Radio Frequency Range

digi-MOD HD-8002DM
www.resi-linx.com

HD-8002DM Eight Input DVB-T HD Encoder / Modulator 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 power supply. The use of any other power supply could cause damage and invalidate the manufacturer's warranty.
- **Do not** connect the power cord to the device if the power cord is damaged.
- **Do not** cut the power cord.
- **Do not** plug the power cord into an AC outlet 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.
- **Do not** cover or obstruct the device's fan or fan openings.
- If the device has been in a cold environment allow it to warm to room temperature for at least 2 hours before connecting to an AC outlet.

Package Contents

This package contains:

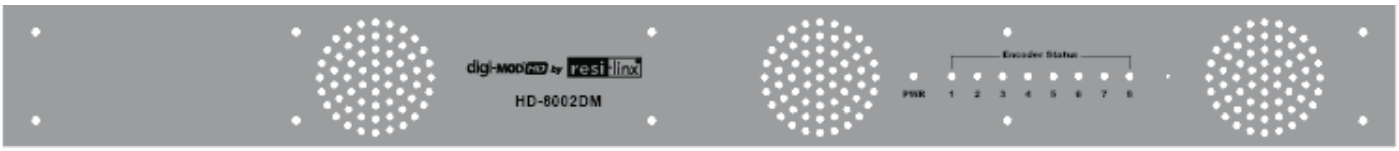
- One HD-8002DM Encoder / Modulator*
- One power cable
- Eight mini DIN to RCA cables
- One installation / configuration manual

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.

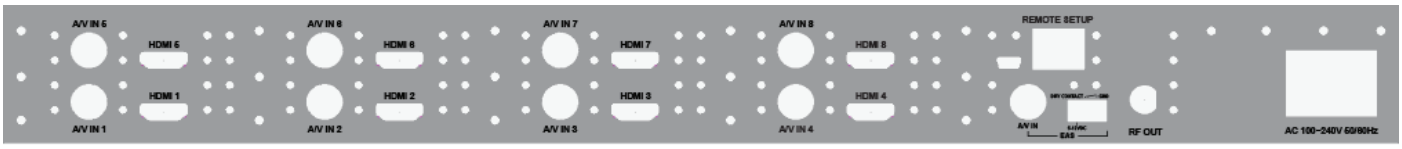
Product Description

resi-linx digi-MOD HD Series Encoder/ Modulators provides a DVB-T channel - making it 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 8 High Quality HD DVB-T channels in a single 1RU space.

- High Resolution up to 1080p
- Composite, Component, and HDMI (unencrypted) inputs
- MPEG2 or H.264 (MPEG4) Video Output
- Selectable Constellation
- Closed Captioning Support
- 100dB Output
- Newly Added EAS Functionality*
- Rack mountable 1RU height



Front Panel



Rear Panel

Specification

VIDEO INPUTS (VIDEO BY PRIORITY)	
HDMI	1.4v
Component	YPrPb (RCA) (via mini DIN cable)
Composite	CVBS (RCA) (via mini DIN cable)
AUDIO INPUTS	
Audio Inputs	Via mini DIN or HDMI embedded
VIDEO ENCODER	
Mode	MPEG-2, H.264 (MPEG4)
Video Resolutions	1080p (H.264 Only), 1080i, 720p, 576p, 576i, 480p, 480i
AUDIO ENCODER	
Audio Compression	MPEG-1 Layer II, AAC, AC-3 Pass Through
RF DVB-T SUPPORT	
Frequency	Channel Plan Australia
RF Channel Output	8 multiplexed on to 4 adjacent RF Output
Constellation	64QAM (16QAM)
Bandwidth	7 MHz
RF Level Output	100dB
MER	>40dB Typical
FEC	1/2, 2/3, 3/4, 5/6, 7/8
Guard Interval	1/4, 1/8, 1/16, 1/32
OFDM	8K (2K)
Attenuation	1-20dB (1dB steps)
RF Output	"F" - Female 75 ohm
Closed Captioning Control	By Selection (use of CVBS Input)
MANAGEMENT / CONTROL	
GUI Supported	IE9, Firefox, Chrome, Safari
GUI Control	RJ45 10/100
Password Protected	GUI
GENERAL	
Rack Mountable (1RU)	482.7mm x 240mm x 44.4mm - 19" EIA Standard
Internal Fan Cooled	Internal
LCD Front Panel	LED System Indicators
EAS SUPPORT	
Connection	Dry Contact
Audio/Video Input	DIN

**Subject to change without 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 Installations and Connections

It is highly recommended that quality cables and connectors be used for all video and audio source connections.

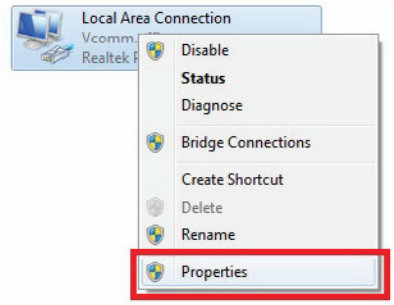
1. The unit is designed to be rack mounted in a standard EIA 19” rack.
2. The unit comes standard with HDMI and mini DIN inputs. The HDT encoder / modulator are intelligently designed to detect the video input from the video source. **HDMI Connection**: Connect the HDMI cable(s) from the video source(s) into the HDMI input(s). If using a **Component Video Cable** or a **Composite Video** connect appropriate cable to mini DIN lead supplied.
3. Repeat this step for each video source connection.
4. Use a quality 75Ω coaxial cable with “F” connectors from the unit’s **RF OUT jack** to the **distribution system** (combiner or reverse splitter) or directly to a television.
5. Connect the included power cord to the unit’s **POWER** plug.
6. Connect the power cord to an appropriately rated AC power outlet.

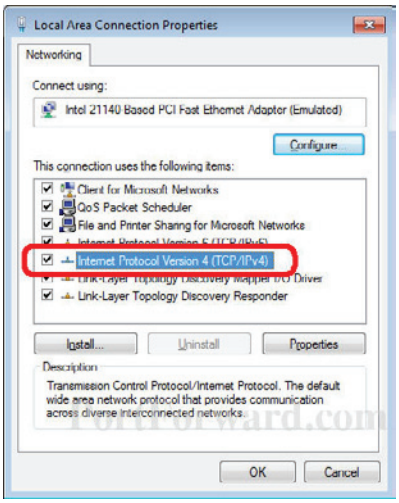
DEVICE Programming and Setup

To setup and program the Encoder you can use the GUI interface.

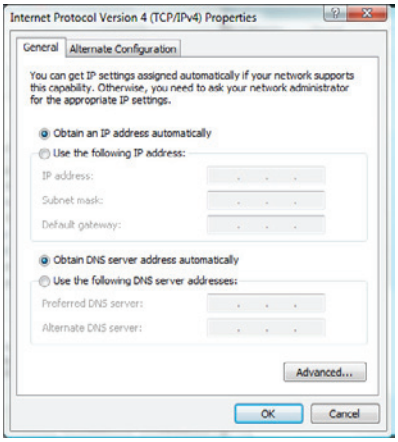
Connecting to the GUI Interface

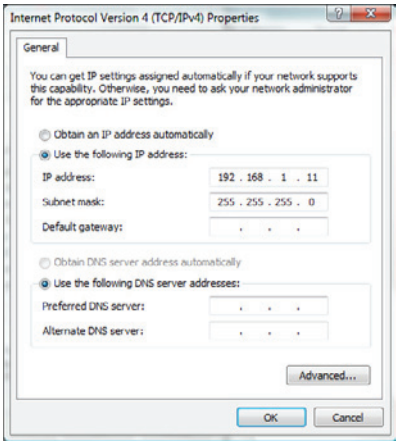
1. Connect one end of the Ethernet cable to the Web Management Port on the rear of the HD-8002DM
2. Connect the other end of the Ethernet cable to your PC/Laptop
3. Enter the TCP/IP settings on your PC/Laptop and set to static IP address





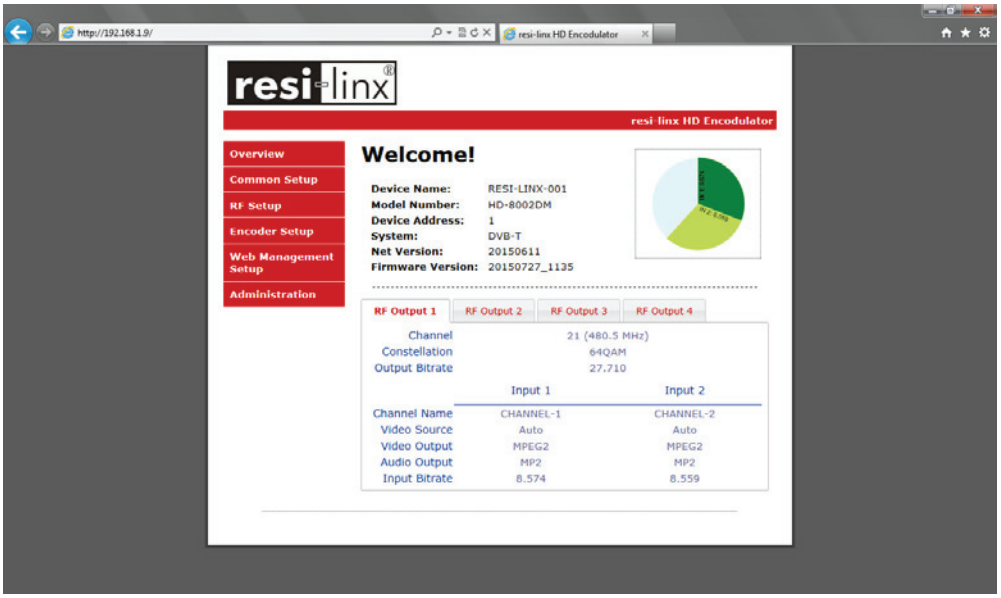
4. Change your PC/Laptop IP address to 192.168.1.11 & Subnet mask 255.255.255.0





NOTE:
Only one HD-8002DM can be accessed at one time.

5. Open web browser on PC/Laptop and enter Encoder IP address: 192.168.1.9
6. Enter GUI and make required device changes



7. Save all changes as required, upload and reboot changes
8. Verify parameters then end web session

NOTE:
To revert IP setting to default, please go directly to Step 7 and select Obtain an IP address automatically.

Encoder Programming and Setup via GUI Interface

NOTE:
Image displays the Eight input version of the HDT Encoder.

Overview page of resi-linx digi-MOD HD

Overview status of the Encoder when fully functioning. Alternate between viewing status of RF Output 1, RF Output 2, RF Output 3, RF Output 4, etc. by selecting the RF Output section of the device you want to monitor.

STEP 1: Login Select Common Setup

Once the Common Setup Tab is selected you will be prompted to enter the user name and password for device:

Default User Name: **admin**
Default Password: **Admin123**

STEP 2: Common Setup Tab

Common Setup: Use the Common Setup Page to set the Output channel, Attenuation, LCN Mode, and Device Address.

STEP 3: Local Save

Once all parameters are set you are required to do a Local Save.

Notes on Changes: *Changes made to an individual setup tab may require the installer to perform a Local Save AND Upload and Reboot to the device if you are only making changes to one parameter to the encoder.*

Example: Installer is required to change only the output channel for the device (No other changes to the device are not required). Once the channel has been changed, the installer is required to perform

1. **Local Save** and
2. **Upload and Reboot**.

Notes on Channel Selection: *The image below shows the Output Channel is set to CH # 21. RF1 will output 1 QAM signal carrying 2 digital audio/video channels (within your device's Bandwidth settings).*

The device will automatically set RF2 to Ch # 22, RF3 to Ch # 23, RF4 to Ch # 24

NOTES ON CHANNEL SELECTION:

The image below shows the Output Channel is set to CH # 21.

The HD-8002DM will automatically set the channels for each QAM channel.

The below diagram depicts how each input on the Encoder is placed in RF1, RF2, RF3, and RF 4 output.

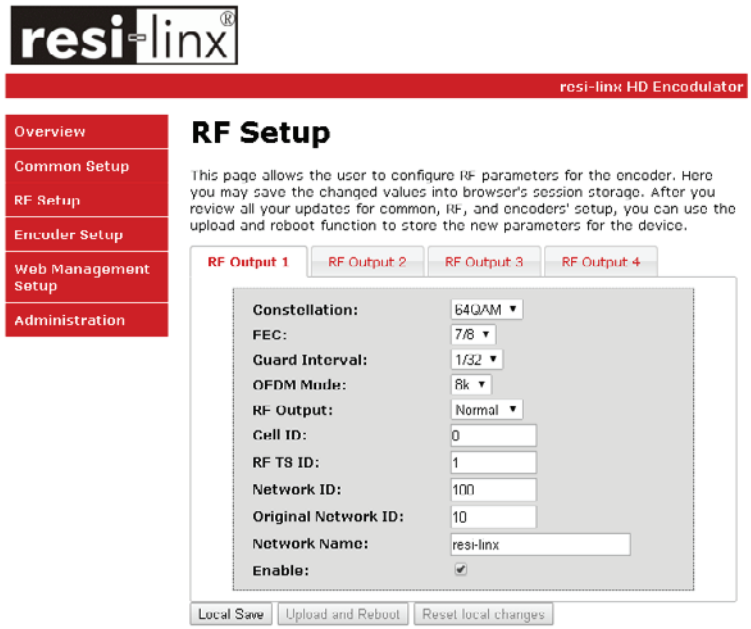
Note: The RF2, RF3, and RF4 Physical Channel Output is determined by the selection of output channel of RF1.

RF1	RF2	RF3	
Input 1 Input 2	Input 3 Input 4	Input 5 Input 6	Input 7 Input 8
CHANNEL-1 CHANNEL-2	CHANNEL-3 CHANNEL-4	CHANNEL-5 CHANNEL-6	CHANNEL-7 CHANNEL-8

NOTES:

When selecting output channels it is highly recommended that the user review the RF Frequency Chart.

STEP 4: RF Setup



Use the RF Setup Page to setup each RF Output.

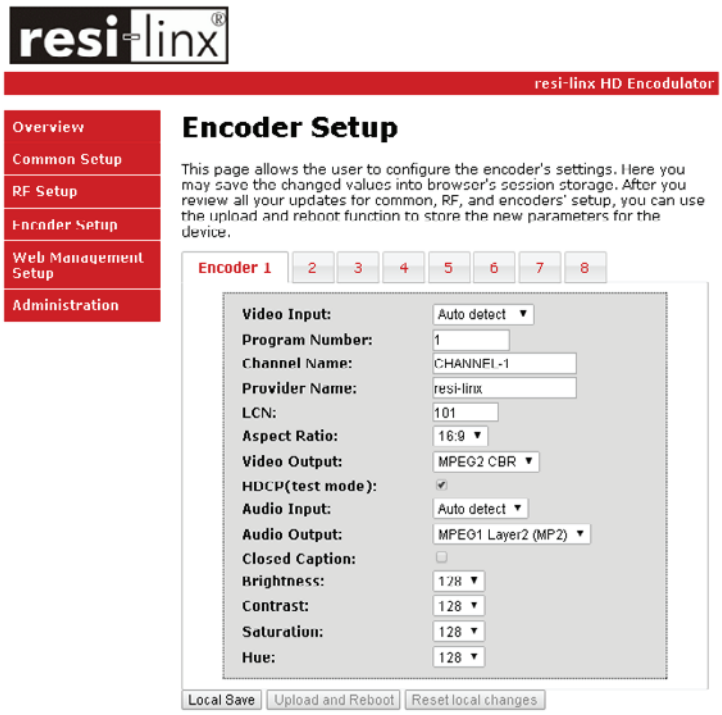
Select **RF Output 1**, **RF Output 2**, **RF Output 3** or **RF Output 4**. Select and set the required parameters you require for your installation.

STEP 5: Local Save

Once all parameters are set you are required to do a Local Save.

> **NOTE:**
> The device shown is an EIGHT input device. Your device will not show RF Output 2 if you are setting up a Single or Dual input encoder.

STEP 6: Encoder Setup

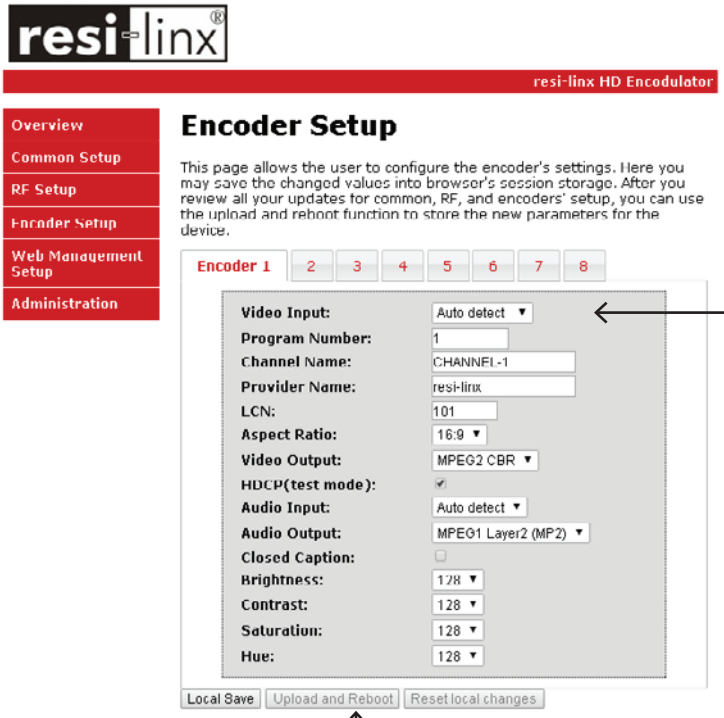


> **NOTE:**
> **There is an Encoder tab present for each input on the device.**

Select the **Encoder 1, 2, 3, 4, 5, 6, 7, 8 tab** to program an individual encoder. **Select and change** all desired parameters.

STEP 7: Local Save for each Encoder tab

Once all parameters are set you are required to do a Local Save on EACH Encoder Tab where changes were performed



Note: *Local Save function will indicate the local change made*

Upload and Reboot after all changes have been made and a Local Save performed

IMPORTANT NOTE:

Ensure all Encoder changes have been locally saved before performing Step 9.

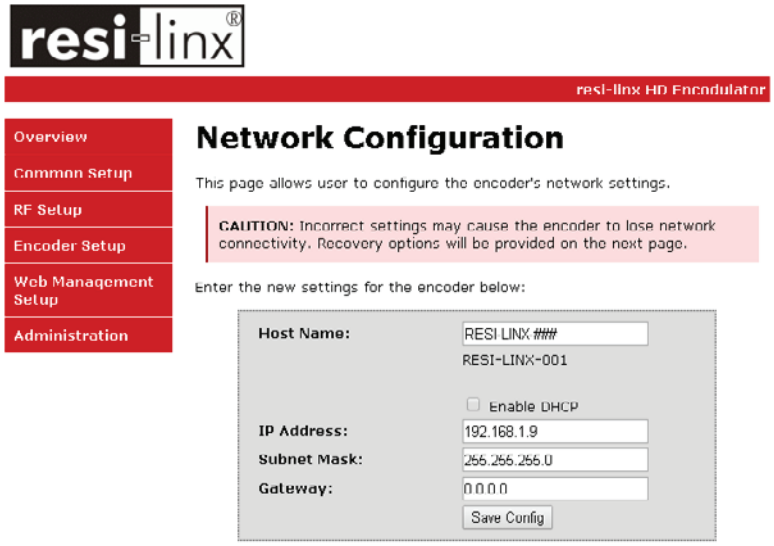
STEP 8: Upload and Reboot

Once you have set all the encoder settings and performed a **Local Save** for each encoder

Select "Upload and Reboot" after you have saved all your Local changes on each Tab. This function will upload and save all parameters set in the Common, RF, and Encoder sections of the device.

We highly recommend you save your encoder configuration files. See Administration tab for how to back you device settings.

STEP 9: Network Configuration Tab



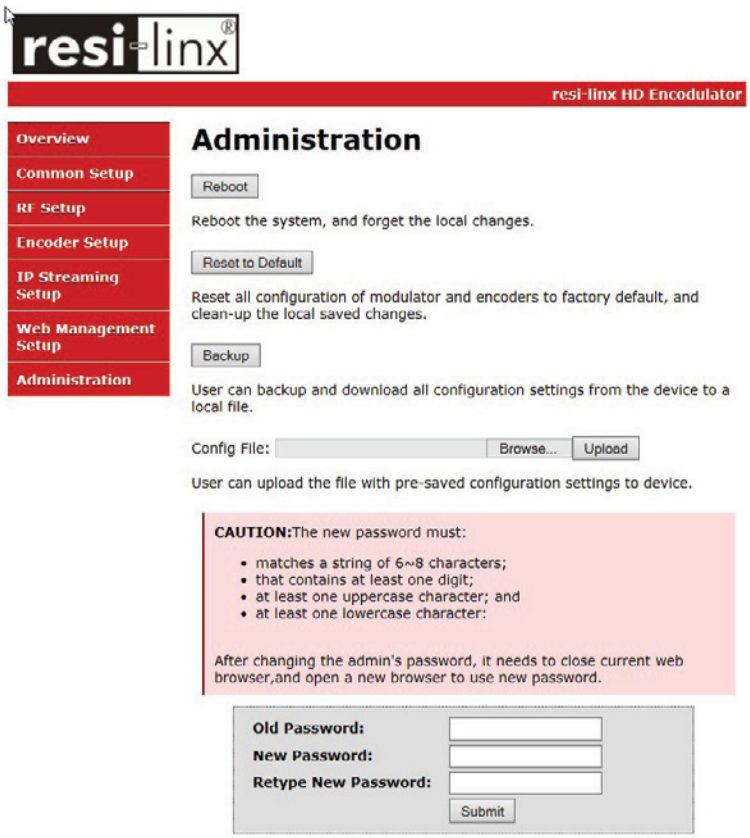
Use the Network Setup Tab to configure the device's IP address, Subnet Mask, Gateway, Enable/Disable DHCP, and set Host Name.

STEP 10: Save Network Configuration

Save Config: Once all parameters are set you are **required** to select **Save Config**. This function will reboot and save the changes setting for the Network Configuration.

> **NOTE:**
> **Only the Network Configuration changes will be saved.**

STEP 11: Administration



ADMINISTRATION PAGE FUNCTIONS	ACTIONS
Reboot	Reboot device. All unsaved settings will be lost.
Reset to Default	Reset all settings back to original factory settings
Backup	Download all settings of device
Upload	Upload a saved config file
New Password	Create and save new password for GUI

STEP 13: If required, change GUI Password and Submit.

This password is for access to the GUI only. The LCD front Panel Password will not be changed and is set to prevent unauthorized users access to your device.

> **NOTE:**
> **When setting a new password you must use the 'Submit' button.**

Installing Multiple Encoders in the Same Installation

Ensure the following settings are unique on each encoder.

- RF TS ID (Transport Stream ID)
- Program number
- Output channel
- LCN Program number
- Channel name (optional)

Saving your configuration files

To upload a configuration file- simply click “Choose File” then locate the file you want to upload. Click “Upload” to install the configuration files. This function is helpful to the installer when installing a large number of encoders in a single system.

IMPORTANT NOTE:

We highly recommend you save your encoder configuration files. Simply Click the “Backup” button and the config files will be saved to your computer.

To upload a configuration file - simply click “Choose File” then locate the file you want to upload. Click “Upload” to install the configuration files. This function is helpful when installing a large number of encoders in a single system.

EAS

This device is equipped with EAS Terminals/connections and 1 Video/Audio input (DIN Audio / Video Input).

Connect your EAS Alert Device System output to the Encoder using the DIN to breakout cable.
Connect the devices as recommended by your EAS System,

Operation:
If the encoder receives the proper Event signal from your EAS device, the normal input audio/video will replaced by the audio and video from the EAS system device. Once the encoder has received the proper signal from your EAS device the normal input video and audio will return to a normal operating mode.

******THIS DEVICE IS NOT AN EAS RECEIVER******

Note: It is the responsibility of the Integrator/System Operator /Installer/User to properly connect, verify, and test the EAS functionality of this device with the EAS receiver.

Note: It is the responsibility of the Integrator/System Operator /Installer/User to properly perform the required EAS tests as required by the FCC or your specific Government Agency.

If the EAS functions on this device fail for any reason it is the responsibility of the Integrator/System Operator /Installer/User to replace this device as required by the FCC or your specific Government Agency.

ITEM	VALUE
Password	
Serial Number	
Installation Date	
Purchase Date	
Video Input 1	
Video Input 2	
Video Input 3	
Video Input 4	
Video Input 5	
Video Input 6	
Video Input 7	
Video Input 8	

Notes

digi-MOD® HD by resi-linx®

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WARRANTY

Vcomm Pty Ltd 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 us and we will forward it to the manufacturer. The manufacturer will then determine the extent of their liability. This expressly negates, to the extent possible by Australian law, any warranty reliance on Vcomm Pty Ltd.

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