

CHP - Compact High Performance Headends

HKI 40-00 | HKI 80-00

4-way HDMI IP encoder

8-way HDMI IP encoder

premium-line

Operation instructions



Table of contents

1.	Product description	4
1.1.	Field of application	4
1.2.	Product description	4
1.3.	Scope of delivery.....	4
1.4.	Input	5
1.5.	Output	5
1.6.	Graphical user interface	5
1.7.	Display elements and connectors.....	5
2.	Mounting and Installation.....	6
2.1.	Equipotential bonding	6
2.2.	HDMI installation.....	6
2.3.	IPTV output.....	6
2.4.	Power supply	6
3.	Configuration	7
3.1.	Accessing the configuration interface:.....	7
3.2.	IPTV settings.....	8
3.2.1.	Setup Stream IP	8
3.2.2.	Setup Stream Port	9
3.2.3.	IP Stream Status	10
3.3.	Video	11
3.4.	Audio	12
3.5.	Output streams.....	13
3.5.1.	Service.....	13
3.5.2.	PID.....	14
3.6.	System	15
3.6.1.	Reset	15
3.6.2.	Retrieve Inventory	16
3.6.3.	Upgrade Software	16
3.6.4.	IP Adress	17
3.6.5.	Language.....	18
3.6.6.	Password.....	18
4.	Technical specifications.....	19



WARNING

- Observe the safety instructions supplied with the device! They are also available at the following Internet address:
https://download.axing.com/BAs/Sicherheitshinweise_9sprachig.pdf
- Use the device only as described in these operating instructions and in particular in accordance with the state of the art. If the device is used for other purposes, no warranty will be assumed!



Herewith AXING AG declares that the marked products comply with the valid guidelines.



WEEE Nr. DE26869279 | Electrical and electronic components must not be disposed of as residual waste, it must be disposed of separately.

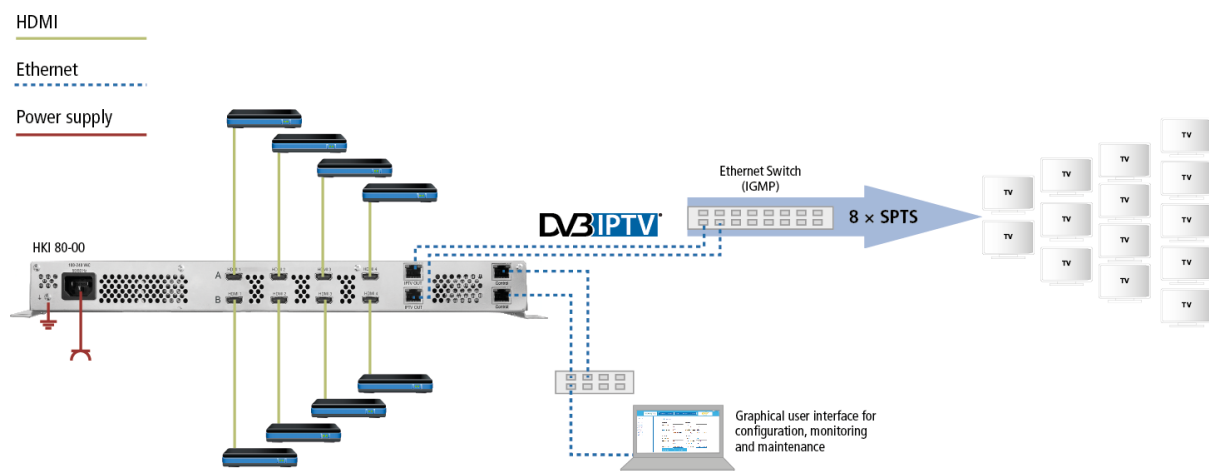
1. Product description

1.1. Field of application

The devices are only intended for distributing signals from HDMI sources via an IPTV-capable network in buildings. If a device is used for other purposes, no guarantee is given!

1.2. Product description

The HDMI IP encoder is used to transmit HDMI signals in IPTV networks. It converts the HDMI input signals into separate SPTS streams. H.264 encoding leads to efficient compression with high picture quality. Configuration is carried out via a web-based interface. The device comes in a 19" housing with one rack unit and has a built-in switching power supply.



Features

HKI 40-00

- 4 x HDMI in 4 x SPTS
- 4 HDMI inputs
- One IPTV output - H.264 encoding

HKI 80-00

- 8 x HDMI in 8 x SPTS
- 8 HDMI inputs
- Two IPTV outputs - H.264 encoding

Common

- Web-based configuration
- Built in power supply
- 19" unit, 1 RU

1.3. Scope of delivery

1 x HKI 40-00 or HKI 80-00

1 x AC power cord

1 x Quick start guide

1 x Safety instructions

1.4. Input

The HKI 40-00 has four HDMI inputs. Connect them to up to four HDMI sources.

The HKI 80-00 has eight HDMI inputs. Connect them to up to eight HDMI sources.

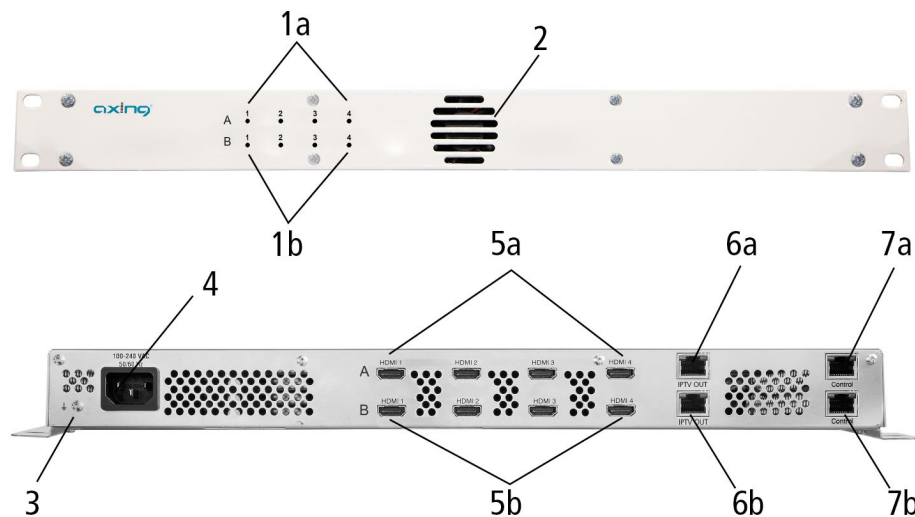
1.5. Output

The HDMI signals are then converted into four or eight Single Program Transport Streams (SPTS) and can be distributed via Ethernet using suitable switches.

1.6. Graphical user interface

The settings can be changed via the graphical user interface. To access the user interface and thus configure the devices, you need a standard PC/laptop with a network interface and the current version of the installed web browser.

1.7. Display elements and connectors



HKI 40-00 includes one module, Module A.

HKI 80-00 includes two modules, Module A and Module B.

1a/b LEDs for the input signals

green	=	HDMI signal ok
green flashing	=	low resolution signal
out	=	no HDMI signal

2 Fan

3 Equipotential bonding connection

4 Mains connection

5a/b HDMI inputs

6a/b RJ-45 Ethernet connectors IPTV output

7a/b RJ-45 Ethernet connectors Control

2. Mounting and Installation

- ➔ Installation must be performed by authorized and skilled electricians only.
- ➔ Before mounting and installation, pull the mains plug!

Note: For 19-inch rack mounting, there must be at least 5 cm clearance in front of and behind the unit.

- ➔ Slide the device into the 19" rack.
- ➔ Fix the device with four screws.
- ➔ Comply with EN 60728-11.

2.1. Equipotential bonding

The device must be connected to the equipotential bonding. This serves to avoid dangerous overvoltages (caution: fire/life hazard) according to EN 60728-11.

- ➔ Use the equipotential bonding connection at the device (3).

2.2. HDMI installation

The HKI 40-00 has four HDMI inputs, the HKI 80-00 has eight.

- ➔ Connect them to suitable HDMI sources.

2.3. IPTV output

The HKI 40-00 has one IPTV output, the HKI 80-00 has two.

- ➔ Connect the IPTV output(s) to an IGMP-capable Ethernet switch. Use Cat 7 cable or higher.

2.4. Power supply



CAUTION

The Device has a built-in power supply (100 ... 240 VAC / 50 ... 60 Hz).

- ➔ Do not connect the device unit until all assembly and installation work has been completed.
- ➔ Use the supplied power cord.
- ➔ Connect the power cord to an appropriate wall outlet.

3. Configuration

The device is configured via the graphical user interface. To access the user interface, you need a standard PC/laptop with a network interface, a commercially available network cable and the latest version of the installed web browser.

HKI 40-00 includes one module, Module A

Default IP address of module A: 192.168.0.168

Subnet mask: 255.255.255.0

HKI 80-00 includes two modules, Module A and Module B.

Each module has its own configuration interface and its own IP address.

Default IP address of module A: 192.168.0.168

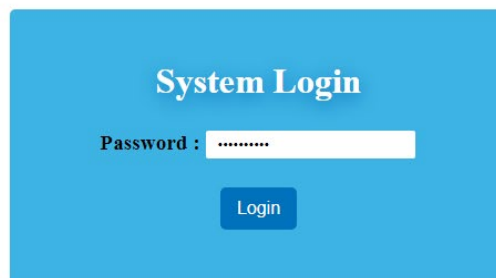
Default IP address of module B: 192.168.0.170

Subnet mask: 255.255.255.0

3.1. Accessing the configuration interface:

- ➔ Change the IP address of your PC/laptop, e.g. to 192.168.0.11, subnet mask: 255.255.255.0
- ➔ Connect the PC to the RJ-45 Ethernet connector Control.
- ➔ Enter the IP address of the connected module in the web browser.

The configuration screen is password-protected:



- ➔ Enter the default password: *Ramsen8262*.

Changing the password:

- ➔ Please change the password immediately after the first commissioning and choose a sufficiently safe password. Keep this password at a safe place.
- ➔ Menu item: **System** > **Set password** (see 3.6.6 on page 18).

Notes:

- If the browser is closed while you are still logged in, an automatic logout occurs 2.5 minutes later.
- If the browser window stays open, there is no automatic logout. It allows monitoring the installation via the web browser.

3.2. IPTV settings

→ Click on **OUTPUT** on the main menu.

In the IPTV settings, the source's IP address and the corresponding port are clearly listed to enable precise signal assignment. Additionally, the status indicates whether the connection is functioning properly, ensuring a stable and reliable transmission.

3.2.1. Setup Stream IP

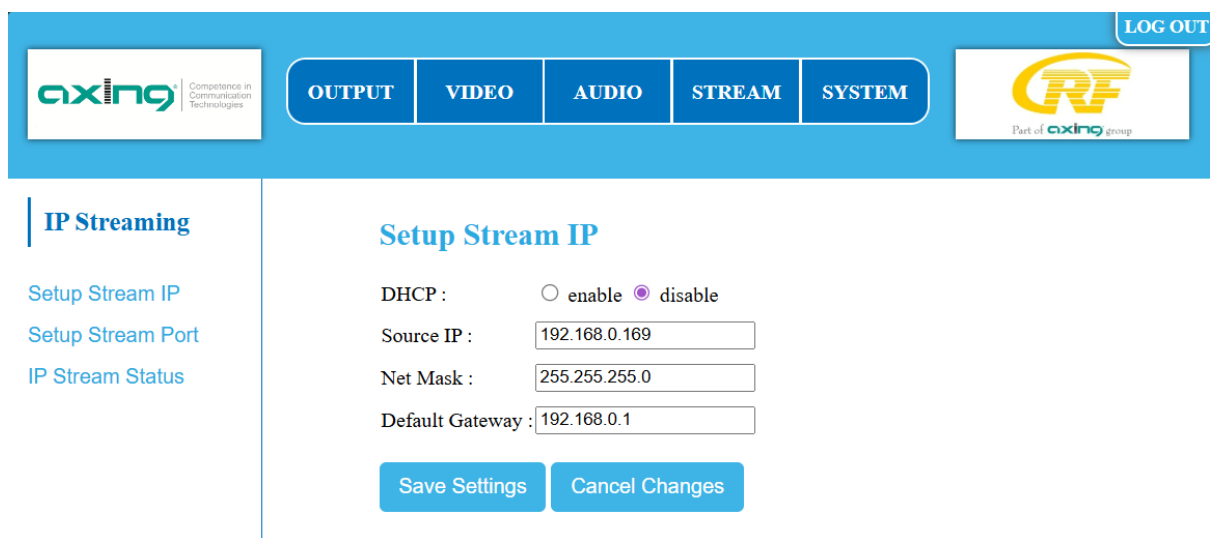
Dynamic IP address

→ For **DHCP**, select **enable** to include the device in a network with a DHCP server.

The device then receives the IP address, netmask and gateway address from the DHCP server in the IPTV network.

Static IP address

→ Select **disable** to connect the device to a network with a fixed IP address. In this case, enter the IP address, the netmask and the gateway address.



The screenshot displays the 'Setup Stream IP' configuration page within a web interface. The top navigation bar includes the 'axing' logo, a 'Competence in Communication Technologies' tagline, and a menu with 'OUTPUT', 'VIDEO', 'AUDIO', 'STREAM', and 'SYSTEM' tabs. A 'LOG OUT' button is located in the top right corner. The left sidebar shows 'IP Streaming' as the active section, with sub-links for 'Setup Stream IP', 'Setup Stream Port', and 'IP Stream Status'. The main content area is titled 'Setup Stream IP' and contains the following settings:

- DHCP :** Radio buttons for 'enable' and 'disable'. The 'disable' option is selected.
- Source IP :** Text input field containing '192.168.0.169'.
- Net Mask :** Text input field containing '255.255.255.0'.
- Default Gateway :** Text input field containing '192.168.0.1'.

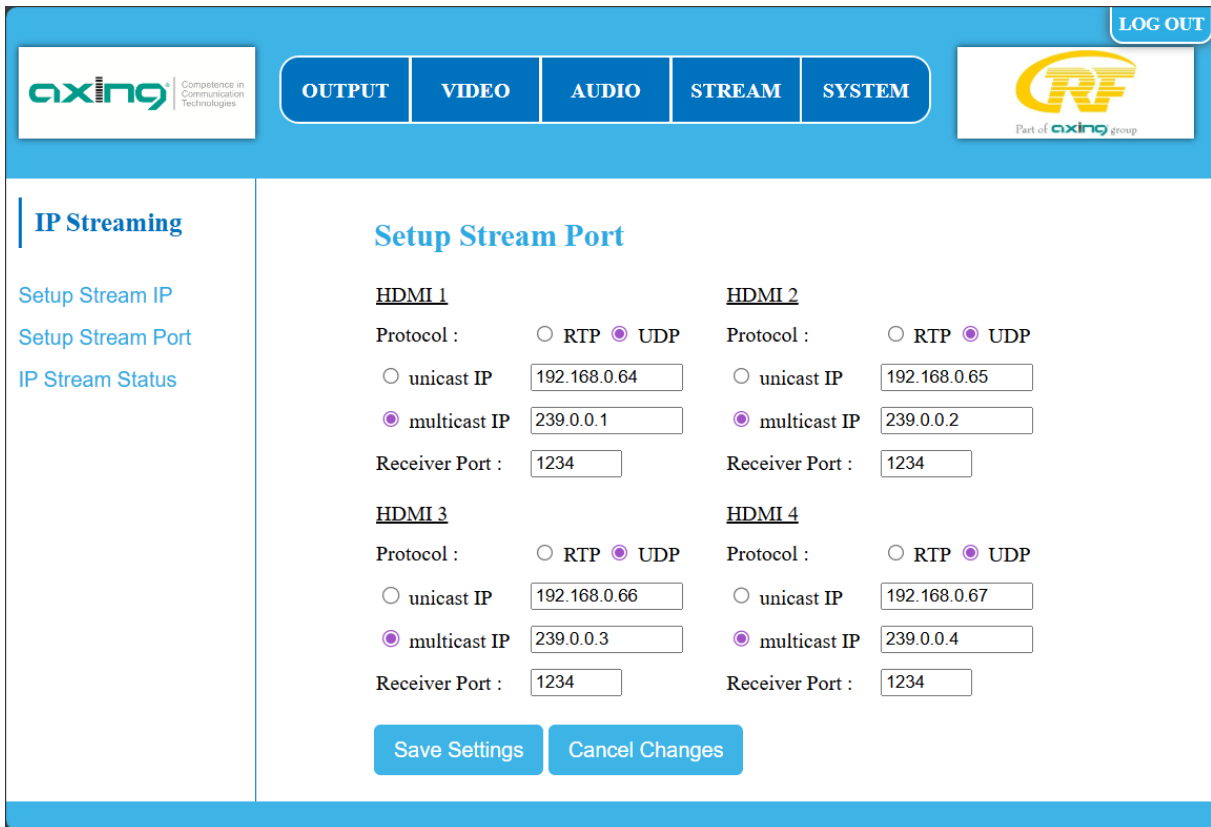
At the bottom of the form are two buttons: 'Save Settings' and 'Cancel Changes'.

→ Click **Save Settings** to save your settings.

3.2.2. Setup Stream Port

For each HDMI source (1 ... 4), set the streaming parameters.

- ➔ For *Protocol*, select whether the output stream is to be output according to *RTP* or *UDP*.
- ➔ Select *unicast IP* or *multicast IP* and enter the corresponding IP address.
- ➔ Enter the *Receiver Port* as well.



The screenshot shows the 'Setup Stream Port' configuration page in the axing web interface. The page has a blue header with the axing logo, navigation tabs (OUTPUT, VIDEO, AUDIO, STREAM, SYSTEM), and a 'LOG OUT' button. A left sidebar contains 'IP Streaming' with links for 'Setup Stream IP', 'Setup Stream Port', and 'IP Stream Status'. The main content area is titled 'Setup Stream Port' and contains four sections for HDMI 1, HDMI 2, HDMI 3, and HDMI 4. Each section has a 'Protocol' dropdown (RTP or UDP), a 'unicast IP' field, a 'multicast IP' field (selected by default), and a 'Receiver Port' field (set to 1234). At the bottom are 'Save Settings' and 'Cancel Changes' buttons.

HDMI Source	Protocol	unicast IP	multicast IP	Receiver Port
HDMI 1	UDP	192.168.0.64	239.0.0.1	1234
HDMI 2	UDP	192.168.0.65	239.0.0.2	1234
HDMI 3	UDP	192.168.0.66	239.0.0.3	1234
HDMI 4	UDP	192.168.0.67	239.0.0.4	1234

- ➔ Click **Save Settings** to save your settings.

3.2.3. IP Stream Status

Under **IP Stream Status**, the status of the IP stream is displayed.


Competence in
Communication
Technologies

OUTPUT

VIDEO

AUDIO

STREAM

SYSTEM


Part of axing group

LOG OUT

IP Streaming

Setup Stream IP

Setup Stream Port

IP Stream Status

IP Stream Status

DHCP : Disabled

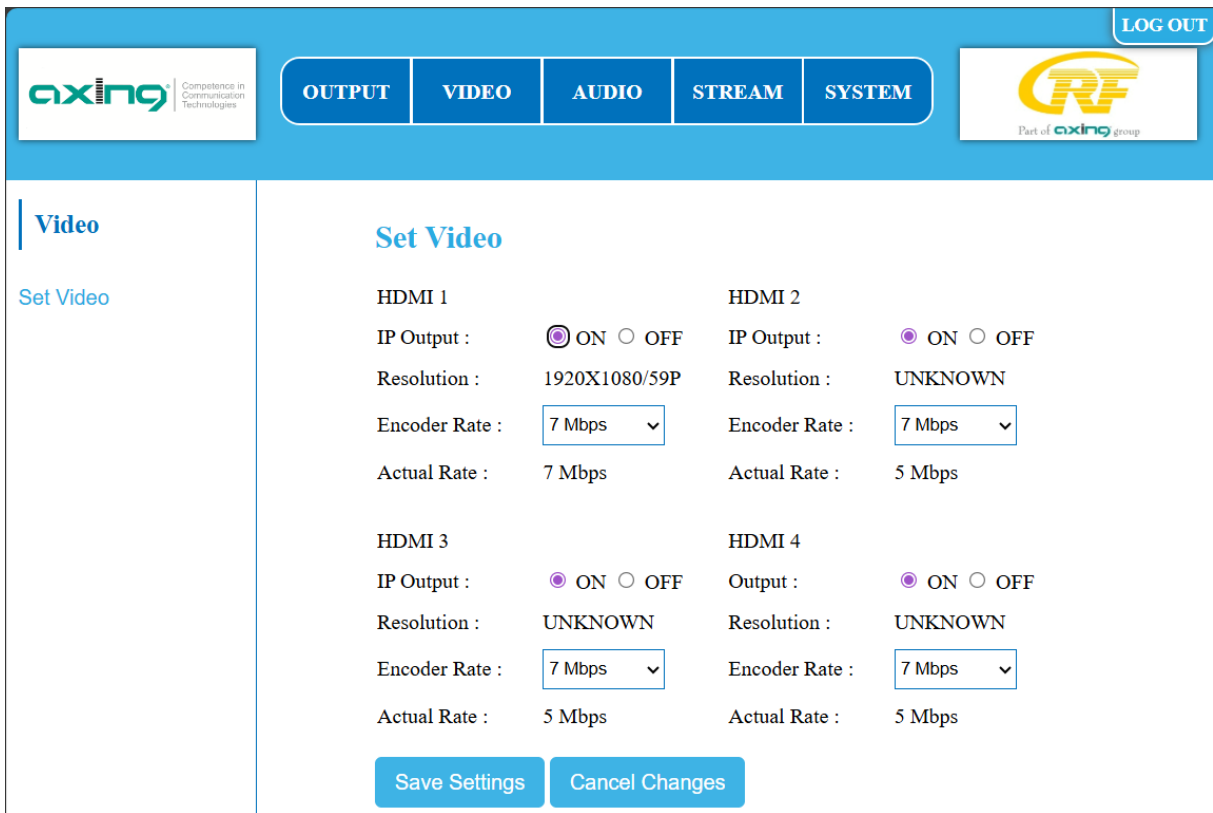
Source IP : 192.168.0.169

Net Mask : 255.255.255.0

Default Gateway : 192.168.0.1

3.3. Video

➔ In the main menu, click **Video**.



The screenshot shows the 'Set Video' configuration page. At the top, there is a navigation bar with tabs for OUTPUT, VIDEO, AUDIO, STREAM, and SYSTEM. The VIDEO tab is selected. On the left, there is a sidebar with 'Video' and 'Set Video' links. The main content area is titled 'Set Video' and contains settings for four HDMI ports (HDMI 1, HDMI 2, HDMI 3, and HDMI 4). Each port has a section for IP Output, Resolution, Encoder Rate, and Actual Rate. HDMI 1 and 2 have IP Output set to ON, Resolution set to 1920X1080/59P and UNKNOWN respectively, Encoder Rate set to 7 Mbps, and Actual Rate set to 7 Mbps and 5 Mbps respectively. HDMI 3 and 4 have IP Output set to ON, Resolution set to UNKNOWN, Encoder Rate set to 7 Mbps, and Actual Rate set to 5 Mbps. At the bottom, there are 'Save Settings' and 'Cancel Changes' buttons.

HDMI Port	IP Output	Resolution	Encoder Rate	Actual Rate
HDMI 1	ON	1920X1080/59P	7 Mbps	7 Mbps
HDMI 2	ON	UNKNOWN	7 Mbps	5 Mbps
HDMI 3	ON	UNKNOWN	7 Mbps	5 Mbps
HDMI 4	ON	UNKNOWN	7 Mbps	5 Mbps

The settings for **Video** can be made for each of the four HDMI input ports (1 ... 4).

➔ For **IP Output**, select whether or not to output an IPTV stream (ON/OFF).

The **Resolution** field indicates the resolution of the connected video source.

➔ For each video source, set the **Encoder Rate** to **Auto** or select a value between **4 ... 14 Mbps**.

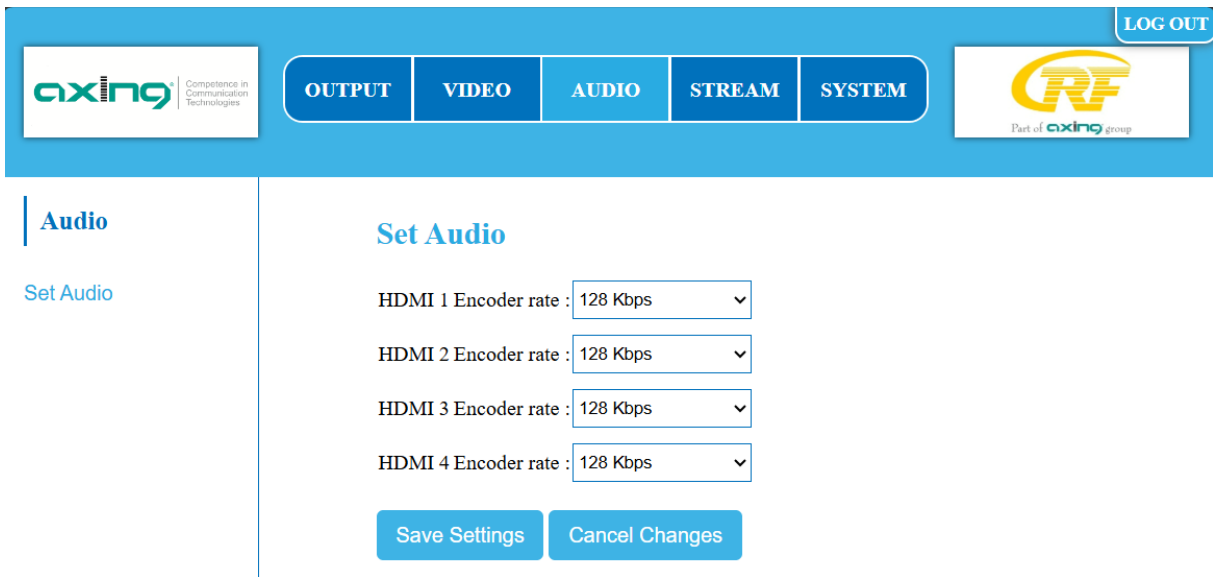
If you select **Auto**, make sure that the output data rate is not exceeded.

The **Actual Rate** field indicates the bit rate.

➔ Click **Save Settings** to save your settings.

3.4. Audio

➔ On the main menu, click **Audio**.



The screenshot shows the Axing web interface. The top navigation bar has a blue background with the Axing logo on the left and a 'LOG OUT' button on the right. Below the logo is a navigation menu with tabs: 'OUTPUT', 'VIDEO', 'AUDIO' (selected), 'STREAM', and 'SYSTEM'. To the right of the tabs is a logo for 'RF' (Part of axing group). The left sidebar has a blue background with the 'Audio' tab selected and a 'Set Audio' link. The main content area has a white background and is titled 'Set Audio'. It contains four rows, each with a label and a dropdown menu: 'HDMI 1 Encoder rate : 128 Kbps', 'HDMI 2 Encoder rate : 128 Kbps', 'HDMI 3 Encoder rate : 128 Kbps', and 'HDMI 4 Encoder rate : 128 Kbps'. At the bottom of the main content area are two buttons: 'Save Settings' and 'Cancel Changes'.

The settings for the audio source can be made for each of the four input ports.

➔ Set the bit rate to **128, 192, 256** or **384 Kbps** for each audio source in the **Encoder Rate** field.

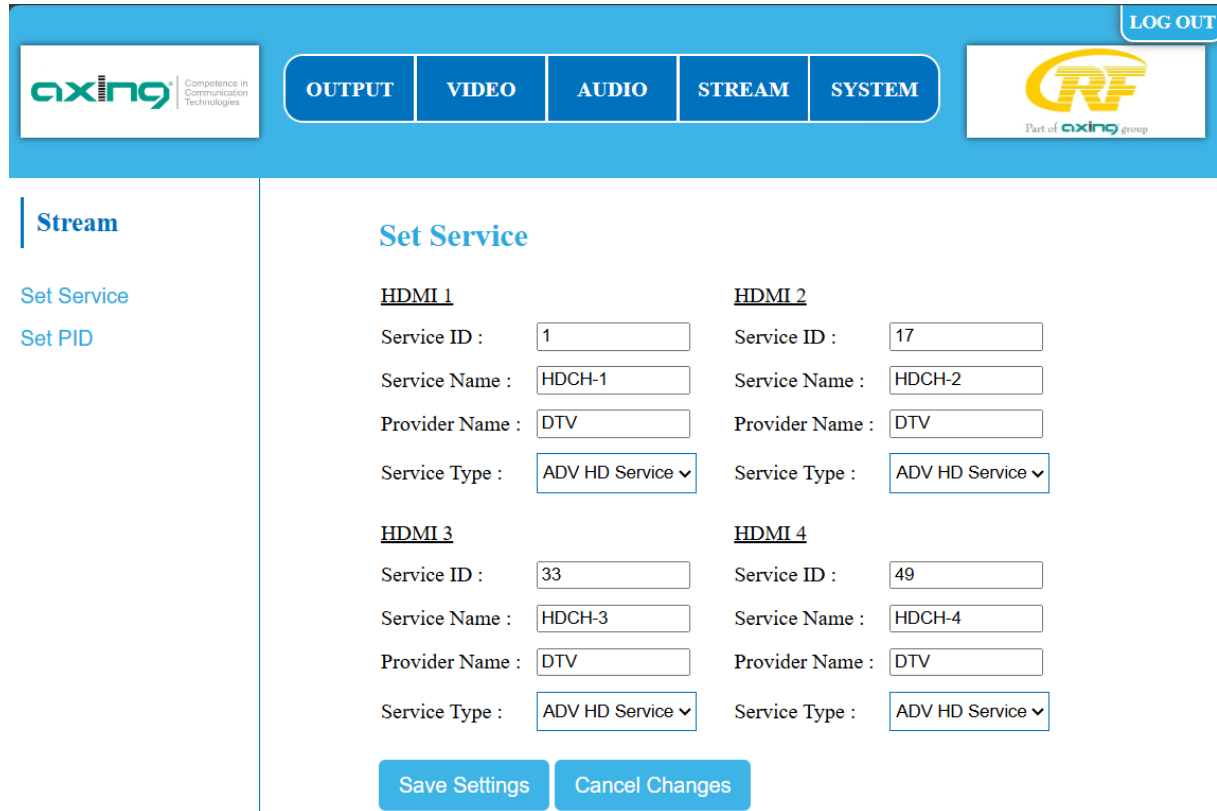
➔ Click **Save Settings** to save your settings.

3.5. Output streams

➔ On the main menu, click **Stream**.

Settings can be made for each of the four output streams.

3.5.1. Service





OUTPUT
VIDEO
AUDIO
STREAM
SYSTEM


Part of axing group

Stream
Set Service
Set PID

Set Service

HDMI 1
Service ID : 1
Service Name : HDCH-1
Provider Name : DTV
Service Type : ADV HD Service

HDMI 2
Service ID : 17
Service Name : HDCH-2
Provider Name : DTV
Service Type : ADV HD Service

HDMI 3
Service ID : 33
Service Name : HDCH-3
Provider Name : DTV
Service Type : ADV HD Service

HDMI 4
Service ID : 49
Service Name : HDCH-4
Provider Name : DTV
Service Type : ADV HD Service

Save Settings
Cancel Changes

- ➔ In the **Service ID** field, type an ID between 1 and 65535.
The service IDs of all streams in your network must be unique.
- ➔ Enter a maximum 15-character name in the **Service Name** field.
These are displayed as program names in the TV set after the program scan.
- ➔ Enter a maximum 15-character name in the **Provider Name** field.
- ➔ In the **Service Type** selection field, select for each stream whether it is output in *HD*, *SD*, *ADV HD* or *ADV SD*.
- ➔ Click **Save Settings** to save your settings.

3.5.2. PID

NOTICE

Packet identifier changes should only be performed by experienced users.

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Technologies

OUTPUTVIDEOAUDIOSTREAMSYSTEM

 Part of **axing** group

Stream

Set Service

Set PID

Set PID

HDMI 1	HDMI 2
PMT PID : 129	PMT PID : 130
PCR PID : 768	PCR PID : 769
Video PID : 2064	Video PID : 2065
Audio PID : 2068	Audio PID : 2069
HDMI 3	HDMI 4
PMT PID : 131	PMT PID : 132
PCR PID : 770	PCR PID : 771
Video PID : 2066	Video PID : 2067
Audio PID : 2070	Audio PID : 2071

Save SettingsCancel Changes

Enter the **PMT PID** (Program Map Table), **PCR PID** (Program Clock Reference), **Video PID** and **Audio PID** in the appropriate fields.

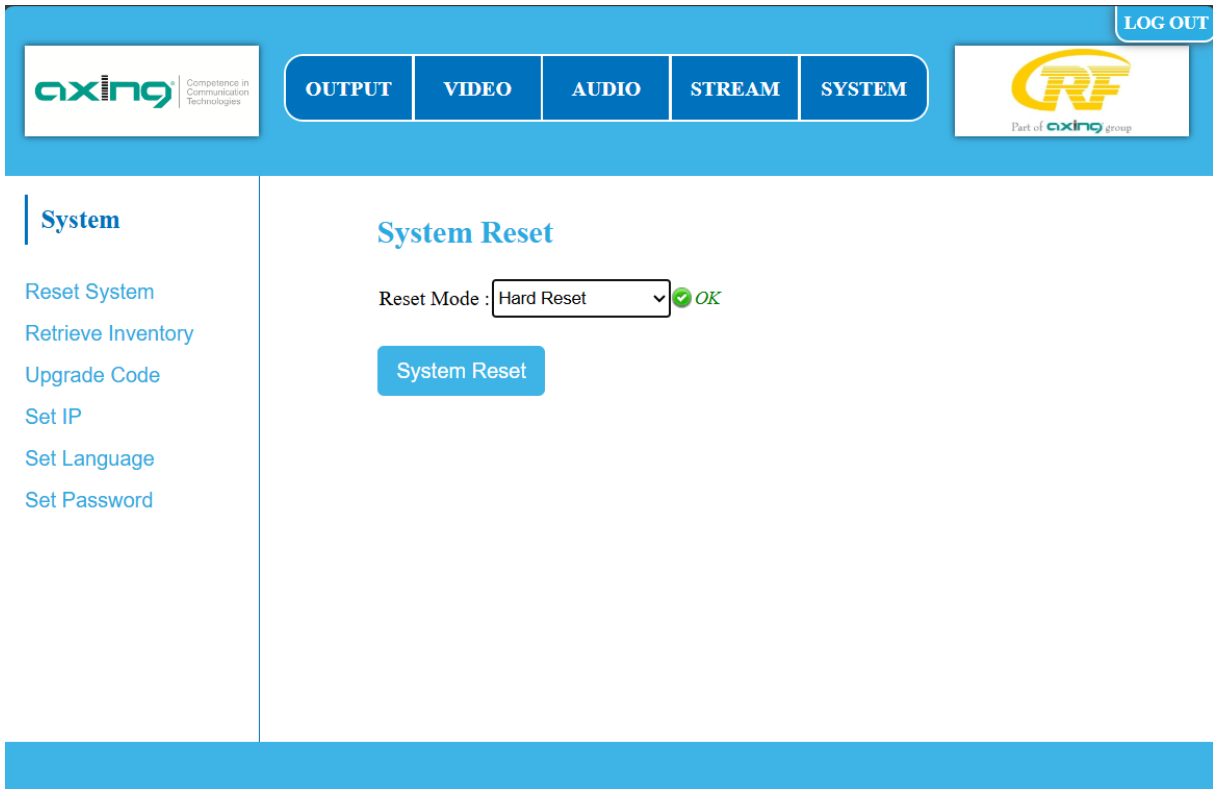
➔ Click **Save Settings** to save your settings.

3.6. System

➔ On the main menu, click **System**.

In the **System** menu item, the system can be reset, a software update is carried out, the IP address changed, a new password assigned.

3.6.1. Reset



The screenshot shows the Axing web interface for the 'System' menu. The top navigation bar includes the Axing logo, a 'LOG OUT' button, and tabs for OUTPUT, VIDEO, AUDIO, STREAM, and SYSTEM. The left sidebar lists system management options: System, Reset System, Retrieve Inventory, Upgrade Code, Set IP, Set Language, and Set Password. The main content area is titled 'System Reset' and features a 'Reset Mode' dropdown menu set to 'Hard Reset' with a green checkmark and 'OK' status. Below this is a blue 'System Reset' button.

➔ In the **Reset Mode** field, select whether you want to perform a hardware reset or whether you want to reset the device to its factory settings.

➔ Click on **System Reset** to perform the reset.

3.6.2. Retrieve Inventory

Under **Retrieve Inventory** you will find the current version of the device.



The screenshot shows the axing web interface. The top navigation bar includes the axing logo, a menu with 'OUTPUT', 'VIDEO', 'AUDIO', 'STREAM', and 'SYSTEM', and a 'LOG OUT' button. The left sidebar lists 'System' with sub-items: 'Reset System', 'Retrieve Inventory' (highlighted), 'Upgrade Code', 'Set IP', 'Set Language', and 'Set Password'. The main content area is titled 'Retrieve Inventory' and displays the following information:

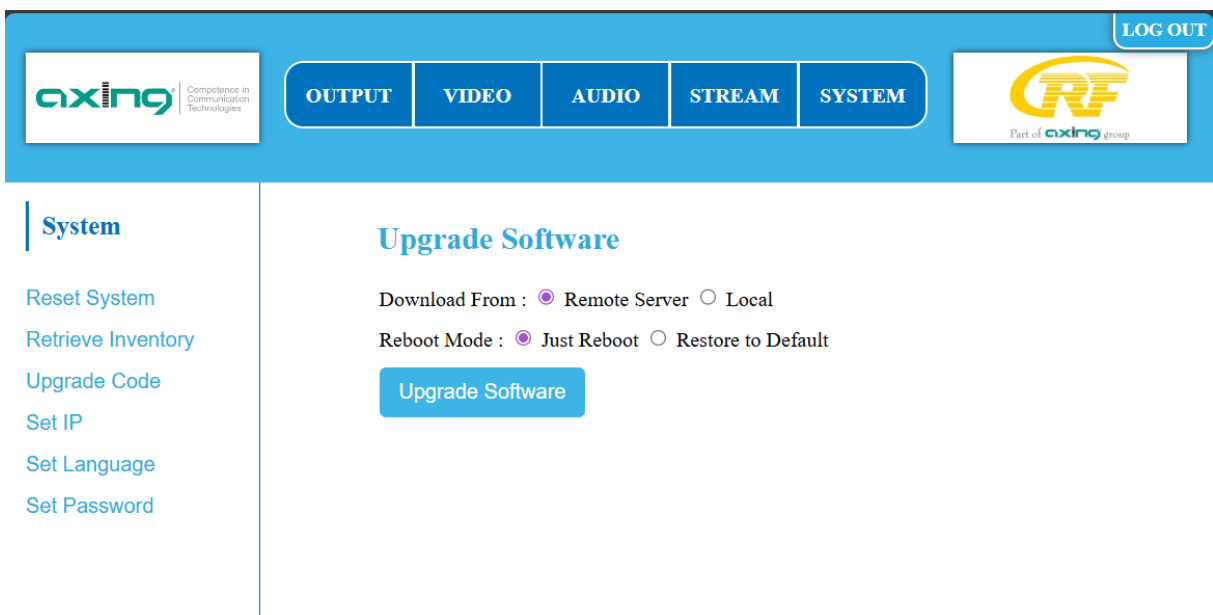
- Software Version : 1.00
- Software Date : Dec 4 2025
- Hardware Version : 1.1
- Database Version : 0.01

3.6.3. Upgrade Software

The software can be updated under **Upgrade Code**.

- The version of the currently installed software can be found in the menu item "Retrieve Inventory".
- The version of the currently available software can be found on the Internet at <https://axing.com/en/downloads/software-and-firmware/>
> Software for Encoders

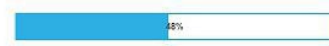
A software upgrade will be downloaded directly from the remote server. This requires an existing internet connection of the device.



The screenshot shows the axing web interface. The top navigation bar is identical to the previous screenshot. The left sidebar is also identical. The main content area is titled 'Upgrade Software' and displays the following options:

- Download From : ☒ Remote Server ☐ Local
- Reboot Mode : ☒ Just Reboot ☐ Restore to Default
- Upgrade Software** (button)

- ➔ Select Download From **Remote Server**.
- ➔ Click **Upgrade Software**.
The device establishes a connection to the remote server and downloads the software.
The download progress is displayed.



After the download the upgrade of the device begins. The remaining time is displayed.

Please wait 51s to Reboot and Config
New Firmware

Do not switch off the device during the upgrade!

3.6.4. IP Address

Dynamic IP address

- ➔ For **Enable DHCP**, select **enable** to include the device in a network with a DHCP server. The headend then receives the IP address, netmask and gateway address from the DHCP server in the network.

Static IP address

- ➔ For **Enable DHCP**, select **disable** to link the device to a network with a fixed IP address. In this case, enter the IP address, the netmask and the gateway address.


Competence in
Communication
Technologies

OUTPUT

VIDEO

AUDIO

STREAM

SYSTEM

LOG OUT


Part of axing group

System

[Reset System](#)

[Retrieve Inventory](#)

[Upgrade Code](#)

[Set IP](#)

[Set Language](#)

[Set Password](#)

Set IP

Enable DHCP : ☐ enable ☒ disable

IP Address :

Net Mask :

Default Gateway :

Save Settings

Cancel Changes

- ➔ Click **Save Settings** to save your settings.
- ➔ After the changes have been saved, the device is restarted automatically.
- ➔ After restarting, you must enter the new IP address in the browser and log in again.

3.6.5. Language

Here you can select the language of the interface.

➔ Click **Save Settings** to save your settings.

3.6.6. Password

The factory-set password is: Ramsen8262.

After the first commissioning of the cassette, the factory-set password should be changed immediately.

➔ Enter a new password with 8 to 10 characters and / or numbers.

➔ Re-enter the password.

➔ Click **Save Settings** to save your settings.

➔ After the changes have been saved, the Login page is displayed, you must log on again.

4. Technical specifications

Type	HKI 40-00	HKI 80-00
Inputs		
Number	4 × HDMI	8 × HDMI
Supported protocols	HDMI 1.3, 1.4a HDCP 1.4	
Video resolution	1080p@50 Hz 1080p@60 Hz	
IP output		
Transportstreams	4 × SPTS	8 × SPTS
Total net data rate	56 Mbps	2 × 56 Mbps
Supported transport protocols	UDP	
Supported application protocols	RTP	
Audio codecs	AAC, AAC+, AAC++, MP3	
Video codecs	H.264	
Interfaces		
Ethernet connectors	2 × RJ 45	4 × RJ 45
Ethernet standards	IEEE 802.3, 100 Base-T @ Control IEEE 802.3, 1000 Base-T/1 GbE @ IPTV OUT	
Supported configuration protocols	HTTP, AXING SMARTPortal*	
General		
Operating temperature range (acc. to EN 60065)	−10 °C ... +50 °C	
Operating voltage	100 ... 240 VAC/50 ... 60 Hz	
Power consumption	15 W	30 W
Dimensions (W × H × D) appr.	480 × 47 × 253 mm	
Weight	2.900 kg	3.800 kg
Comments	* encrypted, cloud-based application for configuration, monitoring and remote maintenance	

Hersteller | Manufacturer
AXING AG
Gewerbehaus Moskau
 8262 Ramsen

EWR-Kontaktadresse | EEA contact address
Bechler GmbH
Am Rebberg 44
 78239 Rielasingen