

EDISION®

HDMI Modulator Xtend

HDMI Modulator to DVB-T/MPEG4 + HDMI LOOP & IR Control



User's Guide



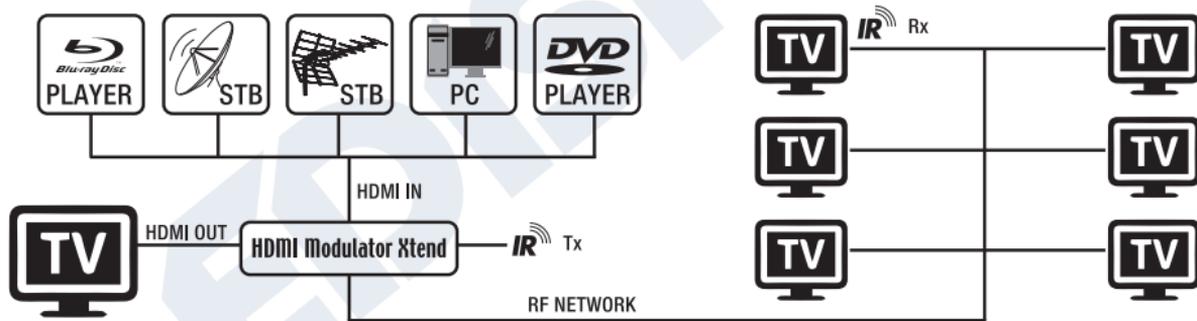
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The CE certificate of the product is available on our webpage, by visiting this link:
<https://www.edision.gr/en/support>

► INTRODUCTION

Digital FULL HIGH DEFINITION single channel modulator, with EMBEDDED IR REMOTE CONTROL system over coaxial, plus HDMI LOOP for HDMI signal connection to a TV set. HDMI signal input from any HDMI source (Terrestrial & Satellite TV receivers, Cameras, DVD's, DVR's, etc) can be converted up to FULL HIGH DEFINITION 1080p, Digital Terrestrial DVB-T signal output, in VHF/UHF band, plus the HDMI source can be also connected to a TV set, using the HDMI LOOP OUT of the modulator. The embedded IR-over-Coax system IR EDI-Rx of the modulator, offers the ability to control the connected HDMI source, from the TV point, through the existing coaxial cable connection.





► FEATURES

- INPUT signal: HD IN
- OUTPUT signal: Digital Terrestrial DVB-T MPEG4
- IR control over coaxial, through the embedded EDI-Rx system.
- On board HDMI LOOP for source HDMI signal connection to TV.
- On-board RF LOOP (IN)
- High Video Resolution up to 1080p
- Frequency Range VHF (CH. 5-12) & UHF (CH. 21-69)
- MER more than 35dB
- Adjustable RF Output Level / Default 90db μ V
- Fast Pre-Config Function / 50 ID's Selectable
- Backup Config File by USB
- Software Upgrade by USB
- Ports - Connections: HD IN, HD OUT, RF IN, RF OUT, IR OUT, USB, DC 5V, GROUND
- 4-digit LED Display
- Front panel buttons: Button Lock, Menu/OK, Left / Right menu selection, Up/Down menu selection.
- Low Power Consumption

► TECHNICAL SPECIFICATIONS

Processor	200MHZ 32Bits RISC
Memory	DDRII 16bit 512Mbits (Embedded) & NOR Flash 32Mbit
HDMI Input/Output	HDMI 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	VHF (CH. 5-12) & UHF (CH. 21-69)
Impedance	50Ω
RF IN	RF signal mix through
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	~90dBuV Adjustable from 0 to -14dB 0 to +6d
Bandwidth	7MHZ, 8MHZ
FFT	2K, 8K
Reed Solomon	202, 188, T=8
Symbol Rate	Up to 31.668 MBPS
MER	>35dB at Maximum RF output level
IR OUT	Stereo Jack 3,5mm (Jack to IR EDI-Tx)

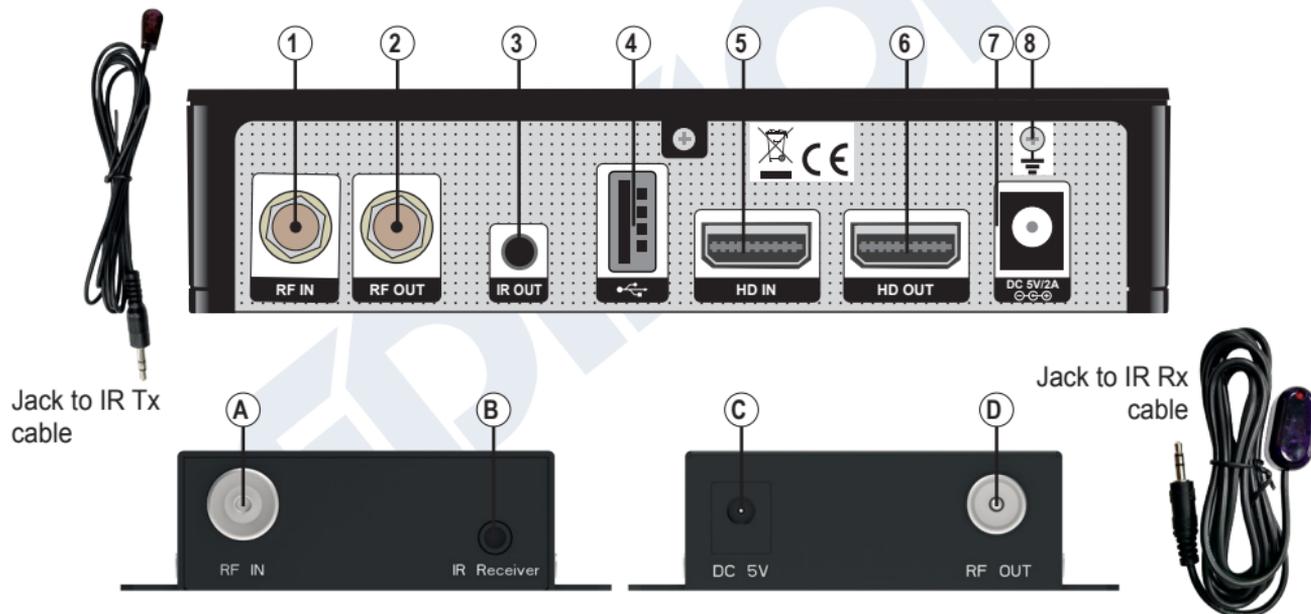
► IR CONTROL SYSTEM EDI-RX SPECIFICATIONS

Modulation Type	ASK
Frequency bandwidth	VHF III (174-230 MHZ) & UHF (470-862 MHZ)
RF IN Input	1x Female IEC-type
RF OUT Output	1x Male IEC-type
IR Receiver OUT	Stereo Jack 3,5mm (Jack to IR EDI-Rx)
DC OUT	5V/500mA (DC to USB cable)
IR Signal LED	IR status indication

► CONNECTION & OPERATION

1. Connect an HDMI Cable from HDMI source device to the HDMI Modulator Xtend HD in
2. For viewing the content from the HDMI source connected to the HDMI Modulator Xtend to another HDMI device (TV set), connect an HDMI cable from the HD OUT (6) of the HDMI Modulator Xtend, to the HDMI IN of the TV
3. Connect an RF coaxial Cable from RF OUT to the RF Network or to an ANT IN of an MPEG4 TV.
4. As an option, the HDMI Modulator Xtend RF IN (1) can be used as a connection-mixing of the existing coaxial network or as a connection-mixing of a network of modulators.
5. For controlling from a second TV point, connect the RF OUT(2) of the HDMI Modulator Xtend to the RF IN (A) of the IR EDI-Rx and then from the RF OUT (D) of the EDI-Rx, to the ANT IN of the TV.
6. From the IR OUT(3) of the HDMI Modulator Xtend, connect the Jack to IR Tx cable and place it in front of the HDMI source to be controlled via IR. Then connect the Jack to IR Rx (B) from the IR Control System EDI-Rx in front of the second TV's IR reception point, so as to control it via IR.
7. In case there are more than one HDMI Modulator Xtend in the same installation, please choose different ID for each one modulator (from the 50 pre-installed into the device). For each additional IR control point, you need one IR Control System EDI-Rx.
8. Connect the ground point (8) of the HDMI Modulator Xtend to a proper grounding point.
9. Connect the power supply DC5V from the PSU to the HDMI Modulator Xtend DC power input (7).

10. Connect the power supply DC5V input of the IR Control System EDI-Rx (C) to a USB port of a TV/STB, using the cable USB-to-DC.
11. Proceed to channel scan on your TV or STB.



ON/OFF

ON/OFF status of the HDMI Modulator Xtend device



KEY LOCK

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



HD IN SIGNAL

Connect the HDMI cable to the HD IN and when the green light turns on, the signal is active



HD OUT SIGNAL

Connect the HDMI cable to the HD OUT and when the green light turns on, the signal is active

► PACKAGE INCLUDES

First TV equipment:

1. HDMI Modulator Xtend
2. Jack to IR Tx cable
3. 5V/2.0A EU/UK universal Power Supply Unit

General:

7. User Manual EN/DE/GR

Second TV equipment:

4. IR Control System EDI-Rx
5. Jack to IR Rx cable
6. USB to DC (5V) cable

► 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.



CH: Shows the current RF channel output. Use the **keys Up & Down** to select the desired RF channel output.



FACT: Factory defaults. Press **key UP** to restore factory defaults.



ID: Shows the current ID. Use the **keys Up & Down** to set the desired ID.



CFG: Configuration extract. Press **key UP** to extract the current configuration to the USB storage device.



RF: Shows the RF output level. Use the **keys Up & Down** to adjust to the desired RF level.



SOFT: Shows the SW version. Use the **key UP** to display the current SW version.



LCN: Shows the current LCN type. Use the **keys Up & Down** to set the desired LCN type.

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 HDMI modulator Xtend, you must extract the configuration file to a USB drive, modify it and import it again in the HDMI modulator Xtend. 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 configuration file **jedi_config.txt** should not be renamed!

****IMPORTANT:** Use only FAT32 partitions! In any other case, the message **FAIL** will indicate that the process has not been completed.



Configuration file details (jedi_config.txt)

<attribute>value<attribute>	Description: Allowed values
<constellation> 2 <\constellation>	Constellation: 0 QPSK, 1 16QAM, 2 64QAM
<channel> 43 <\channel>	RF channel: 05 to 12 & 21 to 69
<bandwidth> 8000 <\bandwidth>	Channel Bandwidth: 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 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 to 999
<TSID> 1 <\TSID>	Transport Stream ID: 1 to 65534
<ONID> 1 <\ONID>	Original Network ID: 1 to 65534
<NetworkID> 1 <\NetworkID>	Network ID: 1 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 to 8000
<audiopid> 1001 <\audiopid>	Audio PID: 1 to 8000
<pmtpid> 1003 <\pmtpid>	PMT PID: 1 to 8000
<serviceID> 1000 <\serviceID>	Service ID: 1 to 9999
<video_bitrate> 18000 <\video_bitrate>	Video Bitrate: 0 to 27000
<Netname> EDISION <\Netname>	Network Name, Max 10 characters allowed

► 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 HDMI modulator Xtend. 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 enables the user to operate the unit hassle free by automatically setting the appropriate broadcasting table information to provide a more convenient installation, easy to adjust anytime with no tools required*!

This feature is important when there are several HDMI modulators Xtend operating within the same TV coaxial distribution network. The user should change each unit's broadcasting table information to be able for the end user devices to receive the channels.

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

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
servicelD	2401	2402	2403	2404	2405	2406	2407

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

► 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

The modulated channel is not produced in the RF OUT

- Make sure that the TV set has a DVB-T MPEG4 tuner
- Make sure that the selected RF output channel number, is not the same as a received TV channel or the same as from other modulator output
- In case the HDMI Modulator Xtend is connected in line with the aerial antenna, disconnect the aerial antenna, connect only the modulator and try again

“Signal Loss!” message appears on screen

- Check the HDMI cable and connection, regarding the cable itself and the HD IN and OUT
- Make sure that the HDMI signal is compatible with the supported formats

Resolution not support” message appears

- Make sure that the source Video output does not exceed 1080p@30FPS resolution

The channel number on the list does not appear properly

- Make sure that the TV set supports LCN (Logical Channel Numbering) functions and it is ON
- Make sure that you have selected the correct LCN type
- Make sure that the same LCN has not been selected in more than one devices

The video (image) of the HDMI Modulator Xtend appears to be from another HDMI Modulator Xtend

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

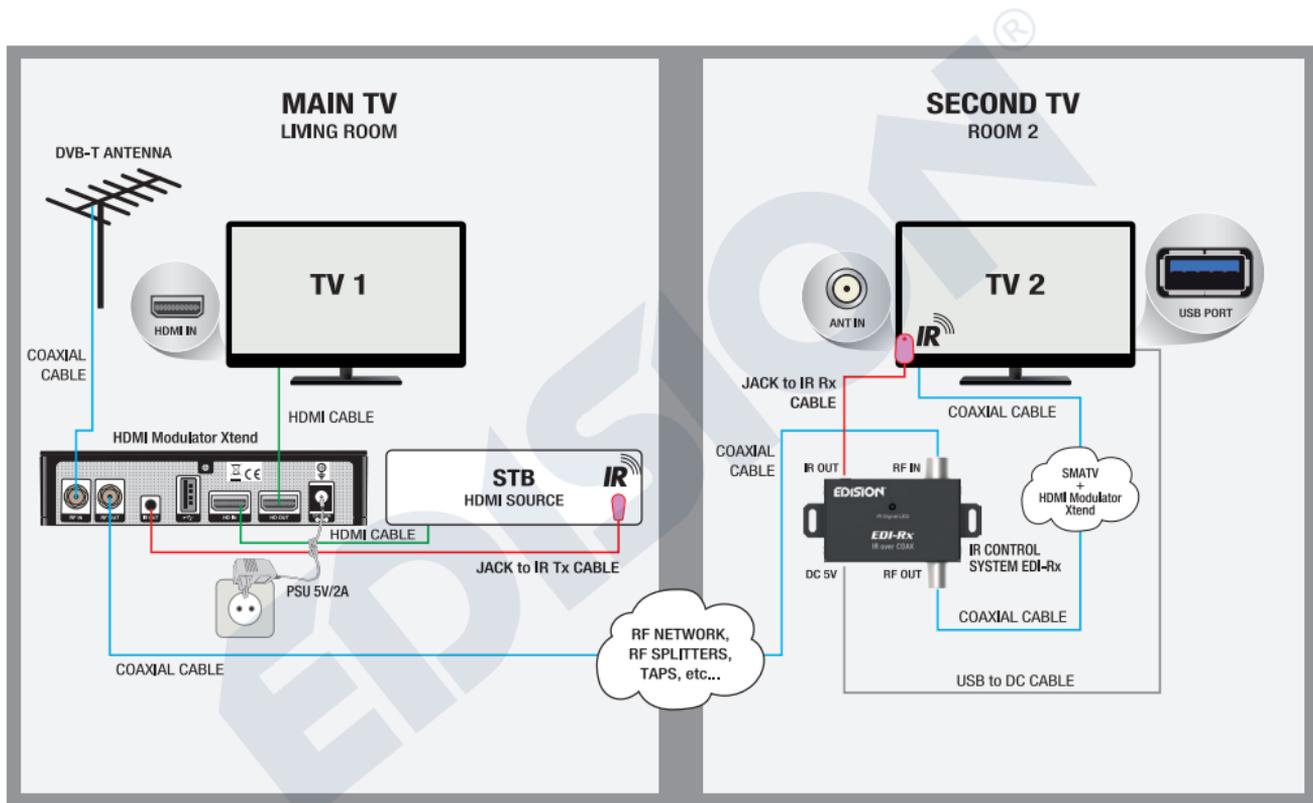
The sound is not synchronized with the video

- From the menu "PCR Gap", please adjust the PCR gap accordingly, until you get the perfect Audio/Video sync

The IR control at the second TV point does not work

- Make sure that the Jack to IR Tx cable is close to the HDMI source device
- Make sure that there is a clear field between the IR remote control and the Jack to IR Rx cable and the distance between them is up to ~6 meters
- In case the LED indication of the IR Control System EDI-Rx is always ON, this may be caused by interference. Please relocate the device
- Check the DC 5V power supply of the IR Control System EDI-Rx
- Make sure that the IR signal coaxial cable path does not include active devices such as amplifiers, multiswitches etc.

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



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