

# HD-4797 4-Input HD Digital Modulator with HDMI Loop Through and IR User Guide and Install Manual

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## SAFETY PRECAUTIONS



*The presence of this symbol is to alert the installer and user to the presence of uninsulated dangerous voltages within the product's enclosure that may be of sufficient magnitude to produce a risk of electric shock.*

**TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS DEVICE TO RAIN OR MOISTURE. DO NOT OPEN THE UNIT. REFER SERVICING TO QUALIFIED PERSONNEL ONLY.**

- ❖ DO NOT apply power to the unit until all connections have been made, all components have been installed and all wiring has been properly terminated.
- ❖ DO NOT terminate, change or uninstall any wiring without first disconnecting the unit's power adapter from the device.
- ❖ This device is supplied with the appropriately rated 12VDC power supply with the center pin positive. The use of any other power supply could cause damage and invalidate the manufacturer's warranty.
- ❖ DO NOT power on the unit until all cables and connections to the device have been properly connected.
- ❖ The device should be installed in an environment consistent with its operating temperature specifications. Placement next to heating devices and ducts is to be avoided as doing so may cause damage. The device should not be placed in areas of high humidity.
- ❖ DO NOT cover any of the device's ventilation openings.
- ❖ If the device has been in a cold environment allow it to warm to room temperature for at least 2 hours before connecting power.



## PACKAGE CONTENTS

This package contains:

- ❖ One HD-4797 HD Digital Modulator
- ❖ One Power Cord
- ❖ One User Guide and Install Manual

Inspect the package before starting installation to ensure there is no damage and all supplied contents are present. Contact your distributor or dealer should the device be damaged or package contents are incomplete.

## PRODUCT DESCRIPTION



**digi-MOD HD by ZyCast** HD-4797 Modulator converts Digital Video Broadcasting (DVB) high definition video and audio signals to COFDM. The HD Digital Modulator is with HDMI Loop Through , IR function, and manual Gain adjustment. The unit's front-mounted LCD display allows for easy configuration and adjustments.

**ZyCast's** HD-4797 Digital Modulator is ideal for any Commercial RF Network. The high quality HD design allows for watching action packed movies and sports channels on any HDTV. The space saving design delivers up to 4 High Quality HD channels in a single 1RU space.

### Features

- ✧ H.264 AVC
- ✧ HDMI Input, HDMI Loop through, RF Output
- ✧ Built-in IR control
- ✧ Gain Control (20dB Manual Attenuation)
- ✧ RJ-45 port for Web Management
- ✧ Video resolution : Up to 1080p
- ✧ Perfect, clean, and clear picture on high motion video, sports, text crawls/rolls, etc.
- ✧ Front panel LCD Display for easy installation
- ✧ Cool & silent operation
- ✧ Rack mountable 1RU height

## SPECIFICATIONS

INPUT	HD-4797
Video Input	HDMI
Video Input Level	0.7 – 1.4V(peak-to peak)
Video Mode	PAL / NTSC
Audio input	Stereo
Audio Input Level	0.4 – 4.8V (p-to-p)
OUTPUT	
Frequency Range	Local country available
Output Level	85 dB $\mu$ V
MER	36 dB typ.
MODULATION	
Video Resolution	480i, 480p, 576i, 576p, 720p, 1080i, 1080p
Video Compression	H.264 AVC
Audio Compression	MPEG1 Layer II / AAC
LCN	Yes
Carrier (OFDM Mode)	2K/8K
Guard Intervals	1/32
Code Rate (FEC)	7/8
Constellations	64-QAM
GENERAL	
Power Supply	12 VDC 4 Amp.
Consumption	1650 mA
Operating Temperature	0°C to +45°C
Storage Temperature	-10°C to +60°C
Languages	English
Dimensions	482.7mm x 187mm x 44.4mm
Weight	2.76 kgs

***\*Specifications subject to change without prior notice***

# INSTALLATION



***System Installer must adhere to Article 820-40 of the NEC that provides guidelines for proper grounding and specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as possible.***

## UNPACKING and INSPECTION

Each unit is shipped factory tested. Ensure all items are removed from the container prior to discarding any packing material.

Thoroughly inspect the unit for shipping damage with particular attention to connectors and controls. If there is any sign of damage to the unit or damaged or loose connectors contact your distributor immediately. Do not put the equipment into service if there is any indication of defect or damage.

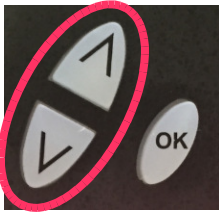
## HARDWARE INSTALLATION and CONNECTIONS



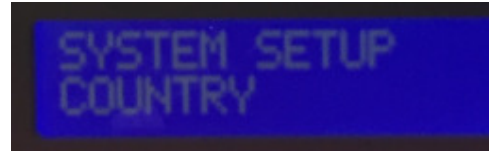
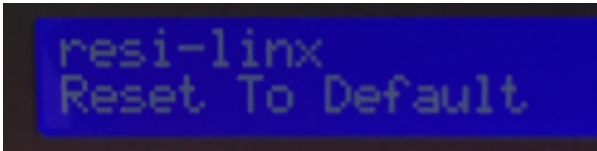
1. Use HDMI cables to connect the video sources (e.g., CATV, DVD, VCR, Camera) to the unit's HDMI Input port 1,2,3,4. It is highly recommended that quality HDMI cables be used for all video source connections.
2. Use HDMI cables to connect the unit's HDMI Loop through port 1,2,3,4 to televisions. Or Use a quality 75Ω coaxial cable with "F" connectors from the unit's RF Output jack to the distribution system (combiner or reverse splitter) or directly to a television.
3. Use a quality RJ45 cable to connect the Remote Setup port to a computer RJ45 port for setup/manage the unit.
4. If applicable, connect an IR repeaters jack to the IR ports for IR remote control function. If needed, you can turn ON the REMOTE POWER for sending a 12V power through RF Output to the connected module.
5. Connect the included power cord to the unit's DC 12V POWER jack.
6. Connect the power supply to an appropriately rated AC power outlet.

## Reset to Default

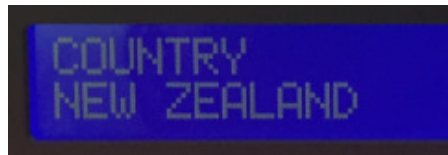
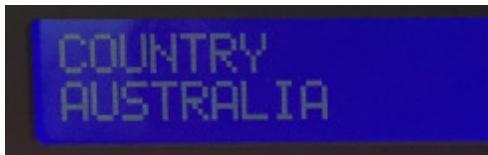
1. Turn OFF the unit. While pressing UP and DOWN buttons at the same time, power ON the unit.



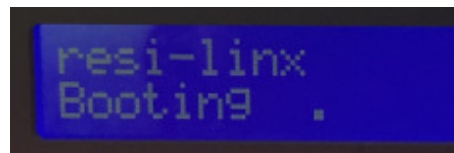
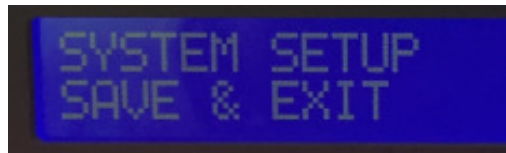
2. Release the UP and DOWN buttons when the LCD shows Reset To Default.



3. Press OK button to select Country : Australia or New Zealand



4. Press OK button again when the country selected, then press UP or DOWN button to show SAVE & EXIT.



5. Press OK button to Save and Exit. The unit will Booting on.



Caution: Once this process is complete the unit will automatically reset to the factory default settings. All settings or changes to the encoder/modulator will be lost.

# MODULATOR SETUP AND CONFIGURATION

## DEVICE Programming and Setup

To setup and program the Encoder you can use the GUI interface or the LCD Front Panel

**Note:** The installer can set to enable DHCP via Front Panel LCD at the WEB MANAGEMENT SETUP setion.

### Connecting to the GUI Interface:

#### Factory Default IP: 192.168.1.9

1. Connect an Ethernet cable directly (**no Cross Over cable required**) to the Web Management Port on the rear panel of the encoder or connect the Ethernet cable to an Ethernet switch. Connect an Ethernet Cable to your PC/Laptop.
2. Modify your PC/Laptop IP address to 192.168.1.11.
3. Enter '192.168.1.9' into your web browser.
4. The Welcome Page will shown.

Welcome page will be displayed as shown

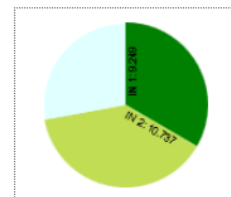


resi-linx HD Encodulator

- Overview
- Common Setup
- RF Setup
- Encoder Setup
- Network Setup
- Administration

## Welcome!

**Device Name:** RESI-LINX-001  
**Model Number:** HD-4797  
**Device Address:** 1  
**System:** DVB-T  
**Net Version:** 20170420



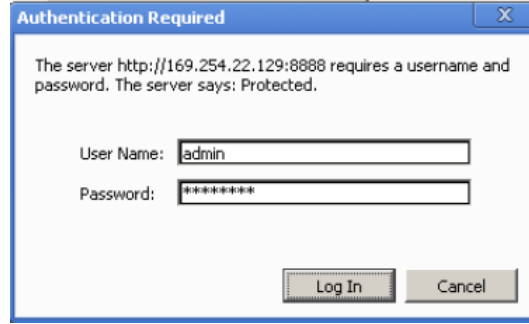
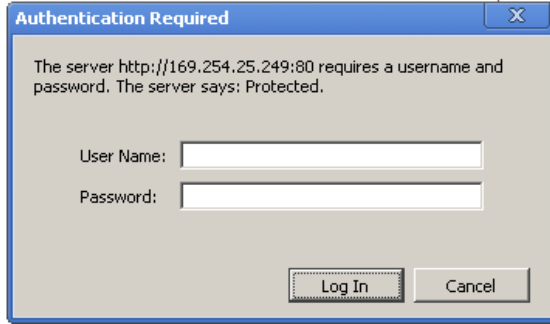
	RF Output 1	RF Output 2
Channel	39 (606.5 MHz)	
Constellation	64QAM	
Output Bitrate	27.710	
	Input 1	Input 2
Channel Name	CHANNEL-1	CHANNEL-2
Video Source	HDMI	HDMI
Video Output	H.264 CBR	H.264 CBR
Audio Output	MP2	MP2
Input Bitrate	9.249	10.737
Status	OK	OK

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Select the Common Setup tab.

User will be presented with encoders **'Authentication Required'** screen.



Enter User Name and Password.

User Name: **admin**

Password: **Admin123**

## Common Setup



resi-linx HD Encodulator

Overview

Common Setup

RF Setup

Encoder Setup

Network Setup

Administration

## Common Setup

This page allows to configure the encodulator's common settings. After making any change, click **Save Config** to apply the change.

LCN Mode: AUSTRALIA

Device Address: 1

Save Config

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**Remark:** The Attenuation in the Common Setup is reserved. Please adjust the attenuation by adjusting the Gain control from the unit.







Overview

Common Setup

RF Setup

Encoder Setup

Network Setup

Administration

## RF Setup

This page allows to configure the encodulator's RF output settings. After making any change, click **Save Config** to apply the change.

RF Output 1

RF Output 2

Output Channel:	39 (606.5 MHz) ▾
Attenuation:	0 dB ▾
Constellation:	64QAM ▾
FEC:	7/8 ▾
Guard Interval:	1/32 ▾
OFDM Mode:	8k ▾
RF Output:	Normal ▾
Cell ID:	0 ▾
TS ID:	1 ▾
Network ID:	12801 ▾
Original Network ID:	8228 ▾
Network Name:	Network-1
Enable:	<input checked="" type="checkbox"/>

Save Config



Overview

Common Setup

RF Setup

Encoder Setup

Network Setup

Administration

## Encoder Setup

This page allows to configure the encodulator's encoder settings. After making any change, click **Save Config** to apply the change.

Encoder 1 Encoder 2 Encoder 3 Encoder 4

Video Input:	HDMI
Program Number:	1
Channel Name:	CHANNEL-1
Provider Name:	resi-linx
LCN:	101
Aspect Ratio:	16:9
Video Output:	H.264 CBR
HDCP(test mode):	<input checked="" type="checkbox"/>
Audio Output:	MPEG1 Layer2 (MP2)
Closed Caption:	<input type="checkbox"/>
Brightness:	<input type="range"/> 128
Contrast:	<input type="range"/> 128
Saturation:	<input type="range"/> 128
Hue:	<input type="range"/> 128

Save Config



- Overview
- Common Setup
- RF Setup
- Encoder Setup
- Network Setup**
- Administration

## Network Configuration

This page allows user to configure the encoder's network settings.

**CAUTION:** Incorrect settings may cause the encoder to lose network connectivity. Recovery options will be provided on the next page.

Enter the new settings for the encoder below:

<b>Host Name:</b>	<input type="text" value="RESI-LINX-###"/> <input type="text" value="RESI-LINX-001"/>
	<input type="checkbox"/> Enable DHCP
<b>IP Address:</b>	<input type="text" value="192.168.1.9"/>
<b>Subnet Mask:</b>	<input type="text" value="255.255.255.0"/>
<b>Gateway:</b>	<input type="text" value="0.0.0.0"/>
	<input type="button" value="Save Config"/>



- Overview
- Common Setup
- RF Setup
- Encoder Setup
- Network Setup
- Administration**

## Administration

Reboot the system.

Reboot and reset all configuration settings to factory default.

User can backup and download all configuration settings from the device to a local file.

Config File:  未選擇檔案。

User can upload the file with pre-saved configuration settings to device.

**CAUTION:**The new password must:

- matches a string of 6~8 characters;
- that contains at least one digit;
- at least one uppercase character; and
- at least one lowercase character:

After changing the admin's password, it needs to close current web browser, and open a new browser to use new password.

<b>Old Password:</b>	<input type="text"/>
<b>New Password:</b>	<input type="text"/>
<b>Retype New Password:</b>	<input type="text"/>
	<input type="button" value="Submit"/>

## Front Panel LCD Encoder Menu Map

Main Menu

Common Setup
Device Address
Default Config
Back to Main

RF Setup
Select RF
Enable RF
Output Channel
Attenuation
FEC
Guard Interval
OFDM Mode
TS ID
Network ID
ORG Network ID
Network Name
Back to Main

Encoder Setup
Select Encoder
Video Input
Program Num
Channel Name
Provider Name
LCN
HDCP
Audio output
Back to Main

Network Setup
DHCP
IP Address
Subnet mask
Gateway
Back to Main

## Modulator Configuration via Front Panel LCD

Once the encoder is powered up it will go through its initial booting process. Once the unit has completed its initial “Booting” up process the LCD will display IN-1..., Bit Rate information, Channel-1..., and other information in the LCD Display Window. When visible the unit is ready for programming or operation.

The LCD will display data as it cycles through the available information.

### Screen Views:

1: Inputs, Mbps, Channel Names, Video Output Type, Audio Output type

IN-1	10.127Mbps	CHANNEL-1	H.264	MP2
IN-2	10.741Mbps	CHANNEL-2	H.264	MP2

Note: The device is a QUAD version and the below screen will display all input data as is cycles through the data available.

2: Use the Scroll Up/Down button to display RF-1 / RF-2 data, Physical Output Channel, Constellation, FEC setting, OFDM Mode Selection.

39 (606.5 MHz)	QAM 64	7/8	1/32	8K
40 (613.5 MHz)	QAM 64	7/8	1/32	8K

3: Use the Scroll Up/Down button to display IP address

NETWORK	FIXED IP	192.168.	1.	9
SM 255.255.255. 0	GW	0.	0.	0. 0

**Main Menu**– To access the Main Menu first enter the password by pressing the OK button. Use the Scroll Up/Down buttons to enter the password. Once the password is entered press the OK button again and the LCD Screen will display “Main Menu Common Setup”.

**Password** – Use the Scroll Up/Down buttons to enter the password. Password is **0000**. Press the OK button for each number to enter the password. Press OK again after the display shows ..... HD Series.

PASSWORD=?
0

## Common Setup Menu

- ♣ **Device Address** – Use the Scroll Up/Down button to select Device Address. Press the OK button to enter the Device Address menu. Use the Scroll Up/Down to select the Desired Address ranging from 1 to 255 then press OK to set. A unique device address is required if setting up more than 1 encoder per site. This allows the user to distinguish each device.
- ♣ **Default Configuration** –To reset the Encoder/Modulator back to the factory default select the Default Configuration Menu. Press OK to enter the Default Configuration Menu. There are three options that you can choose. Using the Up/Down button select No, New Zealand and Australia. Press OK to reset all programmed settings back to the factory default setting.
- ♣ **Back to Main**- Select Back to Main to escape the Common Setup Menu.

## RF Setup Menu

- ♣ **Select RF**- Press the OK button to enter the Select RF menu. Use the Scroll Up/Down button to Select the RF section of the Encoder. Select 1 or Select 2.  
**Note:** The QUAD version of the unit has 2 RF Sections. The Quad will place 2 RF channels in the first RF output and 2 RF Channels in the second RF output.
- ♣ **Enable RF**- Use the Scroll Up/Down button to select Enable/Disable RF.
- ♣ **Output Channel** – Use the Scroll Up/Down button to change the output channel. Use the Scroll Up/Down buttons to select the desired Output Channel. Once the desired output channel is selected press the OK button to set the channel.  
The LCD Display will show both the channel number and the frequency number of the output channel (example: 39 (606.5 MHz))
- ♣ **Attenuation** – Use the Scroll Up/Down button to select Attenuation. Press the OK button to enter the Attenuation menu. Use the Scroll/Up down button to select the desired attenuation in 1dB increments from 0 to -20 dB. Once the desired attenuation level is found press the OK button to set.
- ♣ **FEC**- The FEC is default 7/8.
- ♣ **GUARD INTERVAL** – The GUARD INTERVAL is default 1/32.
- ♣ **OFDM** - Use the Scroll Up/Down button to select the OFDM menu. Press the OK button to enter the OFDM menu. Use the Scroll Up/Down to select the OFDM 2K or 8K. Press OK to set.
- ♣ **TS ID** – Use the Scroll Up/Down button to select TS ID. Press the OK button to enter the TS ID menu. Use the Scroll Up/Down button to select the desired Stream ID ranging from 1 to 65535 then press the OK button to set.
- ♣ **Network ID** – Use the Scroll Up/Down button to select Network ID. Press the OK button to enter the Network ID menu. Use the Scroll Up/Down button to select the desired Network ID ranging from 1 to 65535 then press the OK button to set.
- ♣ **ORG Network ID** – Use the Scroll Up/Down button to select ORG Network ID. Press the OK button to enter the ORG Network ID menu. Use the Scroll Up/Down button to select the desired ID ranging from 1 to 65535 then press the OK button to set.
- ♣ **Network Name** – Use the Scroll Up/Down button to select Network Name. Press the OK button to enter the Network Name menu. Use the Scroll Up/Down button to select the first character for the desired Network Name then press the OK button to set. Repeat the



process for each character in the desired Network Name. A Network Name can consist up to 16 characters.

- ♣ **Back to Main**- Select Back to Main to escape the RF Setup Menu.

### Encoder Setup Menu

- ♣ **Select Encoder**- Use the OK button to enter the Select Encoder Menu. Using the Scroll Up/Down buttons select the encoder you wish to program. Use the OK button to set the Encoder. Select Encoder 1, 2, 3, or 4 based on your model number.

Once Selected the Display will indicate which Encoder you are programming while in the setup function



- ♣ **Video Input** – The Video Input is default HDMI.
- ♣ **Program Num** - Use the Scroll Up/Down button to set 1 Program Num(Number). Press the OK button to enter the Program Num menu. Use the Scroll Up/Down to select Program Num ranging from 1 to 65534 then press OK to set.
- ♣ **Channel Name** – Use the Scroll Up/Down button to select Channel Name. Press the OK button to enter the Channel Name menu. Use the Scroll Up/Down menu to select the first character of the desired Channel Name then press the OK button to set. Repeat the process until the Channel Name is completed.

The Channel Name can be 7 characters long. Factory Default: CHANNEL-1.

- ♣ **PROVIDER NAME** – Use the Scroll Up/Down button to select Provider Name. Press the OK button to enter the Provider Name menu. Use the Scroll Up/Down menu to select the first character of the desired Provider Name then press the OK button to set. Repeat the process until the Provider Name is completed. The Provider Name can be 16 characters long.
- ♣ **LCN**-Use the Scroll Up/Down button to set LCN. Press the OK button to enter The Source ID menu. Use the Scroll Up/Down to set the Source ID. Range: 1 to 999. Press OK to set. Factory default : 101.
- ♣ **HDCP**- Use the Scroll Up/Down button to select the HDCP menu- Use the Scroll Up/Down button to select the HDCP menu. Press the OK button to enter the HDCP menu. Select Enable / Disable, and press OK to set.

**NOTE:** It is the installers / property owner / integrator's responsibility to contract with the service provider regarding content authorization and the use of HDCP.

- ♣ **Audio Output** – Use the Scroll Up/Down button to select Audio Output. Press the OK button to enter the Audio Output menu. Use the Scroll Up/Down button to select the Audio Output option: MP2(MPEG1 Layer2 Audio), AAC. Factory default: MP2. Press the OK button to set.
- ♣ **Back to Main**- Select Back to Main to escape the Encoder Setup Menu.

## Network Setup

- ♣ **DHCP** – Use the Scroll Up/Down button to select DHCP. Press the OK button to enter the DHCP menu. Use the Scroll Up/Down button to Enable/Disable. Press the OK button to set.
- ♣ **IP Address** – Use the Scroll Up/Down button to select IP Address. Press the OK button to enter the IP Address menu. Use the Scroll Up/Down button to enter the IP Address. Use the Scroll Up/Down menu to select the desired IP Address then press the OK button to set. Repeat the process until the IP Address is completed. Press the OK button to set. Note: If DHCP is enabled you will not be able to set an IP address. Select DHCP disabled if Static IP Address required.
- ♣ **Subnet Mask** – Use the Scroll Up/Down button to select Subnet Mask. Press the OK button to enter the Subnet Mask menu. Use the Scroll Up/Down button to enter the Subnet Mask. Use the Scroll Up/Down menu to select the first number of the desired Subnet Mask then press the OK button to set. Repeat the process until the Subnet Mask is completed. Press the OK button to set.
- ♣ **Gateway** – Use the Scroll Up/Down button to select Gateway Address. Press the OK button to enter the Gateway Address menu. Use the Scroll Up/Down button to enter the Gateway Address. Use the Scroll Up/Down menu to select the first number of the desired Gateway Address then press the OK button to set. Repeat the process until the Gateway Address is completed. Press the OK button to set.
- ♣ **Back to Main-** Select Back to Main to escape the Web Management Network Setup Menu.

## HD-4797 HD Encoder/Modulator Notes

PRODUCT NOTES:

ITEM	VALUE
DEVICE NAME	
PURCHASE DATE	
INSTALLATION DATE	
SERIAL NUMBER	
FIRMWARE VERSION	
Video Input 1	
Video Input 2	
Video Input 3	
Video Input 4	

Distributed by:

digi-MOD<sup>®</sup> **HD** by ZyCast<sup>®</sup>

[www.digi-modbyzycast.com.tw](http://www.digi-modbyzycast.com.tw)

#### WARRANTY

digi-MOD states that the warrant that the customer can rely on is that provided by the manufacturer. In the event of any warranty claim please contact your place of purchase and it will be forwarded it to the manufacturer. The manufacturer will then determine the extent of their liability.