

New markets for city carriers, network operators and energy suppliers

High-speed networks for internet, TV and telephony



HFC Broadband Solutions from AXING and DEV Systemtechnik provide low-cost, multi-gigabit-capable broadband network solutions from a single source – from signal supply to in-house delivery

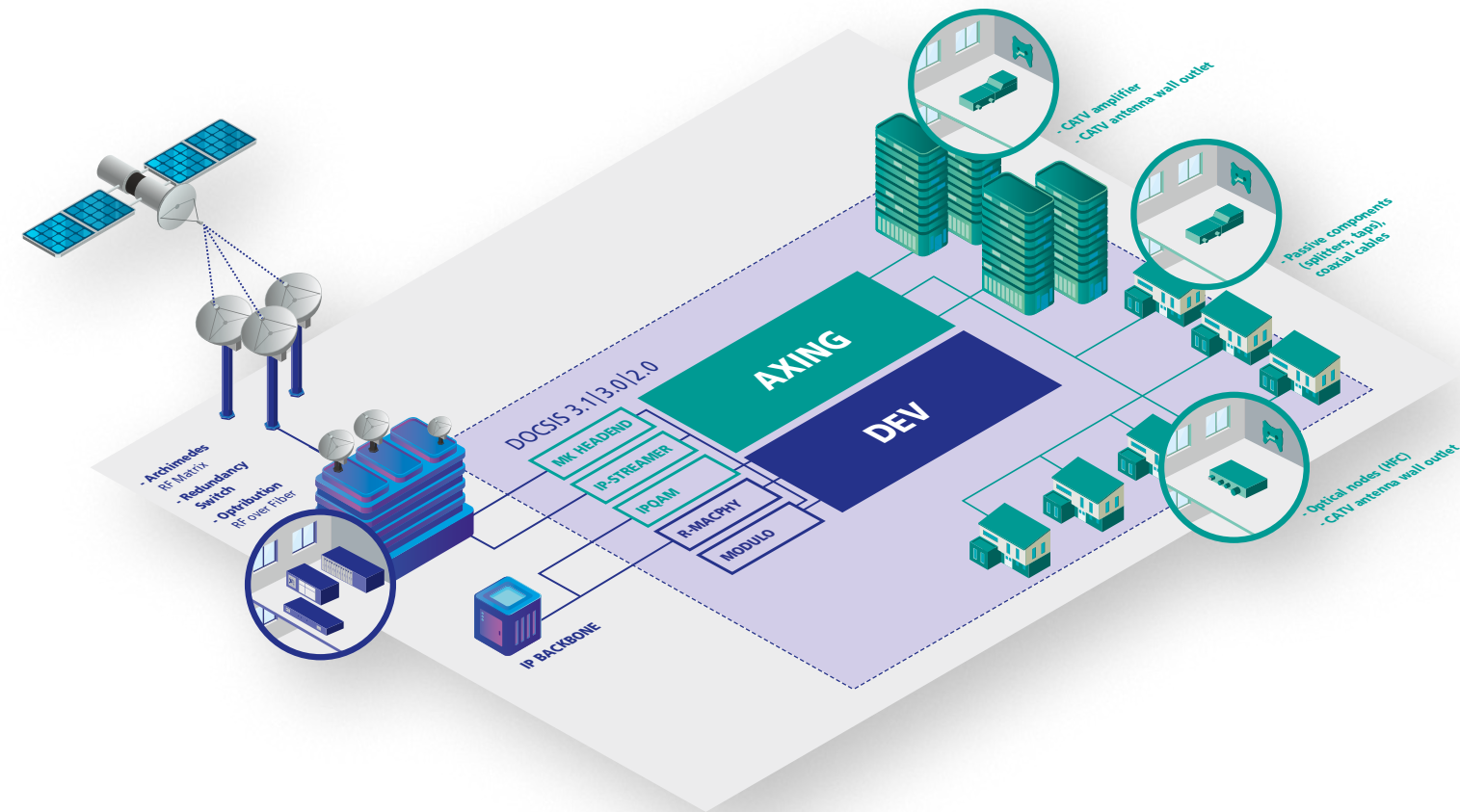


Competence in
Communication
Technologies



The benefit to your customers: High-speed network for internet, TV and telephony

The increasing demand for broadband connectivity for businesses and private households presents major challenges to providers and communities, while offering great opportunities for opening up new markets and ensuring customer loyalty. The use of innovative solutions for internet and telecommunications puts regional network operators and city carriers in a position to provide highly competitive services.



Competent partner for high-performance infrastructure products

Providing suitable infrastructure products for these types of solutions is a task that requires lots of know-how. That's why it is even more important to have partners with a lot of experience in the area of communication technology and whose core competencies include the construction and extension and upgrade of networks, and the distribution and reception of content. If all these competencies can be found under one roof, this means:



HFC Broadband Solutions – we specialize in your ideal solution

A solution and a proven team from the AXING Group that has extensive experience gained over many decades in the field of broadband supply – DEV Systemtechnik GmbH and AXING AG. Your benefit: You get twice the amount of expert knowledge and solutions, products, consultancy and planning services from a single source and from a single contact person. This allows you to concentrate on opening up and maintaining your new markets.

Here's how you can benefit from our solutions already now

- Future-proof and competitive end-to-end solution as a true alternative to FTTB/FTTH
- High Average Revenue per User (ARPU) through manageable investment costs
- Our solution puts you one step ahead, as the switch-over to fibre optics in particular is still very time-consuming and expensive
- High bandwidth
- Pay as you grow: Modular, scalable offers that can be matched flexibly to the number of customers
- Use of existing infrastructures
- Time to market: Quick and simple installation requiring hardly any construction measures
- Flexible options: Purchase signals, generate them yourself or even sell them to others
- Very good price/performance ratio and very quick return on investment



Two professionals – one goal: Multi-gigabit networks for everyone!

HFC Broadband Solutions deliver
high-speed internet to every home



AXING – System provider for communication technologies

AXING is a company based in Switzerland and is known as a manufacturer of high-tech solutions in the product areas of TV and multimedia reception distribution technology. As a partner of many cable network providers, city carriers, broadcasters, the housing industry and the hospitality sector, we offer innovative and future-proof solutions in combination with an excellent and reliable service. In addition, our R&D department is equipped with all important measuring and testing equipment for quality assurance.

All these services observe AXING's corporate philosophy: To offer our customers maximum precision and quality, our activities are carried out with the proverbial Swiss thoroughness.



DEV Systemtechnik – Signal management and transmission at the highest level

For 25 years, DEV Systemtechnik has been the first choice when it comes to management and transmission of RF signals via coaxial or fibre optical cables. Renowned satellite network operators, television studios and cable network operators use DEV systems for reliably supplying millions of end customers worldwide with uninterrupted TV and data services.

The introduction of highly integrated Remote MACPHY systems has allowed DEV Systemtechnik to offer existing and new cable network operators the most sophisticated gigabit broadband services, thus providing the greatest possible security for the future.



Strong team – strong performance

AXING and DEV have developed and implemented future-proof and competitive end-to-end solutions as an alternative to FTTH – for data, TV, radio and telephony, from signal supply to in-house distribution. We deliver not only the hardware, but also the matching software tools, remote monitoring options, as well as measuring and planning services.

Our promise

We offer products, project monitoring and support from a single source and assist you during all phases of the project, from planning to project processing and placing everything into operation. Our technology team will also provide remote support during operation.

Compelling advantages

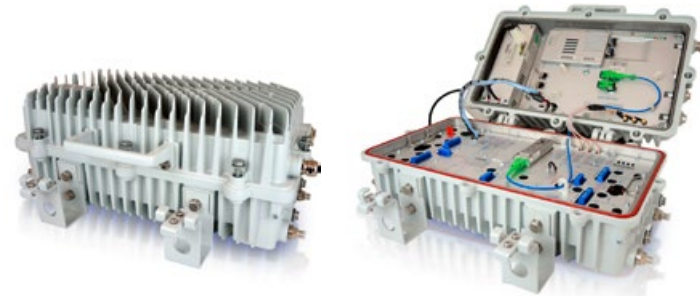
- Solutions that are easy to handle and assemble
- Large warehouse with efficient logistics for short delivery times
- Consistent high quality
- Ecological technology
- Flexibility thanks to a large variety of products
- Favourable financing options
- Technical service/after-sales support

Flexible, scalable, cost-saving – Future-oriented broadband solutions!

Remote MACPHY systems – Multi-gigabit solution for coaxial networks

The core of our solutions for signal transmission are our Remote MACPHY systems compatible up to DOCSIS 3.1. They provide an enormous increase in power of coaxial networks, allowing flexible configuration of the architecture by virtue of the Distributed CCAP approach.

When equipped with Remote MACPHY, all key functions are no longer located in the headend, but directly in the access node, that is, in a highly integrated platform. Our solutions can be adapted precisely to the customer's requirements with regards to the spectrum of up to 1218 MHz, data rates, channel assignments and the number of users. Apart from that they are also scalable to future applications. Once implemented, your devices can be controlled according to your individual requirements – via a user-friendly web interface, SNMP or locally on site.



**COST-EFFICIENT
ALTERNATIVE TO
FTTH EXPANSION**

dev
Part of the **oxit** Group
**REMOTE
MACPHY**

**INVESTMENT
ADVANTAGES UP TO
50% (CAPEX)**

What are the advantages? Compelling!

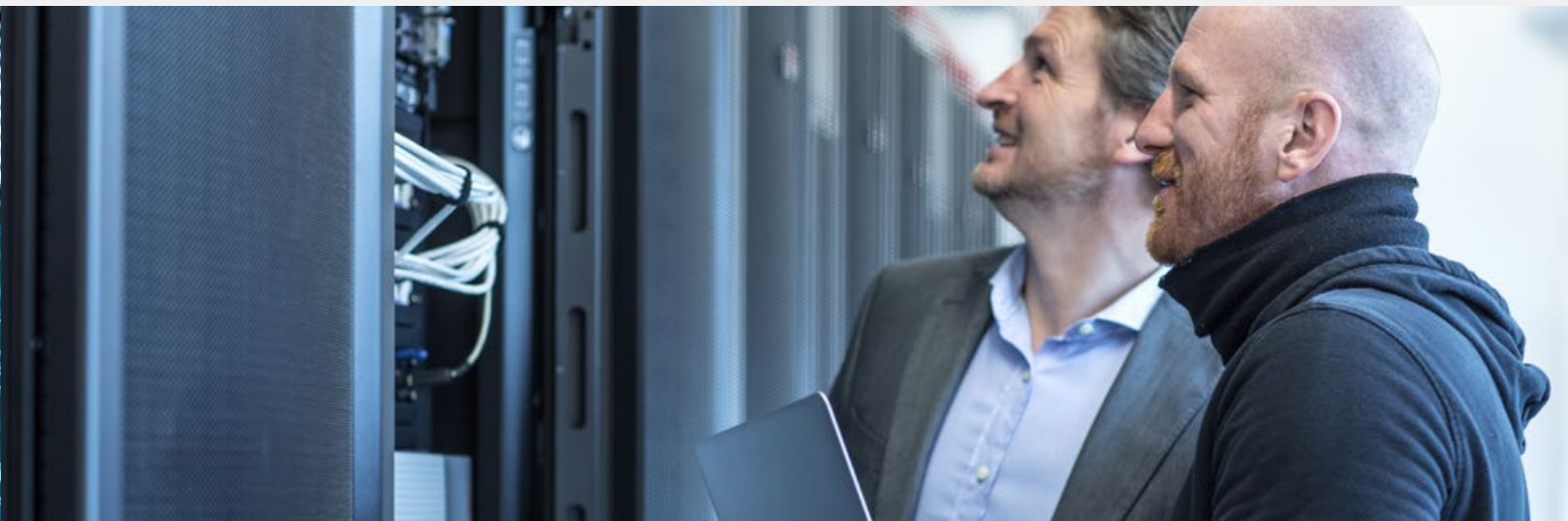
- Fully developed system technology, field-proven a thousand times
- Additional services
- Higher return channel bandwidths
- Future-proof
- Simple and space-saving solution in the central headend
- Short implementation times ensure timely switch-over or quick network extension
- Optimum use of the bandwidth – the network becomes a multi-gigabit-capable network through modern DOCSIS 3.1 technology
- Low investment costs per user

And what about flexibility? High!

- Various migration scenarios while maintaining the current TV provision via an HFC network
- Continued use of existing coaxial or HFC infrastructures
- For a stepwise network upgrade, temporary coexistence with centralized headend equipment is possible without problems
- High scalability, extension and adaptation to new customer requirements is possible
- Flexible and manufacturer-independent selection of switch and OLT systems in the central headend

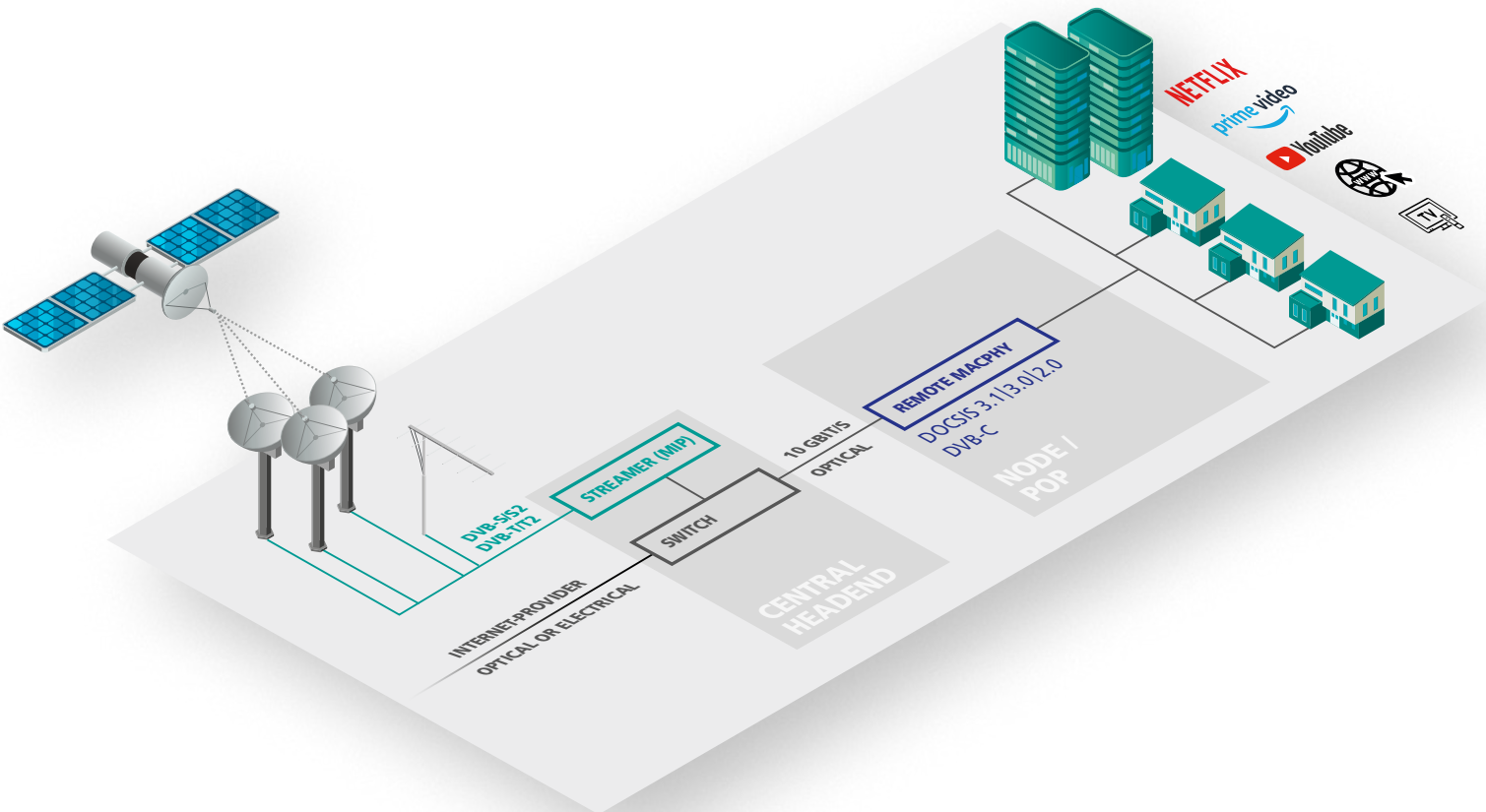
And the running costs? Low!

- Cost-efficient software solutions
- No running annual hardware licence costs
- Transparent, full cost check for the operator
- Average profit per customer is high due to low investment costs
- Lower implementation costs
- Lower maintenance costs through PNM support (Proactive Network Maintenance)



Optimum solutions – Customizable

Case study 1:
You are generating TV and internet yourself –
the entire broadband cable spectrum is generated in the node

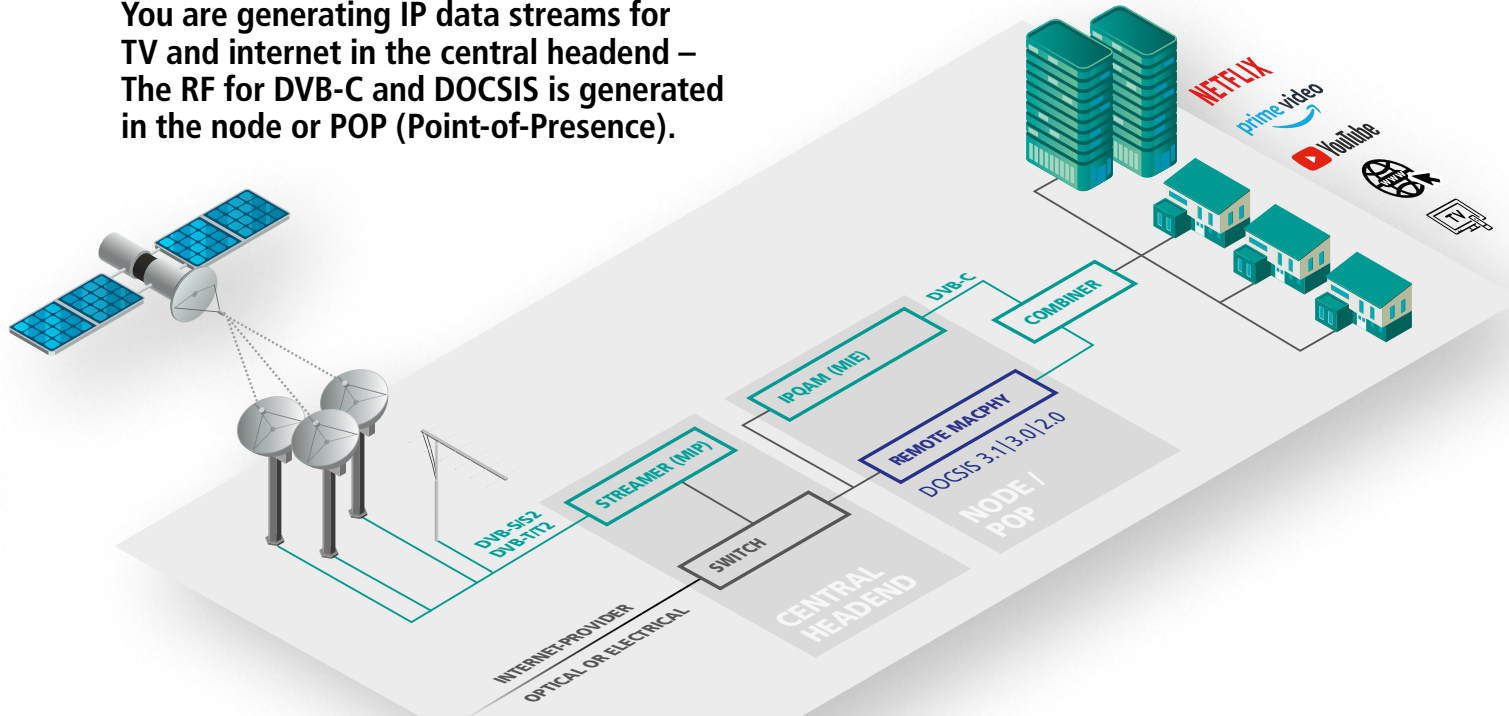


- Infrastructures
- = AXING components
 - = DEV components
 - = Existing infrastructure

Please find more case studies under
www.hfc-broadbandsolutions.com



Case study 2:
You are generating IP data streams for
TV and internet in the central headend –
The RF for DVB-C and DOCSIS is generated
in the node or POP (Point-of-Presence).



Possible scenarios:

Generating only internet signals yourself
Purchase a TV signal from a major operator and simply generate the broadband internet or DOCSIS signal for the end customer yourself.

Generating only TV signals yourself
Likewise, you can generate only the TV signal yourself. This is what our headend technology can be used for.

Generating TV and internet signals yourself
If you generate the entire broadband cable spectrum yourself, you make full use of our range of services, thus taking advantage of the maximum added value.

Your profitable benefit: Selling signals to others

You can even sell the signals you generate to others and thus increase your profit.

The signal is sent coaxially or via an analogue fibre, and TV bouquets can be provided in the same way as an IP stream. The choice is yours!

Reception at the highest level – reliable and fast in the entire home

Products in proven Swiss quality from AXING

Having your own cable network using DVB headends and modulators or using the traditional SAT-IF distribution and much more – with innovative, professional solutions your customers get that little bit extra. For example, by providing:

AXING headends

Optimum processing for satellite, terrestrial or cable signals. Easy to program and maintain, and quick to mount.

AXING CATV accessories

Active and passive components for modern and reliable in-house multimedia distribution.

AXING HFC Fibre Node

The solution for analogue optical FTTB/FTTH applications in various return path versions (65/85/204 MHz).

High-speed internet, crystal-clear telephony

Coming to your home at the maximum data transmission rate – easily and cleanly

Working, communicating or informing – digitalization is everywhere, and the internet has become indispensable. Unrestricted access to data from any location inside the flat or home is expected as standard.

To allow all our customers high-speed access to the internet, we are working with different innovative technologies.

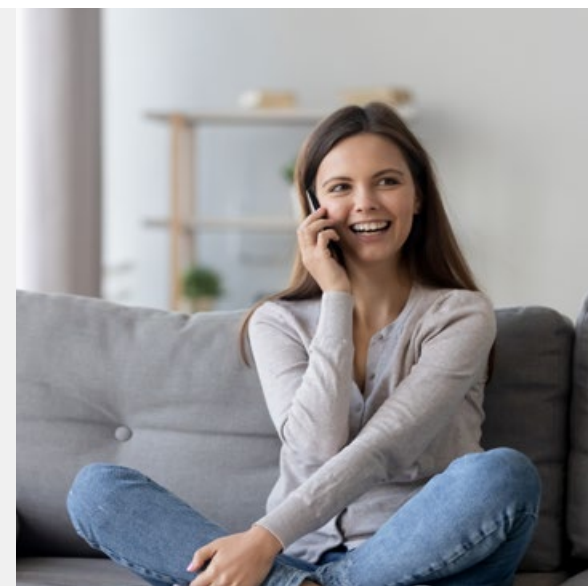
The result:

Internet, television and telephony at the highest level, that is, in optimum quality while ensuring crystal-clear reception and low latency times. Noticeable loading times are something of the past.



For your security:

- Measuring services for the network and in-house distribution
- AND-supported planning of extensions, upgrades and optimizations of the coaxial network
- Provision of the required basic equipment
- With the standardized, globally present and mature DOCSIS protocol, you are on the safe side



Your customers are going to love this:

- Network data rates of up to 10 Gbps
- Reliable and high-speed transmission, minimal latency
- Optimum conditions, for example, for online games and Virtual Private Network
- State-of-the-art internet, telephony and television in a single connection



Offer your customers internet, TV and telephony in top condition

A safe, manageable investment in a successful future!

Are you looking for reliable solutions at minimum expenditure?

Place your trust in HFC Broadband Solutions from the AXING Group!



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E-Mail



Internet