

INSTALLATION & CONFIGURATION MANUAL

U5 Ultra HD (4K) Streaming Encoder (with Simultaneous RF and IP out)



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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 U5
- ❖ One Power adapter
- ❖ Rack mount ear kit

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.

Introduction to the U5

ZyCast's Single Channel U5 HEVC Encoder, a cutting-edge broadcasting solution that combines versatility, efficiency, and ultra high-definition video encoding. Designed to meet the demands of modern broadcasters and content creators, this encoder is engineered to deliver exceptional performance and flexibility.

With the ZyCast Single Channel U5 HEVC Encoder, you can effortlessly encode video content into the RF standard of your choice (DVB-C, DVB-T/T2, J.83B, ISDB-Tb). Whether you require RF output or prefer the convenience of an IP video stream, this encoder has you covered.

Equipped with state-of-the-art HEVC (High-Efficiency Video Coding) technology, the ZyCast U5 encoder maximizes video compression efficiency, reducing bandwidth requirements without compromising on visual quality. This advanced encoding capability allows for the delivery of stunning, high-resolution content up to 4096 x 2160 pixels, ensuring an immersive viewing experience for your audience.

Thanks to its simultaneous RF and IP output capabilities, this encoder offers exceptional flexibility in content distribution. Whether you need to broadcast content over traditional RF networks or deliver content over IP-based platforms (UDP/RTP Multicast/UniCast, RTSP, SRT).

In summary, the ZyCast Single Channel U5 HEVC Encoder combines the power of HEVC encoding, multiple standard RF output, and simultaneous IP streaming in resolutions up to 4096 x 2160 pixels. This encoder is the ideal solution for broadcasters and content creators seeking to deliver exceptional video content across various platforms. Upgrade your broadcasting capabilities with the ZyCast U5 encoder and unlock a world of possibilities.

The U5 series features:

- ✓ Video resolution up to 4096 x 2160p60
- ✓ HDMI 2.0 Input
- ✓ HEVC (H.265) Profile: Main 4:2:0 8Bit
- ✓ Video Standards: ATSC, QAM-B (J.83), ISDB-Tb, DVB-T/T2, DVB-C
- ✓ Supports Multicast/Unicast, RTSP, and SRT codecs
- ✓ Audio Formats: AAC, AC-3, MP2
- ✓ GUI for setup and control (English and Spanish)
- ✓ Allows for Stream recoding using external USB drive.

Specifications

U5 Specifications

Video / Audio Input

HDMI 2.0	Single Connector
Loophrough	To Be Developed
HDCP Compliance	2.2

Encoding Profile

Input Resolution	4096 x 2160p (60 / 59.94 / 50 / 30 / 29.97 / 25Hz) 3840 x 2160p (60 / 59.94 / 50 / 30 / 29.97 / 25Hz) 1920 x 1080p (60 / 59.94 / 50 / 30 / 29.97 / 25Hz) 1280 x 720p (60 / 59.94 / 50Hz) 720 x 576p (50Hz) 720 x 480p (60 / 59.94Hz)
Encode Resolution	Same as Input
HEVC (H.265) Tiers and Levels	4096 x 2160p, Main Tier / Level 5.1 3840 x 2160p, Main Tier / Level 5.1 1920 x 1080p, Main Tier / Level 5.1 1280 x 720p, Main Tier / Level 5.1 720 x 576p, Main Tier / Level 5.1 720 x 480p, Main Tier / Level 5.1
HEVC (H.265) Profile	Main ; 4:2:0 ; 8bit
Video Codecs H.264	4096 x 2160p High Profile @Level 4 3840 x 2160p High Profile @Level 4 1920 x 1080p High Profile @Level 4 1280 x 720p High Profile @Level 4 720 x 576p High Profile @Level 4 720 x 480p High Profile @Level 4
Video Bitrate	1Mbps to 30Mbps
Rate Control	VBR, CBR
Audio Codecs	MPEG-1 Layer II / MPEG-4 AAC-LC in ADTS / AC-3
Encode Sampling Freq	44.1 and 48KHz

Recording

(Simultaneous Streaming & Recording Capabilities)

Recording	USB 2.0 (MPEG-TS) / FTP Upload (To Be Developed)
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IP Output

Connector	RJ-45 x 1
Standard	1000Base-T Ethernet, Full Duplex
IP Streaming Protocol	HLS (TS) / RTSP / UDP Unicast, Multicast / RTP Unicast, Multicast / SRT

General

Local Monitoring	4 Indicator LEDs
GUI Suported	Firefox, Chrome and Edge
Password Protected	GUI: Changeable
Power Supply	12VDC 1.5Amp.
Consumption	0.75A ; 9W Typical
Dimension	Housing: 236mm x 145mm x 35mm
Language	English ; Spanish

U5 Specifications

RF Output		
Connector	1 x "F" Female	
Output Level	35 dBmV	
Output Impedance	75ohm	
Level Adjustment	0 to 20 dB	
Carrier Suppression	55 dB	
Output Return Loss	10 dB Typical	
MER	40 dB Typical	
Modulator STD I / II	(I.) J.83 Annex B	(II.) ATSC-8VSB
RF Mode	Normal / Inverted	
Channel Type	STD / HRC / IRC	ATSC-8VSB
Frequency Range (Under Standard Mode)	57.000 MHz to 861.000 MHz (Ch 2 to Ch 135)	57.000 MHz to 803.000 MHz (Ch 2 to Ch 69)
Interleaver	I=128, J=1	-
Constellation (Output Bitrate, Max)	64-QAM (26.970Mbps) / 256-QAM (38.810Mbps)	8VSB (19.393Mbps)
VCN	Auto (Major & Minor) / Manual (Major & Minor) / Manual (One Part)	Auto (Major & Minor) / Manual (Major & Minor)
Modulator STD III / IV	(III.) DVB-T	(IV.) ISDB-Tb
RF Mode	Normal / Inverted	
Frequency Range (Under 6MHz)	57.000 MHz to 803.000 MHz (Ch 2 to Ch 69)	177.143 MHz to 803.143 MHz (Ch 7 to Ch 69)
Constellation (Output Bitrate, Max)	16-QAM (15.834Mbps) / 64-QAM (23.751Mbps)	16-QAM (15.490Mbps) / 64-QAM (23.235Mbps)
FEC	1/2, 2/3, 3/4, 5/6, 7/8	1/2, 2/3, 3/4, 5/6, 7/8
LCN Mode (Default)	Colombia	Brazil
OFDM Mode	2k, 8k	2k, 4k, 8k
Guard Interval	1/32, 1/16, 1/8, 1/4	
Modulator STD V / VI	(V.) DVB-T2 **Requires Additional Fee**	(VI.) DVB-C
RF Mode	Normal / Inverted	
Frequency Range (Under 8MHz)	50.500 MHz to 858.000 MHz (Ch E2 to Ch E69)	50.500 MHz to 858.000 MHz (Ch E2 to Ch E69)
Constellation (Output Bitrate, Max)	PLP Constellation QPSK / 16-QAM / 64-QAM / 256-QAM / (Up to 46.590Mbps)	16-QAM (25.656Mbps) / 32-QAM (32.071Mbps) / 64-QAM (38.485Mbps) / 128-QAM (44.899Mbps) / 256-QAM (51.313Mbps) /
Guard Interval	1/32, 1/16, 1/8, 1/4, 1/128, 19/128, 19/256	-
FFT Mode	1k, 2k, 4k, 8k, 16k	-

**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

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

1. Plug the power cord into a properly rated surge protector and allow the device to power up.
2. Connect the Video source input.
Note: HDMI 2.0 or HDMI 2.1 cable is required for 4K encoding (cable not provided with this device)
3. Properly set the parameters and network settings / connections.

Configuring the U5

Enter IP of GUI into a Browser

Default IP: 192.168.1.9

Login User and Password

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

Once the Welcome Page is displayed select the Encoder Setup tab and the below Login “Authentication Required” screen will be presented. Enter the User Name and Password then click Login.

Authentication Required

The server http://169.254.22.129:8888 requires a username and password. The server says: Protected.

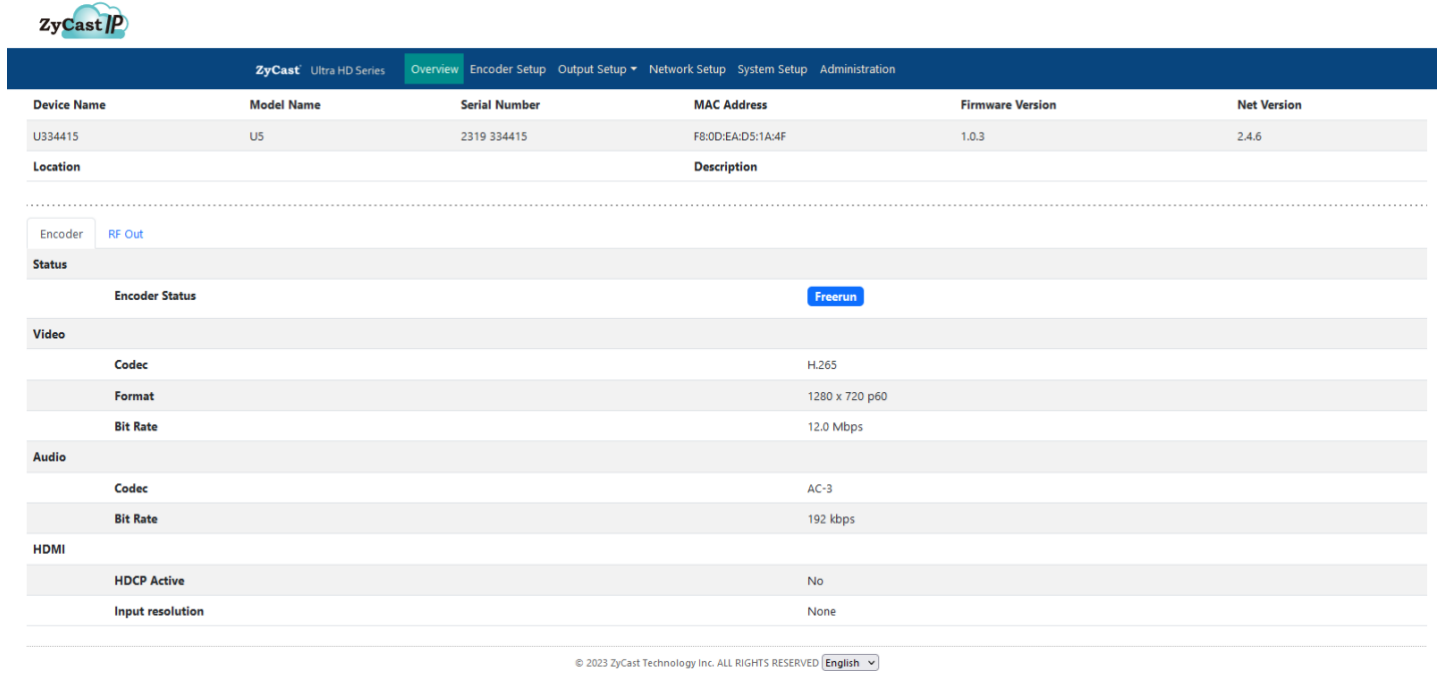
User Name:

Password:

Note: User Password can be changed – *See Administration Page.*

Overview Page

The Overview page of the U5 offers a quick status of the device. The user can navigate the Overview page for quick information on the Encoder, RF Output, and SRT status.



ZyCast IP

ZyCast Ultra HD Series Overview Encoder Setup Output Setup Network Setup System Setup Administration

Device Name	Model Name	Serial Number	MAC Address	Firmware Version	Net Version
U334415	U5	2319 334415	F8:0D:EA:D5:1A:4F	1.0.3	2.4.6

Location Description

Encoder RF Out

Status

Encoder Status [FreeRun](#)

Video

Codec	H.265
Format	1280 x 720 p60
Bit Rate	12.0 Mbps

Audio

Codec	AC-3
Bit Rate	192 kbps

HDMI

HDCP Active	No
Input resolution	None

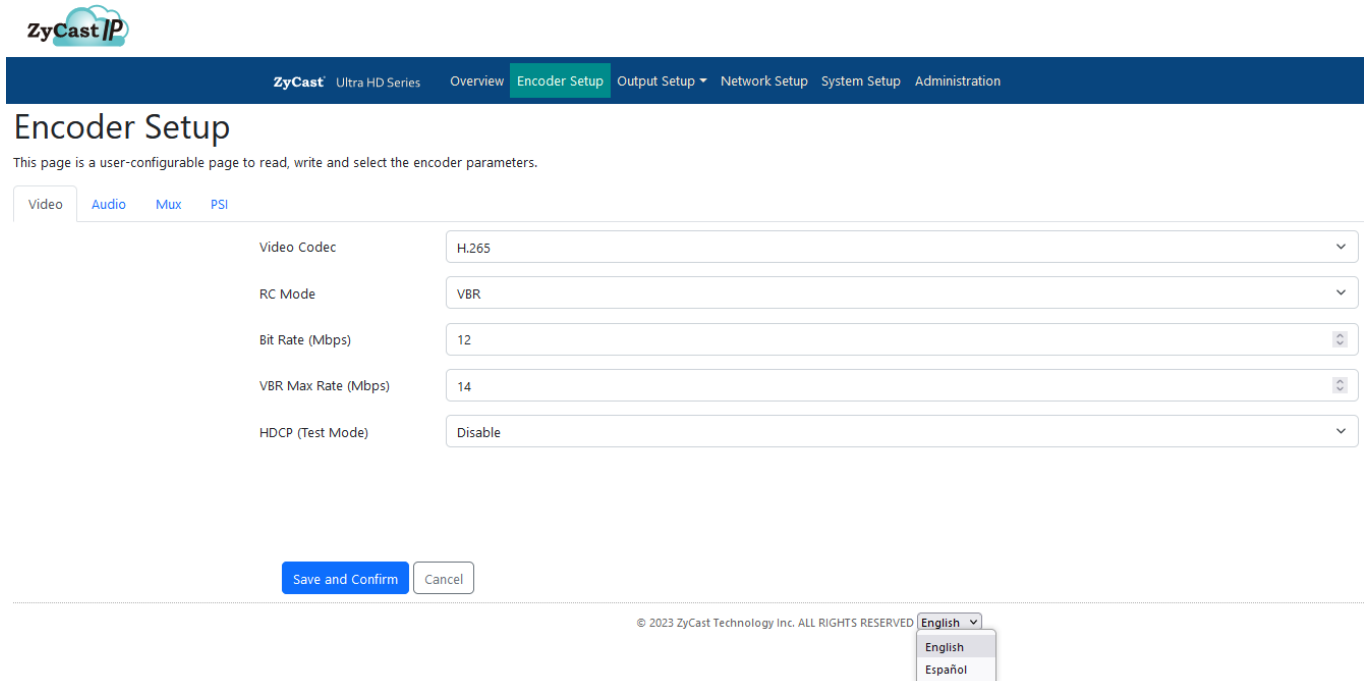
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Encoder Setup

Use the Encoder Setup page to Set the Video, Audio, Mux, and PSI parameters.

Encoder Setup

The U5 provides the user with a variety of parameter settings. Select and set the encoder's parameters on the encoder setup page



ZyCast IP

ZyCast Ultra HD Series Overview Encoder Setup Output Setup Network Setup System Setup Administration

Encoder Setup

This page is a user-configurable page to read, write and select the encoder parameters.

Video Audio Mux PSI

Video Codec	H.265
RC Mode	VBR
Bit Rate (Mbps)	12
VBR Max Rate (Mbps)	14
HDCP (Test Mode)	Disable

[Save and Confirm](#) [Cancel](#)

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[English](#)
[Español](#)

Encoder Setup

This page is a user-configurable page to read, write and select the encoder parameters.

Video Audio Mux PSI

Video Codec	H.265
RC Mode	VBR
Bit Rate (Mbps)	11
VBR Max Rate (Mbps)	13
HDCP (Test Mode)	Disable

Save and Confirm Cancel

Video Settings:

Video Settings	Settings Available	Default
Video Codec	H.265 H.264	H.265
RC Mode	CBR VBR	CBR
Bit Rate (Mbps)	Range: 1-30 (Mbps)	22
VBR Max Bit Rate (kbps)	Range: 2-40 (Mbps)	24
HDCP (Test Mode)	Disable Enable	Disable

RC Mode: Refers to the Rate Control Mode of the video encoding

Audio Settings:

Audio Output (Options): Audio Output | Disabled

Default: Audio Output

Audio Codec (Options): AAC, AC-3, MP2 (MPEG-1 Layer II)

Default: AC-3

Audio Bit Rate(kbps) [Options]: 64, 96, 128, 192, 224, 256, 384

Default:256kbps

Mux Settings:

Use the Mux Tab to change additional encoder parameters.

Parameter	Parameter Options
*TSID	1 (0 ~65535)
*SID	1 (0 ~65534)
PMT PID	As needed within parameters [range 32-4999, 5004-7936] (Default:1001)
Video PID	As needed within parameters [range 32-3840] (Default: 1002)
PCR PID	Assigned by the device
Audio PID	Assigned by the device
System	ATSC, DVB

**Note: Incrementally change TSID if more than 1 unit is in the same system*

System:

Select ATSC for ATSC and J.83B Standards.

Select DVB for: DVB-C, ISDB-Tb, DVB-T/T2,

**PSI (Program Specific Information) Settings:
J.83B (QAM-B) factory default settings**

PSI Settings	Default	Settings Available
VCN (Channel Number)	102.1 Default channel displayed if in VCN mode Auto (two-part)	Editable: Only if in VCN Manual Mode(s)
VCN Mode(s)	Auto (two-part)	Auto (two-part) Manual (one part) Manual (two-part)
Short Name	MY-DTV1	7 characters
Long Name	ATSC-Digital-TV1	16 characters
Source ID	101	1-65535

VCN Modes

Examples: VCN Mode (Auto two-part) will force the VCN channel to be based on the CH/Frequency selected on the RF Output Setup page of the device.

RF Settings

RF 1	
Enable	<input checked="" type="checkbox"/> 1
Regional Name	USA
RF Output	Normal
Channel Type	STD
Channel / Frequency	102 (663.0000 MHz)
Bandwidth (MHz)	6
Constellation	256 QAM
Interleaver	I = 128, J = 1
Maximum Allowable Bit Rate (Mbps)	2.873/ 38.810

Examples:

CH/Frequency(MHz)	VCN Channel
57/423.000	57.1
102/663.000	102.1 (Factory Default: 102.1)
134/855.000	134.1

- This mode automatically sets the VCN based on the RF CH/Freq. set in the RF Output Setup section.

VCN Mode (Manual one-part)- will allow the installer to control VCN channel regardless of the CH/Frequency selected on the Output Setup page of the device.

RF Settings

RF 1	
Enable	<input checked="" type="checkbox"/> 1
Regional Name	USA
RF Output	Normal
Channel Type	STD
Channel / Frequency	102 (663.0000 MHz)
Bandwidth (MHz)	6
Constellation	256 QAM
Interleaver	I = 128, J = 1
Maximum Allowable Bit Rate (Mbps)	2.873/ 38.810

Above example: shows RF CH # 102 is selected on the RF Output Setup page.

Encoder Setup

This page is a user-configurable page to read, write and select the encoder parameters.

Video Audio Mux **PSI**

VCN (Channel Number) 105 ✓

VCN Mode Manual(one-part) ↓

Short Name MY-DTV1

Long Name ATSC-Digital-TV1

Source ID 101



The VCN Mode now shows Manual (one-part) is selected allowing the user to manually set the VCN Channel number as desired.

CH/Frequency(MHz)	VCN Channel
102/663.000	105

VCN Mode (Manual two-part)- VCN Manual 2-part will allow the installer to control VCN channel regardless of the CH/Frequency selected on the Output Setup page of the device.

Examples:

CH/Frequency(MHz)	VCN Channel
57/423.000	2.1
102	105.2
134/855.000	58.1

SAVE AND CONFIRM ALL CHANGES MADE ON THE ENCODER PAGE

Note: To reset all changes made or saved go to the Administration Page and select '**Reset to Default**'.

***Leaving any encoder setting tab screen without saving changes will cause the previous settings to be used.**

Output Setup

RF Out Setup

Use the RF Out Setup to setup / select your RF Output.

The U5 encoder offers the integrator the ability select from a variety of Multiple standards: DVB-T, DVB-C, ISDB-Tb, ATSC, J.83B(QAMB), DVB-T2.

RF Output Setup

This page allows the user to configure the RF settings. Enter/Select the required settings for each RF Channel. Use the **Save and Confirm** button to save any changes made.

Modulation
J.83B

Country / Bandwidth
6 MHz

RF Settings

	RF 1
Enable	<input checked="" type="checkbox"/> 1
Regional Name	USA
RF Output	Normal
Channel Type	STD
Channel / Frequency	102 (663.0000 MHz)
Bandwidth (MHz)	6
Constellation	256 QAM
Interleaver	I = 128, J = 1
Maximum Allowable Bit Rate (Mbps)	2.499/ 38.810

J.83B (QAM-B) Settings:

1. **Select** RF Out from the menu.
2. **Select Modulation** Type from the drop down: DVB-T, DVB-C, ISDB-Tb, ATSC, **J.83B (QAMB)**, DVB-T2.
3. **Select Bandwidth required: 6 MHz**
4. **Enable | Disable: RF1** Disabling the RF1 will prevent the unit from outputting a RF signal.
5. **Modify** Regional Name (if required).
6. **Select and Set** RF Output Type. [**Default: Normal** | Options: Normal | Inverted]
7. **Select and Set** Channel Type. [**Default: STD** | Options: STD | HRC | IRC]
8. **Select and Set** CH/Frequency required. [**Default: CH 102** | Channel Range: CH 2 (57MHz) to CH 135 (861MHz)]
9. **Select and Set** required Constellation. [**Default: 256QAM** | Options: 64 QAM |256QAM]
10. **Save and Confirm** all changes made.

Note: Use the **Encoder Page -> PSI Tab** to set the **VCN MODE / Channel** as required.

ATSC Settings:

1. **Select** RF Out Setup from the menu.
2. **Select Modulation** Type from the drop down: **ATSC**
3. **Enable/Disable** RF1 by checking or unchecking Checkbox (as required).
4. **Modify** Regional Name (if required).
5. **Select and Set** RF Output Type. [**Default: Normal** | Options: Normal | Inverted]
6. **Select and Set** Ch/Freq required. [**Default: CH 2** | Channel Range: CH 2 (57MHz) to CH 69(803MHz)]
7. **Save and Confirm** all changes made.

Note: Use the **Encoder Page -> PSI Tab** to set the **VCN MODE / Channel** as required

Contact your Distributor if you require instructions for: DVB-C, DVB-T/T2, or ISDB-Tb.

IP Out

IP Out Setup

This page is a user-configurable page to read, write and select the IP output parameters.

Multicast Unicast RTSP SRT

Enable	Enable
Multicast URL	rtp://224.1.1.20:10000
Multicast TTL	4

Save and Confirm Cancel

Multicast Streaming:

Step 1: **Select** the Multicast Tab

Step 2: **Select** Enable.

Step 3: **Enter** the Multicast address and port ID

Example: udp://multicast_address:PortId

udp://224.1.1.20:10000

Step 4: **Set** Multicast TTL (Time To Live) parameter. [**Default TTL: 4**]

Step 5: **Save and Confirm** all changes made.

Unicast Streaming:

IP Out Setup

This page is a user-configurable page to read, write and select the IP output parameters.

Multicast Unicast RTSP SRT

Enable	Unicast URL
<input checked="" type="checkbox"/> 1	udp://192.168.100.201:10000
<input checked="" type="checkbox"/> 2	rtp://192.168.100.202:10000
<input type="checkbox"/> 3	udp://192.168.100.203:10000
<input type="checkbox"/> 4	rtp://192.168.100.204:10000
<input type="checkbox"/> 5	udp://192.168.100.205:10000

Save and Confirm Cancel

Step 1: **Enable** the Stream(s) as needed.

Step 2: **Enter** the UniCast Address and port ID.

Example: udp://unicast_address:PortId

udp://192.168.100.201:10000

rtp://192.168.100.202:10000

Step 4: **Save and Confirm** all changes made.

Note: You can stream up to 5 Unicast streams at one time.

RTSP Streaming:

IP Out Setup

This page is a user-configurable page to read, write and select the IP output parameters.

Multicast Unicast **RTSP** SRT

Enable	Enable
Multicast URL	rtsp://192.168.1.9/VideoInput/mcast.ts
Unicast URL	rtsp://192.168.1.9/VideoInput/ucast.ts

Step 1: **Select Enable** to enable the pre-configured RTSP streams generated. (stream addresses are based on the Unit's IP Address)

Step 2: **Save and Confirm** all changes made.

SRT Streaming:

The U5 is capable of SRT (Secure Reliable Transport) streaming.

SRT (Secure Reliable Transport) is an open source transport protocol created by Haisivon.

It allows for video streaming over the public internet without any intermediary device.

It is used around the world to transport video over the internet.

3 methods of SRT: Called/Listener modes and Rendezvous.

SRT Streaming:

Note: Caller and listener modes require access to respective on premise routers/NAT to allow caller/listener port to be allowed.

SRT Listener Mode Setup

Listener mode requires 'caller' device

Step 1: Select the SRT Tab.

Step 2: Select Enable.

Step 3: Select Listener.

Step 4: Set Listen Port parameter as desired.

Step 5: Set Latency(ms) parameter as desired.

Step 6: Set Bandwidth (%) parameter as desired.

Step 7 (Optional): Enter Passphrase for stream security.

Step 8: **Save and Confirm** all changes made.

SRT Caller Mode Setup:

Step 1: Select the SRT Tab.

Step 2: Select Enable.

Step 3: Select Caller.

Step 4: Enter valid destination IP Address

Step 5: Set Listen Port

Step 6: Set Caller Port

Step 7: Set Latency(ms) parameter as desired.

Step 8: Set Bandwidth (%) parameter as desired.

Step 9 (Optional): Enter Passphrase for stream security.

Step 10: **Save and Confirm** all changes made.

SRT Rendezvous Mode Setup:

Rendezvous Mode does not require any NAT or network configuration of the local routers.

Step 1: Select the SRT Tab.

Step 2: Select Enable.

Step 3: Select Rendezvous.

Step 4: Enter valid destination IP Address

Step 5: Set Listen Port

Step 6: Set Caller Port

Step 7: Set Latency(ms) parameter as desired.

Step 8: Set Bandwidth (%) parameter as desired.

Step 9 (Optional): Enter Passphrase for stream security.

Step 10: **Save and Confirm** all changes made.

Recording

Recording Setup:

The U5 has the ability to record the stream from the device onto a USB Drive.

Recording Setup

This page is a user-configurable page to read, write and select the recording parameters.

Enable	<input type="text" value="Enable"/>
Start Date	<input type="text" value="05 / 23 / 2023"/>
Start Time	<input type="text" value="12:00 PM"/>
End Date	<input type="text" value="05 / 23 / 2023"/>
End Time	<input type="text" value="01:00 PM"/>
Estimate Size	6.29 GiB / NaN KiB
Disk Available	NaN KiB / NaN KiB
<input type="button" value="Save and Confirm"/> <input type="button" value="Cancel"/>	

Attach USB drive to the front of the unit.

Step 1: **Select** Recording Setup from the Output Setup Menu.

Step 2: **Select** Enable.

Step 3: **Set** Start Date

Step 4: **Set** Start Time

Step 5: **Set** End Date

Step 6: **Set** End Time

Note: When USB is connected and recording- unit will display:

USB Indicators on Faceplate:

Solid: USB Plugged in

Flashing: Unit is recording

Unlit: No USB attached

Network Setup

Network Setup

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

NIC

Hostname	<input type="text" value="U334409"/>	✓
MAC Address	f8:0d:ea:d5:1a:49	
DHCP	<input type="checkbox"/>	
IP Address	<input type="text" value="192.168.8.99"/>	
Subnet Mask	<input type="text" value="255.255.255.0"/>	
Default Gateway	<input type="text" value="192.168.8.254"/>	
DNS Server 1	<input type="text" value="192.168.8.254"/>	
DNS Server 2	<input type="text"/>	

Use the Network Setup Page to set device: Hostname, IP, Subnet Mask, Default Gateway, DNS Server 1 & 2 addresses

Host Name

User definable. If required enter a new Host Name.

Device IP Address:

DHCP:

To **Enable** DHCP **check** the DHCP Checkbox.

IP Address:

Setting Static IP

1. To set a Static IP '**Uncheck** ' *Enable DHCP*'.
2. **Enter** IP Address, Subnet Mask, Default Gateway, and DNS Servers (as needed).
3. **SAVE AND CONFIRM** all changes made on the Network Setup page.

Default IP address: 192.168.1.9

System Setup

Use the System Setup Page to set up the units Description (location) and Time.

Description:

System Setup

Description **Time**

Device Description

Location	<input type="text" value="Hotel USA"/>	✓
Description	<input type="text" value="Rack1 Encoder5 Service: CNBC"/>	✓

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As needed, enter unit Location and Unit Description for device.
This info will be displayed on the Overview Page.

Set Time:

The U5 requires accurate time stamping for SRT functionality.
Select and **set** the devices System UTC time, Time Zone, and NTP Servers.

System Setup

Description **Time**

Set Time

System UTC Time	<input type="text" value="Wed, 10 May 2023 14:30:58 GMT"/>
NTP Server 1	<input type="text" value="0.pool.ntp.org"/>
NTP Server 2	<input type="text" value="1.pool.ntp.org"/>

Administration

Administration

REBOOT RESET TO DEFAULT

Backup / Restore Firmware Upgrade Password

 Download current configuration settings to a local file.
BACKUP

 Upload a pre-saved configuration to the device.
BROWSE... UPLOAD

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Reboot Device

Click the 'Reboot Device' button to reboot the device from within the GUI.

Note: The encoder can be rebooted using pressing the 'Reboot' button on the front of the device.

All unsaved changes will be lost.

Reset to Default

Click the 'Reset to Default' button to disregard any parameter changes made to the device.

Note: Device settings will revert to factory default settings.

Backup and Restore Configuration

Saving your configuration files

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

Backup ✕

Select backup data!

- Encoder Setup
- IP Streaming Out Setup
- Network Setup
- System Setup

Cancel Download

Restore:

1. Select Administration tab.
 2. Select “Browse”.
 3. Locate the required file to be imported.
 4. Select “Upload” to import the selected file into the device.
- Note:** backup can be imported to assist in setting up new or multiple devices onsite.
Remember to save and backup any and all changes.

Firmware Upgrade

[Backup / Restore](#) [Firmware Upgrade](#) [Password](#)

Current Firmware

Model Number	U5
Serial Number	2313 334409
Firmware Version	0.8.0.202305091838t
Build Time	Tue May 09 2023 06:38:00 GMT-0400 (Eastern Daylight Time)
Net Version	2.3.2

Update Firmware



Select a new firmware image file and Upload.

BROWSE...

UPLOAD

If an update is required, use the Firmware Upgrade function to upload new FW into the device as required.

Change Password

[Backup / Restore](#) [Firmware Upgrade](#) [Password](#)

Change Password

CAUTION: The new password must contain:

- 6–8 characters
- At least one digit
- At least one uppercase character
- At least one lowercase character

Old Password:

New Password:

Confirm Password:

Save and Confirm

Change Password:

Use the Change Password section to change or modify the device’s password as desired.
Remember to **Click** ‘*Save and Confirm*’ button to save new password.

References:

Private Address Ranges, IPv4

Private IPv4 addresses are addresses set aside by the IANA (Internet Assigned Numbers Authority) for use within networks that will not directly communicate or not be seen by the internet. These private addresses cannot be used on the Internet or be used to communicate with the Internet. ISP's filter out and delete packets using private IP addresses. Any organization that uses private IP addresses on devices that communicate with the internet must use a device that performs Network Address Translation.

Anyone can use private addresses and they are not required to seek permission to use them. Again, networks using private IP addresses cannot communicate directly with the internet.

There are three blocks of addresses that are set aside by IANA for use in private internets and are not publicly routable on the global internet:

- Private Class A Range: 10.0.0.0 - 10.255.255.255
- Private Class B Range: 172.16.0.0 - 172.31.255.255
- Private Class C Range: 192.168.0.0 - 192.168.255.255

It is important to note that only *some* of the 172.xx.xx.xx and the 192.xx.xx.xx address ranges are designated for private use. The remaining addresses are public and can be routable via the global Internet.

More information regarding private addresses can be found at <http://www.iana.org> and <https://www.arin.net>.

For More information on ZyCast products visit: **www.ZyCastTech.com**

Encoder	IP Out
Solid: OK	Solid: Enabled
Flash(ing): No Input	Flash(ing): Programming
Unlit: NG (device error)	Unlit: Disabled
USB	RF Out
Solid: Plugged	Solid: Enabled
Flash(ing): Recording	Flash(ing): NG (device error)
Unlit: Unplugged	Unlit: Disabled