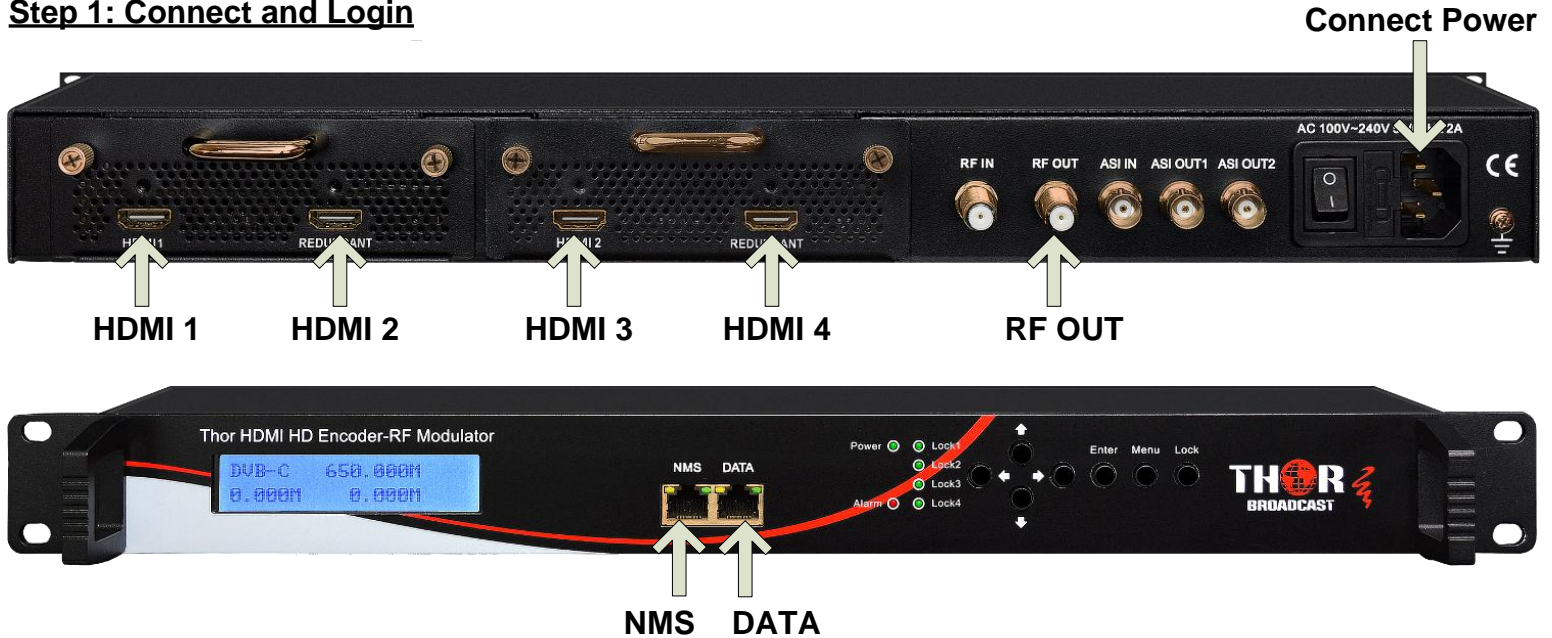


H-1HDMI-ATSC-IPLL

Quick Setup Guide

This guide also applies to models: H-2HDMI-ATSC-IPLL and H-4HDMI-ATSC-IPLL

Step 1: Connect and Login



- Connect the NMS port to your PC using an ethernet cable
- Open web browser and go to <http://192.168.0.136>
- Login/Password: admin/admin

Step 2: Configure Encoders

Parameters

▶ Encoder 1

▶ Encoder 2

▶ Modulator

▶ TS Config

▶ Output Settings

Select "Encoder 1" from the main menu

Input Lock: ●

Bitrate: 8.558 Mbps

Input Lock must be Green and showing bitrate info

Recommended Settings:

- Video Format: MPEG2
- Video Bitrate: 18Mbps

Field/Picture Encoding: Picture

Low Delay: Normal

H.264 Level: Normal

Share PCR PID: Mode 1

Latency (Input/Output delay):

- Normal: 800ms
- Mode 1: 500ms
- Mode 2: 300ms
- Manual: 250 – 500ms

Note: These settings are TV decoder dependent.

Click "Apply" to save changes

Apply

Step 3: Configure Modulator (Channels and Frequencies)

Click Pencil Icons to modify parameters.

#	Frequency	Status	Bit(Act/Max)	
1	57.000 MHz	●	14.7/19.4 M	
2	63.000 MHz	●	14.7/19.4 M	
3	69.000 MHz	●	14.7/19.4 M	
4	75.000 MHz	●	14.7/19.4 M	

Parameters

- ▶ Encoder 1
- ▶ Encoder 2
- ▶ **Modulator**
- ▶ TS Config
- ▶ Output Settings

Select "Modulator" from the main menu

Check box to enable channel

Channel Enable:

Start Frequency: (50 ~ 960 MHz)

Click "Apply" to save changes

Start Frequency 57MHz Recommended (See ATSC chart)

Step 4: TS Config (Transport Stream Selection)

- ▶ Modulator
- ▶ **TS Config**
- ▶ Output Settings

Select "TS Config" from the main menu

Click "Parse program". Detected programs will appear in the left pane.

Choose Output TS 1-4

Output TS 1-4 | Stream Select | General

⇒ Not Locked ⇒ Locked

- ⇒ 1: Encoder 1 (prog: 1/1) [14.7/17.1M]
 - 1: [101] TV-101
 - 2: Encoder 2 (prog: 0/1) [14.6/17.1M]

Check the box to select program

Click "→" to assign selected program to output

⇒ Normal ⇒ Overflow

- ⇒ Output (prog: 1)
 - 1: TV-101 <=CH1_Encoder 1 [101]

Programs assigned to output will appear in the right pane. Click the program name for channel/sub-channel options

Step 4: TS Config (Program Customization)

Output TS 1 ▾ Stream Select General

⇒ Not Locked ⇒ Locked

⇒ 1: Encoder 1 (prog: 1/1) [14.7/17.1M]

 + 1: [101] TV-101

⇒ 2: Encoder 2 (prog: 0/1) [14.6/17.1M]

CA Filter

PID Remap

Refresh Input

Refresh Output

⇒ Normal ⇒ Overflow

⇒ Output (prog: 1)

 + 1: TV-101 <=CH1_Encoder 1 [101]

Click the program name for channel/sub-channel options

Program From Input: CH1_Encoder 1 [101]

Service Name: TV-101

SUB-CHANNEL NUMBER: 1

Major Channel Number: 2

Minor Channel Number: 1

Source Id: 1

Short Name:

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

Service Name can be changed

Major/Minor Channel Numbers can be set to preference. (VCT must be enabled)

Click "Apply" to save changes →

Step 4: TS Config (Virtual Channel Table)

Click "General" tab



Output TS 1 ▾ Stream Select **General**

Stream

Character Encoding: NORMAL ▾

TS ID: 1

NIT

NIT Insert: Not insert ▾

VCT

VCT Insert: ←

VCT Mode: TVCT ▾

Check the box to enable VCT

Click "Apply" to save changes →

Apply

If VCT is ENABLED:
The virtual channel numbers will override the physical channel number. The TV will display the values set in the Program Information settings as the major channel number / minor channel number

Service Name: TV-101

SUB-CHANNEL NUMBER: 1

Major Channel Number: 2 ←

Minor Channel Number: 1 ←

Source Id: 1

Short Name:

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

TV will display VCT channel 2-1

If VCT is DISABLED:

The TV will display the physical channel number according to the modulator frequency. For example, 57 MHz (Channel 2) will show as the major channel number, and the Sub-channel Number will be shown as the minor channel number.

Frequency Mode: Manual ▾

#	Frequency
1	57.000 MHz
2	63.000 MHz
3	69.000 MHz
4	79.000 MHz

CH 2 Major ←

Program From Input: CH1_Encoder 1 [101]

Service Name: TV-101

SUB-CHANNEL NUMBER: 1 ←

Major Channel Number: 2

Minor Channel Number: 1

Source Id: 1

Short Name:

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

Sub-Channel 1 Minor ←

TV will display physical channel 2-1

Step 5: Output Settings (IP Streaming)

▶ TS Config

▶ Output Settings

Select "Output Settings" from the main menu

Select top Pencil icon to edit all, Select Pencil icon on the same line to edit individually

#	IP Address	Port	Protocol	Pkt Length	Null PKT Filter	Program	Status	Bit(Act/Max)	
MPTS 1	224.2.2.2	2001	UDP	7	<input type="checkbox"/>		●	14.7/19.4 M	
MPTS 2	224.2.2.2	2002	UDP	7	<input type="checkbox"/>		●	14.7/19.4 M	
MPTS 3	224.2.2.2	2003	UDP	7	<input type="checkbox"/>		●	14.7/19.4 M	
MPTS 4	224.2.2.2	2004	UDP	7	<input type="checkbox"/>		●	14.7/19.4 M	
SPTS 1	224.2.2.2	3001	UDP	7	<input type="checkbox"/>	TV-101(MPTS1)	●	14.7/20.0 M	
SPTS 2	224.2.2.2	3002	UDP	7	<input type="checkbox"/>	TV-201(MPTS2)	●	14.7/20.0 M	

Status will show GREEN when enabled

Enable: ← Check box to enable channel

Output Bitrate: Mbps

IP Address:

Port:

Protocol: ▼

Pkt Length: ▼

Null PKT Filter:

Program: ▼ ← Select Program

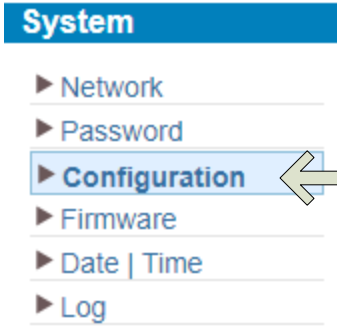
Click "Apply" to save changes

IMPORTANT:
Streams are accessed via the DATA port.

Connect to the stream using the appropriate IP address and port number:

FOR EXAMPLE:
`udp://@224.2.2.2:3001`

Step 6: Save Configuration



Select "Configuration" from the main menu

IMPORTANT:
YOU MUST SAVE CONFIGURATION OR ALL CHANGES WILL BE LOST AFTER RESTART



Select the "Save" tab

Press "Save Config" button



Confirmation message will appear briefly until saving is complete



ATSC - US Television Channels (MHz)

Channel	MHz Center Frequency	Channel	MHz Center Frequency	Channel	MHz Center Frequency
2	57	27	551	52	701
3	63	28	557	53	707
4	69	29	563	54	713
5	79	30	569	55	719
6	85	31	575	56	725
7	177	32	581	57	731
8	183	33	587	58	737
9	189	34	593	59	743
10	195	35	599	60	749
11	201	36	605	61	755
12	207	37	611	62	761
13	213	38	617	63	767
14	473	39	623	64	773
15	479	40	629	65	779
16	485	41	635	66	785
17	491	42	641	67	791
18	497	43	647	68	797
19	503	44	653	69	803
20	509	45	659		
21	515	46	665		
22	521	47	671		
23	527	48	677		
24	533	49	683		
25	539	50	689		
26	545	51	695		