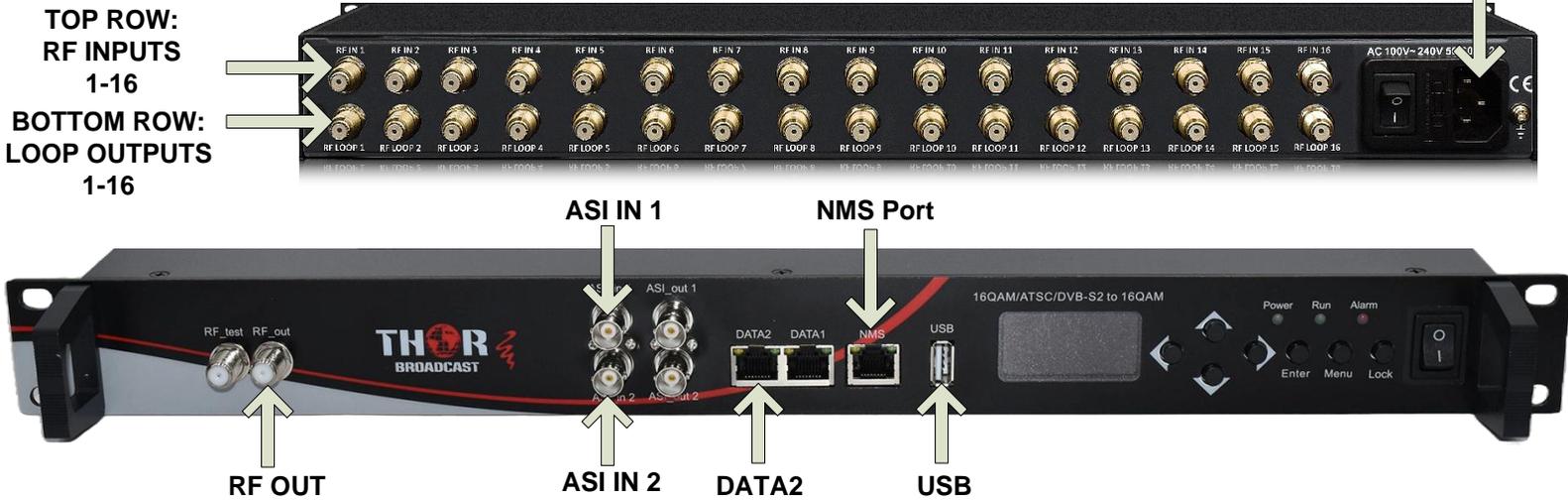


H-16ATSC-IP-16QAM

Quick Setup Guide

Step 1: Connections

Connect Included Power Supply



- 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

Using Loop Jumper Cables:

The unit is supplied with a set of 15 Loop Jumper Cables.

Connect the RF LOOP OUT of the previous channel to the RF IN of the next channel.

- | | |
|---------------------|-----------------------|
| RF LOOP 1 → RF IN 2 | RF LOOP 9 → RF IN 10 |
| RF LOOP 2 → RF IN 3 | RF LOOP 10 → RF IN 11 |
| RF LOOP 3 → RF IN 4 | RF LOOP 11 → RF IN 12 |
| RF LOOP 4 → RF IN 5 | RF LOOP 12 → RF IN 13 |
| RF LOOP 5 → RF IN 6 | RF LOOP 13 → RF IN 14 |
| RF LOOP 6 → RF IN 7 | RF LOOP 14 → RF IN 15 |
| RF LOOP 7 → RF IN 8 | RF LOOP 15 → RF IN 16 |
| RF LOOP 8 → RF IN 9 | |

RF SIGNAL IN



IMPORTANT:

A small amount of signal loss will occur with each consecutive loop used. A splitter may be used to create separate loops in order to reduce this signal loss.

Step 2: CONFIGURE INPUTS

Parameters

- ▶ Tuner ← SELECT "TUNER" FROM THE MAIN MENU
- ▶ TS Config
- ▶ Scrambler
- ▶ Modulator
- ▶ Output
- ▶ USB Media

CLICK "EDIT"

#	Tuner	TS Lock	Signal	Param	Action
1	Tuner ATSC	0.000 Mbps	Quality: 0% Strength: 0%	Frequency: 0.000 MHz	Edit

CH 1 Config

Frequency: MHz ← ENTER THE DESIRED FREQUENCY FOR THE APPROPRIATE CHANNEL (SEE ATSC FREQUENCY CHART)

Apply Close

CLICK "APPLY" TO SAVE

#	Tuner	TS Lock	Signal	Param	Action
1	Tuner ATSC	19.356 Mbps	Quality: 26% Strength: 45%	Frequency: 177.000 MHz	Edit

You should now see signal quality/strength information, the link light will go green, and show your bitrate.

Repeat these steps as needed for the rest of the channels.

Step 3: PROGRAM SELECTION

Parameters

- ▶ Tuner
- ▶ **TS Config**
- ▶ Scrambler
- ▶ Modulator
- ▶ Output
- ▶ USB Media

CLICK "TS CONFIG" FROM THE MAIN MENU

IMPORTANT:
CONFIRM THAT CHANNELS ARE SHOWING BITRATE INFO

Channel	Program	Bitrate
1: TUNER_CH1	(prog: 1/1)	[19.3/19.3M]
2: TUNER_CH2	(prog: 0/1)	[19.3/19.3M]
3: TUNER_CH3	(prog: 0/1)	[19.3/19.3M]
4: TUNER_CH4	(prog: 0/1)	[19.3/19.3M]
5: TUNER_CH5	(prog: 0/1)	[19.3/19.3M]
6: TUNER_CH6	(prog: 0/1)	[19.3/19.3M]
7: TUNER_CH7	(prog: 0/1)	[19.3/19.3M]
8: TUNER_CH8	(prog: 0/1)	[19.3/19.3M]
9: TUNER_CH9	(prog: 0/1)	[19.3/19.3M]
10: TUNER_CH10	(prog: 0/1)	[19.3/19.3M]

SELECT A CHANNEL AND CLICK "PARSE PROGRAM"

Parse-Select all(SPTS)

Parse program

time out: 60 seconds

CLICK "+" TO EXPAND DETECTED PROGRAMS

Channel	Program	Bitrate
1: TUNER_CH1	(prog: 1/1)	[19.2/19.2M]
2: TUNER_CH2	(prog: 0/1)	[19.2/19.2M]
3: TUNER_CH3	(prog: 0/1)	[19.2/19.2M]

CHECK THE BOX TO SELECT THE PROGRAM

Channel	Program	Bitrate
1: TUNER_CH1	(prog: 1/1)	[19.3/19.3M]
1: <input checked="" type="checkbox"/> [2] THOR FI		
2: TUNER_CH2	(prog: 0/1)	[19.3/19.3M]
3: TUNER_CH3	(prog: 0/1)	[19.3/19.3M]
4: TUNER_CH4	(prog: 0/1)	[19.3/19.3M]
5: TUNER_CH5	(prog: 0/1)	[19.3/19.3M]
6: TUNER_CH6	(prog: 0/1)	[19.3/19.3M]
7: TUNER_CH7	(prog: 0/1)	[19.3/19.3M]
8: TUNER_CH8	(prog: 0/1)	[19.2/19.2M]
9: TUNER_CH9	(prog: 0/1)	[19.3/19.3M]

Output	Program
Output TS 1 (prog: 1)	<input type="checkbox"/> THOR FI <=TUNER_CH1 [2]

PROGRAM WILL SHOW UNDER OUTPUT
(Click Program Name for more options)

CLICK "→" BUTTON

REPEAT THESE STEPS AS NEEDED FOR THE REST OF THE CHANNELS

Step 4: MODULATOR

Parameters

- ▶ Tuner
- ▶ TS Config
- ▶ Scrambler
- ▶ **Modulator**
- ▶ Output
- ▶ USB Media

CLICK "MODULATOR"
FROM THE MAIN MENU

CLICK THE PENCIL
ICON TO EDIT CHANNEL

Center Frequency: 264.000 MHz

Standard: J.83B

Level(All Carriers): -10.0 dBm

Channel Info.(Alarm/Active/Total): 0/16/16

Channel	Frequency	Constellation	Symbol Rate	Gain offset	Status	Bit(Act/Max)	
1	219.000 MHz	256 QAM	5361 Ksps	0.0 dB		0.0/38.8 M	
2	225.000 MHz	256 QAM	5361 Ksps	0.0 dB		0.0/38.8 M	
3	231.000 MHz	256 QAM	5361 Ksps	0.0 dB		0.0/38.8 M	
4	237.000 MHz	256 QAM	5361 Ksps	0.0 dB		0.0/38.8 M	
5	243.000 MHz	256 QAM	5361 Ksps	0.0 dB		0.0/38.8 M	
6	249.000 MHz	256 QAM	5361 Ksps	0.0 dB		0.0/38.8 M	

Channel 1 Config.

[close]

Standard: J.83B

Level(All Carriers): -10.0 (-20 ~ +10 dBm)

Spectrum Inversion: OFF

Channel Enable:

Frequency: 219.000 (50 ~ 960 MHz)

Constellation: 256 QAM

Symbol Rate: 5361 (5000 ~ 7000 Ksps)

Gain offset: 0.0 (-10 ~ 0 dB)

SET APPROPRIATE
FREQUENCY FOR
DESIRED CHANNEL (SEE
QAM FREQUENCY CHART)

Apply Close

CLICK "APPLY" TO SAVE CHANGES

REPEAT THESE STEPS AS NEEDED FOR THE REST OF THE CHANNELS

Step 5: IP Streaming

▶ Modulator
▶ **Output** ← CLICK "Output" FROM THE MAIN MENU
▶ USB Media

CLICK PENCIL ICON TO EDIT SETTINGS ↓

IP Address	Port	Protocol	Pkt Length	Null PKT Filter	Status	Bit(Act/Max)	ModulatorChannel	
224.2.2.2	2001	UDP	7	<input type="checkbox"/>	●	0.0/38.8 M	1	

USING AN ETHERNET CABLE, CONNECT YOUR STREAMING DEVICE(S) TO PORT DATA2.
ACCESS THE STREAM USING THE APPROPRIATE IP ADDRESS & PORT NUMBER:
FOR EXAMPLE: `udp://@224.2.2.2:2001`

Step 6: SAVE CONFIGURATION

System

- ▶ Network
- ▶ Cloud Platform
- ▶ Password
- ▶ **Configuration** ← 1. Click "Configuration" from the main menu
- ▶ Firmware
- ▶ Date | Time

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

SAVE CONFIGURATION

When you change the parameter, you should save configuration, otherwise the new configuration will be lost after reboot.

Save config

2. Press "Save config" button

saving configuration, please wait... ← 3. Confirmation message will appear briefly until saving is complete.

Scan for more info:

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		

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

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

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		