Mesh WiFi: Taking Your Smart Home to the Next Level

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Introduction

Key features driving purchases of wireless network equipment center around performance, consistency, and security. Today’s smart home network needs to keep up with a growing demand for internet access for a wide range of traditional devices, from PCs to TVs, and from new smart home technologies, including WiFi speakers and music systems, home appliances, and security systems.

Traditional WiFi Networks (routers and range extenders) are not designed to flex with the needs of a smart home’s stretching WiFi footprint. Today’s homes need a flexible solution that will deliver WiFi throughout the entire home to all the devices and be simple to set up, use and manage while continuously getting new features delivered via automatic software updates. Consumers are increasingly looking for better performance – faster speeds, more coverage, and more reliable connections. They want reliable WiFi that will work anywhere in their home with the connection they need to power all their devices.

This InfoBrief examines consumers’ familiarity with and their attitudes towards WiFi networks at home, the challenges of adopting a mesh WiFi system as well as the potential solution it represents. For the study, IDC conducted a survey of 1,000 adults in the U.S. who subscribe to broadband Internet service in July 2018.
What Drives Consumers To Purchase New WiFi Equipment?

Over three-quarters of US households want greater performance from their WiFi network, and more than half expect consistent internet coverage.

77% More performance  
53% Consistent Internet  
41% Enhanced Security  
38% Easy Initial Setup

Top Devices connected to WiFi today:
- Laptop/computer/tablet
- TV
- Streaming Device (Apple TV, Roku, media streaming)

Top IoT devices connected:
- Smart Speaker
- Appliance
- Lighting
- Security monitoring camera

Most people believe WiFi is more important than:
- Entertainment
- Vacation
- Sex
- Video Gaming
- Chocolate

There are some things people choose over WiFi:
- Utilities (gas & electricity)
- Comforts (bed & food)
- Freedoms (car, lighting, money)
Having Safe and Reliable WiFi at Home Is Essential

...yet one-third of US households are not satisfied with their WiFi, and almost half don’t know what a Mesh WiFi system is. To handle today’s internet needs and take your smart home to the next level, it all starts with Mesh WiFi.

1/3 of users are not satisfied with their Home WiFi

What were some of the reasons why users who were not satisfied with their Home WiFi?

- Performance: 69%
- Coverage/range: 32%
- Unresponsive companies for trouble shooting: 16%
We Need More from Our Home WiFi

There is a big disconnect between our reliance on internet access via so many connected devices and the enabling appliances that we are so dependent on.

The internet router is the unsung hero in our quest to have the best WiFi experience at home. People don’t consider the router as the main enabler to the internet and the role it plays in speed, security and reliable connection – and many don’t even know what router they have. Consumers are even less aware of the advances in WiFi technology with the introduction of mesh WiFi products. More than three-quarters of consumers are only somewhat aware of what Mesh WiFi is, or were not aware at all.

Consumer awareness of Mesh WiFi is very low....

- **56%** are not aware at all (prior to this survey)
- **22%** are somewhat aware
- **15%** are moderately aware
- **8%** are very aware
What is Mesh WiFi?

Mesh WiFi is a system which consists of a main router that connects directly to your modem, and a series of satellite modules, or nodes, placed around the home.

These nodes create a single wireless network with one SSID and password. Unlike their predecessor - the standard router – they are easy to use and provide seamless wireless coverage for all internet-based devices.

In contrast a standard router is limited to one location (where your modem is). Think about it like a speaker. You could be playing music loudly in the front of your home, but the office in the back will only hear a faint echo. A standard router works the same way—you can only move so far from it before the signal starts to wane, and eventually it’s going to cut out altogether.

Mesh systems allow you to spread the WiFi throughout your home using multiple nodes (speakers) Whole home WiFi (or mesh WiFi) systems work by utilizing multiple nodes installed around your home so you get solid WiFi coverage from one end to the other.
A modular mesh whole-home WiFi system is flexible and scalable, giving you a customizable method of expanding your WiFi without the need to add range extenders, which have performance and ease-of-use issues. It’s just like installing lighting fixtures to illuminate your home; you choose how many nodes to place, which rooms need the coverage, and when it’s time to add more to extend the signal even further.

Most mesh systems are also paired with a smartphone app for guided setup—the app walks you through the set-up process for optimal placement of nodes throughout your home. It will help you find those hard-to-reach areas, so you can place nodes in areas that otherwise wouldn’t receive WiFi coverage. Unlike traditional routers which can have complex setup and installation requirements, Mesh WiFi nodes are as simple as plug-in and enjoy fast WiFi. The mobile app also incorporates some cool features to help you manage your WiFi, such as parental controls, device prioritization, guest access, and more.
How Mesh WiFi Helps Deliver Better WiFi

Mesh WiFi Solutions work together to deliver better performance, coverage, range and are easier to use and manage than traditional Router/Range Extender solutions.

Mesh solutions work as a system to extend WiFi in all areas of the home. They are also flexible by being able to add more nodes to the network as you need them and with some Mesh solutions like Velop you can interchange Dual-Band and Tri-Band Velop solution together to build the kind of WiFi network you want and need.

Most Consumers are Unaware of their WiFi Type

Making an informed decision is characteristic of a savvy shopper. Although most consumers know the type of internet speed they receive from their broadband provider, many have no idea about the type of WiFi equipment they own or what the differences are between models and brands.

- 82% don't know the difference between Dual-Band and Tri-Band
- 67% don't know what kind of WiFi standard they use
- 42% are getting 100Mpbs services+
Let’s talk about what Dual Band is and What Tri-band is

Dual Band Routers or Mesh Systems have two Radios built in- a 2.4Ghz radio and 5 Ghz radio.

Each radio will give a signal to achieve WiFi on client devices around the home such as phones, TVs, laptops, voice assistants, etc. Each client device will have a 2.4 Ghz client or a 5 Ghz client – or sometimes both – in which the router will help choose which radio will provide better performance for that client devices.

A Triband Router or Mesh System will have 3 radios built in – one 2.4Ghz radio and two 5 Ghz radios. The more radios a router or mesh solution has, the more ways to deliver better, faster and more reliable WiFi.

So, when would you need a Dual Band Mesh Solution or a Tri-Band Mesh System?
Based on which package you have will help you determine if you should get Dual Band or Tri Band. Why?

Because Dual Band Routers are only capable of providing so much performance and will cap out at the service plan you have. Tri-Band mesh solutions are capable of deliver the bandwidth of up to 1 Gig around the home. So, consider what your service plan is and get a mesh solution that matches up with your plan – but remember if you plan to update your service plan – you might want to think ahead and get a mesh solution that will be ready to take on those new speeds.

Consider first – what Broadband Internet Service package are you getting from your Internet provider?

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<tr>
<th>Broadband Speed</th>
<th>Ideal - Mesh System</th>
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<tbody>
<tr>
<td>50 Mbps and less</td>
<td>Dual-Band Mesh Systems</td>
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<tr>
<td>51-100 Mbps</td>
<td>Dual-Band Mesh Systems</td>
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<tr>
<td>100-300 Mbps</td>
<td>Tri-Band Mesh Systems</td>
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<tr>
<td>300-1 Gbps</td>
<td>Tri-Band Mesh Systems</td>
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We Desire Better Internet Coverage

Having fast internet in the living room is great – but we want to use our devices throughout our homes.

Many consumers who want to use connected devices in areas of their home currently have inadequate signal coverage because the internet connection may not be at a central location. It might be in an upstairs bedroom, downstairs in the office, outside on the patio or balcony.

Consumers need internet coverage delivered around the home wherever it is needed regardless of where the connection comes in.

39.5% want to have WiFi in areas of the home where they don’t get adequate WiFi, but 78% of users don’t use Range Extenders, and less than 1 in 10 use Mesh today.

Top locations respondents wanted WiFi but weren’t getting enough coverage:

1. Outside in the backyard 52%
2. Bedroom 32.7%
3. Garage 22.1%
4. Basement 21.9%
Ignorance is not Bliss - Mesh WiFi Delivers Speed, Coverage, Freedom

For households already using Mesh WiFi, internet coverage and consistency are the major differentiators over their old router.

For those who are aware of Mesh WiFi but don’t currently use it, almost two-thirds say they are interested in having it soon. A smaller percentage of households currently have no interest in a Mesh WiFi system, and remain satisfied with their router, while others simply don’t know enough about Mesh WiFi to want to purchase it.

Why do households have a Mesh WiFi system?

- 34.4% to move freely around the home with interruption to WiFi connection
- 30% like the smartphone app where they can easily understand and manage the home WiFi network
- 25.6% router didn’t provide whole home coverage

Among respondents that are aware of Mesh:

- 63% are extremely interested in getting Mesh in the next two years, and less than 10% are not interested in Mesh at all

For those who are not interested in using a Mesh WiFi network:

- Current WiFi coverage is adequate 73.2%
- Mesh has no perceived value 26.8%
- Have no knowledge or don’t know enough about Mesh to purchase 30%
Network and Device Security is Vitally Important

Concerns about privacy, security, and cost are among the primary reasons why many households have not adopted smart home devices and applications. Most remain worried about identity theft, viruses, and unauthorized access to personal content. Yet many of these concerns are addressed by Mesh WiFi through automatic software updates, which helps to ensure the network is always up to date and the home network is safe and highly secure.

Leading Security Concerns

- Steal my identity 57.4%
- Virus 34.8%
- Access to my content 29.3%
- Download malware 29.1%

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<tr>
<th>Why respondents don’t use or are not interested in using internet-connected devices and applications in the home</th>
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<tr>
<td>Have no use for them</td>
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<td>I don’t feel comfortable with the idea of sacrificing my privacy</td>
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<tr>
<td>Too expensive</td>
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<td>I don’t trust that they have adequate security protections in place</td>
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<td>I don’t see the value in them</td>
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<td>I don’t like how companies will use my data for their own economic gain</td>
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<td>Don’t know enough about them</td>
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<td>Too complicated</td>
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<tr>
<td>I doubt they will live up to their promise</td>
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<td>Other</td>
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*Source: IDC’s 2018 Consumer Internet of Things Survey*
Mesh WiFi Promises A Better Internet Experience

With demand for faster and more reliable home internet coverage, traditional routers and range extenders are struggling to keep up. Consumers want consistent wireless coverage and a powerful WiFi system enabling all their internet-based devices. Throughout the home.

- Safe and reliable WiFi is becoming essential, for many households even more so than some other of life’s basic comforts.
- Poor internet speed and inadequate coverage in the home are major reasons why consumers are unhappy with their wireless networks at home.
- Awareness of Mesh WiFi systems and how they can enrich home internet experiences is very low amongst consumers.
- Households already using a Mesh WiFi system enjoy the freedom it allows to move devices around their home without interruption to the WiFi connection... and that it provides fast internet coverage to their entire home, even outside or in their basement.
- Households that are somewhat aware of Mesh WiFi are optimistic about the benefits, with two-thirds interested in purchasing a Mesh WiFi system soon.
- Knowledge of the benefits of a Mesh WiFi solution is the first step in taking the connected household to the next level of a smart home.
Message from the sponsor

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