

Why am I not getting 1Gb/s when doing a speedtest?

How to optimize your speedtest ...

1. Are you sharing your internet connection with others?

During testing you need to be the only device connected (wired and wireless) otherwise you will potentially get false readings.

2. Have you tried connecting with a wired connection?

It will give you a truer reflection of your internet throughput. A wired connection is a direct connection that is not shared, thus your connection should be 1Gb to the router. Contrarily, Wi-Fi is a shared medium with users potentially sharing the bandwidth.

3. Are you close to the Router/Access Point?

As you move further away the Wi-Fi signal reduces and so does throughput.

4. Does the testing device (laptop/phone) support 802.11ax (Wi-Fi 6)?

If not, it may not be getting all the potential capabilities including increased modulation and wider frequency channels which it offers, thus reducing performance.

5. Do you have other programs and processes running?

When running your tests, it is crucial that you have the bare minimum of other programs and processes running as this can have an impact. You may consider to:

- a) Shut down all non-used programs
- b) Stop background services
- c) Limit other programs or processes that are using the test interface (Ethernet port/Wi-Fi)

Reasons why you won't get 1Gb/s ...

6. True throughput is lower than the headline rate

Published data rates are headline potential rates. Taking into account transmission overheads/packet encapsulation, the true throughput is actually lower than the headline rate.

7. Wi-Fi connections & throughput are based on the lowest common denominator

This means that although our Wi-Fi router/AP has 8 antennas, it is likely that the testing device may only have 1 or 2, thus reducing potential throughput.

8. The test is effectively a snapshot in time

This is important to understand as results may differ when different parameters are used. Even if the same test scenario is used, but at a later time of day, you may see different results.

Speedtest using the Icotera High-end 8x8 Wi-Fi 6 Router

Test results ...

Test results achieved by following the outlined instructions, using a Wi-Fi 6 PC and a wired 1Gb Ethernet PC connected to our Icotera i4882 High-end 8x8 Wi-Fi 6 Router. The performance of the wired connection is very slightly better than the Wi-Fi as expected, due to no interference. Results are just below 1Gbps due to actual achievable throughput being lower than the headline rate as described.

WIRED CONNECTION



WI-FI CONNECTION

