

Quick configuration Guide for H-4ADHD-QAM-IPLL and H-4ADHD-ATSC-IPLL

Login instructions:

In order to log in to the Modulator NMS port, please set your PC's NIC Ethernet card to the following IP address: 192.168.0.100.

Access Modulator GUI by typing derail IP address **192.168.0.136** in to the browser

Login /password – admin/admin

Encoder 1 Page Control Setup for HDMI, YPbPr, or CVBS 1 and 2

Encoding Setup page for HDMI 1, 2

192.168.0.136

H-4ADHD-QAM-IPLL

Encoder - Multi IN 1 HD

CH 1-
CH 1
CH 2

Setup for HDMI Input 1
Setup for HDMI Input 2

Advanced mode controls detailed encoding parameters and latency

Advanced Mode: ☐

1 Encoder 1 HDMI INPUT 1/2
Encoder 2 HDMI INPUT 3/4

2 Interface: HDMI
Aspect Ratio: Auto
Out Resolution: Auto

3 Video Format: Mpeg2
Video Bitrate: 14.0 Mbps (1.0 ~ 19.5 Mbps)

4 HDMI YPbPr CVBS

5 Format: AC 3

6 Apply

Video
Audio
Status

Encoder Chip Version: 1.1.3.211
Input Information: 1920x1080 60i
Input Lock: [Green LED]
Bitrate: 14.628 Mbps
Encode Status: Completed

When HDMI video is detected, it will show INPUT LOCK, Green LED, Bit rate and Video detected resolution

1 Select ENCODER1

2 Video interface: HDMI / CVBS / YPbPr

3 Video encoding MPEG2 or H.264 (**MPEG2** is a US, Canada, Mexico standard)

4 Video Encoding bitrates up to 18Mbps

5 Audio encoding format AC3,AC3 Pass,AAC,MPEG2 (The **AC3** is a US, Canada, Mexico standard)

6 Once configured click apply

Encoding Setup page for VIDEO 3/4

The screenshot shows the web management interface for the H-4ADHD-QAM-IPLL device. The interface is divided into several sections:

- Summary:** Includes links for Status, Parameters, and System.
- Parameters:** Contains settings for Encoder 1, Encoder 2, Modulator, TS Config, and Output Settings.
- System:** Includes links for Network, Password, Configuration, Firmware, Date | Time, and Log.
- Encoding Setup:**
 - CH 1 Setup for HDMI Input 3/4:** This section is highlighted with a red dashed box and labeled with a '2'.
 - Video Interface:** The 'Interface' dropdown is set to 'HDMI', highlighted with a red dashed box and labeled with a '3'.
 - Video Encoding:** The 'Video Format' is set to 'Mpeg2' and 'Video Bitrate' is set to '14.0 Mbps', both highlighted with red dashed boxes and labeled with a '4'.
 - Audio Encoding:** The 'Format' is set to 'AC 3', highlighted with a red dashed box and labeled with a '5'.
 - Status:** This section at the bottom shows the 'Encoder Chip Version' (1.1.3.211), 'Input Lock' (Green LED), 'Input Information' (1920x1080 60i), 'Bitrate' (14.640 Mbps), and 'Encode Status' (Completed). This section is highlighted with a red dashed box and labeled with a '7'.

Additional information visible in the interface includes:

- Latency setting:** Normal 600ms, Mode 2 450ms, Mode 1 300ms, Manual
- Contact closure ON/OFF From CVBS input (Pr):** CC Switch: Off, H.264 Profile: Main Profile, Brightness: 128, Saturation: 128, Low Delay: Normal, GOP Bframe: Normal, PCR Interval: Mode 1, Mode 2, Manual.
- Audio Settings:** Interface: Auto, Bitrate: 192 Kbps, Dialog Normalization: -31, Audio Delay: 0.

- 1 Select ENCODER2
- 2 Select CH1 for Input 3, CH2 for Input 4
- 3 Select Video interface : HDMI / CVBS / YPbPr
- 4 Video encoding MPEG2 or H.264 (MPEG2 is a US, Canada, Mexico standard)
- 5 Set Video Encoding bitrates up to 18Mbps
- 6 Set Audio encoding format MPEG2 / AC3 / AAC / AC3 Pass (AC3 Dolby is a US, Canada, Mexico standard)
7. Once configured click apply

Modulator Setup

The modulator setup allows you to set the CATV channel constellation and control the RF power.

H-4ADHD-QAM-IPLL – DVB-C annex A/B
QAM 64 /QAM 256
H-4ADHD-ATSC-IPLL – ATSC modulation
H-4ADHD-ISDBT-IPLL – ISDB-T modulation
H-4ADHD-DVBT-IPLL – DVB-T modulation

Summary

► Status

Parameters

► Encoder 1

► Encoder 2

► **Modulator**

► TS Config

► Output Settings

System

Modulator

Center Frequency: 66.000 MHz

Standard: J.83B

Level(All Carriers): 3.0 dBm

Channel Info (Alarm/Active/Total): 0/4/4

Frequency Mode: **List**

#	Frequency	Constellation	Symbol Rate	Status	Bit(Act/Max)
1	57 CH 2	256 QAM	5361 Kbps	●	0.0/38.0 M

Encoder Modulator

Management

Summary

► Status

Parameters

► Encoder 1

► Encoder 2

► **Modulator**

► TS Config

► Output Settings

System

► Network

► Password

► Configuration

► Firmware

► Date | Time

► Log

Modulator

Center Frequency: 63.000 MHz

Standard: J.83B

Level(All Carriers): 3.0 dBm

Channel Info (Alarm/Active/Total): 0/4/4

Frequency Mode: **List**

#	Frequency	Constellation	Symbol Rate	Status	Bit(Act/Max)
1	57 CH 2	256 QAM	5361 Kbps	●	0.0/38.0 M
2	63 CH 3	256 QAM	5361 Kbps	●	0.0/38.0 M
3	69 CH 4	256 QAM	5361 Kbps	●	0.0/38.0 M
4	69 CH 4	256 QAM	5361 Kbps	●	0.0/38.0 M

Channel 1 Config. [close]

Standard: J.83B

Level(CH Carriers): 0.0 (-20 ~ -3 dBm)

Channel Enable: ☒

Frequency: 57 CH 2

Constellation: 256 QAM

Symbol Rate: 5361 (3000 ~ 9000 Kbps)

Apply Close

1. Press the pencil icon to bring up edit window
2. Standard should be J.83B (US Standard) J.83A(Europe Standard) H-4ADHD-ATSC-IPLL has ATSC modulation frequency table listed
3. Frequency should be 57 for CH 2
4. Press apply

TS Config (Encoded Transport Stream from the Video Audio Input selection for the CATV RF/ASI/IP Output)

H-4ADHD-QAM-IPLL

welcome to us

THOR BROADCAST

Summary

► Status

Parameters

► Encoder 1

► Encoder 2

► **Modulator**

► **TS Config**

► Output Settings

System

► Network

► Password

► Configuration

► Firmware

► Date | Time

► Log

Select Output CH # 1-4

TS Config

1 → Output TS 1- Stream Select General

2 →

4 →

3 → Parse program time out: 60 seconds

Transport Stream Input from Video or ASI

Transport Stream Output setting

5 →

Program Information [close]

Program From Input: CH1_Encoder1 CH1 [101]

Service Name: TV-101

SUB-CHANNEL NUMBER: 1

Major Channel Number: 10

Minor Channel Number: 2

Source id: 1

Short Name: CH 1

Logic Channel Number: 1

Service Type: 0x01

Service Provider: Encoder 1

PMT PID: 0x0020

PCR PID: 0x0021

MPEG-2 Video PID: 0x0022

AC3 Audio PID: 0x0023

Apply Close

1. Click on 'Output TS 1-4' to select CATV RF output channels 1-4.
2. Highlight 'Encoder CH 1'.
3. Parse the program (scanning function) and click the plus sign to expand encoder channel options.
4. Check the box next to the desired source.
5. Press the '==>' button to move the encoded video to the output channel. Multiple videos can be multiplexed on a single RF channel, up to a total bit rate of 38Mbps, as sub-channels like 2.1, 2.3, 2.4, etc."

VCT Virtual Channel Table Setup

(if VCT is not turned on, the TV will show physical channel numbers +SUB-Channel number).

The screenshot shows the 'Encoder Modulator' web interface. On the left, a sidebar contains 'Summary', 'Parameters', 'Modulator', 'TS Config', and 'System'. The 'TS Config' tab is selected. The main area is titled 'TS Config' and has three tabs: 'Output TS 1-4', 'Stream Select', and 'General'. The 'General' tab is selected and highlighted with a red dashed box and a '1'. Below the tabs, there are sections for 'Stream', 'NIT', and 'VCT'. In the 'VCT' section, the 'VCT Insert' checkbox is checked with an 'X' (2). The 'VCT Mode' is set to 'CVCT'. The 'Modulation Mode' is '4' and 'Carrier Frequency' is '500.000'. The 'Apply' button is highlighted with a red dashed box and a '3'. A red dashed box labeled '2' also encompasses the 'VCT Insert' checkbox and 'VCT Mode'.

CVCT is the CABLE TV QAM standards TVCT is the ATSC standards

1. Click the general tab

2. Check the VCT insert check box (if VCT is not turned on, the TV will show physical channel numbers).

3. Press apply

The screenshot shows the 'Encoder Modulator' web interface. On the left, a sidebar contains 'Summary', 'Parameters', 'Modulator', 'TS Config', and 'System'. The 'TS Config' tab is selected. The main area is titled 'TS Config' and has three tabs: 'Output TS 1-4', 'Stream Select', and 'General'. The 'Stream Select' tab is selected and highlighted with a red dashed box and a '2'. The 'General' tab is also highlighted with a red dashed box and a '1'. A 'Program Information' dialog box is open, showing fields for 'Program From Input', 'Service Name', 'SUB-CHANNEL NUMBER', 'Major Channel Number', 'Minor Channel Number', 'Source Id', 'Short Name', 'Logic Channel Number', 'Service Type', 'Service Provider', 'PMT PID', 'PCR PID', 'MPEG-2 Video PID', and 'AC3 Audio PID'. The 'SUB-CHANNEL NUMBER' is set to '1 or 2 or 3' (4). The 'Major Channel Number' is set to '1' (5). The 'Apply' button is highlighted with a red dashed box and a '5'. A red dashed box labeled '3' encompasses the 'Program Information' dialog box. A red dashed box labeled '4' encompasses the 'SUB-CHANNEL NUMBER' field. A red dashed box labeled '5' encompasses the 'Major Channel Number' field.

1 Click on the Output 1-4 tab, which corresponds to the CATV RF channel output.

2 Click Stream Select

3 Click on the number "1" and a drop-down box will open showing program information.

4 Change the major channel number to your preference.

5 Change the minor channel number to your preference.

6 Click apply.

IP Output Settings

H-4ADHD-QAM-IPLL

IP Stream(GE_DATA)
Channel Info.(Alarm/Active/Total): 0/4/8

#	IP Address	Port	Protocol	Pkt Length	Null PKT Filter	Program	Status	Bit(Act/Max)
MPTS 1	224.2.2.2	2000	UDP	7	<input type="checkbox"/>		●	14.7/38.8 M
MPTS 2	224.2.2.2	2002	UDP	7	<input type="checkbox"/>		●	14.7/38.8 M
MPTS 3	224.2.2.2	2004	UDP	7	<input type="checkbox"/>		●	14.7/38.8 M
MPTS 4	224.2.2.2	2006	UDP	7	<input type="checkbox"/>		●	14.7/38.8 M
SPTS 1	224.2.2.2	3000	UDP	7	<input checked="" type="checkbox"/>	TV-101(MPTS1)	●	14.7/20.0 M
SPTS 2	224.2.2.2	3002	UDP	7	<input checked="" type="checkbox"/>	TV-102(MPTS2)	●	14.7/20.0 M
SPTS 3	224.2.2.2	3004	UDP	7	<input checked="" type="checkbox"/>	TV-201(MPTS3)	●	14.7/20.0 M
SPTS 4	224.2.2.2	3006	UDP	7	<input checked="" type="checkbox"/>	TV-202(MPTS4)	●	14.7/20.0 M

ASI Settings
Output Select: MPTS1

SPTS 1 Config.
 Enable: ☒ **ENABLE ON/OFF**
 Output Bitrate: 20.000 Mbps
 IP Address: 224.2.2.2
 Port: 3000
 Protocol: UDP
 Pkt Length: 7
 Null PKT Filter: ☒
 Program: TV-101(MPTS1)
 Apply

VLC media player
Open Media
File Disc Network
Network Protocol
Please enter a network URL:
udp://@224.2.2.2:3000

Annotations:
 1. Click the pencil icon for MPTS's or SPTS's section. Drop box will open to configure channel 1
 2. Enable and edit your IP preferences
 3. Press apply

IPTV streaming is sent out from the data port and can be tested using VLC player.

UDP syntax example is `udp://@224.2.2.2:3000`

RTP syntax example is `rtp://@224.2.2.2:3000`

RTSP syntax example is `rtsp://(DATA IP ADDRESS):5000/1-4`

1. Click the pencil icon for MPTS's or SPTS's section. Drop box will open to configure channel 1
2. Enable and edit your IP preferences
3. Press apply

Configuration Saving / Backup / Restore

H-4ADHD-QAM-IPLL
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Configuration
 Save Restore Factory Set Backup Load
 When you change the parameters, you should save configuration, otherwise the new c
 Save config

1. Click the configuration tab on the left hand side
2. Click the save tab
3. Press save config –

YOU MUST SAVE OR ALL CHANGES WILL BE LOST AFTER RESTART!