MIP 800 | MIP 1600
MIP 806CI | MIP 1606CI

Multituner | IP streamers

Operation instructions

Table of contents

⚠ WARNING

Safety instructions:

- The installation of the device and repair work on the device must be carried out only by a professional in accordance with the applicable VDE directives. In case of incorrect installation, no liability is assumed.
- Never open the device. There are no parts to be maintained by the user inside the device, however, lethal voltages are present. This also applies to cleaning the device or working on the connections.
- Use only the mains cable enclosed to the device. Never replace any parts or make any modifications to the mains cable. Otherwise, there is a risk of death.
- If you intend not to use the device for a longer period of time, we recommend you to completely disconnect the device from the mains for safety reasons and for saving energy by pulling out the mains plug.
- Let the device adjust to the room temperature before commissioning, in particular if condensation is present on the device, or if it was exposed to large temperature fluctuations.
- The device must be operated only in moderate climate.
- The device must be operated only in dry rooms. In damp rooms or outdoors, there is a risk of short-circuits (attention: risk of fire) or electrical shocks (attention: risk of death).
- The device shall not be exposed to dripping or splashing. Do not place objects filled with liquids such as vases on the device.
- Plan the mounting or installation location such that you can easily reach the mains plug and interrupt the electric circuit in dangerous situations. Select the mounting or installation location such that children cannot play near the device and its connections without supervision. The mounting or installation location must allow a safe installation of all connected cables. Power supply cables and supply cables must not be damaged or squeezed by any objects.
- Operate the device only on a flat, firm surface and protect it against unintentional movements.
- Never expose the device to direct solar irradiation and avoid direct vicinity of heat sources (e.g. heaters, other electrical appliances, fireplace, etc.). It must be always ensured that devices with cooling elements or ventilation slots are not covered or obstructed.
- Ensure generous air circulation around the device. This will prevent possible damage to device and risk of fire due to overheating. It must be always ensured that cables are not located near heat sources (e.g. heaters, other electrical appliances, fireplace, etc.). The unit must be wall mounted with at least 5 cm clearance along the 4 sides. For 19-inch rack mounting, there must be at least 5 cm clearance in front of and behind the unit.
- In particular, the warranty and liability shall be excluded for the consequences of incorrect use, in case of incorrect modifications or repair work carried out by the customer. Use the device only as described in the operating instructions and in particular according to the state-of-the-art.
- The antenna system must be installed and grounded according to the current DIN EN 60728-11 standard.

CE

Herewith AXING AG declares that the marked products comply with the valid guidelines. You can call up the complete EU declaration of conformity for download by entering the article in the search field at www.axing.com.

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. General

MIP 800	Eight independent multituner inputs Transmodulates 8 × DVB-S/S2/S2x/T/T2/C into 512 SPTS (Single Program Transport Stream) or 8 MPTS (Multi Program Transport Stream)
MIP 806CI	Like MIP 800, with 6 CI slots
MIP 1600	16 independent multituner inputs Transmodulates 16 × DVB-S/S2/S2x/T/T2/C into 512 (Single Program Transport Stream) or 16 MPTS (Multi Program Transport Stream)
MIP 1606CI	Like MIP 1600, with 6 CI slots

Common Features:

- GbE-interface with max. 800 Mbps
- Web-based configuration
- Remote maintenance (SMARTPortal)
- 19" housing, 1RU
- Two redundant power supplies (hot pluggable)

1.2. Scope of delivery

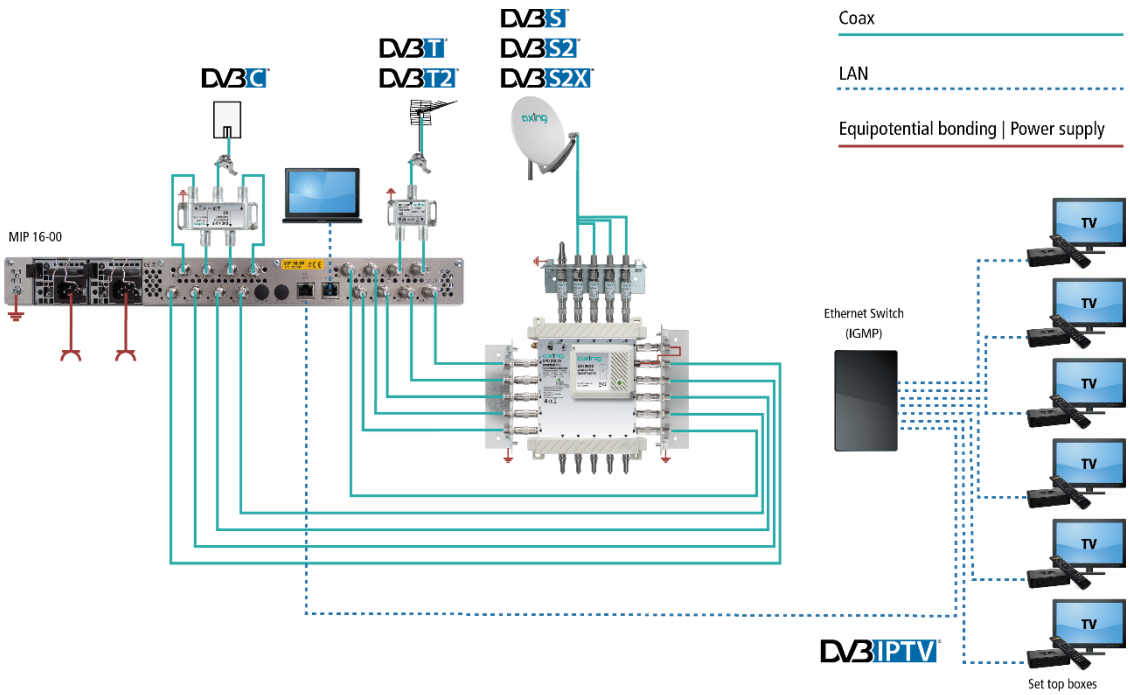
1 × IP Streamer

2 × AC power cord

1 × Quick start guide

1.3. Inputs/multituner

Devices with multituner can receive DVB-S/S2/S2x, DVB-T/T2 or DVB-C. **For receiving DVB-T/T2 or DVB-C the LNB power has to be switched off before connecting a antenna cabel to one of the HF inputs (see 3.3.2 on page 14)!**



Direct connection to the LNBs

The devices have a remote supply voltage for the LNB and DiSEqC 1.0 functionalities at the inputs. The inputs can be connected directly to the LNB.

Multiswitches as input distributors (recommended)

Optionally, you can also use multiswitches as input distributors. The advantage of this solution is that you can set both the polarization and the satellite via the user interface. Changes in the list of programmes can be made using remote maintenance, so that it is not necessary to change or modify the input distribution on site.

Demodulation of the data stream

The selection of the frequency and the demodulation of the data stream are both done in the tuner.

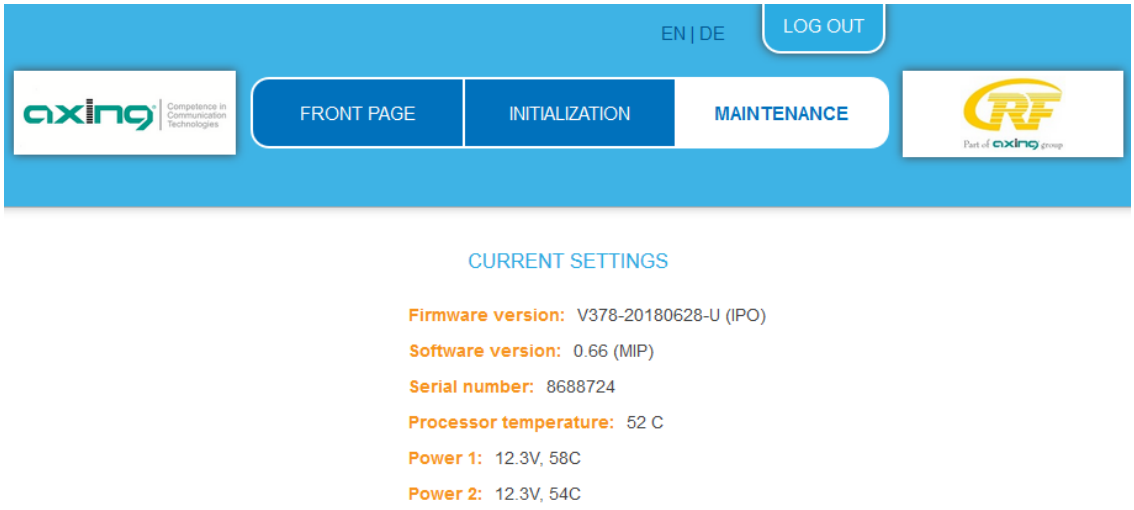
1.4. Output transport stream

As Output transport stream 512 SPTS or 8 MPTS (MIP 80x) or 16 MPTS (MIP 160x) can be choosen.

SPTS: each program is attached to one transport stream. **MPTS**: multiple programs are attached to a transport stream, using remux or crossmultiplex mode.

1.5. Graphical user interface

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



The configuration interface is "mobile ready" and can therefore also be used from the smartphone or tablet.

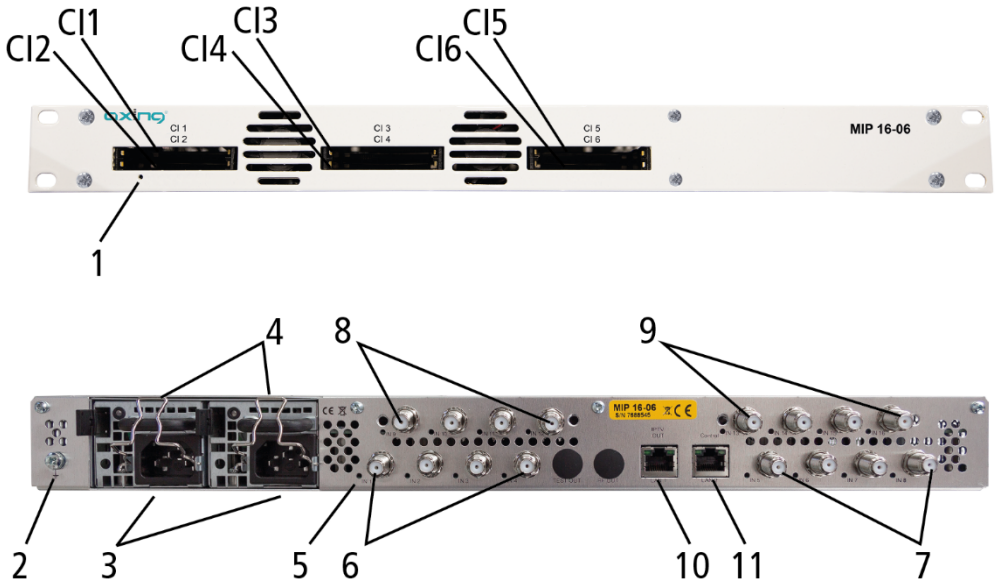
1.6. SMARTPortal

AXING ensures with its **SMART**Portal, a web-based cloud application, an easy remote access on web configuration surfaces of its headends.

With AXING's SMARTPortal a worldwide configuration of all settings or software updates can be ensured. On customer request AXING can provide the necessary support.

AXING devices ensure a continuous secure and encoded connection to the AXING SMARTPortal. Only requirement on site is an internet connection (e. g. via LAN or 3G/LTE-Router). There is no complicated configuration of a router and no additional software for the local computer needed.

1.7. Display elements and connectors



1. LED IPTV stream:
   Green (blinking) = No IPTV stream (no input signal, tuner not configured, no program selected, no program configured for output)
   Green = IPTV stream ok
   Red = IPTV stream overload.
2. Equipotential bonding connection
3. Mains connection. 2 slot redundance power supply as in picture is an option.
4. Locking bow for inlet connector
5. 8 bzw. 16 HF input LEDs:
   Yellow = MPEG data stream present
   Off = MPEG data stream not present
6. RF input 1…4
7. RF input 5…8
8. RF input 9…12 (MIP 16-0x only)
9. RF input 13…16 (MIP 16-0x only)
10. RJ-45 Ethernet connector IPTV output
11. RJ-45 Ethernet connector Control

MIP 806/1606

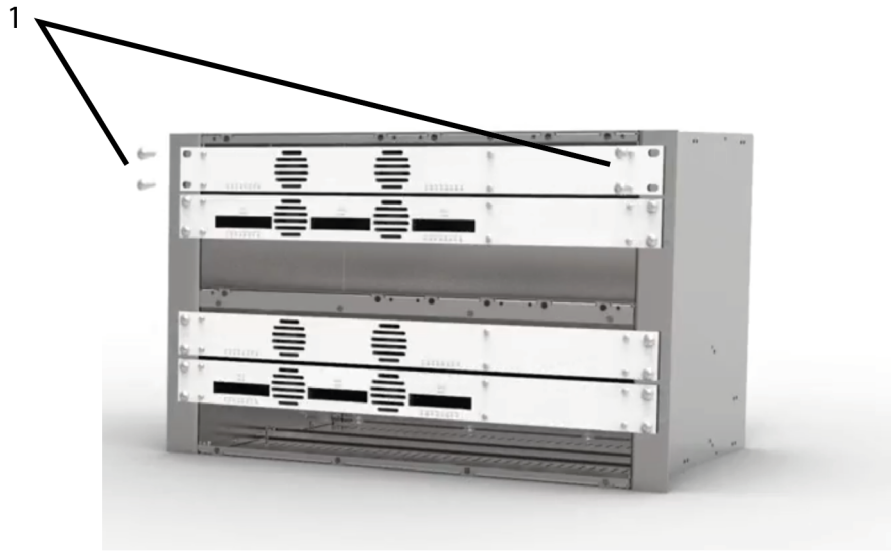
MIP 806 and MIP 1606 each have 6 common interfaces (CI1 ... CI6).
Which encrypted program you decrypt with which interface, you determine in the configuration.

2. Mounting and Installation

➔ Installation must be performed by authorized and skilled electricians only.
➔ Before mounting and installation, pull the mains plug (1)!
➔ The antenna system must be installed and grounded according to the EN 60728-11 standard.

2.1.1. Mounting in a 19“ rack

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.
➔ Screw the device with four screws (1).
➔ Observe the standard EN 60728-11.

2.2. Equipotential bonding

➔ To connect the outer conductor of the coaxial cable to the equipotential bonding, use e.g. QEW earthing angles or CFA earth connection blocks at the inputs and output (see 2.4 on page 9).

2.3. Power supply

The devices are equipped with two redundant power supplies to provide this e.g. to connect to different power supplies (such as a standard power outlet and a UPS) If a power failure occurs, the unit will sound with an alarm sound.

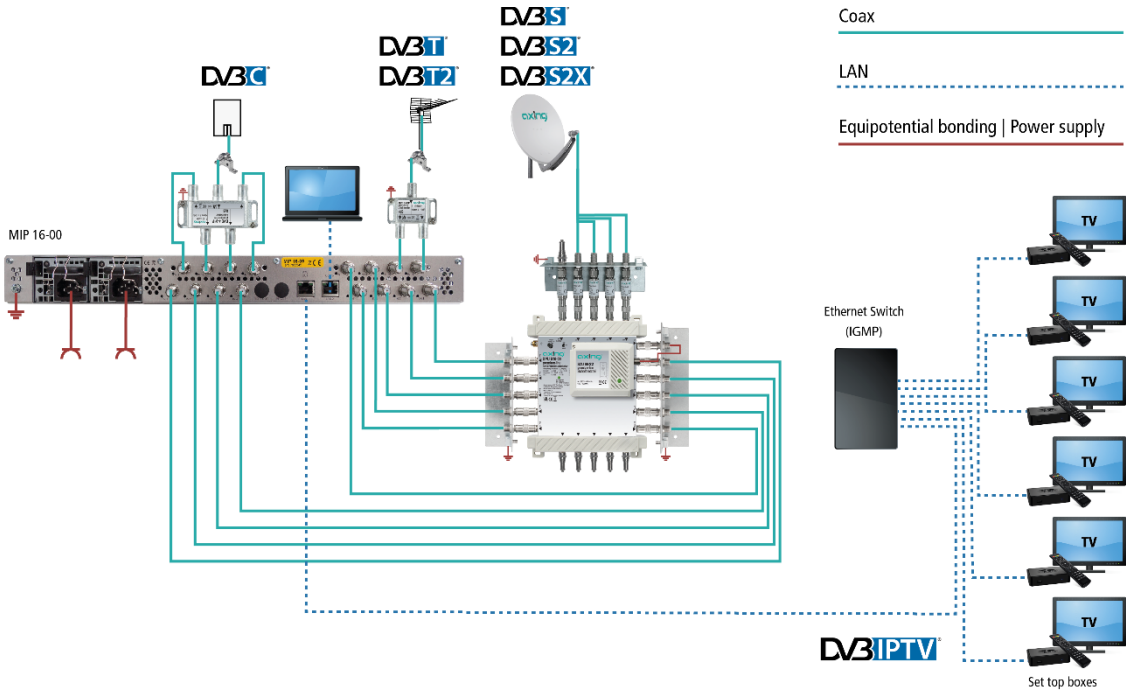
➔ Connect both power supplies with the enclosed cables to 230 V AC. Open the stirrup, plug the appliance plugs into the power supply and secure it with the stirrup.

2.4. RF Installation

2.4.1. Connection to DVB-T/T2 or DVB-C

⚠ CAUTION

Before connecting the antenna cabel, the LNB power has to be switched off (see 3.3.2 on page 14). Active DVB-T antennas have to be supplied by an external power supply.



2.4.2. Connection to DVB-S/S2/S2x

Connection to the LNBs

On the SAT-IF input the devices have a remote supply voltage for the LNB and use DiSEqC 1.0 functionalities. Therefore, they can be connected directly to the LNB.

Multiswitches as input distributors

Optionally, you can also use multiswitches as input distributors. The advantage of this solution is that you can set both the SAT IF level and the satellite via the user interface. Changes in the list of programmmes can be made using remote maintenance, so that it is not necessary to change or modify the input distribution on site.

3. Configuration

The device is configured via the graphical user interface of the integrated web interface.

To access the user interface, you need a standard PC/laptop with a network interface and the actual version of the installed web browser. To connect the network interface of the device to the computer, you need a commercially available network cable.

The HTTP protocol is used for communication allowing a worldwide remote maintenance of the systems at various locations via the Internet. Access protection is implemented by means of the password prompt.

IP address:	192.168.0.145
Subnet mask:	255.255.255.0.

The computer and the device must be in the same subnetwork. The network part of the IP address of the computer must be set to 192.168.0. and the subnet mask must be set to 255.255.255.0.

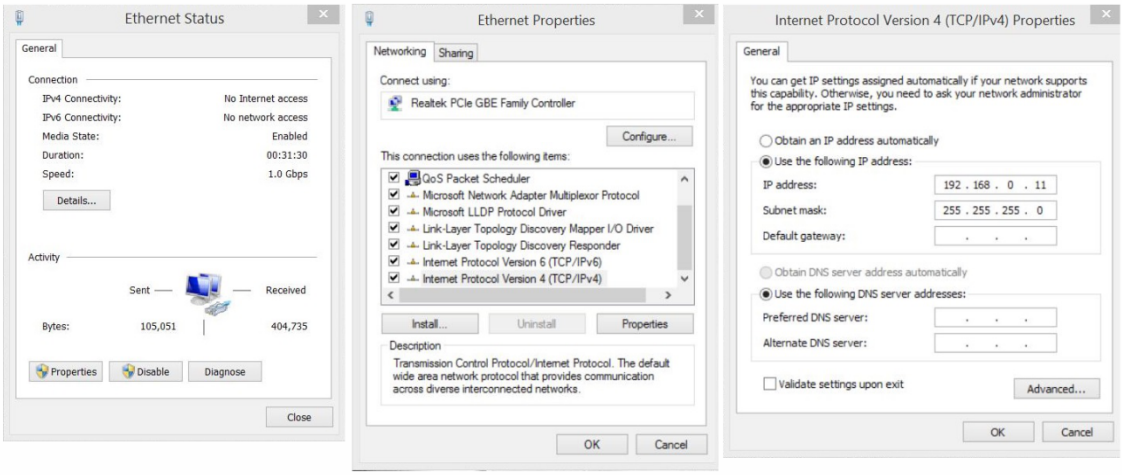
The host part of the network address is required for the identification of the devices and can be assigned in the subnetwork only once. You can allocate to the computer any not allocated host address between 0 and 255.

Hint:

Change the IP address and the subnet mask of your computer accordingly.

(e.g.: IP address:192.168.0.11 and subnet mask: 255.255.255.0)

Control panel > Network connections > LAN connection >Properties > Internet protocol version 4 TCP/IPv4 > Properties > Use the following IP address:

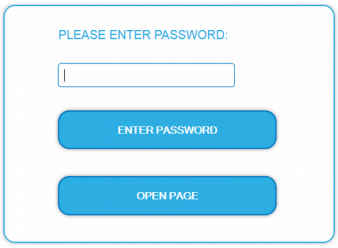


➔ Click OK to save.

➔ Start your web browser and enter the IP address of the device: 192.168.0.145.

3.1. Login and logout

The web-based user interface is protected against unauthorized access. When accessing the user interface, the first thing is the password request.

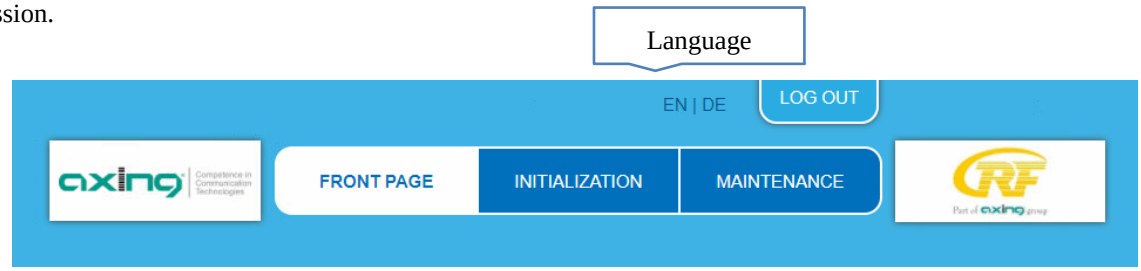


➔Enter the default password: *Ramsen8262*

➔Click ENTER PASSWORD.

➔If you are not automatically forwarded to the start page, click OPEN PAGE.

The standard language of the user interface is English. In the header, the the language of the user interface can be changed. The possibilities are German (DE) and English (EN). The chosen language applies until the end of the session.



➔To log out, click LOG OUT.

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.

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: MAINTENANCE > SET NEW PASSWORD (see 3.6.4 on page 29).

Changing the IP address:

If needed, the devices can be integrated in a network. For this application, some changes must be applied to the network configuration.

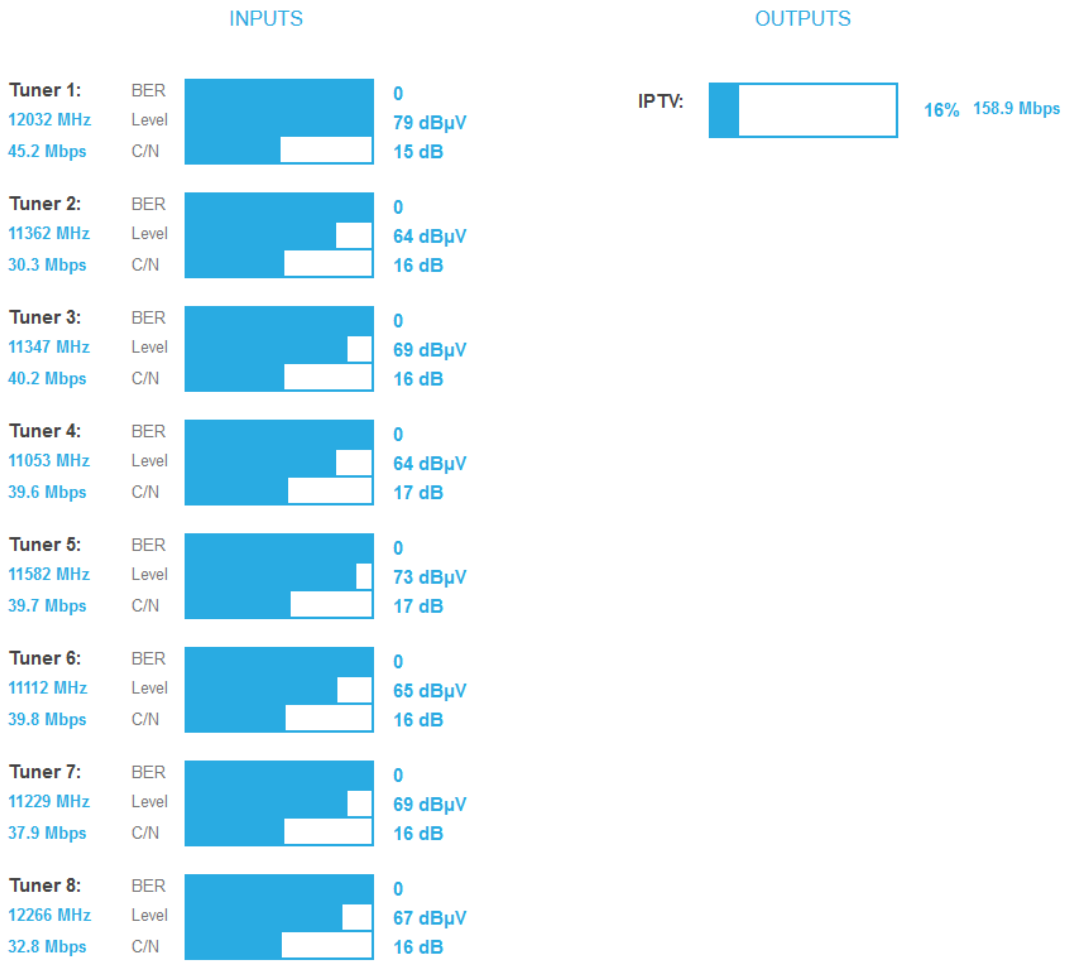
➔Menu item MAINTENANCE > SYSTEM.

3.2. Front page

The relevant information required for the function of the system are shown on the front page. The decisive thing is the quality of the signals at the INPUT and the utilization of the OUTPUT.

3.2.1. Input

The bit error rate BER of all four tuners is shown on the left side. The amount of bit errors for the last 1,000,000 transferred bits is calculated. Also the LEVEL and the C/N ratio are shown.



3.2.2. Outputs

The fill level of the output is shown. If the current fill level exceeds the maximal fill level, it may cause image disturbances, e.g. mosaic images.

The data rates of the programmes are not constant. They are dynamically changed by the sender. To ensure an undisturbed reception, a reserve must absolutely be observed.

We recommend you to set the maximal fill level to 90%.

From a fill level of 95%, this is indicated in red.

3.3. Initialization phase 1

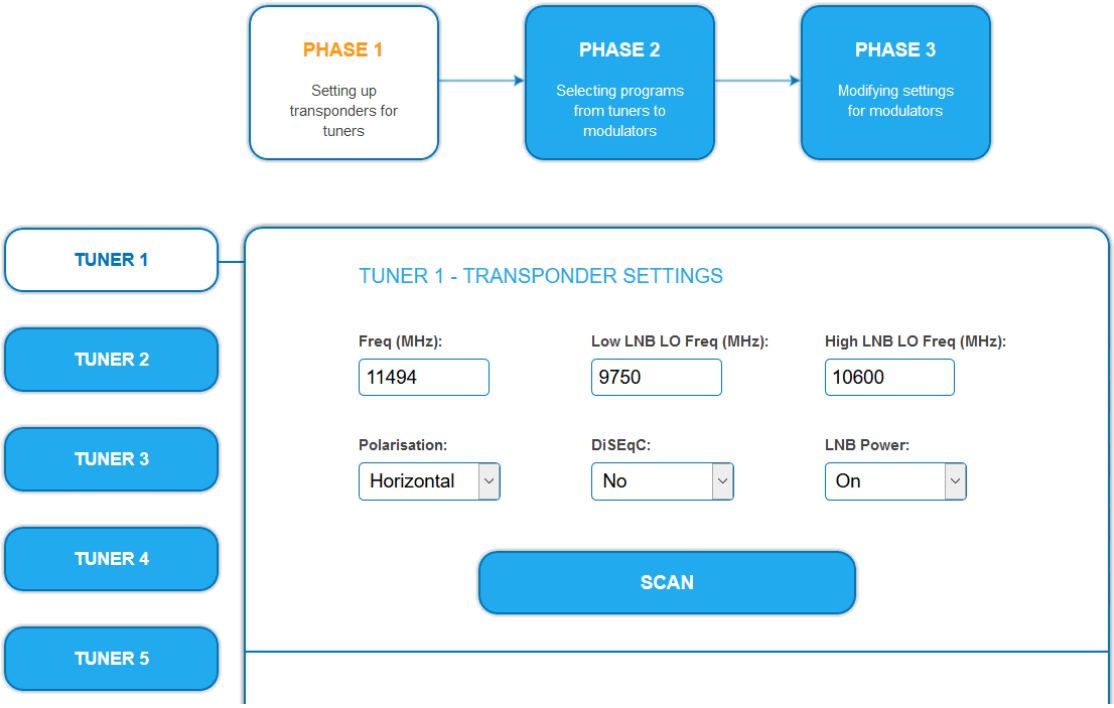
➔ Choose INITIALIZATION from the main menu.

During the first phase of the initialization, the tuner settings required for the scan are made and the station scanning is carried out. The tuners work independently from each other and after the same principle.

3.3.1. DVB-S/S2/S2x

➔Click TUNER 1…8 or TUNER 1…16 to select one tuner.

➔Configure the needed settings for all tuners.



The SAT IF frequency of the transponder is entered in the input field **Freq (MHz).**

The input fields **Low LNB LO Freq (MHz)** and **High LNB LO Freq (MHz)** correspond to the oscillator frequencies of the LNB in low and high band. The default settings of the oscillator frequencies are 9,750 MHz for the low band and 10,600 MHz for the high band.

In the optional field **Polarisation**, you can switch from horizontal to vertical.

In the optional field **DiSEqC**, the DiSEqC command signals can be turned off or set to switch a DiSEqC-enabled multi switch on the positions 1 to 4.

If required, the operating voltage for the LNB can be switched off via the optional field **LNB Power**.

➔After all settings have been made, click SCAN.

A rotating circle is shown during the scanning process.

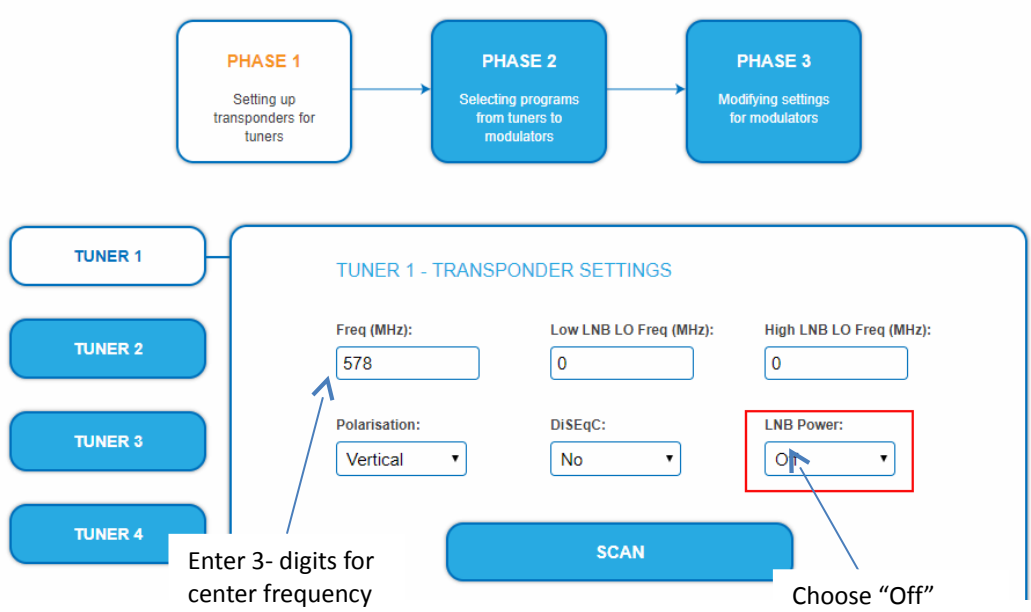
3.3.2. DVB-C, DVB-T or DVB-T2

⚠ CAUTION

Before connecting an antenna cable to a tuner, the LNB Power has to be set to Off!

➔Click TUNER 1…8 or TUNER 1…16 to select one tuner.

➔In the field **LNB power** choose the option **Off**.



➔Enter the center frequency (see table below) for the receiving channel into the field FREQ (MHz).

Channel	Input	Channel	Input	Channel	Input	Channel	Input
S 21	306	21	474	41	634	61	794
S 22	314	22	482	42	642	62	802
S 23	322	23	490	43	650	63	810
S 24	330	24	498	44	658	64	818
S 25	338	25	506	45	666	65	826
S 26	346	26	514	46	674	66	834
S 27	354	27	522	47	682	67	842
S 28	362	28	530	48	690	68	850
S 29	370	29	538	49	698	69	858
S 30	378	30	546	50	706		
S 31	386	31	554	51	714		
S 32	394	32	562	52	722		
S 33	402	33	570	53	730		
S 34	410	34	578	54	738		
S 35	418	35	586	55	746		
S 36	426	36	594	56	754		
S 37	434	37	602	57	762		
S 38	442	38	610	58	770		
S 39	450	39	618	59	778		
S 40	458	40	626	60	786		
S 41	466						

Note: The center frequeny of channels using a bandwith of 7MHz will be rounded down to 3 full digits. For example: center frequency of CH 5 = 177,5 MHz, the according input = 177.

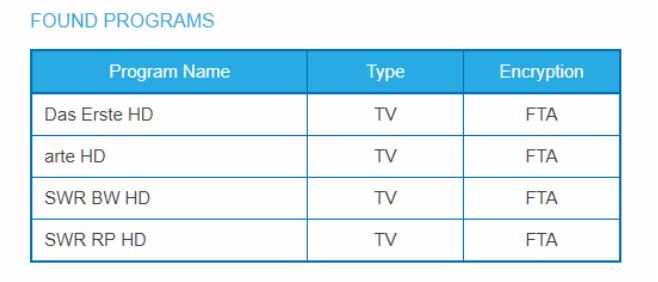
Note: All other entry fields are not relevant. Modulation and all other important parameter for reception are detected automatically.

3.3.3. Bit error rate

The BIT ERROR RATE is shown. The amount of bit errors for the last 1,000,000 transferred bits is calculated.

3.3.4. Found programmes

After a successful station scanning, the radio and TV stations are shown in the area FOUND PROGRAMS. The table contains information about the Program Name, the Type and the Encryption.

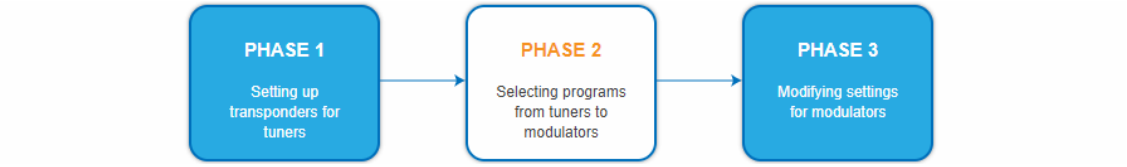


Program Name	Type	Encryption
Das Erste HD	TV	FTA
arte HD	TV	FTA
SWR BW HD	TV	FTA
SWR RP HD	TV	FTA

3.4. Initialization phase 2

In the initialization PHASE 2, the found programmes are subdivided by tuner.

➔ Click on PHASE 2, to select programs.



After the station scanning in initialization phase 1 no programms are activated.

3.4.1. SPTS

If SPTS (Single Program Transport Stream) is selected as the transport stream output (see 3.6.2 on page 27), programs can be activated or deactivated in the **Select** column.

TUNER 2

☐ Select/unselect all incoming programs

Select	LCN	Program Name	Type	Encryption	Decrypt
☑	4	ZDF HD	TV	FTA	no
☑	5	zdf_neo HD	TV	FTA	no

TUNER 3

☐ Select/unselect all incoming programs

Select	LCN	Program Name	Type	Encryption	Decrypt
☑	6	3sat HD	TV	FTA	no
☐		KiKA HD	TV	FTA	no
☑	7	ZDFinfo HD	TV	FTA	no

TUNER 4

☐ Select/unselect all incoming programs

Select	LCN	Program Name	Type	Encryption	Decrypt
☑	8	tagesschau24 HD	TV	FTA	no
☐		ONE HD	TV	FTA	no
☑	9	SR Fernsehen HD	TV	FTA	no

IMPORTANT

➔With each programme you asign to an output, the data rate rises.

➔The performed modifications are only taken over by the system when you click on SAVE CHANGES.

3.4.2. MPTS

If MPTS (Multi Program Transport Stream) is selected as the transport stream output (see 3.6.2 on page 27), then the programs can be assigned to the 8 or 16 transport streams.

All lines of the programme table have colored buttons M1, M2 …. The buttons correspond to the outputs. The allocation of the buttons is given in the COLOR CODES legend.

You can assign programmes in REMUX MODE or in CROSS MULTIPLEX MODE.

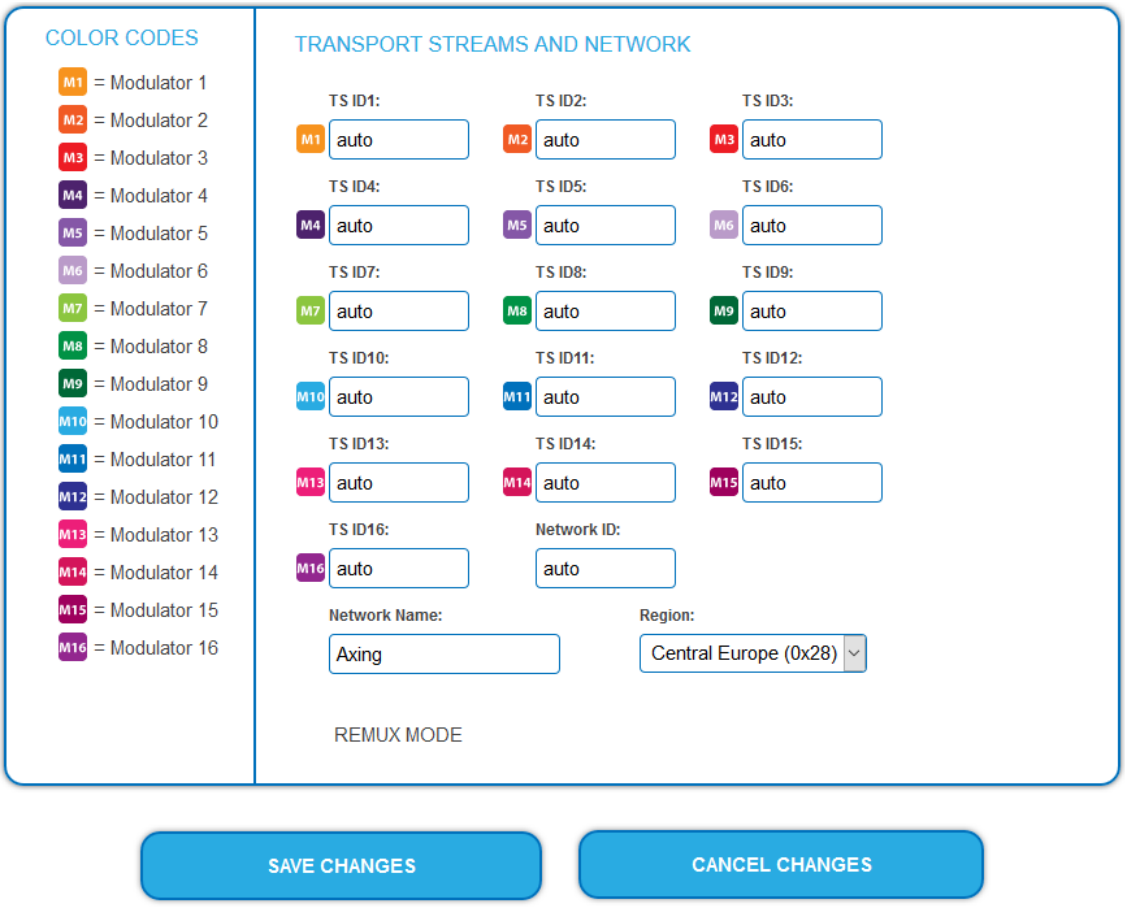
IMPORTANT

➔With each programme you asign to an output, the data rate rises.

➔The performed modifications are only taken over by the system when you click on SAVE CHANGES.

3.4.3. Remux mode

If the the Net**work ID** are set on **auto**, the device works in the Remux mode. In this mode, the IDs from the set transponder and from the satellite are used and forwarded with virtually no changes. The **TS ID1** to **TS ID8/16** of the outputs, are also set on **auto**.



Note:

➔ If the device is already set to CROSS MULTIPLEX MODE, set the **Network ID** to **auto**.

➔ Click on SAVE CHANGES.
The device ist set back to REMUX MODE.

Assigning programmes

Every tuner is assigned to an output. The programmes of the tuner can only be assigned to the associated output.

➔For example, click in table TUNER 1 on M1.

The program is assigned to output 1. The button of the output is highlighted in color (a new click on a output allow the assignment to be canceled. The button fades then again).

Choosen programs for output 1

TUNER 1

☐ Select all incoming programs

Modulator	LCN	Program Name	Type	Encryption	Decrypt
M1 M2 M3 M4 M5 M6 M7 M8 M9 M10 M11 M12 M13 M14 M15 M16		ORF1 HD	TV	CA	CI 4
M1 M2 M3 M4 M5 M6 M7 M8 M9 M10 M11 M12 M13 M14 M15 M16		ORF2W HD	TV	CA	no
M1 M2 M3 M4 M5 M6 M7 M8 M9 M10 M11 M12 M13 M14 M15 M16		ServusTV HD Oesterreich	TV	CA	CI 4
M1 M2 M3 M4 M5 M6 M7 M8 M9 M10 M11 M12 M13 M14 M15 M16		ServusTV HD Deutschland	TV	FTA	no
M1 M2 M3 M4 M5 M6 M7 M8 M9 M10 M11 M12 M13 M14 M15 M16		ORF2N HD	TV	CA	no

➔Choose the programs for TUNER 1 to TUNER 8/16.

➔Click on SAVE CHANGES.

The assignment is saved to the device.

Select all programs

➔Activate the option **Select all incoming programs**, with each program of the tuner the button is activated.

TUNER 2

☑ Select all incoming programs

Modulator	LCN	Program Name	Type	Encryption	Decrypt
M1 M2 M3 M4 M5 M6 M7 M8 M9 M10 M11 M12 M13 M14 M15 M16		ORF1 HD	TV	CA	CI 4
M1 M2 M3 M4 M5 M6 M7 M8 M9 M10 M11 M12 M13 M14 M15 M16		ORF2W HD	TV	CA	no
M1 M2 M3 M4 M5 M6 M7 M8 M9 M10 M11 M12 M13 M14 M15 M16		ServusTV HD Oesterreich	TV	CA	CI 4
M1 M2 M3 M4 M5 M6 M7 M8 M9 M10 M11 M12 M13 M14 M15 M16		ServusTV HD Deutschland	TV	FTA	no
M1 M2 M3 M4 M5 M6 M7 M8 M9 M10 M11 M12 M13 M14 M15 M16		ORF2N HD	TV	CA	no

Note: If the option is activated, then no settings can be made in the columns **LCN, decrypt** etc.

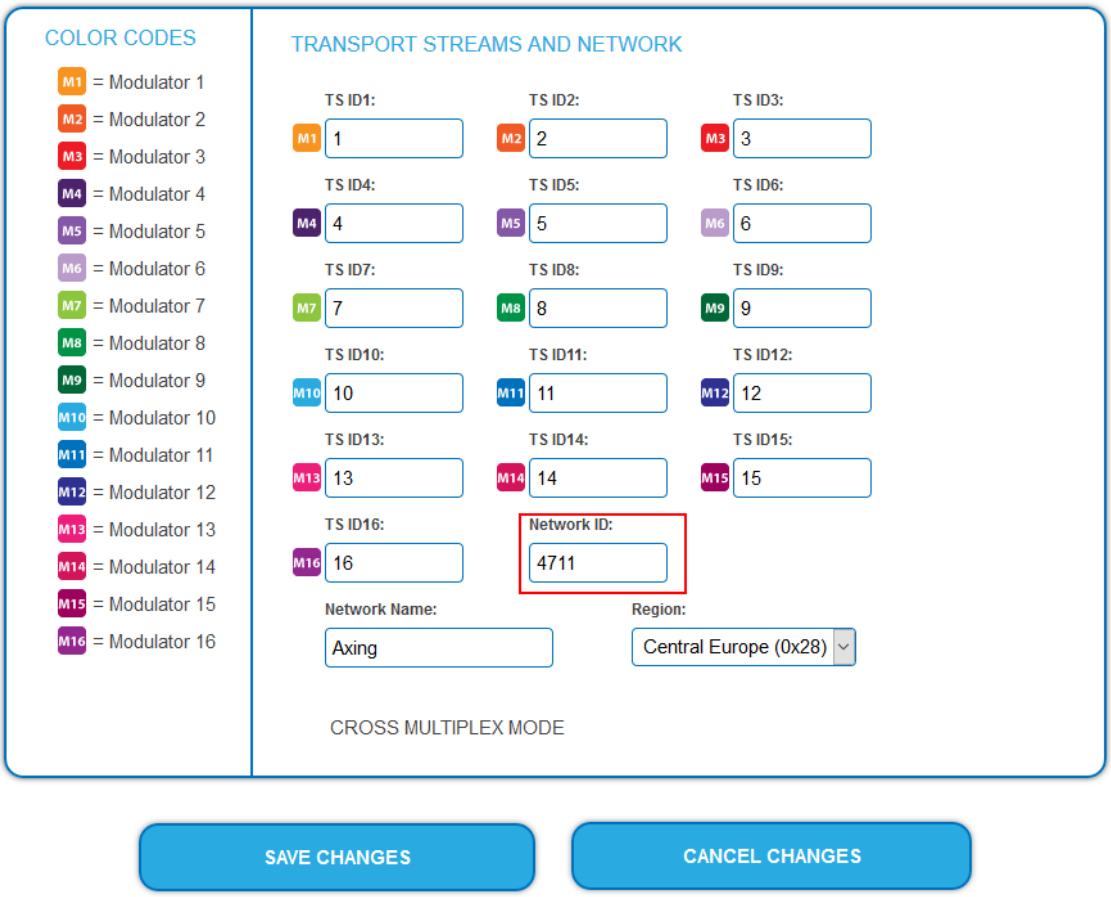
3.4.4. Cross Multiplex Mode

The cross multiplex mode is used:

- To split the programmes of a transonder to several outputs.
- To merge pogams of several transponders into one output.

Transmission capacities in the distribution networks can be optimized.

➔Change the N**etwork ID** to a value greater than zero.



➔Click on SAVE CHANGES.

The IDs of the transport streams **TS ID1** to **TS ID8[16]** are automatically incremented by one to eight[16], the cross multiplex mode is activated.

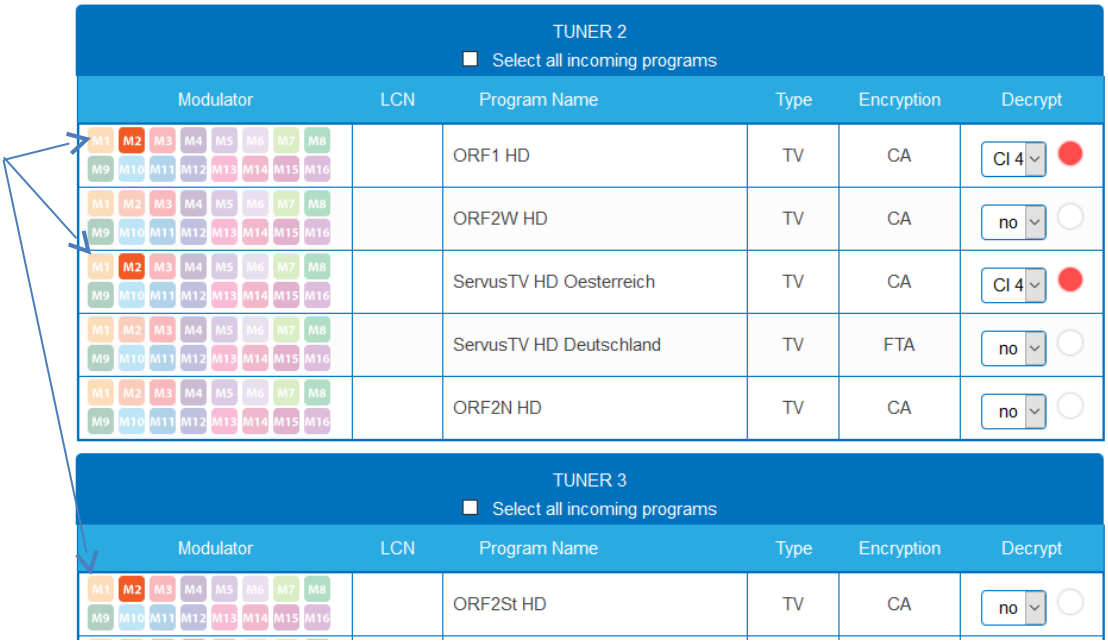
Important:

- A splitted transponder works like two transponders.
- If you use the cross multiplex mode in several streamers, the **Network IDs** of the devicees have to be different.

Assigning programmes to the outputss

In the cross multiplex mode, the tuners are no longer assigned to one output.

Programs, which are assigned to output 2



TUNER 2

Select all incoming programs

Modulator	LCN	Program Name	Type	Encryption	Decrypt
M2		ORF1 HD	TV	CA	CI 4
		ORF2W HD	TV	CA	no
M2		ServusTV HD Oesterreich	TV	CA	CI 4
		ServusTV HD Deutschland	TV	FTA	no
		ORF2N HD	TV	CA	no

TUNER 3

Select all incoming programs

Modulator	LCN	Program Name	Type	Encryption	Decrypt
M2		ORF2St HD	TV	CA	no

➔Click e.g. in the table TUNER 2 to TUNER 3 on M2.
The programs are assigned to output 2.

Spliting the programmes of a transonder

If there are to much programms transmitted in one transponder, they can be splitted to several outputs.

The programms of one transponder are spitted to two outputs

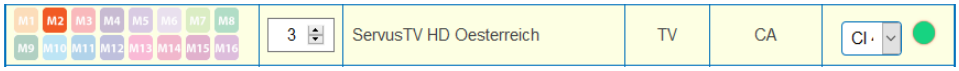
M2		ORF1 HD	TV	CA	CI 4
		ORF2W HD	TV	CA	no
M2		ServusTV HD Oesterreich	TV	CA	CI 4
M1		ServusTV HD Deutschland	TV	FTA	no
		ORF2N HD	TV	CA	no

➔ For example: choose output M1 for two programmes and output M2 for two other programmes.

3.4.5. LCN (Logical Channel Numbering)

The LCN function enables channel allocation for the station scan of the TV devices. The TV device must support the LCN function. An LCN can only be entered for programs assigned to an output.

➔Click on the **LCN** column for the corresponding program.



➔Enter the LCN with the keyboard or increase / decrease the LCN with the arrow buttons right of the number.

➔Enter a separate LCN for each desired program.

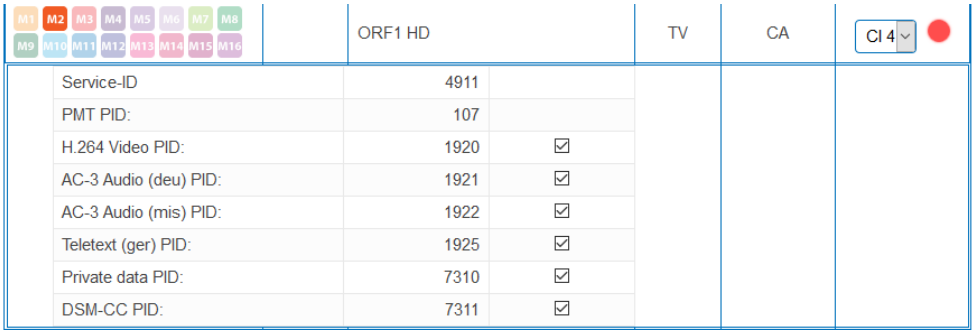
➔To clear the LCN, enter 0 in the LCN column.

➔Click SAVE CHANGES.

The numbers of the channels are saved.

3.4.6. PID Filtering

➔ Click on one of the programs.
The table with the Packeges opens. This contains the name, the PID and a check mark. By default, all PIDs are initially selected.



➔Remove the check mark if desired.
The packet is no longer transmitted in the transport stream.

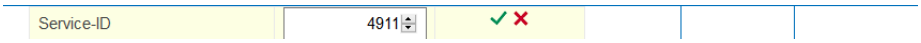
Edit service ID (in crosmultiplex mode only)

In crosplex mode you can also edit the service ID.

⚠ CAUTION

Not provided modifications will cause problems!

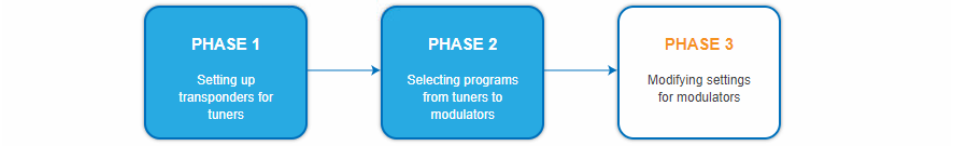
Changes of the SID are only necessary for STBs using fix preset IDs. These STBs are used of some providers to suppress reception for external devices. Modifications should only be done after consulting the provider.



➔Enter the Service ID with the keyboard or increase / decrease the ID with the arrow buttons right of the number.
➔Click on the green check mark to accept the ID or on the red cross to discard the entry.

3.5. Initialization phase 3

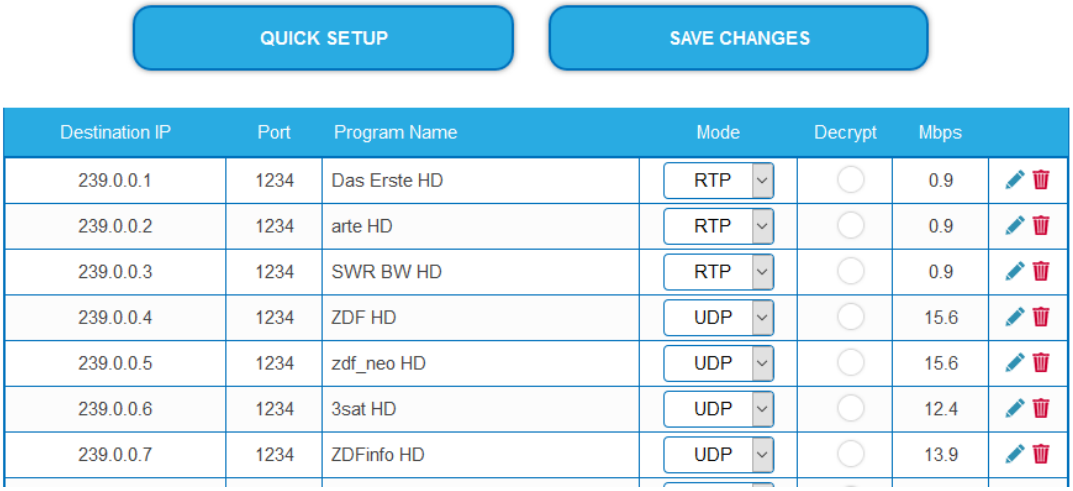
➔ Click on PHASE 3.



The output channels are compulsory assigned to adjacent outputs.

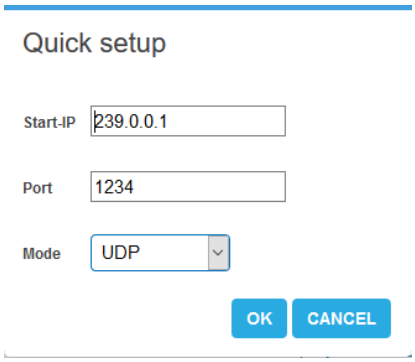
3.5.1. SPTS

If **SPTS** (Single Program Transport Stream) is selected as the transport stream output (see 3.6.2 on page 27), then to each transport stream is assigned a destination address. You also define the port and the transmission protocol.



Since there are up to 512 transport streams, there is the possibility of quick setup.

➔ Click on QUICK SETUP.



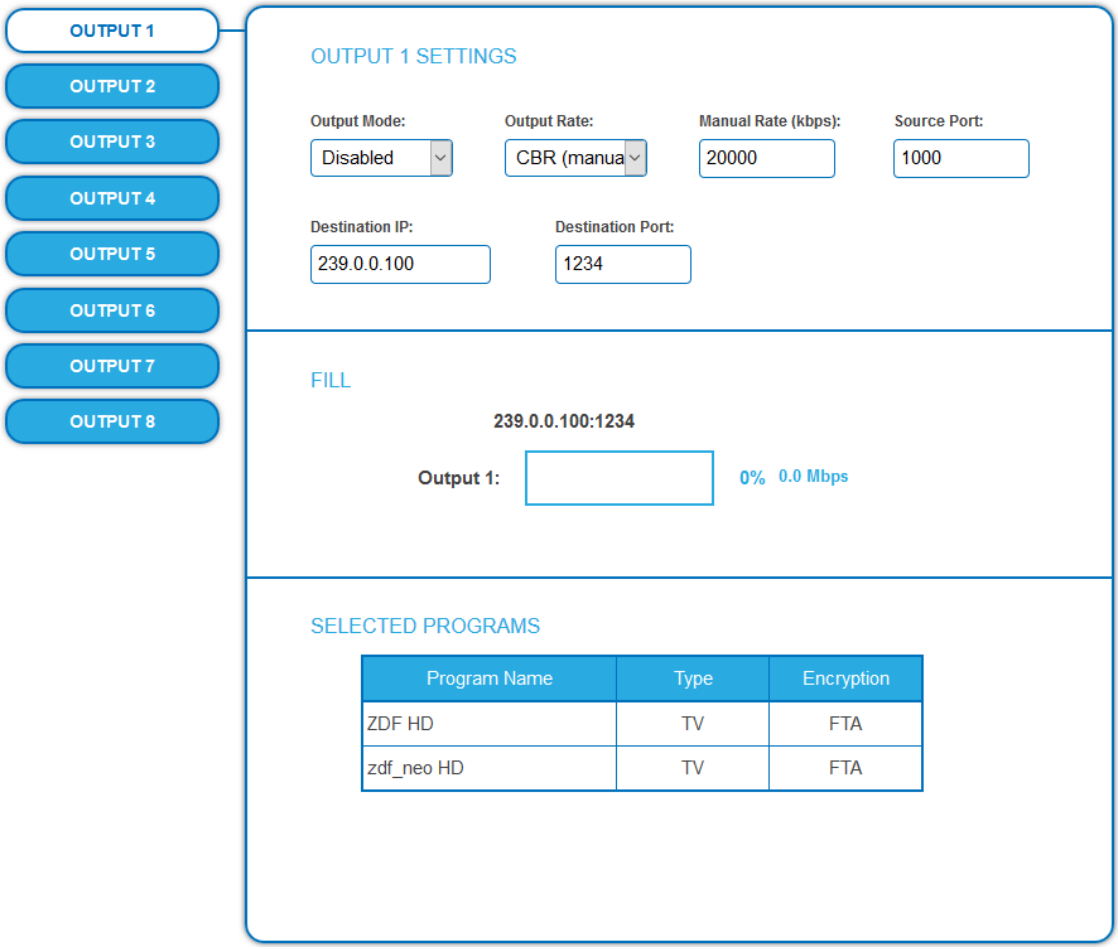
➔ Enter the start IP.
The other IP addresses are incremented by this Start IP (239.0.0.1, 239.0.0.2, 239.0.0.3 ...).

➔ Enter the **port** and as **mode** the transmission protocol.

➔ Click OK.
All transport streams are configured accordingly.

3.5.2. MPTS

If **MPTS** (Multi Program Transport Stream) is selected as the transport stream output (see 3.6.2 on page 27), then each of the 8/16 output transport streams is individually configured.



Output mode Choose between the following options:
- Disabled = no output transport stream
- UDP = User Datagram Protocol
- RTP = Real-Time Transport Protocol

Output Rate Choose between the following options:
- VBR = compression method for variable bit rate audio and video data
- CBR (auto) = compression method for constant bit rate audio and video data. The bitrate is assigned automatically.
- CBR (manual) = The bit rate is assigned manually.

Manual Rate Constant bitrate input when CBR (manual) is selected.

Source port Port of the source

Destination IP IP address that must be entered as a multicast IP address for the set-top boxes or IPTV terminals.

Destination Port Port of the destination

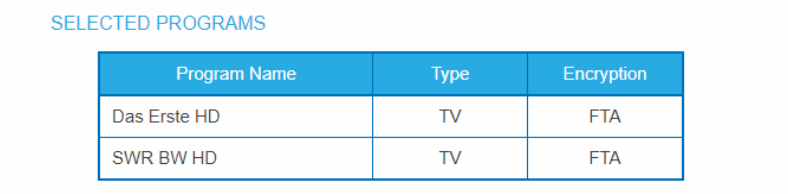
3.5.3. Fill level

The fill level depends on the number of activated channels in Phase 2.

The data rate of the channels on the DVB-S/S2/S2x transponders may vary depending on the image contents and on the transmission quality. To ensure an undisturbed reception, a reserve must absolutely be observed. We recommend you to set the maximum fill level to 95%. If the current fill level exceeds the maximal fill level, it may cause image disturbances, such as mosaic images. The error LEDs on the front panel will light up in red in this case.

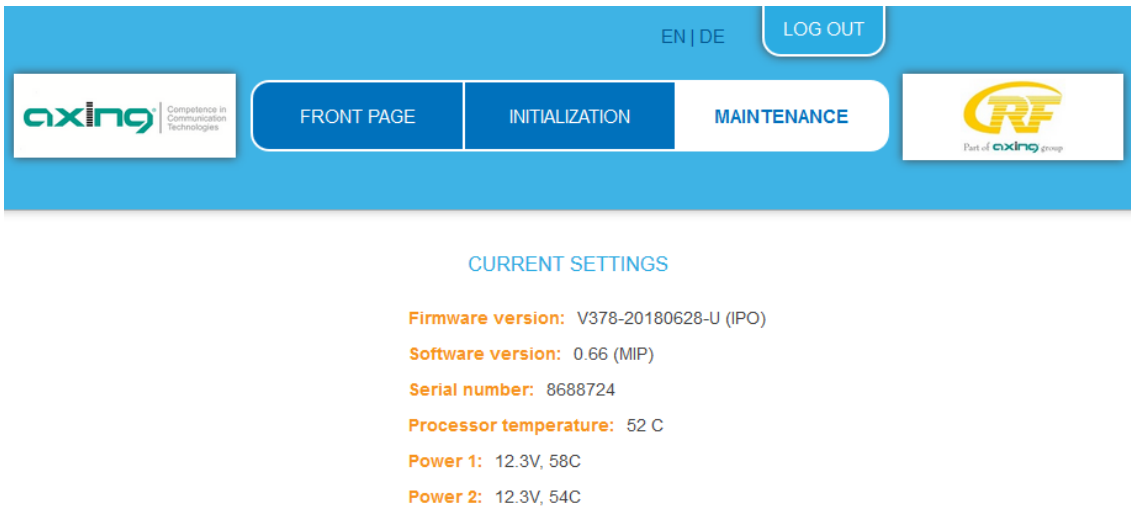
3.5.4. Selected Programmes

The programme table SELECTED PROGRAMS shows the programmes that were activated in phase 2.



3.6. Maintenance

The menu entry MAINTENANCE enables software updates, changing the IP address, changing the password, restarting the device and erasing service data.



Under Current Settings, you will find the following information:

- Firmware version: Displays the firmware version
- Software version: Displays the version of the interface
- Serial number of the device
- Processor temperature
- Output voltage and temperature of the power supplies

Important: If you stay on the maintenance page for more than 2.5 minutes, an automatic logout will occur and you will have to repeat the login procedure.

3.6.1. Updating software

NOTICE

➔ After an update, initialization data saved with older Software versions can be loaded into the device with a newer Software version.
➔ Initialization data saved with the current Software versions can **not be loaded** into devices with an **older Software** version.
➔ Therefore, if possible, make a Software update of all devices.
We recommend the AXING SMARTPortal for easier handling and overview (see 1.6 on page 6)

Download

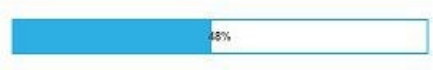
Software updates are available at https://axing.com/en/downloads/software-and-firmware/
> Software for IP streamers
➔ Download the current version of the file to your computer and unpack it.

Update

New software for the graphical user interface can be installed under SOFTWARE FILE.

➔ Click under SOFTWARE FILE on „Browse…“.
➔ Browse for the file on your computer.
➔ Click on UPDATE.

The file will be uploaded to the device.



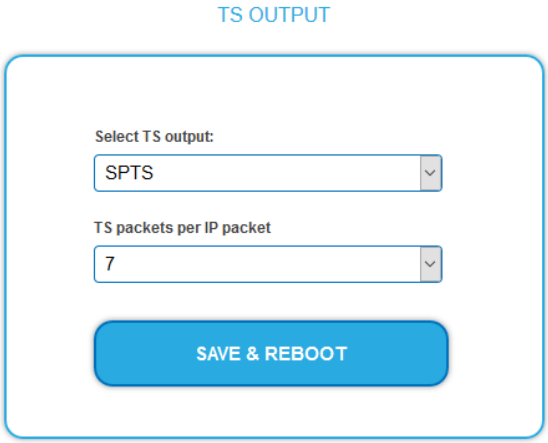
After this the update of the device begins, the remaining time ist shown as a countdown.

The device will be automatically rebooted after an update. The PLEASE ENTER PASSWORD dialog will be displayed.

➔ After the Update, log in again.

3.6.2. Select transport stream output

Under TS OUTPUT, the type of transport stream and the number of transport stream packets are selected. Depending on the configured transport stream, the output signals are output as MPTS (Multi Program Transport Stream) or as SPTS (Single Program Transport Stream). You will configure in PHASE 2 and PHASE 3 according to your selection.



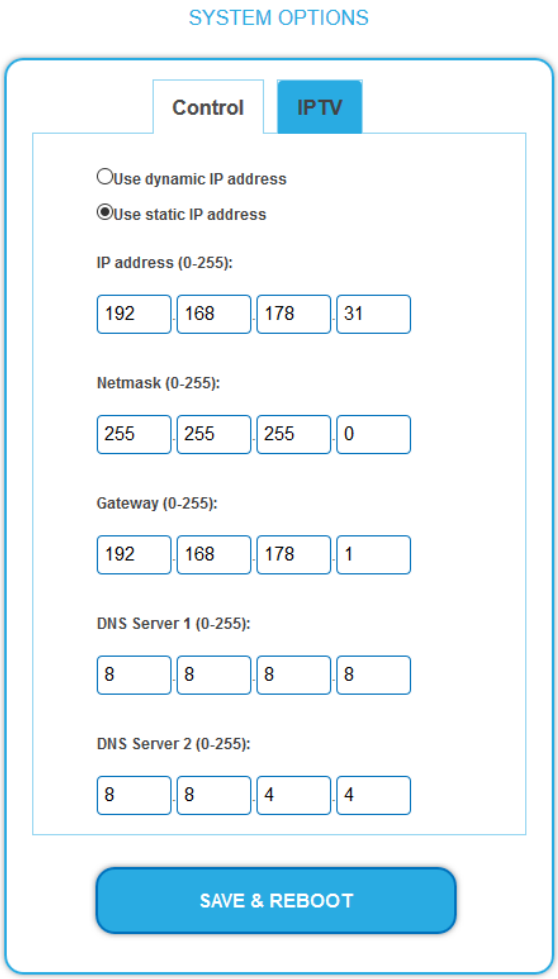
➔ In the **Select TS Outbox** box, select MPTS or SPTS.
➔ In the **TS packets per IP packet** field, select the number of TS packets.
➔ Click SAVE & REBOOT.
The changes are made. The remaining time is displayed.

➔ After rebooting log in again.

3.6.3. Changing the IP addresses

The network options are configured under the menu item MAINTENANCE> SYSTEM OPTIONS.

- In the **Control** tab, the Control interface to which the computer is connected to configure the MIP is configured.
- In the **IPTV** tab, the interface of the IPTV transport stream is configured.



Dynamic IP adress

➔ **Use dynamic IP address** to connect the device to a network with a DHCP server.

Static IP adress

➔ **Use a static IP address** to connect the device to a network with a fixed IP address. The IP address, netmask and the gateway can be changed here. In addition, DNS server 1 and DNS server 2 can be entered.

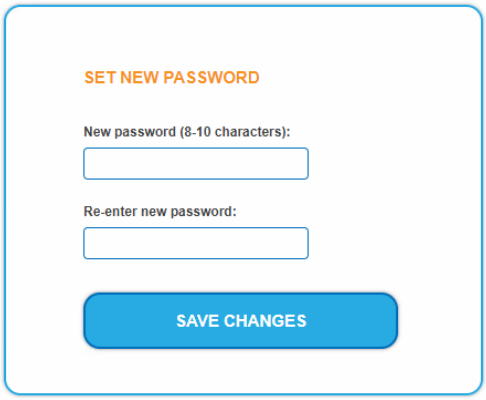
➔ Click SAVE & REBOOT to confirm and save the changes.
When the changes are saved, the device will reboot automatically.

➔ If you change the IP address of the **Control** interface, you must enter the new IP address in the browser after rebooting and log in again.

3.6.4. Changing the password

The default password is: *Ramsen8262*.

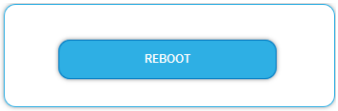
The default password should be changed right after commissioning the device.



➔ Type an new password with 8-10 characters (letters and/or digits).
➔ Re-enter the password.
➔ Click SAVE CHANGES to confirm and save the changes.
When the changes are saved, the frontpage will be shown.

3.6.5. Rebooting

Under REBOOT THE SYSTEM the device can be rebooted.



➔ Click on REBOOT.
After rebooting, the password must be entered again.

Note: If input signals are temporarily unavailable (e.g. due to snow), the device will reboot every 10 minutes. This ensures that all configured programmes will be available once the input signal becomes available again.

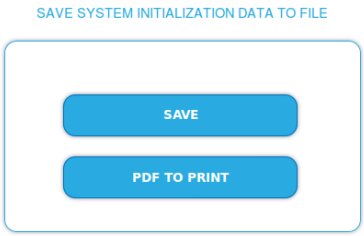
3.6.6. Erasing service data

In the section ERASE SERVICE DATA you can erase the settings from phase 2. The transponder data must be read again for tuners 1-4 by executing a scan.

➔ Click on erase.
The frontpage will be shown.

3.6.7. Save Initialization Data

In the section SAVE SYSTEM INITILIZATION DATA TO FILE you can save the current initilization data from phase 1 to 3 into a file on your computer.

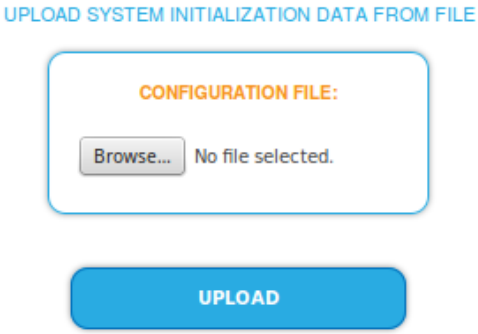


➔ Click on SAVE.
The config.dat file is generated. You can save these on your computer.
➔ Click on PDF TO PRINT.
A PDF of the configuration is generated that can be opened or saved.

Note: Password and IP adress will not be saved.

3.6.8. Upload Initialization Data

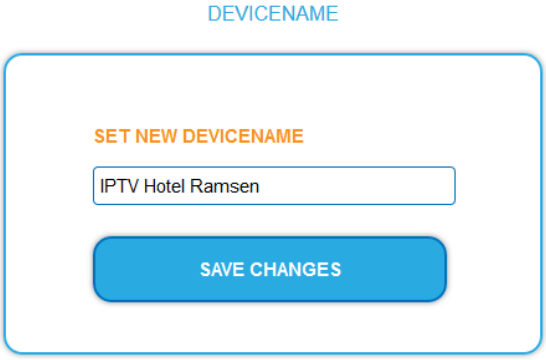
In the section UPLOAD SYSTEM INITILIZATION DATA FROM FILE you can upload the initiaization data from a file to the device.



➔Choose a configuration file.
➔Click on UPLOAD.
The upload will take a few seconds.
➔After the upload you have to log in again.

3.6.9. Device name

In the section DEVICE NAME you can set a new device name.



➔ Enter a name in the field SET NEW DEVICE NAME.
➔ Click on SAVE CHANGES.
The new device name is shown at the login.

3.6.10. Access to SMARTPortal

If you are a registered user of the SMARTPortal, then you can remotely control the device via the SMARTPortal and, if necessary, receive support from AXING.

Prerequisite is an internet connection for the device.

➔ In the **State** field, select **Enabled**.
➔ Activate, if required, the option **AXING support allowed**.
➔ In the field **Location**, enter a name for the location of the device. This name will appear later in the SMARTPortal to help you identify the device.
➔ In the field **Email address**, enter the e-mail address with which you are registered at SMARTPortal.
➔ In the field **User key**, enter the user key that you received when registering at SMARTPortal.

➔ Click on SAVE & REBOOT. The data is saved, the device is rebooted and the connection to the SMARTPortal is established.
Where required, you have to adjust the connection data (see 3.6.2 on page 27).

3.6.11. Log files

In the section LOGS you can view the Log files .

➔ Choose **Status Log**.
The status log is written to RAM and starts empty after a restart of the device. In the status log for example, the lock in time and the frequencies of the tuners are stored.

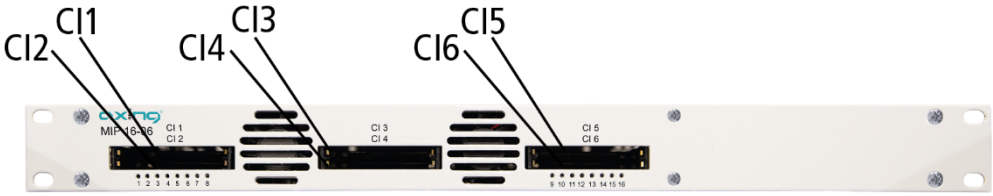
➔ Select **System log**.
The system log is written to the flash memory, so it is still available after a restart of the device. In the system log for example, the boot time and hardware defects are stored.

4. Use of CA modules (MIP 0806CI and MIP 1606CI)

4.1. Insertion of CA modules

Up to six CA modules can be inserted into the CI slots at the front side of the MIP 8-06 or MIP 16-06.

➔ Carefully insert the CA modules to the corresponding CI slot without exerting force.



4.2. CI menu

In the CI menus, settings of CA modules can be made. The buttons for opening the CI menu will be activated after the modules have been plugged in and initialized.

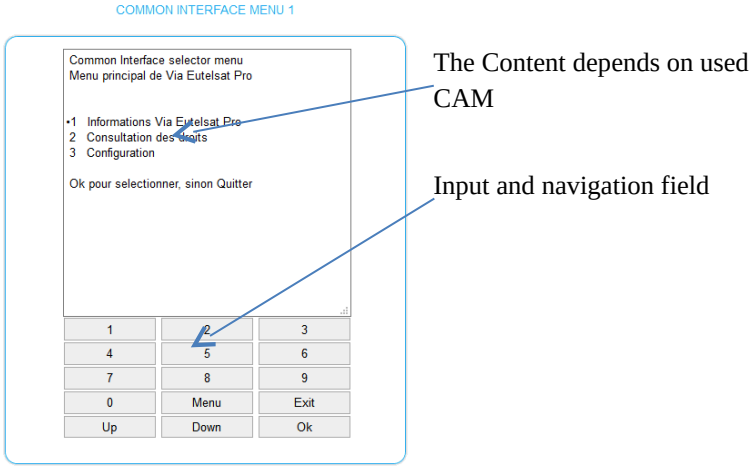
Active buttons for the CI menu.

➔Click one of the buttons.
The corresponding CI menu is displayed.

4.2.1. Using CI menu

The content of the CI menu depends on the CAM manufacturer and the card being used. Depending on the manufacturer, various settings are possible. Information on validity and authorisation are the most important.

➔Please observe the operating instructions provided by the manufacturer.



The input and navigation field is used for navigation within the CI menu.

➔ Use **Up** or **Down** to reach a higher or lower selection point.

➔ Use **Ok** to enter a corresponding sub menu or confirm a selection.

➔ Use **Menu** to come back to the next superordinate level.

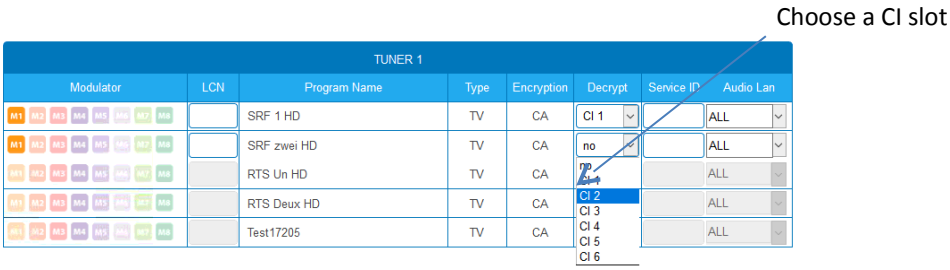
➔ Use **Exit** to leave the menu.

4.3. Decryption of programmes

Scrambled programs are indicated by the abbreviation CA in the column **Encryption** of the TUNER table.

By default, in the column **Decrypt** the option **no** is choosen.

If CA modules are plugged in, the corresponding programs can be decrypted.



➔Choose **CI 1**…**CI 6** in the column **Decrypt**.

The programm will be transferred to the transport stream in decrypted form.

5. Technical specifications

Article	**MIP 800**	**MIP 806CI**	**MIP 1600**	**MIP 1606CI**
Input tuner	8 × DVB-S/S2/S2x/T/T2/C		16 × DVB-S/S2/S2x/T/T2/C	
Input frequency range DVB-C | DVB-T/T2 | DVB-S/S2/S2X	50…898 MHz | 900…2150 MHz			
Input level DVB-C | DVB-T/T2 | DVB-S/S2/S2X	49…84 dBµV | 39…84 dBµV | 43...84 dBµV			
LNB voltage	13/17 V; 22 kHz on/off; DiSEqC 1.0			
LNB current per input (max.)	150 mA			
Symbol rate	1,5…45 MS/s			
Input error correction	automatic			
CI slots	–	6	–	6
Input connector, female	8 × F		16 × F	
Data interface IPTV	1×RJ-45, IEEE 802.3, 1000 Base-T			
Total data rate	800 Mbps			
Streams SPTS | MPTS	512 | 8		512 | 16	
Supported protocols	UDP, RTP			
Data interface managemant	1×RJ-45, IEEE 802.3, 100 Base-T			
Operation voltage	100…240 VAC/50…60 Hz			
Power consumption	70 W			
Ambient temperature range (acc. to EN 60065)	-10°C…+50°C			
Dimensions (W × H × D) appr.	480 × 47 × 253 mm			