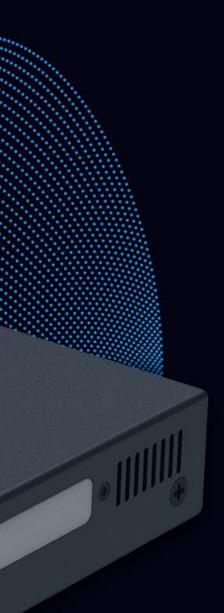
**MAGEWELL**°

# ULTRA ENCODE PLUS

User Manual, Reference and FAQ



Ultra Encode HDNII

LINE OUT LINE IN LIVE ETH WI-FI PWR

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1	0	8

# Preface



#### Introduction

Our Ultra Encode family of universal live media encoders offers systems integrators, streaming professionals, and OEM partners a flexible and affordable encoding solution for applications including live streaming, AV over IP, remote contribution, IP production workflows and much more. Available in HDMI and SDI models, it builds on the functionality of the Ultra Encode family with expanded features including 4K encoding and streaming from the HDMI input; simultaneous multi-protocol streaming; higher streaming bitrates; file recording; and much more. This device is ideal for high-quality live streaming of content including sports, education, and live events as well as IP-based production and AV-over-IP.

Encoder supports multiple video encoding formats – including H.264, H.265 (HEVC), NDI<sup>®</sup>|HX2, and NDI<sup>®</sup>|HX3 – and a wide array of delivery protocols including RTMP, RTMPS, SRT, RTSP, RTP, HLS, TS over UDP, TS over RTP, and TVU's ISSP technology. Up to eight channels of audio can be encoded in AAC format.

Encoder is ideal for broadcast video and audio, natively support live broadcast for Facebook, YouTube, and Twitch, as well as WOWZA, your own site, with multi-platform distribution. To customize encoder perfectly for your session, we have Web UI, where device work status, a thumbnail preview window and tabs for streaming settings, analytics, and stream health monitoring are provided.

### **Key Features**

- Support RTSP/RTMP/RTMPS/SRT Caller/SRT Listener/NDI<sup>®</sup>|HX2/NDI<sup>®</sup>|HX3/HLS/TS over UDP/TS over RTP/TVU ISSP streaming protocols
- Dual stream encoding main-stream and sub-stream
- 8 overlays for main and sub streams each
- Specify main stream or sub stream for each streaming session
- Multi-streaming to various video platforms simultaneously and up to 8 schedules are supported for each session.
- H.264 and H.265 (HEVC) Video encoders
- Recording main or sub streams to SD card, USB drive, and NAS. Up to 8 schedules are supported for each task.
- AAC Audio encoder
- Web UI a remote network management system provides webpage configuration with kinds of customization for device functions

### System Requirements

#### Network

- 10/100/1000Mbps Ethernet
- Wi-Fi 802.11 a/b/g/n/ac
- USB 4G/5G mobile broadband modem (not included)
- USB Net

#### Web UI Supported Web Browser

- Microsoft Edge
- Mozilla Firefox version 61 and above
- Google Chrome version 49 and above
- Apple Safari 11.1 and above
- Opera 55.0.2994.44 and above

#### Ultra Encode Family

- Ultra Encode HDMI Plus
- Ultra Encode SDI Plus

# Tutorial

Let's learn by example. Throughout this tutorial, we'll walk you through the creation of a basic YouTube live streaming with Ultra Encode.

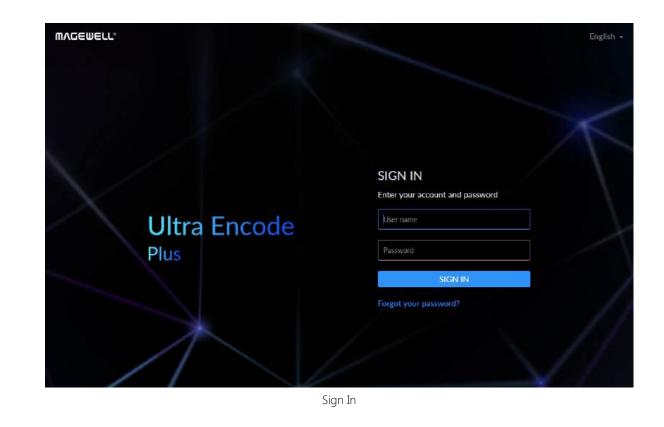
It'll consist of two parts: Part 1. Ultra Encode setup Part 2. YouTube setup

### Part 1. Ultra Encode Setup

#### 1. Find Ultra Encode

- 1. Connect the encoder to a LAN and power it up.
- 2. Connect input signal.
- 3. Access Web UI
  - i. In Windows 10, open a File Explorer window, find the encoder in **Network > Other Devices**.
  - ii. Double click a encoder icon to open the Web UI of the device in your default web browser.
- 4. Log in with your username and password.

_   File Network V	/iew	
Properties Open Connect	View printers	
← → → ↑ 🛃 → ١	Network > > Computer (6)	
📌 Quick access	V Other Davises (2)	
Downloads	Ultra Encode C315220930003 Ultra Encode C315220914001	
Network		



Find your Device

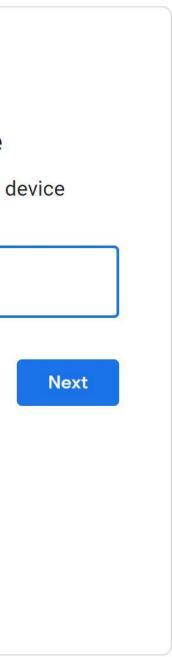
#### 2. Add YouTube streaming session

If you need low latency, then YouTube RTMP is the better option. However, if you need adaptive bitrate streaming, then YouTube HLS is the better option.

- 1. In the left control pane, go to Live tab. Click Add Destination and choose YouTube RTMP or YouTube HLS.
- 2. Go to YouTube https://www.google.com/device, and paste the code prompted.

YouTube RTMP	$\times$	Google
Next, visit https://www.google.com/device on your smartphone or computer and enter this code: YQFG-TGWL D		Connect a device Enter the code displayed on your Enter code YQFG-TGWL
Go to YouTube		

3. Follow the page instructions to log in and trust your device.

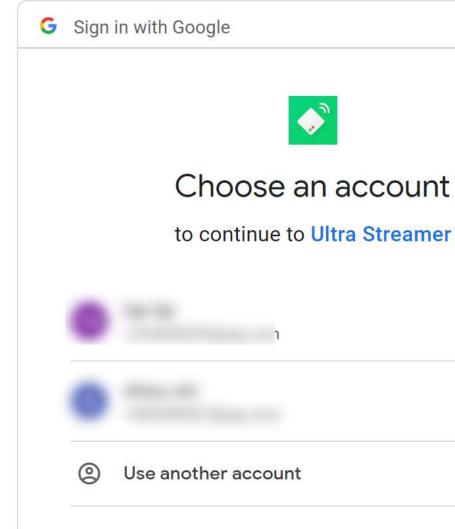


YouTube RTMP

Next, visit https://www.google.com/device on your smartphone or computer and enter this code: Х

## YQFG-TGWL □

Go to YouTube



To continue, Google will share your name, email language preference, and profile picture with U Streamer. Before using this app, you can review Streamer's **privacy policy** and terms of service

4. Choose the **Event** where you want to show your video clips.

Then you can simply save the server with default parameters for streaming.

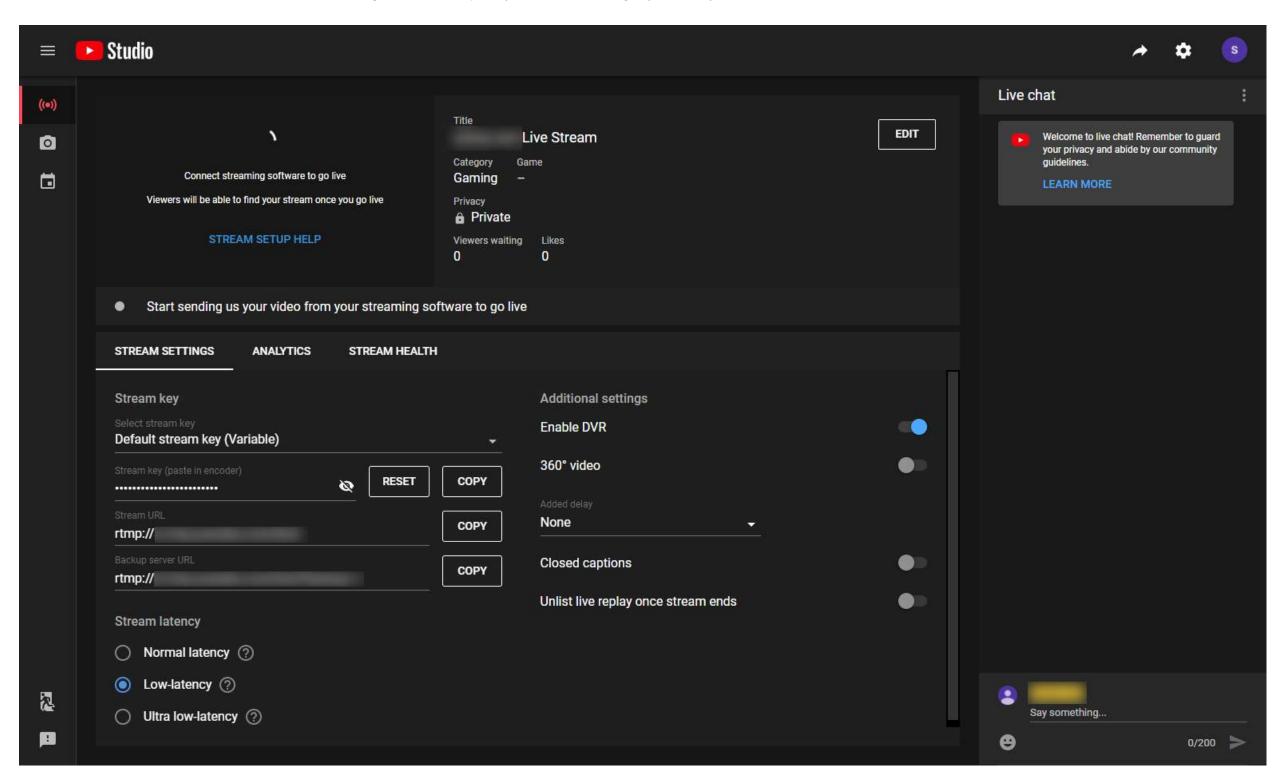
- 5. Content made for kids switch is off by default. You can go to Youtube Help to get detailed requirements.
- 6. Go back to the Live tab and turn on the switch 🔘 before YouTube icon to start the streaming session.

t	
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ail address, Jltra	
w Ultra	
e.	

Now the encoder is ready to bring your content to YouTube directly with all these settings.

### Part 2. YouTube Setup

Create a live stream task in YouTube Studio to go live, and specify the Title, Category, Privacy, etc.



# Installation

### Safety Information

#### **Electrical Safety**

- Seek professional assistance before using an adapter or extension cord. • These devices could interrupt the grounding circuit.
- Make sure that you are using the correct power adapter for the local • voltage. If you are not sure about the voltage of the electrical outlet you are using, contact your local power company.
- If the power adapter is broken, do not try to fix it by yourself. Contact a qualified service technician or your retailer for help.

#### **Operation Safety**

- Before using the product, make sure all cables are correctly connected and the power cables are not damaged. If you notice any damage, contact your dealer immediately.
- To avoid short circuits, keep paper clips, screws, and staples away from connectors, slots, sockets and circuitry.
- Avoid dust, humidity, and temperature extremes. Do not place the product in any area where it may become wet.
- If you encounter technical problems with the product, contact your dealer or the Magewell Support Team via support@magewell.net.

### **FCC Compliance Statement**

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and cause undesired operation

(2) this device must accept any interference received, including interference that may cause undesired operation.

#### **FCC Statement**

This device has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This device generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this device does cause harmful interference to radio or television reception, which can be determined by turning the device off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the device and receiver.
- Connect the device into an outlet on a circuit different from that to which the receiver is connected. •
- Consult the dealer or an experienced radio/TV technician for help.

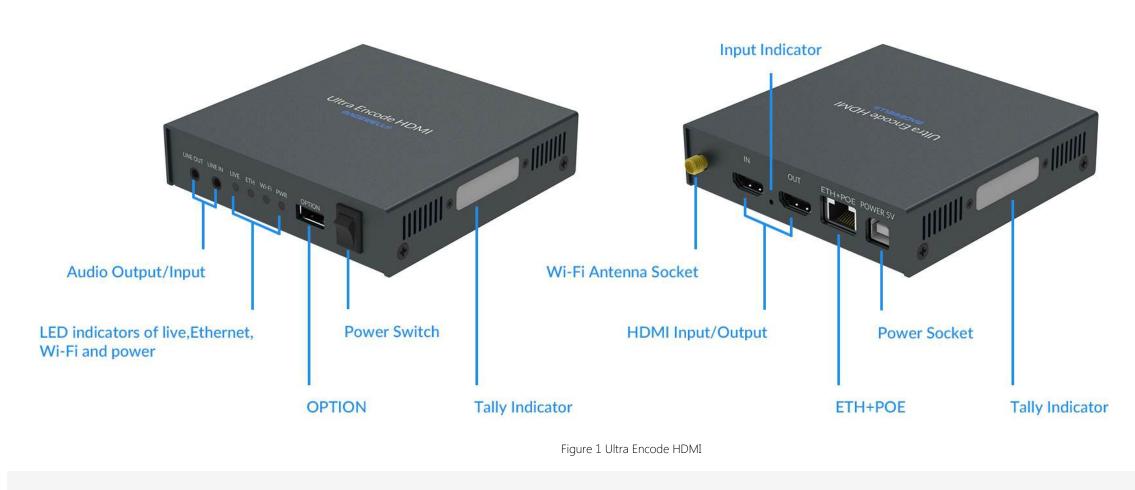
Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

#### **FCC Radiation Exposure Statement**

The antennas used for this transmitter must be installed to provide a separation distance of at least 20cm from all persons and must not be co-located for operating in conjunction with any other antenna or transmitter.

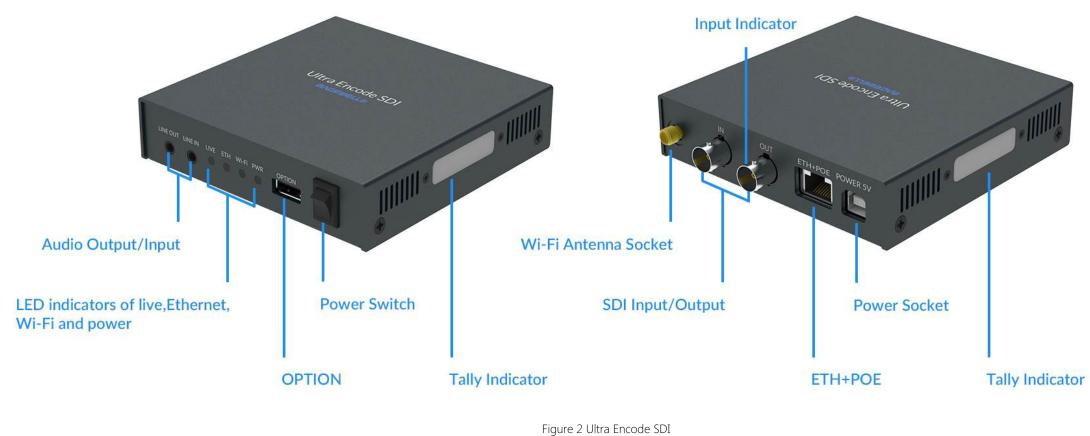
#### Interfaces & Indicators

#### Ultra Encode HDMI Plus



 $\triangle$  Plug included Wi-Fi antenna when you want to connect to a wireless network.

#### Ultra Encode SDI Plus



 $\triangle$  Plug included Wi-Fi antenna when you want to connect to a wireless network.

#### Indicators

Indicators status is as follows. PWR (Power)

- On: power on.
- Off: power off.

#### IN (HDMI/SDI)

- On: input signal detected.
- Breathing: input signal undetected.

#### LIVE

- On: the encoder is streaming to at least one streaming address.
- Breathing: none of the live sessions is enabled.

#### ETH

- On: Ethernet connected.
- Off: Ethernet unconnected.

#### Wi-Fi

- On: Wi-Fi connected.
- Breath: Wi-Fi not connected or connecting.

#### Tally (For NDI)

- Two-green-on: Preview
- Two-red-on: Program

Multiple indicators flash:

- The indicator lights of live, Eth, Wi-Fi flash once simultaneously: system is booting up or rebooting.
- The indicator lights of live, Eth, Wi-Fi flash in turn: firmware is updating.
  - $\triangle$  If any other status appear, please try to unplug and re-plug in the power cable to recover your encoder.

# Get Started With Ultra Encode

_   🖓 🛄 ╤   Network File Network Vie	ew
Properties Open Connect on Desktop Location	with Remote Connection Add devices and printers Network
← → → ↑ 👉 > N # Quick access Desktop #	etwork > > Computer (6) <ul> <li>Other Devices (2)</li> </ul>
Downloads * Documents * Pictures *	C315220930003
This PC Network	

#### Access Web UI

Manage your device via wired networks, USB NET, or Wi-Fi.

- 1. Connect your device to your LAN and power it up. The device may be powered by PoE through the ETH+PoE port or by DC input using the provided power adapter.
  - $\triangle$  To ensure a smooth video, you are recommended to connect to a wired network.
- 2. Open Web UI:
  - Via File Explorer on Windows 7 and above
    - i. Open File Explorer in your PC, then locate your device in **Network** > Other Devices.
    - ii. Double click the device icon, open the sign page of Web GUI.
  - Via USB NET, IP Address: 192.168.66.1
    - Connect the device to your computer using provided USB cable. i.
    - Type the USB NET IP address 192.168.66.1 in your web browser to ii. access the Web UI.
  - Via device Wi-Fi AP, IP Address: 192.168.48.1
    - ⚠ Plug included Wi-Fi antenna when you want to connect to a wireless network.

MVGEMELT.	English +
Ultra Encode	SIGN IN Enter your account and password
Plus	Password SIGN IN Forgot your password?

i. In your smartphone/tablet/laptop, turn on WLAN, search for and join the device AP named Ultra Encode + (Serial number). The AP names after your gear's Serial number, and the password is the last 8-number of the serial number. For example, a serial number 311210101001 indicates the initial AP password is 10101001.

We recommend that the distance between the Web UI and the encoder should be within 10m.

- ii. In your web browser, enter 192.168.48.1 to open the Web UI.
- 3. Input your username and password.
  - The default administrator name and password are both Admin.
  - We recommend you to modify the admin password after initial logging-in.

#### Set Device Name

### Initialization

1

Follow the instructions of the Web UI to perform the device initialization and set a new device name.

😳 1, 1-32 characters

2. A-Z, a-z, 0-9, space and .\_-+'[]()

3. Cannot begin or end with a space.

Next

# Web UI Configuration

_   🛃 ╤   Network	
File Network View	
View print	ce webpage
Properties Open Connect with Remote Add devices Desktop Connection and printers	Network and Sharing Center
Location Network	
← → → ↑ 💣 > Network >	
A Quick access     Computer (6)     ✓ Other Devices (2)	
Downloads	Ultra Encode
Documents C315220930003	C315220914001
Pictures 🖈	-
CneDrive	
This PC	
i Network	

Fig1 Find your device in Windows > Network

### Accessing the Web UI

A free tool, Web UI, is provided to monitor and manage device status and configuration. If you know your device's IP address, type it into your web browser to access the Web UI. Alternatively, you can access the Web UI via wired Ethernet, USB NET, or Wi-Fi following the steps below.

- 1. Connect your device to your LAN and power it up. The device may be powered by PoE through the ETH+PoE port or by DC input using the provided power adapter.
  - $\triangle$  To ensure a smooth video, you are recommended to connect to a wired network.
- 2. Access Web UI:
  - Via File Explorer on Windows 7 and above
    - i. Open File Explorer in your PC, then locate your device in **Network** > Other Devices.
    - ii. Double click the device icon to open the sign page of Web UI.
  - Via USB NET, IP Address: 192.168.66.1
    - i. Connect the device to your computer using provided USB cable.
    - ii. Type the USB NET IP address 192.168.66.1 in your web browser to access the Web UI.
  - Via device Wi-Fi AP, IP Address: 192.168.48.1

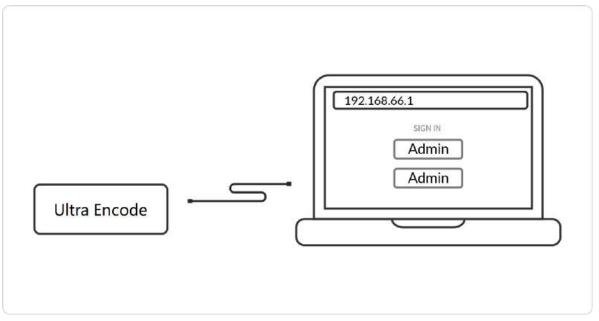
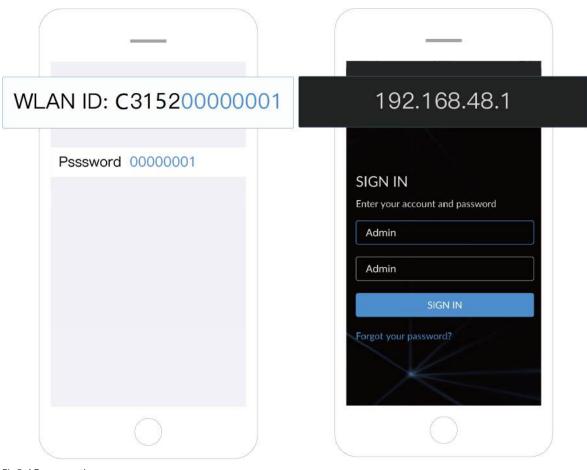


Fig2 USB NET connection



- $\triangle$  Plug included Wi-Fi antenna when you want to connect to a wireless network.
- i. In your smartphone/tablet/laptop, turn on WLAN, search for and join the device AP named Ultra Encode + (Serial number). The AP names after your gear's Serial number, and the password is the last 8-number of the serial number by default. For example, a serial number 311210101001 indicates the initial AP password is 10101001.

We recommend that the distance between the Web UI and the encoder should be within 10m.

ii. In your web browser, enter 192.168.48.1 to open the Web UI.

Fig3 AP connection

SIGN IN SIGN IN Enter your account and password Ultra Encode Plus Password SIGN IN SIGN IN Base SIGN IN SIGN IN SIGN IN	Ultra Encode Plus Enter your account and password Ultra Encode Password Password	VGEMELT.	Englist
Ultra Encode Plus	Ultra Encode       Marcount and password         Marcount and password       Marcount and password         Plus       Password         SIGN IN       SIGN IN		SIGN IN
Password	Password Sign in		
Password	Password Sign in	Ultra Encode	User name
SIGN IN			Password
	Forgot your password?		SIGN IN
Forgot your password?			Forgot your password?

### Signing In/Out

The Web UI allows multiple users to have read/write access to make configuration settings at the same time after logging-in. However, to avoid configuration conflicts, we do not recommend you to operate one device simultaneously.

- 1. Sign In: enter your account and password in the **SIGN IN** page.
  - The default administrator name and password are both Admin.
  - We recommend you to modify the admin password after initial logging-in.
- 2. Sign Out: click the down arrow symbol  $\frown$  behind the logging-in username at the top-right of the Web UI, and select **Sign out**.

#### Dashboard

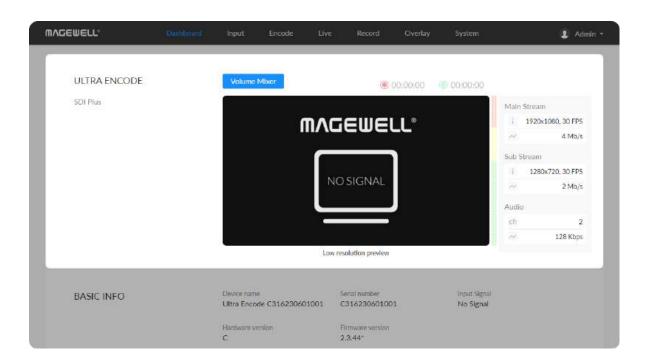
On **Dashboard** page, you can

- preview the thumbnail of the encoded video •
- check device hardware information
- check system status •
- set global volume mixer •
- check product module at the upper left corner •

MAGEWELL	Dashbeard Input	Encode	Live Record	Overlay	System		💄 Admin -
ULTRA ENCODE	Volu	me Mixer	(8)	00:00:00	00:00:00		
SDI Plus	Volume M	lixer		×		Main Stream	1080, 30 FPS 4 Mb/s
	Mic blas		Bb Q Q	0 + - +			x720, 30 FPS
	≪∳ Line o	ut	8500 Bb00	-+ @		Audio ch	2 Mb/s 2
	O SDI in	Done	Reset	<u> - + </u> (@)			128 Kbps
BASIC INFO	Device Ultra E	name ncode C31623060100	Serial number 01 C3162306010	01.	input Signal No Signal		
	Hantwa C	re version	Firmware version 2.3.44*				

#### Setting Volume Mixer

- Mic Bias: turn it on when connecting a microphone via line in. It allows flowing way power (around 2.3V) to the jack which makes the microphone sound. It is off by default.
- LINE IN: adjust the audio connected to the LINE IN. Click \_\_\_\_\_ to fine tone the volume at 0.1dB.
- LINE OUT: adjust the LINE OUT audio which remixes audio embedded in input signal and LINE IN. Click is to fine tone the volume at 0.1dB.
- HDMI/SDI IN: adjust input signal volume
- $\Rightarrow$  : mute current channel. Click  $\rightarrow$  to fine tone the volume at 0.1dB. •
- • : restore current channel to default value
- Reset: restore all settings of the volume to default settings
- Done: click to save your configuration



#### 2 Mb/s ch 2 128 Kbps Low resolution preview Serial number Input Signal BASIC INFO Device name Ultra Encode C316230601001 C316230601001 No Signal Hardware version Firmware version 2.3.44\* C **STATUS** 12% 1500 MHz 54% Send 233.79 Kb/s Receive 9 27 Mb/s WI-FI Mobile Unconnected Unconnected © 2023, Nanjing Magewell Electronics Co., Ltd. All rights reserved.

#### Previewing Thumbnails

Thumbnails, with a low resolution of 640x360, give you a quick snapshot of video being encoded.

#### **Checking BASIC INFO**

- Device name: device name of your unit. You can modify the device name in the System > General > Device name section.
- Serial number: serial number of your unit, which is also marked on your • device.
- Input Signal: current input signal format.
- Hardware version: hardware version of your unit.
- Firmware version: current firmware version that is installed in your unit. You can update the firmware, via the **System > Firmware** tab.

			Audio ch ~	128 Kbj
	ول ا	w resolution preview		
BASIC INFO	Device name Ultra Encode C316230601001	Serial number C316230601001	Input Signal No Signal	
	Hardware version C	Firmware version 2.3.44*		
STATUS	CPU 12% 1500 MHz	Memory 54%	Ethernet Send 233.79 Kb Receive 9.27 Mb	
	WI-FI Unconnected	Mobile Unconnected		

### Checking STATUS

• Gives you an overview of your system CPU, memory usage, network usage in real-time in order to evaluate the device performance & health.

#### Input

Click and enter the **Input** tab to check the input signal information detected by the device.

Video Options 😽		
INPUT		
🗌 Color format	YUV EIT. 709	*
Quantization	(Limited range (16-235)	*
OUTPUT		
Color format	VUV BT.709	-
Quantization	Limited range (16-235)	-
COLOR		
-iQ+ Brightness		· · ·
Contrast	100	o
Saturation	100	o
O Hue	0	o

#### Set Input Source

- Color format: input video color format. Check the box to select other options, including RGB, YUV BT.601, YUV BT.709, YUV BT.2020.
- Quantization: input quantization range. Check the box to select other options, including Full range(0-255), Limited range(16-235).

#### Setting OUTPUT

- Color format: check the box to select other options, including YUV BT.601, YUV BT.709.
- Quantization: check the box to select other options, including Full range(0-255), Limited range(16-235).

#### Setting Color

Set color format of preview and stream video.

- Brightness: range from -100 to 100, the default value is 0.
- **Contrast:** range from 50 to 200, the default value is 100.
- Saturation: range from 0 to 200, the default value is 100.
- Hue: range from -90 to 90, the default value is 0.
- Click  $\bigcirc$  icon to restore the current setting to default value.

#### Signal 😵 VIDEO STATUS Resolution 1920×1080p, 60.00Hz Color depth 10 4:2:2 Sampling Aspect ratio 16:9 Color format BT.709 Frame struc 2D Limited Quantization range Saturation rang Limited AUDIO STATUS 44100, 24 bits Sampling Channels 8 SDI STATUS Link type Single link Link speed 3G Single stream Stream type False Level B Interlaced False Assignment 0 ST 352 payload ID 0x00000000 H total 2200 Pixels V total 1125 Lines H active 1920 Pixels Vactive 1080 Lines

#### **Check VIDEO STATUS**

- **Resolution** shows the input video pixel resolution & frame rate.
- Color depth shows the input video color depth, in bits.
- Sampling shows the input video color sampling format. •
- Aspect ratio shows the input video aspect ratio.
- Color format shows the input video color encoding format.
- Frame struct shows the input video frame type, 2D or 3D.
- Quantization range shows the quantization range, Full or Limited. •
- Saturation range shows the saturation range, e.g. Full or Limited. •

#### **Check AUDIO STATUS**

- Sampling shows the input audio sampling rate and bit depth.
- Channels shows the number of input audio channels detected.

#### **Check SDI STATUS**

NOTE: This parameter is available for SDI products.

- Link type shows link type of input SDI signal, including single link, dual link, quad link.
- Link speed shows the current data speed.
- Stream type shows the number of streams that is contained in the data source.
- Level B shows whether the input signal is level B format.
- Interlaced shows whether the input signal is interlaced.
- Assignment shows the link number, especially when be fed into a source of

- ST 352 payload ID shows the SMPTE ST 352 video payload identification code for SDI.
- **H total** shows the total number of pixels, horizontally.
- V total shows the total number of pixels, vertically.
- H active shows the number of active pixels, horizontally.
- V active shows the number of active pixels, vertically.

#### Signal ₩

Resolution	1920×1080i, 60.00Hz	
Color depth	8	
Sampling	4:4:4	
Aspect ratio	16:9	
Color format	BT.709	
Frame struct	2D	
Quantization range	Limited	
Saturation range	Limited	

#### AUDIO STATUS

Sampling	48000, 16 bits
Channels	2

Mode	HDMI	
HDCP encrypted	False	
VIC	5	
IT content	False	
Pixel rate	74.25 MHz	
Timing-H total	2200 Pixels	
Timing-H active	1920 Pixels	
Timing-H front porch	88 Pixels	
Timing-H sync width	44 Pixels	
Timing-H back porch	148 Pixels	
Timing-V total	1125 Pixels	
Timing-V active	540 Pixels	
Timing-V front porch	2 Pixels	
Timing-V sync width	5 Pixels	
Timing-V back porch	15 Pixels	

#### **Check HDMI STATUS**

NOTE: This parameter is available for HDMI products.

- Mode shows the signal type (which is always HDMI for the HDMI product).
- HDCP encrypted shows whether the signal source is HDCP encrypted. In accordance with the related laws and regulations, the device doesn't process HDCP encrypted signals, so the value is None.
- VIC Video Identification Code, which is defined for CEA formats.
- IT content shows whether the transmission package is content.
- **Pixel rate** shows the maximum number of pixels the unit could possibly write to the memory in one second.
- Timing-H total shows the total number of pixels, horizontally.
- Timing-H active shows the number of active pixels, horizontally.
- **Timing-H front porch** shows the Front Porch width in pixels.
- Timing-H sync width shows the Sync Pulse width in pixels.

INFO FRAME	
AVI	
Туре	0x82
Version	0x02
Length	13 bytes
Checksum	0x72
Data	50 A8 00 05 08 00 00 00 00 00 00 00 00 00
AUDIO Type	0x84
Version	0x01
Length	10 bytes
Checksum	0x70
Data	01 00 00 00 00 00 00 00 00 00

#### INPUT PORT

Manage EDID of the input port. SmartEDID<sup>TM</sup> solves conflicts when connecting a loop-through device

- Timing-H back porch shows Back Porch width in pixels.
- **Timing-V total** shows the total number of pixels, vertically.
- Timing-V active shows the number of active pixels, vertically.
- Timing-V front porch shows the size of the vertical Front Porch in pixels.
- Timing-V sync width shows the width of the vertical Sync Pulse in pixels.
- Timing-V back porch shows the size of the vertical Back Porch in pixels.

#### **Check HDMI INFO FRAME**

The info frames vary from different signal sources, AVI/AUDIO/SPD/VS may be included.

- Type shows the packet type.
- Version shows the packet Version.
- Length shows the length of the AVI InfoFrame payload.
- Checksum shows the packet checksum.
- Data shows the InfoFrame payload.

EDID ¥																	
INPUT POP	(T																
			Tente														
Manage ED																	
SmartEDID	<sup>m</sup> solve	s co	nflic	15 W	hen	001	inec	ting a	loop	-Din	ough	de	/ice;				
🗹 SmartEl	ND™		Ke	ep la	nst		A	td au	dio		Lim	ited	pixe	el clo	ck		
Offset	9	1	z	3	4	5	6	7	8	9	А	в	с	D	E	F	
60	00	FF	FF	FF	FF	FF	FF	00	34	F7	64	32	15	CD	58	07	
10	30	14	01	03	80	30	18	78	ØF	EE	95	AB	54	4C	99	26	
20	ØF	50	54	FF	FF	80	81	00	81	40	81	80	95	00	A9	40	
30	B3	00	D1	00	D1	40	F3	39	80	18	71	38	2D	40	58	2C	
40	45	80	¢4	88	21	00	88	1A	28	30	80	AØ	70	BØ	23	40	
50	30	20	36	68	C4	8E	21	00	88	1A	00	80	00	FC	90	55	
60	53	42	20	43	61	70	74	75	72	65	<b>Ø</b> A	20	00	66	90	FD	
70	99	19	78	90	FF	22	98	ΘA	20	20	20	20	20	20	81	E1	
80	95	03	4F	F1	5E	96	15	02	11	13	64	14	05	20	21	22	
90	16	10	40	ЗF	5D	5E	5F	60	61	62	63	64	65	66	67	68	
AØ		6A												90			
BØ		00												E3			
CO		E7												8C			
DØ		80												21			
EØ		E2												C4			
FØ	99	88	90	00	99	90	99	00	89	00	00	99	00	00	86	80	
									Defa	ult			In	nport			Export

#### EDID

Click the EDID to check the EDID information. By clicking Reset to Default, you can cancel your settings.

EDID is only available for products supporting HDMI signal.

#### Set SmartEDID<sup>TM</sup>

NOTE: This function is available for HDMI products.

- SmartEDID<sup>TM</sup>
  - SmartEDID<sup>TM</sup> is enabled by default. When it is disabled, other related functions can not be set.
  - Depending on the input capability of the encoder and that of the device connected to the loop-through interface, the encoder will smartly select to send the EDID to the video source device, to ensure both the encoder and the loop-through device can obtain the signal they support.
- Keep last
  - Keep the last EDID value used.
  - This function is disabled by default. To enable it, the SmartEDID function should also be enabled. When Keep Last is enabled and the loopthrough device is disconnected, the current EDID will still be used. The encoder will continue receiving signal so the video capture and encoding continues. Otherwise, the encoder will resend its EDID to the source device for it to redetermine what format of signal to send. As a result, there could be an interruption to the source signal for a short time.
- Add audio
  - Force the source device to output audio.

- If users connect a monitor which doesn't support audio to the loopthrough output, the source device will decide not to output audio. As a result, the device will not get any audio input. If Add Audio is enabled, the device will communicate with the video source device, forcing it to output audio.
- Limited pixel clock
  - If enabled, when the pixel resolution of the loop-through device is beyond the capability of the device, a lower pixel resolution will be used in order to avoid the output producing a blank screen.

#### Set INPUT EDID

Any of the following actions can be performed on the input EDID of the device.

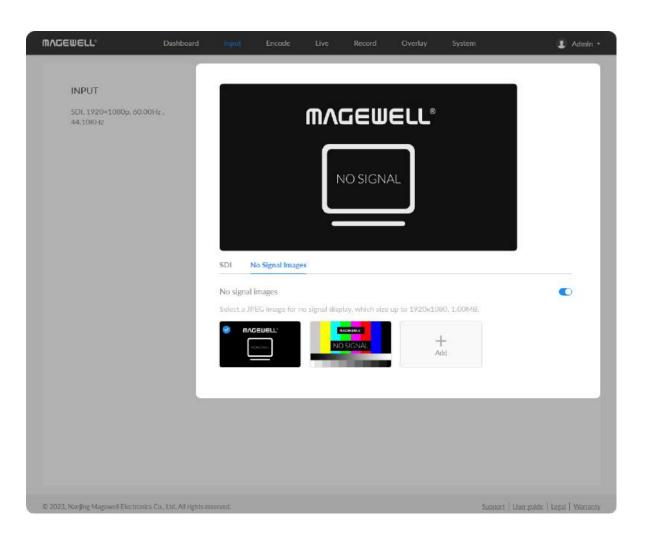
- **Default**: Click **Default** to reset the current EDID to default values.
- **Import**: Click and select an EDID file to import a EDID file.
- **Export**: Click and set the file name to export the current EDID as a .bin file.

	E0 F0				66					60 80								
	0.30	ARCO	33				2000	33		SR.				87776	33			
											De	faul	<b>\$</b> 2			Im	port	Export
14	OOP-THR		op	r														
L.C.	JOP-THK	U P	OR	1														
c	Offset	0	1	2	з	4	5	6	7	8	9	А	в	¢	D	E	F	
	60			• •							×		+ -					
	10															-		
	20																	
	30			22			·		1.2							22		
	40	-		-					14.4		**			-		-	**	
	50																	
	60				22				100							2.2	5.5°	
	70								1		22							
	80																	
	90								-		-		+-			-		
	AO								-		-		+-					
	80			-	5.5				55		27	575				35	2.7	
	CO																	
	DØ										**					**		
	EØ								-		-		+-					
	FØ			25					353	-					-77	25	55) -	
																		Export_

### Check Loop-through EDID

Loop-through EDID shows the EDID of the connected loop-through device. NOTE: This section is available for HDMI products.

• **Export**: Click and set the file name to export the current EDID as a .bin file.



#### No Signal Images

- Select a JPEG image for no signal display, which size up to 1920x1080, 1MB. The device provided 2 pictures can not be deleted. By default, the switch is on.
- Add: you can add 2 more JPEG photos sizing up to 1920x1080, 1.00 MB.
- **Delete:** click the delete icon (1) to remove the uploaded image from your device.

#### Encode

MVQEMELT.	Dashboard	Input	Encode	Live	Record	Overlay	System	🤱 Admin -
DEINTERLACI			-interlace					•
progressive picture displayed on non in display devices.	e that can be	Mode		Bol				Apply
								_

WVGEMELL.	Dashboard	Input	Enrode	Live	Record	Overlay	System	🤰 Admin -
DEINTERLACI		Video de	interlace					
Convert interlaced progressive picture displayed on non i display devices.	e Ibat can be							
3D		3D						
3D mode needs a input signal.	progressive							
MAIN STREAM	л	System pr	referred					3
Configure paramet main coding stream		Output		191	20×1080	• , 60 FPS	• . 8192	Kbps •
14 Crop		Advanced	l settings 🛛					
		Elitrate	e encoding	G	BR			•

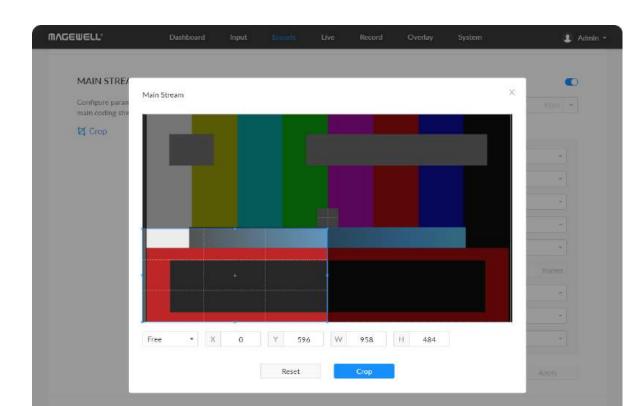
#### Deinterlacing

For interlaced signals, the output can be interlaced HEVC stream, if de-interlace function is turned off, and the stream encoders both are HEVC.

- Video de-interlace: by default, the switch is on. The dual streams must be HEVC(H.265) for turning off de-interlace. After turning off, only HEVC is available for the code type of the dual streams.
  - Mode: when the Video de-interlace switch is on, it can be set to Blend or Bob, with Bob as the default.
- Apply: click Apply after configuration.

#### 3D

• **3D:** by default, the switch is off. To output 3D video, you need to input progressive signal with resolution lower than 2048x1080.

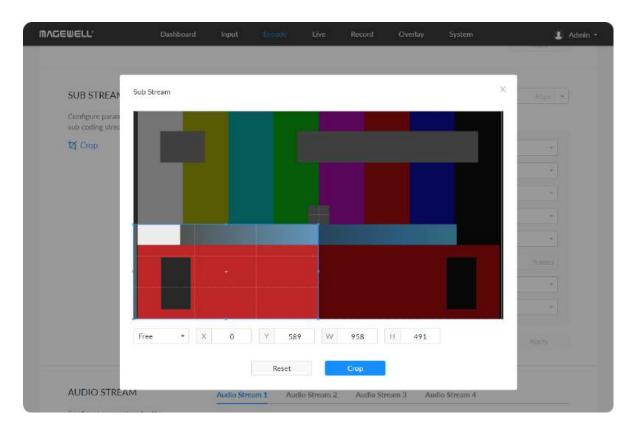


MAIN STREAM	System preferred		Q
Configure parameters for the main coding stream.	Output	1920×1080 • , 60 FPS • , 8192	Kbps •
杠 Crop	Advanced settings 👳		
	Bitrate encoding	CBR	•
	Code type	H.264	•
	Encoding profile	High profile	•
	Quantization range	Limited range (16-235)	•
	AR convert	Padding	•]
	Keyframe Interval	60	frames
	Time code SEI message		
	Closed caption SEI message		
	Rotation	Qa.	•
			Apply

#### Setting MAIN STREAM

- Crop: click on the  $\checkmark$  icon, and specify the cropping ratio as Free, 1:1, 3:2, 4:3, 16:9 in the pop-up window. You can drag and drop the crop border to set the crop window. Or specify the the left (x) and top (y) edges of the containing block and the specified width (w) and height (h) of the rectangle. The cropped image will be displayed on the Live, Overlay and LCD screens simultaneously. Click "Reset", the coordinates of the cropping frame will be changed to (0, 0, the resolution WH of the Output configuration).
- System preferred: by default, it is off. Turn on the switch, and the output • format would be consistent with the input signal. You can check the format on the right side of the thumbnail of the device status. System preferred is not available for NDI<sup>®</sup>|HX3.
- Output: by default, it follows input resolution, frame rate, bitrate. Only the resolution and frame rate can be specified for  $NDI^{(R)}|HX3$ , and the bit rate is determined by NDI<sup>®</sup> and is filled in automatically.
- Bitrate Encoding: options are CBR (default) and VBR. Live stream at CBR (Constant Bitrate) for bandwidth stability. VBR(Variable Bitrate) files vary the amount of output data per time segment. CBR is the only choice for NDI<sup>®</sup>|HX3. And you need to set quantization parameters for VBR. The quantization parameter controls the amount of compression for every macroblock in a frame. Large values mean that there will be more compression, lower quality, and lower bandwidth. Lower values mean the opposite.
  - Min QP: available when Bitrate Encoding is VBR. The range of values is 0 to 50. The default value is 4. And we recommend you use the default value and do fine adjustment if needed.

- Max QP: available when Bitrate Encoding is VBR. The range of values is 1 to 51. The default value is 40. And the value must be larger than the Min QP value. We recommend you use the default value and do fine adjustment if needed.
- Code type: options are H.264 (default) and H.265(HEVC) encoders.
- Encoding profile: for H.264 encoder, the profiles can be High (default)/Main profile/Baseline. For H.265 (HEVC), it can be Main profile.
- Quantization range: options are Full range(0-255) and Limited range(16-• 235) (default).
- AR convert: options are Ignore, Cropping and Padding (default).
- Keyframe interval: options are 0.5, 15-300 frames, the default is 60. A smaller number will result in a larger file size and less buffer time for seeing the first frame. To ensure a clear and smooth live broadcast, it is recommended that the key frame interval be less than or equal to 60 frames. Keyframe interval is fixed at 20 for  $NDI^{\mathbb{R}}|HX3$ .
- Time code SEI message: options are off (default), system clock, and embedded. Turn on the switch to get A/V sync between multiple devices which support this SEI message as well.
- **Closed caption SEI message:** turn on the switch to encode closed captions • (if present in the input signal) into H.264/H.265 (HEVC) SEI message. Native CEA-608 and 608 over 708 captions are both supported. It is off by default. Note that it is only supported by SDI product.
- Rotation: options are 0° (default), 90°, 180°, and 270°. Rotation will make • overlay not working.



SUB STREAM 🔍	Output	1280×720 • . 30 FPS • . 2048 Kbps •
Configure parameters for the sub coding stream.	Advanced settings ≈	
杠 Crop	Bitrate encoding	CBR *
	Code type	H.264 -
	Encoding profile	High profile -
	Quantization range	Limited range (16-235) -
	AR convert	Padding
	Keyframe Interval	60 frames
	Time code SEI message	Disabled -
	Rotation	. 0º
		Apply

#### Setting SUB STREAM

- By default, the sub stream is on. You can turn it off to lower bandwith usage.
- Crop: click on the  $\checkmark$  icon, and specify the cropping ratio as Free, 1:1, 3:2, 4:3, 16:9 in the pop-up window. You can drag and drop the crop border to set the crop window. Or specify the the left (x) and top (y) edges of the containing block and the specified width (w) and height (h) of the rectangle. The cropped image will be displayed on the Live, Overlay and LCD screens simultaneously. Click "Reset", the coordinates of the cropping frame will be changed to (0, 0, the resolution WH of the Output configuration).
- Output: by default, it is 1280x720, follow input frame, 2Mbps. Sub stream outputs at 640x360p30, 3Mbps for NDI<sup>®</sup>|HX3.
- Bitrate Encoding: options are CBR (default) and VBR. Live stream at CBR . (Constant Bitrate) for bandwidth stability. VBR(Variable Bitrate) files vary the amount of output data per time segment. CBR is the only choice for NDI<sup>®</sup>|HX3. And you need to set quantization parameters for VBR. The quantization parameter controls the amount of compression for every macroblock in a frame. Large values mean that there will be more compression, lower quality, and lower bandwidth. Lower values mean the opposite.
  - Min QP: available when Bitrate Encoding is VBR. The range of values is 0 to 50. The default value is 4. And we recommend you use the default value and do fine adjustment if needed.
  - Max QP: available when Bitrate Encoding is VBR. The range of values is 1 to 51. The default value is 40. And the value must be larger than the Min QP value. We recommend you use the default value and do fine

adjustment if needed.

- Code type: options are H.264 (default) and H.265(HEVC) encoders. H.264 is the only choice for  $NDI^{(R)}|HX3$ .
- Encoding profile: for H.264 encoder, the profiles can be High • (default)/Main profile/Baseline. For H.265 (HEVC), it can be Main profile.
- Quantization range: options are Full range(0-255) and Limited range(16-235) (default).
- AR convert: options are Ignore, Cropping and Padding (default).
- Keyframe interval: options are 15-300 frames. The default value is 60. A • less number will result in a larger file size and less buffer time for seeing the first frame. To ensure a clear and smooth live broadcast, it is recommended that the key frame interval be less than or equal to 60 frames. Keyframe interval is fixed at 20 for  $NDI^{\mathbb{R}}|HX3$ .
- Time code SEI message: options are off (default), system clock, and embedded. Turn on the switch to get A/V sync between multiple devices which support this SEI message as well.
- Rotation: options are 0° (default), 90°, 180°, and 270°. Rotation will make • overlay not working.

Configure parameters for the audio streams.				Apply	
Map source channels with the output channels of stream 1/2/3/4/5/6, and specify audio channels for stream 1. Then you can select a specified audio	Audio stream count	-	6	Apply	
stream for your streaming and recording.	< Audio Stream 1 A	udio Stream 2 Audio St	tream 3 Audio Stream 4 A	udio Stream 5	
	Channel count	2 Channels			
	Channel map	Channel 1 map	Source channel 1	•	
		Channel 2 map	Source channel 2	•	
		Channel 3 map	Source channel 3	-	
		Channel 4 map	Source channel 4		
		Channel 5 map	Source channel 5	~	
		Channel 6 map	Source channel 6	*	
		Channel 7 map	Source channel 7	×.	
		Channel 8 map	Source channel 8	*	
	AAC	16 Kbps		•	
				Apply	

### Setting AUDIO

- Audio stream count: set the number of audio streams for encoding to be 1-8, default is 1.
- Audio output: can be either embedded audio signal (default) or embedded audio signal + Line in.
- Audio stream: the number of streams is controlled by the parameter "Audio stream count".
  - Channel count: for Audio Stream 1, default is 2 channels and it can be 2/4/6/8 channels or follow input. The other audio streams are fixed at 2 audio channels.
  - LFE: Low Frequency Effect, the switch is off by default. Available when the Channel count is greater than 2 channles.
  - Channel map: specify mapping relationship between the output channel and the source channel.
  - AAC: from 16 to 256 Kbps, and the default value is 128 Kbps.

# Live

The encoder natively supports streaming to YouTube, Facebook, Twitch, as well as self-defined servers.

DESTINATIONS 🧲	5						
圈 Scheduler		R	1 Session	Name RTSP Server	Port. 554	8	۲
		N	Off NDI <sup>®</sup> [HX3	Name NDI HX3	Source name B313220914001	ß	٥
		H	Off HLS	Name HLS Server	Port. 8080	ß	0
		N	Off NDI <sup>®</sup> [HX3	Name NDI HX3 (2)	Source name B313220914001-2	ß	0
				+ Add De	stination		

WVCEMELT.	Dashboard Input Enc	ode Livy Rec	cord Overlay S	System	1	Admin •
	Select Server		à	×		
	RTMP	Twitch	Facebook			
	YouTube RTMP	YouTube HLS	RTSP			
	SRT Caller	SRT Listener	NDI <sup>®</sup>  HX2			
	NDI <sup>®</sup>  HX3	HLS	TS over UDP			
	TS over RTP	TVU ISSP	Wowza over RTMP			
	Wowza over SRT			72		
	<b>B C</b> 83	IMP Name	Network	N.		

### Managing Live Streaming Sessions

You can manually added, modify, or delete any of streaming sessions listed in the tab.

- Click Edit to modify the parameters of the stream.
- Click **Delete** to remove the source from the list.
- Turn on/off the switch C to start/stop streaming.
- Click Add and select an RTMP, RTMPS, RTSP, SRT Caller/Listener, NDI<sup>®</sup>|HX2, NDI<sup>®</sup>|HX3, HLS, TS over UDP/RTP, TVU ISSP, Wowza over RTMP, or Wowza over SRT server to stream to.

### Notes

- Supported streaming protocols RTSP, RTMP, RTMPS, SRT Caller, SRT Listener, NDI<sup>®</sup>|HX2, NDI<sup>®</sup>|HX3, HLS, TS over UDP, TS over RTP, and TVU ISSP.
- Allow simultaneous 6 sessions over multiple streaming protocols, containing 1 session of HLS, RTSP, or 2 NDI<sup>®</sup>|HX2 (if included).
- NDI<sup>®</sup>|HX3 stream is exclusive, and other protocol streams cannot be pushed at the same time.
- Specify the main stream or sub stream for each session.

O EDIT SERVER	<mark>.</mark> ዲ	NSNORS Re-login	
	Name	Twitch Server	
	Stream	Main stream	•
	Audio Stream	Audio stream 1	•
	URL	US East: New York, NY	•
	Network	Mobile broadband first	•
	Delete		Test

### Live Streaming to Twitch

You can stream to Twitch if you have a Twitch account.

- $\triangle$  To ensure smooth live streaming experience, connecting to a wired Ethernet network is recommended.
- 1. Click + Add Destination in the Live tab, select Twitch , follow the onscreen instructions to log in and select a server. Your avatar will be displayed after a successful logging-in.
- 2. Specify a Name for your streaming session, which can be 1 to 30 characters.
- 3. Choose main or sub stream for streaming, parameters of which can be set in Encode tab.
- 4. Choose an audio stream (1 to 8) for streaming, and the default value is Audio stream 1. Audio encoding parameters can be set in Encode > AUDIO STREAM.
- 5. URL is automatically filled in after successful login, and it is not recommended to change it.
- 6. Choose the prime network for streaming. By default, the network connection priority is: Mobile Broadband > Ethernet > Wi-Fi.

The device scans for the available network according to the connection priority and connect to it for streaming. If the current network is disconnected, the unit automatically re-scans according to the priority. Plug a USB modem into your encoder while using mobile network to stream.

WVCEMELT.	Dashboard	Input Encode	Live Record Overlay System	💄 Admir
③ EDIT SERVER				
			Re-login	
		Name	Facebook Server	
		Stream	Main stream	-
		Audio Stream	Audio stream 1	-
	URL	rtmps://live-api-s.facebook.com:443/rtmp		
		Network	WI-Fi first	
	Backup stream			
		Publish settings		
		Publish to	Timeline	- 🛛
		Tible	ggg	
		Description	0-127 duracters	
		Privacy	Only me	•
		Delete	Test	Save

- 7. Click **Test** to check the connection between the server and encoder.
- 8. When prompted, click **OK**.
- 9. Go back to Live page, turn on 🚺 before streaming.

## Live Streaming to Facebook Live

You can live broadcast to Facebook if you have a Facebook account.

- $\triangle$  To ensure smooth live streaming experience, connecting to a wired Ethernet network is recommended.
- Click + Add Destination in the Live tab, select Facebook, enter the 1. Stream Name.
- 2. Click Log In. Follow the on-screen instructions to open Facebook, enter the code prompt, and log in.
  - $\triangle$  Your avatar will be displayed after a successful logging-in.
- 3. Specify a Name for your streaming session, which can be 1 to 30 characters.
- 4. Choose main or sub stream for streaming, parameters of which can be set in Encode tab.
- 5. Choose an audio stream (1 to 8) for streaming, and the default value is Audio stream 1. Audio encoding parameters can be set in Encode > AUDIO STREAM.
- 6. Input facebook destination URL.
- 7. Choose the prime network for streaming.

By default, the network connection priority is: Mobile Broadband > Ethernet > Wi-Fi.

The device scans for the available network according to the connection priority and connect to it for streaming. If the current network is disconnected, the unit automatically re-scans according to the priority. Plug a USB modem into your encoder while using mobile network to stream.

- (Optional) Turn on the Backup stream and specify the Stream key. 8.
- Specify Publish settings including Publish to, Title (0-63 characters), 9. Description (0-127 characters), Privacy and Stream ID.
- 10. Click Save.
- Click **Test** to check the network connection. 11.
- After passing the test, click **OK**. 12.
- (Optional) Click **Delete** to clear the session. 13.
- 14. Go back to Live page, turn on 🚺 before streaming.

© EDIT SERVER	2	Re-login		
	Name	YouTube Server		
	Stream	Main stream	•	
	Audio Stream	Audio stream 1		
	Server	Primary server (rtmps)	•	
	Network	Mobile broadband first	•	
	Publish settings			
	Publish to		- 0	
	Delete		Test	

### Live Streaming to YouTube

If you need low latency, then YouTube RTMP is the better option. However, if you need adaptive bitrate streaming, then YouTube HLS is the better option. You can stream to YouTube if you have a YouTube account, and you have enabled the Live streaming feature of your channel at least 24 hours before your streaming.

You can stream to YouTube if you have a YouTube account, and you have enabled the Live streaming feature of your channel at least 24 hours before your streaming.

 $\triangle$  To ensure smooth live streaming experience, connecting to a wired Ethernet network is recommended.

 $\triangle$  To enable the Live streaming feature, refer to YouTube Help.

- 1. Click + Add Destination in the Live tab, select YouTube RTMP or YouTube HLS, enter the stream Name, follow the on-screen instructions to log in and select a server.
- 2. Click Log In. Follow the on-screen instructions to open YouTube, enter the code displayed on your device, and log in. Your avatar will be displayed after a successful logging-in.
- 3. Specify a Name for your streaming session, which can be 1 to 30 characters.
- 4. Choose main or sub stream for streaming, parameters of which can be set in Encode tab.
- 5. Choose an audio stream (1 to 8) for streaming, and the default value is

Audio stream 1. Audio encoding parameters can be set in Encode > AUDIO STREAM.

- 6. Server is automatically filled in after successful login, and it is not recommended to change it.
- 7. Choose the prime network for streaming. By default, the network connection priority is: Mobile Broadband > Ethernet > Wi-Fi

The device scans for the available network according to the connection priority and connect to it for streaming. If the current network is disconnected, the unit automatically re-scans according to the priority. Plug a USB modem into your encoder while using mobile network to stream.

Tap **Publish to** and select a channel or event for your session. 8. When choosing Add a new stream, you need to enter title, description and privacy. Then a new live event would be added to your logging-in account automatically. And you can stream to YouTube using streamer without clicking on go live in YouTube Studio.

Choose a channel or event. Then go live in YouTube studio to ensure a successful live broadcast.

- 9. Content made for kids switch is off by default. You can go to Youtube Help to get detailed requirements.
- Click **Test** to check the connection between the server and encoder. 10.
- 11. When prompted, click **OK**.
- 12. Go back to the Live page, and turn on  $\bigcirc$  before streaming.

C EDIT SERVER	Name	RTMP Server	
	Stream	Main stream	-
	Audio Stream	Audio stream 1	•
	URL	rtmp:// • /scotlawril/appl/storpath	
	Stream key		
	Authentication		3
	Network	Mobile broadband first	-
			Test Save

### **RTMP/RTMPS**

- Name: specify a name for current task to facilitate server management, which will be displayed in the server list. The name can be  $1 \sim 30$  character.
- Stream: choose to deliver a main or sub stream, which can be customized in Encode tab.
- Audio Stream: options are Audio stream 1 ~ 8, and the default is Audio stream 1. Audio stream parameters can be set in "Encode > AUDIO STREAM".
- URL: enter the RTMP URL address, or an RTMP address you have obtained from the live stream platform. Full address example:rtmp://192.168.1.136:1935/live. The port number part :1935 can be omitted, and the value range is 1 to 65535. If the RTMP address is a domain name, live can be omitted. If the RTMP address is an IP address, The part live cannot be omitted.
- Stream key: enter the stream key obtained from the live stream platform. If none, leave it empty. The key can be string of 0-512 characters.
- Authentication: turn on if your live streaming service provider requires. • Obtain the User Name and Password from your live streaming service provider.
- Network: The device scans for the available network according to the • connection priority and connect to it for streaming. If the current network is disconnected, the unit automatically re-scans according to the priority. By default, the network connection priority is: Mobile Broadband > Ethernet > Wi-Fi.

Plug a USB modem into your encoder while using mobile network to stream.

NAGEWELL D	ashboard Input Encode	Live Record Overlay System	2 Adr
③ EDIT SERVER	Name	RTSP Server	
	Port	554	
	Connections	- 4	+
	Main stream		0
	Main key	mainstream	
	Sub stream		
	Sub key	substream	
	Audio		
	Audio Stream	Audio stream 1	
	Authentication		
	User name		
	Password		ø
	Delete		Save
		Main Stream URL: rtsp:// <user name="">:<password>@10.10.13.1 rtsp://<user name="">:<password>@10.20.0.17</password></user></password></user>	
		Sub Stream URL: rtsp:// <user name="">:+Password&gt;@10.10.13.1- rtsp://<user name="">:+Password&gt;@10.20.0.17.</user></user>	

- **Test:** check the connection between the server and encoder.
- Save: save current configuration.

### **RTSP**

- Name: specify a name for current task to facilitate server management, which will be displayed in server list. The name can be  $1 \sim 30$  character.
- Port: specify RTSP stream port, the value range is 554 (default), 10000-65535.
- **Connections:** set number of clients for each RTSP stream, 8 clients are supported at most. And you can check the client (session) number at the server list.
- Main stream: turn on to push main stream. Specify parameters in Encode • tab. By default, it is on.
- Main key: specify stream key for main stream. The main key should be different from sub key.
- Sub stream: turn on to push sub stream. Specify parameters in Encode tab. By default, it is off.
- Sub key: specify stream key for sub stream. The sub key should be different from main key.
- Audio: turn on to stream audio signal, otherwise audio will not be delivered. The audio signal consists of audio embedded in input signal and LINE IN. By default, it is on.
- Audio Stream: options are Audio stream 1 ~ 8, and the default is Audio stream 1. Audio stream parameters can be set in "Encode > AUDIO

NAGEWELL'	Dashboard	Input Encode	Live Record C	iverlay System	💄 Admin
C EDIT SERVER		Name	SRT Caller		
		Stream	Main stream		
		Audio Stream	Audio Stream 1 Audio Stream 3 Audio Stream 5 Audio Stream 7	Audio Stream 2 Audio Stream 4 Audio Stream 6 Audio Stream 8	
		Address			
		Port			
		Connect timeout	3000		ms
		Retry duration	10000		ms
		Latency	120		ms
		Bandwidth	25		35
		MTU		1496	+
		Stream ID			
		Encryption	Not Used		•
		Network	Ethernet first		

### STREAM".

- Authentication: turn on if your live streaming service provider requires. Type your user name and password for the streaming service.
- Save: save current configuration.
- The encoder can stream 1 RTSP session with other protocol streams.
- After configuration, the stream URLs display at the end of the page. If you have multiple network connections, there would be multiple stream URLs.

### SRT Caller

- Name: specify a name for current task to facilitate server management, which will be displayed in server list. The name can be  $1 \sim 30$  character.
- Stream: choose to stream main or sub stream, which can be customized in Encode tab.
- Audio Stream: check multiple boxes to choose from Audio stream 1 ~ 8. Each stream will be sent as one track. Audio stream parameters can be set in "Encode > AUDIO STREAM".
- Address: enter the Listener address when Mode is set to Caller. If the SRT . listener and caller are on the same LAN, enter the private IP address of the SRT listener on the LAN. If the SRT listener and caller are in different network environments, enter the public IP address of the SRT listener.
- **Port:** enter the port number specified by the encoder, which ranges from 1 to 65535.
- Connect timeout: specify SRT connection timeout in milliseconds, which ranges from 1000 to 30000ms. The default value is 3000.

- Retry duration: specify retry duration when SRT SRT connection timeout in milliseconds, which ranges from 0 to 10000. The default value is 10000ms.
- Latency: possible values are 30 ~ 8000ms. The default value is 120ms. We recommend that you set the same latency for SRT caller and listener.
- Bandwidth: indicate the portion of the total bandwidth of a stream required • for the exchange of SRT control and recovery packets. Available values are 5 ~ 100%, and the default value is 25%. A worse network condition requires more bandwidth for overhead to ensure normal transmission.
- MTU: specify maximum transmission unit (MTU) in bytes, ranging from 232 to 1500. The default size is 1496.
- Stream ID: specify Stream ID of 0 to 256 characters which should be consistent with that of its sender.
- Encryption: specify the stream encryption algorithm to ensure the data security, options are not used, AES-128/192/256.
- **Passphrase:** specify stream key of 10 to 79 characters, which is the same as • the SRT listener.
- Network: The device scans for the available network according to the • connection priority and connect to it for streaming. If the current network is disconnected, the unit automatically re-scans according to the priority. By default, the network connection priority is: Mobile Broadband > Ethernet > Wi-Fi.
  - Plug a USB modem into your encoder while using mobile network to stream.
- Test: check the connection between the server and encoder.
- Save: save current configuration.

③ EDIT SERVER	Name	SRT Listener (2)		
	Stream	Main stream		•
	Audio Stream	Audio Stream 1	Audio Stream 2	
		Audio Stream 3	Audio Stream 4	
		Audio Stream 5	Audio Stream 6	
		Audio Stream 7	Audio Stream 8	
	Port	8000		
	Latency	120		ms
	Bandwidth	25		95
	MTU		1496	+
	Connections		í	+
	Encryption	Not Used		

### SRT Listener

- Name: specify a name for current task to facilitate server management, which will be displayed in server list. The name can be  $1 \sim 30$  character.
- Stream: choose to stream main or sub stream, which can be customized in Encode tab.
- Audio Stream: check multiple boxes to choose from Audio stream 1 ~ 8. Each stream will be sent as one track. Audio stream parameters can be set in "Encode > AUDIO STREAM".
- Port: specify the service port of the encoder, ranging from 8000, and 10000 to 65535. The default value is 8000.
- Latency: options are 30 ~ 8000ms and the default value is 120ms. We • recommend that you set the same latency for SRT caller and listener.
- Bandwidth: indicate the portion of the total bandwidth of a stream required for the exchange of SRT control and recovered packets. Available values are 5 ~ 100% and the default value is 25%. A worse network condition requires more bandwidth for overhead to ensure normal transmission.
- MTU: specify maximum transmission unit (MTU) in bytes, ranging from 232 to 1500. The default size is 1496.
- Connections: 8 connections at most.
- **Encryption:** specify encryption algorithm for stream data security. Options are not used (default), AES-128/192/256.
- **Passphrase:** specify stream key of 10 to 79 characters, which is the same as the SRT caller.
- Save: save current configuration.
- The encoder can stream up to 6 SRT sessions simultaneously, containing

MVCEMELT.	Dashboard	Input	Encode	Life	Record	Overlay	System	💄 Admin -
© EDIT SERVER	i.	Name		ND	I HX2			
		Program str	eam	Mai	n stream			
		Preview stre	eam	Sub	stream			•
				The wid	lee dimensions (with	th and height) threak	t be both within 640 pilo	le.
		Audio Strea	m	Aud	lio stream 1			•
		Source vide	0					
		Machine	name	Ult	tra Encode			
		Group na	me	pul	blic			
		Source na	me	#se	erial-no#-3			
						serial number of the is: B313220914001		
		Transport M	lode	тср	(Uni-connecti	ion)		•
		Failover						
		Source na	me	N/A				Change
		URL		N/A				
		Receiver cor	lantral					
		Web cont	rol					•
		Delete	2					Save

one SRT Listener session at most.

- After configuration, the play URL and passphase are shown in the page below.
- After configuration, the stream URLs display at the end of the page. If you have multiple network connections, there would be multiple stream URLs.

### NDI

NDI<sup>®</sup>|HX2 and NDI<sup>®</sup>|HX3 are supported.

- Name: specify a name for current task to facilitate server management, which will be displayed in server list. The name can be  $1 \sim 30$  character.
- Program stream: Options are Main stream, Sub stream, and full black video stream (640x360@30FPS).
- Preview stream: Options are Main stream, Sub stream, and full black video • stream (640x360@30FPS). Both width and height of the stream resolution must be no greater than 640.
- Audio Stream: options are Audio stream 1 ~ 8, and the default is Audio • stream 1. Audio stream parameters can be set in "Encode > AUDIO STREAM".
- Source Video •
  - Machine name

Specify the Machine name which is a case-insensitive string of 1 to 30 characters, and should be a combination of A to Z, a to z, 0 to 9 and special characters like \_-#(). By default, it is the same as the device's model name.

		iystem 🔱 Admin
Name	NDI HX3	
Program stream	Main stream	•
Preview stream	Sub stream	•
Audio Stream		eth withen 690 pixels.
Source video	Addro Stream 1	-
Machine name	Ultra Encode	
Group name	public	
Source name	#serial-no#-3	
	#serial-no# indicates the senal number of the device The current source name is: B313220914003-3	1
Transport Mode	TCP (Uni-connection)	-
Failover		
Source name	N/A	Change
IP address	N/A	
Receiver control		
Web control		
		Save
	Program stream Preview stream Audio Stream Source video Machine name Group name Source name Source name Fallover IP address Receiver control	Program stream       Main stream         Preview stream       Sub stream         The veloc dimension lwidth and height) should be be         Audio Stream       Audio stream 1         Source video       Image: Comparison lwidth and height) should be be         Machline name       Ultra Encode         Group name       public         Source name       #serial-no#-3         #serial-no# indicates the senial number of the device The connect toans         Transport Mode       TCP (Uni-connection)         Failover       Source name         Source name       N/A         IP address       N/A         Receiver control       Source name

### Group name

Specify the Group name which the source belongs to. It is caseinsensitive, and should be a combination of A to Z, a to z, 0 to 9 and special characters like \_-. Multiple groups are supported, which should be comma-separated. By default, it is public.

Source name

By default, it is **#serial-no#**, serial number.

- Transport Mode
  - UDP (Unicast) indicates that the encoder sends a UDP stream directly to the receiver. It is used where lower latency matters. And multiple simultaneous streams will work independently for multiple receivers.
  - UDP (Multicast) indicates that the encoder sends the UDP stream to a multicast group. It is used for one-to-many broadcast for lower CPU utilization. Parameters in a multicast configuration include:
    - Multicast IP ranges from 224.0.0.0 to 239.255.255.255.
    - Subnet Mask can be legitimate value ranging from 255.0.0.0 to 255.255.255.0.
    - Time To Live ranges from 1 to 255. The default value is 4.
  - **RUDP (Unicast)** indicates that the encoder sends the reliable UDP stream directly to the receiver.
  - TCP (Uni-connection) indicates that the encoder sends the TCP stream directly to the receiver.
  - TCP (Multi-connection) indicates that the encoder sends the TCP stream to more than one receiver.

- Failover: turn on to protect your NDI transmission from failure. If the initial source video fails, the backup device begins to provide a service. The initial source will be automatically switched back to after it recovers. This function is disabled by default.
  - Source name shows the backup NDI channel name. Click Change... and select the failover (backup) video device within the same NDI group as the initial source.
  - IP Address shows the IP Address of the backup NDI channel which is automatically obtained after you select the backup NDI source.
- Receiver Control: turn on Web control to enable you to open the Web UI by clicking the gear icon in the NDI Studio Monitor application.
- When streaming NDI<sup>®</sup>|HX2, the encoder would send dual streams simultaneously.
- When streaming NDI<sup>®</sup>|HX3, the encoder would send the dual streams simultaneously, and sub streams format is fixed as 640x360, 30FPS, 3Mbps.
- The encoder can stream 2 NDI<sup>®</sup>|HX2 sessions with other protocol streams.
- When streaming NDI<sup>®</sup>|HX3 session, no other session can be started simultaneously. 1 NDI<sup>®</sup>|HX3 sessions can be started simultaneously.

VQEMELT.	Dashboard	Input	Encode	Live	Record	Overlay	System	👃 Admin
C EDIT SERVER		Name		HLS	Server			
		Stream		Məlr	n stream			
		Stream ke	Ŷ	strea	im			
		Audio Stre	sam	Audi	o stream 1			-
					5	Stream URL: htt	p://10.10.13.160:808	Save 30/hls/stream.m3u8
							p://10.20.0.172:8080	

### HLS

- Name: specify a name for current task to facilitate server management, which will be displayed in server list. The name can be  $1 \sim 30$  character.
- stream: options are main stream, and sub stream. Modify the stream profile in **Encode** tab.
- Stream key: set key for your chosen stream. The keys of dual streams should be different.
- Audio Stream: options are Audio stream 1 ~ 8, and the default is Audio stream 1. Audio stream parameters can be set in "Encode > AUDIO STREAM".
- Save: save current server configuration.
- The encoder can stream 1 HLS session with other protocol streams.
- After configuration, the stream URLs will display at the end of the setting page. If you have multiple network connections, there would be multiple stream URLs.

INGEWELL	Dashboard	Input	Encode	live	Reco	rd Ov	erlay	5)	/stem		۸ ۲	Admi									
☑ EDIT SERVER		Name		T5 0	ver UDP																
		Stream Audio Stream		Main	stream																
				Aut	dio Strea dio Strea dio Strea	m 3	A	udio	Stream Stream Stream	4											
		Address			dio Strea	m 7 stole tome	A []]	Audio	Stream	8											
		Port Custom PI	D																		
		PMT PIE		-			2	.56			+										
		Video PID Audia PiD	D	-			2	57			+										
			D	3	-	258	+	3		259											
													(3)		260		۲		261		
								<u>الله</u> م	262	62 +	(6) -		263								
				0		264		8		265											
		PCR PID		-			į	45			+										
		Network		Ether	net first																

# TS over UDP/RTP

- Name: specify a name for current task to facilitate server management, which will be displayed in server list. The name can be  $1 \sim 30$  character.
- Stream: options are main stream and sub stream, which can be customized in Encode tab.
- Audio Stream: options are Audio stream 1 ~ 8, and the default is Audio stream 1. Audio stream parameters can be set in "Encode > AUDIO STREAM".
- Address: specify the destination address.
- **Port:** specify the stream port. The value ranges from 1 to 65535.
- Custom PID: PID stands for packet ID. Toggle it on to set the PIDs. PMT PID (program map table) should be different from Video PID, Audio PID and PCR (program clock reference) PID.
  - PMT PID: the default value is 256. The value ranges from 16 to 8190.
  - Video PID: the default value is 257. The value ranges from 16 to 8190.
  - Audio PID: the default value is 258 to 265 for channel 1 to channel 8. The value ranges from 16 to 8190.
  - PCR PID: it is used to sync the audio and video. The default value is 45. The value ranges from 16 to 8190.
- Network: The device scans for the available network according to the connection priority and connect to it for streaming. If the current network is disconnected, the unit automatically re-scans according to the priority. By default, the network connection priority is: Mobile Broadband > Ethernet > Wi-Fi.

MVCEMETT.	Dashboard	Input	Encode	Lbe	Reco	ord Ove	rlay	59	stem		L Adı
© EDIT SERVER		Name		TS of	er RTP						
		Stream		Main	stream						•
		Audio Str	eam	🛄 Au	dio Stre dio Stre dio Stre dio Stre	am 3 am 5	0.	Audio Audio	Stream Stream Stream Stream	4 6	
		Address		TP ad							
		Port									
		Custom P	٦D								
		PMT PID	D	-				256			+
		Video F	٩D	-				257			+
		Audio PID	o PID	3	-	258	+	0		259	
				0		260		۲		261	
				0		262		6		263	
				Ø		264		0		265	
		PCR PH	D	-				45			+
		Network		Ethe	rnet firs	t					*
											Sove

<i></i>			
③ EDIT SERVER	Name	TVU ISSP	
	Stream	Main stream	
	Audio Stream	Audio stream 1	
	Port	6539	
			Save
		Stream	URL: issp://10.10.13.160:6539 issp://10.20.0.172:6539

Plug a USB modem into your encoder while using mobile network to stream.

- Save: save current configuration.
- You can set TS over UDP/RTP MTU at the System > General > LIVE part.

### **TVU ISSP**

- Name: specify a name for current task to facilitate server management, which will be displayed in server list. The value can be 1 to 30 characters, including A-Z, a-z, 0-9, spaces, .\_-+'[]() and can not begin or end with a space.
- Stream: options are main stream and sub stream, which can be customized in Encode tab.
- Audio Stream: options are Audio stream 1 ~ 8, and the default is Audio stream 1. Audio stream parameters can be set in "Encode > AUDIO STREAM".

C EDIT SERVER	Name	Wowza over RTMP	
	Stream	Main stream	•
	Audio Stream	Audio stream 1	•
	Network	Ethernet first	•
	Token		
	Publish settings		
	Publish to		- 0
			Save

- Port: specify the stream port. The value can be 6539 (default), 10000-65535.
- Save: save current configuration.
- The encoder can stream 1 TVU ISSP session with other protocol streams.
- After configuration, the stream URLs display at the end of the page. If you have multiple network connections, there would be multiple stream URLs.

### Wowza over RTMP

- Name: specify a name for current task to facilitate server management, which will be displayed in server list. The name can be  $1 \sim 30$  character.
- Stream: options are main stream and sub stream, which can be customized . in Encode tab.
- Audio Stream: options are Audio stream 1 ~ 8, and the default is Audio • stream 1. Audio stream parameters can be set in "Encode > AUDIO STREAM".
- Network: The device scans for the available network according to the • connection priority and connect to it for streaming. If the current network is disconnected, the unit automatically re-scans according to the priority. By default, the network connection priority is: Mobile Broadband > Ethernet > Wi-Fi.

Plug a USB modem into your encoder while using mobile network to stream.

- Token: enter Wowza access token. One token can be used for one RTMP and one RTP session.
- Publish settings: specify publish destination.
  - Publich to select a channel or event for vour session

MAGEWELL	Dashboard Input	Encode	Live Record C	)verlay System	🤱 Admin -
ⓒ EDIT SERVER	Name		Wowza over SRT		
	Stream Audio Str	eam	Main stream  Audio Stream 1  Audio Stream 3  Audio Stream 5  Audio Stream 7	Audio Stream 2 Audio Stream 4 Audio Stream 6 Audio Stream 8	
	Connect Retry dur		3000		ms
1	Latency		120		ms
	Bandwidi MTU		-	1496	*
	Encryptik		Not Used Ethernet first		•
	Token Publish s	ettings			
	Publish	i to			•
					Save

# I MAISTI LA. SCIECE A CHARMENT OF EVENTION YOUR SESSION. When choosing Add a new stream, you need to enter title, description and privacy. Then a new live event would be added to your logging-in account automatically.

- Live stream name: specify the session name.
- Broadcast location: specify the Wowza server.
- Save: save current configuration.

### Wowza over SRT

- Name: specify a name for current task to facilitate server management, which will be displayed in server list. The name can be  $1 \sim 30$  character.
- Stream: options are main stream and sub stream, which can be customized in Encode tab.
- Audio Stream: options are Audio stream 1 ~ 8, and the default is Audio • stream 1. Audio stream parameters can be set in "Encode > AUDIO STREAM".
- Connect timeout: specify SRT connection timeout in milliseconds, which ranges from 1000 to 30000ms. The default value is 3000.
- Retry duration: specify retry duration when SRT SRT connection timeout in milliseconds, which ranges from 0 to 10000. The default value is 10000ms.
- Latency: possible values are 30 ~ 8000ms. The default value is 120ms. We • recommend that you set the same latency for SRT caller and listener.
- Bandwidth: indicate the portion of the total bandwidth of a stream required for the exchange of SRT control and recovery packets. Available values are 5 ~ 100%, and the default value is 25%. A worse network condition requires

more bandwidth for overhead to ensure normal transmission.

- MTU: specify maximum transmission unit (MTU) in bytes, ranging from 232 to 1500. The default size is 1496.
- Encryption: specify the stream encryption algorithm to ensure the data • security, options are not used, AES-128/192/256.
- **Passphrase:** specify stream key of 10 to 79 characters, which is the same as • the sender.
- Network: The device scans for the available network according to the • connection priority and connect to it for streaming. If the current network is disconnected, the unit automatically re-scans according to the priority. By default, the network connection priority is: Mobile Broadband > Ethernet > Wi-Fi.

Plug a USB modem into your encoder while using mobile network to stream.

- Token: enter Wowza access token. One token can be used for one RTMP and one RTP session.
- Publish settings: specify publish destination.
  - Publish to: with token authentication, refresh and select a channel or event for your session.

When choosing Add a new stream, you need to enter title, description and privacy. Then a new live event would be added to your logging-in account automatically.

- Live stream name: specify the session name.
- Broadcast location: specify the Wowza server.
- Save: save current configuration.

DESTINATIONS	RTSP					
	R 1 Session	Name RTSP Server	Port 554	ß	۲	
	Off NDI®JHX3	Name NDI HX3	Source name B313220914001	ß	0	
	H Off	Name HLS Server	Port. 8080	B	0	
	Off NDI <sup>®</sup> IHX3	Name NDI HX3 (2)	Source name B313220914001-2	ß	0	
		+ Add De	stination			
AGEWELL Dashboar	d Input Encode E	ive Record	Overlay System		۰ 1	vdmir
SCHEDULER Manage RTSP Server streaming profile	New event	<ul> <li>2022/12/15 16:20</li> <li>No-repeat</li> </ul>	):20 - 2022/12/15 17:20:20	G		
		( + A	dd			

## Live Schedule

In everyday terms, a schedule will help you keep on top of other tasks and are less likely to procrastinate, whilst still being able to stream on a regular basis. For a streamer, a schedule will also mean that your viewers, followers, and subscribers will know exactly when you will be live and on which days, which is possibly the biggest reason for creating a schedule and sticking to it. Imagine having no clue when the next episode of your favorite TV show airs. By creating a stream schedule, viewers will know when to expect you and are therefore more likely to tune in. Scheduling your stream is easy with the scheduler we provide. Here's a quick tutorial on how to set it up:

- 1. Click the 🗰 schedule icon.
- Click Add in the window, and specify parameters of the schedule. You can 2. add up to 8 scheduling schemes.
  - **Description**: 1 to 64 characters, including chinese, english, numbers, and special characters, among which one chinese word occupy three characters in length.
  - **Details**: 0 to 64 characters, specifying the scheduling task information
  - Begin: Select the start date and specific time of this live broadcast task, or check the Full day.
  - End: Select the end date and specific time of this live broadcast task, or • check the Full day.
  - Repeat event: Support no-repeat (default), daily, weekly, monthly, yearly.
    - **Daily**: The repeat mode can be repeated every N days, or every workday, and the number of repetitions can be set to

60

Daily -
Every 1 day O Every workday
No end date
O After 1 occurrences
O End by 2023-01-15
Monthly
Repeat     1     day every     1     month
O On 1 Monday    every 1 month
<ul> <li>No end date</li> </ul>
O After 1 occurrences
O End by 2023-01-15

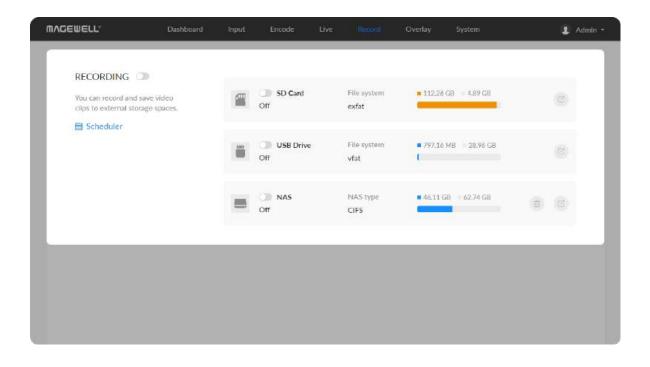
- No end date default,
- After N occurrences where **Begin** and **End** indicate the firstrepeat,
- End by specified date YYYY-MM-DD the session will not repeat on the end day.
- Weekly: The repeat mode can be Repeat every 1 week next days: multiple choices are available, and the number of repetitions can be set to
  - No end date default,
  - After N occurrences where **Begin** and **End** indicate the firstrepeat,
  - End by specified date YYYY-MM-DD the session will not repeat on the end day.
- Monthly: The repeating pattern may be repeat N days every N month, or on weekday every N month. And you can set the number of repetitions to
  - No end date default,
  - After N occurrences where **Begin** and **End** indicate the firstrepeat,
  - End by specified date YYYY-MM-DD the session will not repeat on the end day.
- Yearly: The repeating pattern can be every N day N month, or on N weekday of N month. And you can set the number of repetitions to
  - No end date default,

Weekly			
Repeat every	1 week next d	ays:	
Monday	Tuesday	Uednesday	🔽 Thursday
Friday	Saturday	Sunday	
<ul> <li>No end dat</li> <li>After 1</li> </ul>	e occurrences		
◯ End by	2023-01-15		
Yearly			

Every	day January 👻 month	
0 On 1	Monday - of January -	
No end date	e	
O After 1	occurrences	
O End by	2023-01-15	

- After N occurrences where **Begin** and **End** indicate the firstrepeat,
- End by specified date YYYY-MM-DD the session will not repeat on the end day.
- 3. Save: Click to save the current configuration.
- 4. Turn on the 🔵 switch to make your schedule work.

# Record



# Start/Stop Recording

- To start recording immediately: you need to turn on the 🔵 switch of one seesion and the **RECORDING** switch.
- To start recording automatically: you need to turn on the Auto-recording and the **RECORDING** switch.
- To schedule a recording: you need to turn on the 🚺 switches of the specified seesion(s) and scheduler(s).

Use the schedule function for your live stream, which will be triggered, ended, repeated automatically on a chosen day and time.

- To stop recording immediately:
  - Turn off the **RECORDING** switch to end this round of scheduled recording.
  - Turn off the switch of recording session to stop it permanently.

WVCEMELT.	Dashboard Input	Encode Live	Record Over	lay System	🗜 Admin -
♂ RECORDING SD CARD	Name 0804-9867 File system exfat	,	Used space 6.75 GB Free space 107.51 GB	04 DAY Estimated remaining	
PERFORMANCE	$\bigcirc$	Pass SD card write speed is recording.	fast enough for	Write speed (MB/S) Required speed © 0.27 Your speed	Done 29.62
VIDEOS © Configure	T All		00 <mark>0</mark>	Delete	Uphiad
VIDEOS	All			Delete	Upload
Configure	000000 000000 VID_37 2.161	me co:42,300 000:011 00000000 .mp4 VID_36.m	93311 243 p4 VID_35_7.mp		CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
		. <b>30:01</b> . ● ○ ○ ○ ○ ○ 3 4.mp4 VID_35_3.n	0:01 0000003030 0:01 0000003303	01a 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	VID_34.mp4 22.44 MB
	VID_93 34.58	.mp4 VID_32.m			01-43 VID_29.mp4 19.98 MB
			× 1 2 3	E 38	

# Manage SD card

Click and enter **SD Card** tab, then you can check and manage your SD card.

- To check SD card, such as File system, Free space, and Estimated remaining recording time. Check remaining time for normal recording, and total recording time for loop recording.
- To format SD card: click to start Format. After formatting, the file system of USB will be changed to exfat.
- To download video clips: move the cursor to a specified clip and click the icon to download the chosen one.
- To choose a specific video: move the cursur to a video clip and click  $\bigcirc$  .
- To delete videos: choose one or more, or all clips to delete.

<b>③ BACK</b>			
RECORDING	Record mode	Normal	•
Normal record mode will stop recording when the storage	Stream	Main stream	
space is full.	Audio Stream	Audio stream 1	•
Loop record mode provides continuously recording. Old files	Video type	mp4	
will be overwritten by new ones when the SD card is full.	File path	REC_Folder	
	File name	Custom prefix	•
	Filename prefix	VID	
	Duration	30 Minutes (478.13 MB)	•

### Record to External SD Card

The device supports external SD card in exfat, ntfs, and vfat formats, up to 2T. And a vfat file should be less than 4G. Before recording, please insert the SD Card.

### Configure recording parameters

Click O Configure button in the "RECORDING > VIDEOS" sector and set recording parameters in the pop-up page.

- Record mode: Options are normal (default) and loop. In normal record mode, the encoder will stop recording when the storage space is full. However, loop record mode provides continuously recording which means that old files will be overwritten by new ones when the storage is full.
- Stream: Options are main (default) and sub stream.
- Audio Stream: options are Audio stream 1 ~ 8, and the default is Audio stream 1. Audio stream parameters can be set in "Encode > AUDIO STREAM".
- Video type: Options are mp4 (default), mov, and ts.
- File path: REC\_Folder by default, and 1 to 255 characters.
- File name: Options are custom prefix (default, from 1 to 32 characters), and creation time.
  - Filename prefix: VID by default, 1 to 32 characters.
- Duration: from 5 to 240 minutes. That is, a new file is generated for each • specified duration. A new file is generated every time the specified duration is recorded. The file size generated by different recording durations is automatically calculated according to the stream format and is for reference only. Duration can be set to **No limit** for normal (Record mode) recording in ts (Video type) format.

Auto-upload			•			
Delete local files after	r upload		C			
Upload Server	r URL: <protocol>:<b>//</b><host>:<port></port></host></protocol>					
	+ Add	Server				
			Clear transferred			
	Size	Add Time	Status			
	2.16 MB	2023-09-11 10:50:36	0			
	2.16 MB 3.04 MB	2023-09-11 10:50:36 2023-09-11 10:50:30	0			
	3.04 MB	2023-09-11 10:50:30	0			
	Delete local files afte	Delete local files after upload Upload Server URL: «Protoc I Add	Delete local files after upload Upload Server URL: <protocol>://<host>:<port></port></host></protocol>			

п	IVQEMELT	Dashboard	Input	Encode	Live	Record	Overlay	System	🗶 Admin -
	UPLOAD		Auto-uplo	ad					۲
	Automatically or manua upload videos in SD car specified folder.		U Sele	tt Server			×		Edit
				FT	P Serve	er			
	LIST Naroe			4	Google Dri	ve	2		Clear transferred Status
	VID_37.mp4						-11 10	0:50:36	$\odot$
	VID_36.mp4			~	Dropbo	x	-11 10	).50:30	0
	UID_35_6.m		-		10.1111111	0.000.0	1.000	2:09:54	0
	VID_35_5.m	p4			683,801	МВ	2023-09-06 18	39:52	$\odot$
	🗌 🛅 VID_35_4.m	p4			678.901	ИB	2023-09-06 16	09:50	0
	🗂 🛅 VID 35.3 m	n4			893.517	MR	2023-09-06 15	1:39:49	0

### Upload

- Auto-upload: off by default. Files recorded to the SD card with the switch on will be automatically uploaded to the specified upload server.
- Delete local files after upload: successfully uploaded files will be • automatically deleted when turning on the switch. By default, it is off.
- Upload server: Click "+Add Server" and choose from FTP Server, Google Drive, Dropbox for uploading.
  - FTP Server
    - **Protocol:** options are FTP-File Transfer Protocol, SFTP-SSH File Transfer Protocol.
    - Host: IP address or domain name of the host.
    - Port: specify port number between 1 and 65535.
    - Directory: specify a fold for saving uploaded files between 0 and 63 characters.
    - Encryption: options are Only use plain FTP (insecure), Require explicit FTP over TLS and Require implicit FTP over TLS. Available when **Protocol** is FTP-File Transfer Protocol.
    - Transfer mode: Active or Passive.
    - Authentication: turn it on if your service provider requires. Type in your user name and password for the streaming service.
    - Network: By default, the network connection priority is: Mobile Broadband > Ethernet > Wi-Fi.

- **Test:** check the connection between the server and encoder.
- Save: save current configuration.
- Google Drive •

Follow the prompts to get the verification code, connect the device, and set the network (the default network connection priority is: Mobile Broadband > Ethernet > Wi-Fi).

Dropbox

Follow the prompts to log-into Dropbox, and set the network (the default network connection priority is: Mobile Broadband > Ethernet > Wi-Fi).

		1.0	
Name	Size	Add Time	Status
🗌 🧧 VID_37.mp4	2.16 MB	2023-09-11 10:50:36	$\odot$
□	3.04 MB	2023-09-11 10:50:30	$\odot$
VID_35_6.mp4	857.36 MB	2023-09-06 17:09:54	$\odot$
VID_35_5.mp4	883.80 MB	2023-09-06 16:39:52	$\odot$
UID_35_4.mp4	678.90 MB	2023-09-06 16:09:50	$\odot$
VID_35_3.mp4	893.51 MB	2023-09-06 15:39:49	$\oslash$
VID_35_2.mp4	894.43 MB	2023-09-06 15:09:47	$\odot$
🗌 📑 VID_35.mp4	895.46 MB	2023-09-06 14:39:45	$\odot$
VID_34.mp4	22.44 MB	2023-09-04 17:07:20	$\odot$
VID_33.mp4	34.58 MB	2023-09-04 17:05:18	$\odot$

### List

The list shows all the recorded files in SD card. You can check transfer status of them.

- "Delete" select one or more files to delete from the file list.
- "Clear transferred" click on "Clear transferred", the system will automatically delete the files with  $\bigcirc$  transfer status from the list.

WVCEMETT.	Dashboard	Input	Encode	Live	Record C	Overlay	System	🙎 Admin -
USB DRIVE								Format
		Name D99B-FF3 File system vfat		2%	Used space     797.16 N     Free space     28.96 GE	мв e	03 <sub>HR</sub> 1 Estimated remainin	
PERFORMANCE								Test
			Pass USB drive w recording.	wite speed is fa	ist enough for		eed (MB/S) d speed 2.3	52 1702
VIDEOS								
Configure							1	

MVQEMELL	Dashboard	Input	Encode	Live	Record	Overlay	System	🔱 Admin -
③ RECORDING								
USB DRIVE								Format
		Name D998-FF3 File system		29	Intee st	6 MB lace	03 MR 1	
_		vfat			28.96	GB		-
PERFORMANCE								Test
		(z)	Pass USB drive v	vrite speed is	fast enough <mark>f</mark> or		speed (MB/S) red speed 2.	52
		U	reco <mark>rdi</mark> ng.		10550	Your	speed	7.02
VIDEOS		All						
Configure		-		-		-		

### Manage USB Flash Drive

Manage the USB and files stored in the USB Flash Drive page.

- Check USB Info, such as File system, Free space, and Estimated remaining recording time. Check remaining time for normal recording, and total recording time for loop recording.
  - We recommend that you use a USB with FAT32/VFAT file system.
- To format USB: click to start **Format**. When prompted, click **YES**. The USB Flash Drive data cannot be recovered after formatting. Please be cautious.

After formatting, the file system of USB will be changed to VFAT.

• To test USB Performance

### Click Test to start Performance Test.

Test whether the write speed of USB flash drive meets the requirements before recording. If the USB fails the test, please change another one, or the recording may stop automatically.

- To download a clip: move the cursor to a specified clip and click the . icon to download the chosen one.
- To choose a specific video: move the cursur to a video and click 🥥 to download the clip.
- To delete videos: choose one or more, or all clips to delete.

### VIDEOS All Configure VID\_21.ts 22.62 MB VID\_20.ts 36.75 MB VID\_19.ts 56.77 MB VID\_18.ts VID\_17.ts 36.64 MB 03 11 VID\_16.ts 19.75 MB VID\_12.ts 94\_14 MB VID\_15.ts VID\_14.ts VID\_13.ts 36.61 MB 36.59 MB 57.74 MB VID\_8.1s 56.59 MB VID\_11.ts 36.65 MB VID\_10.ts 56.81 MB VID\_9.ts 36.92 MB VID\_7.ts 36.65 MB < 1 2 >

### MAGEWELL' 2 Admin -**BACK** RECORDING \* Record mode Normal Normal record mode will stop . Main stream Stream recording when the storage space is full. . Audio stream 1 Audio Stream Loop record mode provides . Video type mp4 continuously recording. Old files will be overwritten by new ones REC\_Folder File path when the USB drive is full. File name Custom prefix VID Filename prefp 30 Minutes (4.44 GB) Duration

# Manage Video Clips in USB

- To download: move the cursor to a specified clip and click the 🧶 icon to download the chosen one.
- To choose a specific video: move the cursur to a video and click  $\oslash$  .
- To delete videos: choose one or more, or all clips to delete.

# Record to External USB Drive

The device supports external USB flash drive in exfat, ntfs, and vfat formats, up to 2T. And a vfat file should be less than 4G. Before recording, please insert the USB.

# Configure recording parameters

Click 🤨 Configure button in the "RECORDING > VIDEOS" secion and set recording parameters in the pop-up page.

- Record mode: Options are normal (default) and loop. In normal record mode, the encoder will stop recording when the storage space is full. However, loop record mode provides continuously recording which means that old files will be overwritten by new ones when the storage is full.
- Stream: Options are main (default) and sub stream. •
- Audio Stream: options are Audio stream 1 ~ 8, and the default is Audio stream 1. Audio stream parameters can be set in "Encode > AUDIO STREAM".

- Video type: Options are mp4 (default), mov, and ts.
- File path: REC\_Folder by default, and 1 to 255 characters.
- File name: Options are custom prefix (default, from 1 to 32 characters), and creation time.
  - Filename prefix: VID by default, 1 to 32 characters.
- Duration: from 5 to 240 minutes. That is, a new file is generated for each specified duration. A new file is generated every time the specified duration is recorded. The file size generated by different recording durations is automatically calculated according to the stream format and is for reference only. Duration can be set to **No limit** for normal (Record mode) recording in ts (Video type) format.

<b>BACK</b>			
CONFIGURE NAS	NAS type	CIFS - Common Internet File System	•
Save recorded files to NAS(Network Attached Storage).	User name	Everyone	
	Password		Ø
	Host	10.10.14.193	
	Volume/Mount point	cifs	

### Record to NAS

### Add a NAS

- NAS type: options are NFS- Network File System (default) and CIFS-Common Internet File System, which also requires User name and Password.
  - User name: 1 to 64 characters,
  - **Password**: 1 to 64 characters,
- Host: IP address of NAS.
- Volume/Mount point: 1 to 64 characters, and special characters \:"?<>| are not allowed. By using volume mount points, you can graft or mount a target partition onto a folder on another physical disk. You can also exceed the 26-letter limitation for drive letter references. Create a dependency in the mounted volume disk resource that specifies the disk that is hosting the mount point folder. This makes the mounted volume dependent on the host volume, and it makes sure that the host volume comes online.
- Clear: restore all parameters to defaults.

MVQEMELT.	Dashboard	Input E	Encode Live	Record Ov	erlay System	2 Admin -
C RECORDING						
NAS (Network Attach	ied Storage)	Host 10.10.14.193 NAS type CIFS	42	• Used space 46.11 GB • Free space 62.74 GB	O7, HR OS Estimated remaining	
VIDEOS		All				Delete
Configure		02				C9:13
		VID_21.ts 22.62 MB	VID_20.ts 36.75 MB	VID_19.ts 56.77 MB	VID_18.ts 36.64 MB	VID_17.ts 36.69 MB
		01.	45 05	13	13 05:00	CH 16
		VID_16.ts 19.75 MB	VID_15.ts	VID_14.ts 36.59 MR	VID_13.ts 57.74 MB	VID_12.ts 94.14 MP

VIDEOS	All				Desete
Configure	02:00	03:13	05:00	03 : 13	03 : 13
	VID_21.ts 22.62 MB	VID_20.ts 36.75 MB	VID_19.ts 56.77 MB	VID_18.ts 36.64 MB	VID_17.ts 36.69 MB
	01:43	03:13	03:13	05:00	
	VID_16.ts 19.75 MB	VID_15.ts 36.61 MB	VID_14.ts 36.59 MB	VID_13.ts 57.74 MB	VID_12.ts 94.14 MB
	03:13	05:00	03:13	03:00	03:13
	VID_11.ts 36.65 MB	VID_10.ts 56.81 MB	VID_9.ts 36.92 MB	VID_8.ts 56.59 MB	VID_7.ts 36.65 MB

# Manage NAS

Click and enter **NAS** tab, then you can check and manage your NAS storage.

- Check NAS Info, such as NAS type, Free/total space. And check remaining time for normal recording, and total recording time for loop recording.
- To download a clip: move the cursor to a specified clip and click the . icon to download the chosen one.
- To choose a specific video: move the cursur to a video and click  $\oslash$  .
- To delete videos: choose one or more, or all clips to delete.

RECORDING	Record mode	Normal	
Normal record mode will stop recording when the storage space is full.	Stream	Main stream	•
	Audio Stream	Audio stream 1	•
Loop record mode provides continuously recording. Old files	Video type	mp4	•
will be overwritten by new ones when the NA5 is full.	File path	REC_Folder	
	File name	Custom prefix	•
	Filename prefix	VID	
	Duration	30 Minutes (4.44 GB)	
			Saval

### Configure recording parameters

Click 🤨 Configure button in the "RECORDING > VIDEOS" secion and set recording parameters in the pop-up page.

- Record mode: Options are normal (default) and loop. In normal record mode, the encoder will stop recording when the storage space is full. However, loop record mode provides continuously recording which means that old files will be overwritten by new ones when the storage is full.
- Stream: Options are main (default) and sub stream.
- Audio Stream: options are Audio stream 1 ~ 8, and the default is Audio stream 1. Audio stream parameters can be set in "Encode > AUDIO STREAM".
- Video type: Options are mp4 (default), mov, and ts.
- File path: REC\_Folder by default, and 1 to 255 characters.
- File name: Options are custom prefix (default, from 1 to 32 characters), and creation time.
  - Filename prefix: VID by default, 1 to 32 characters.
- Duration: from 5 to 240 minutes. That is, a new file is generated for each • specified duration. A new file is generated every time the specified duration is recorded. The file size generated by different recording durations is automatically calculated according to the stream format and is for reference only. Duration can be set to No limit for normal (Record mode) recording in ts (Video type) format.

#### MAGEWELL' 🙎 Admin -RECORDING D SD Card File system ■ 112.26 GB 4.89 GB You can record and save video 1 Off exfat clips to external storage spaces E Scheduler 797.16 MR 28.96 GR File system USB Drive Off vfat 1 NAS NAS type 46.11 GB 62.74 GB -Off CIFS

MVQEMELT,	Dashboard	Input Enco	de Live	Record	Overlay	System		🗜 Admin -
SCHEDUL Manage Destinati scheduler		New		<ul> <li>2023/0</li> <li>No-rep</li> </ul>	03/14 - 2023/0 Jeat	33/15	6	0
				(+	Add			

#### Delete the NAS

Go back to **Record** tab, you can delete the NAS in the following ways.

- Click the 
   delete button behind the nas and confirm your delete in the pop up window.
- Click the 
   discrete edit button behind the nas and clear all NAS settings.

#### **Record Schedule**

Set schedule parameters. 8 schedules are supported for recording.

- 1. Click 🗰 schedule button.
- Click Add in the window, and specify parameters of the schedule. Each 2. session can add up to 8 scheduling schemes.
  - **Description**: 1 to 64 characters, including chinese, english, numbers, and special characters, among which one chinese word occupy three characters in length.
  - **Details**: 0 to 64 characters, specifying the scheduling task information. •
  - Begin: Select the start date and specific time of this live broadcast task, or check the Full day.
  - End: Select the end date and specific time of this live broadcast task, or • check the Full day.
  - Repeat event: Support no-repeat (default), daily, weekly, monthly, -

Daily -
Every 1 day O Every workday
<ul> <li>No end date</li> <li>After 1 occurrences</li> </ul>
○ End by
Monthly
<ul> <li>Repeat 1 day every 1 month</li> <li>On 1 Monday  <ul> <li>every 1 month</li> </ul> </li> </ul>
No end date
<ul> <li>After 1 occurrences</li> <li>End by 2023-01-15</li> </ul>

yearly.

- Daily: The repeat mode can be repeated every N days, or every workday, and the number of repetitions can be set to
  - No end date default,
  - After N occurrences where **Begin** and **End** indicate the firstrepeat,
  - End by specified date YYYY-MM-DD the session will not repeat on the end day.
- Weekly: The repeat mode can be Repeat every 1 week next days: multiple choices are available, and the number of repetitions can be set to
  - No end date default,
  - After N occurrences where **Begin** and **End** indicate the firstrepeat,
  - End by specified date YYYY-MM-DD the session will not repeat on the end day.
- Monthly: The repeating pattern may be repeat N days every N month, or on weekday every N month. And you can set the number of repetitions to
  - No end date default,
  - After N occurrences where **Begin** and **End** indicate the firstrepeat,
  - End by specified date YYYY-MM-DD the session will not repeat on the end day.
- Yearly: The repeating pattern can be every N day N month, or on N

Weekly			
Repeat every	1 week next d	ays:	
🗌 Monday	🗌 Tuesday	Wednesday	🛃 Thursday
Friday	🗌 Saturday	Sunday	
<ul> <li>No end date</li> <li>After 1</li> </ul>	occurrences		
O End by	2023-01-15		

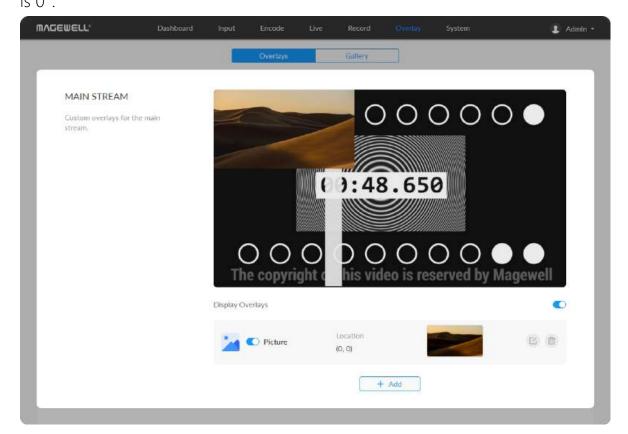
Yearly	•
<ul> <li>● Every 1 day January - month</li> </ul>	
○ On 1 Monday   of January	
No end date	
O After 1 occurrences	
O End by 2023-01-15	

weekday of N month. And you can set the number of repetitions to

- No end date default,
- After N occurrences where **Begin** and **End** indicate the firstrepeat,
- End by specified date YYYY-MM-DD the session will not repeat on the end day.
- 3. Save: Click to save the current configuration.
- 4. Turn on the 🔿 switch to make your schedule work.

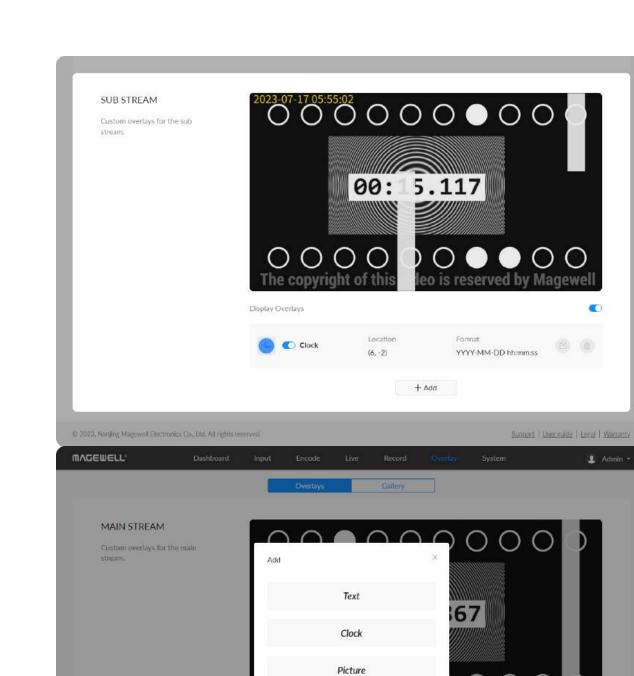
## Overlay

The overlay function is available when the resolutions of the input signal and the mainstream are no greater than 2048x1080, and image rotation of the output signal is 0°.



## Setting Overlays for the Main and Sub Streams **Display Overlays** is off by default. You can preview thumbnails with overlays

after turning it on.



1 Admin -

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The copyright of this video

Display Overlays

77

MVQEMELT.	Dashboard	Input E	incode Live	Record	Overlay System		🌡 Admi
⊙ text		(0, 0)					(1920, 0)
		1000000	2000000000	999999999	90000000	9999999	88888
				10 10 10 10 10 10 10			
		(0. 1080) Location					(1920, 1080)
		(0. 1080)	Cus	tom			•
		(0. 1080)	Cus Ho	tom			•
		(0. 1080) Location	Cus Ho	tom rizontal — 7		cal 273	•
		(0. 1080) Location Font	Cus Ho	tom rizontal — 7	37 + Verb	cal — 273 •	•
		(0. 1080) Location Font Size & Fill	Cus Ho Sou	tom rizontal — 7	37 + Verth	cal – 273 • +	• 8 + B <i>I</i>

#### Adding Text

- Location: options are Custom(default), Top left, Top right, Top center, Bottom left, Bottom right, Bottom center, and Center. Or just drag the item on the 1920x1080 canvas and place it at your desired location.
- Horizontal: specify the horizontal coordinates manually when location is Custom.
- Vertical: specify the vertical coordinates manually when location is Custom.
- Font: options are Source Han Sans (default), and Lato. Bold and Tilt are also provided.
- Size & Fill: font size is 26px by default. You can set from 6 to 400px. The default fill color is rgba(255, 255, 255, 1), and you can click the color-picker to custom your desired color.
- Outline: the default width of outline is 1px. You can set from 0 to 100px. • And the default outline color is rgba(0, 0, 0, 1), and you can click the colorpicker to custom your desired color.
- **Content:** 1 to 63 characters are supported to display.
- Save: save current configuration.

MVCEMELT	Dashboard	Input	Encode	Live
€ CLOCK				

Location

Font

Size & Fill

Outlin

Time

## • Custom Vertical 0 + Horizontal - B Source Han San 26 YYYY-MM-DD hh:mm:ss

👤 Admin 🝷

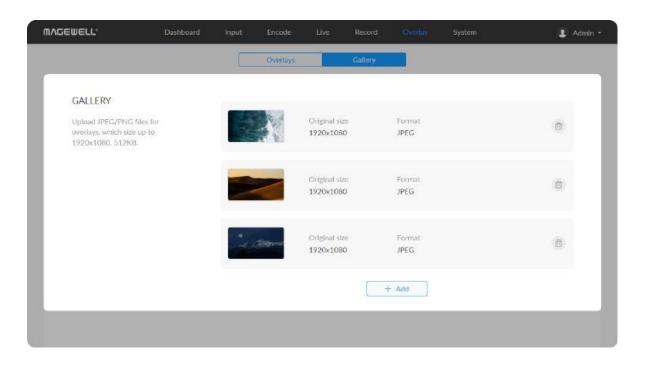
#### Adding Clocks

- Location: options are Custom(default), Top left, Top right, Top center, Bottom left, Bottom right, Bottom center, and Center. Or just drag the item on the 1920x1080 canvas and place it at your desired location.
- Horizontal: specify the horizontal coordinates manually when location is Custom.
- Vertical: specify the vertical coordinates manually when location is Custom.
- Font: options are Source Han Sans (default), and Lato. Bold and Tilt are also provided.
- Size & Fill: font size is 26px by default. You can set from 6 to 400px. The default fill color is rgba(255, 255, 255, 1), and you can click the color-picker to custom your desired color.
- Outline: the default width of outline is 1px. You can set from 0 to 100px. • And the default outline color is rgba(0, 0, 0, 1), and you can click the colorpicker to custom your desired color.
- Time: options are as follows.
  - YYYY-MM-DD hh:mm:ss
  - MM/DD/YYYY hh:mm:ss
  - DD/MM/YYYY hh:mm:ss
  - YYYY-MM-DD
  - MM/DD/YYYY
  - DD/MM/YYYY
  - hh:mm:ss
  - hh:mm

- WVCEMELL. 💈 Admin -☑ PICTURE Location Custom Vertical Alpha transparency 20 % Scale Picture Delete
- Save: save current configuration.

#### **Adding Pictures**

- Location: options are Custom(default), Top left, Top right, Top center, Bottom left, Bottom right, Bottom center, and Center. Or just drag the item on the 1920x1080 canvas and place it at your desired location.
- Horizontal: specify the horizontal coordinates manually when location is Custom.
- Vertical: specify the vertical coordinates manually when location is Custom.
- Alpha transparency: it can have a value from 0 (0%) to 255 (100%) in • opacity.
- Scale: resize your picture between 1% and 400%. By default it is 100%.
- **Picture:** choose a picture from Overlay > Gallery. There is no picture by • default.
- Save: save current configuration. •



### Gallery

- Upload JPEG/PNG files for overlays, up to 1920x1080, 1 M. And you can add 8 pictures at most.
- You can choose the picture in Overlay > Picture after uploading successfully.
- Click delete button  $\bigcirc$  to delete current picture from your device.

### General

MVCEMELL	Dashboard Input	Encode Liv	ve Record	Overlay System	🙎 Admin -
General	Network	Q User Admin	Firmiware	ය Control Hub	About
DEVICE NAME Change the device name other name you like,		Encode C31623060100	01		Save
SECURITY	HTTP Port		85		
	HTTPS				•
	Port		445		

SECURITY	HTTP	
	Port	85
	HTTPS	
	Port	445
	CA Certificate	Certificate already exists Update by drag & drop a new license file or click to upload
	CA Private Key	Private key already exists Update by drag & drop a new key or click to upload
		Save

- **DEVICE NAME:** value range is from 1 to 32 characters, including A-Z, a-z, 0-9, space .\_- + ' [ ] ( ) and cannot begin or end with a space.
- Save: save current configuration.

#### Modify HTTP/HTTPS settings

1. Modify HTTP port.

The default port is 80. Modify the port number ranging from 1 to 65535, based on your network condition, then click Save.

2. Secure the Control Hub with HTTPS.

Turn on HTTPS, then specify the port number ranging from 1 to 65535 for HTTPS. The default port is 443.

Modify HTTPS port.

The default port is 443. Modify the port number ranging from 1 to 65535, based on your network condition, then click Save.

• Import a CA certificate and private key into Control Hub.

A/V SYNC	Audio offset	0 ms	
To match up the audio and video tracks, set a positive value to delay the start of the audio track, set a negative value to reduce the delay.		Save	Reset

A/V Sync

3. Re-log into Web UI.

• Audio offset ranges from -200 to 200ms. To match up the audio and video tracks, set a positive value to delay the start of the audio track, or set a negative value to reduce the delay. We recommend that you start your live after this configuration to enjoy the A/V sync adjustment.

removing existing ones. Then click **Save**.

https://IPaddress to access the SIGN IN page.

- Save: save current configuration.
- **Reset:** reset parameters to default values.

Renew certificates by uploading the new files that you want to, without

Open your Web browser and type http://IPaddress:new-port, or

A/V SYNC	Audio offset	· · ·	
To match up the audio and video tracks, set a positive value to delay the start of the audio track, set a negative value to reduce the delay.		Save	
RECORD	Auto-recording		
Set Record parameters.	Auto-record policy	Automatic - USB drive connected	•
			Save
LIVE	TS Over UDP/RTP		
Set Live parameters.			

#### RECORD

- Auto-recording: it is off by default. If you turn it on , options are Automatic - signal locked and Automatic - USB drive connected (recommended if you need to record to USB). You need to turn on the specified record task switch in the Record tab at the same time to make the auto-recording function work.
- Save: save current configuration.

LIVE	TS Over UDP/RTP			
Set Live parameters.	MTU		1500	
			Save	Reset
	HLS (push)			
	Segment count		з	+
	Segment duration(sec)	-	3.	+
			Save	Reset
NDI®	Access Manager			
	Groups	Public,3,2,1		
	Discovery Server			•
	Discovery Server	10.10.8.233		

## Live

Reset

#### TS over UDP/RTP

- MTU: specify maximum transmission unit (MTU) in bytes, ranging from 228 to 1500. The default size is 1496.
- Save: save current configuration.
- **Reset:** reset parameters to default values. HLS (push)

Configurations will work on both HLS and Youtobe HLS sessions.

- Segment count: between 1 and 5. •
- Segment duration(sec): between 1 and 4. Lower value results in lower lantency.
- Save: save current configuration.

#### NDI®

• Group name: specify the group which the source belongs to. 1 to 63

DATE & TIME	Time zone	Pacific/Yap	
Set proper time for your streamer to live and record.			Save
	Set time automatically		
	NTP server 1	0.pool.ntp.org	
	NTP server 2	1.pool.ntp.org	
			Save
RESET	Reset all settings		
Reset all settings will cause all configurations to return to the	Import settings		
default value.	Export settings		

#### Date & Time

the switch is off.

• Save: save current configuration.

- Time zone: specify a time zone for your device.
- Set time automatically: turn on Set Time Automatically. Then the device's time will synchronized to the world-time servers depending on the timezone you set. Otherwise, you can set time manually.
- NTP server 1: the default server is 0.pool.ntp.org.
- NTP server 2: the default server is 1.pool.ntp.org.
- Save: save current configuration.

characters are supported. It is case-insensitive, and should be a combination of A to Z, a to z, 0 to 9 and special characters like \_-. Multiple groups are supported, which should be comma-separated. By default, it is public. • Discovery Server: turn on the switch to auto-detect a source sender in different network segment and ping the sender. And the Server IP should

be the IP address of the server running discovery server software. By default,

	Time zone:	Pacific/Yap	•
Set proper time for your streamer to live and record.			
	Set time automatically		C
	NTP server 1	0.pool.ntp.org	
	NTP server 2	1.pool.ntp.org	
			Save
RESET	Reset all settings.		
NEDEI			
Reset all settings will cause all configurations to return to the default value.	Import settings		

Reset all settings will cause all configurations to return to the	Import settings			
fefault value.	Export settings			
REBOOT	Reboot the device			
Reboot will shut device down and then start it again mmediately.	Auto reboot			
	Reboot time	問 2023-09-15	© 10:16:32	
	Repeat event	Dally		*
		🗍 Every 🚺 day 💿	Every workday	
				Save

#### **Resetting Your Device**

- Reset all settings: be cautious that resetting your device would restore configurations to defaults.
  - You can **Reset all settings** on the "SIGN IN" page, when the device is connected to PC via USB NET.
- Import settings... Click the button and select the target JASON format configuration file in the pop-up window, after importing the settings successfully, the device will be reconnected and you need to log in to the Web UI again.
- Export settings... Click the button, set the file name in the pop-up window, click "Export" to download the JASON format configuration file to the default path of your browser. The default file name is Settings\_YYYY\_MM\_DD\_HH\_MM\_SS.json.

#### Reboot

- **Reboot the device:** power off the device and restart it when it does not work.
- Auto reboot: off by default. Turn it on to set Reboot time (YYYY-MM-DD • HH-MM-SS), Reboot time, and click Save.
  - Repeat event: Support no-repeat (default), daily, weekly, monthly, yearly.
    - Daily: The repeat mode can be repeated every N days, or every workday.
    - Weekly: The repeat mode can be Repeat every 1 week next days:

multiple choices are available.

- Monthly: The repeating pattern may be repeat N days every N month, or on weekday every N month.
- Yearly: The repeating pattern can be every N day N month, or on N weekday of N month.

### Network

Networking information, including Ethernet, USB NET, mobile network, Wi-Fi and AP, can be set in the Network tab.

MVCEMELT.	设备状态	输入	编码	直播	录制	自加	素机设置		2 Admin -
(@)	Ø		2		8		ය		
通用设置	网络设	a.	用户管理	同代	升级	Co	ntrol Hub	关于	
以太网		连接状态		1.0 Gbps					
设置印地址。		自动 (DH		and sample					
		职地址		10.10.13	1.92				_
		子网境	<del>6</del> 4	255.255	.240.0				_
		默认阿	¥	10.10.0	1				
		DNS 獲	病語	10.0.1.3					
									-

#### Setting ETHERNET

The device automatically detects and connects to the Ethernet when networking to a DHCP-enabled LAN. Or you can set the IP address manually for a fixed IP address or an auto-networking failure.

- DHCP: it is on by default. Turn off the switch to modify current network setting or when being connected to a non-DHCP network.
  - IP address: device IP address.
  - Subnet mask: device subnet mask.
  - Network gateway: device gateway.
  - **DNS:** DNS server IP address.
- Apply: make current configuration effective. When prompted, click Yes.
- Verify: input new IP address to open the Web UI.

#### WVCEMELT. 1 Admin -Choose a network Mine WI-FI Disable 87 magewell Forget 0 Others TP-UNK\_5G\_8EF4 89 8 奈 mlw-guest AP MLW-DVR magewell-GUEST 89 8040\_AP\_5G Ŷ WI-FI Display the Wi-Fi information. SSID magewell Status Medium (-64 dBm) DHCP 10,20.0.44 IP address

Change Disable	<ul> <li>Network gateway: WLAN gateway.</li> </ul>
Change Disable	<ul> <li>DNS: WLAN DNS server IP address.</li> </ul>
	Search Wi-Fi Network manually

Change password....

C315230423008

Disable

1.	Click Change to choose a different WLAN to conn
	network security key. If you select Others, enter I
	characters) and choose a <b>Security</b> policy from <b>Non</b>
	WPA2/WPA3, and enter the Password (8 character
	connect.

Enable Wi-Fi: click to turn on Wi-Fi function.

• **SSID:** named after device serial number.

• Status: Wi-Fi signal strength.

• **IP address:** WLAN IP address.

Subnet mask: WLAN subnet mask.

- (Optional) Disconnect: click to cut off current Wi-Fi network. 2.
- (Optional) Forget: click to delete current Wi-Fi network information. 3.
- (Optional) Check Connect automatically, then the Wi-Fi network will be 4. joined automatically.

#### Setting Wi-Fi manually

Setting Wi-Fi

•

• Set IP address manually: turn on the switch to modify current network

AP

Display the AP information

16 Wi-Fi network information can be saved for auto-detection.

• Change... click to choose a different WLAN to connect to.

• Disable: click to turn off Wi-Fi function. Then Wi-Fi will not be available.

nect to, and Enter the Name (1-63 e, WEP, WPA, and rs at least). Click

setting or when being connected to a non-DHCP network.

- **IP address:** device IP address.
- Subnet mask: device subnet mask.
- Network gateway: device gateway.
- DNS: DNS server IP address.
- Apply: make current configuration effective. When prompted, click Yes.
- Verify: input new IP address to open the Web UI.

AP		Change passwo	ord Disable
Display the AP information.	SSID	C315230423008	
	IP address	192.168.48.1	
	Subnet mask	255.255.255.0	
Settings for IP address of USB NET.	IP address	Disconnected 192.168.66.1	
USB NET			Edit
NEL	IP address	192.168.66.1	
	Subnet mask	255.255.255.0	
MOBILE NETWORK		Mobile Network not available	

#### Setting AP

You device can work as an AP to be joined to for remote web control.

- SSID: by default, it is named after the device serial number.
- **IP address:** fixed as 192.168.48.1.
- Subnet mask: fixed as 255.255.255.0.
- Change password...
  - AP password: the default AP password is the last 8-number of the serial number. For example, a serial number 311210101001 indicates the initial AP password is 10101001. It ranges from 8 to 16 characters including A-Z, a-z, 0-9, space .\_-+'[]() and cannot begin or end with a space.
- **Disable:** click to turn off AP mode. This renders you unable to manage the device over AP, which is not recommended, especially when you are using wireless network or linux/mac OS.

WVQEMELT.	Dashboard	Input				Overlay		1	
		IP addre	58	103	20.0.44				
		Subnet		255	255.255.0				
		Networl		103	20.0.1				
					0.1.3				
		USB	NET			×			
		IP ad	Idress	192.168,	66 .1				
AP				_			Change password	Disable	
Display the AP informa	tion.	1	Cancel		Apply				
		IP addre	295	19	2.168.48.1				
		Subnet	mask.	25	5.255.255.0				
USB NET								Edit	
Settings for IP address	of USB	Link sta	tus	Dis	sconnected				

AP		Chan	ge password Disable	
Display the AP information.	SSID	C315230423008		
	(P address	192.168.48.1		
	Subnet mask	255.255.255.0		
USB NET			Edit	
USB NET			Edit	
Settings for IP address of USB NET.	Linic status	High Speed		
	IP address	192.168.66.1		
	Subnet mask.	255.255.255.0		
MOBILE NETWORK	IP address	192.168.8.161		
Display the mobile broadband	Subnet mask	255.255.255.0		
information.	Network gateway	192.168.8.1		
	DNS	192.168.8.1		

#### Setting USB NET

You can connect your device to a PC via USB NET for remote control.

- Link status: USB NET connction status.
- IP address: USB NET IP address, 192.168.66.1 by default. You can click Edit... to change it.
- Subnet mask: Subnet mask of USB NET.
- Edit...: enter a new address and click Apply in the prompt window. The IP address will show the changed IP address after modification.

#### Setting Mobile Network

The encoder supports streaming via a USB modem.

- IP address: IP address assigned by the USB modem.
- Subnet mask: subnet mask.
- Network gateway: gateway.
- **DNS**: DNS server IP address.

DVANCED SETTINGS	Network priority	WI-FI	•
		When multiple network connections are available, y	ou can set the priority of the network connections.

#### Advanced Settings

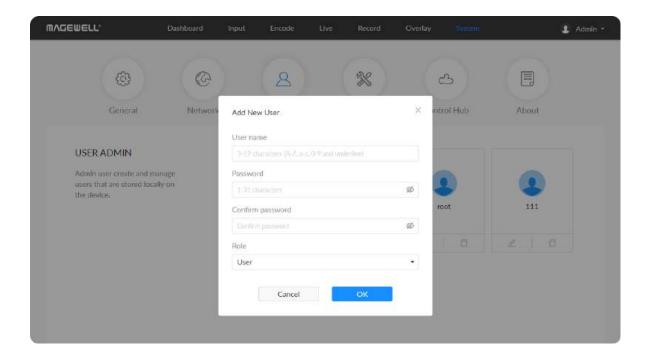
Network priority

The default network priority is as follows: Ethernet > Wi-Fi > Mobile Broadband. This parameter does not impact the real-time transmission of video and audio data during live streaming. However, it may affect the quality of other network-related services, such as the ability to communicate with the Control Hub for device management and monitoring purposes. If the parameter is set to Mobile Broadband, please insert a USB mobile network card into the encoder.

### User Admin

Administrator is allowed to perform the following tasks. The User Admin tab is invisible when you log in as a general user.

- Creating/Removing General User Accounts
- Modifying User Password



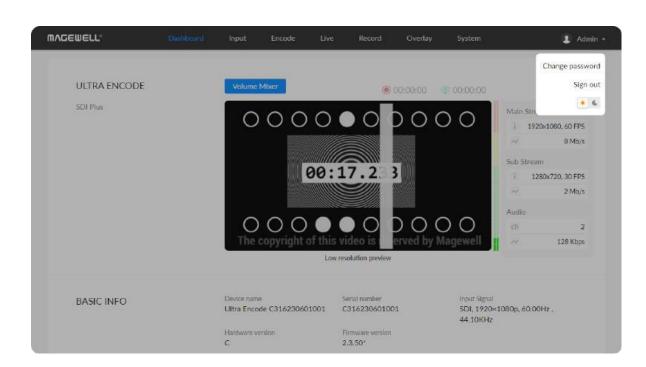
#### Creating/Removing General User Accounts

After signing in with default admin account, you may need to add general users to give them permissions to do basic operations, like monitoring the device, or setting some of the parameters.

- Access the Web UI, and sign in as administrator. 1.
- Go to User Admin tab. 2.
- Click Add user. 3.
- Enter username, password, and confirm your password. 4.
  - The username is a string of 3 to 12 characters, which contains the letters A-Z, a-z, numbers 0-9 and underline.
  - The password is a string of 1 to 32 characters, which contains the • letters A-Z, a-z, numbers 0-9 and special characters \_~!@#\$%^&\*-+=.
- 5. Assign the user to an Administrator role or general User role.
  - Administrators have the highest level of access to an account.
  - A general user will have limited access to the account as per the permissions given by the Admin. You may not get access to the "User Admin" function.
  - The user role can not be changed. You might need to recreate a new

user.

- 6. Click OK.
- 7. Repeat step 3~5 to add multiple users. You can add up to 15 users.
- 8. To delete a user: Click **Delete** in the username card. When prompted, click Yes.



#### Modifying User Password

Set Password in the following ways.

- 1. Modify user password logged-in via drop-list beside your avatar at the top right
- 2. Modify a specified user password in User Admin tab with admin account

#### Modifying current logged-in user password

- 1. Log in Web UI.
- Click the drop-list icon  $\blacksquare$  beside your avatar icon, and click **Change** 2. password.
- 3. In the pop up window, type in your old password, the new password, and confirm your new password.

The password is a string of 1 to 32 characters, which contains letters A-Z, a-z, numbers 0-9 and special characters  $_{-}!@#$ %^&\*-+=.

4. Click OK.

#### Change Password

1-31 cha	aracters	Ø
New pas	sword	
1-31 cha	aracters	ø
Confirm	password our new passcode	

Х

0	C	8	X	ය	
General	Network	User Admin	Firmware	Control Hub	About
USER ADMIN			Admin	Admin	
Admin user create and manag users that are stored locally o				•	•
the device,		Add New User	Admin	root	111
			Ŀ	2 0	2 0

#### Modifying a specified user password

- 1. Access the Web UI and sign in with the administrator account.
- Go to User Admin tab, then you can change any user's password. 2.
- 3. Click the **Set password**.
- 4. In the pop up window, type in and confirm your new password. The password is a string of 1 to 32 characters, which contains letters A-Z, a-z, numbers 0-9 and special characters  $_{-}!@#$ %^&\*-+=.
- 5. Click OK.

#### Set Password

## $\times$

#### New password

1-32 characters (A-Z, a-z, 0-9 and \_--!@#\$%^&\*-+=) Ø

#### Confirm password

Verify your new passcode	Ø
--------------------------	---

ОК

Cancel

### Firmware

Detect and update firmware to the latest version online, or you can manually add a firmware file to update the unit to specified version.

<b>MVCEMEIT.</b> 1	Jashboard Inpu	t Encode Li	ve Record	Overlay System	🌡 Admin -
6	6	Q	*	e	
	<u> </u>				
General	Network	User Admin	Firmware	Control Hub	About
ONLINE UPDATE					
Physics and conducts they deader	too Contraction of the Contracti	urrent Version			
Check and update the device the latest version on the	2.	.2.94 Your firmware is u	p to date. 🙆		
internet, enjoy the latest					
features and improvements, a	nd				
appreciate your assets.					
MANUAL UPDATE					
Drag and drop a firmware file					
here to update the device to a specified version manually.					
			Current ver	sion: 2.2.94	
		Attach t		drag & drop or click to uplo	वर्ते.

#### Online Update

By default, the function is on. When a new version is detected, a Firmware icon will flow on the control pane.

- 1. Turn on 💽 switch, and the online update function is on. The unit would detect the latest released firmware automatically when connecting to the Ethernet.
- 2. Click 👩 icon to check for the latest firmware manually.
- 3. Click **Update** button to download and install the new version file if any. Do not disconnect from the power source or perform any operation while updating the firmware as this could damage your gear. After a successful update, the device will restart automatically.
- 4. Verify: click 🙆 checking for updates again.

the latest version on the internet, enjoy the latest features and improvements, and appreciate your assets.		
MANUAL UPDATE Drag and drop a firmware file here to update the device to a specified version manually.	Current version: 2.2.94 Attach the update file (.mwrf) by drag & drop or click to	o upload
6 2023, Nanjing Magewell Electronics Co., Ltd. All	ights reserved.	Suggori   Lisersuide   Legal   Wartanty

ſ,	MVCEMELT.	Dashboard	Input Encode	Live Record	Overlay Syr	tem 🕹 Admin -	
	(@)	G	8	*	ය		
	General	Network	Control Hub		Control Hut	About	
	CONTROL HUB 1		Invitation code 4 digit Control Hub address IP address or domain re			Register	
			HTTPS HTTP port		0		
	CONTROL HUB 2		80 Cancel	Save		Register	
9			(	$\sum$			3

#### Manual Update

1. Click on **click to update** to select the **.mwf** firmware update file from your local storage, or just drag and drop the file from your computer into the upload zone.

Dowload firmware file from our official website. The device will automatically verify the update file and upload the file after the file verification is passed.

2. Click Update to download and install the new version file. Then the device will reboot to complete the update.

Do not disconnect from the power source or perform any operation while updating the firmware as this could demage your gear.

3. Verify: check the Firmware version in Dashboard or Firmware tab. It should be the same as your target version number.

## **Control Hub**

You can apply for remotely control using Control Hub. 2 platforms are supported simultaneously, Control Hub 1 and Control Hub 2.

- Click **Register...** and input parameters in the prompted window. And save after configuration.
  - Invitation code: a 4-digital numbers security code obtained from Control Hub. If not leave it empty.
  - Control Hub address: input IP address or domian name of Control Hub.
  - HTTPS: turn it on when data security matters, and Control Hub enables HTTPS at the same time. It is off by default.

VQEMELL	Dashboard	Input Encode	Live Record	Overlay System	🌡 Admin
(@)	œ	8	×	ය	
General	Network	User Admin	Firmware	Control Hub	About
CONTROL HUB 1					Cancel
		Control Hub status	Online		
		Register status	Waiting	16	
		Control Hub address	10.10.8,183		
		HTTPS	Disabled		
		HTTP port	5544		
CONTROL HUB 2					Deregister
		Control Hub status	Online		
		Register status	Accepted		

- HTTPS port: input HTTPS port number between 1 and 65535, which should be consist with that of Control Hub. Port 443 is used by default.
- HTTP port: input HTTP port number between 1 and 65535, which should be consist with that of Control Hub. Port 80 is used by default.
- Click Deregister to stop the remote control from Control Hub.
- Check parameters related to Control Hub management.
  - Control Hub status: Online or Offline. Online indicates that the communication between device and Control Hub platform goes well. On the other hand, Offline indicates the communication is interrupted.
  - Register status: shows current status of Control-Hub-join permission, including
    - Incorrect invitation code: you need to change your registration with correct code.
    - Waiting: registration is successfully submitted to Control Hub • plarform.
    - Approved: registration is approved. This device can be remotely controlled.
    - Rejected: Registration is denied.
    - Deleted: Registration is deleted, you can re-apply for joining the Control Hub.
  - **Control Hub address:** shows the IP address of Control Hub.
  - HTTPS: shows the enable status of HTTPS.

• HTTPS/HTTP port: shows the HTTPS/HTTP port of device used to communicate with Control Hub.

Obtain basic data for device maintenance in About tab.

VQEMELT.	Dashboard Inpu	rt Encode Live	: Record	Overlay System	🚦 Admin •
6	G	8	*	ය	
General	Network	User Admin	Firmware	Control Hub	About
ABOUT	D	evice name	Channel-1-de	278	
Display the device infor	mation. Pr	oduct name	Ultra Encode		
	Se	erlal number	C315230423	800	
	H	ardware version	С		
	Fi	mware version	2.2.94		
	Et	hernet MAC address	D0:C8:57:81	:6A:D7	
	W	/i-Fi MAC address	D0:C8:57:81:	6A:D8	
REPORT		Itra Encode HDMI Plus	20.00, 37.01	AR.100;	1
Take a snapshot of all co conditions of the device export to a file for supp	ument Ga e and	enerated at Mon Jul 17 06:5	i1:32 2023		

### **Checking Device Information**

- Device name: device name, which can be modified in the System > General > Device name area.
- Product name: device family name.
- Serial number: device serial number.
- Hardware version: device hardware version.
- Firmware version: device firmware version, which can be update in the Firmware tab.
- Ethernet MAC address: device Ethernet MAC address.
- Wi-Fi MAC address: device Wi-Fi MAC address.

REPORT	Ultra Encode HDMI Plus	1
Take a snapshot of all current conditions of the device and export to a file for support.	Generated at Mon Jul 17 06:51:32 2023 DEVICE	
	<pre>{     "product": {         "device-name": "Channel-1-dev8",         "product-name": "Ultra Encode",         "module-name": "Ultra Encode HOMI Plus",         "sn": "C315230423008",         "hardware-ven": "Cc.,         "firmware-ver": "2.2.94",         "factory-firmware-ver-s": "2.2.39" },     "mac-addr": { </pre>	
		Export

### Exporting Reports

Export reports from your encoder when you want to get help from the Magewell Support team. These files will help our support engineers get a better understanding of your device status and other related information.

- 1. Go to About > Report.
- 2. Click **Export...** to generate a .html file.
- 3. When prompted, click **Export**.

Level         Date & Time         Detail           @         2023-07-17 06:20:51.886         Interface (wlan0) was assigned IP address 10.20.0.44           @         2023-07-17 06:20:21.974         User 'Admin' (10.10.5.130) logged in, session: 32           @         2023-07-17 06:20:21.974         User 'Admin' (10.10.3.121) logged in, session: 32           @         2023-07-17 03:40:11.944         User 'Admin' (10.10.3.121) logged in, session: 7           @         2023-07-17 03:36:55.522         User 'Admin' (10.10.3.121) logged in, session: 7           @         2023-07-17 03:36:03.210         User '111' (10.10.3.121) logged in, session: 7           @         2023-07-17 03:12:04.674         User 'Admin' (10.10.3.121) logged in, session: 7           @         2023-07-17 03:12:04.674         User 'Admin' (10.10.3.121) logged in, session: 7           @         2023-07-17 03:12:04.674         User 'Admin' (10.10.3.121) logged in, session: 7           @         2023-07-17 03:12:04.674         User 'Admin' (10.10.3.121) logged in, session: 7           @         2023-07-17 03:10:49.239         Video signal locked: 1920x1080p60.00           @         2023-07-17 03:10:48.132         Video signal locked: 1920x1080p60.00           @         2023-07-17 03:10:47.890         Video signal unlocked           @         2023-07-17 03:10:47.890         Video signal unlocked	EMLOG	Total : 579 events	All Information Warning Error
generated by the device and export them as a file for technical support.         ①         2023-07-17 06:20:51.886         Interface (wlan0) was assigned IP address 10.20.0.44           ⑦         2023-07-17 06:20:21:974         User 'Admin' (10.10.5.130) logged in, session: 32           ⑦         2023-07-17 03:40:11.944         User 'Admin' (10.10.3.121) logged in, session: 7           ⑦         2023-07-17 03:36:55.522         User 'Admin' (10.10.3.121) logged in, session: 7           ⑦         2023-07-17 03:36:55.522         User 'I11' (10.10.3.121) logged in, session: 7           ⑦         2023-07-17 03:36:55.529         Added user '111'           ⑦         2023-07-17 03:12:04.674         User 'Admin' (10.10.3.121) logged in, session: 7           ⑦         2023-07-17 03:12:04.674         User 'Admin' (10.10.3.121) logged in, session: 7           ⑦         2023-07-17 03:12:04.674         User 'Admin' (10.10.3.121) logged in, session: 7           ⑦         2023-07-17 03:10:49.239         Video signal locked: 1920x1080p60.00           ⑦         2023-07-17 03:10:49.239         Video signal locked: 1920x1080p60.00           ⑦         2023-07-17 03:10:48.132         Video signal locked: 1920x1080p60.00	important events	Level Date & Time	Detail
(i)         2023-07-17 06:20:21.974         User 'Admin' (10.10.5.130) logged in, session: 32           (i)         2023-07-17 03:40:11.944         User 'Admin' (10.10.3.121) logged in, session: 7           (i)         2023-07-17 03:36:55.522         User 'Admin' (10.10.3.121) logged in, session: 7           (i)         2023-07-17 03:36:55.522         User 'Admin' (10.10.3.121) logged in, session: 7           (i)         2023-07-17 03:36:55.529         User '111' (10.10.3.121) logged in, session: 7           (ii)         2023-07-17 03:35:55.089         Added user '111'           (iii)         2023-07-17 03:12:04.674         User 'Admin' (10.10.1.1.125) logged in, session: 8           (iii)         2023-07-17 03:11:20.721         User 'Admin' (10.10.3.121) logged in, session: 7           (iii)         2023-07-17 03:11:20.721         User 'Admin' (10.10.3.121) logged in, session: 7           (iii)         2023-07-17 03:11:20.721         User 'Admin' (10.10.3.121) logged in, session: 7           (iii)         2023-07-17 03:10:49.239         Video signal locked: 1920x1080p60.00           (iii)         2023-07-17 03:10:47.890         Video signal locked: 1920x1080p60.00	이 말 방법 정말에서 한 방법 지 않는 것이 없는 것이 없는 것이 없다.	② 2023-07-17 06:20:51.886	Interface (wlan0) was assigned IP address 10.20.0.44
①       2023-07-17 03:40:11.944       User 'Admin' (10.10.3.121) logged in, session: 7         ⑦       2023-07-17 03:36:55.522       User 'Admin' (10.10.3.121) logged in, session: 7         ⑦       2023-07-17 03:36:03.210       User '111' (10.10.3.121) logged in, session: 7         ⑦       2023-07-17 03:36:03.210       User '111' (10.10.3.121) logged in, session: 7         ⑦       2023-07-17 03:35:55.089       Added user '111'         ⑦       2023-07-17 03:12:04.674       User 'Admin' (10.10.1.1.125) logged in, session: 8         ⑦       2023-07-17 03:11:20.721       User 'Admin' (10.10.3.121) logged in, session: 7         ⑦       2023-07-17 03:11:20.721       User 'Admin' (10.10.3.121) logged in, session: 7         ⑦       2023-07-17 03:10:49.239       Video signal locked: 1920x1080p60.00         ②       2023-07-17 03:10:48.132       Video signal locked: 1920x1080p60.00         ③       2023-07-17 03:10:47.890       Video signal locked: 1920x1080p60.00		② 2023-07-17 06:20:21.974	User 'Admin' (10.10.5.130) logged in, session: 32
Image: Constraint of the sector of the se	cal support.	② 2023-07-17 03:40:11.944	User 'Admin' (10.10.3.121) logged in, session: 7
⑦       2023-07-17 03:35:55.089       Added user '111'         ⑦       2023-07-17 03:12:04.674       User 'Admin' (10.10.11.125) logged in, session: 8         ⑨       2023-07-17 03:11:20.721       User 'Admin' (10.10.3.121) logged in, session: 7         ⑨       2023-07-17 03:10:49.239       Video signal locked: 1920x1080p60.00         ⑨       2023-07-17 03:10:48.132       Video signal locked: 1920x1080p60.00         ⑧       2023-07-17 03:10:47.890       Video signal locked: 1920x1080p60.00		② 2023-07-17 03:36:55.522	User 'Admin' (10.10.3.121) logged in, session: 7
①       2023-07-17 03:12:04.674       User 'Admin' (10.10.11.125) logged in, session: 8         ②       2023-07-17 03:11:20.721       User 'Admin' (10.10.3.121) logged in, session: 7         ③       2023-07-17 03:10:49.239       Video signal locked: 1920x1080p60.00         ④       2023-07-17 03:10:48.132       Video signal locked: 1920x1080p60.00         ④       2023-07-17 03:10:47.890       Video signal locked: 1920x1080p60.00		② 2023-07-17 03:36:03.210	User '111' (10.10.3.121) logged in, session: 7
②       2023-07-17 03:11:20.721       User 'Admin' (10.10.3.121) logged in, session: 7         ③       2023-07-17 03:10:49.239       Video signal locked: 1920x1080p60.00         ③       2023-07-17 03:10:48.132       Video signal locked: 1920x1080p60.00         △       2023-07-17 03:10:47.890       Video signal locked: 1920x1080p60.00		@ 2023-07-17 03:35:55.089	Added user '111'
⑦       2023-07-17 03:10:49.239       Video signal locked: 1920x1080p60.00         ⑦       2023-07-17 03:10:48.132       Video signal locked: 1920x1080p60.00         ▲       2023-07-17 03:10:47.890       Video signal locked: 1920x1080p60.00		② 2023-07-17 03:12:04.674	User 'Admin' (10.10.11.125) logged in, session: 8
O         2023-07-17 03:10:48.132         Video signal locked: 1920x1080p60.00           A         2023-07-17 03:10:47.890         Video signal unlocked		② 2023-07-17 03:11:20.721	User 'Admin' (10.10.3.121) logged in, session: 7
A 2023-07-17 03:10:47.890 Video signal unlocked		② 2023-07-17 03:10:49.239	Video signal locked: 1920x1080p60.00
		② 2023-07-17 03:10:48.132	Video signal locked: 1920x1080p60.00
② 2023-07-17 03:10:41.124 Audio signal present: 44100 Hz, 2 channels, 16 bits		A 2023-07-17 03:10:47.890	Video signal unlocked
		② 2023-07-17 03:10:41.124	Audio signal present: 44100 Hz, 2 channels, 16 bits
⑦ 2023-07-17 03:10:40.016 Video signal locked: 1920x1080p60.00		⑦ 2023-07-17 03:10:40.016	Video signal locked: 1920x1080p60.00
⑦ 2023-07-17 03:10:39.814 Video signal locked: 1920x1080p60.00		② 2023-07-17 03:10:39.814	Video signal locked: 1920x1080p60.00
		A 2023-07-17 03:10:33.191	Audio signal not present
Audio signal not present		▲ 2023-07-17 03:10:32.113	Video signal unlocked
② 2023-07-17 03:10:39.814 Video signal locked: 1920x1080p60.00		②         2023-07-17 03:10:41.124           ③         2023-07-17 03:10:40.016           ③         2023-07-17 03:10:39.814	Audio signal present: 44100 Hz, 2 channels, 16 bits Video signal locked: 1920x1080p60.00 Video signal locked: 1920x1080p60.00
			NIN BULL SI
A. 9099-07-17 09/10/99 191 Audio signal not prepent			
② 2023-07-17 03:10:39.814 Video signal locked: 1920x1080p60.00		⑦         2023-07-17 03:10:41.124           ⑦         2023-07-17 03:10:40.016           ⑦         2023-07-17 03:10:39.814           ▲         2023-07-17 03:10:39.814	Audio signal present: 44100 Hz, 2 channels, 16 Video signal locked: 1920x1080p60.00 Video signal locked: 1920x1080p60.00 Audio signal not present

#### Clearing/Exporting All Logs

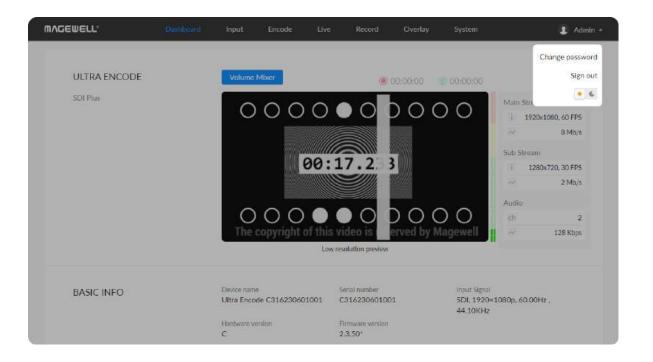
- 1. Access the Web UI and sign in.
- 2. Click and enter the **System** tab, then select **Log**.
- 3. (Optional) Filter current logs.

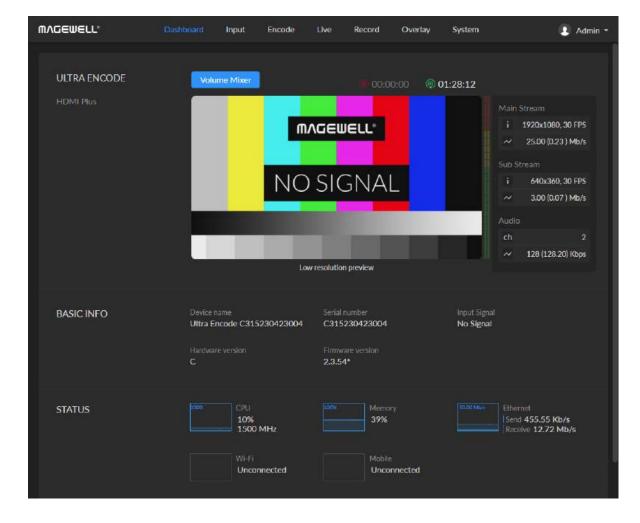
By default, all logs are displayed in the table. Log entries can be categorized as "error", "warning", and "information".

- **Total** shows the total number of filtered events.
- All: Check to show all logs.

The device can store up to 1000 local log entries. After 1000 entries have been recorded, the oldest entry will be deleted before a new one can be added.

- Information: Check to show information logs which record user actions or significant system events, e.g. login and signal locked.
- Warning: Check to show warning logs which mean something has not worked as it should. e.g. Ethernet is disconnected or signal is unlocked.
- **Error**: Check to show error logs which mean some serious error has • happened.
- 4. (Optional) Click **Export...** to get a .html file of all logs. When prompted in the window, click Export.
- 5. (Optional) Click **Clear** to delete all logs. When prompted in the window, click **Yes**.





#### Enable Dark Mode for Your WebGUI

- 1. Log in WebGUI.
- 2. Click the drop-list icon  $\overline{\phantom{a}}$  beside your avatar icon, and click  $\underbrace{\textcircled{\sc s}}$  to switch between day and night mode.

# FAQ

## How to turn on/off AP mode

AP mode is on by default. Administrator can go to **System > Network > AP** section to turn on/off the AP mode and change AP password.

## Can I set one live stream server to use the main stream and the other to use the sub stream?

Yes. You can select the main stream or sub stream for each session.

## Can Ultra Encode stream to multiple destinations at the same time?

- Supported streaming protocols: RTSP/RTMP/RTMPS/SRT Caller/SRT Listener/NDI<sup>®</sup>|HX2/NDI<sup>®</sup>|HX3/HLS/TS over UDP/TS over RTP/TVU ISSP
- Allow simultaneous 6 sessions over multiple streaming protocols, containing 1 session of HLS, RTSP, NDI<sup>®</sup>|HX2, or 2 NDI<sup>®</sup>|HX2 (if included)
- Specify main stream or sub stream for each streaming session
- Stream 1 NDI<sup>®</sup>|HX3 sessions, and they cannot stream simultaneously with other tasks

## What to do if I forget the Web UI password?

- Forgot admin password:
  - 1. Connect the device to your computer using provided USB cable.
  - 2. Type the USB NET IP address 192.168.66.1 in your web browser to access the Web UI.
- At top right of the "SIGN IN" page, click "Reset all settings" to restore all configurations to defaults, and the "Admin" password will be "Admin" again. Be cautious that resetting your device would restore configurations to defaults.
- Forgot a general user's password:
  - Sign in Web UI with the administrator account, then go to **System > User** Admin tab, then you can change the specific user's password.

	Reset all settings	Engl
SIGN IN Enter your account and password		
SIGN IN		



## Support

## Get the Latest Information

If you have any problems using Magewell products or need more technical information, please visit the following.

- Tutorial video: Magewell TV
- YouTube channel: Magewell Video Capture Device
- Knowledge base: Ultra Encode Support

## **Technical Support**

Ticket System: If you have any questions using Magewell products or need technical assistance, please submit and track your inquiries by clicking here.

## Warranty

## **Limited Warranty**

Except otherwise set between you and Magewell in advance in a written form, the free limited warranty service starts from the date on your proof of purchase. The proof can be: sales contract, formal sales receipt, invoice or delivery note. The earliest date of these proofs is the starting date of the free limited warranty. The period of free limited warranty goes as below:

- Ultra Encode Family: two (2) years;
- The power adapter provided as accessories: one (1) year;

## How to get the limited warranty

- Please contact the Magewell support team by email (support@magewell.net) first, to determine whether your problem can only be solved by returning it to 1. Magewell for repair. Magewell might ask you to take photos of the front and back of the defective products.
- Magewell will issue an RMA letter to you if it is confirmed that you need to return the faulty product for further examination or repair. Please fill in the RMA with 2. necessary information as required.

If it is regular repair, you will be responsible for the shipping cost, duties and insurance cost (if applicable); if the product is DOA, Magewell will be responsible for the shipping cost.

- 3. If some components need to be replaced, Magewell will decide to repair, renovate or replace the components by itself. Magewell may use new or repaired component to repair the product. The repaired product can be expected to work normally and the performance to remain the same. Repaired products can work in a good working condition and at least function the same as the original unit. The original replaced component will become the property of Magewell and components which are replaced for the client will become his/her property.
- If the product is within warranty, Magewell will repair or replace the faulty units at its own discretion. In circumstances where the faulty unit is replaced by another 4. one, Magewell may use new, repaired or renovated units. The faulty unit will then become the property of Magewell while the replacement unit will become the property of the purchaser.
- If the warranty expires, Magewell will inform the purchaser whether the products can be repaired and the maintenance costs they need to pay. If purchasers 5.

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decide to repair, Magewell will repair, renovate, or replace the components after receiving the maintenance costs. If purchasers give up repairing, Magewell will dispose of the faulty unit if the purchaser chooses that option.

- 6. The repaired or replaced product assumes 1) the remaining term of the Warranty of the replaced unit or faulty unit; 2) ninety (90) days from the date of replacement or repair, whichever provides longer coverage for you. The extended warranty is only valid for repaired/replaced components.
- 7. The period of service depends on the client's location (country and area) and the product.

To view the complete warranty policy, please visit www.magewell.com/quality-assurance.

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