

The Fiber-to-the-Distribution-Point concept

The "Fiber-to-the-Distribution-Point" (FTTdP) concept is based on the idea of cabling fiber up to basement of the buildings and then using VDSL2 technology over the existing copper.

Reverse Power Feeding

The hybrid network termination installed in the basement is not connected to the power network: power is injected backwards through the vertical copper cabling by a home plug connected to the customer's telephone socket.

Single appointment installation and VDSL2 subscribers upselling

Inside the building broadband is provided using VDSL2. Installation and upgrading of existing subscribers is easy and cost effective.



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Aethra[®] Telecommunications FTTdP carrier solutions

Introducing the "Fiber-to-the-Distribution-Point" (FTTdP) concept

Fiber has become more and more important when providing high speed broadband access for home and business users.

However, connecting fiber up to the customer's home brings a series of crucial issues related to the cabling process itself. Each installation would need to be handled individually, simply because of the huge variety of already existing buildings (just think about old historical buildings), with unpredictable effects on lead times and costs for the provider.

The "Fiber-to-the-Distribution-Point" (FTTdP) concept is based on the idea of cabling fiber up to basement of the buildings (the "distribution point"), and then using VDSL2 technology over the existing copper vertical cabling in order to provide

broadband access to the end users. VDSL2 technology on such a short distance (less than 100 mt.) makes it possible to offer up to aggregated 250Mbps connections to the end user on a standard copper pair, without the need of any construction work.

Opposed to the FTTB approach, in FTTdP the hybrid fiber-copper network termination installed in the basement are rack single user modules not connected to the power network.

Reverse Power Feeding technology

Of course the hybrid fiber-copper network termination needs a power source. If it were directly connected to the power network, the provider would be forced to subscribe electric energy contracts for each one of the buildings. Definitely inconvenient and not a Plug and Play solution.

Aethra® Telecommunications reverse power feeding technology (patent pending) allows the hybrid network termination to receive power from the copper cables coming from the end users' homes.

Customers will be provided with a home plug which, connected to the first telephone socket and the power socket, will inject power to the hybrid network termination through the same copper cables used for VDSL2 connectivity.

Analog phones backward compatibility and power failure recovery

Standard POTS ringing voltage and off-hook condition signals cannot co-exist with the reverse powering technology. To solve this problem, they are intercepted, carried separately and regenerated by the home plug and the hybrid termination.

Analog phones will continue to work as usual. Moreover, in case of power failure at the customer's home, the system will auto-sense the loss of power and will switch back to standard POTS functionalities: the underlying POTS service is guaranteed by connecting the customer's local loop back to the POTS line.

Easy installation and seamless VDSL2 upgrading

Inside the building broadband connectivity is provided to the customers using standard VDSL2 technology.

Any standard VDSL2 modem or CPE is fully compatible with the system, not binding providers or users to dedicated devices and making it easy to upgrade existing VDSL2

subscriptions. Installations and upgrades can be managed with a single one engineer appointment at the customer's home, just inserting the plug.

HGV1+ Access System helps carriers offer superfast fiber broadband to their customers with guaranteed lead times and cutting deployment costs.

Products

Aethra® Telecommunications HGV1/HGV1+ Access System

Aethra® Telecommunications HNT1/HNT1+

Hybrid GPON-VDSL2 network termination, without/with POTS regeneration.

Aethra® Telecommunications RPF1/RPF1+

Home plug with reverse power feeder, without/with POTS regeneration.

Guaranteed lead times and cost effective deployment

Aethra® Telecommunications HGV1 and HGV1+ Access System give the providers the possibility to supply aggregated 250Mbps broadband internet access to the customers, without the need to impact on the building infrastructures and using standard VDSL2 modems/CPEs over the existing copper cabling.

Aethra® Telecommunications HGV1/HGV1+ Access System makes it effortless and cost effective to provide fiber high speed connections even in buildings where it is impossible to bring fiber up to the customers' homes or offices.

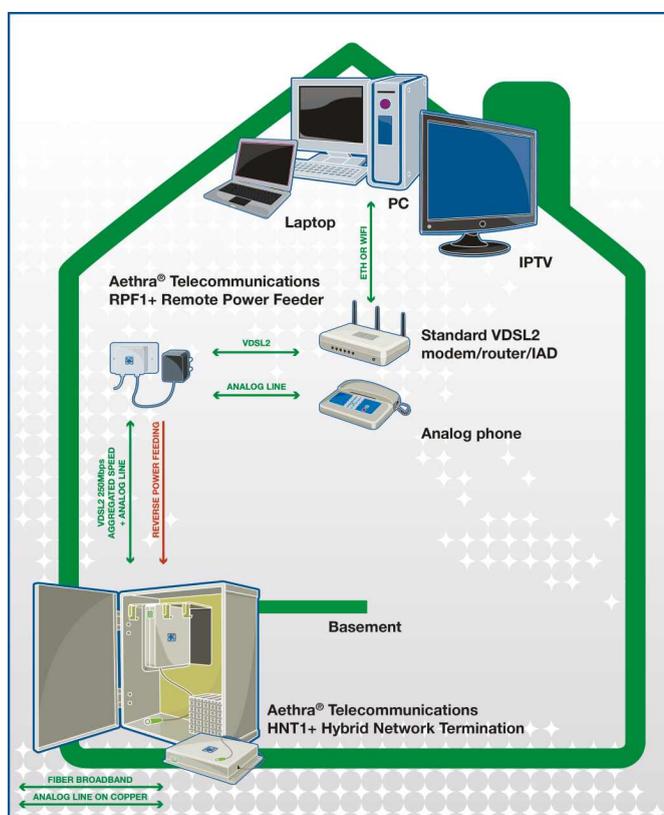


Figure 1: Aethra® Telecommunications HGV1+ Access System application scenario.