USER MANUAL

4 HD H.264 ISDB-T Encoder Modulator

SAFETY INSTRUCTIONS

1. CONNECTING TO THE MAINS SUPPLY

This product has to be connected to the mains supply.

Before carrying out maintenance operation or modification of the installation, the Device has to be disconnected.

2. OVERVOLTAGE

An over-voltage cause short-circuits or fire. Never overload the power lines. Always use the 12VDC power supply provided for single channel series.

3. LIQUIDS

should be protected from splashes;

Do not place objects filled with liquids on it;

If any liquid should accidentally fall into the cabinet, disconnect the power plug.

4. CLEANING

Disconnect the module before cleaning. Use only a humid cloth without solvent.

5. VENTILATION

the ventilation holes should not be obstructed;

not be installed in a hermetically sealed environment;

Other electronic products or heat producing items keep a minimum distance of 15 cm around the apparatus for sufficient ventilation;

6. ACCESSORIES

Only use the supplied power adaptor;

The use of accessories not manufactured by the manufacturer can cause damage to the module.

7. INSTALLATION OF THE MODULE

Do not expose the unit to rain or moisture;

Do not installed in direct sunlight or in humid place;

Respect the minimum and maximum temperature specifications

PACKAGE CONTENT

Device	1pc
Power Adapter	1pc
User Manual	1pc

GENERAL DESCRIPTION

The device is designed to make your HD device use more convenient, productive and cost- efficient. The signal source could be from satellite receivers, STB, android media player, closed -circuit television, cameras, DVD players, etc.

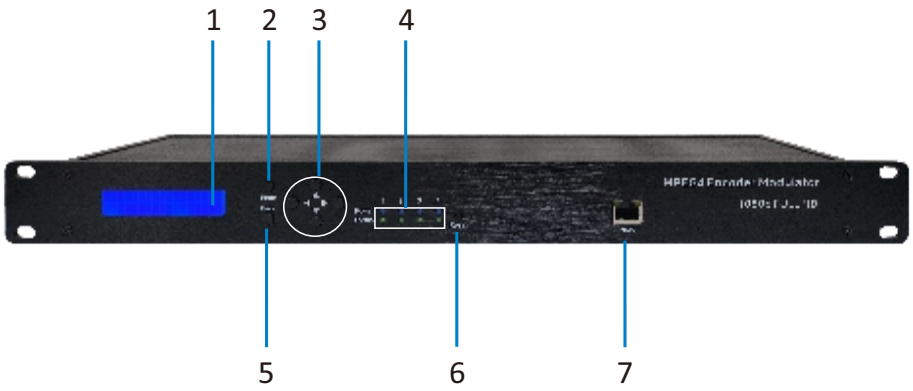
The device can do digital coding processing for HDMI signal with DTV technology. The product adopts RF modulation technology characteristic to transmit the multiple RF signal through one common coaxial cable for long distance transmission without amplification. The model can distribute your HD source to HD resolution to an unlimited number of displays over almost any distance. By adding DTV network mixer at the RF cable, you can easily achieve a large number of displays or DTVs.

The device offer solution for such as hotels, stadiums, entertainment facilities, or broadcast environments.

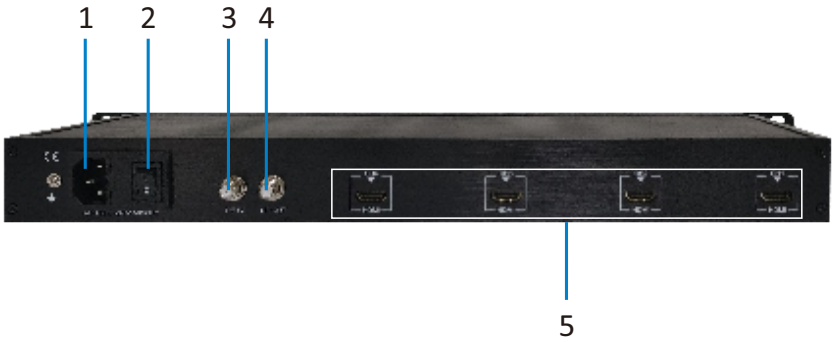
FEATURES

- Support output resolutions up to 1080 60p
- LCD display、key buttons & Web controlled, updated via Web
- Compact and wall mountable
- Good ventilation for the device
- Install multiple units onto TV system

APPEARANCE INTRODUCE



1. LCD Screen
2. Enter key
3. Directional keys(up, down, left, right)
4. Power & Status LED
5. Back(Cancel/Return)
6. Reset button
7. NMS Control



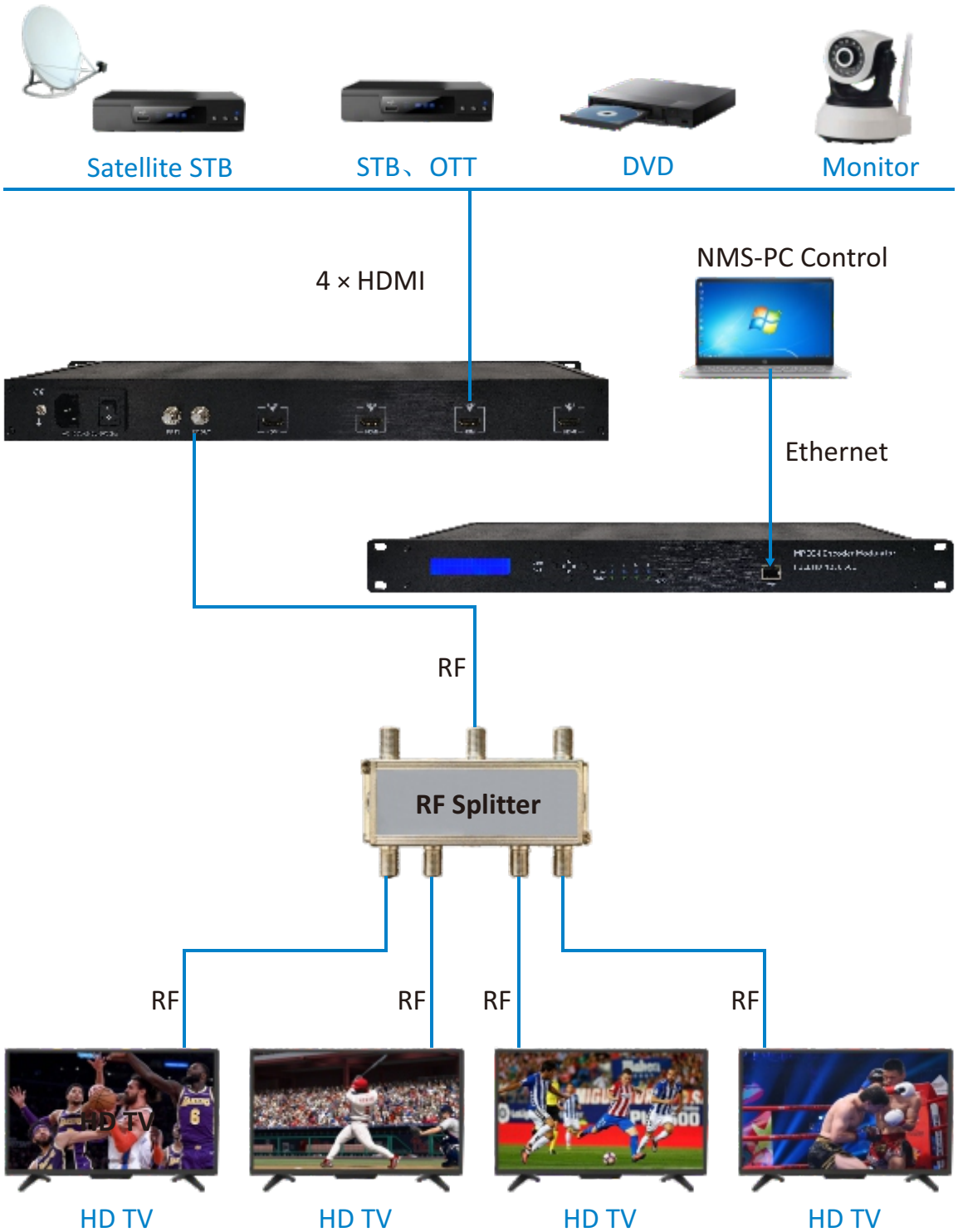
1. Power Supply Input
2. Power Switch
3. RF Input
4. RF Output
5. HDMI Input*4

TECHNICAL SPECIFICATIONS

Encoding Section-Video		
Encoding	MPEG4 AVC/H.264	
Interface	4×HDMI	
Resolution	Input	Output
	720@50p,720@60p 1080@50i/p,1080@60i/p	Max.1080@60p
Bit rate	5-25Mbps	
Encoding Section-Audio		
Encoding	MPEG-1 Layer2, AAC	
Sample rate	48KHz	
System		
Management	LCD + Control buttons/Ethernet	
Language	English	
Upgrade	Ethernet	
Menu Configuration		
Basic	RF range/Key ID/Service Name/ RF attenuation	
Advanced	PMT PID/VPID/APID/PCR PID/TS ID/Service ID/Network ID/ON ID/ Service provider/Network/FHD Output/Latency	
Modulator Section		
MER	Typ. 35dB	
RF range	100~900MHz, 1KHz step	
RF output level	100dBμV(30dB Attenuation)	
Standard	**ISDB-T**	
Constellation	QPSK, 16QAM, 64QAM	
Code rate	1/2, 2/3, 3/4, 5/6, 7/8	
Guard interval	1/4, 1/8, 1/16, 1/32	
Mode	1-3	
Time Interleave	Mode1(I=4,8,16), Mode2(I=2,4,8), Mode3(I=1,2,4)	
General		
Power supply	AC 100-240V 50/60Hz	
Dimensions	484×135×44mm	
Weight	1150g	

APPLICATION DIAGRAM

The model offer solution for such as hotels, stadiums, entertainment facilities, or broadcast environments.

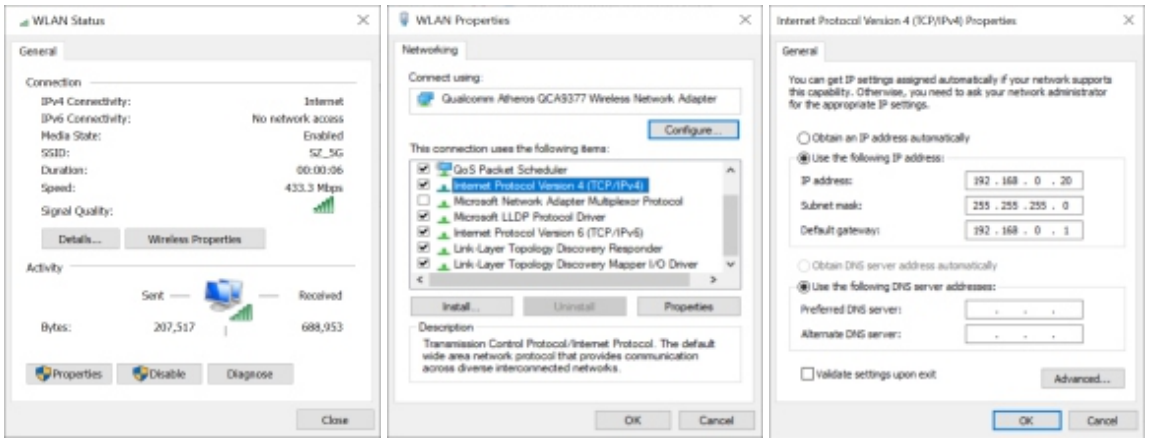


WEB OPERATION INSTRUCTION

For setting configurations, you can use the Web NMS to control and set by connecting the device to a computer's RJ45 Port. The default IP of device is 192.168.0.168. Your computer will require a static IP address in the range 192 . 168 . 0 . xxx except device's ; otherwise, it would cause an IP conflict

1. Computer static IP address Setting

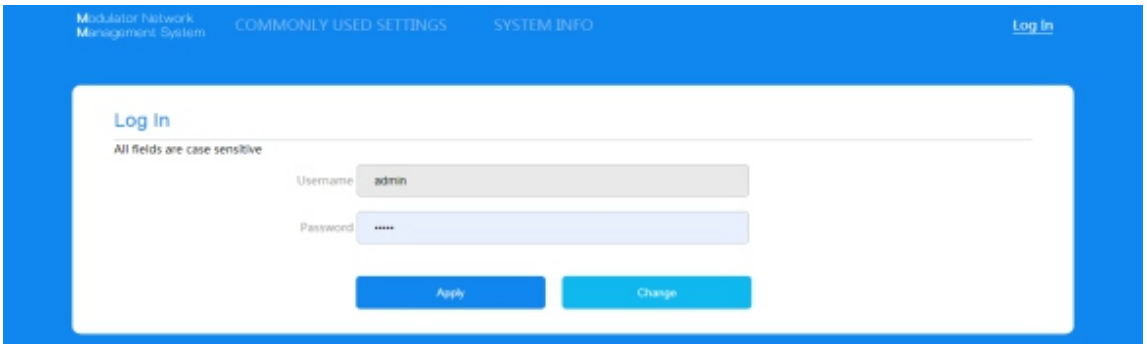
The IP Address of the computer must be in the same participation as device's.
System Control > Network Connections > LAN Connection > Properties >Internet Protocol Version 4 TCP/IPv4 > Properties,as the picture:



2. Device set up and Log in

1. Connect the PC to the Ethernet port of the Device.
2. Launch the web browser and delete browsing history.
3. When log in to the IP (192.168.0.168), you will see the log in page.

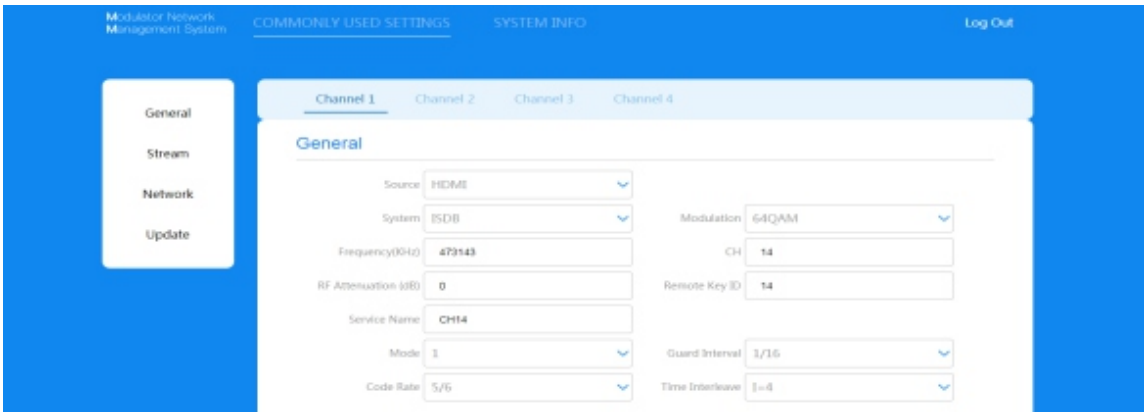
The factory password is **"admin"**. Enter the password and click button **"Apply"**.



Also, user can changed the Username and Password by click **“Change”** , details display as following page.

3. General Section

In **“ General ”** section, you can change basic settings as following format description.



Parameter	Range
Source	HDMI
System	ISDB-T
Frequency(KHz)	100000-900000
RF Attenuation(dB)	0-30
Service Name	up to 15 alphanumeric characters
Mode	1-3
Code rate	1/2, 2/3, 3/4, 5/6, 7/8
Constellation	QPSK, 16QAM, 64QAM
CH	7-78
Remote Key ID	1-255
Guard interval	1/4, 1/8, 1/16, 1/32
Time Interleave	Mode1(I=4,8,16), Mode2(I=2,4,8), Mode3(I=1,2,4)

4. Stream Section

In **“ Stream ”** section, you can change detail TS setting as following format description.

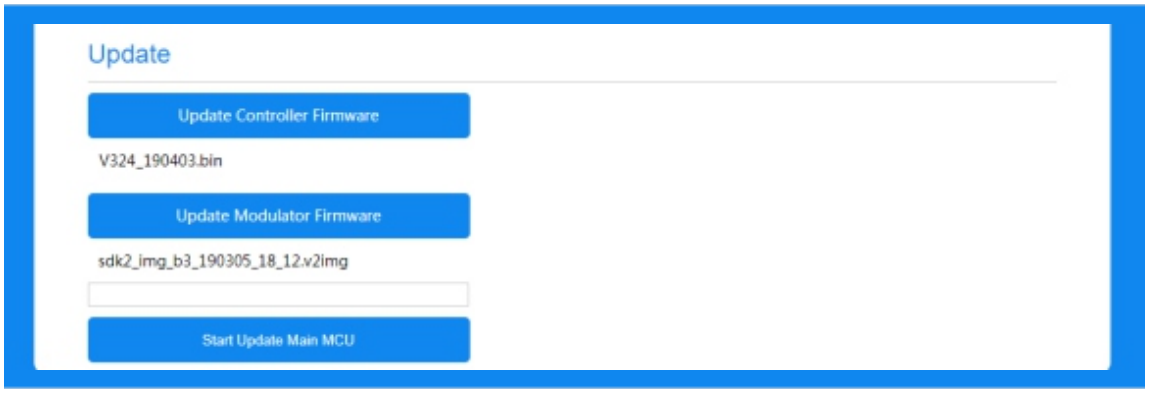
Stream	Range
PMT PID	32-8190
Video PID	32-8190
Audio PID	32-8190
PCR PID	32-8190
TS ID	1-65535
Service ID	1-8
Network ID	1-65535
ON ID	1-65535
Service Provider	up to 15 alphanumeric characters
Network Name	up to 15 alphanumeric characters
Encoder	**Range**
Bit rate	5-25Mbps
Audio encoder	MPEG, AAC
Half FPS	On/Off
FHD Output	Auto/Interlace
Latency	500, 800, 1000ms

5. Network Section

The default IP is 192.168.0.168. Allow user manual change in this page.

6. Update Section

Click **"Update"** on the left side of the homepage to display the following page.

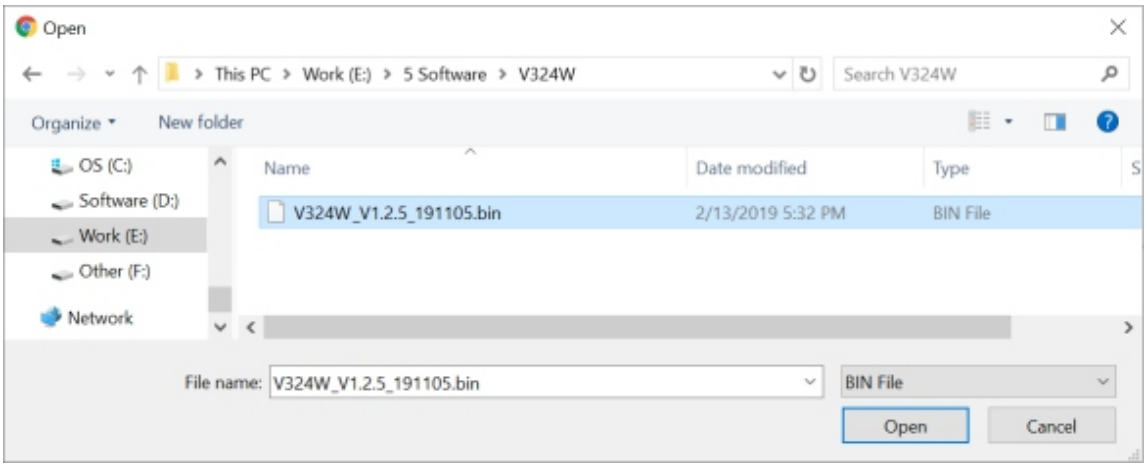


Remark:

1. Make sure the network is stable before operation.
2. Avoid opening two pages with the same URL.
3. Avoid updating the FW & Main MCU through the router, which may cause the update to fail.
4. Ensures the route and power supply are not separated in the update process.
5. After the update, it takes a while for the device to automatically restart. And never turn off the power supply during this period.
6. After the update, if the page does not automatically response, please do not power off, and try to reload page, or use another browser to open again.
7. If the update doesn't work properly, hold the reset button for 5 seconds before reloading the web page.

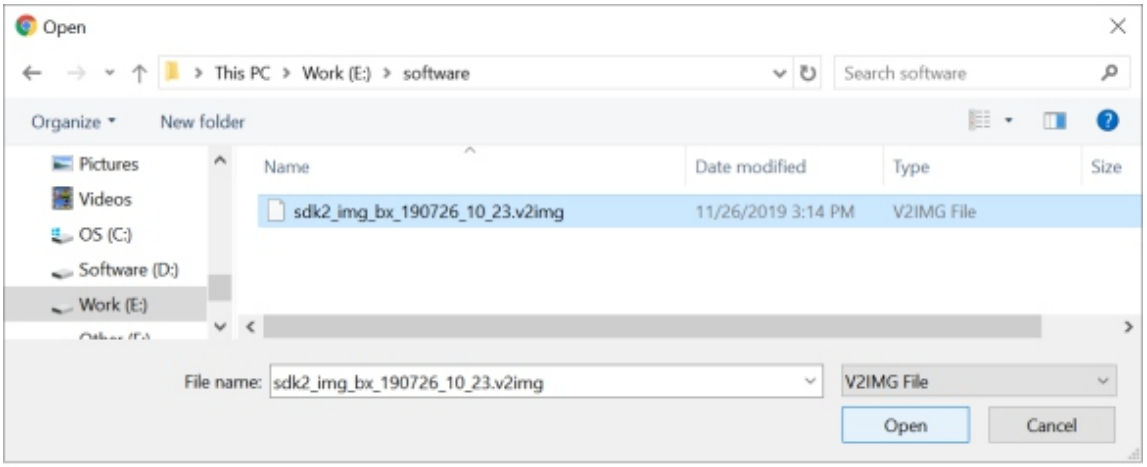
6.1. Update Controller Firmware:

1. Click **“ Update Controller Firmware ”** button and pop up a dialog box.
2. Choose the file[xxx.bin] to be uploaded.
3.After the update is completed, it will automatically return to the settings page.



6.2. Update Modulator Firmware

1. Click **“ Update Modulator Firmware ”** button and pop up a dialog box.
2. Choose the file[xxx.v2img] to be uploaded.
3. After the update is completed, it will automatically return to the settings page.



6.3. Update Main MCU

1. Click **“ Start Update Main MCU ”** button, it will jump to another page as below picture.
2. Choose the file [xxx.bin] to upload then click **“ Update ”** button.
3. When update finished, will automatically return to homepage.

7. System Info Section

User can check the software version and Video sources information here.
The button **“ Reload ”** is to upload the file that saved settings before.
The button **“ Factory Default ”** is for the settings restore factory defaults.