ANEDiS® POWERED BY Netceed

Netceed

XGS-PON & G.fast & G.hn

Gamechanger for your digital infrastructure

Calix

casa systems

POSITRON

OLT / ONT

DPU

ONT

TEST

XGS-PON

DKT

VIAVI

FTTX 5E

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

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E7 flexible indoor / outdoor OLT

- Temperature-hardened, modular system for PoP and multifunctional enclosures
- Two cards per chassis
- AXOS GPON / XGS-PON / NG-PON 2 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

DKT

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

Calix

AXOS®

e3 e5 e7 e9

The Access software platform

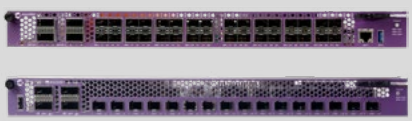
- At the cutting edge of software development (Netconf/YANG)
- Modular - designed for quick customisation
- Agile development - simple updating
- Enables future SDN/NFV architectures
- An API, a „method of procedure", an integration, a CLI
- IPFIX support for telemetry functions
- Distributed BNG functionality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

AXOS e9 2 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

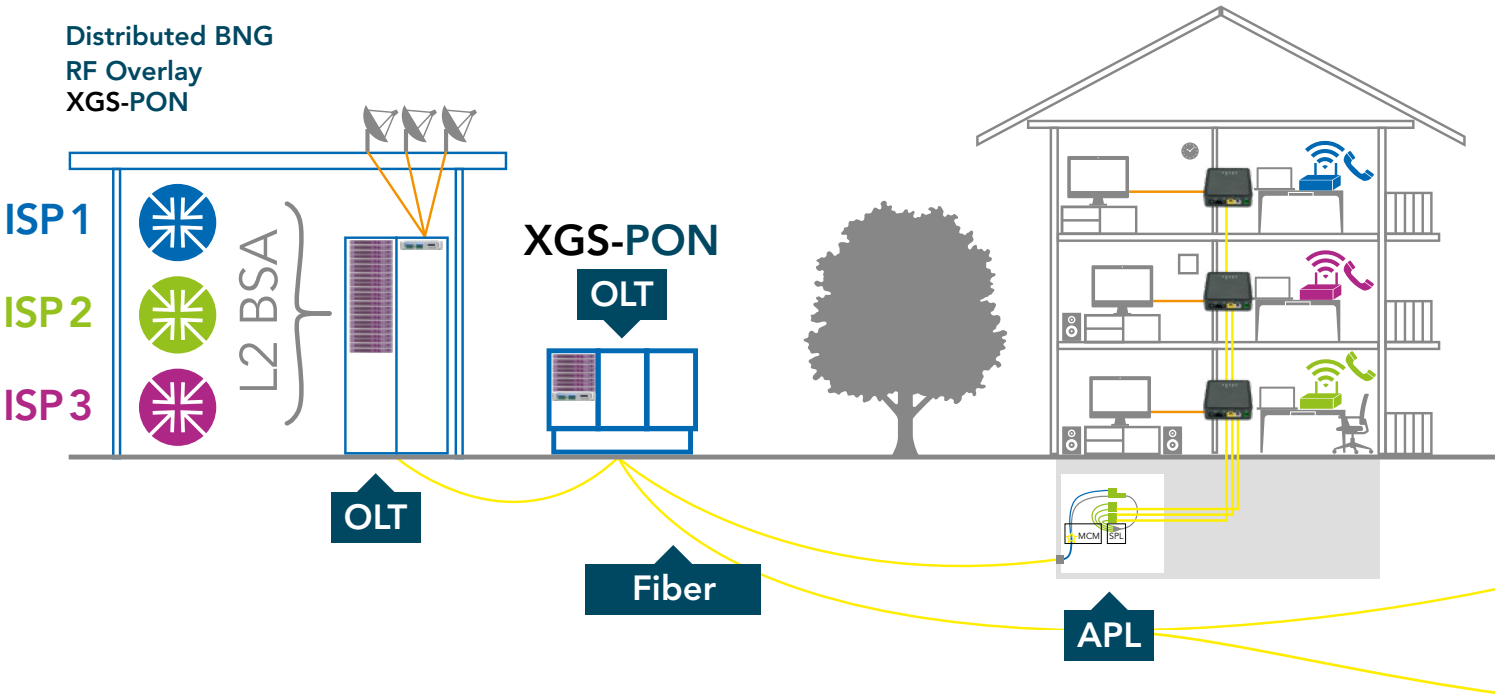
AXOS e9 2



E9-2 – Integrated 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)

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



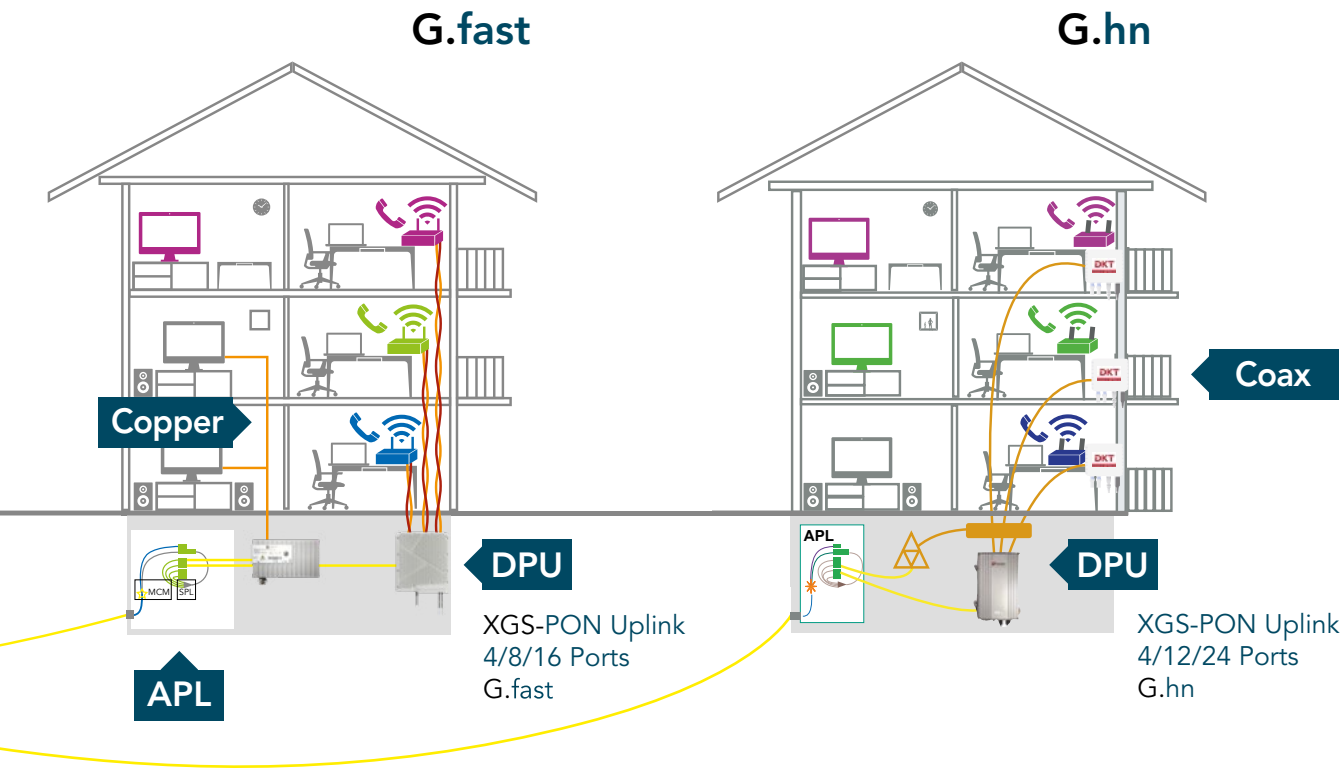
FTTH with XGS-PON

- 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 mit 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

RF overlay enables basic TV supply via fibre optics

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

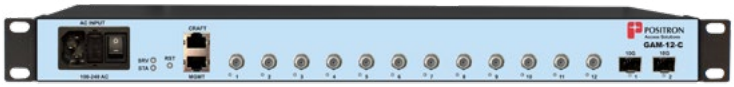
Axyom™ Element Management System

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

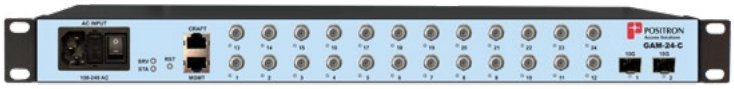
FTTB G.hn Access Multiplexer (GAM) Familie

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

GAM-12-C



GAM-24-C



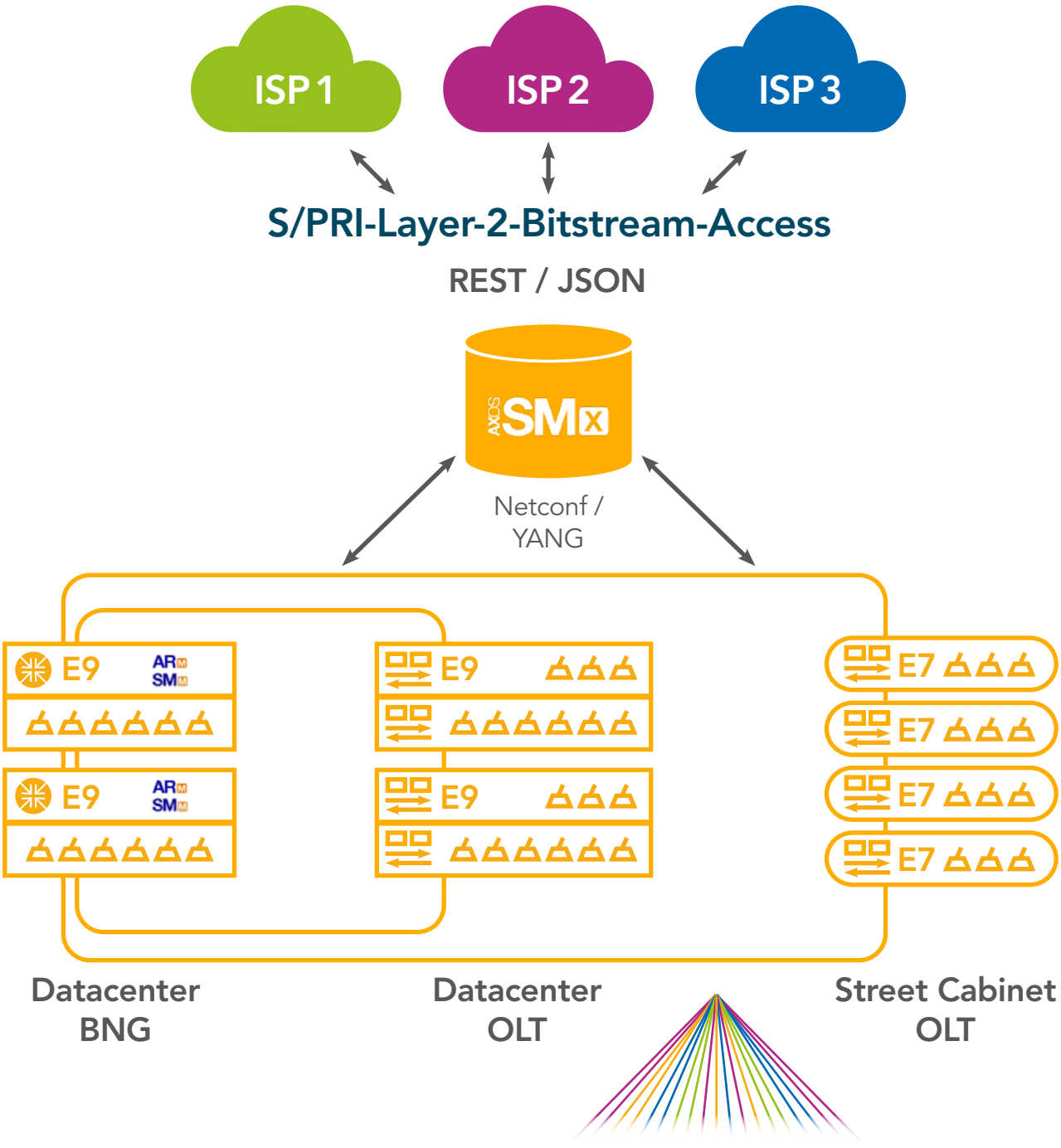
GAM Hardware

- 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



FTTB
XGS DPU G.hn

FTTB
XGS DPU G.fast

FTTH
XGS ONT

FTTH + RF Overlay
XGS ONT

FTTX challenges

- New customer acquisition
- Implementation of the german TKG amendment
- Standardisation of FTTH & FTTB
- Increased efficiency
- Pressure to innovate

The solution:

FTTX 5E

FTTX 5E

- 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/

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

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