your connection anyway.**

However, there may be cases when your provider's supplied modem is of low quality, and you want one with better performance and stability.

In this case, buying a standalone modem may save you money and lots of frustration.

Your home network is yours, however, so owning devices on your side of the modem makes perfect sense—including the router.

The problem is that many internet providers now supply you with wireless gateways (modem/router combos), so if you have one, purchasing a router is an added expense and more in line with privately managing your home network than saving you money.

Replacing the gateway entirely may be cheaper, depending on what you buy.

# Here is what Wyverd says about this subject

## **Do I need a Router?**

“If you want to take advantage of WiFi in your home, you will need a wireless router.

We recommend you use Zona Wyverd’s managed Wi-Fi service.


The managed WiFi service provides you with peace of mind and lets Zona Wyverd manage things for you – worry free!

Our managed WiFi program provides you with a high grade router which we continually push security and software updates.

We can access the router remotely for minor corrections or resets. If anything were to go wrong, including if the router falls off the shelf and stops working, we will repair or replace it at our cost.”



# And Cox

[view other drafts](#) 



Yes, Cox recommends using the gateway they provide. The Cox Panoramic Wifi Gateway is a modem and router in one that helps lessen interference to provide faster speeds to your devices. It also has a number of features that can improve your Wi-Fi experience, such as band steering, which automatically optimizes which Wi-Fi band a device connects to, and guest Wi-Fi, which allows guests to connect to your Wi-Fi network without sharing your password.

If you choose to use your own modem and router, Cox recommends using a DOCSIS 3.1 cable modem with integrated Wi-Fi capabilities, also known as a gateway, that is capable of broadcasting dual-band 802.11-AC Wi-Fi or higher, for all Cox Internet packages. Combination Internet and Telephone modems purchased or received in new or used condition from third-party retailers are not certified for use with the Cox network.

This info comes from a Bard chat

# More from Cox

Here are some of the benefits of using the Cox Panoramic Wifi Gateway:

- Faster speeds: The Cox Panoramic Wifi Gateway is designed to provide faster speeds than traditional modems and routers.
- Better coverage: The Cox Panoramic Wifi Gateway has a wider range than traditional modems and routers, so you can get better Wi-Fi coverage throughout your home.
- More features: The Cox Panoramic Wifi Gateway has a number of features that can improve your Wi-Fi experience, such as band steering and guest Wi-Fi.
- Easy to use: The Cox Panoramic Wifi Gateway is easy to set up and use.

If you're looking for the best possible Wi-Fi experience, I recommend using the Cox Panoramic Wifi Gateway.

This info comes from a Bard chat

# Even more from Cox

**Cox regularly updates the firmware on their gateways to ensure that they are protected against the latest security threats.**

**These updates are pushed out automatically, so you don't have to do anything to get them.**

**You can check the firmware version of your gateway by logging into the Cox Panoramic Wifi app.**

**If you have an older gateway that is not receiving firmware updates, Cox may be able to provide you with a newer one.**

This info comes from a Bard chat



I asked the new AI component of Bing “can I use my own router with Cox ?”



SEARCH

CHAT

✓ Searching for: **can i use my own router with cox**

✓ Generating answers for you...

Yes, you can use your own router for Cox<sup>1</sup>. However, in order for it to work properly, you'll need to make sure that it is compatible with Cox's network<sup>1</sup>. Cox partners with several router manufacturers and suggests that you use a compatible router from one of them<sup>1</sup>. You can purchase your own modem for use with your Cox Internet, as long as the equipment is certified to work on their network<sup>2</sup>. Before buying from the retailer of your choice, please check here to make sure the modem you've chosen supports your internet speed tier<sup>2</sup>.

I hope this helps! Let me know if there's anything else I can help with.

Learn more: [1. remodelormove.com](https://remodelormove.com) [2. cox.com](https://cox.com) [3. cox.com](https://cox.com)

3 of 20 ●



I went to Cox and found this information

[Learn How to Choose & Use Cox Compatible Modems | Cox](#)

**What if I want to get internet to my home from either T-Mobile or Verizon ?  
Do I still need a router ?**

**I'll ask my buddy, the BING AI chatbox**

✓ Searching for: **do t-mobile and verizon provide a wifi router for their internet**

✓ Generating answers for you...

Yes, T-Mobile provides its Wi-Fi Gateway device, a combination modem and Wi-Fi 6 router compatible with T-Mobile's 4G LTE and 5G networks <sup>1</sup> <sup>2</sup>. Verizon also provides Wi-Fi 6 routers that are more than fast enough for their internet speeds <sup>3</sup>.

I hope this helps! Let me know if you have any other questions.

**Learn more:** [1. cnet.com](#) [2. t-mobile.com](#) [3. androidcentral.com](#) [4. digitaltrends.com](#)

**4 of 20** ●

# **What if I want to dig deeper into the Router?**

You may be able to access your router directly if it is your own personal one

If it is supplied by your internet provider, you may have to ask them to enable this capability

## **I aske Wyverd a few questions about the router they supplied to me and how to access it – their response**

”I went ahead and enabled access for you. User is : admin and the password is nnnnnn.

You can change the password once you log on

Once, the router is fully onboarded into our cloud system, the user name / password access is disabled.

We generally refer our customers to download the mywyverd app, to manage the router and make changes.

As the for the firewall, yes the router does have a firewall.

You can see the firewall settings under Advanced > Security > Firewall once you log in to the router.”




# Accessing the Router

Enter 192.168.1.1 into browser

Enter userid and password

# Here is my router home screen

 **EXOS**  
The Experience OS

Home

Status

Utilities

Advanced

Wi-Fi

admin

HOME

Refresh

☐ Full Mesh Topology

IPv4: Connected


IPv6: Disconnected

Gateway

Client Efficiency	# of Clients
Good	3
Fair	0

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# If I select Connection, this pops up

The Experience OS

admin

Home

Status

Connection

Devices

Internet

Ethernet

Wi-Fi

Utilities

Advanced

Wi-Fi

## CONNECTION

### Connection

The table below reflects the current state of the WAN and Local Internet connections.

Connection	Status
Wide Area Network (WAN)	Connected
IPv4 Internet Access	Connected
IPv6 Internet Access	Disconnected


### Residential Gateway

The table below reflects the current state of this Residential Gateway.

Parameter	Value
WAN MAC Address	f8:85:f9:c0:6e:b1
Upstream Rate	1000 Mbps
Downstream Rate	1000 Mbps
IPv4 IP Address	38.9.248.223

© 2019 EXOS. All Rights Reserved.

# This shows up from Devices

The Experience OS

Home

Status

Connection

**Devices**

Internet

Ethernet

Wi-Fi

Utilities

Advanced

Wi-Fi

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admin







DEVICES

Devices

The list below displays all devices connected to your Local Area Network (LAN) and main wireless network with the connection type, separated by IPv4 and IPv6.

☐ Show inactive devices

Refresh

Icon	Device	IP Address	MAC Address	Status	Connection Type
	Apple iPad 5	192.168.1.100	66:46:45:14:a2:6c	Active	
	Apple iPhone SE 3	192.168.1.113	6e:7a:98:8f:18:e5	Active	
	LAPTOP-9IPEC2GV	192.168.1.153	e8:2a:44:9f:00:49	Active	


IPv6

Icon	Device	IP Address	MAC Address	DUID	IAID	Status	Connection Type
N/A							

Note: Hover over device icon for more device details; Double click icon to edit device info.



# Select Security then Firewall

The Experience OS

admin

Utilities

Advanced

Static Routing

Remote GUI

IP Address

Parental Control

Security

Credentials

UPnP

Firewall

DMZ Hosting

Port Forwarding

Arp Spoofing

## FIREWALL

### Firewall

Activating the firewall is optional. When the firewall is activated, security is enhanced, but some network functionality will be lost.

#### Security Level

<input type="radio"/> Security Off	No filtering of traffic in or traffic out.
<input type="radio"/> Low Security	Blocking of pre-defined traffic in per the Blocked Services settings. No blocking of traffic out.
<input type="radio"/> Medium Security	Blocking of pre-defined traffic in per the Blocked Services settings. No blocking of traffic out.(More limitation than first level.)
<input checked="" type="radio"/> High Security	Blocking of pre-defined traffic in per Blocked Services settings. Blocking of pre-defined traffic out per Blocked Services settings including DNS.

#### Stealth Mode

☒ Enabled ☐ Disabled

When Stealth Mode is enabled, the device will not respond to all unsolicited WAN traffic including pings.

Apply

### Blocked Services

Selecting a traffic in checkbox or a traffic out checkbox in the Blocked Services table will reject the traffic flow in, or out, respectively, for that service.

Service	Service Type	Service Ports	Traffic In	Traffic Out
---------	--------------	---------------	------------	-------------

# I asked Wyverd if I should make any changes

## Their answer:

“All we do when we onboard the router is to update your SSID'S and Passwords.

Other than changing passwords and , I'd advise leaving them as is.

The router has a firewall which is currently set to high (which all of the routers installed come set up as ).

If you wanted additional security, I'd recommended getting our Protect IQ, which acts as a VPN at router level.”

# The internet provider may have extra “add ons” for purchase

Here are some options from Wyverd

## Introducing Protect IQ™



### Enhanced Security

(Powered by ProtectIQ™) extends the security standards of Wyverd Fiber's core network all the way to your home. All of the connected devices at your premise are proactively protected from cyber security threats, viruses, and other malicious intrusions. If it's connected, it's protected!

## Introducing Experience IQ™



### Parental & Network Controls

(Powered by ExperienceIQ™) empowers you to manage and optimize your home network for your family's needs. Subscribers can create personalized user and device profiles to manage a set of rules and preferences, including:

- Blocking and filtering of specific content types and applications
- Scheduling specific times of the day during which Internet and/or application usage is limited or blocked, by individual user
- Prioritizing specific apps & devices, customizable by time of day (e.g., set schedules so that work-related applications are prioritized during the day)
- Viewing usage for all devices, to better understand how the Internet is used in your home

The internet provider may have extra “add ons” for purchase

\$5

**\$5** /mo  
for each feature

Activate Wyerd's MyNetwork™ additional controls & features **INSTANTLY** by calling our office during business hours (623) 455-4555





The internet provider may have extra “add ons” for purchase

COX HOMELIFE

## A smarter way to keep an eye on your home

Cox Homelife is our smart home system that helps you stay connected to what's happening around the house. You can keep an eye on pets and deliveries while on the go, see who's at the door and control it all from your smartphone.



Congrats – looks like your home qualifies for special offers



Feedback

## Cox Homelife packages

Homelife is powered by Cox Internet and Panoramic Wifi. Once you choose the plan that's right for your household, you'll be ready to begin setting up your smart home system.



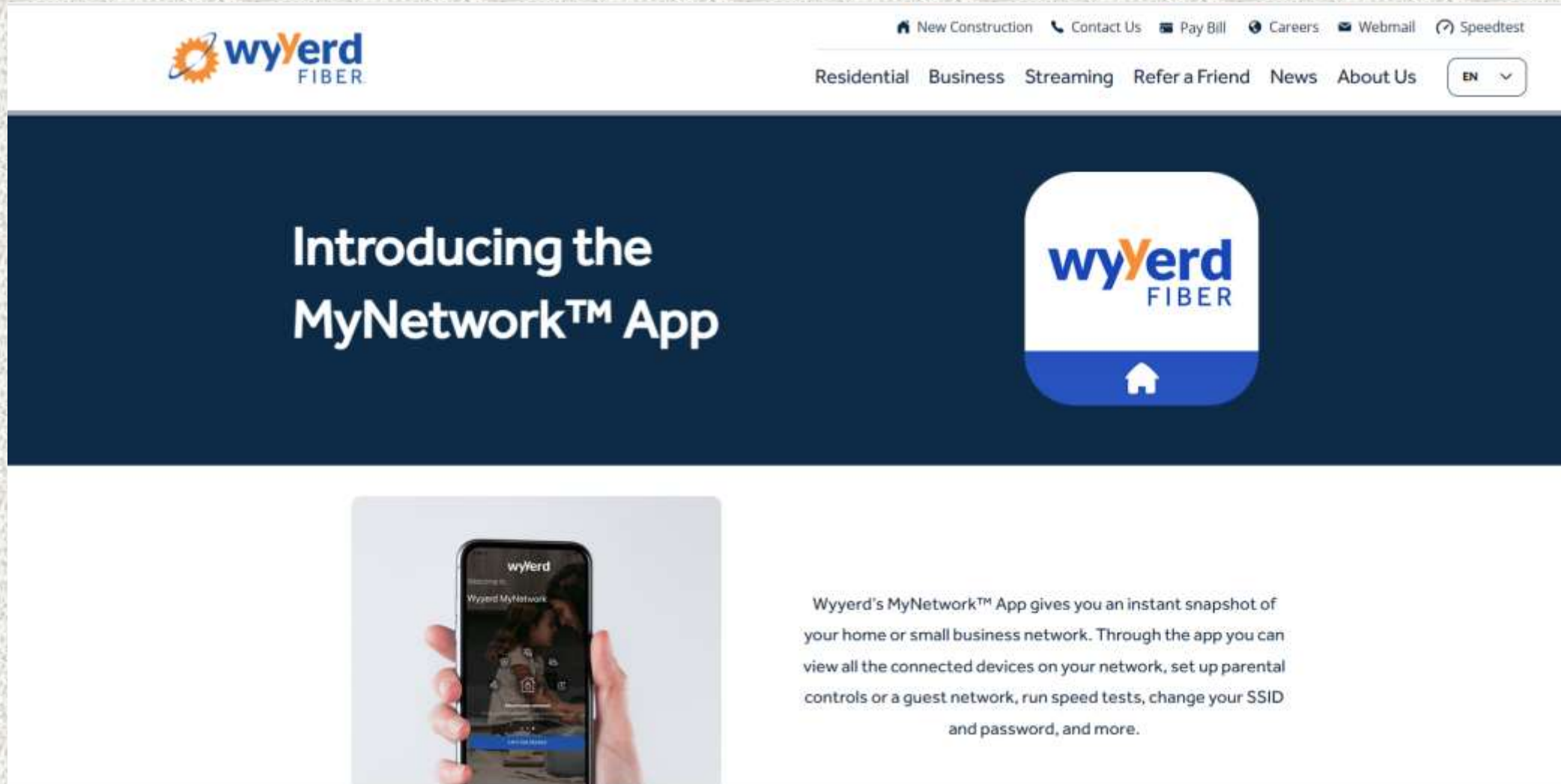
## My two cents worth



Unless you have special requirements, use the Router supplied to you by the internet provider and use the default settings they installed

How do I see what is on my home network ?

One example - Wyverd provides an app



The image shows a screenshot of the Wyverd Fiber website. At the top, there is a navigation bar with the Wyverd Fiber logo on the left and links for New Construction, Contact Us, Pay Bill, Careers, Webmail, and Speedtest on the right. Below this, a secondary navigation bar lists Residential, Business, Streaming, Refer a Friend, News, and About Us, along with a language selector set to EN. The main banner features a dark blue background with the text "Introducing the MyNetwork™ App" on the left and a large, rounded square icon of the app on the right. The app icon has a white top half with the Wyverd Fiber logo and a blue bottom half with a white house icon. Below the banner, there is a section with a photo of a hand holding a smartphone displaying the app's interface on the left, and a text block on the right describing the app's features.

**Introducing the MyNetwork™ App**

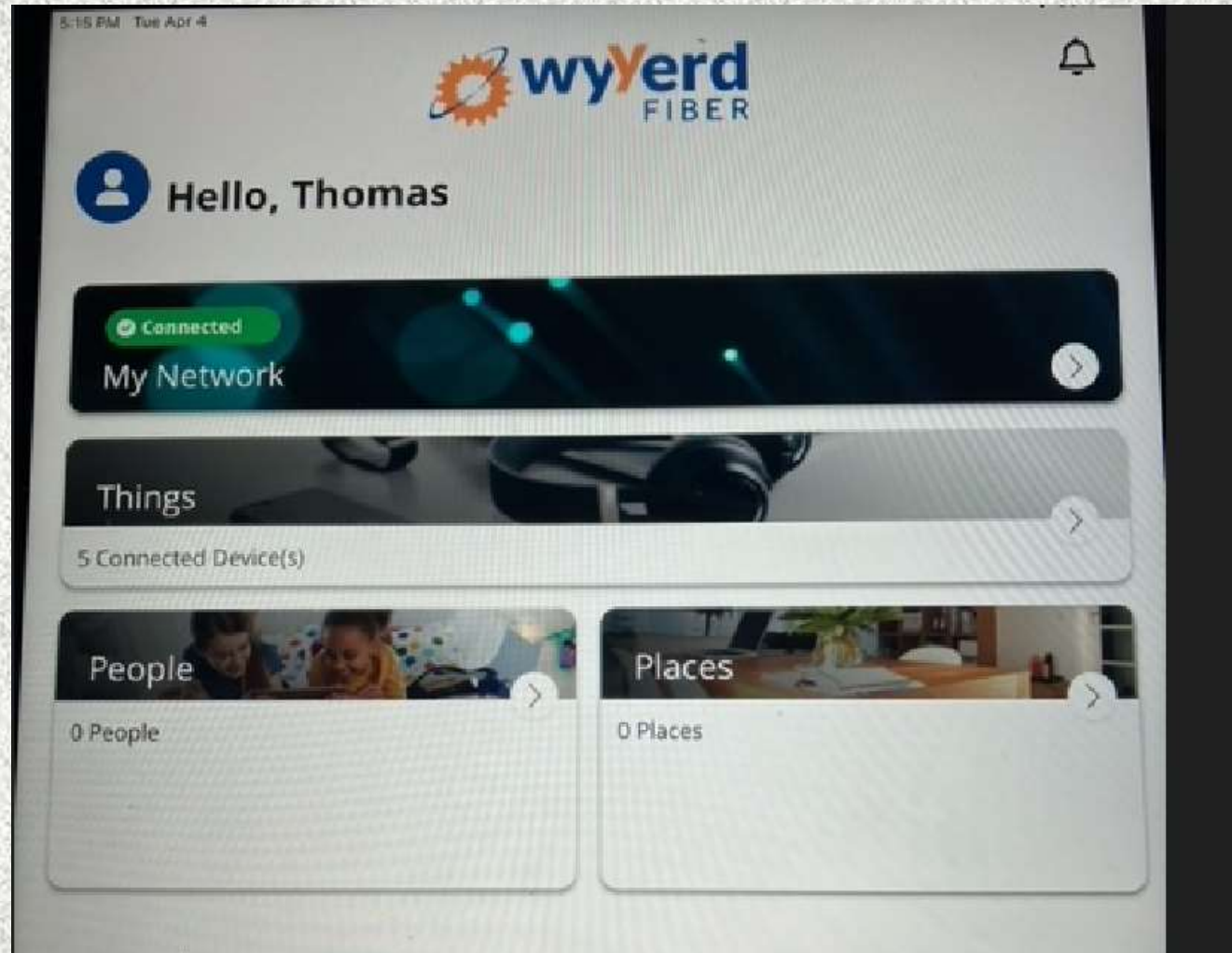
**wyYerd FIBER**

Wyverd's MyNetwork™ App gives you an instant snapshot of your home or small business network. Through the app you can view all the connected devices on your network, set up parental controls or a guest network, run speed tests, change your SSID and password, and more.



**How do I see what is on my home network ?**

One example - Wyverd provides an app





## Things (5)

ALL



Apple iPad 5  
Online



Apple iPhone SE 3  
Online



iPad-7  
Online



LAPTOP-9IPEC2GV  
Online



SAMSUNG Galaxy A13 5G  
Online

# Network Map

All Connections ▾



Thomas's Router  
Connected to internet



Apple iPhone SE 3



iPad-7



LAPTOP-9IPEC2GV



SAMSUNG Galaxy A13 5G



Apple iPad 5

Cox also has an app for managing your home network

[How to Use the Cox Panoramic WiFi App](#)



**What about Speed – How much do I  
need**


**and**


**How much does it cost ?**










# I asked Bing AI it's opinion on what internet speed is needed


 Microsoft Bing


 SEARCH

 CHAT

tom  2933   

What internet speed do I need in my home for email browsing, web surfing, streaming TV ?

 Searching for: **internet speed for email browsing web surfing streaming TV**


 Generating answers for you...


Here are some general download speed requirements based on everyday online activities <sup>1</sup> :


- Check email and browse the web: **1-5 Mbps** minimum
- Stream HD content: **5-25 Mbps** minimum
- Stream 4K content and play competitive online games: **40-100 Mbps** minimum
- Stream 4K content, play competitive online games, and download very large files: **200 Mbps** minimum

If you're streaming, we recommend **25-50 Mbps per person** <sup>2</sup> . If you have a lot of connected devices or internet users at home, then you should look into **1,000 Mbps** <sup>2</sup> .

I hope this helps!

 New topic

 Ask me anything...

 Feedback

# I then asked Google Bard the same question

≡ Bard [Experiment](#)



↻ Reset chat

🕒 Bard Activity

❓ FAQ

📅 Updates

💬 Help & support



What internet speed do I need in my home for email browsing, web surfing, streaming TV?



[View other drafts](#) ▾



The amount of internet speed you need in your home depends on how many people are using the internet at the same time and what they are using it for. For example, if you are the only person using the internet and you are only using it for basic tasks like checking email, browsing the web, and streaming music, you can get away with a slower internet speed. However, if you have multiple people in your home who are all using the internet at the same time, and they are doing things like streaming video, gaming, and working from home, you will need a faster internet speed.

Here is a general guide to the amount of internet speed you need for different activities:

- **Basic tasks:** 1-5 Mbps
- **Streaming video:** 5-10 Mbps for standard definition, 10-20 Mbps for high definition, 20-30 Mbps for 4K
- **Gaming:** 3-5 Mbps for casual gaming, 5-10 Mbps for competitive gaming
- **Working from home:** 10-20 Mbps for basic tasks, 20-30 Mbps for more demanding tasks like video conferencing

If you are not sure how much internet speed you need, it is always best to err on the side of caution and get a faster plan. This will ensure that you have enough bandwidth to do everything you need to do without experiencing any slowdowns or interruptions.

Here are some additional factors to consider when choosing an internet speed:

Enter a prompt here



# I then asked Google Bard the same question

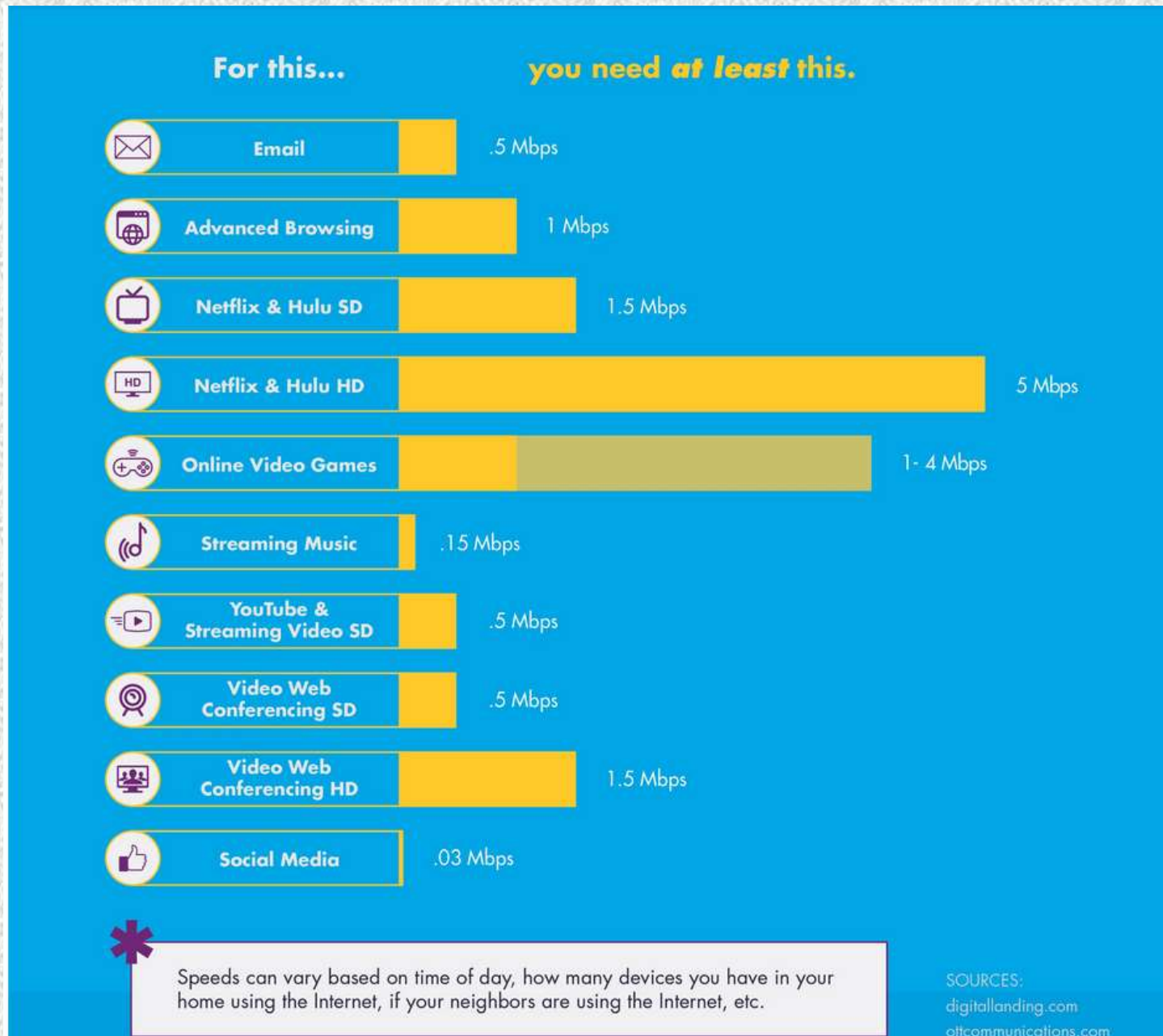
Here are some additional factors to consider when choosing an internet speed:

- The number of people in your household
- The type of devices you use
- The activities you do online
- The quality of your internet service provider (ISP)

If you are still unsure how much internet speed you need, you can contact your ISP for help. They can assess your needs and recommend a plan that is right for you.



# Another opinion





# Who offers What ?

The next few slides are indicative of the type of internet offerings provided in our area

The actual prices are subject to contacting each provider directly

# Here are the speed choices offered by Wyverd

**NOW FEATURING 2 GIG INTERNET**

Local Customer Service & Support ♦ Transparent Pricing ♦ No Contracts ♦ No Hidden Fees

[CHECK AVAILABILITY](#)

The Envy of the Internet

**\$150/mo**

**2 GIG**

Total Speed of 2000 Mbps up & 2000 Mbps down

[CHECK AVAILABILITY](#)

- ✓ Wyverd WiFi Included
- ✓ Free Installation
- ✓ No hidden fees
- ✓ No data caps

GIG Speed Under \$100

**\$95/mo**

**1 GIG**

Speed of 1000 Mbps up & 1000 Mbps down

[CHECK AVAILABILITY](#)

- ✓ Wyverd WiFi Included
- ✓ Free Installation
- ✓ No hidden fees
- ✓ No data caps

Super Speed for Streaming

**\$80/mo**

**600 Mbps**

Speed of 600 Mbps up & 600 Mbps down

[CHECK AVAILABILITY](#)

- ✓ Wyverd WiFi Included
- ✓ Free Installation
- ✓ No hidden fees
- ✓ No data caps

Fastest Entry Level Speed

**\$65/mo**

**300 Mbps**

Speed of 300 Mbps up & 300 Mbps down

[CHECK AVAILABILITY](#)

- ✓ Wyverd WiFi Included
- ✓ Free Installation
- ✓ No hidden fees
- ✓ No data caps

Wyverd: An Arizona Internet Provider

# And from Cox

[TV](#)[Internet](#)[Streaming](#)[What To Watch](#)[Resources](#)[Shop Cox Internet](#)[Cox TV](#)[Cox Deals](#)[Shop Cox Bundles](#)[Cox Channel Lineup](#)[Cox Availability Map](#)[Cox Installation Guide](#)[Cox Troubleshooting Guide](#)[Cox Customer Service](#)[Cox I](#)

## COX INTERNET PLANS, PRICES, AND PACKAGES

- Download speed up to 1,000 Mbps
- Prepaid Cox internet plan offers flexibility and convenience
- Free Wi-Fi access with Cox hotspot network
- Protect your home internet with free Cox Security Suite

Internet plans starting at

**\$49.99/mo.**

[CHECK AVAILABILITY](#)



## Top Cox internet plans

### Internet Essential 100

**\$49.99/mo.**

- Download speeds up to 100 Mbps
- Includes free Wi-Fi router/modem
- Great budget internet plan

**CHECK AVAILABILITY**

### Internet Ultimate 500

**\$79.99/mo.**

- Download speeds up to 500 Mbps
- Fast 10 Mbps upload speeds
- Excellent fit for most households

**CHECK AVAILABILITY**

### Gigablast

**\$99.99/mo.**

- Download speeds up to 1,000 Mbps
- Upgraded 35 Mbps upload speeds
- Cox's fastest home internet plan

**CHECK AVAILABILITY**

Interested in getting Cox internet service at your home? Enter your zip code below to see Cox services in your area.

**FIND** 



[For Home](#)[For Business](#)[85387](#)[Support](#)[Sign In](#)

Best offers are online.

## Fiber internet with unlimited data

plans starting at

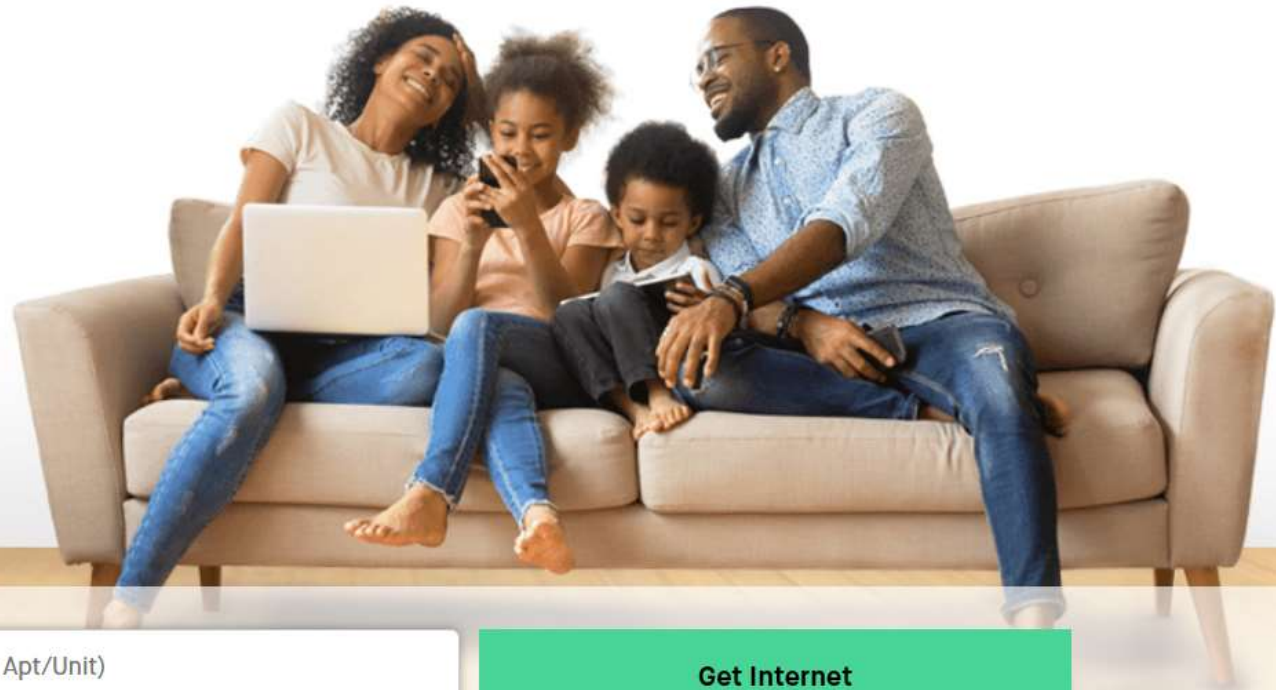
\$50/MO

No contract. No bundling.

Paperless billing required.  
Taxes and fees apply. [Offer Details](#)

Fast home WiFi service on  
a 99.9% reliable\* network.

\*Based on network uptime or availability.

[Get Internet](#)

# CenturyLink

Up to  
**100**  
Mbps

## Simply Unlimited Internet

- Work from home and shop online
- Unlimited data on a 99.9% reliable\*\* network
- Connect multiple users and devices
- Stream HD movies
- No annual contract

**\$50** /MO

Speed may not be available in your area. Paperless billing or prepay required. Additional taxes, fees, and surcharges apply. [Offer Details](#)

Up to  
**940**  
Mbps

## Fiber Internet

- 20X faster upload speed than cable\*
- Unlimited data on a 99.9% reliable\*\* network
- **FREE** installation - **\$129** value
- Modem provided - no monthly charge
- No annual contract

**\$70** /MO

Speed may not be available in your area. Paperless billing or prepay required. Additional taxes, fees, and surcharges apply. [Offer Details](#)

\*Comparison, as of 10/7/22, based on CenturyLink fiber technology with wired upload speeds of up to 940 Mbps to major cable providers 1GIG cable service over DOCSIS 3.1 technology with upload speeds of 35 Mbps. \*\*Based on network uptime or availability.

**Get Internet**



[Plan](#) ▾[How it works](#) ▾[Internet deals](#)[Support](#)[Contact & support](#) ▾[Search](#)[Check availability](#)[My account](#) ▾

## Leave exploding bills behind with Price Lock.

We're not like Big Cable—we won't raise your monthly price for home internet, ever. Keep your low price low at just \$50/month with AutoPay, plus no annual contracts or additional monthly fees.

[Check availability](#)

Not available in all areas. Regulatory fees included in monthly price for qualified accounts.

[Get full terms](#)

**\$50** /mo.  
w/ AutoPay  
with  
**PRICE LOCK GUARANTEE**  
EXCLUSIONS LIKE TAXES & FEES APPLY.

[TELL ME MORE](#)

## Breaking up with your internet provider is easy.





**Get 5G Home Internet**

**Check availability**

Get up to \$500 to help cover your early termination fees when you switch. ⓘ

## Get 5G Home Internet and save.

Switch to 5G Home Internet starting at a low price, guaranteed. The network America relies on, at a price you can rely on.

**Check availability**

Starting at

**\$25** /mo.

With Auto Pay and select 5G mobile plans. ⓘ

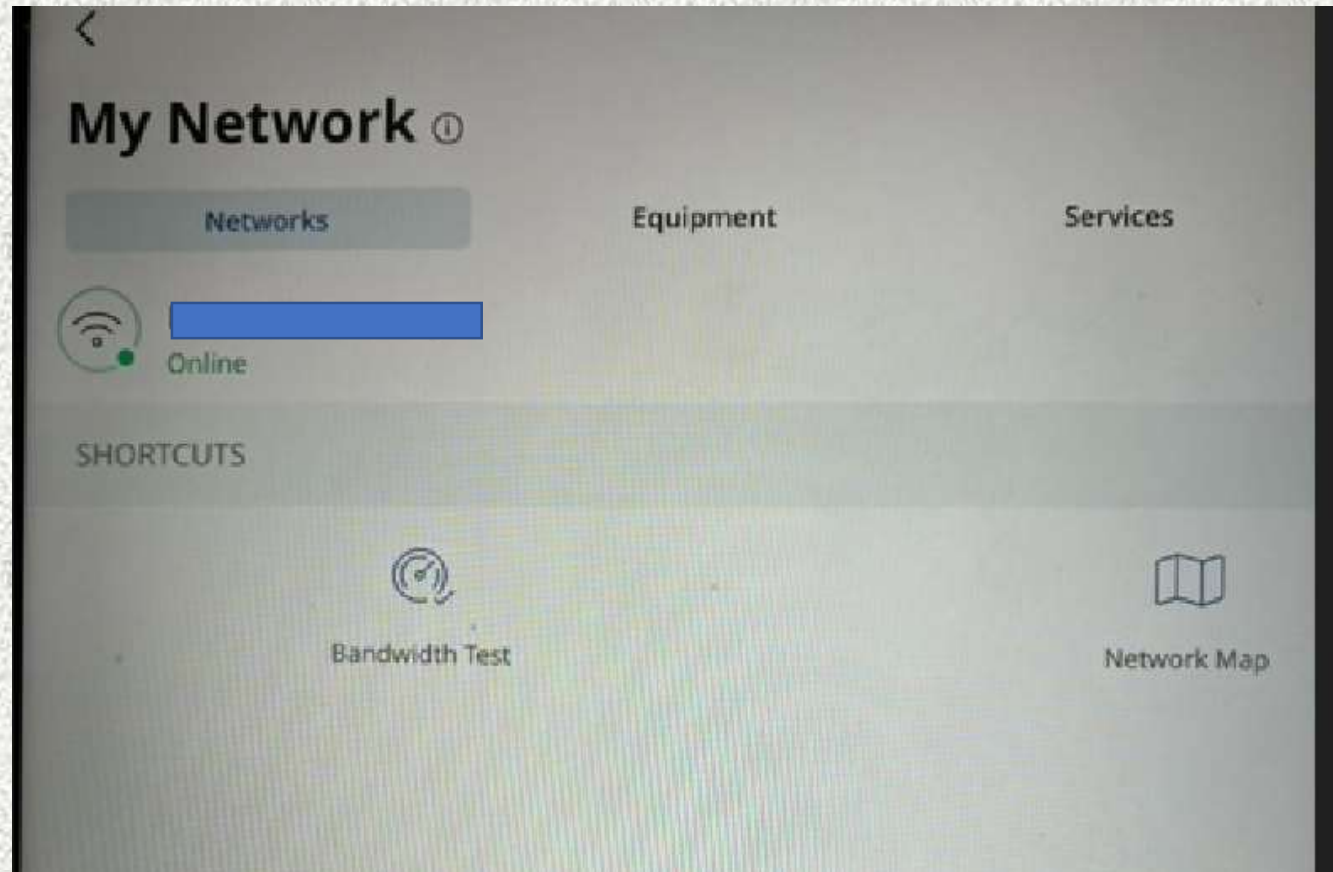


**How can I measure how fast my Internet is ?**

**There are web sites and apps to measure speed**



Wyerd includes in their app a speed test



Here is what it shows for my home network on Wyyerd

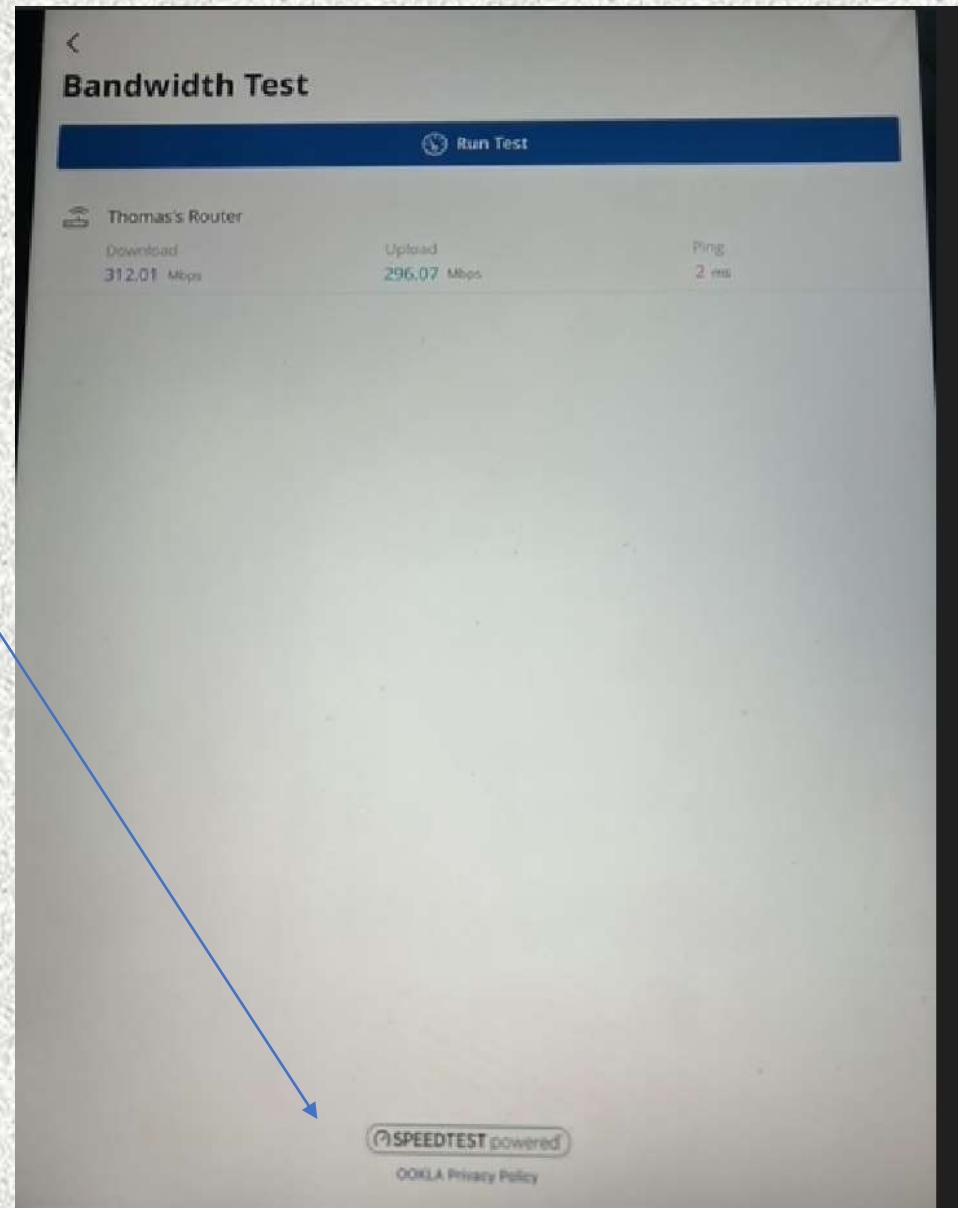


A screenshot of a network speed test result. The background is dark grey. At the top left, there is a Wi-Fi icon followed by the text 'Thomas's Router'. Below this, there are three columns of data: 'Download' with a value of '313.00 Mbps' in purple, 'Upload' with a value of '296.00 Mbps' in teal, and 'Ping' with a value of '2 ms' in red. A thin horizontal line separates the header from the data.

Thomas's Router		
Download	Upload	Ping
313.00 Mbps	296.00 Mbps	2 ms



It's hard to see at the bottom, but Wyverd is simply using the Speedtest app from Ookla





## **Some of the best apps to measure home internet speed include:**

Meteor by OpenSignal

SpeedTest Master (iOS, Android)

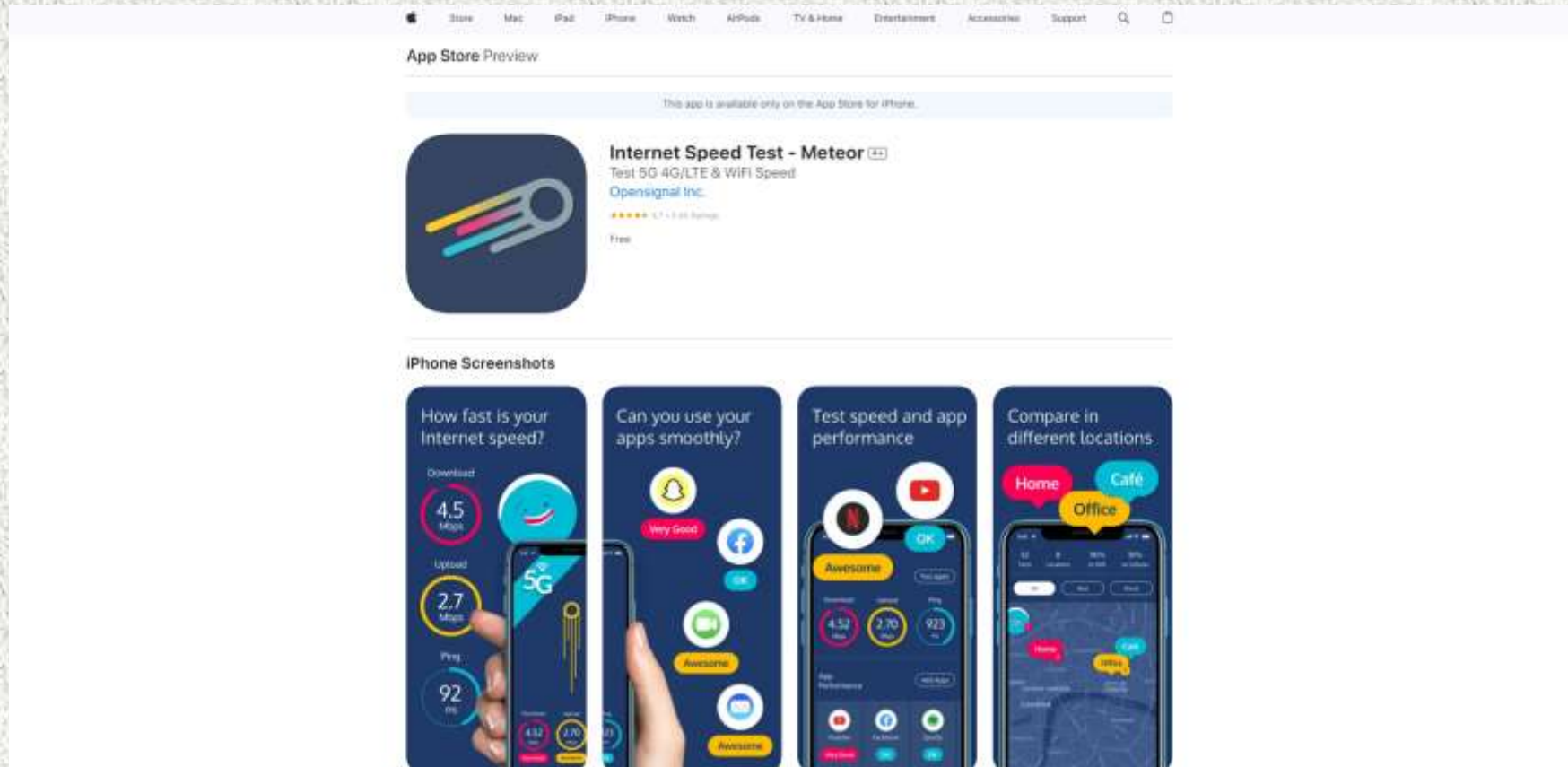
Speed Test WiFi Analyzer by analiti

Speedtest by Ookla (iOS, Android, Windows, Mac)

Fast by Netflix (iOS, Android)

Network Speed Test by Microsoft (Windows)

# Meteor by OpenSignal for Apple



# **Meteor shows internet speed for individual apps**

Let's see from an iPad perspective

# Speedtest by Ookla

It is a popular internet speed testing app that allows you to test your internet speed and performance

It is available for iOS, Android, Windows, and Mac devices

The app is easy to use and provides accurate results that can help you determine if your internet connection is fast enough to fit your needs





ookla speed test



+ 5G

+ Online mobile

+ Upload

+ Android

+ Spectrum

+ HTML5

+ APK

+ IOS

+ App

All filters ▾

Tools

About 2,190,000 results (0.40 seconds)



Speedtest by Ookla

<https://www.speedtest.net>

## Speedtest by Ookla - The Global Broadband Speed Test

Use **Speedtest** on all your devices with our free desktop and mobile apps.

### Results Settings

Upload Mbps. 41.43. Free. LaFibre.info. Marseille. Use Speedtest ...

### Speedtest.net Desktop App

Our mission at Speedtest by Ookla® is to make the internet faster ...

### Apps for Mobile

Our mission at Speedtest by Ookla® is to make the internet faster ...

### Apps

Android - Windows - Speedtest for Chrome - iOS - Speedtest CLI

[More results from speedtest.net »](#)

People also ask ▾



## Speedtest.net

Web site ▾



speedtest.net

Speedtest.net, also known as Speedtest by Ookla, is a web service that provides free analysis of Internet access performance metrics, such as connection data rate and latency. [Wikipedia](#)

**Owner:** [Ookla](#)

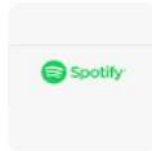
**Android:** 4.6.16 / 22 December 2021; 15 months ago

**Chrome Web Store:** 1.0.9.9 / 14 April 2021; 23 months ago

People also search for



Gmail



Spotify



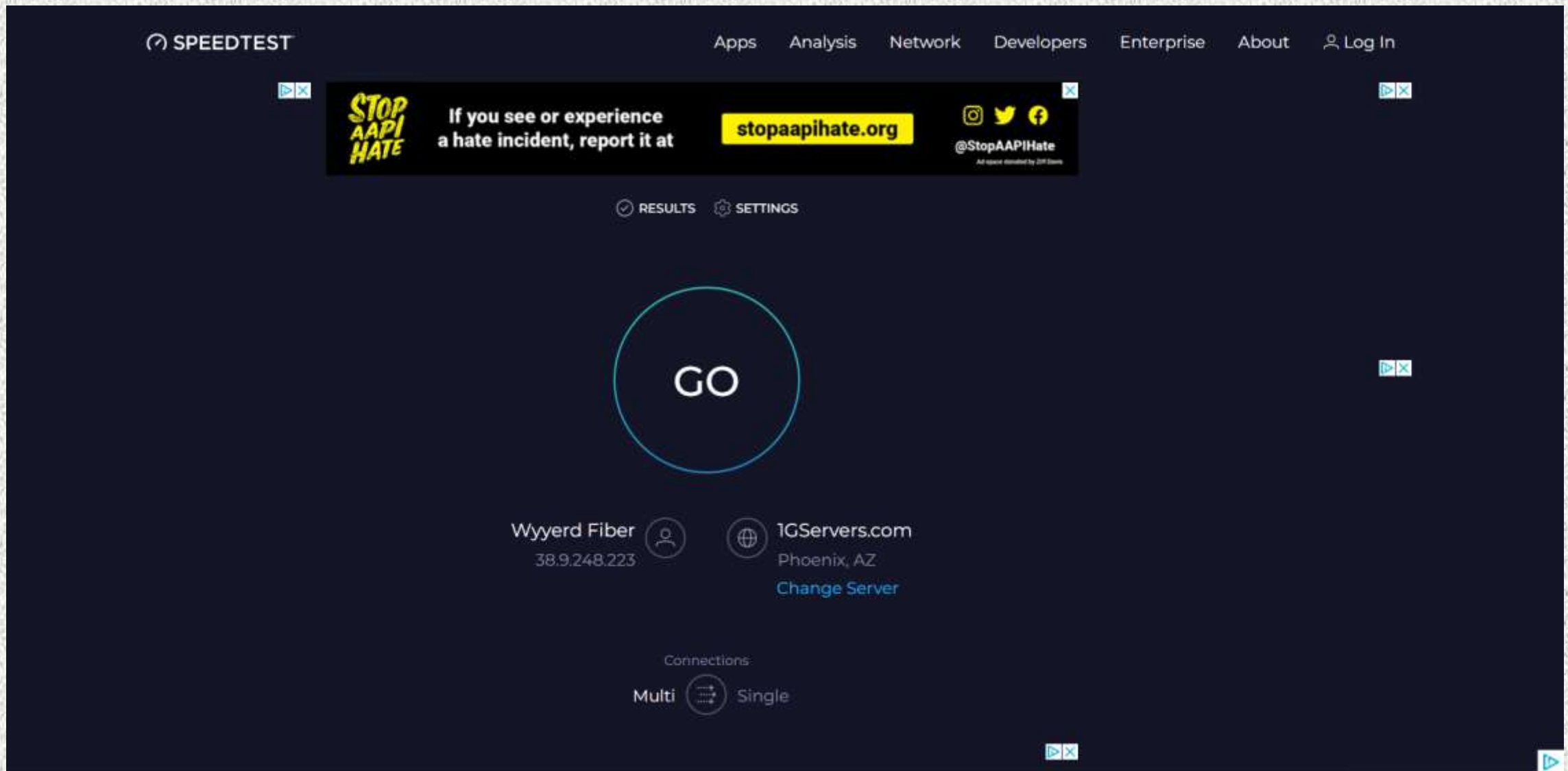
Facebook



Downdetect...

Here is the website for the program

Here's a peek at the web site , it's very easy, you just click GO



Here is what it looks like at my house  
There are a few ads for Cox Internet

The screenshot displays the Speedtest website interface. At the top, the 'SPEEDTEST' logo is on the left, and navigation links for 'Apps', 'Analysis', 'Network', 'Developers', 'Enterprise', 'About', and 'Log In' are on the right. Below the navigation bar, there are social media share icons (Twitter, Facebook, etc.) and a 'Result ID 14575221508'. The main content area shows test results: 'DOWNLOAD Mbps' at 182.73, 'UPLOAD Mbps' at 297.22, and 'Ping ms' at 14. Below these, there are buttons for 'Connections' (Multi), 'Xiber LLC' (Phoenix, AZ), and 'Wyerd Fiber' (38.9.248.223). A 'GO' button is also visible. To the right of the results, there is a section titled 'HOW LIKELY IS IT THAT YOU WOULD RECOMMEND WYERD FIBER TO A FRIEND OR COLLEAGUE?' with a rating scale from 0 to 10. At the bottom, there is a section titled 'Having Internet Problems?' with a link to 'Twitch Possible Problems'. On the far right, there is a large advertisement for 'Find 5G Towers Online' with the text 'Search For Hidden 5G Cell Tower Locations In My Area.' and a button 'Open >'. There are also several small advertisements for Cox Internet.

SPEEDTEST

Apps Analysis Network Developers Enterprise About Log In

SHARE Result ID 14575221508 RESULTS SETTINGS

DOWNLOAD Mbps 182.73

UPLOAD Mbps 297.22

Ping ms 14

GO

Connections Multi

Xiber LLC Phoenix, AZ Change Server

Wyerd Fiber 38.9.248.223

HOW LIKELY IS IT THAT YOU WOULD RECOMMEND WYERD FIBER TO A FRIEND OR COLLEAGUE?

0 1 2 3 4 5 6 7 8 9 10

Not at all likely Extremely Likely

Having Internet Problems? Popular services with reported issues

Twitch Possible Problems

Find 5G Towers Online

Search For Hidden 5G Cell Tower Locations In My Area.

Find 5G Towers

Open >

# Let's Try It Here

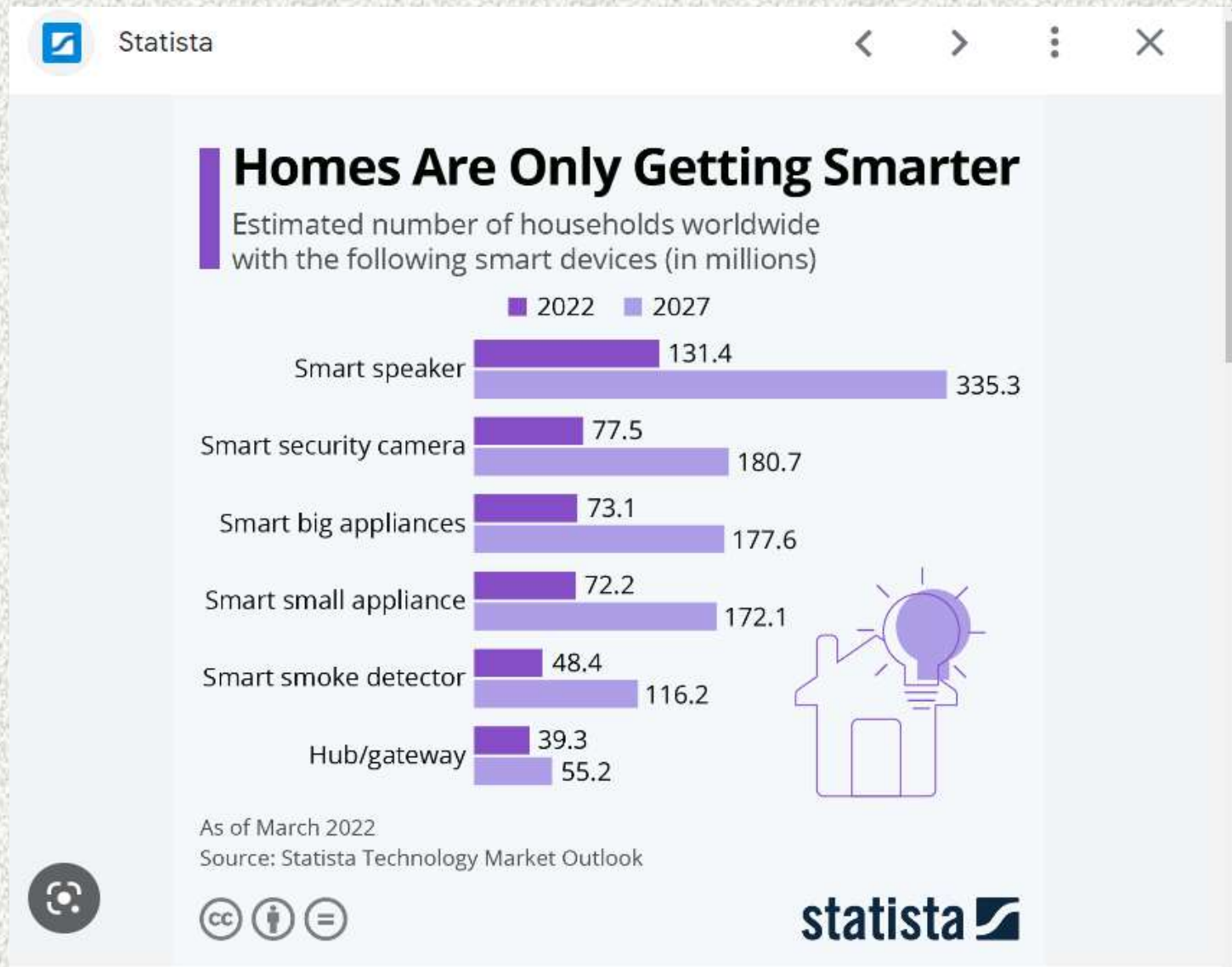
<https://www.speedtest.net/>



# Let's Try It Here

<https://www.speedtest.net/>

# Our homes are getting smarter

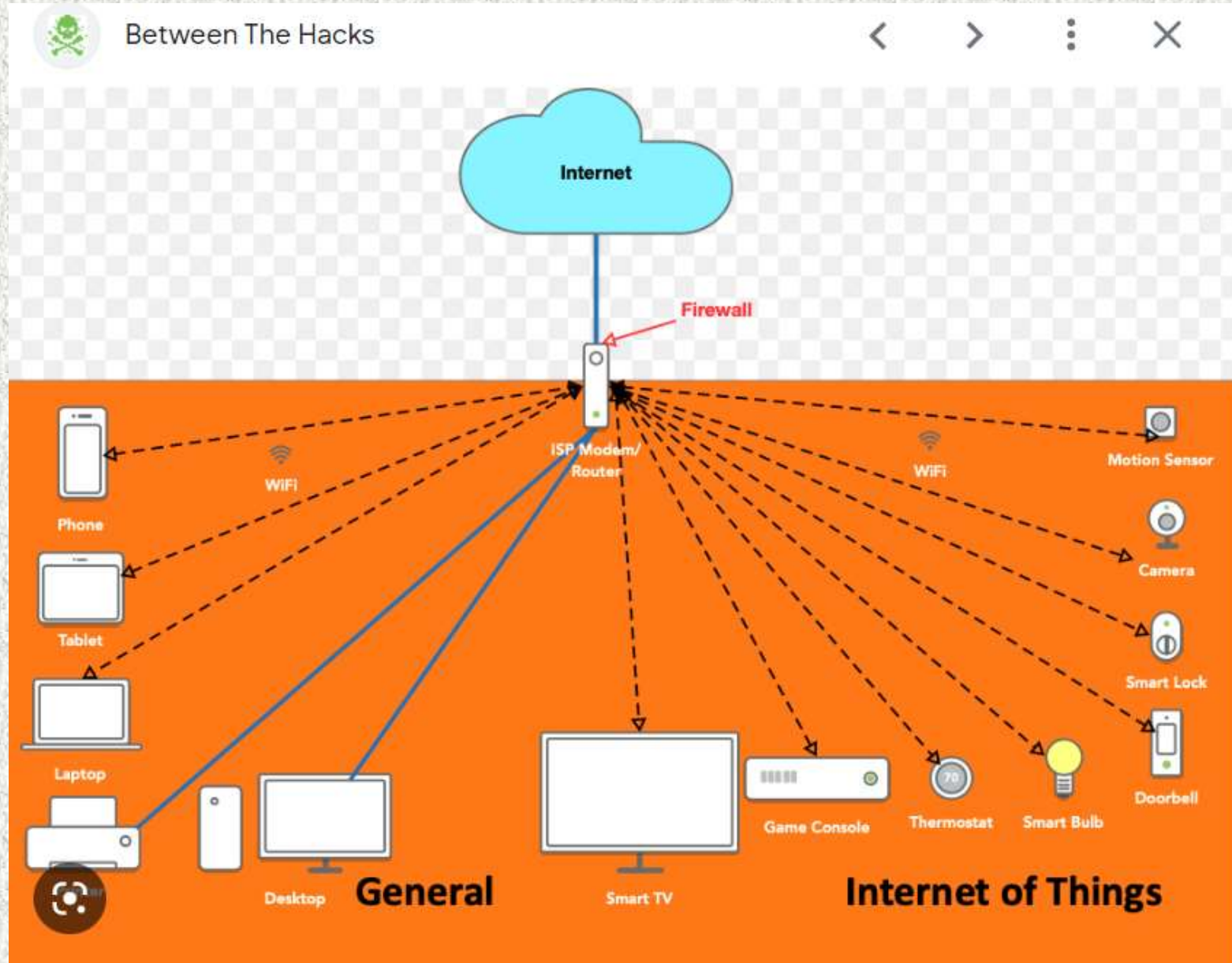


With many devices and appliances now using the Internet, things get complicated fast



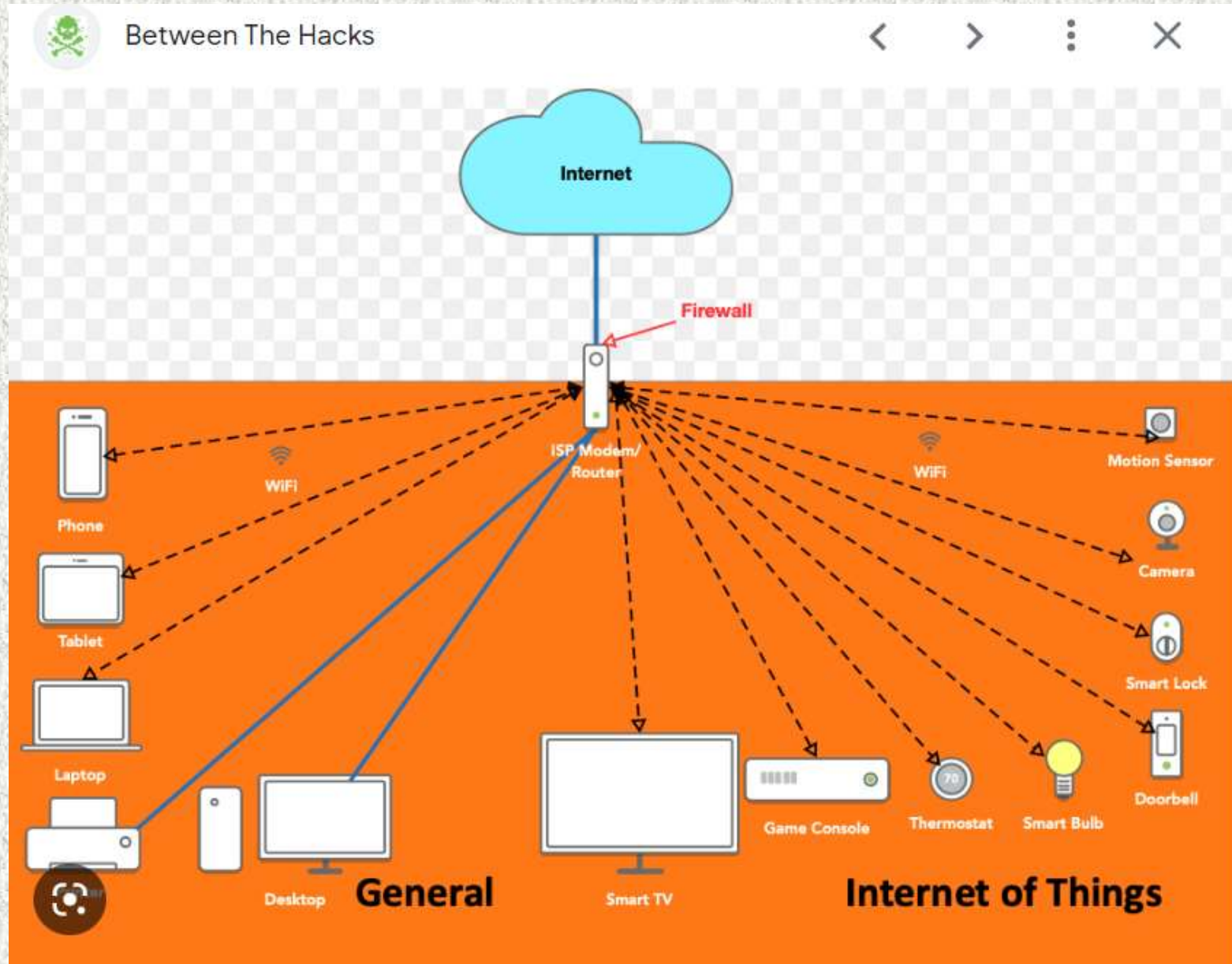


Here is another diagram of a home network with many devices





# How do keep all these new gadgets secure ?



Here are some websites with ideas  
on securing your smart home devices

<https://www.forbes.com/sites/forbestechcouncil/2023/02/22/14-essential-steps-to-take-to-secure-household-iot-devices/?sh=381ec13d7cb8>

<https://allaboutcookies.org/securing-smart-home-devices>

<https://www.onithome.com/blog/security/how-to-secure-iot-devices/>

# **Tips to protect your home network**

1. Place your router in a central location.
2. Create a strong Wi-Fi password and change it often.
3. Change the default router login credentials.
4. Turn on firewall and Wi-Fi encryption

## **Tips to protect your home network**

- 5. Create a guest network.**
- 6. Use a VPN.**
- 7. Keep your router and devices up to date.**
- 8. Disable remote router access.**



Let's look at these in more detail

<https://www.cnet.com/home/internet/stop-home-network-hackers-top-10-tips-to-protect-your-wi-fi-security/>

Here is a document from the NSA with some tips

[https://media.defense.gov/2023/Feb/22/2003165170/-1/-1/0/CSI\\_BEST\\_PRACTICES\\_FOR\\_SECURING\\_YOUR\\_HOME\\_NETWORK.PDF](https://media.defense.gov/2023/Feb/22/2003165170/-1/-1/0/CSI_BEST_PRACTICES_FOR_SECURING_YOUR_HOME_NETWORK.PDF)

## Even more tips

<https://staysafeonline.org/resources/securing-your-home-network/>

# Here is what Cox says about security

<https://www.cox.com/residential/internet/guides/securing-wifi/how-to-improve-wifi-security.html>



## And Centurylink's take on security

<https://www.centurylink.com/home/help/internet/wireless/home-wifi-security.html#:~:text=To%20enhance%20cybersecurity%2C%20consider%20changing,your%20secure%20modem%20user%20interface.>

# Guest Network

You may want to set up a “Guest Network” in your home so that

- Guests can access the internet through your wifi

but

- They would not have access to your devices unless you specifically allow that

# Guest Network

It gives visitors access to your Internet connection and nothing else.

They can't see any of your devices on the network and they don't have the ability to access them.

Most importantly, they can't accidentally introduce malware or compromise your devices or data in any other way

# Wyverd

The Wyverd App has a function to allow you to create a Guest Network

You can specify a unique network name and password

You can also put a duration or time/day span



# Info from Cox on how to create a guest network \*

To create a guest network with Cox, you will need to access your router's settings. You can do this by opening a web browser and entering the IP address of your router into the address bar. The IP address is usually something like 192.168.0.1 or 192.168.1.1.

Once you have entered the IP address, you will be prompted to log in to your router. The username and password are usually printed on the back of your router.

Once you have logged in, you will need to find the "Guest Network" settings. The location of these settings may vary depending on the make and model of your router.

Once you have found the "Guest Network" settings, you will need to enable the guest network and set a password for it. You can also choose to name the guest network whatever you like.

Once you have enabled the guest network and set a password, you will be able to connect your devices to the guest network. Guests will not be able to access your main network or any of your devices on the main network.

\* This info comes from a Bard chat

# And Verizon also can handle guest networks\*



Here are the steps on how to create a guest network on Verizon Home Internet:

1. Go to the My Verizon app and sign in to your account.
2. Tap the "Home Internet" tab.
3. Tap the "Settings" icon.
4. Tap the "Guest Wi-Fi" switch to turn on guest Wi-Fi.
5. Enter a name and password for your guest Wi-Fi network.
6. Tap "Save".

Your guest Wi-Fi network is now ready to use. Guests can connect to your guest Wi-Fi network by using the name and password you provided. They will not be able to access your main network or any of your devices on the main network.

\*This info comes from a Bard chat


**How does the internet  
provider access my home ?**

**There is a panel somewhere in your house – for me, it's in my utility room**





## This panel is called a “Media Enclosure...Box”



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Tools & Home Improvement

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Legrand - OnQ 30 Inch Structured Media Enclosure, Wifi Electrical Box, Cable Management Box for Distribution of Networking Service, Recessed Media Box Lets Signal Through, White, EN2030  
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Roll over image to zoom in

### Legrand - OnQ Structured Media Enclosure with Hinged Door, 28 Inch Metal Media Box with Key Lock, Cable Management Box to Hide Cords and Store Devices, Color, EN2850

Visit the On-Q Store

★★★★★ 257 ratings

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List Price: \$145.54

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Thank you for being a Prime member. Get a \$100 Gift Card: Pay \$0.00 upon approval for the Amazon Prime Rewards Visa Card.

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Size: 28 Inch

28 Inch 14 Inch 20 inch 42 Inch

\$93.99

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Returns Eligible for Return, Refund

Packaging Shows what's inside

Details

☐ Add a gift receipt for easy returns

Open that panel and you see wires, cables, boxes, etc.





Here is a device, apparently from OnQ



# It is an Enhanced Video Module

## Legrand - On-Q 2x6 Enhanced Video Module (Discontinued)

(Model # 363468-02)



Discontinued, Without Direct Replacement

**Note:** Picture may not represent the actual product. We are continuously working on improving our website and reserve the right to change specifications, availability, and pricing without prior notice.



Let's look at this



## **It is a “Digital Subscriber Amplifier”**

**What does a subscriber amplifier do?**

**Boost the signal — not the noise or distortion**

**When you need to distribute a clear signal to multiple locations within a single structure, CommScope's subscriber amplifiers and components deliver excellent performance and reliability with ultra-low noise signal amplification.**



The moral is that the “stuff” inside this panel takes as input a cable from your internet service provider – it takes the signal from the ISP , amplifies it and splits it, and sends it through pre-wired cables within your walls – that can be accessed in a room with an outlet, in which you connect your router

Here is an outlet and connected to it, this orange cable





At the other end, the orange cable connects via the WAN Port, into my Router

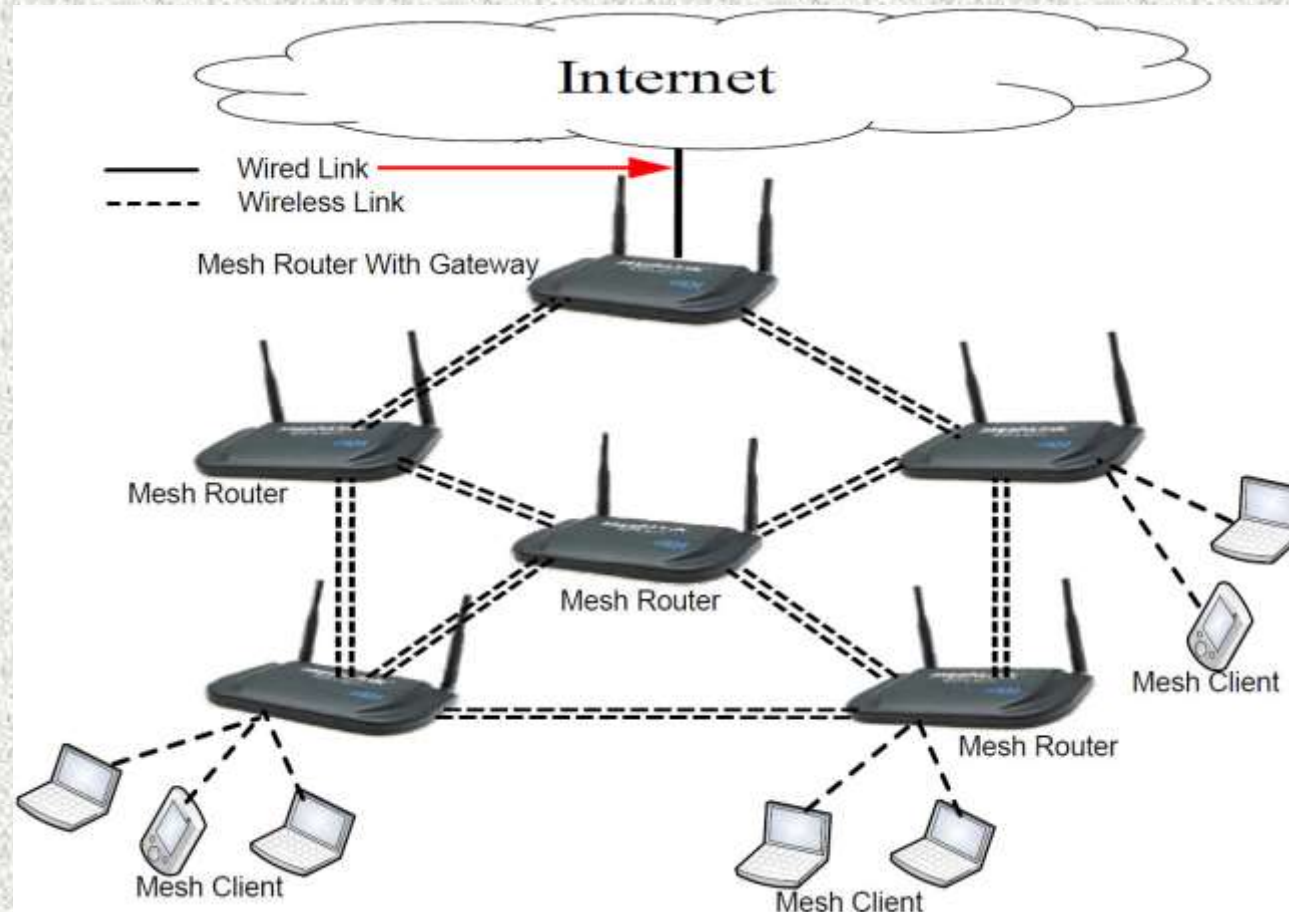
Phone Ports

Ethernet Ports

WAN Port

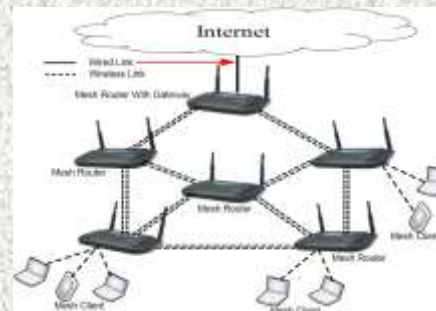


# What is a Mesh Router and Why would I need one ?



A mesh router is a type of wireless networking device that uses multiple nodes to provide Wi-Fi coverage throughout your home

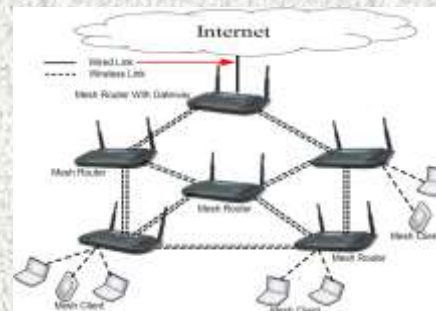
Unlike traditional routers that broadcast W-Fi from a single point, mesh router have multiple access points that work together to provide faster speeds, greater coverage, and a more reliable connection





Mesh routers are ideal for larger homes and apartments, or anywhere with thicker walls, an odd layout or an inherently low WiFi signal<sup>1</sup>

They can help eliminate dead zones and provide uninterrupted Wi-Fi throughout your home





**With that , I think we are done**

**Thanks for your attention!**