

CLEAR VIEW

Digital MPEG4 HD Encoder Modulator

USER MANUAL

MODEL: TINYMOD



PLEASE READ THE MANUAL COMPLETELY BEFORE USE

GENERAL DESCRIPTION

This is a single HD Modulator, small size and good performance.

It is MPEG4 encoding up to 1080p 60Hz and can modulate in 3 formats-

DVB-T

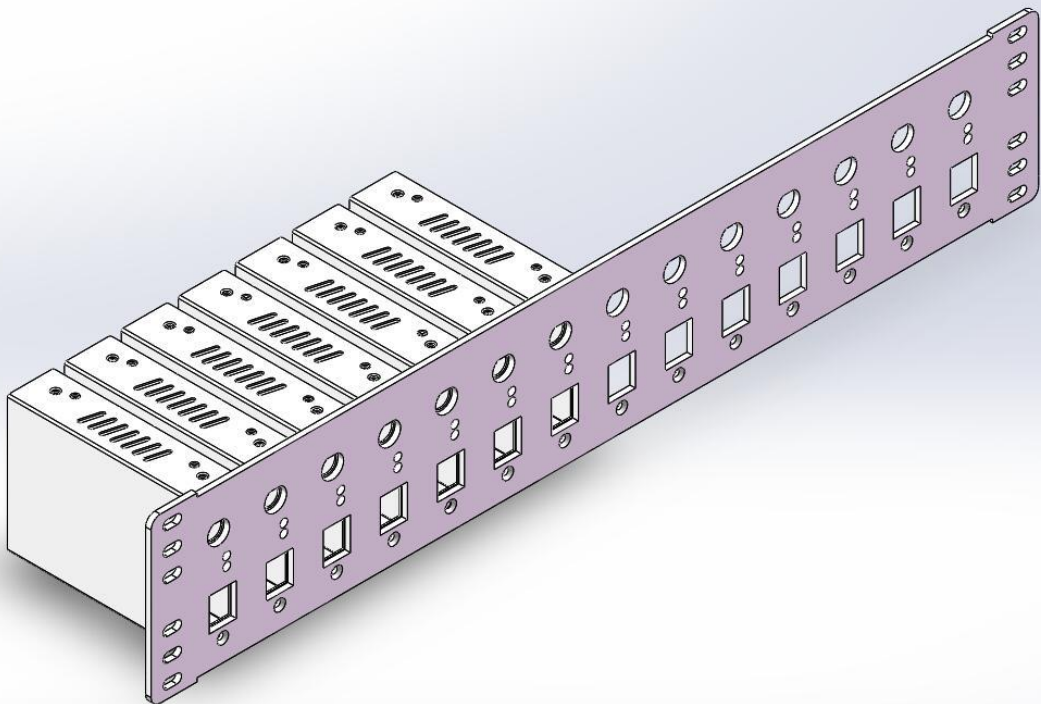
DVB-C – J83A

ISDB-T

The unit will convert a HDMI source to and RF signal that can be distributed throughout Hotels, Motels, Apartments and Homes, all in High Definition and MPEG4 encoding.

Where multiple units are used in the one installation there is a Rack Position option in the WEB so that different rack positions on each unit will allocate different Transport stream IDs and frequencies to each unit so there is no conflict in the system.

A 14 slot rack unit that fits into a 19 inch rack is available to house several units neatly in the 19 inch rack.



INTRODUCTION



- 1 HDMI INPUT
- 2 RESET BUTTON
- 3 POWER INPUT
- 4 ETHERNET(NMS CONTROL)
- 5 POWER LED
- 6 STATUS LED
- 7 RF OUTPUT

TECHNICAL SPECIFICATIONS

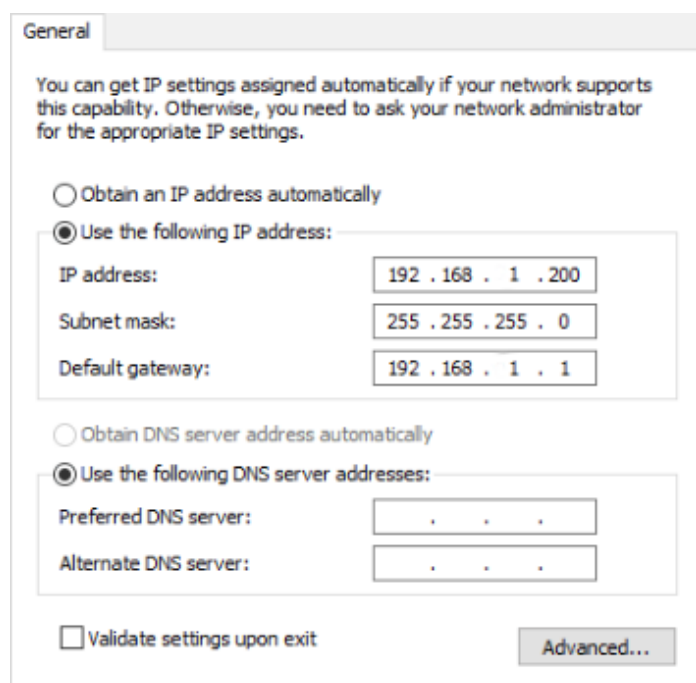
Encoding Section-Video							
Encoding	MPEG4 AVC/H.264						
Interface	HDMI*1						
Resolution	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">Input</th> <th style="width: 50%;">Output</th> </tr> </thead> <tbody> <tr> <td>720@60p</td> <td rowspan="3" style="text-align: center;">Max. 1080@60p</td> </tr> <tr> <td>1080@50i</td> </tr> <tr> <td>1080@60p</td> </tr> </tbody> </table>	Input	Output	720@60p	Max. 1080@60p	1080@50i	1080@60p
Input	Output						
720@60p	Max. 1080@60p						
1080@50i							
1080@60p							
Bit rate	Max. 25Mbps						
Encoding Section-Audio							
Encoding	MPEG-1 Layer2, AAC, AC3						
Sample rate	48KHz						
System							
Management	Ethernet						
Language	English						
Upgrade	Ethernet						
NMS Configuration							
General	System/Frequency/ RF Attenuation/ Service Name/Rack Position/Modulation / Bandwidth/Symbol Rate/LCN						
Stream/ Encoder	PMT PID/Video PID/Audio PID/PCR PID/ TS ID/ Network ID /ON ID/ Service provider/ Bitrate/ Audio Encoder /Half FPS						
Network	IP Address/Subnet Mask/ Default Gateway						
Update	Modulator Firmware/Main MCU						

Modulator Section	
MER	Typ. 35dB
RF range	50-950MHz, 1KHz step
RF output level	100 dB (70-100 adj)
Standard	DVB-C J.83A
Bandwidth	64QAM, 128QAM, 256QAM
Constellation	5.000-9.000Msp/s adj
Standard	DVB-T
Bandwidth	6M,7M,8M
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
FFT	2K, 8K
Standard	ISDB-T
Bandwidth	6M
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
FFT	2K, 8K
General	
Power supply	12V1A, interchangeable socket
Dimensions	103*64*24mm
Weight	211g

WEB OPERATION INSTRUCTIONS

The web browser will allow the user to fully configure the device via an Ethernet connection. The default IP of Device is 192.168.1.138. Your computer will require a static IP address in the range 192.168.1.XXX other than 192.168.1.138 as this would cause an IP conflict with the modulator.

1.Computer static IP address Setting

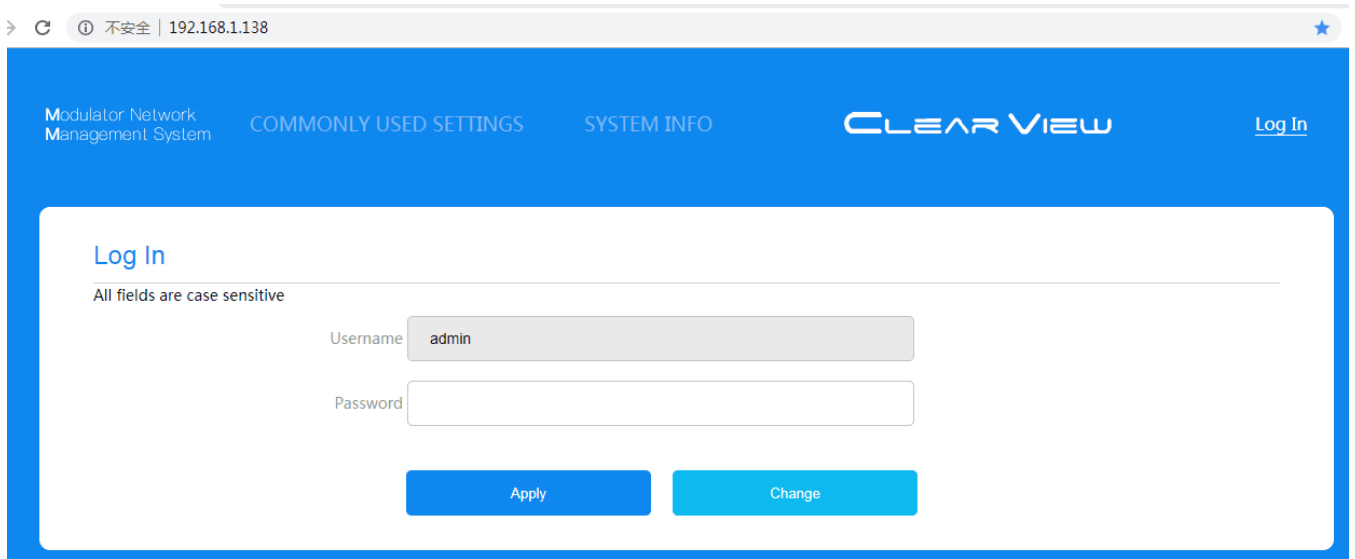


The screenshot shows a 'General' network settings window. At the top, it states: 'You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.' Below this, there are two radio button options: 'Obtain an IP address automatically' (unselected) and 'Use the following IP address:' (selected). Under the selected option, there are three input fields: 'IP address:' with the value '192 . 168 . 1 . 200', 'Subnet mask:' with the value '255 . 255 . 255 . 0', and 'Default gateway:' with the value '192 . 168 . 1 . 1'. Below these, there are two more radio button options: 'Obtain DNS server address automatically' (unselected) and 'Use the following DNS server addresses:' (selected). Under the selected option, there are two input fields: 'Preferred DNS server:' and 'Alternate DNS server:', both containing three dots. At the bottom left, there is a checkbox for 'Validate settings upon exit' which is unchecked. At the bottom right, there is a button labeled 'Advanced...'

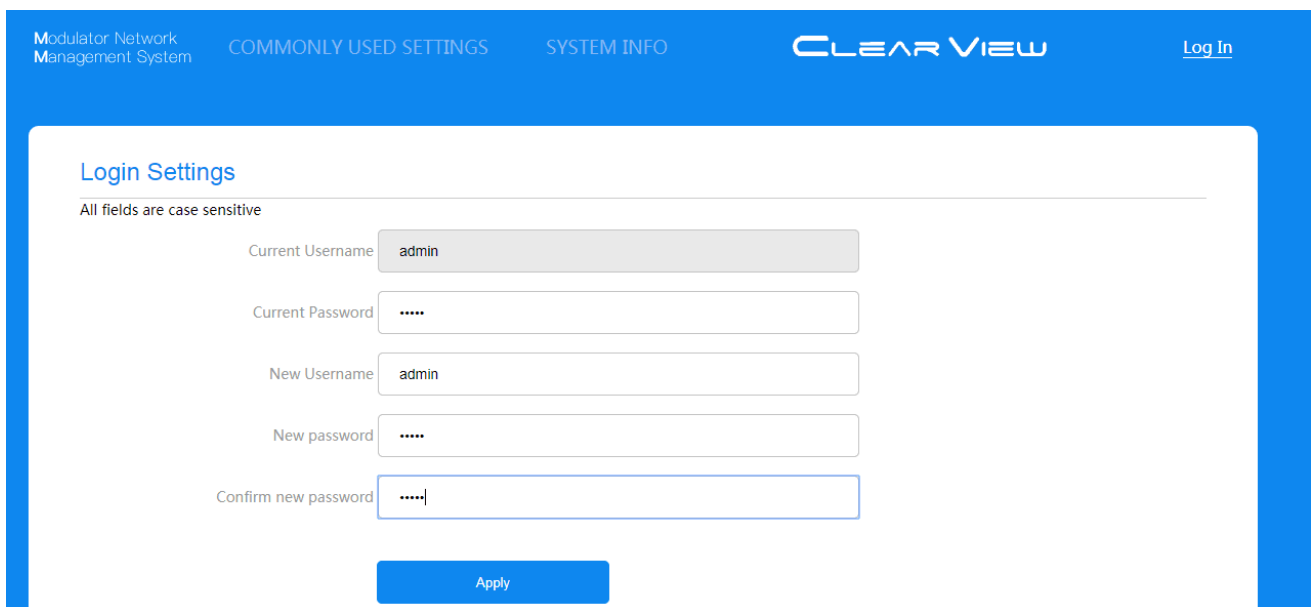
2.Device set up and Log in

- 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 (192.168.1.138), you will see the log in page.

The factory username and password is “**admin**”. Enter the password and click “Apply”.



User can change the Username and Password by clicking “Change” button on following page-



3.General Section

In “General” section, you can change basic modulation format settings.

3.1 DVB-C

Parameter	Range
Source	HDMI
System	DVB-C
Frequency(KHz)	50000-950000
RF Attenuation(dB)	0-30
Service Name	up to 15 alphanumeric characters
Modulation	64QAM, 128QAM, 256QAM
Symbol Rate	5.000-9.000Msps adj
LCN	0001-1000

Modulator Network Management System COMMONLY USED SETTINGS SYSTEM INFO CLEAR VIEW Log Out

General

Stream

Network

Update

General

Source:

System:

Frequency(KHz):

RF Attenuation (dB):

Service Name:

Modulation:

Symbol Rate (K):

Logic Channel Number:

3.2 DVB-T Mode

Parameter	Range
Source	HDMI
System	DVB-T
Frequency(KHz)	50000-950000
RF Attenuation(dB)	0-30
Service Name	up to 15 alphanumeric characters
FFT	2K, 8K
Code Rate	1/2, 2/3, 3/4, 5/6, 7/8
Rack Position	1-16
Modulation	QPSK, 16QAM, 64QAM
Bandwidth	6,7,8M
Guard Interval	1/4, 1/8, 1/16, 1/32
LCN	0001-1000

Modulator Network Management System COMMONLY USED SETTINGS SYSTEM INFO CLEAR VIEW Log Out

General

Stream

Network

Update

General

Source:

System:

Frequency(KHz):

RF Attenuation (dB):

Service Name:

FFT:

Code Rate:

Rack Position:

Modulation:

Bandwidth (MHz):

Logic Channel Number:

Guard Interval:

3.3 ISDB-T Mode

Parameter	Range
Source	HDMI
Standars	ISDB-T
Frequency(KHz)	50000-950000
RF Attenuation(dB)	0-30
Service Name	up to 15 alphanumeric characters
FFT	2K,8K
Code Rate	1/2, 2/3, 3/4, 5/6, 7/8
Modulator	QPSK, 16QAM, 64QAM
Remote Key ID	001-256
Guard Interval	1/16

Modulator Network Management System
COMMONLY USED SETTINGS SYSTEM INFO CLEAR VIEW Log Out

General

Stream

Network

Update

General

Source:

System:

Frequency(KHz):

RF Attenuation (dB):

Service Name:

FFT:

Code Rate:

Modulation:

Remote Key ID:

Guard Interval:

4.Stream Section

In “ Stream ” section, you can change detail TS setting as follows-

Stream	Range
PMT PID	32-8190
Video PID	32-8190
Audio PID	32-8190
PCR PID	32-8190
TS ID	0000-65535
ON ID	0000-65535
Service ID	0000-65535
Network ID	0000-65535
Service Provider	up to 15 alphanumeric characters
Network Name	DIGTAL-TV1
Encoder	Range
Bit rate	19000
Audio encoder	AAC,MEPG,AC3
Half FPS	on

Stream

Transport Stream

PMT PID	<input type="text" value="4096"/>
Video PID	<input type="text" value="2000"/>
Audio PID	<input type="text" value="2256"/>
PCR PID	<input type="text" value="2100"/>
TS ID	<input type="text" value="32"/>
Service ID	<input type="text" value="256"/>
Network ID	<input type="text" value="1009"/>
ON ID	<input type="text" value="1009"/>
Service Provider	<input type="text" value="DigitalTV"/>
Network Name	<input type="text" value="DIGITAL-TV1"/>

Encoder

Bitrate	<input type="text" value="19000"/>
Audio Encoder	<input type="text" value="MPEG"/>
Half FPS	<input type="text" value="On"/>

5.Network Section

Network

IP Address	<input type="text" value="192.168.1.138"/>	Subnet Mask	<input type="text" value="255.255.255.0"/>
Default Gateway	<input type="text" value="192.168.1.1"/>		
<input type="button" value="Save"/>		<input type="button" value="RELOAD"/>	

The default IP is 192.168.1.138. You can change this on this page.

6.Update Section

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

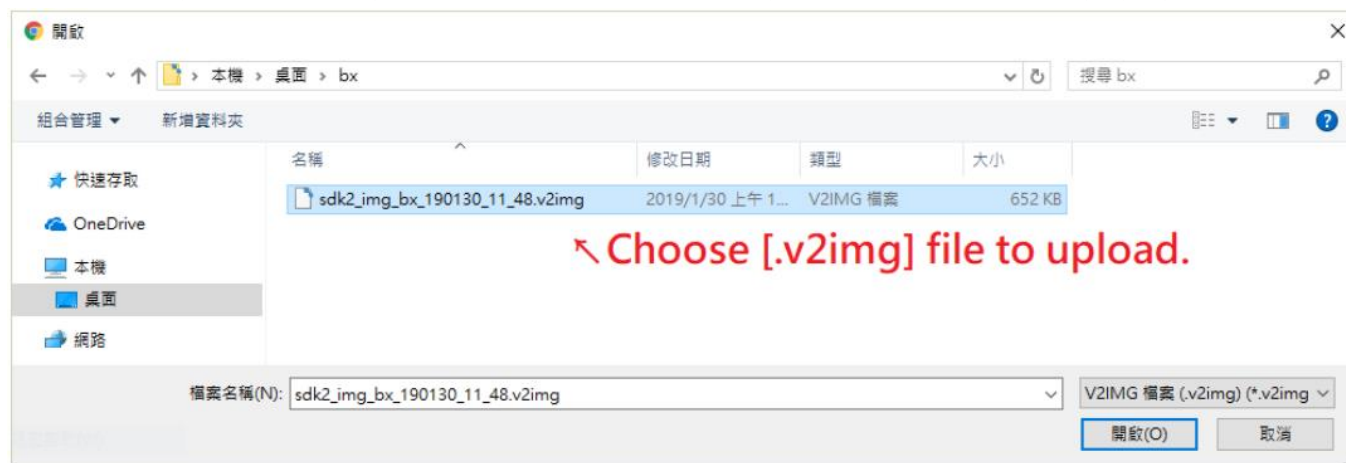


Remark:

- [1] Avoid updating the FW & Main MCU through the router, which may cause the update to fail.
- [2] If the update does not work properly, hold the reset button for 5 seconds before reloading the web page.

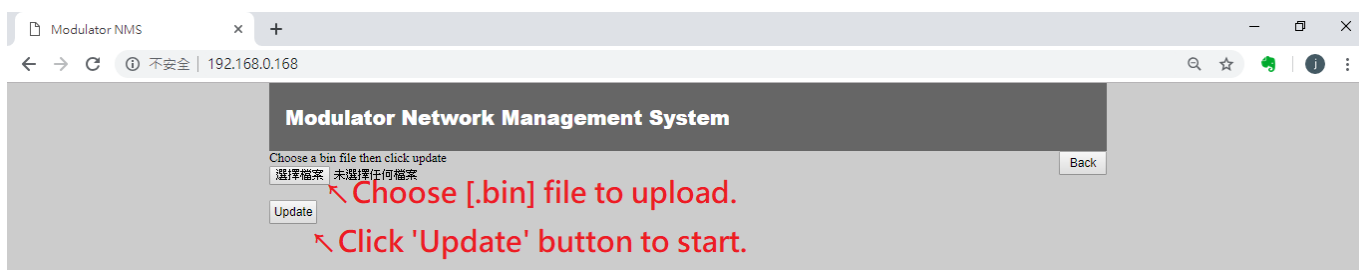
6.1 Update Modulator Firmware:

- 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.



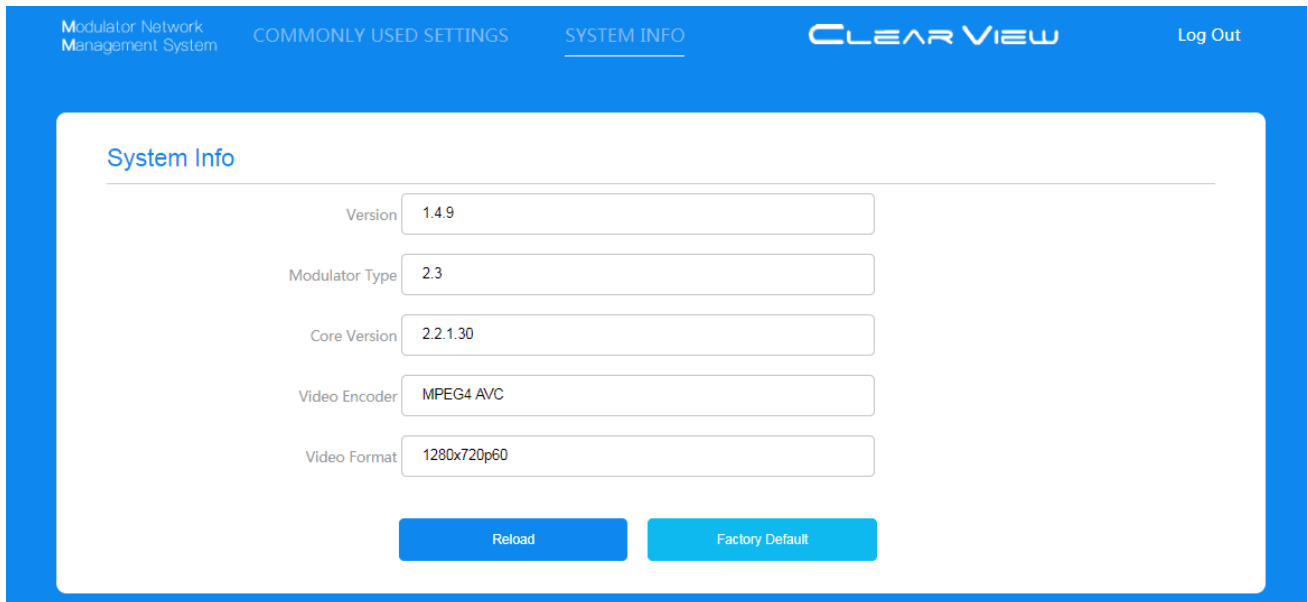
6.2 Update Main MCU- This is only for upgrading firmware:

- 1) Click " Start Update Main MCU " button, it will jump to another page like the picture below.
- 2) Choose the file [xxx.bin] to upload then click " Update " button.
- 3) When update is finished, the screen will automatically return to homepage.



7. SYSTEM INFO SECTION

User can check the software version and Video sources information here.



The screenshot shows the 'System Info' section of the Modulator Network Management System. The interface has a blue header with the following elements: 'Modulator Network Management System' on the left, 'COMMONLY USED SETTINGS' and 'SYSTEM INFO' in the center, the 'CLEARVIEW' logo on the right, and a 'Log Out' link. The 'System Info' section is titled and contains five input fields with the following values: Version (1.4.9), Modulator Type (2.3), Core Version (2.2.1.30), Video Encoder (MPEG4 AVC), and Video Format (1280x720p60). At the bottom of the section are two buttons: 'Reload' and 'Factory Default'.

Field	Value
Version	1.4.9
Modulator Type	2.3
Core Version	2.2.1.30
Video Encoder	MPEG4 AVC
Video Format	1280x720p60

Buttons: Reload, Factory Default

SAFETY INSTRUCTIONS

⚠ CONNECTING TO THE MAINS SUPPLY

This product connects to the mains supply via the power adaptor.
Before carrying out maintenance operation or modification of the installation, the Device has to be disconnected.

⚠ OVERVOLTAGE

An over-voltage cause short-circuits or fire. Always use the 12VDC power supply provided for single channel series.

⚠ LIQUIDS

Do not splash liquids onto the unit;
Do not place objects filled with liquids on it;
If any liquid should accidentally fall into the cabinet, disconnect the power plug.

⚠ CLEANING

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

⚠ VENTILATION

The ventilation holes should not be obstructed;
Do not install in a hermetically sealed environment;
Other electronic products or heat producing items should be kept a minimum distance of 15 cm from the unit for sufficient ventilation;

⚠ ACCESSORIES

Only use the supplied power adaptor;
The use of accessories not manufactured by the manufacturer can cause damage to the unit and will void warranty.

⚠ INSTALLATION OF THE UNIT

Do not expose the unit to rain or moisture;
Do not install in direct sunlight or in a humid place;
Respect the minimum and maximum temperature specifications

PACKAGE CONTENT

Device	1pcs
Power Adapter	1pcs