

OPTIMUSS

HDMI Modulator T100



User's Guide

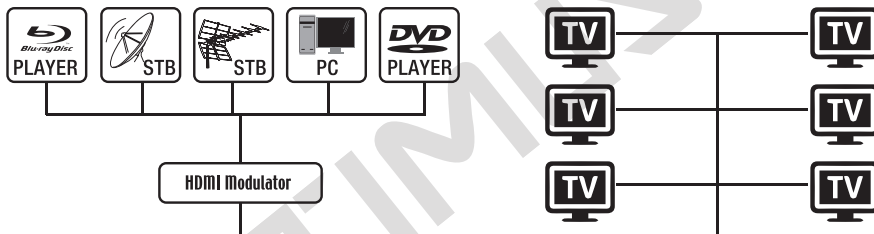


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► INTRODUCTION

Digital single-channel FULL HIGH DEFINITION modulator. HDMI signal input from 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. Produces excellent quality signal output, combined with reliable, easy and fast configuration with the Pre-Config Function and stable operation in any installation scheme.



► FEATURES

- INPUT signal: HD IN
- OUTPUT signal: Digital Terrestrial DVB-T MPEG4
- 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 90dbµV
- Fast Pre-Config Function / 50 ID's Selectable
- Backup Config File by USB
- Software Upgrade by USB
- Ports: HD IN, RF OUT, USB, DC 5V, GROUND
- 4-digit LED Display
- Low Power Consumption



► TECHNICAL SPECIFICATIONS

Processor	200MHZ 32Bits RISC
Memory	DDRII 16bit 512Mbits (Embedded) & NOR Flash 32Mbit
HDMI Input	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
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 +6dB
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



► CONNECTION & OPERATION

1. Connect an HDMI Cable from HDMI source device to the HDMI Modulator HD in
2. Connect an RF Cable from RF OUT to the RF Network
3. Connect the power supply to the HDMI Modulator
4. Select the desired RF Channel output
5. If there are more than one HDMI Modulators in the same installation, select ID for each one
6. Proceed with DVB-T scanning on your TV/STB



► PACKAGE INCLUDES

1. HDMI Modulator
2. Power Adapter
3. Mounting screws
4. User Manual

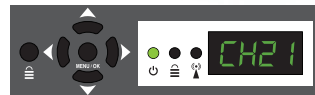
KEY LOCK

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



HDMI SIGNAL

Connect the HDMI cable to 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.



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, you must extract the configuration file to a USB drive, modify it and import it again in the HDMI 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 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> DTV <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. 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 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
pmtPID	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 HDMI 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

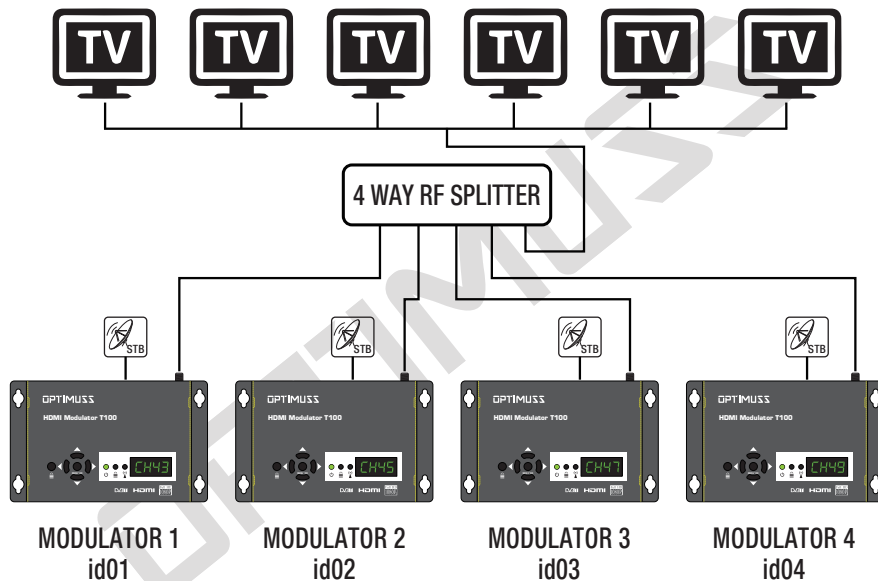
- Make sure you have selected correct LCN type
- Make sure you have no conflicting LCN numbers

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



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