


STARMAX MP-
104R Quad
Channel H.264 IP
Streaming to
QAM



STARMAX MP-104R Quad Channel H.264 IP Streaming to QAM Modulator User Guide

[Home](#) » [Starmax](#) » STARMAX MP-104R Quad Channel H.264 IP Streaming to QAM Modulator User Guide 

Contents

- [1 STARMAX MP-104R Quad Channel H.264 IP Streaming to QAM](#)
- [2 Introduction](#)
- [3 Overview](#)
- [4 LCD Menu Flowchart](#)
- [5 Specifications](#)
- [6 IP Streaming Theory](#)
- [7 Web Configuration and Remote Control](#)
- [8 Web Configuration – IP Streams](#)
- [9 Web Configuration – Modulation](#)
- [10 ATSC \(8VSB\) Channel Plan – North America](#)
- [11 Warranty](#)
- [12 FCC Class B Equipment](#)
- [13 Troubleshooting](#)
- [14 FAQ](#)
- [15 Documents / Resources](#)
 - [15.1 References](#)
- [16 Related Posts](#)

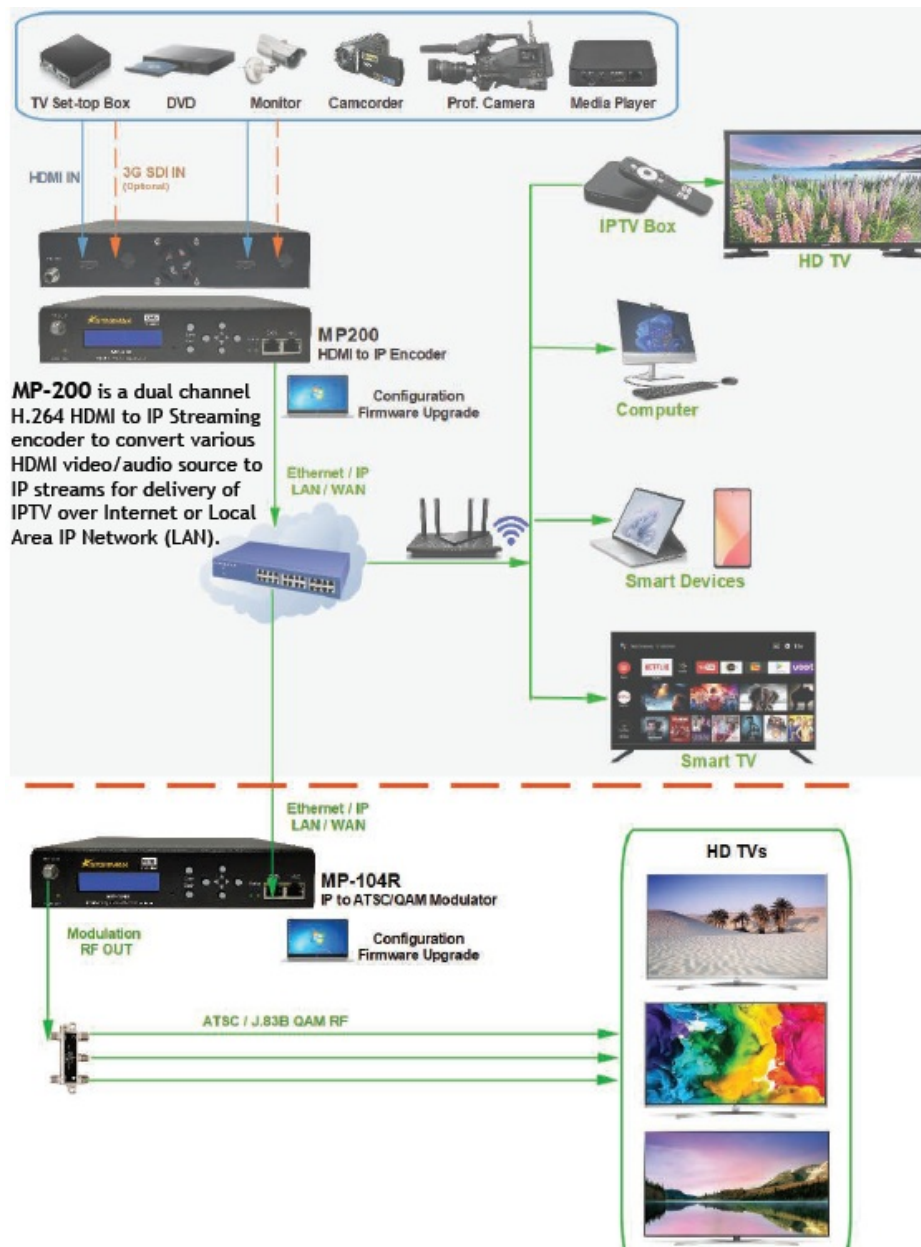


STARMAX MP-104R Quad Channel H.264 IP Streaming to QAM



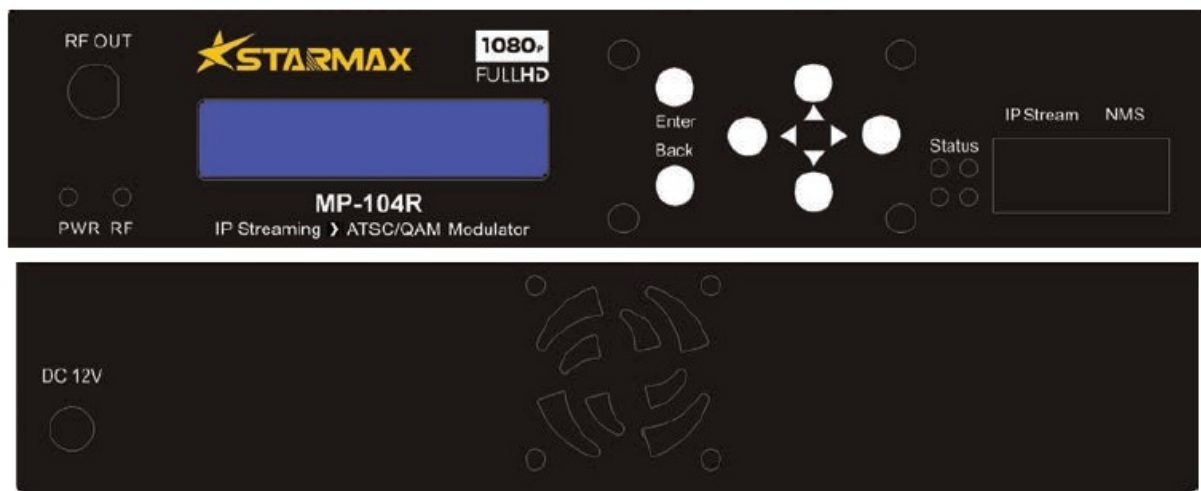
Introduction

Various HDMI Input Source for IP Streaming Output



MP-104R is quad channel ATSC/J.83B QAM modulator to convert IP streams received from Internet or LAN IP network to ATSC / J.83B QAM RF signal for delivery of IPTV over coax network.
IP Streaming to ATSC/J.83B QAM RF Output

Overview



Operation Panel (Front)

- 3"x1.2" dot matrix LCD
- Keypad
- Back

Input Interface (Back)

- DC 12V DC Power Input
-
- Return or escape to upper level menu and cancel the current operation
- ◀ ▶ ▲ ▼ Arrow keys to traverse
- between menu items or increase / decrease
- selected parameter value
- Confirm the selection
- IP Stream (DATA) 1000Base-T IP streaming output
- NMS 1000Base-T Web based configuration
- RF (OUT) Modulated RF output, 75Ω F
- LEDs Status

RF

- LED 1/3 solid
- LED 2/4



- solid amber dark
- blinking amber
- solid blue
- solid green

- blinking green

RF out

- DATA port disconnected or no TS inputs
- IP streams bit rate exceeds the limit
- TS input available (SPTS1 , SPTS3)
- TS input available (SPTS2, SPTS4)
- HDMI not connected or no TS input

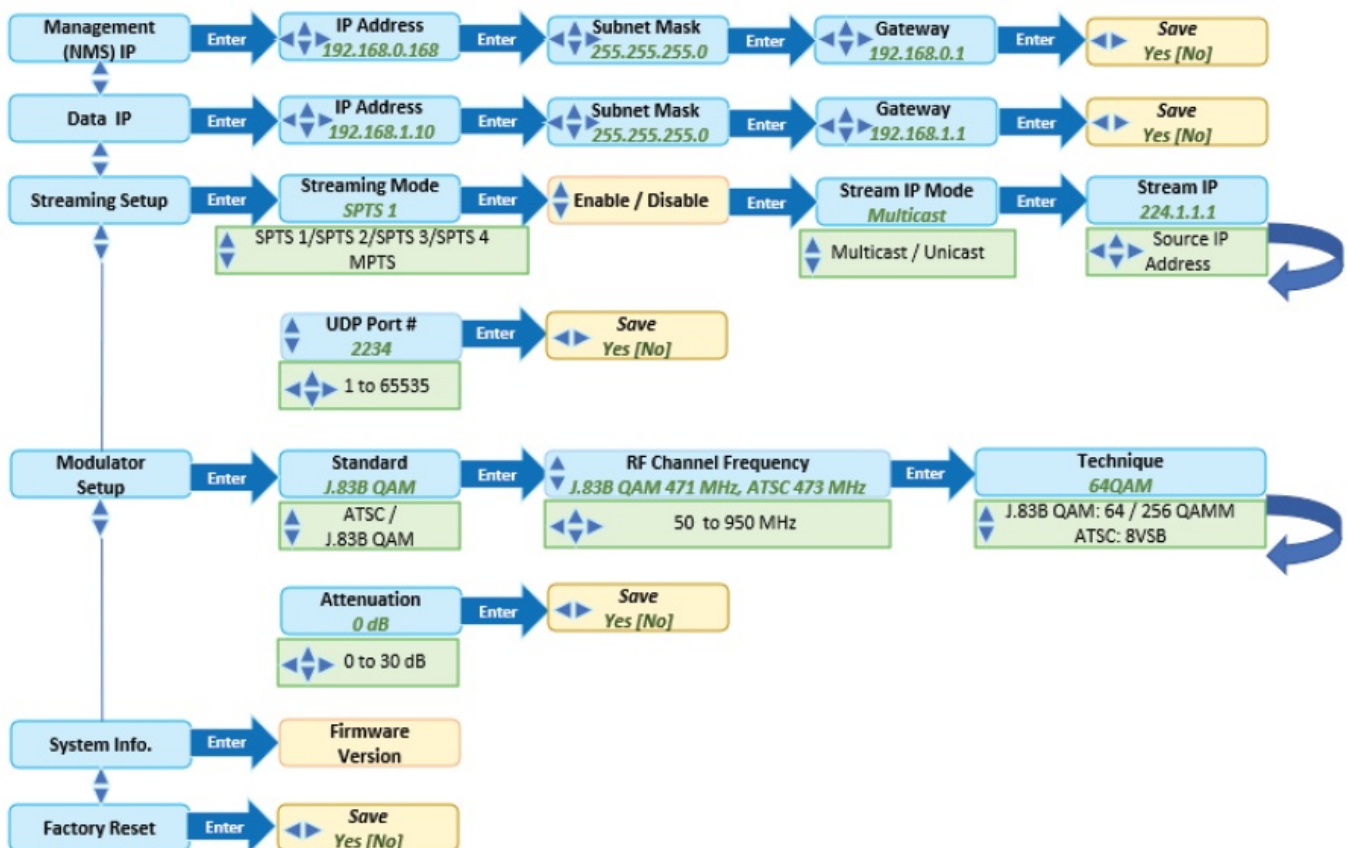
Installation Requirement

- Available TV sets
- Available Ethernet/ IP network
- Available electrical power socket

Package Content

- MP-104R quad channel H.264 IP streaming to ATSC/J.83B QAM modulator
- AC/DC power adapter
- User Guide

LCD Menu Flowchart



All commands and settings are also available on Web based configuration by connecting the Ethernet port of

computers to the NMS port of MP-104R. Launch any Web browser and point the URL to http://192.168.0.168 to login with

User name admin

Password 0000

to access configuration pages.

Specifications

IP Streaming to ATSC / J.83B QAM Modulation		
Input	Interface	1000Base-T RJ-45 x 1 for IP streaming in Unicast / Multicast UDP / RTP
	Transport Streams	SPTS x 4 or MPTS x 1
	Protocols	RTP, ARP, IPv4, TCP/UDP, HTTP, IGMP v2/v3
	Packet Length	188 Bytes
Output	Interface	75Ω F x 1
	Standard	ATSC (8VSB) or J.83B (64QAM or 256QAM)
	Frequency	50 to 950 MHz, 1 kHz Step
	Level	70 to 100 dBmV, 1 dB Step, 0 to 30dB Adjustable
	Channels	Main-channel with 4x Sub-channels
Video	Encoding	MPEG-2; 5 to 15 Mb/s compression rate
	Resolution	1080 60/50 p/i
	MER	≥ 35dB
	Aspect Ratio	16:9, 4:3
	Bit Rate	2 to 20Mbps
Audio	Encoding	MPEG-1 Layer 2, AAC, AC3
	Sampling Rate	48 kHz
	Bit Rate	64, 96, 128, 192, 256, 320 kbps
General		
Management/Configuration		1000Base-T RJ-45 x 1 Web based
Power Supply		12 VDC, 1A
Dimensions		8.66" x 8.11" x 1.73" (220 x 206 x 44 mm)
Weight		1.9 lbs (900g)
Environment		Operating Temperature: 5 to 40 °C Humidity: 80% @ 30 °C

IP Streaming Theory

- IP streaming to smart devices (TVs, phones, tablets, computers) requires the IPTV streams to reach the video player in server (broadcaster) and client (player) model. The IPTV streams can be distributed over IP network, which can be WAN/Internet or LAN/Intranet through wired or wireless (e.g. Wi-Fi or cellular) connection on demand basis.
- The Internet/Intranet connection bandwidth required for live IPTV streaming is about 9Mbps per channel for 1080p video resolution. Larger streaming server such as YouTube, AWS, Hulu offer higher throughput or bandwidth to deliver the live streaming to millions of users simultaneously.

The output of MP-104R streaming can be received and played on various smart devices, such as

- Regular TV with Android TV set-top box, IPTV set-top box, or IPTV to HDMI decoder
- Android Smart TV
- Computer, cell phone, tablet
- MP-104R IP to ATSC / J.83B QAM RF modulator for distribution of IPTV over coax network


Video player APP, such as VLC (www.videolan.org), MX player (www.mxplayer.in) downloadable from Google Play or Apple store, is required to play IPTV streams on smart devices.

Web Configuration and Remote Control

1. Connect the Ethernet (RJ-45) port on the front panel of MP-104R to the Ethernet port of a PC with Ethernet cable. Power on MP-104R.
2. Configure the IP address of the PC to be static IPv4 192.168.0.100.
3. Launch a Web browser on PC and type <http://192.168.0.168>, The default login name is 'admin' and the default password is '0000'.

The default IP address of MP-201 NMS port is 192.168.0.168. If this address is changed from LCD menu or Web configuration page, write down the new IP address for future use. If the IP address of the NMS port of MP-104R is unknown, press and hold the reset button for 5 seconds to restore the default IP address of NMS port to be 192.168.0.168.

Login



Username:


Password:

Default User:admin
Default Password:0000

LOGIN

Copyright © 2023

The default login name is 'admin' and the default password is '0000'.
There are 3 sections on Web configuration pages – Summary, Modulation, and System.



MP-104R IP Streaming to ATSC/J.83B QAM Modulator

Web Management Logout 02:59

Summary
▶ Device Information
Parameters
▶ Streaming Setup
▶ Modulator Setup
System
▶ Network Setup
▶ Password
▶ Upgrade
▶ Configuration

Device Information

Model Name	IF201-A	Serial Number	0E2404001
Firmware Version	230630R0917	BOOT Version	230630R0917
Modulator Version	R0217	Modulator Mode	ATSC
Data MAC Addr	00:1E:97:6F:1C:90	NMS MAC Addr	00:1E:97:6F:1C:91

Web Configuration – System

Network

NMS IP

IP settings of Configuration (NMS) port.

IP Address	<input type="text" value="192.168.1.168"/>
Subnet Mask	<input type="text" value="255.255.255.0"/>
Default Gateway	<input type="text" value="192.168.1.1"/>

Data IP

IP settings of streaming Data port.

IP Address	<input type="text" value="192.168.0.10"/>
Subnet Mask	<input type="text" value="255.255.255.0"/>
Default Gateway	<input type="text" value="192.168.0.1"/>

Notes:

- IP address of NMS port and Data port CANNOT be configured in the same subnet to avoid conflict
- Current IP address of NMS port and Data port can be found on LCD menu

Login User Name and Password

New Username	<input type="text" value="admin"/>
New Password	<input type="password"/>
Confirm Password	<input type="password"/>

Upgrade

Firmware File :

Press *Choose* to select firmware file (*image.ub*) and then *Upgrade* to update the firmware.

Encode File :

Note: MP-104R reboots after Firmware/Encoder/Boot update.
Wait for 1 minute for the device to boot up.

BOOT File :

Press *Choose* to select boot loader file (*bootloader.bin*) and then *Upgrade* to update boot loader.

Configuration

Factory Reset	Apply
Download Config	Save
Upload Config	Load

- Apply Factory Reset to restore configurations to factory defaults.
- Download configuration file from the device to PC connected.
- Upload configuration file from PC connected to the device.

Web Configuration – IP Streams

IP Streams

	Protocol	IP	Port	Bit Rate
<input checked="" type="checkbox"/> SPTS 1	Multicast UDP/RTP	224.1.1.1	2234	8.03 Mbps
<input checked="" type="checkbox"/> SPTS 2	Multicast UDP/RTP	224.1.1.1	2236	3.94 Mbps
<input type="checkbox"/> SPTS 3	Multicast UDP/RTP	224.2.2.2	2238	0.00 Mbps
<input type="checkbox"/> SPTS 4	Multicast UDP/RTP	224.2.2.2	2240	0.00 Mbps
<input type="checkbox"/> MPTS	Multicast UDP/RTP	224.2.2.2	2250	0.00 Mbps
Total				11.97 Mbps

Cancel	Apply
--------	-------

IP video streams can be distributed in Single Program Transport Stream (SPTS) or Multi-Program Transport Stream (MPTS). Each stream can be delivered in unicast address or multicast address to reach destination over IP network.

Multicast IP address range is (224.0.0.0 to 239.255.255.255 with 224.0.0.0 to 224.0.0.255 reserved exclusively for local network management and maintenance. If multicast address is used to reach the destination, mostly a video player APP installed on computer or smart devices,

1. Both the encoder (sender) and the decoder (receiver) of IP streams are located in the same Local Area Network (LAN) subnet.
2. Both the encoder/sender and the decoder/receiver of IP streams join the same multicast group address.
3. The network administrator has configured the routers and firewalls in the LAN to allow multicast traffic to pass through.

Each IP stream can be encoded to one SPTS stream. Multiple IP streams can be encoded to one MPTS stream.

- Streams SPTS 1 check box to enable the 1st input SPTS.

- SPTS 2 check box to enable the 2nd input SPTS.
- SPTS 3 check box to enable the 3rd input SPTS.
- SPTS 4 check box to enable the 4th input SPTS.
- MPTS check box to enable the only input MPTS.
- Protocol UDP/RTP in Unicast or Multicast IP streaming destination.
- Stream IP Unicast or multicast IP address of IP streaming destination.
- Port UDP/RTP port number of IP streaming destination.
- Bit Rate Bit rate of the IP stream received.

Playlist URL

UDP and RTP

- Unicast udp://@destination_IP_address:port_number or rtp://@destination_IP_address:port_number for example udp://@192.168.10.25:2234 where 192.168.10.25 is the IP address of the decoder/receiver of IP streams.
- Multicast udp://@multicast_IP_address:port_number or rtp://@multicast_IP_address:port_number for example udp://@224.1.1.1:2234 where 224.1.1.1 is the multicast IP address.

Web Configuration – Modulation

Modulation

Standard	ATSC	RF Frequency	473000	KHz
Modulation	8VSB	RF Atten.	0 dB	
TS ID	1			
Allow Bit Rate	19.39	Mbps	Actual Bit Rate	12.02
				Mbps

Channel Parameter

	SPTS 1	SPTS 2	SPTS 3	SPTS 4
	Remapping	Remapping	Remapping	Remapping
Major Channel	14	14	14	14
Minor Channel	1	2	3	4
Short Name	DTV-1	DTV-2	DTV-3	DTV-4
Service ID	1	2	3	4
PMT PID	100	200	300	400
PCR PID	101	201	301	401
VIDEO PID	102	202	302	402
AUDIO PID	103	203	303	403

Cancel

Apply

- Modulation Standard Selection of ATSC or J.83B QAM.
- Output Frequency Output channel frequency. Refer to ATSC or J.83B QAM channel plan in the appendix of this User's Guide to set proper output frequency in MHz.
- Technique ATSC 8VSB only.
- J.83B selection of 64 QAM or 256 QAM.
- RF Output Attenuation Selection of output attenuation between 0dB and 31dB.
- TS ID Transport Stream ID between 1 and 65535
- Allow Bit Rate Allowed total bit rate of all IP streams received.
- Actual Bit Rate Actual total bit rate of all IP streams received.
- PID Pass-Through Selection of Pass-Through or Re-Mapping of PID.
- If input stream is SPTS, the PID's and other parameters can be either Pass-Through or Re-Mapping.
- If input stream is MPTS, the PID's and other parameters can onlybe Pass-Through.
- Major Channel Number Output channel number.
- Minor Channel Number Output subchannel number.
- Program Name Program name. Maximum 15 characters allowed.
- Service ID Service Stream ID between 1 and 65535.
- PMT PID Program Map Table (PMT) Packet ID (PID) between 32 and 8190.
- PCR PID Program Clock Reference Packet ID (PID) between 32 and 8190.
- Video PID Video Packet ID (PID) between 32 and 8190.
- Audio PID Audio Packet ID (PID) between 32 and 8190.

ATSC (8VSB) Channel Plan – North America

Channel Bandwidth: 6 MHz 8VSB

- Suggested settings for output channel
- Frequency 473.000 MHz
- Channel Number 66.1
- Channel Name HD1

Channel Plan is for reference only. It may vary across countries, areas or cities. Refer to the LCD menu screen of the Modulator to load country-wise Channel Plan if available.

Mexico ATSC channels are channel 14 to channel 69.

Channel No.	Frequency (MHz)
VHF	
2	57
3	63
4	69
5	79
6	85
VHF High Band III	
7	177
8	183
9	189
10	195
11	201
12	207
13	213
UHF	
14	473
15	479
16	485
17	491
18	497

19	503
20	509
21	515
22	521
23	527
24	533
25	539
26	545
27	551
28	557
29	563
30	569
31	575
32	581
33	587
34	593
35	599
36	605
37	611
38	617
39	623
40	629
41	635

Channel No.	Frequency (MHz)
UHF	
42	641
43	647
44	653
45	659
46	665
47	671

48	677
49	683
50	689
51	692
52	701
53	707
54	713
55	719
56	725
57	731
58	737
59	743
60	749
61	755
62	761
63	767
64	773
65	779
66	785
67	791
68	797
69	803
70	809
71	815
72	821
73	827
74	833
75	839
76	845
77	851
78	857
79	863
80	869

81	875
82	881
83	887

J.83B QAM Channel Plan – North America

Channel Bandwidth: 6 MHz QAM

Suggested settings for output channel

Frequency 783.000 MHz (# 122)

Channel Name HD1

Channel Plan is for reference only. It may vary across countries, areas or cities. Refer to the LCD menu screen of the Modulator to load country-wise Channel Plan if available.

Channel No.	Frequency (MHz)
Low	
2	57
3	63
4	69
1	75
5	79.00 / 81.00
6	85.00 / 87.00
Mid	
95	93
96	99
97	105
98	111
99	117
14	123
15	129
16	135
17	141
18	147
19	153
20	159
21	165

22	171
High	
7	177
8	183
9	189
10	195
11	201
12	207
13	213
Super	
23	219
24	225
25	231
26	237
27	243

Channel No.	Frequency (MHz)
Super	
28	249
29	255
30	261
31	267
32	273
33	279
34	285
35	291
36	297
Hyper	
37	303
38	309
39	315
40	321

41	327
42	333
43	339
44	345
45	351
46	357
47	363
48	369
49	375
50	381
51	387
52	393
53	399
54	405
55	411
56	417
57	423
58	429
59	435
60	441
61	447

Channel No.	Frequency (MHz)
Hyper	
62	453
63	459
64	465
Ultra	
65	471
66	477
67	483
68	489

69	495
70	501
71	507
72	513
73	519
74	525
75	531
76	537
77	543
78	549
79	555
80	561
81	567
82	573
83	579
84	585
85	591
86	597
87	603
88	609
89	615
90	621
91	627
92	633
93	639
94	645
Jumbo	
100	651
101	657
102	663
103	669
104	675
105	681

106	687
107	693
108	699
109	705
110	711
111	717

Channel No.	Frequency (MHz)
Jumbo	
112	723
113	729
114	735
115	741
116	747
117	753
118	759
119	765
120	771
121	777
122	783
123	789
124	795
125	801
126	807
127	813
128	819
129	825
130	831
131	837
132	843
133	849
134	855

135	861
136	867
137	873
138	879
139	885
140	891
141	897
142	903
143	909
144	915
145	921
146	927
147	933
148	939
149	945
150	951
151	957
152	963
153	969
154	975
155	981
156	987
157	993
158	999

DVB-T Channel Plan – Europe, Colombia & Asia
Channel Bandwidth: 7 MHz or 8 MHz QAM, QPSK

Suggested settings for output channel

Frequency 474.000 MHz (CH-21)

Channel Name HD1

Channel Plan is for reference only. It may vary across countries, areas or cities. Refer to the LCD menu screen of the Modulator to load country-wise Channel Plan if availab

- UK DVB-T channels start from CH-21.
- New Zealand DVB-T channels start from CH-26.
- Australia DVB-T channels – 7 MHz bandwidth.

Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
CH-05	177.5*	CH-42	642
CH-06	184.5*	CH-43	650
CH-07	191.5*	CH-44	658
CH-08	198.5*	CH-45	666
CH-09	205.5*	CH-46	674
CH-10	212.5*	CH-47	682
CH-11	219.5*	CH-48	690
CH-12	226.5*	CH-49	698
CH-21	474	CH-50	706
CH-22	482	CH-51	714
CH-23	490	CH-52	722
CH-24	498	CH-53	730
CH-25	506	CH-54	738
CH-26	514	CH-55	746
CH-27	522	CH-56	754
CH-28	530	CH-57	762
CH-29	538	CH-58	770
CH-30	546	CH-59	778
CH-31	554	CH-60	786
CH-32	562	CH-61	794
CH-33	570	CH-62	802
CH-34	578	CH-63	810
CH-35	586	CH-64	818
CH-36	594	CH-65	826
CH-37	602	CH-66	834
CH-38	610	CH-67	842
CH-39	618	CH-68	850
CH-40	626	CH-69	858
CH-41	634		

Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
CH-06	177.5	CH-45	648.5
CH-07	184.5	CH-46	655.5
CH-08	191.5	CH-47	662.5
CH-09	198.5	CH-48	669.5
CH-09A	205.5	CH-49	676.5
CH-10	212.5	CH-50	683.5
CH-11	219.5	CH-51	690.5
CH-12	226.5	CH-52	697.5
CH-28	529.5	CH-53	704.5
CH-29	536.5	CH-54	711.5
CH-30	543.5	CH-55	718.5
CH-31	550.5	CH-56	725.5
CH-32	557.5	CH-57	732.5
CH-33	564.5	CH-58	739.5
CH-34	571.5	CH-59	746.5
CH-35	578.5	CH-60	753.5
CH-36	585.5	CH-61	760.5
CH-37	592.5	CH-62	767.5
CH-38	599.5	CH-63	774.5
CH-39	606.5	CH-64	781.5
CH-40	613.5	CH-65	788.5
CH-41	620.5	CH-66	795.5
CH-42	627.5	CH-67	802.5
CH-43	634.5	CH-68	809.5
CH-44	641.5	CH-69	816.5

ISDB-T(b) Channel Plan – South America

Channel Bandwidth: 6 MHz QAM, DQPSK, QPSK

Suggested settings for output channel

Frequency 473.143 MHz (CH-14)

Channel Name HD1

Channel Plan is for reference only. It may vary across countries, areas or cities. Refer to the LCD menu screen of

the Modulator to load country-wise Channel Plan if available.

Channel No.	Frequency (MHz)
CH-07	177.143
CH-08	183.143
CH-09	189.143
CH-10	195.143
CH-11	201.143
CH-12	207.143
CH-13	213.143
CH-14	473.143
CH-15	479.143
CH-16	485.143
CH-17	491.143
CH-18	497.143
CH-19	503.143
CH-20	509.143
CH-21	515.143
CH-22	521.143
CH-23	527.143
CH-24	533.143
CH-25	539.143
CH-26	545.143
CH-27	551.143
CH-28	557.143
CH-29	563.143
CH-30	569.143
CH-31	575.143
CH-32	581.143
CH-33	587.143
CH-34	593.143
CH-35	599.143

CH-36	605.143
CH-37	611.143
CH-38	617.143

Channel No.	Frequency (MHz)
CH-39	623.143
CH-40	629.143
CH-41	635.143
CH-42	641.143
CH-43	647.143
CH-44	653.143
CH-45	659.143
CH-46	665.143
CH-47	671.143
CH-48	677.143
CH-49	683.143
CH-50	689.143
CH-51	695.143
CH-52	701.143
CH-53	707.143
CH-54	713.143
CH-55	719.143
CH-56	725.143
CH-57	731.143
CH-58	737.143
CH-59	743.143
CH-60	749.143
CH-61	755.143
CH-62	761.143
CH-63	767.143
CH-64	773.143
CH-65	779.143

CH-66	785.143
CH-67	791.143
CH-68	797.143
CH-69	803.143

DVB-C (J.83A QAM) Channel Plan

Channel Bandwidth: 8 MHz QAM

Suggested settings for output channel

Frequency 778.000 MHz (# 88)

Channel Name HD1

Channel Plan is for reference only. It may vary across countries, areas or cities. Refer to the LCD menu screen of the Modulator to load country-wise Channel Plan if available.

Channel No.	Frequency (MHz)
1	52.5
2	60.5
3	68.5
4	80
5	88
13	115
14	123
15	131
16	139
17	147
18	155
19	163
6	171
7	179
8	187
9	195
10	203
11	211
12	219
20	227

21	235
22	243
23	251
24	259
25	267
26	275
27	283
28	291
29	299
30	307
31	315
32	323
33	331

Channel No.	Frequency (MHz)
34	339
35	347
36	355
37	363
38	371
39	379
40	387
41	395
42	403
43	411
44	419
45	427
46	435
47	443
48	451
49	459
50	474

51	482
52	490
53	498
54	506
55	514
56	522
57	530
58	538
59	546
60	554
61	562
62	570
63	578
64	586
65	594
66	602

Channel No.	Frequency (MHz)
67	610
68	618
69	626
70	634
71	642
72	650
73	658
74	666
75	674
76	682
77	690
78	698
79	706
80	714

81	722
82	730
83	738
84	746
85	754
86	762
87	770
88	778
89	786
90	794
91	802
92	810
93	818
94	826
95	834
96	842
97	850
98	858
99	866

Compliance

Warranty

The MX-100T modulator has one-year Limited Hardware Warranty and 90-day free software updates after purchase. This Limited Warranty Statement gives the customer specific legal rights. The customer may also have other rights which vary from State to State in the United States, from province to province in Canada, and from country to country elsewhere in the world. To the extent that this Limited Warranty Statement shall be deemed modified to be consistent with such local law. Under such local law, certain disclaimers and limitations of this Warranty Statement may not apply to the customer.

Important Safety Instructions

Basic safety precautions should always be followed to reduce the risk of fire, electrical shock, and personal injury, including the following:

- Do not use this product near water – for example, near a bathtub, kitchen sink, laundry tub, or swimming pool, or in a wet basement; only clean with dry cloth.
- Do not block any ventilation openings. Install in accordance with the manufacturer's instructions. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus including amplifiers that produce heat.

- Do not remove the cover of the modulator, cover the modulator with thick or heavy objects.
- Use only the power cord indicated in this manual if applicable.

Coaxial Cable

If applicable, the coaxial cable screen shield needs to be connected to the Earth at the building entrance per ANSI/NFPA70, the National Electrical Code (NEC), in particular Section 820.93, "Grounding of Outer Conductive Shield of a Coaxial Cable," or in accordance with local regulation.

FCC Class B Equipment

This device has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try and correct the interference by implementing one or more of the following measures:

- Reorient or relocate the device
- Increase the separation between the device and receiver
- Connect the device to an outlet on a circuit different from that to which the receiver is connected (applicable only to power line products)
- Consult the dealer or an experienced radio or television technician for help

Declaration of Conformity for Products Marked with the FCC logo – USA Only

This device complies with Part 15 of the FCC Rules license-exempt RSS standard(s). Operation is subject to the following two conditions:

- This device may not cause harmful interference
- This device must accept any interference received, including interference that may cause undesired operation of the device

Where applicable, the Most Technology Service Co., Ltd. performed above specification conformity test and issued certificate # TMC180315106E-2 in accordance with local regulation.

Declaration of CE and RoHS Conformity

Objects: MX-100T

This declaration of conformity is issued under the sole responsibility of the manufacturer for products of HDMI RF modulators that support single channel or multi-channel DVB-T, ISDB-T, DVB-C (J.83B/A/C), and ATSC standards.

The object(s) of the declaration described above are in conformity with the relevant Community harmonization legislation:

- Low Voltage Directive (2014/35/EU)
- Electromagnetic Compatibility Directive (2014/30/EU)
- Radio Equipment Directive (2014/53/EU) And their amendments.

References to the relevant harmonized standards, including the date of the standard, used in relation to which the

conformity is declared:

- ETSI EN 55032:2015
- ETSI EN 55020:2007+A11:2011
- ETSI EN 61000-3-2:2014
- ETSI EN 61000-3-3:2013
- EN IEC 62321:2013

Where applicable, the Most Technology Service Co., Ltd. performed above specification conformity test and issued certificate # TMC180315106E-1/TMC180315160-C and TMC171222103E-1/TMC171222103-C in accordance with local regulation.

- StarLink LLC. Copyright
- 2024, All Rights Reserved.
- 1030 E. El Camino Real, #158
- Sunnyvale, CA 94087
- www.starlink7.com
- support@starlink7.com

TroubleShooting

The video and the audio from video source are not synchronized on TV

Unplug and plug the input port(s) on the Modulator to restore.

My Modulator output video cannot be viewed on TV but other channels can be

If output channel can be scanned from TV without HDMI source connected, check the User Guide of input device to ensure high resolution video signal is configured correctly for modulation. If nothing is displayed on TV with or without HDMI source device connected, check all connections and settings are correct according to the instructions on this Start Guide. If a HDMI switch or a hub is used, some of them don't pass through Extended Display Identification Data (EDID) to tell the video resolution. Connect the HDMI device directly to the Modulator or TV without a switch. If the HDMI source is from a PC/DVI device (e.g. laptop computer), the Modulator doesn't support it. A converter box to convert the DVI video to standard 3D video in 720p or 1080p is required.

Video with fast motion doesn't play well or shows ghosting on TV

This might be caused by interlacing issue with 1080i resolution on sports or action video.

How to get the best video quality on TV with the Modulator

Change the resolution of video source to 1080p or 720p (progressive). If TV doesn't support 1080p, change the resolution of video source to 720p and enable interlacing. If QAM modulation technique is available from the Modulator, change it to 256QAM.

How do I know my TV supports ISDB-T or DVB-C standard

Most recent models of TV set sold within the last three years can support both ISDB-T and DVB-C standards but if it's unsure, the broadcasting standard of the TV can be realized by checking the wiring: If the coaxial cable connected to the TV is an outdoor/indoor antenna drop, the TV supports ISDB-T. If the coaxial cable connected to the TV is a Cable TV drop without set-top box, the TV supports DVB-C.

Some or most channels are instable or cannot be viewed on TV

The input signal can be too strong for the TV tuner. Increase the RF output attenuation to be higher than 0dB but less than 30dB.

Audio from HDMI source is skipping or stuttering on TV

If HDMI source device has Compressed Audio or Dolby Digital Sound enabled, try to set it to traditional Pulse-Code Modulation (PCM) Stereo or Uncompressed Audio output. Double compression of audio signal may cause audio skipping on TV.

How do I replace an old modulator with MX-100T

Refer to the settings of the old modulator and duplicate them, such as Output Frequency, Output Power Level, Channel Number, Channel Name ... etc. on MX-100T as much as possible before replacing the old modulator.

The Modulator output video stretches or shrinks on TV

MX-100T processes input video without alteration in color and aspect ratio. Check the settings of aspect ratio on video input device and TV to adjust and fix.

The Modulator output video on TV is flickering

Some old TVs expects the MPEG Transport Stream (TS) Video PID value different from PCR PID. Check the TS Settings of MX-100T and change the PCR PID value to be different from Video PID value.

ing

FAQ


- **Q: How do I access the web-based configuration?**

A: Connect your computer's Ethernet port to the NMS port of the MP-104R and enter "http://192.168.0.168" in a web browser. Use the provided login credentials to access the configuration pages.

- **Q: What is the required bandwidth for live IPTV streaming?**

A: Approximately 9Mbps per channel for 1080p video resolution.

Documents / Resources

	<p>STARMAX MP-104R Quad Channel H.264 IP Streaming to QAM Modulator [pdf] User Guide MP-104R, MP-104R Quad Channel H.264 IP Streaming to QAM Modulator, MP-104R, Quad Channel H.264 IP Streaming to QAM Modulator, H.264 IP Streaming to QAM Modulator, Streaming to QAM Modulator, QAM Modulator, Modulator</p>
--	--

References

- [▶ MX Player](#)
- [🌐 StarMax](#)
- [🔊 VLC: Official site - Free multimedia solutions for all OS! - VideoLAN](#)
- [User Manual](#)

[Manuals+](#), [Privacy Policy](#)

This website is an independent publication and is neither affiliated with nor endorsed by any of the trademark owners. The "Bluetooth®" word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. The "Wi-Fi®" word mark and logos are registered trademarks owned by the Wi-Fi Alliance. Any use of these marks on this website does not imply any affiliation with or endorsement.