Compact headend solutions
DVB headends, IP streamers, IPQAM, IP to DVB-T2, mini CMTS and encoders

- Multituner inputs
- Multimodulater outputs
- IPTV output
- Web-based maintenance
- Remux/Crossmultiplex
- FTA/Pay TV
Creating room for all signals – headends

Via the optimum processing of satellite, cable, terrestrial or IP signals, subscribers receive digital programs in excellent quality through the existing in-house coaxial cable or ethernet structure.

An AXING headend is an investment in technology that meets the demands and requirements of tomorrow and it’s a system that merges efficiency with reliability.

With AXING you can always rely on fast assistance and consultancy for planning, implementing and maintenance.

Headend modules and IPTV streamers with flexible mult tuner technology

The multituner technology ensures independence. All input signals, regardless of the source (satellite, terrestrial or cable), can be received with the same module.

Each of these input signals can be converted to DVB-C, DVB-T/T2 or IPTV (SPTS/MPTS). Received programs can be easily assembled for your subscribers.

Encoder/modulators

With AXING encoders/modulators it is easy to feed in an info channel in a TV distribution network to inform the guests, tenants or residents.

IPQAM | IP to DVB-T2

Due to the fast fiber optic networks, some network operators offer TV and multimedia only IP-supported. For hotels, hospitals or residential complexes with DVB-C/T/T2 terminals, new headends are needed.

Mini CMTS

The mini CMTS device CMTS 1-00 allows the professional feeding of IP services into small cable networks and is also suitable for the hospitality sector.

Benefits at a glance:

- Compact system
- Flexibly adaptable via modular system
- Modules can be operated either in a base unit or stand-alone
- Fast and simple mounting
- Web-based programming
- Remote maintenance possible (SMARTPortal)

Benefits for the installer:

- Intuitive web-based programming
- Remote maintenance possible (SMARTPortal)
- Assistance in planning of the installation and pre-configuration
- No re-programming of the TV sets when channels change, adjustable due to SID/PID
- NIT functionality

Benefits for the user:

- User-friendly
- Great variety of programs
- Information for your guests, tenants or residents
- Advertising possibilities
Flexible signal processing solutions

The multituner technology ensures that all input signals, regardless of the source (DVB-S/S2/S2x, DVB-C or DVB-T/T2), can be received and be converted with the same module to DVB-C, DVB-T, or IPTV (SPTS/MPTS). With AXING encoders and modulators, additional information channels can be fed into a TV or Ethernet distribution network.

Furthermore, with an IPQAM or IP to DVB-T2 SPTS and MPTS can be converted to either to DVB-C, to DVB-T or to DVB-T2. AXING’s Mini CMTS feeds in internet services in small cable systems according to EuroDOCSIS/DOCSIS 2.0 or 3.0.
Compact headend

Maximum performance in a compact system

The headend series MK 8-xx and MK 16-xx comes with either eight or 16 multituner inputs. MK 8-06 and MK 16-06 additionally have six CI slots to receive and decrypt pay TV channels on six inputs.

All headends can receive DVB-S/S2/S2x/T/T2/C and modulate the selected programs either in DVB-C or DVB-T. With the fee-based software update MKS 8-16 a MK 8-0x with 8 input tuners can be upgraded to 16 output modulators. Moreover, all versions have remux and crossmultiplex functionality and they are characterized by their mechanical flexibility. They can be either mounted directly on a wall or be converted using the MKZ 1-0x front panel for mounting in a 19”-rack.

With the HKM 40-0x encoders/modulators series four HDMI sources can be converted into one DVB-C/T output channel or two DVB-T output channels.

DVB-C | DVB-T
MK 8-00 | Multituner | 8 × DVB-x into 8 × DVB-C/T
MK 8-06 | Multituner | 8 × DVB-x into 8 × DVB-C/T | 6 × CI
MK 16-00 | Multituner | 16 × DVB-x into 16 × DVB-C/T
MK 16-06 | Multituner | 16 × DVB-x into 16 × DVB-C/T | 6 × CI

Software extensions
MKS 1-00 | To create a Network Information Table (NIT)
MKS 1-01 | Software extension for PID filtering
MKS 8-16 | For extension from 8 to 16 modulators

Encoders/modulators | premium-line
HKM 40-00 | 4 × HDMI | 1 × DVB-C/T encoder/modulator
HKM 40-02 | 4 × HDMI | 2 × DVB-T encoder/modulator

Encoders/modulators | basic-line
HKC 1-00 | 1 x HDMI | 1 x DVB-C encoder/modulator

Accessories
MKZ 1-00 | Front panel for 19” usage of MK xx-00
MKZ 1-01 | Front panel for 19” usage of MK xx-06 | CI
HKZ 1-00 | Front panel for 19” usage of HKM 40-0x

Mini CMTS

The mini CMTS device CMTS 1-00 allows the professional feeding of IP services into small cable networks and is also suitable for the hospitality sector. Via up to 16 downstream and 4 upstream channels DOCSIS2.0 or DOCSIS3.0 modems* are supplied with up to 800 Mbps in the DS and 120 Mbps in the US.

* Suitable cable modems on request.

Benefits at a glance:

- Compact dimensions - many programs in the smallest space
- Compact functions - different input signals, different output modulations in one device
- Compact model pallet - two basic devices, many variations
- Compact design - including power supply with low power consumption and mounting bracket
Sources for IPTVSolutions

The IP streamer series MIP 8-xx and MIP 16-xx comes with either eight or 16 multituner inputs. MIP 8-06 and MIP 16-06 additionally have six CI slots to receive and decrypt Pay TV channels on six inputs.

All streamers can receive DVB-S/S2/S2x/T/T2/C and stream the choosen programs in STPS or MTPS.

With the HKI 40-0x/80-0x encoders it’s possible to convert four/eight HDMI sources into four/eight SPTS.

Streamers

MIP 8-00 | Multituner | 8 × DVB-x into 512 SPTS/8 MPTS
MIP 8-06 | Multituner | 8 × DVB-x into 512 SPTS/8 MPTS | CI
MIP 16-00 | Multituner | 16 × DVB-x into 512 SPTS/16 MPTS
MIP 16-06 | Multituner | 16 × DVB-x into 512 SPTS/16 MPTS | CI

Software extensions

MKS 1-01 | Software extension for PID filtering

Encoders

HKI 41-34 | 4 HDMI inputs, H.264 (MPEG-4) | 4 SPTS
HKI 81-34 | 8 HDMI inputs, H.264 (MPEG-4) | 8 SPTS
HKI 41-35 | 4 HDMI inputs, H.265 (HEVC) | 4 SPTS
HKI 81-35 | 8 HDMI inputs, H.265 (HEVC) | 8 SPTS

Benefits at a glance:

✓ Independent multituner inputs
✓ Transmodulation of DVB-S/S2x, DVB-T/T2 or DVB-C into 512 SPTS | 8/16 MPTS
✓ One GbE-interface with max. 800 Mbps at 16 tuners.
✓ Streamers with CI ports
✓ Encoder with H.264 (MPEG-4) coding
✓ Encoder with H.265 (HEVC) coding
✓ Supports M3U format
✓ 19" usage
✓ FTA and Pay TV
✓ Two redundant power supplies (hot pluggable)
Conversion from IPTV signals to DVB-C/DVB-T in existing coaxial cable networks

The MIE 8-/16-/32-00 are compact, modular and cost-effective IPTV to DVB-C/DVB-T modulators.

Each module has a 1 GbE data interface and 1 management and 1 CAS port*. The modules support SPTS or MPTS at the IPTV input, these can be fed in parallel. Each module converts the input streams into DVB-C / T output channels. An RF output and a test soport are available at the output.

The management software allows an easy re-multiplexing of the incoming streams, so that individual program lists can be assembled.

The modules are configured in a web interface and can be integrated into the AXING SMARTPortal.

The modules are built in a 19” slide-in with 1RU and 2 redundant, hot swappable power supplies (100…240 VAC or 36…60 VDC).

Benefits at a glance:

- IPTV input (900 Mbps)
- Converts SPTS/MPTS to DVB-C (J.83 Annex A/C) or DVB-T
- Re-Multiplexing and PID Filtering
- CA Simulcrypt*
- 2 × redundant power supply units 100…240 VAC (100…240 VAC or 36…60 VDC)
- Web-based configuration
- Suitable for AXING SMARTPortal
- Supports SNMP

* available end of 2019

Available devices

MIE 8-00 Includes 1 module, supports SPTS and MPTS (also mixed), transmodulates max. 512 input streams in 8 DVB-C or 6 DVB-T output channels.

MIE 16-00 Includes 1 module, supports SPTS and MPTS (also mixed), transmodulates max. 512 input streams in 16 DVB-C or 12 DVB-T output channels.

MIE 32-00 Includes 2 modules, supports SPTS and MPTS (also mixed), transmodulates max. 2 × 512 input streams in 2 × 16 DVB-C or 2 × 12 DVB-T output channels.

MIM 16-00 Extension module for MIE 8-00/16-00, for extension to 2 × 512 input streams and 2 × 16 DVB-C or 2 × 12 DVB-T output channels.

MIS 8-16 Software extension for MIE 8-00, from 8 to 16 x DVB-C or from 6 to 12 x DVB-T output channels.
Conversion from IPTV signals to DVB-T2

The MIE 4-/8-02 are compact, modular and cost-effective IP to DVB-T2 modulators. These are used in HFC or FFTB/FTTH applications.

Each module has a 1 GbE data interface and 1 management and 1 CAS port*. The modules support SPTS or MPTS at the IPTV input, these can be fed in parallel. Each module converts the input streams into DVB-C / T output channels. An RF output and a test port are available at the output.

The management software allows an easy re-multiplexing of the incoming streams, so that individual program lists can be assembled.

The modules are configured in a web interface and can be integrated into the AXING SMARTPortal.

The modules are built in a 19” slide-in with 1RU and 2 redundant, hot swappable power supplies 100…240 VAC (100…240 VAC or 36…60 VDC).

Benefits at a glance:
- IPTV input (900 Mbps)
- Converts SPTS/MPTS to DVB-T2
- Re-Multiplexing and PID Filtering
- CA Simulcrypt*
- 2 x redundant power supply units 100...240 VAC (100...240 VAC or 36...60 VDC)
- Web-based configuration
- Suitable for AXING SMARTPortal
- Supports SNMP

* available end of 2019
Web-based user interface
AXING SMARTPortal

All headends can be configured via a web-based user interface. The system configuration is performed quickly and reliably. No additional software is required.

AXING ensures with its SMARTPortal, a web-based cloud application, an easy remote access on web configuration surfaces of its headends and middleware servers of the IPTV Solutions.

The configuration takes place in several consecutive phases. The interface guides the user through the configuration steps.

Benefits at a glance:
- Intuitive web-based programming
- Re-Multiplexing
- NIT functionality*
- PID Filtering*

* Software extension needed

The SMARTPortal lists all installed devices for the system integrator. Easy remote access is possible on all devices. The SMARTPortal can be used to configure the connected devices and/or to perform software updates. A remote support from AXING employees can also be carried out, if required. Thus, quick and uncomplicated help is possible.
Why AXING in particular?

We Swiss don’t waste words. But what we do, we do thoroughly. Which is why AXING products are always state of the art. The compact design and easy installation are equally impressive.

What is more, with AXING you have a partner at your side offering you all the services you need as a one-stop provider – from planning via preparation through to delivery and operation. Contact us now; we would be pleased to advise you on site and make you a detailed offer.

Our AXING commitment:

- Very easy handling and installation of all AXING products
- Short-term and reliable delivery capability
- Consistently high quality
- Highly modern technology – state of the art
- Great flexibility due to wide variety of products
- Optimum support via competent planning and installation service
- Technical service / after sales