

EDISION®

HD Modulator Bin1

Digital single HD Modulator to DVB-C, DVB-T or ISDB-T MPEG4



User's Guide



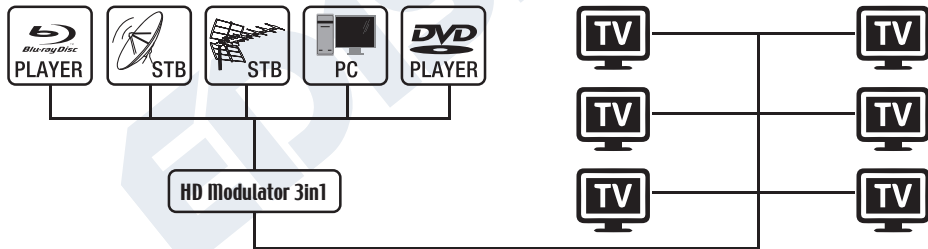
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The CE certificate of the product is available on our webpage, by visiting this link:
<https://www.edision.gr/en/support>

► INTRODUCTION

Digital, 3in1 Single Channel FULL HIGH DEFINITION MPEG4 modulator with 3 SELECTABLE modulation SIGNALS (DVB-C, DVB-T & ISDB-T). With input from any HDMI source (Terrestrial & Satellite decoders, cameras, DVD, DVR etc.) it modulates and produces selectable output by choosing one out of THREE (3) signals: DVB-C, DVB-T & ISDB-T, depending on the installation signal, with simple adjustment using the 6 buttons and the 4-digit LED display. It offers High Output Resolution up to 1080p @ 30FPS and excellent image quality. Easy and fast PLUG & PLAY installation plus rapid adjustment with the Fast Pre-Config function among 50 selectable IDs for absolute flexibility of configuration, according to three installation signals (DVB-C, DVB-T & ISDB-T) and the number of modulators in the installation.



► FEATURES

- INPUT signal: HD IN
- OUTPUT signal: Cable DVB-C, Digital Terrestrial DVB-T MPEG4 or ISDB-T MPEG4
- High Video Resolution up to 1080p@30FPS
- Frequency Range
DVB-C: 47-862 MHz
DVB-T: VHF (CH.5-12) & UHF (CH.21-69)
ISDB-T:VHF (CH.7-13) & UHF (CH.14-69)
- MER more than 35dB
- Adjustable RF Output Level / Default 90dbμV
- Fast Pre-Config Function / 50 ID's Selectable
- Backup Config File via USB
- Software Upgrade via USB
- Ports: HD IN, RF OUT, USB, DC 5V, GROUND
- 4-digit LED Display
- Low Power Consumption
- External Power Supply 5V 2A
- Black color

► TECHNICAL SPECIFICATIONS

Processor	200MHZ 32Bits RISC
Memory	DDRII 16bit 512Mbits (Embedded) & NOR Flash 32Mbit
HDMI Input	HD v1.4a
USB Type	USB 2.0 HOST, Fat32 support
Power Consumption	10W max, 100-240V AC to DC adapter 5V 2A
Video Encoder	MPEG1, MPEG2 MP@HL, MPEG4 SP@L3 to ASP@L5, MPEG4 AVC HP@level4.1, MP@level4.1
Aspect Ratio	16:9 wide screen, 4:3 letter box, 4:3 pan scan
Resolution	Up to 1080p@30FPS
Audio encoder	MPEGI L1/2, MPEGII LII, AAC LC, HE-AAC v1/v2 (2-CH)

► RF SPECIFICATIONS

Frequency Range	DVB-C, DVB-T or ISDB-T
Output Frequency Range:	<u>DVB-C: 47-862 MHz</u> Option 1: Change the frequency in steps of 10KHz from the screen Option 2: Change frequency in steps of 1KHz with USB Config
	<u>DVB-T: VHF (CH.5-12) & UHF (CH.21-69)</u> Option 1: Change preset Channels from the screen Option 2: Change preset Channels with USB Config
	<u>ISDB-T: VHF (CH.7-13) & UHF (CH.14-69)</u> Option 1: Change preset Channels from the screen Option 2: Change preset Channels with USB Config
Impedance	50Ω
FEC	1/2, 2/3, 3/4, 5/6, 7/8
Guard Interval	1/4, 1/8, 1/16, 1/32
Constellation	QPSK, 16QAM, 64QAM
RF Output level	90dBμV, adjustable attenuation 0 ~ -14dB, adjustable gain 0 ~ + 6dB
Bandwidth	DVB-C: 7MHZ, 8MHZ DVB-T: 7MHZ, 8MHZ ISDB-T: 6MHZ
DVB-C QAM	16QAM, 32QAM, 64QAM, 128QAM, 256QAM
FFT	2K, 8K
Reed Solomon	202, 188, T=8
Symbol Rate	Up to 31.668 MBPS
MER	> 35dB, at maximum RF output level

► CONNECTION & OPERATION

1. Connect an HDMI cable from HDMI source device to the “HD in” of HD Modulator.
2. Connect an RF coaxial cable to the “RF OUT” output for signal distribution to the RF network.
3. Connect the power adapter to the HD Modulator.
4. Select configuration signals from the MENU TV STANDARD (STAN) between DVB-C, DVB-T or ISDB-T
5. Select an output frequency or channel.
6. If you have more than one HD Modulator in the same installation, select a different ID for each modulator.
7. Proceed with channel scanning on your TV/STB.



► PACKAGE INCLUDES & DISPLAY

1. HD Modulator
2. Power Adapter
3. Fastening screws
4. User Manual



KEY LOCK

Press the lock key once, and when the green led lights up, the keypad is locked. Press once again to unlock.

HD SIGNAL

Connect the HDMI cable to the HD IN and, when the green led lights up, the signal is active.



► MAIN MENU

To enter the main menu options, press **once** the **Menu/OK** key and use the **Left or Right keys** to navigate within the main menu.



FR: Shows the selected RF output frequency on the DVB-C modulation cable signal. With the «Up», «Down» keys you change the selection.



CH: Shows the selected RF output channel in the DVB-T or ISDB-T terrestrial signal modulation selection. Use the “Up”, “Down” keys to change the selection.



QAM: Shows the QAM in the DVB-C modulation. Use the “Up”, “Down” keys to change the 16QAM, 32QAM, 64QAM, 128QAM or 256QAM selection.



ID: Shows the current ID. Use the “Up”, “Down” keys to change the selection



RF: Shows the RF output level. Use the “Up”, “Down” keys to change the selection.



LCN: Shows the current LCN type. With the “Up”, “Down” keys you can change the selection.



FACT: Factory settings. You can press the “Up” button, to select them.



CFG: Export current configuration file. You can press the “Up” key, to save it to USB stick.



SOFT: Current software version. You can press the “Up”, “Down” key to display it.



STAN: Shows the TV STANDARD modulation signals. Use the “Up”, “Down” keys to change the DVB-C, DVB-T or ISDB-T selection.

To save the selected configuration press once the **MENU/OK** key and confirm with **YES** or **NO** by pressing the **LEFT** and **RIGHT** keys and press **MENU/OK** key once again. The configuration is being saved, please do not power off!



► CONFIGURATION EXTRACTION (CFG)

For an advanced configuration of the HD modulator, you must extract the configuration file to a USB drive, modify it and import it again in the HD modulator. To extract the configuration file named **jedi_config.txt***, you must connect a USB drive** to the USB slot, enter the **Main Menu**, select



CFG and **press key UP** to extract the file to the USB drive. When the message **SUCC** appears, the process has been successfully completed.

**IMPORTANT: The name of the configuration file jedi_config.txt should not be changed!*

***IMPORTANT: Use only FAT32 type. In any other case, the FAIL message will indicate the failure of the process.*



Configuration file details (jedi_config.txt)

<attribute>value<attribute>	Description: Allowed values
<constellation> 2 <\constellation>	Constellation: 0 QPSK, 1 16QAM, 2 64QAM
DVB-T or ISDB-T MODE <channel> 43 <\channel>	RF Output Channel: DVB-T 05-12 & 21-69 ISDB-T 07-13 & 14-69
DVB-C MODE <frequency> 474000 <\frequency>	RF Output Frequency: DVB-C 47-862 MHz
DVB-C MODE <qam> 4 <\qam>	DVB-C QAM 0=16QAM, 1=32QAM, 2=64QAM, 3=128QAM, 4=256QAM
DVB-C MODE <symbolrate> 6900000 <\symbolrate>	DVB-C Symbolrate Width: 200 up to 6960000 KHz
<bandwidth> 8000 <\bandwidth>	Channel Bandwidth: 6000, 7000 or 8000 KHz
<FEC> 2 <\FEC>	FEC: 0 , 1 , 2 , 3 , 4
<FFT> 1 <\FFT>	FFT: 0 2K, 1 8K
<GI> 0 <\GI>	Guard Interval: 0 , 1 , 2 , 3
<Name> TV-1 <\Name>	Channel Name: Max 12 characters
<RF_Level> 0 <\RF_Level>	RF Output Level: 6,4,2,0,-2,-4,-6,-8,-10,-12,-14
<LCN_Type> 1 <\LCN_Type>	LCN Type: 0 ITC, 1 Italy

<LCN> 1 <\LCN>	LCN: 1 up to 999
<TSID> 1 <\TSID>	Transport Stream ID: 1 up to 65534
<ONID> 1 <\ONID>	Original Network ID: 1 up to 65534
<NetworkID> 1 <\NetworkID>	Network ID: 1 up to 65534
<audio_bitrate> 3 <\audio_bitrate>	Audio Bitrate: 0 =64kbps, 1 =96kbps, 2 =128kbps, 3 =192kbps, 4 =256kbps, 5 =320kbps
<PCR_GAP> 0 <\PCR_GAP>	PCR Gap: Audio/Video sync max +5
<audio_format> 0 <\audio_format>	Audio format: 0 MPEG2 L2, 1 AAC MPEG2
<videopid> 1002 <\videopid>	Video PID: 1 up to 8000
<audiopid> 1001 <\audiopid>	Audio PID: 1 up to 8000
<pmtpid> 1003 <\pmtpid>	PMT PID: 1 up to 8000
<serviceID> 1000 <\serviceID>	Service ID: 1 up to 9999
<video_bitrate> 18000 <\video_bitrate>	Video Bitrate: 0 up to 27000
<Netname> EDISION <\Netname>	Signal Name, Max 10 characters allowed
<TV_Standard> 2 <\TV_Standard>	TV Standard: 0 DVB-T, 1 ISDB-T, 2 DVB-C

► CONFIGURATION IMPORT (CFG)

To import the configuration file **jedi_config.txt**, you must save the file within the root directory* of a USB drive, insert the drive to the USB slot and power cycle your HD Modulator. When you see this message **CFG**, press the **MENU/OK** button to confirm the import process. When the process is completed, the unit will reboot with the new configuration!



***IMPORTANT:** Use only FAT32 partitions. In any other case, the configuration file will not be read and the device will reboot normally!

► FAST PRE-CONFIG FUNCTION / 50 ID'S SELECTABLE

This feature allows the user to configure easy and fast all the signal parameters of the unit, selecting from the 50 ready and installed IDs*. This function is necessary and important when we have more than one HD Modulator in the same installation. The user must select an ID to change the parameters, so that the final devices can be tuned to the signal from the HD Modulators.

***IMPORTANT:** In order to change the **Channel Name**, you have to use the CFG function to extract, edit and load the modified configuration file to the HD Modulator.

Example of 7* different ID's:

	ID01	ID02	ID03	ID04	ID05	ID06	ID07
Name	TV-1	TV-2	TV-3	TV-4	TV-5	TV-6	TV-7
LCN	1	2	3	4	5	6	7
TSID	1	2	3	4	5	6	7
ONID	1	2	3	4	5	6	7
NetworkID	1	2	3	4	5	6	7
Videopid	2101	2102	2103	2104	2105	2106	2107
audiopid	2201	2202	2203	2204	2205	2206	2207
pmtplD	2301	2302	2303	2304	2305	2306	2307
serviceID	2401	2402	2403	2404	2405	2406	2407

***IMPORTANT:** 7 sample ID configurations, out of 50 installed in the HD modulator.

► TROUBLESHOOTING

The device does not boot

- Make sure the power supply is connected
- Check power supply voltage

I cannot export configuration file

- Make sure your USB drive is working
- Make sure that the file system is FAT32

I get “No signal” message on the screen

- Please check your HDMI cable or the HDMI source device
- Make sure that the HDMI signal complies with the supported standards

The channel number on the list does not appear properly

- Make sure you have selected correct LCN type
- Make sure you have no conflicting LCN numbers

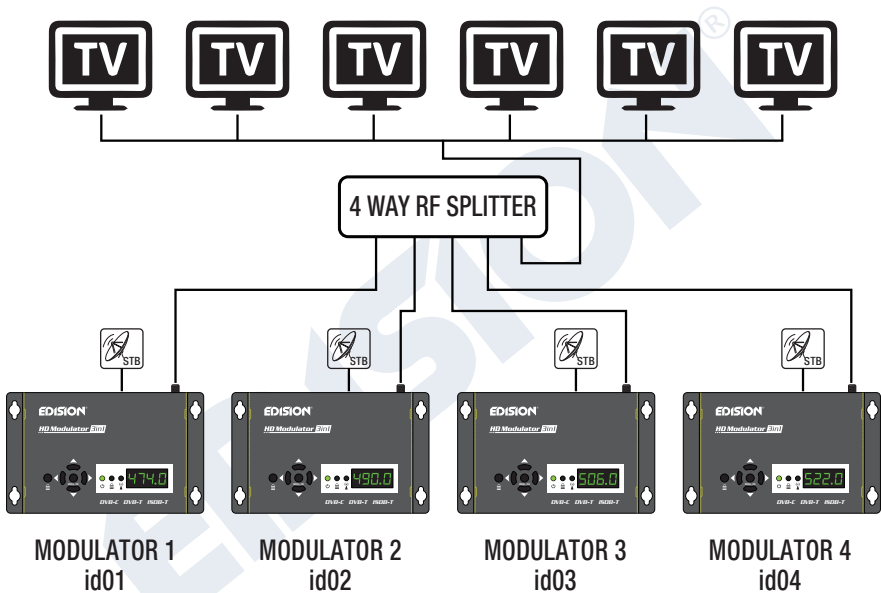
The video of the modulator appears to be from another modulator

- Make sure your Fast Pre-Config ID does not conflict with another unit

The sound is not synchronized with the video

- Please adjust the PCR gap each time until you get the perfect A/V sync

For more queries or advanced troubleshooting, please contact our technical support at support@edision.gr



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