

XGS-PON & G.fast & G.hn

Gamechanger
for your digital
infrastructure



FTTX
5E

- Easy Architecture
- Easy FTTB Integration
- Easy Open Access L2 BSA
- Easy Automation
- Easy Operation



Netceed is a global leader in distribution, logistics, technical engineering, and product design with over 30 years of expertise and performance supporting the telecommunications and broadband industry.

Netceed supplies and distributes a comprehensive range of passive and active equipment and tooling for network deployment, upgrades, and maintenance, supporting all technologies including FTTH, FTTx, HFC, Wi-Fi, 5G/mobile, and data center.

Netceed's comprehensive portfolio of 90,000+ products from nearly 1,500 industry-leading suppliers, along with their value-added supply chain solutions support carriers' seamless delivery of high-speed Internet, Video, Data, and Voice services to Residential, Business, and Mobile Users.

Netceed employs over 2,000 people across 19 countries and counting, and its experienced team works hard every day shaping the future of communication networks across the globe.

FTTX challenges

New customer acquisition

Implementation of the german TKG amendment

Standardisation of FTTH & FTTB

Increased efficiency

Pressure to innovate

The solution:



Easy Architecture

Easy FTTB Integration

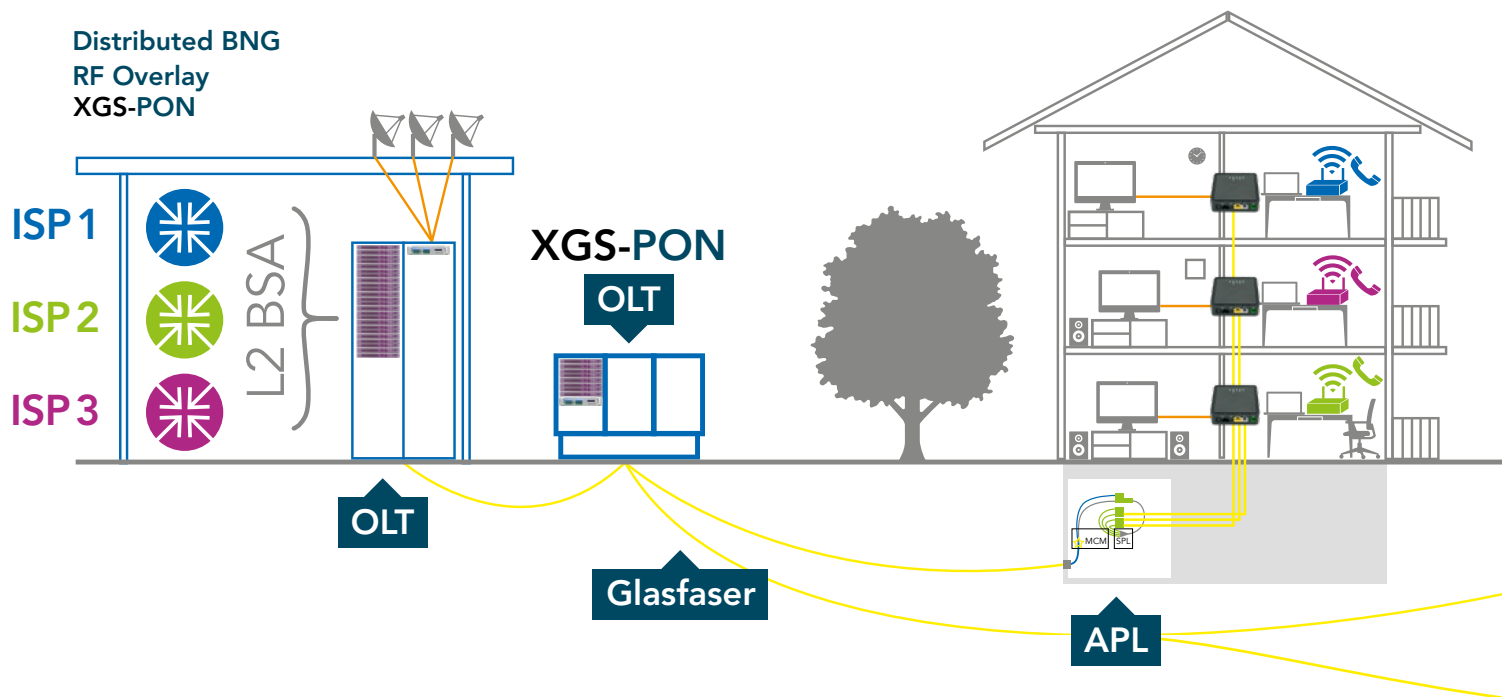
Easy Open Access L2 BSA

Easy Automation

Easy Operation

Find out more about the solution
at www.anedis.de/xgs-pon/

Multi-gigabit connections for end customers, compliant with the TKG amendment



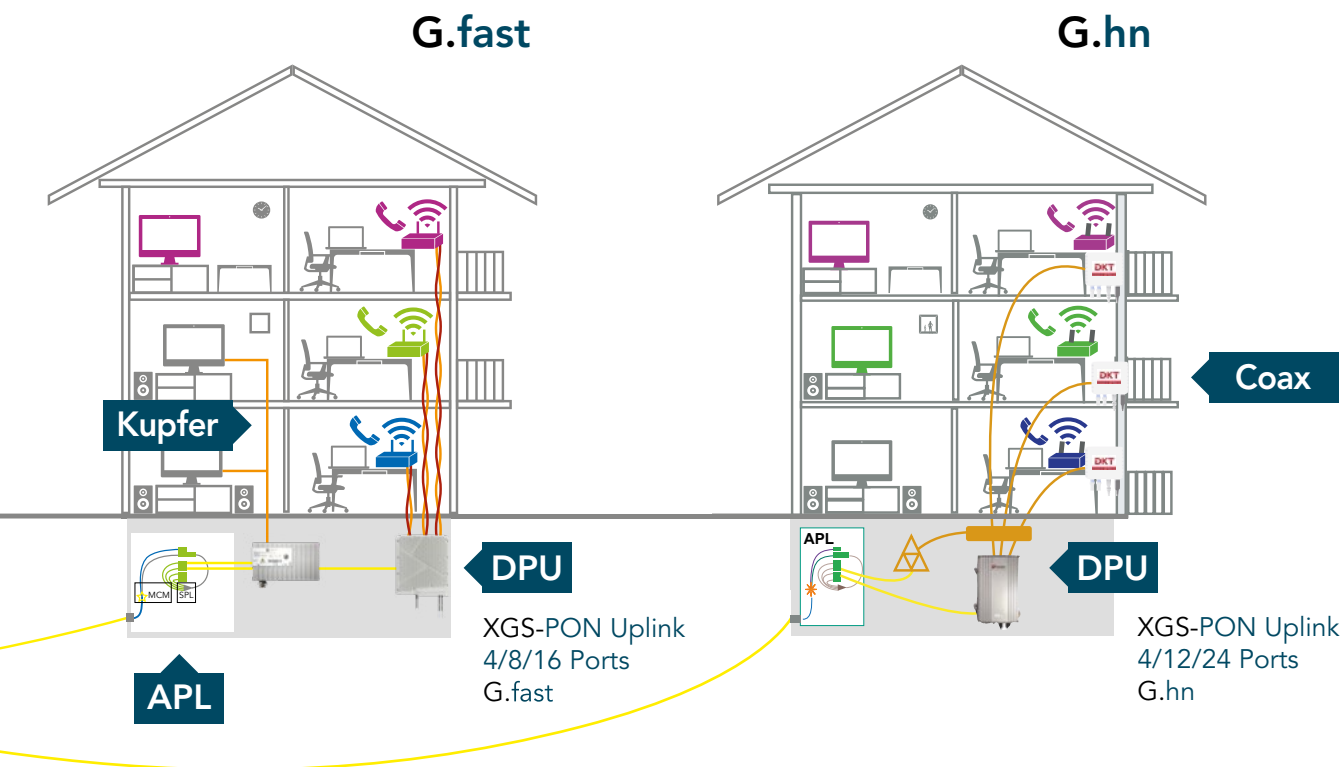
FTTH with XGS-PON

- Multigigabit bandwidths, synchronised for end customers
- Requires fibre to the home
- Passive distribution network in the home
- 10 Gbit/s symmetrical via XGS-PON interface
- L2-BSA-compatible open access
- Free choice of Internet service provider (ISP) for the end customer

FTTB with G.fast

- 1.5 Gigabit per modem, typically with 50 m two-wire
- No need to lay new cables in the home
- DPU reverse fed
- Uplink via DPU with 10 Gbit/s symmetrical XGS-PON
- L2-BSA-compatible open access
- Free choice of Internet Service Provider (ISP) for the end customer

RF overlay enables basic TV supply via fibre optics



FTTB with G.hn over Coax

- 1.7 Gbit/s symmetrical per modem
- Favourable and sustainable use of existing coax networks in the building
- Reverse power or local AC 230V supply
- Uplink via GAM with 10 Gbit/s symmetrical
- Free choice of Internet service provider (ISP) for the end customer
- Frequency range 5-204 MHz, compatible with TV
- FM/TV frequencies can be masked so that they are not used by G.hn
- Up to 16 subscribers supported via splitter on one port
- GAM-4-CX-AC ideal for residential buildings with 4-16 units



E7 flexible indoor / outdoor OLT

- Temperature-hardened, modular system for PoP and multifunctional enclosures
- Two cards per chassis
- AXOS GPON/XGS-PON/NG-PON2 and Active-Ethernet-Layer-2 services of the carrier class
- Modular architecture for fibre optic solutions with low to medium density fibre optic solutions
- Integrated transport and subscriber interface
- Non-blocking uplinks
- XG801 line card for GPON or XGS-PON with 8 SFP+ slots and 4 SFP+ slots, 10/2.5/1 GE ports UNI or NNI and 2 QSFP28 slots
- XG1601 line card for GPON or XGS-PON with 8 dual-density SFP+ slots for 16 PON ports as well as 2 SFP+ slots for 10/2.5/1 GE ports UNI or NNI and 2 QSFP28 slots for NNI or cascading



XGS ONT GigaPoint GP1100x & GP1101x

- 1x 10/10 G XGS-PON-WAN-Interface, SC/APC
- 1x POTS (ANSI or ETSI)-Interface for SIP
- Ethernet OAM (CCM, loopback, link trace, ping)
- Optional: UPS-Support – 2-Pin und 8-Pin DC-Port
- Optional: FTU integrated
- GP1100x: 1x 2.5 GE / 1 GE LAN-Interface, RJ-45
- GP1101x: 1x 10 GE / 2.5 GE / 1 GE LAN-Interface, RJ-45



XGS-PON ONTs DKT 79857 & 79859

- 1x 10/10G XGS-PON WAN Interface, SC/APC
- Simple click-on FTU for all ONT types
- 79857: 1x 10GE, 1x 1GE LAN Port, RJ-45
- 79859: 1x 10GE, 1x 1GE LAN Port, RJ-45, RF-Overlay

AXOS®

e3 e5 e7 e9

The Access software platform

- At the cutting edge of software development (Netconf/YANG)
- Modular - designed for quick customisation
- Agile development - simple updating
- Enables future SDN/NFV architectures
- An API, a „method of procedure“, an integration, a CLI
- IPFIX support for telemetry functions
- Distributed BNG functionality (E9 platform)
- Compatible with the E3 | E5 | E7 | E9 series
- Pay-as-you-succeed-Modell

AXOS e92
AR SM



E9-2 ASM3001 – BNG & LI Router

- For PoP and data centres
- Building a next-generation aggregation layer
- Traditional Layer 2 network
- Simplified Layer 3 access network
- L2 and L3 VPN, MPLS, subscriber management, lawful intercept
- Uplink options N*100G, N*40G, N*10G

AXOS e92



E9-2 – Integriertes OLT-System

- The integrated OLT system for PoP and data centres
- An OLT system consists of at least two chassis
- One or two CLX3001 control cards in one chassis
- Expandable by up to eight access shelves (chassis 2 to 9) with two line cards each
- Maximum of 16 line cards
- Mix / Match – GPON / XGSPON / NG-PON2
- Modular architecture for medium to high density fibre optic solutions
- Integrated transport and subscriber interfaces
- NG1601 line card for XGS-PON or NG-PON2 with 16 PON-XFP slots
- XG3201 Linecard for XGS-PON or GPON with 16 SFP-DD slots for 32 PON ports. Available SFP-DD variants are XGS-PON, G-PON and MPM -Multi PON SFP modules (XGS & G-PON)





FTTB G.fast Distribution Point Unit (DPU)

16 G.fast Ports



8 G.fast Ports



4 G.fast Ports



DPU Hardware

- XGS-PON Uplink
- Multi-GE Port ONT
- Calix OLT and SMx integrated
- 4 / 8 / 16 G.fast Ports (up to 2 Gbit/s)
- Remote power supply enables cost-effective installation

Axyom™ Element Management System

- REST API Northbound Interface
- Netconf/YANG Southbound Interface
- IPFIX for Performance-Monitoring Data Collection
- PnP DPU Auto-Discovery
- Automated firmware management



FTTB G.hn Access Multiplexer (GAM) Family

GAM-4-CX-AC
GAM-4-CRX



GAM-12-C



GAM-24-C



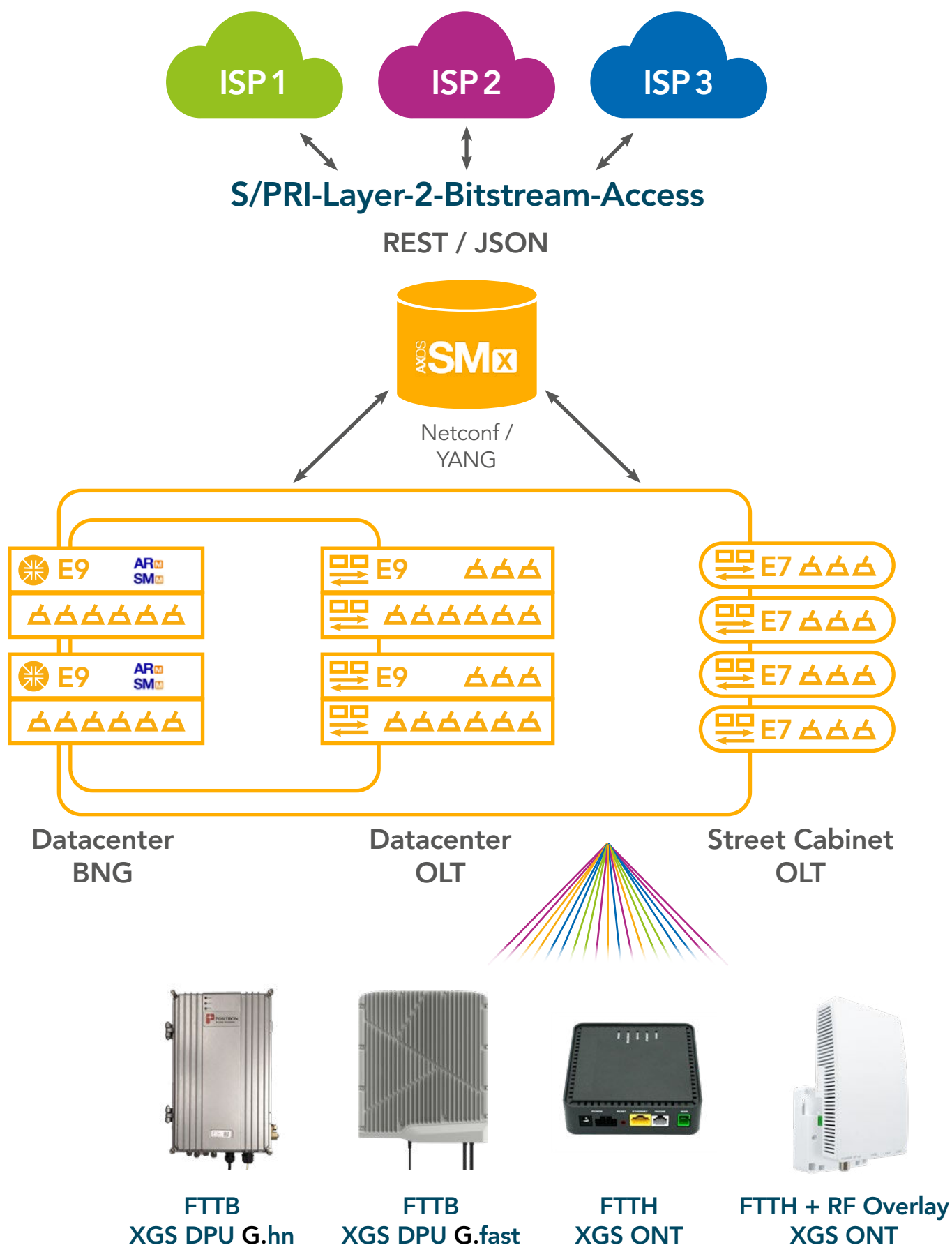
GAM Hardware

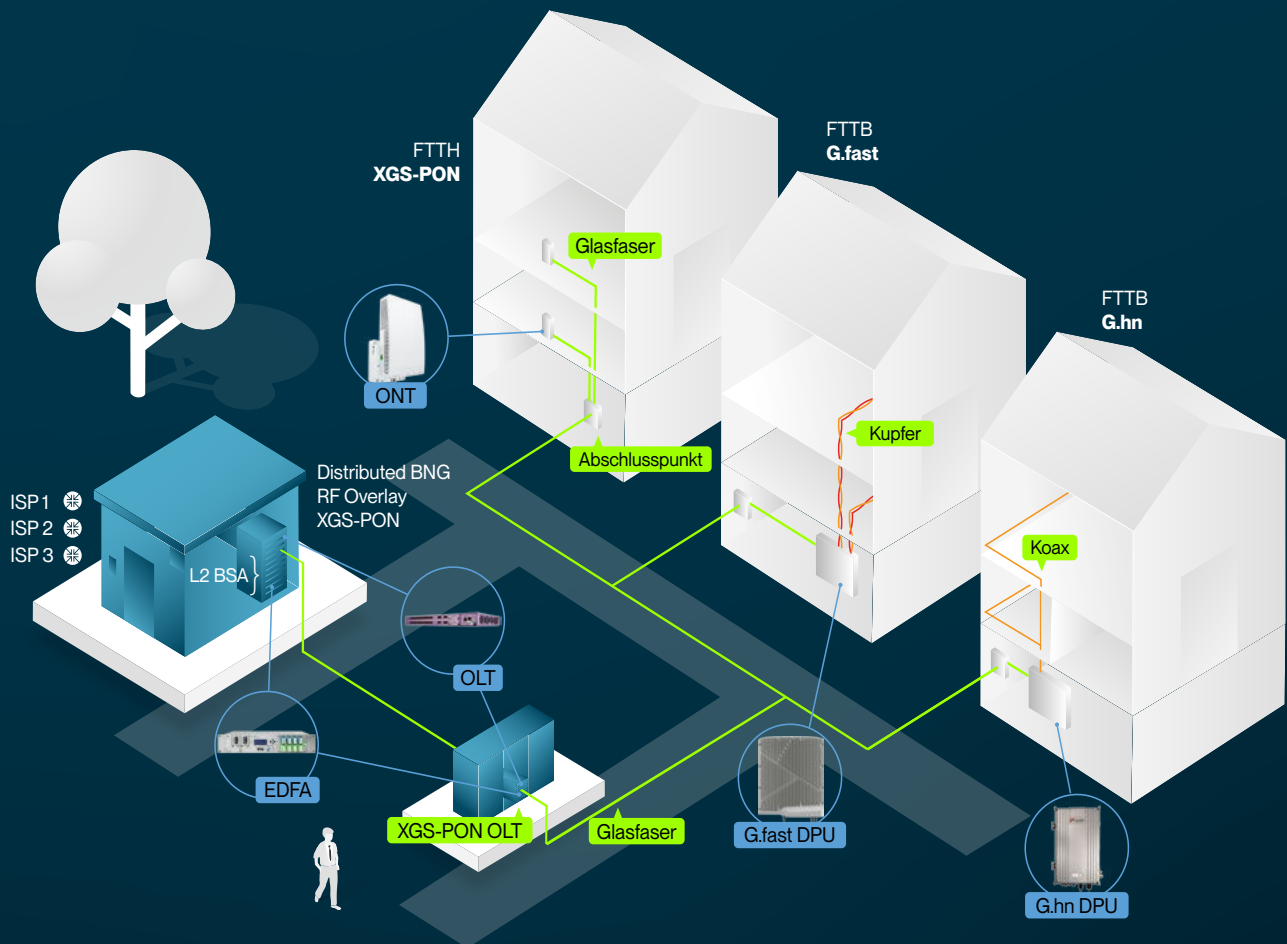
- XGS-PON uplink
- Multi-GE port ONT
- Calix OLT and SMx integrated
- 4 / 12 / 24 G.hn ports (up to 1.7 Gbit/s per port)
- Reverse power supported, for cost-effective installation

Fully integrated in Calix SMx Element Manager

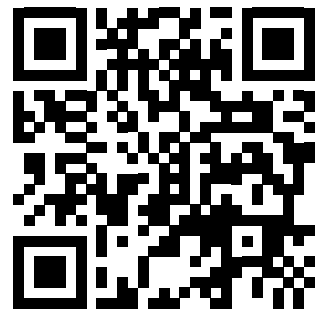
- REST/JSN API Northbound Interface
- PnP GAM Autodiscovery like an ONT
- Management also possible via WEB GUI/CLI or Positron's VIRTUOSO

Open multi-vendor complete solution for FTTH and FTTB





Find out more
about the solution at
www.anedis.de/xgs-pon/





**Give us a call or visit our website –
we will be happy to help you!**

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