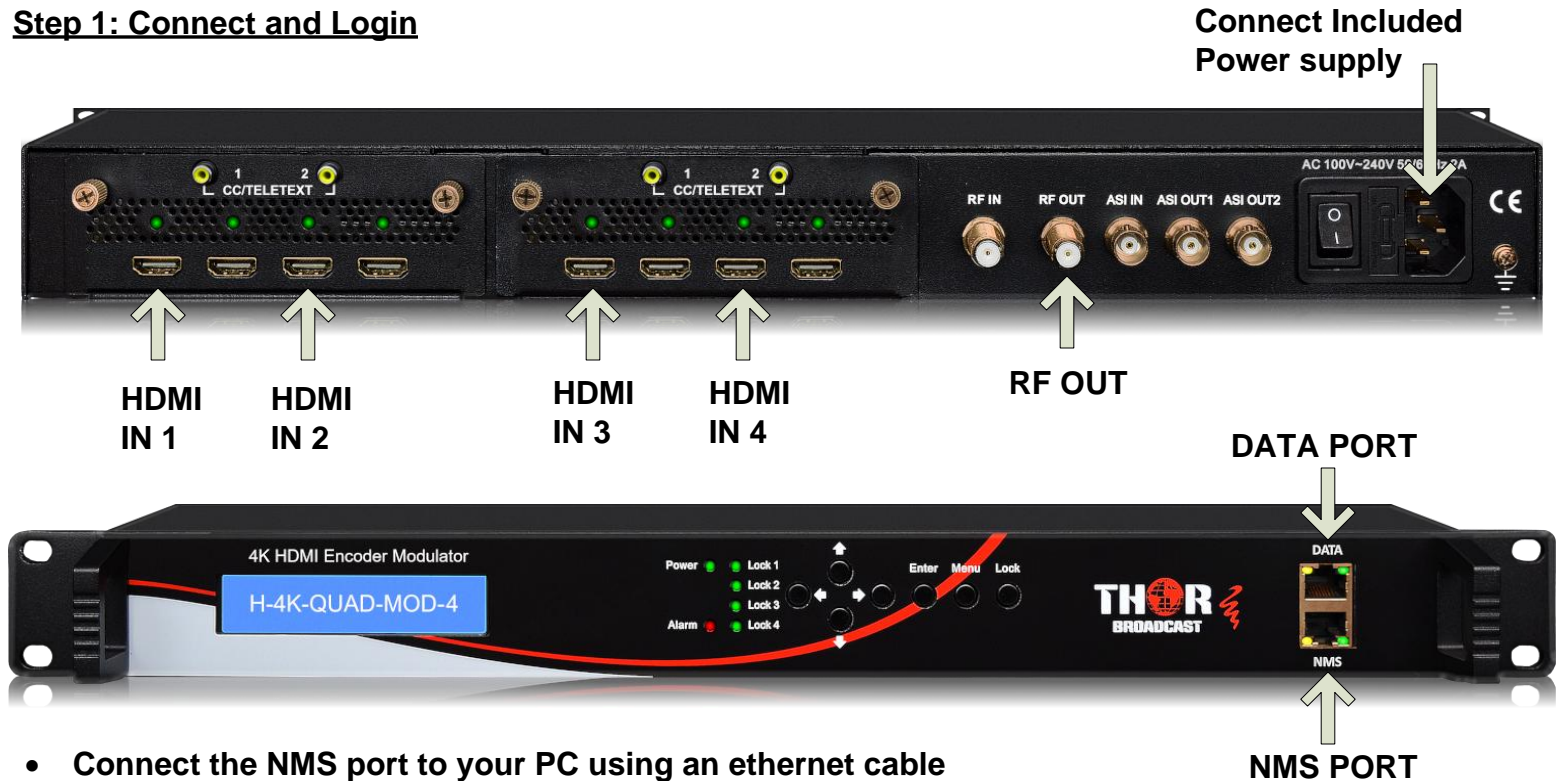


# H-4K-QUAD-MOD-4

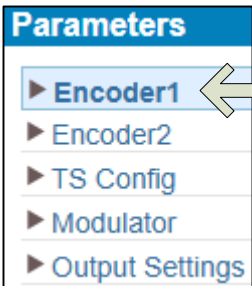
## Quick Setup Guide

### Step 1: Connect and Login



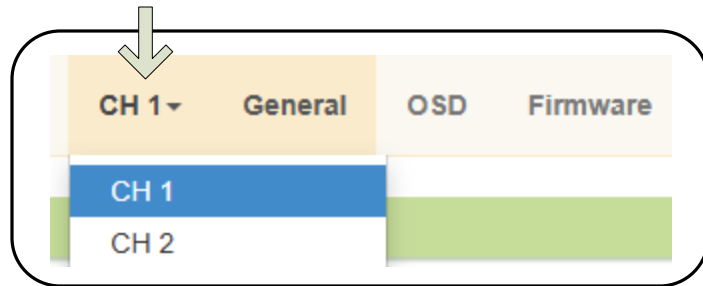
- Connect the NMS port to your PC using an ethernet cable
- Open web browser and go to <http://192.168.0.136>
- Login/Password: admin/admin

### Step 2: Encoders

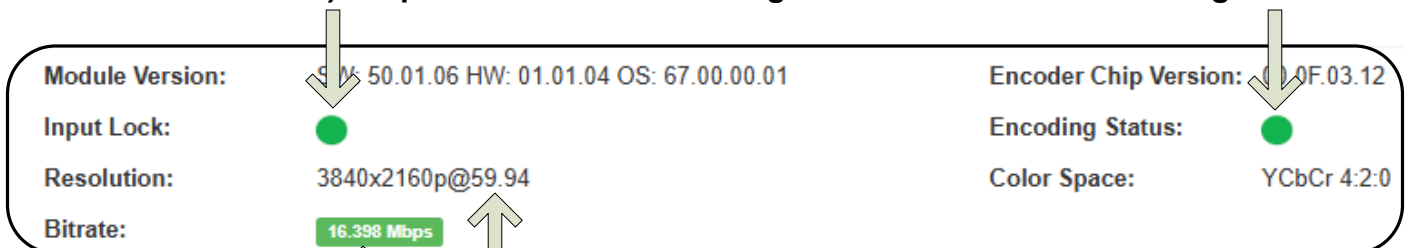


1). Select "Encoder1" from the main menu

2). Select Channel 1 or 2



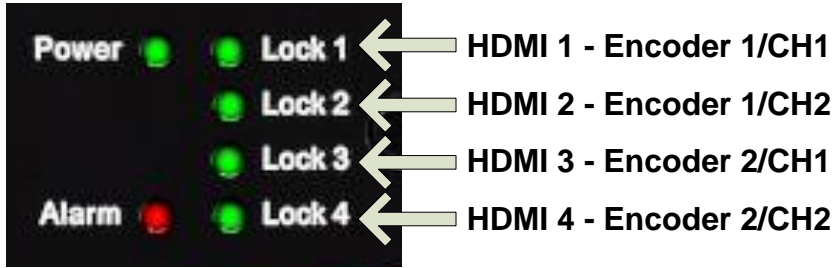
3). "Input Lock" and "Encoding Status" indicators must be green



4). Resolution and Bitrate must be active

## Step 2: Encoders (Continued)

5). “Lock” indicator LEDs on device front panel will light green when inputs are properly connected and encoding



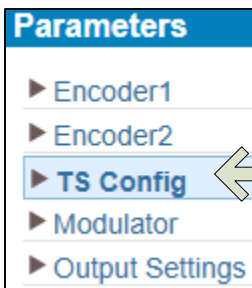
### Recommended Encoder Settings:

- Video Format: H.265 (Required for 4K)
- Video Bitrate: 18.00
- Audio Format: MPEG1 Layer2
- Audio Bitrate: 128 Kbps

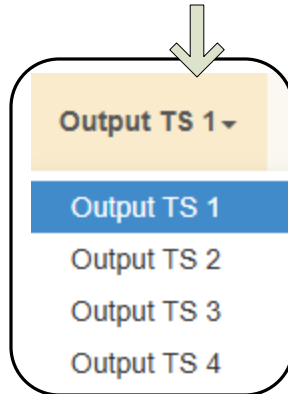
Repeat these steps as needed for channel 1 & 2 of both encoders 1 & 2

## Step 3: TS Configuration

### 2). Select Output TS (1-4)



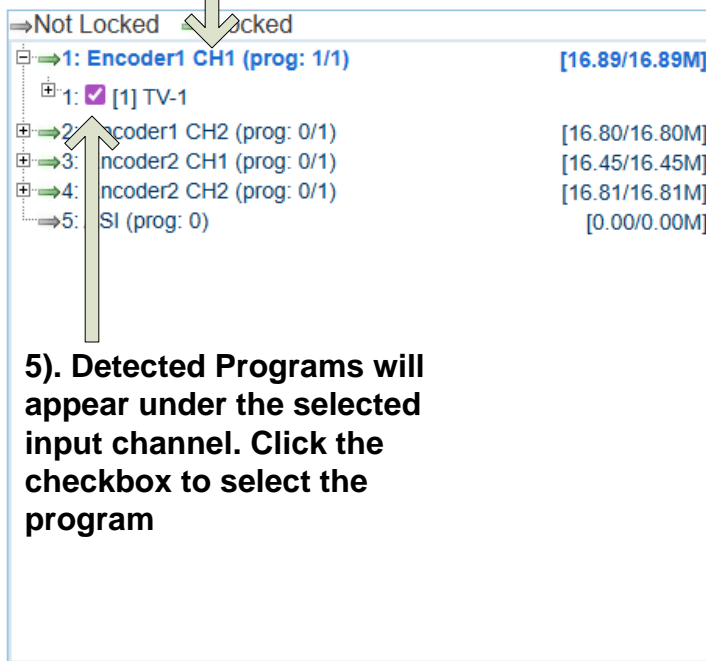
1). Select “TS Config” from the main menu



### Recommended Settings:

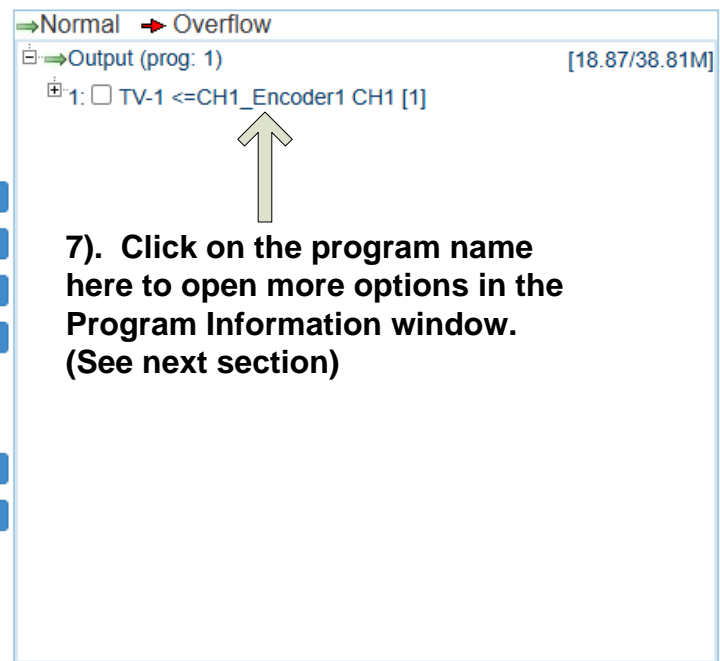
- Encoder 1/CH1 → Output TS 1 = Modulator CH 1
- Encoder 1/CH2 → Output TS 2 = Modulator CH 2
- Encoder 2/CH1 → Output TS 3 = Modulator CH 3
- Encoder 2/CH2 → Output TS 4 = Modulator CH 4

### 3). Click to highlight & select the Input Channel



5). Detected Programs will appear under the selected input channel. Click the checkbox to select the program

4). Click “Parse program”



7). Click on the program name here to open more options in the Program Information window. (See next section)

6). Click blue “→” button to assign the selected program to output. The selected program will now appear under Output.

### Step 3: TS Configuration (Continued)

Program Information [close]

Program From Input:	CH1_Encoder1 CH1 [1]
Service Name:	<input type="text" value="TV-1"/>
Short Name:	<input type="text" value="prog1"/>
Major Channel Number:	<input type="text" value="1"/>
Minor Channel Number:	<input type="text" value="1"/>
Source Id:	<input type="text" value="1"/>
Program Number:	<input type="text" value="2"/>
Logic Channel Number:	<input type="text" value="1"/>
Service Type:	<input type="text" value="0x01"/>
Service Provider:	<input type="text" value="Encoder 1"/>
PMT PID:	<input type="text" value="0x0020"/>
PCR PID:	<input type="text" value="0x0021"/>
H.265 Video PID:	<input type="text" value="0x0022"/>
MPEG-1 Audio PID:	<input type="text" value="0x0023"/>

**10). Click "Apply"**

8). Service Name and Short Name may be changed

9). Major and Minor Channel numbers may be changed (NOTE: VCT must be enabled – see next section)

Repeat these steps as needed for all other programs

### Step 4: Virtual Channel Table

**Parameters**

- ▶ Encoder1
- ▶ Encoder2
- ▶ **TS Config**
- ▶ Modulator
- ▶ Output Settings

1). Select "TS Config" from the main menu

2). Select "General" tab

**General**

3). Select Output TS (1-4)

Output TS 1 ▾

**Output TS 1**

Output TS 2

Output TS 3

Output TS 4

4). Check box to enable VCT

**VCT**

VCT Insert:

VCT Mode:

Carrier Frequency:  (30-1000MHz)

5). Click "Apply"

Repeat these steps as needed for all Output TS (1-4)

**Step 4: Virtual Channel Table (Continued)**

**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

Program Information

Program From Input: CH1\_Encoder1 CH1 [1]

Service Name:

Short Name:

Major Channel Number:  ←

Minor Channel Number:  ←

Source Id:

Program Number:

Logic Channel Number:

Service Type:

Service Provider:

PMT PID:

PCR PID:

H.265 Video PID:

MPEG-1 Audio PID:

**TV will display VCT channel 1-1**

**If VCT is DISABLED:**

The TV will display the physical channel number according to the modulator frequency. For example, 219 MHz (Channel 23) will show as the major channel number, and the Program Number will be shown as the minor channel number.

#	Frequency
1	CH:023 219MHz
2	CH:024 225MHz
3	CH:025 231MHz
4	CH:026 237MHz

CH 23 is Major Channel ←

Program Information

Program From Input: CH1\_Encoder1 CH1 [1]

Service Name:

Short Name:

Major Channel Number:

Minor Channel Number:

Source Id:

Program Number:  ←

Logic Channel Number:

Service Type:

Service Provider:

PMT PID:

PCR PID:

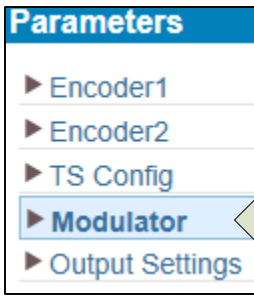
H.265 Video PID:

MPEG-1 Audio PID:

Program Number is Minor Channel ←

**TV will display physical channel 23-2**

## Step 5: Modulator Settings



1). Select "Modulator" from the main menu

### Recommended Settings:

Encoder 1/CH1 → Output TS 1 = Modulator CH 1  
Encoder 1/CH2 → Output TS 2 = Modulator CH 2  
Encoder 2/CH1 → Output TS 3 = Modulator CH 3  
Encoder 2/CH2 → Output TS 4 = Modulator CH 4

2). Click the top pencil icon to edit all channels, or click the icon on the same line as the channel to edit individually

Center Frequency: 228.000 MHz

Standard: J.83B

Level(All Carriers): 0.0 dBm

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

#	Frequency	Constellation	Symbol Rate	Status	Bitrate(Act/Max)	
1	CH:023 219MHz	256 QAM	5361 Ksps	<span style="color: green;">●</span>	15.32/38.81 M	
2	CH:024 225MHz	256 QAM	5361 Ksps	<span style="color: green;">●</span>	15.32/38.81 M	
3	CH:025 231MHz	256 QAM	5361 Ksps	<span style="color: green;">●</span>	15.95/38.81 M	
4	CH:026 237MHz	256 QAM	5361 Ksps	<span style="color: green;">●</span>	15.38/38.81 M	

IMPORTANT: Status lights must be green and Bitrate must be active

Standard: J.83B

Level(CH Carriers): -6.0 (-20 ~ -3 dBm)

---

Channel Enable:

Frequency: CH:23 219MHz

Constellation: 256 QAM

Symbol Rate: 5361 (3000 ~ 9000 Ksps)

3). Check box to enable channel

4). Select modulation frequency

5). Click "Apply"

Apply Close

Repeat these steps as needed for all modulator channels

## Step 6: IP Streaming

### Parameters

- ▶ Encoder1
- ▶ Encoder2
- ▶ TS Config
- ▶ Modulator
- ▶ **Output Settings**

1). Select "Output Settings" from the main menu

**IMPORTANT:**  
TO ACCESS STREAMS, CONNECT DEVICES TO THE DATA PORT USING AN ETHERNET CABLE

2). Click the top pencil icon to edit all channels, or click the icon on the same line as the channel to edit individually

#	IP Address	Port	Protocol	Filter	TTL	Program	Status	Bitrate(Act/Max)	
MPTS 1	224.2.2.2	2000	UDP	<input type="checkbox"/>	128		●	16.8/38.8 M	
MPTS 2	224.2.2.2	2002	UDP	<input type="checkbox"/>	128		●	16.5/38.8 M	
MPTS 3	224.2.2.2	2004	UDP	<input type="checkbox"/>	128		●	17.3/38.8 M	
MPTS 4	224.2.2.2	2006	UDP	<input type="checkbox"/>	128		●	16.9/38.8 M	
SPTS 1	224.2.2.2	3000	UDP	<input type="checkbox"/>	128	TV-1(MPTS1)	●	16.9/20.0 M	
SPTS 2	224.2.2.2	3002	UDP	<input type="checkbox"/>	128	TV-2(MPTS2)	●	16.6/20.0 M	
SPTS 3	224.2.2.2	3004	UDP	<input type="checkbox"/>	128	TV-3(MPTS3)	●	17.2/20.0 M	
SPTS 4	224.2.2.2	3006	UDP	<input type="checkbox"/>	128	TV-4(MPTS4)	●	16.9/20.0 M	

Enable:



Output Bitrate:  Mbps

IP Address:

Port:

Protocol:

Pkt Number:

Null PKT Filter:

TTL:

Program:

NULL

TV-1(MPTS1)

TV-2(MPTS2)

TV-3(MPTS3)

TV-4(MPTS4)

Apply

Close

3). Check box to enable stream

4). IP Address and Port Number can be changed

5). Select Program to output

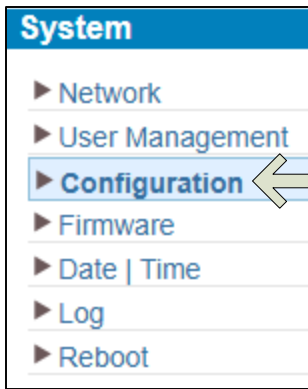
6). Click "Apply"

Repeat these steps as needed for the other streams

Connect to the stream using the appropriate syntax with corresponding IP and Port Number

Example:  
udp://@224.2.2.2:3000

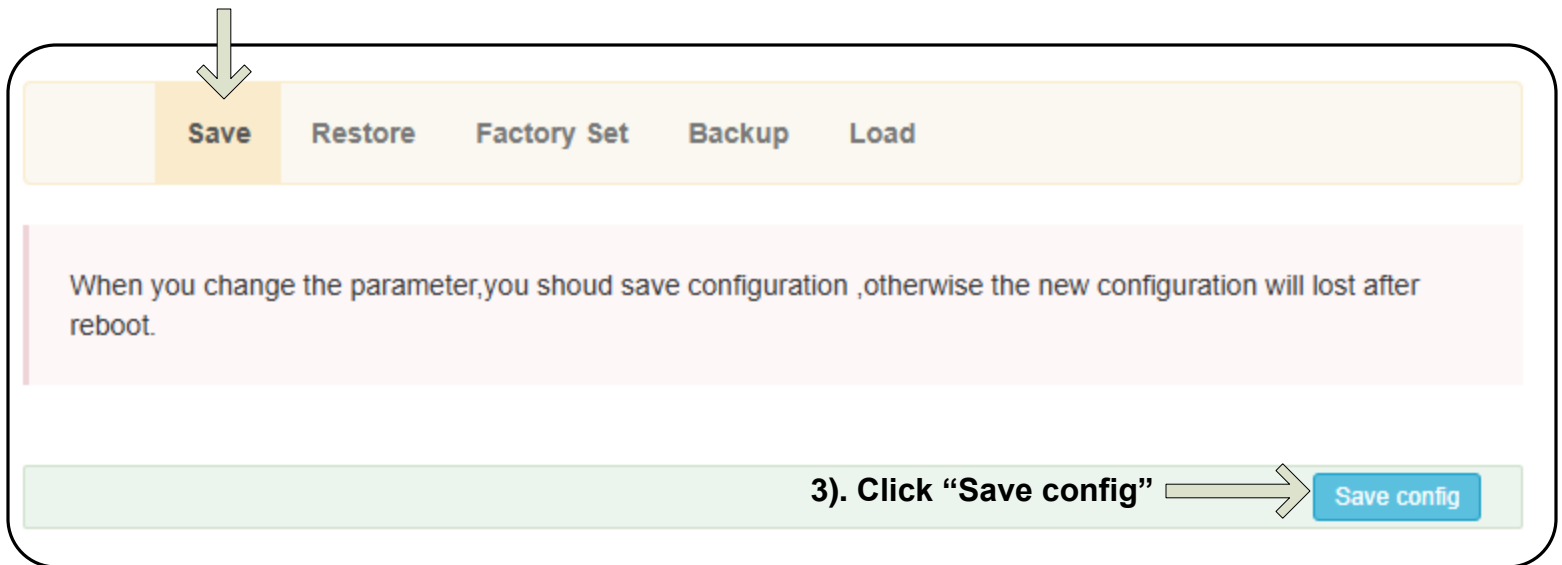
## Step 7: Save Configuration



1). Select  
"Configuration"  
from the main  
menu

**IMPORTANT:**  
**YOU MUST SAVE CONFIGURATION  
OR CHANGES WILL BE LOST  
AFTER RESTARTING THE UNIT**

2). Select the  
"Save" tab



saving configuration, please wait...

4). Confirmation  
message will appear  
briefly until saving is  
complete.

Scan for more:



## CATV QAM Channel Center Frequency - 54 MHz to 860 MHz (J.83B)

QAM 256 / Symbol Rate 5.361Msps , QAM 64 / Symbol Rate 5.057Msps

EIA CH.	MHz Center Frequency	EIA CH.	MHz Center Frequency	EIA CH.	MHz Center Frequency
2	57	42	333	87	603
3	63	43	339	88	609
4	69	44	345	89	615
5	79	45	351	90	621
6	85	46	357	91	627
95	93	47	363	92	633
96	99	48	369	93	639
97	105	49	375	94	645
98	111	50	381	100	651
99	117	51	387	101	657
14	123	52	393	102	663
15	129	53	399	103	669
16	135	54	405	104	675
17	141	55	411	105	681
18	147	56	417	106	687
19	153	57	423	107	693
20	159	58	429	108	699
21	165	59	435	109	705
22	171	60	441	110	711
7	177	61	447	111	717
8	183	62	453	112	723
9	189	63	459	113	729
10	195	64	465	114	735
11	201	65	471	115	741
12	207	66	477	116	747
13	213	67	483	117	753
23	219	68	489	118	759
24	225	69	495	119	765
25	231	70	501	120	771
26	237	71	507	121	777
27	243	72	513	122	783
28	249	73	519	123	789
29	255	74	525	124	795
30	261	75	531	125	801
31	267	76	537	126	807
32	273	77	543	127	813
33	279	78	549	128	819
34	285	79	555	129	825
35	291	80	561	130	831
36	297	81	567	131	837
37	303	82	573	132	843
38	309	83	579	133	849
39	315	84	585	134	855
40	321	85	591	135	861
41	327	86	597		