



# infosat

## Digital Modulator



DTM-HD01

Thank you for buying this encoder modulator.

Please read this manual carefully to install, use and maintain the encoder modulator in the best conditions of performance. Keep this manual for future reference.

We reserve the right to make changes to its products at any time without notice in order to improve design and supply the best possible product. Accordingly operation method may change. If you have any question, please consult the manufacturer.

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# 1. Safety Use

 **WARNING:** Hotplug is not allowed since it may cause system halted. To prevent fire or electrical shock, do not expose the device to rain or moisture.

 The encoder modulator is powered with a voltage of 12V DC. The power supply voltage must not exceed the recommended voltage, which otherwise may cause irreparable damage to the device and the invalidation of the warranty. Therefore:

- Do not replace power supply with a voltage greater than 12V DC.
- Do not connect the device to the power if the power cord is damaged.
- Do not plug the device into mains supply until all cables have been connected correctly .
- Do not cut the cord.

 Avoid placing the device next to central heating components and in areas of high humidity.

Do not cover the device with elements that obstruct the ventilation slots. If the encoder modulator has been kept in cold conditions for a long time, keep it in a warm room minimum 2 hours before plugging into the mains. Mount the device in vertical position with the connectors located on the top side.

When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutes may result in fire, electric shock or other hazards.

**Safety check-** Upon completion of any service or repairs to this device, ask the service technician to perform safety checks to determine that the device is in proper condition.

 **RISK** of damage to the unit

Mechanically handling the unit may result in damage. Do not connect the unit to the power supply before or during assembly . Connect the unit as below instructed.

## **⚠ NO HOT PLUG AND CONNECT THE CABLE AS FOLLOWING STEPS.**

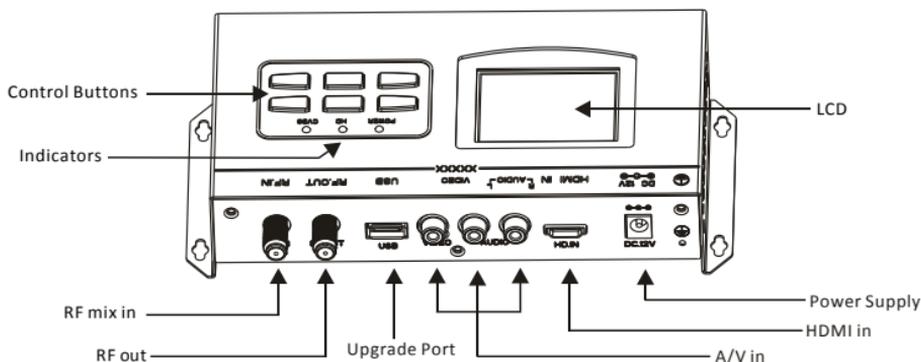
1. Mount and tighten the screws and plugs to secure the unit to the wall. Left 10 cm of free space around from each unit.
2. Connect the signal input in the respective connectors. The signal source can be from a surveillance monitor, DVD, STB and etc.
3. Optionally, connect the loop-through RF input coaxial cable.
4. Connect cable to RF output to STB/TV .
5. Power supply connection: Connect the power plug to the unit, then connect the power plug to the mains socket.

## **2. General Description**

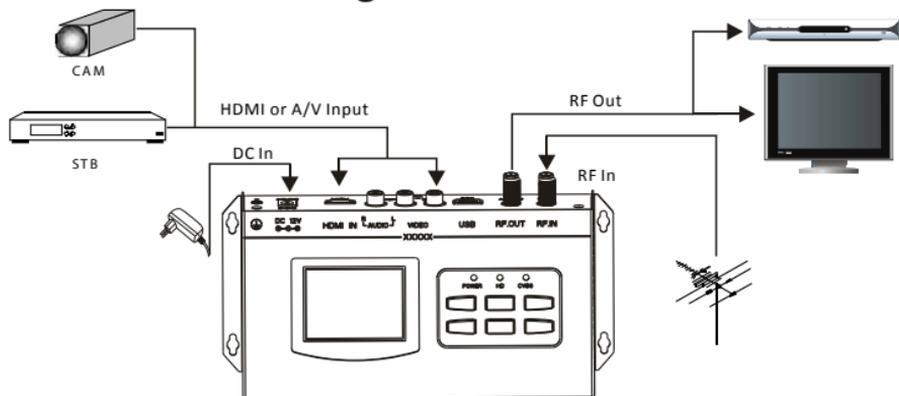
DTM-HD01 encoder & modulator is designed based on consumer electronics which allow audio/video signal input in TV distributions with applications in home entertainment, surveillance control, hotel Digital Signage, shops etc.

It is an all-in-one device integrating MPEG-4 AVC/H.264 encoding and modulating to convert audio/video signals into DVB-T RF out.

The signals source could be from STB, satellite receiver, closed-circuit television, cameras and antenna etc. Its output signal is to be received by a DVB-T standard TVs or STBs etc.

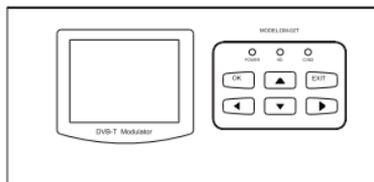


### 3. Connection Diagram



### 4. Operations and Management

DTM-HD01 is controlled and managed through the key board and LCD display.



**LCD Display** : Presents the parameter settings and run states. The backlight of the display is on when the power is applied.

**LED** : These lights indicate the working status

※ **POWER**: It lights on when the power supply is connected.

※ **HD**: It lights on when select the source of HDMI.

※ **CVBS**: It lights on when select the source of A/V.

▲ ▼ ◀ ▶ : Move cursor up/down/left/right, Page up/down, change the parameter settings.

**OK** : Use this button to enter a submenu or save a new setting after adjustment; press it to enter parameter setting.

**EXIT** : Press this button to step back, or cancel current parameter modifying.

When power on, the LCD will display main menu as below:

Main Menu	
Display	Status
Setup	Stream
Setup	Modulator
Channel Information	
Define User Channel	
System	Config

## 4.1 Display Status

Status	
Source:	AUTO
Country:	User-Define
Channel:	CH01
Freq(KHz):	730000
BW(MHz):	8
RF(dBm):	0
-----	
Resolution:	1080P

In this menu user can see the modulator basic run states.

[Source] : Select the input source, HDMI or A/V

[Country] : Select the country that user set in [select country] menu or “User-Define” .

[Channel] : Choose channel under this menu.

[Freq] : Adjust it at range of 50 MHz to 950MHz if you select “User-Define” . Set it according your regional situation or inquire your local services.

[BW] : Choose between 6M, 7M and 8M.

[RF] : Adjust the RF output power at range of 0 ~ +6dBm.

[Resolution] : Signal source resolution.

## 4.2 Setup Stream

Stream	
TSID:	1001
ONID:	2001
Network ID:	1001
Net. Name:	Gecen network
Program ID:	4001
Prog. Name:	Our program
Provider:	provider1
LCN:	0001

In this menu user can view or adjust TSID (Transport Stream ID), ONID (Original Network ID), Network ID, Network Name, Program number, LCN(Logical Channel Number) and etc for the output TS.

## 4.3 Setup Modulator

Modulator	
Country:	User-Define
Channel:	CH01
Freq(KHz):	730000
BW(MHz):	8
Constellat.:	64QAM
FEC:	7/8
FFT:	8K
Guard inte.:	1/32

In this menu user set up the detail parameters of modulation.

[Country] : Select the country that user set in [select country] menu or “User-Define” .

[Channel] : Choose channel under this menu.

[Freq] : Adjust it at range of 50 MHz to 950MHz if you select “User-Define” .

Set it according your regional situation or inquire your local services.

[BW] : Choose between 6M, 7M and 8M.

[Constellat.] : DVB-T modulator contains 3 constellation modes QPSK and 16QAM, 64QAM.

[FEC] : Forward Error Correction rate. It contains 1/2, 2/3, 3/4, 5/6 and 7/8.

[FFT] : Select between 2K and 8K.

[Guard inte.] : Select among 1/32, 1/16, 1/8 and 1/4.

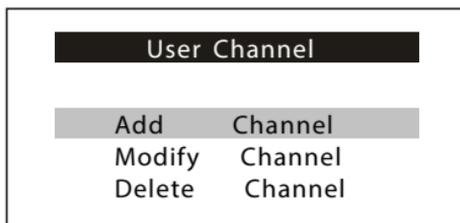
[RF out (dBm)] : Adjust the RF output power at range of 0 ~ +6dBm.

## 4.4 Channel Information

Information	
01	England
02	Netherlands
03	Serbia
04	Germany
05	Belgium
06	Hungary
07	Danmark

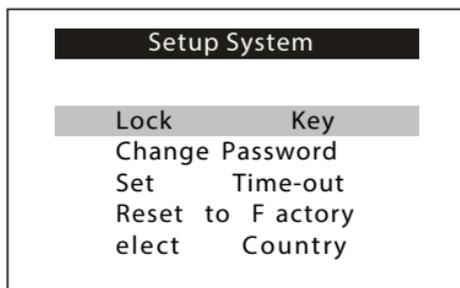
In this menu user can view channels of the select country .

## 4.5 Define User Channel



In this menu, user can edit user-defined channels, include add channel, modify channel and delete channel.

## 4.6 System Config



[Lock Key]: Choose to lock the keyboard, then the keyboard will be locked and cannot be applicable. It is required to input the password to unlock the keyboard. (The default password is "00000000".)

[Change Password]: To change the password for unlocking the keyboard.

[Set Time-out]: A time limit that LCD will light off. Select among 5s, 15s, 30s, 45s, 60s and never (seconds), and press "OK" to confirm.

[Reset to Factory]: Delete the added channels and resume the default settings.

[Select Country]: User can choose country under this menu.

## 5. Specifications

HDMI Encoding Section		
Video	Encoding	MPEG-4 AVC/H.264
	Resolution	1920*1080p@60, 1920*1080p@50, 1920*1080i@60, 1920*1080i@50, 1280*720p@60, 1280*720p@50
	Aspect ratio	16:9, 4:3
	Bitrate	1.000~18.000 Mbps
Audio	Encoding	MPEG1 Layer II
	Sample rate	48KHz
	Bit rate	64, 96, 128, 192, 256, 320kbps
CVBS Encoding Section		
Input	PAL, NTSC	
DVB-T Modulator Section		
Standard	DVB-T COFDM	
Bandwidth	6M, 7M, 8M	
Constellation	QPSK, 16QAM, 64QAM	
Code rate	1/2, 2/3, 3/4, 5/6, 7/8	
Guard interval	1/32, 1/16, 1/8, 1/4	
Transmission mode	2K, 8K	
MER	≥31dB	
RF frequency	50~950 MHz	
RF output level	0~ +6 dBm	
System		
Upgrade	USB	
Power supply	DC 12V	
Operation temperature	0~45°C	