

Wi-Fi 7 MLO testing isn't possible yet!



ByteBlower already did it.
Read the results.

The talkers or the doers?

**Wi-Fi 7 MLO Testing with
ByteBlower**

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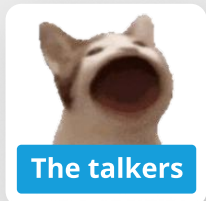
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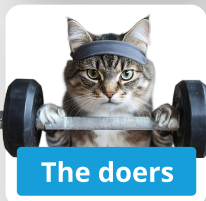
Introduction

The talkers and the doers

The world tends to split between two groups.



There are **the talkers**, those who love to speculate, theorize, and imagine what might be possible. Meet our talker cat, here on your left. He'll be your guide through this document, especially when it comes to the chatter and theory.



And then there are **the doers**, the ones who roll up their sleeves, turn ideas into reality, and drive technology forward. Meet our muscular cat, always searching for insights and doing the work behind the talk.

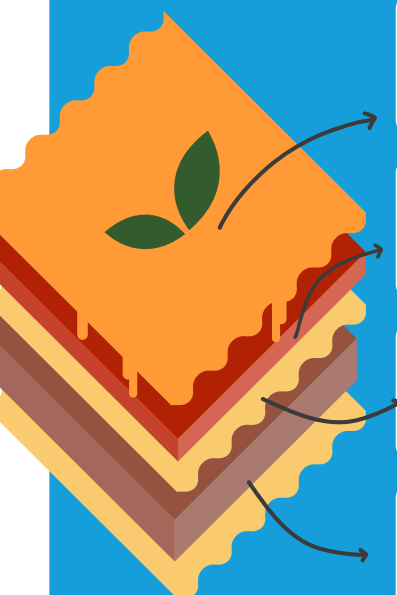
With Wi-Fi 7 and Multi-Link Operation (MLO), there's been no shortage of talk. Predictions, whitepapers, and promises fill the air. But the truth is clear: the majority of devices aren't ready to support Wi-Fi 7, and even fewer are prepared to test it.

At Excentis, we refuse to stay in the first group. We are not only the thinkers but also the doers. We build, we test, and we deliver the tools that make Wi-Fi 7 and MLO a reality today, not someday in the future.

This is why today we're excited to introduce the latest ByteBlower release. But first, our talker cat will give you a quick introduction to Excentis.

About EXCENTIS

Our mission is to advance today's networks while paving the way for tomorrow's. This commitment has established us as the go-to knowledge center for All Access Networks. Our proposal is thoughtfully constructed in layers (just like a lasagna) covering testing tools, services and outsourcing.



Outsourcing

Excentis can step in wherever you need us, handling everything from design to engineering, setup, and operations, so you can leverage our expertise and resources as your own.

Services

Providing testing, consultancy, and training for proactive and reactive solutions to address **all access networks** issues.

Testing infrastructure

From lab-controlled precision to real-home Wi-Fi scenarios, we ensure your solutions meet the highest standards before they reach your customers.

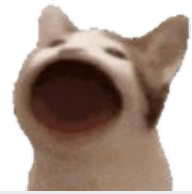
Testing tools

Our tools generate traffic for troubleshooting and analysis, pinpoint and resolve issues, ensuring performance, functionality, and stability in labs and real-world scenarios.

Testing MLO Wi-Fi 7 with ByteBlower

What's new?

First of all, we are excited to announce that we've been working on extending ByteBlower to dig deeper into the new possibilities that Wi-Fi 7 brings.



Enhanced Wi-Fi statistics collection

ByteBlower now supports **retrieving detailed Wi-Fi statistics, including Wi-Fi 7-specific metrics, from the latest chipsets on devices running Linux and Android.** These are currently the only operating systems offering mature APIs to expose such Wi-Fi 7 insights.

Per-link RSSI visualization for MLO

On Wi-Fi 7 devices that support Multi-Link Operation, **ByteBlower can now display an RSSI graph per individual link.** This gives testers a clear, real-time view of how each link behaves and contributes to the overall connection.

Together, these features make it easier to move from talking about Wi-Fi 7 to truly understanding and testing it in practice.

But hey this is still only talking...

What did Excentis actually do?

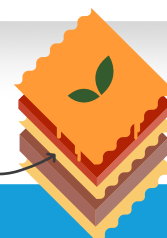


Instead of just talking about Wi-Fi 7 and MLO, we packed up our updated ByteBlower and headed over to the Excentis Wi-Fi House. Think of it as a gym for Wi-Fi devices: lots of sweating, heavy lifting, and a few devices gasping for signal.

Armed with these tools, we ran three test scenarios to see how MLO behaves. Along the way, we'll walk you through the new per-link RSSI graphs, your X-ray vision into what's really happening on each link.

But first, we need to talk about

What Happens Inside the Excentis Wi-Fi House?



→ **The pasta:**
Excentis Infrastructure



The Excentis Wi-Fi House is a testing environment designed to validate Wi-Fi performance in realistic, controlled conditions. Constructed to mimic a typical family home, using common materials like concrete, wood, and metal, it allows vendors and ISPs to assess how their Wi-Fi devices behave in true-to-life scenarios.

At its core, the Wi-Fi House offers automated, reproducible testing using the **ByteBlower + Endpoint** traffic generator and analyzer.



This setup enables the measurement of real user experience, covering scenarios such as roaming, rates vs. location, multiclient, quality of experience, neighbor occupancy, network stability, multi-client performance, MLO (Multi-Link Operation) capabilities, and L4S (Low Latency, Low Loss, Scalable Throughput) performance.

Both standalone access points and mesh Wi-Fi systems can be evaluated.



Cut the bla bla, let's get it done!

We offer different testing packages tailored to different needs and client loads. Whether you're comparing access points, analyzing throughput at various locations, or validating performance under neighboring network interference, the Wi-Fi House delivers comprehensive data.

The facility is ideal for profiles seeking to fine-tune device performance, reduce customer complaints, and gain a competitive edge by proving real-world superiority of their Wi-Fi solutions, especially with emerging technologies like Wi-Fi 7.

[Learn more about](#)

[The Excentis Wi-Fi House](#)

Next up:

The three scenarios

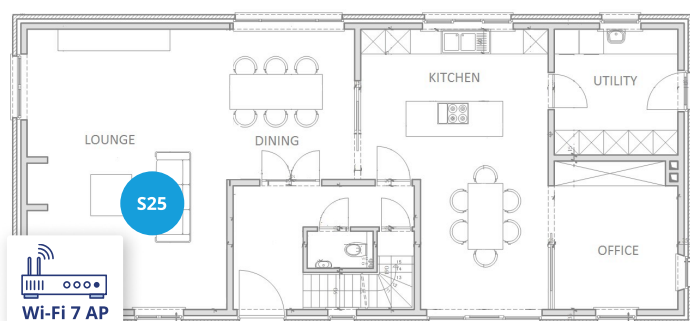
and how they'll help you interpret MLO behavior in your own devices without needing a crystal ball.

Scenario #1

In the first scenario we have put an MLO-capable client (S25) pretty close to the access point and started the traffic. What we see in the RSSI graphs is that the S25 is connected to the 6 GHz band (-20 dBm RSSI) and not to the 5 GHz band (-127 dBm RSSI which should be interpreted as not connected).

After 1.5 minutes, we introduce an interfering access point and client on the 6 GHz band (same channel) and notice that the S25 connects to the 5 GHz band (to avoid the interference) with an RSSI of -15 dBm. If, however, we remove the interfering access point and client again after 2 minutes, we can see that the S25 does not return to the 6 GHz band.

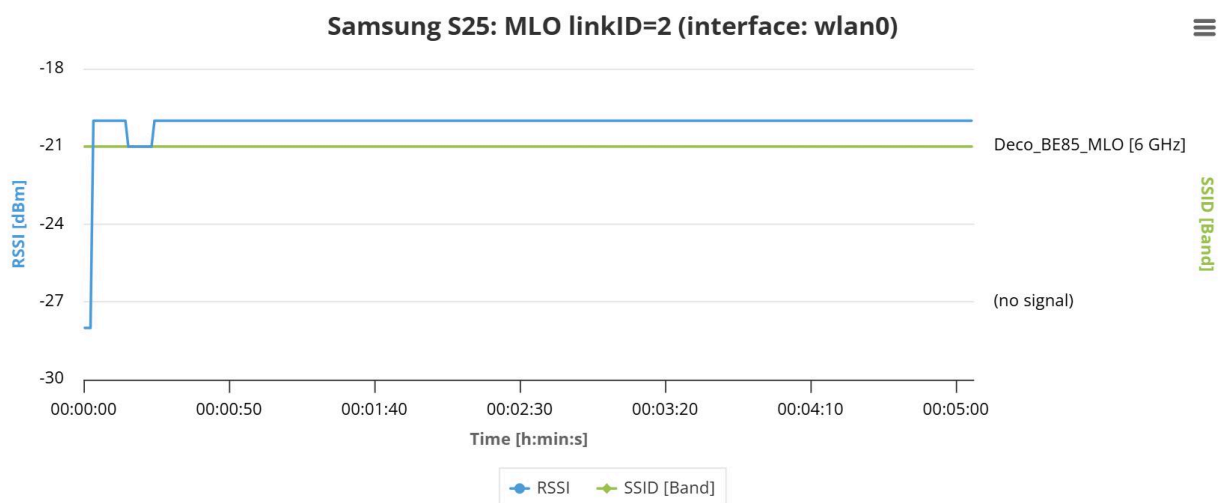
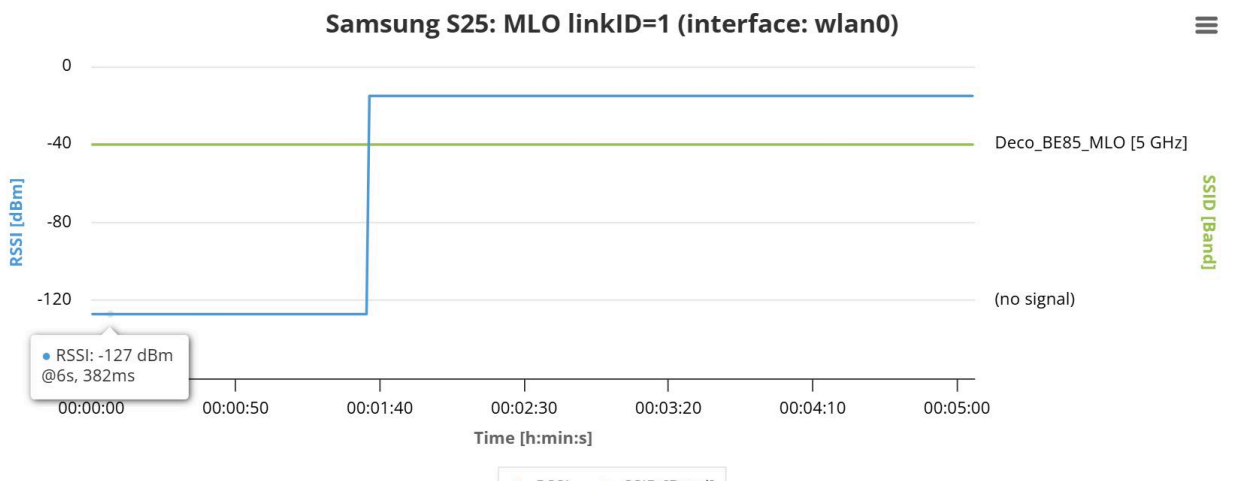
Remark that when the S25 switches to the 5 GHz band, the Android OS does remain providing valid RSSI values (-20 dBm) for the 6 GHz MLO link so from that info alone, it's hard to say which band exactly is used; if you combine it with the throughput graph however, you can clearly identify the switch in bands when the interferer was introduced.



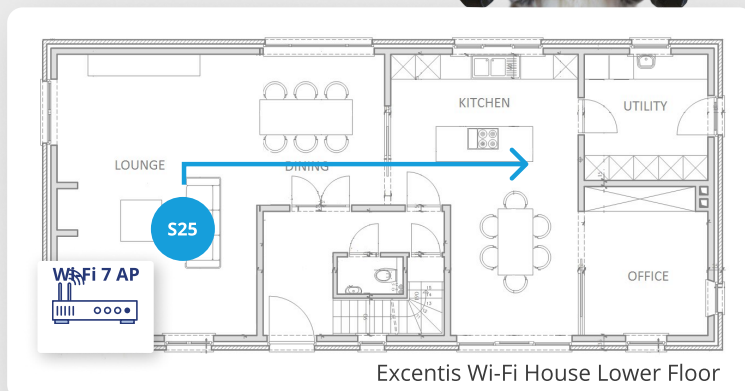
Excentis Wi-Fi House Lower Floor



Scenario #1

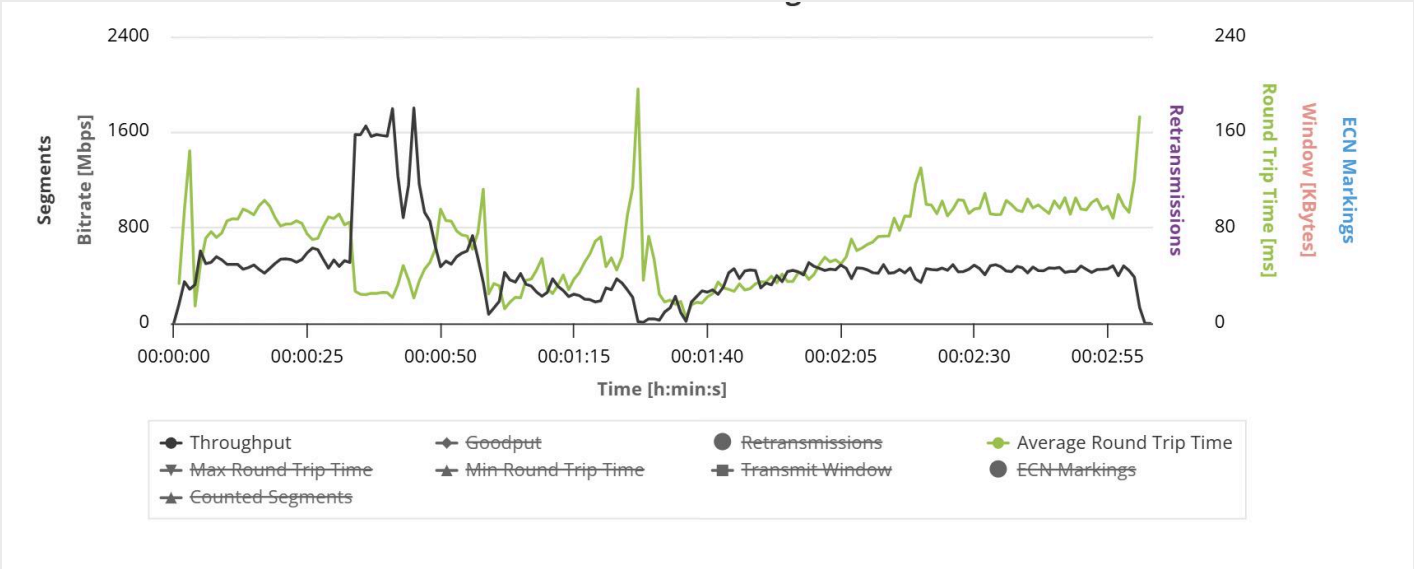
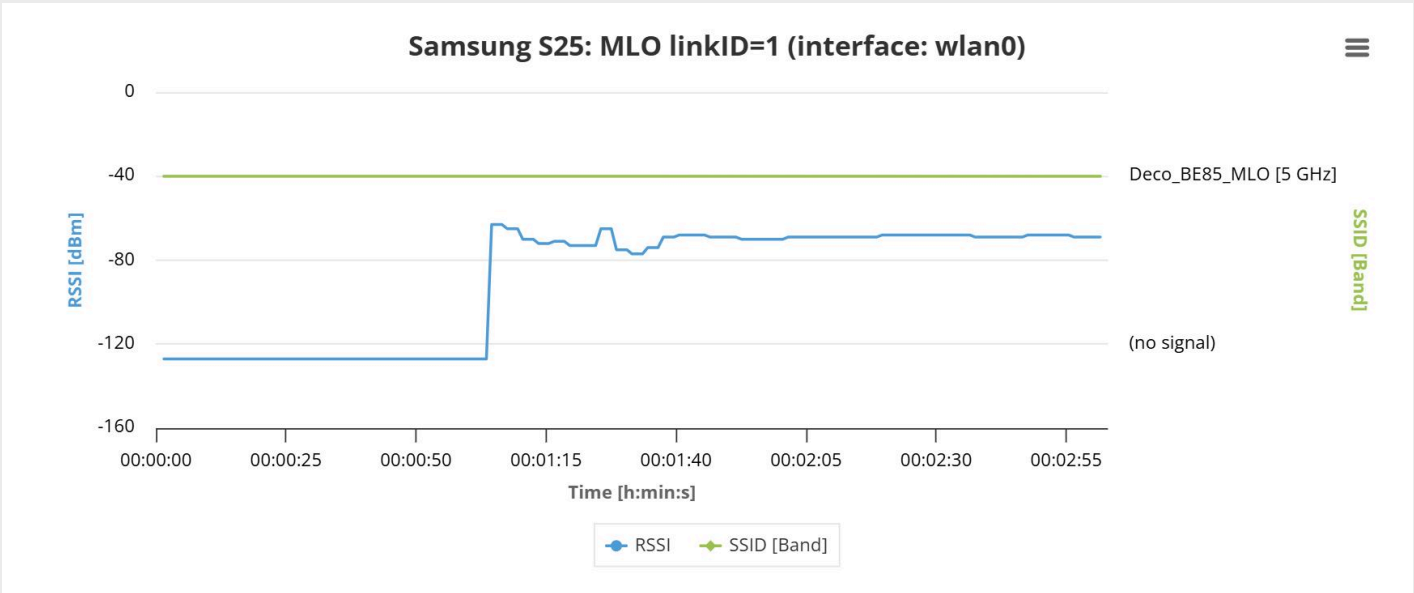
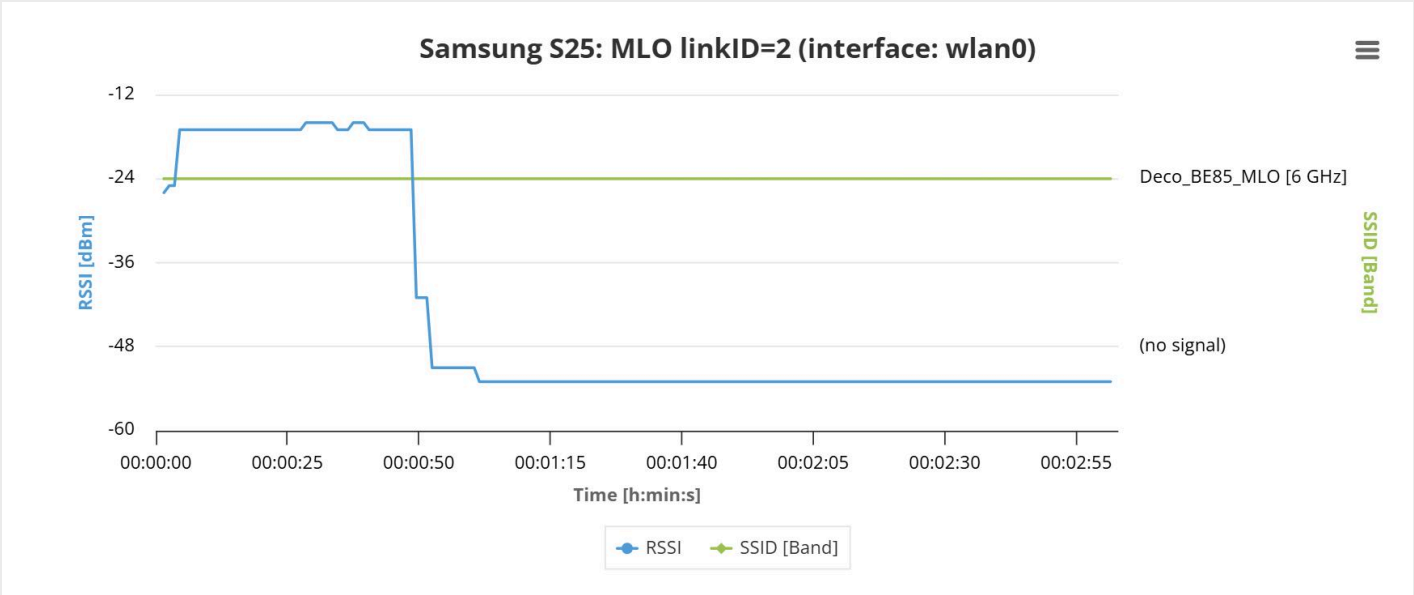


Scenario #2

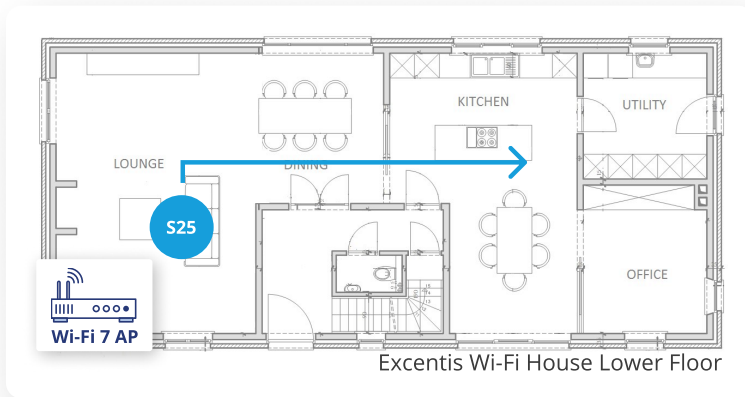


In the second scenario we use the same client (S25) and start traffic when it's close to the access point. As we can see, it starts on the 6 GHz band (-17 dBm RSSI) and not on the 5 GHz band (-127 dBm). We then move away from the access point to a further location and you can see the RSSI on the 6 GHz link drop as well (to an RSSI of -53 dBm). We then, again, introduce the interferer and see the same behaviour as in scenario #1 where the S25 jumps to the 5 GHz band but we see that it doesn't help with the actual user experience as throughput is lower after the switch.

Scenario #2



Scenario #3

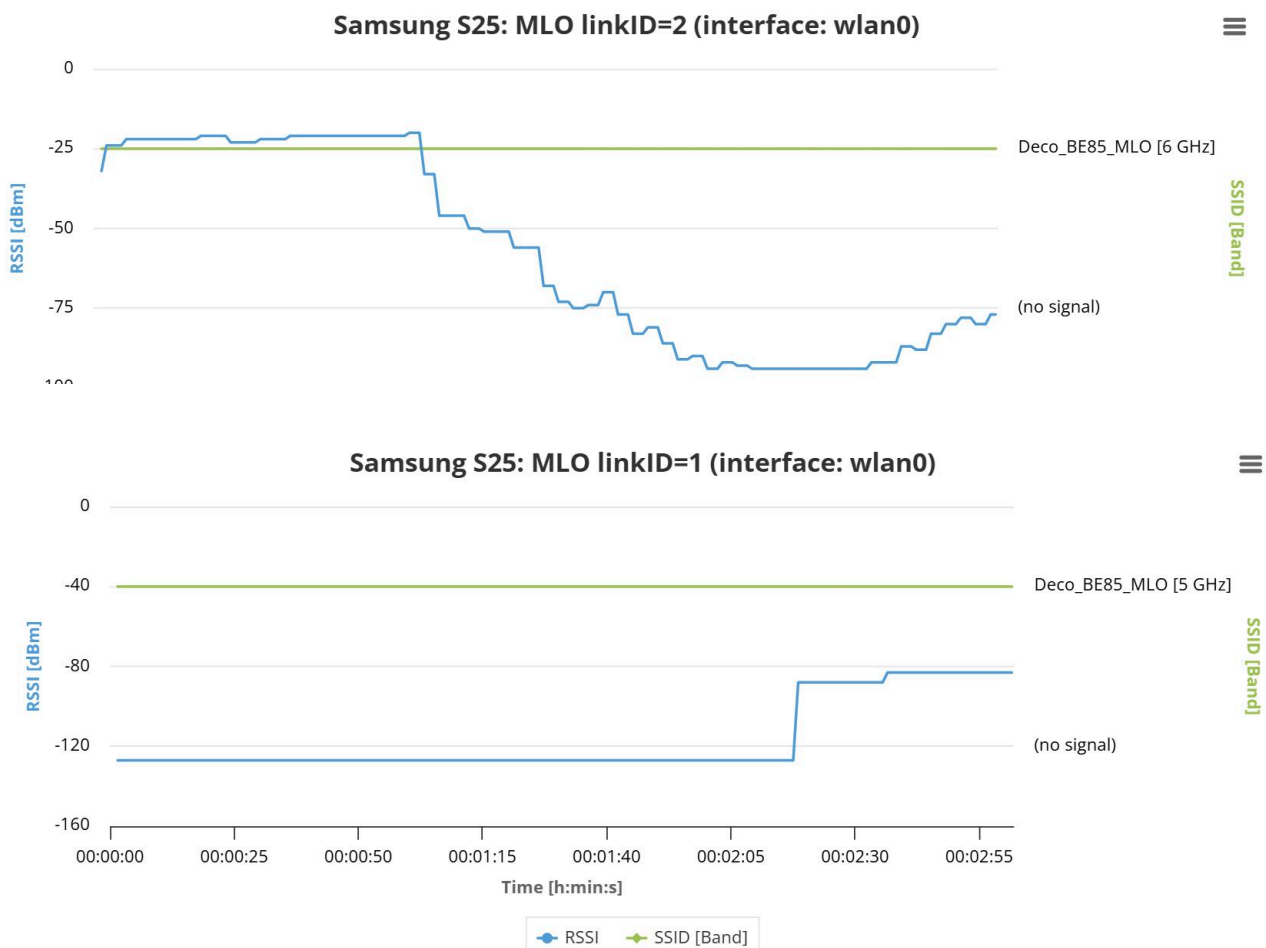


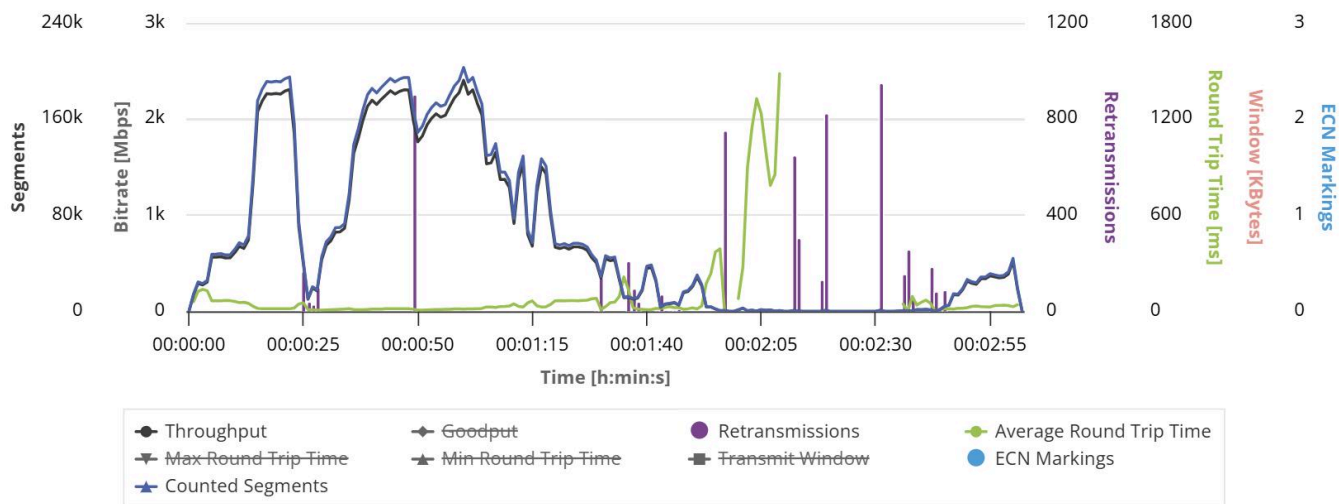
In this 3rd scenario we checked what happens that the actual 6 GHz coverage edge (without an interferer) as that is the default band the S25 uses. Again, we start the traffic when we are close to the access point and then move away from it.

As we can see, we start with high RSSI values on the 6 GHz link (around -20 dBm) and invalid RSSI values on the 5 GHz link (-127 dBm = no connection).

The further we move away from the access point, the lower the RSSI on the 6 GHz band, but we see that the switch to 5 GHz only happens when connection is already completely useless on the 6 GHz band (-94 dBm RSSI) which makes that the 5 GHz signal quality is also not great (-88 dBm RSSI) and thus close to zero throughput.

We do see that when moving back closer to the access point, the S25 switches back to using the 6 GHz link and some throughput is seen again.





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Conclusion

What can we learn?



The new MLO statistics in ByteBlower really earn their hype. They make it much easier to see which bands are truly being used and how that translates into the actual user experience. No more guessing, just real insights.

Interpreting the numbers still takes some brainwork. Different operating systems expose these stats in slightly different ways, which means results can vary not just from one client device to another, but even from one test run to the next. Whenever we uncover new quirks, we'll keep adding them to the ByteBlower Knowledge Base.

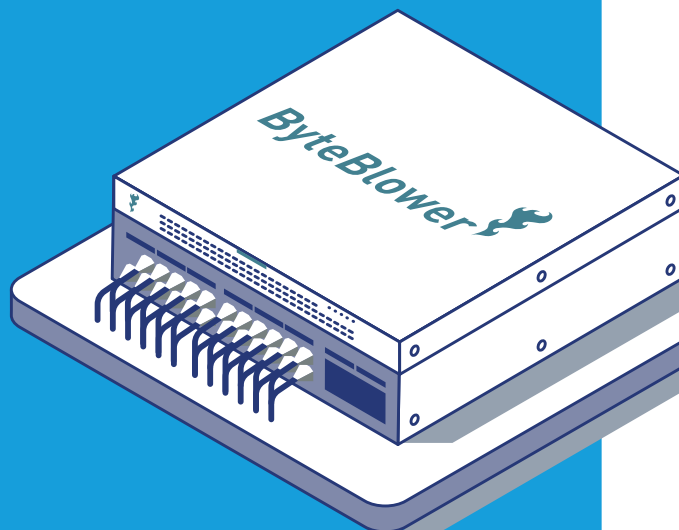
MLO is powerful, but it's not fully grown yet. We're still spotting inefficiencies, especially on the client side. The technology is maturing fast, but there's clearly more work to do before it flexes its full potential.

ByteBlower

The traffic generator and analyzer for All Access Networks

This test was done with **ByteBlower+Endpoint**, a tool that makes it fast and easy to assess your network's real-world performance, functionality, and stability. Efficient networks reduce maintenance headaches and deliver consistently smooth performance, resulting in happier customers.

[Learn more about ByteBlower](#)





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