



50 Gbit/s on a fixed network connection – a world first!

Powerful networks are critical success factors in a digital economy and the corresponding need for bandwidth is growing continuously. In a further innovative step, Swisscom has demonstrated what will be available just a few years from now to cope with increasing data volumes – by achieving a transmission speed of 50 Gbit/s in a real network environment in the access network. A world first.

The Swisscom network underpins digital Switzerland. We depend on it for our modern digital society to function; networked systems and devices are essential for private conversations, sharing important moments, SMEs capitalising on digital opportunities in new areas of business and increases in the efficiency of our infrastructures and production chains.

Over the coming years, the development of digital applications will result in a similar growth in bandwidth need as seen in recent years, when it increased more than tenfold within a decade. Swisscom is therefore investing in network expansion on an ongoing basis, deploying the latest innovative technologies to do so and safeguarding Switzerland's high degree of digital competitiveness.

Achieving the next milestone

Swisscom has now achieved the next milestone in a real network environment in the access network by upgrading existing OLT (Optical Line Termination) hardware with a 50 Gbit/s PON (Passive Optical Network) Line Card prototype, enabling a download transmission speed of 50 Gbit/s and an upload transmission speed of 25 Gbit/s on a fixed network connection. A world first. Markus Reber, Head of Swisscom Networks, says: "There is no question that the bandwidth need will continue to increase over the coming years. That's why, here at Swisscom, we are already considering how our technology needs to develop to ensure that Switzerland continues to be ready to take advantage of the latest digital services with the best possible experience in the future. The results of testing based on PON technology and architecture clearly demonstrate that we have some powerful options available."



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Press release

Swisscom estimates that the technology will be ready to market and deploy in around two years. The company is currently focusing on two areas of application in particular, as Markus Reber explains: “In my opinion, PON with 50 Gbit/s will be an option for the business customer market initially. Progressive network virtualisation will enable companies to use the bandwidth they need on a flexible basis in line with their requirements, for instance. In contrast, the 10 Gbit/s already available in the residential mass market should be more than enough for several years to come. However, the 50 Gbit/s option offers even more opportunities, as it allows the existing fibre optic infrastructure to be deployed in a more versatile way. As an example, the technology will soon facilitate access to mobile communication masts, particularly for 5G, as the same network can be used as the one already built to connect households. With a transmission speed of 50 Gbit/s, there is ample bandwidth available.”

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