

Ultrafast Access Technologies: FTTH – G.fast – DOCSIS 3.1: What Trade-Offs between Cost, Performance and Sustainability

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Abstracts

This report provides a state of the art of the different ultrafast Internet access networks available today:

FTTH optical fibre networks;

Upgraded cable networks with coax in the last mile;

Copper twisted pair networks (phone lines).

This state of the art allows for a comparison of the different technologies' technical performance, and to measure the pros and cons of each. The report gives readers a detailed snapshot of operators' current ultrafast broadband rollouts and future plans, for each class of technology. It also delivers concise insights into the main technical, economic and strategic issues surrounding ultrafast access technologies.

Ultrafast broadband (UFB) technologies, which deliver download speeds of more than 1 Gbps over a fixed Internet connection, are currently available on three types of network: FTTH networks, networks with coaxial cable in the last mile and copper pair networks (over phone lines). If FTTH networks are now able to deliver speeds of 1 Gbps and up, cable networks need to upgrade to the DOCSIS 3.1 standard to be able to do so, and copper pair networks need to rely on G.fast technology. Fibre to the home (FTTH) is the overriding trend today, and the most future-proof as the technology will enable increasingly fast connections over time.

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