



G.FAST AND SUPER-VECTORING

Delivering Tomorrow's Services Today

Rapidly deployable, programmable broadband solutions that leverage existing network infrastructure, speed time to market and reduce deployment costs.

Lowest Total Cost; Fastest Time to Market

Next-generation broadband technologies, such as Super-Vectoring, G.fast and G.hn, enable Gigabit speeds over existing infrastructure wiring drastically reducing zoning issues, build delays and tenant disruption. The higher asset utilisation offered by Fibre-to-the-Cabinet/Node (FTTCab/N) can lower the subscriber connection costs by up to 70%.

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Monetising Deep-Fibre Deployments

Vectored VDSL2 solutions with System Level Vectoring (SLV) are proven solutions available today to deliver 100+ Mbps. Emerging technologies, such as Super-Vectoring and G.fast (A1, A2 and A3) extend fibre closer to the customer, and offer higher rates (250 – 1000+ Mbps) that compete well with DOCSIS 3.1 and 5G. Extending fibre deeper into the access network shortens the copper loop lengths to support these advanced technologies. This enables up to 10 times more utilisation of a networks existing multi-million euro fibre investment.

Unprecedented Operator Interest

Since ADTRAN demonstrated the industry's first fully sealed FTTdp solution in early 2014, it has proceeded to lead the industry in G.fast trial experience. The company is fulfilling demand from more than 60 service providers across six continents who have applauded the solution's innovation and performance.

A New Deployment Model Met with Experience

FTTB/FTTdp could mean deploying Fibre-to-the-Pit, Pole, or Pedestal. This reality demands multiple input power variants including remote and reverse power techniques, as well as, weather hardened solutions.

ADTRAN is a global leader in weather-hardened, sealed broadband solutions with 100,000+ units deployed in harsh environments from Finland/Alaska to Middle East/Mexico.

A Virtual and Versatile Access Portfolio

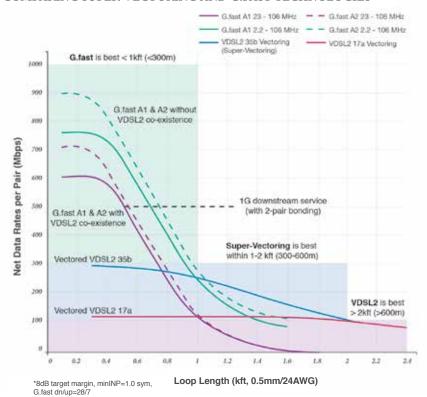
The FTTB/FTTdp solution is further differentiated through the use of modern SDN deployment models and a single, common OS ensuring rapid service deployment and end-user service activation. ADTRAN G.fast/G.hn solutions are managed and provisioned via open source SDN controllers as well as being both physical layer and chipset agnostic.

SDN-Programmable Networks

Successful expansion of next-generation, multitechnology access networks is predicated on the use of open and flexible systems. Operators can select best-in-class solutions from multiple vendors to accelerate the introduction of new revenue generating services across their entire network. ADTRAN is working with standards bodies like the Broadband Forum to develop open APIs and interfaces allowing simplified, rapid network integration of our virtual access solutions into any broadband network, regardless of broadband vendor or OSS incumbency.

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COMPARING SUPER-VECTORING AND G.FAST TECHNOLOGIES



FTTx Access Solutions Chart

	System-Level Vectoring (17a)	G.fast A1 (106MHz)	Super-Vectoring (35b)	G.fast A2 (106 MHz)
Deployment Models (Ideal)	FTTCab/FTTN FTTdp/FTTC/FTTB	FTTdp/FTTC/FTTB	FTTCab/FTTN FTTdp/FTTC/FTTB	FTTCab/FTTN FTTdp/FTTC/FTTB
Ideal Port Count/ Effective Reach	48 – 384 Less than 900m	1 – 16 Less than 300m	48 – 384 Less than 600m	1 – 96 Less than 450m
Initial Market Rollout	2014	2016/2017	2016/2017	2017

Fibre-To-The-x (FTTx); x = Cabinet (Cab), Node (N), Building (B), Curb (C), Distribution Point (dp)





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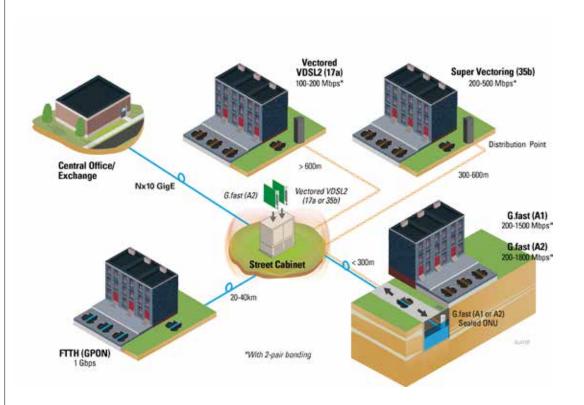
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Comprehensive Broadband Toolkit

ADTRAN offers a comprehensive broadband toolkit that includes Vectored VDSL2, bonding and SLV solutions, which have been widely deployed. In addition, Super-Vectoring and G.fast technologies, and FTTH solutions (GPON, XGS-PON and NG-PON2) offer a path to even greater service rates and operational flexibility.