High-Bright

Live Stream Recording Monitor

15.6”/21.5” 1920×1080 Resolution, features with 1200/1000 nits high brightness screen

User Guide

Contents

Important Safety Instructions:

- Please read User Guide before using this product.
- Please keep User Guide for future reference.
- Please read the precaution to prevent possible danger and loss of property.

Precaution:

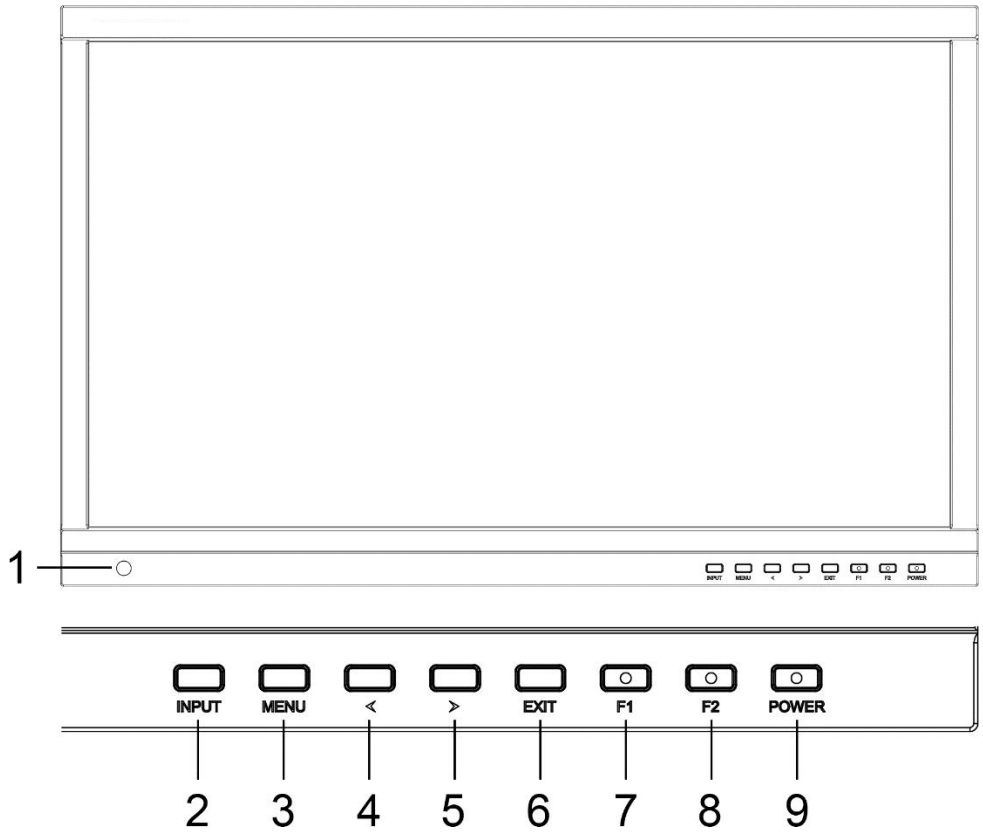
- Please do not place the display screen towards the ground.
- Please avoid heavy impact or drop onto the ground.
- Please do not use chemical solutions to clean this product. Please wipe with a clean soft cloth to maintain the brightness of the surface.
- Please do not block any vent hole.
- Please follow the instructions and trouble-shootings to adjust the product. Other improper adjustment may result in damage. Any further adjustment must be performed or conducted by a qualified technician.
- Please unplug the power and remove the battery if long-term no-use, or thunder weather.

1. Main Features

- Support standard 3G-SDI and HDMI 2.0 input/output.
- Input signals support up to SDI 1920x1080 60/59.94/50/30/29.97/25/24/23.98p and HDMI 3840x2160 60/59.94/50/48/47.95/30/29.97/25/24/23.98p; Signal loop out.
- Support customized various waveform mode: Waveform/Vectorscope/Histogram/Level Meter.
- HDR (High Dynamic Range) display supporting ST 2084/ Hybrid Log Gamma.
- Gamma selection: 1.8-2.8.
- Custom 3D LUT file load through USB.
- Color Gamut supporting SMPTE-C/ Rec709/ EBU
- Color Space/HDR/Gamma/Camera Log comparison with original (side by side).
- Color Temperature: 5500K/6500K/7500K/9300K/User.
- False Color: Default/Spectrum/ARRI/RED.
- Aspect Marker (16:9/1.85:1/2.35:1/2.39:1/4:3/3:2/Grid/ User).
- Anamorphic (1.3X//1.5X/1.8X/2.0X/2.0X MAG).
- Audio: supporting Level Meter
- Time Code: LTC/ VITC.
- Check Field: Red/ Green/ Blue/ Mono.
- Zoom 10%~90%.
- Peaking (Red/ Green/ Blue/ White/ Black).
- Record and replay video with SD card.
- Push/pull stream through network or website.
- Optional NDI pull stream function.

2. Production Description

2.1 Front Panel



1) Light Sensor (Only available on the 21.5" monitor)

2) Input Button (Switch from MEDIA, HDMI and SDI)

3) Menu Button

4) Left Button

5) Right Button

6) Exit Button

7) F1 Button and Lamp

8) F2 Button and Lamp

Assigned function by factory as follow:

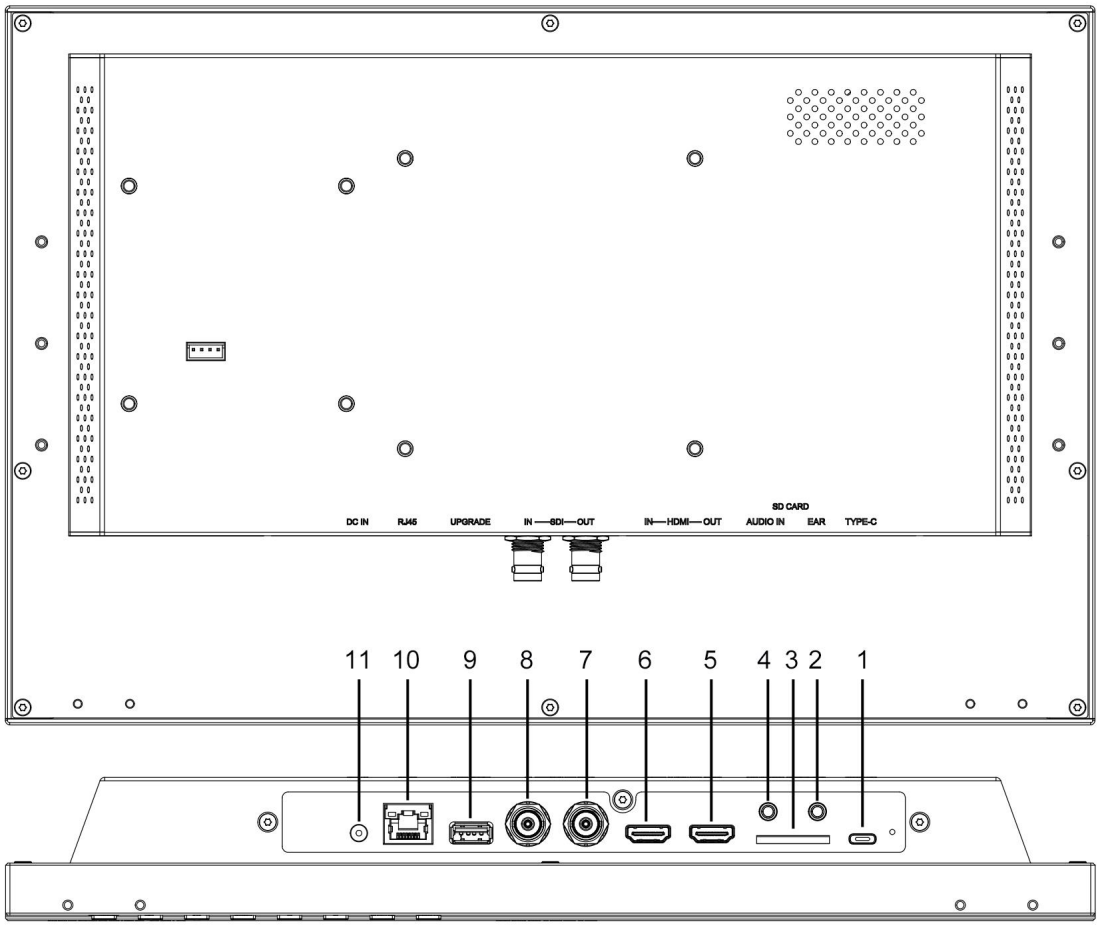
- [F1]: REC Enable

- [F2]: SD Playback

9) Power Button (indicator light)

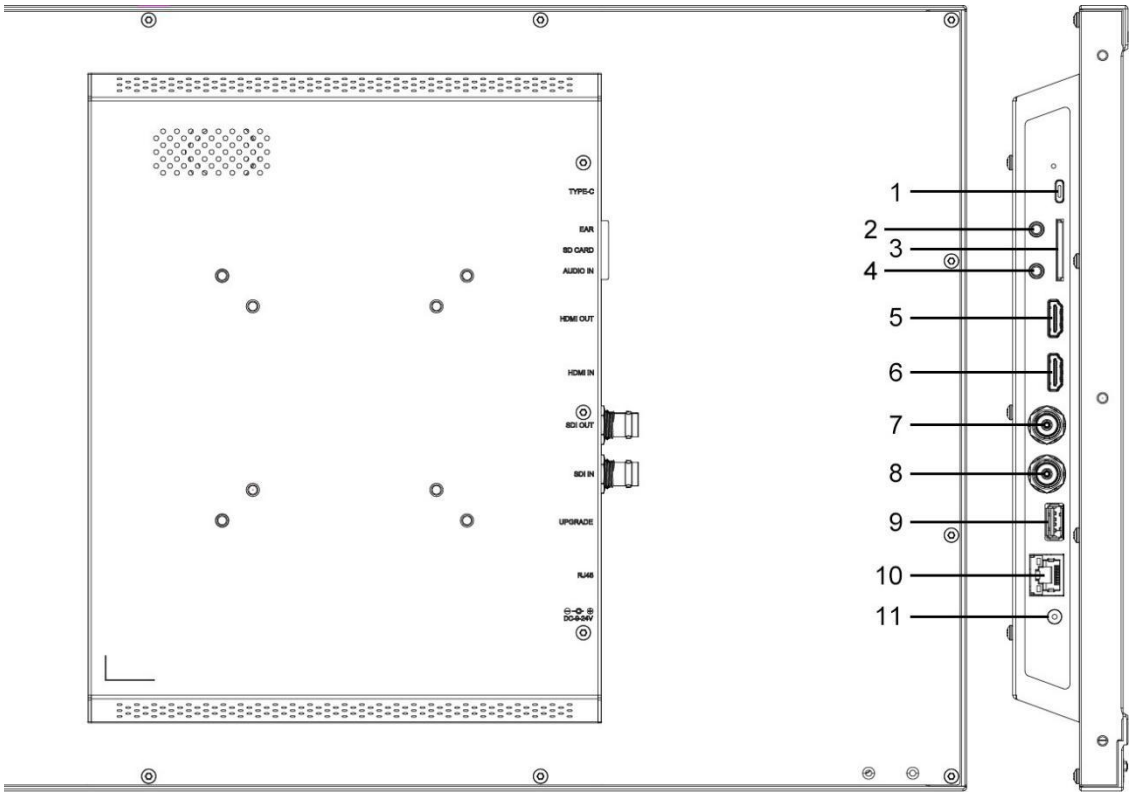
2.2 Rear Panel

2.2.1 Interfaces



(15.6 Inch Monitor)

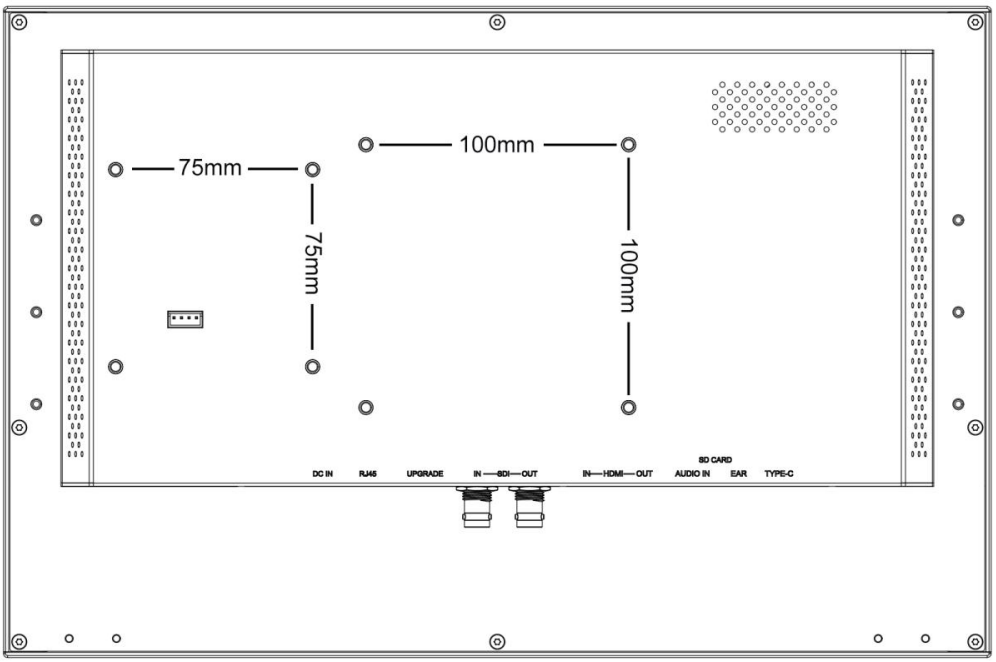
1) USB Type-C: For upgrade
2) Earphone: 3.5mm
3) SD Card Slot: SD card, support up to 512GB (Speed Class > C10, 10MB/s)
4) Audio-in: 3.5mm
5) HDMI Output, support 2160p 60Hz
6) HDMI Input, support 2160p 60Hz
7) 3G-SDI Output, support 1080p 60Hz
8) 3G-SDI Input, support 1080p 60Hz
9) USB for upgrade and 3D-LUT
10) LAN port (Optional PoE)
11) DC Power Input, 9V-24V



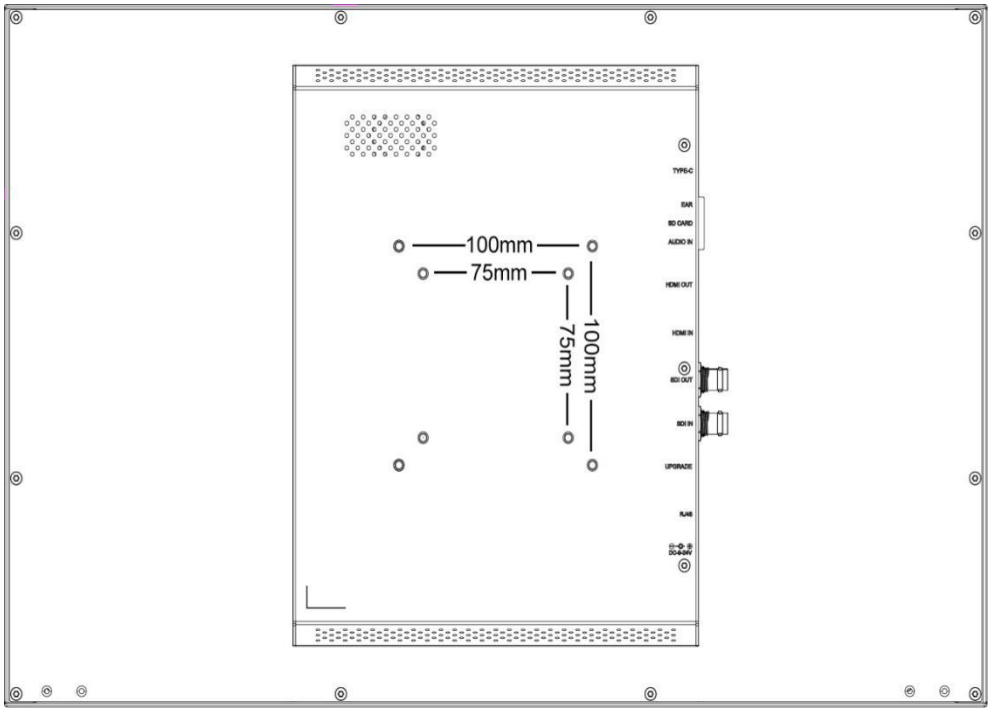
(21.5 Inch Monitor)

1) USB Type-C: For upgrade
2) Earphone: 3.5mm
3) SD Card Slot: SD card, support up to 512GB (Speed Class > C10, 10MB/s)
4) Audio-in: 3.5mm
5) HDMI Output, support 2160p 60Hz
6) HDMI Input, support 2160p 60Hz
7) 3G-SDI Output, support 1080p 60Hz
8) 3G-SDI Input, support 1080p 60Hz
9) USB for upgrade and 3D-LUT
10) LAN port (Optional PoE)
11) DC Power Input, 9V-24V

1.1.2 Standard VESA



(15.6 Inch Monitor)



(21.5 Inch Monitor)

- Standard 75mm*75mm is used for external battery (V-mount/ Anton Bauer mount battery).
- Standard 75mm*75mm and 100mm*100mm, can be used for external hanging bracket.

2. Menu Setting

Before setting the functions, please make sure the device is connected correctly.

2.1 Shortcut keys

2.1.1 Menu Button

- Power on the monitor, press Menu button to display OSD, and select options as the following sequence via rotating it: INFORMATION/PICTURE/MARKER/FUNCTION/WAVE/AUDIO/STREAM&REC/SYSTEM.
- Press Menu button to enter the desired function, use right and left buttons to change the value/option, and press Menu or Exit again to confirm the changes.

2.1.2 F1-F2 Buttons:

- Long press any F1-F2 buttons for 3-5 seconds to pop up shortcut menu on the screen. As shown in Figure. Select option and set it as default via pressing the Menu button, then press Exit button to exit shortcut setting menu. The customized function will be remembered by F1/F2 buttons.
- Functions of F1-F2 buttons can also be customized: [Center Marker], [Aspect Marker], [Safety Marker], [Overscan], [Scan], [Aspect], [Anamorphic], [Camera Log], [Check Field], [H/V Delay], [Freeze], [Color Bar], [Peaking], [False Color], [Exposure], [Histogram], [Waveform], [Vector], [Time Code], [Mute], [Level Meter], [SD Playback], [REC Enable].

  Default function: F1: [REC Enable].

  F2: [SD Playback].

2.2 MENU Operations

2.2.1 INFORMATION

Source	SDI/HDMI/MEDIA
SD Card	Unmounted/xxxx.xGB/xxxx.xGB
Stream1 Status	Off/Pushing/Connecting/Connection Failed
Stream2 Status	Off/Pushing/Connecting/Connection Failed
Stream3 Status	Off/Pushing/Connecting/Connection Failed
REC Status	Off/Recording
MAC Addr	xx-xx-xx-xx-xx-xx

Note: Items in the Information Menu cannot be changed manually.

- Source

  Display the current video source: [HDMI], [SDI], [Media]

- SD Card

  Show the current status of the SD card slot: [Unmounted], [Remaining GB/ Total GB]

- Stream1 Status

  Show the current status of the push stream 1: [Off], [Pushing], [Connecting], [Connection Failed]

- Stream2 Status

  Show the current status of the push stream 2: [Off], [Pushing], [Connecting], [Connection Failed]

- Stream3 Status

  Show the current status of the push stream 3: [Off], [Pushing], [Connecting], [Connection Failed]

- REC Status

  Show the current status of the recording: [Off], [Recording]

- MAC address

  Show the MAC address of LAN..

2.2.2 PICTURE

Brightness	0-100
Contrast	0-100
Saturation	0-100
Tint	0-100
Sharpness	0-100
Back Light Mode	Off/Auto
Back Light	0-100
RGB Range	Full/Limited
HDMI EDID	4K/2K
Color Space	Native/SMPTE-C/Rec709/EBU
Camera Log	Off/Default/User
Def. Log	SLog2ToLC-709/SLog2ToLC-709TA/ SLog2ToSLog2-709/SLog2ToCine+709/ SLog3ToLC-709/SLog3ToLC-709TA/ SLog3ToSLog2-709/SLog3ToCine+709/ ArriLogCTo709/ArriLogCToP3DCI/ CLogTo709/VLogToV709/ JLogTo709/JLogTo709HLG/ JLogTo709PQ/Z7 NLogTo709/ D780 NLogTo709
User Log	No Data/User1-User6
Gamma	Off/1.8/2.0/2.2/2.35/2.4/2.6/2.8
HDR	Off/ST2084 300/ST 2084 1000/ST 2084 10000/HLG
Color Temp.	5500K/6500K/7500K/9300K/User
Red Gain	0-128-255
Green Gain	0-128-255
Blue Gain	0-128-255
Red Offset	0-256-511
Green Offset	0-256-511
Blue Offset	0-256-511

- Brightness

  Control the degree of brightness between 0-100.

- Contrast

  Control contrast ratio between 0-100.

- Saturation

  Adjust the color intensity between 0-100.

- Tint

  Adjust tint between 0-100.

- Sharpness

  Control sharpness of the image between 0-100.

- Back Light Mode

  Back light can be set to adjust automatically: [Off], [Auto]. (Back Light Mode is only available on the 21.5" model.)

- Back Light

  Adjust the back light between 0-100.

- RGB Range

  Use this item to choose the RGB range of the HDMI input: [Full], [Limited].

  Note: Only available under HDMI video signal.

- HDMI EDID

  Select the HDMI EDID from between [4K] and [2K]. This item enables PC or other devices to recognize the property of this monitor and makes the images look excellent on the screen.

  Note: Only available under HDMI video signal.

- Color Space

  Select the display gamut from among [Native], [SMPTE-C], [Rec709], [EBU].

- Camera Log

  Use this item to choose one of the camera Log modes:

  - [Off]: Turn off Camera Log.

  - [Def. Log]: Use this item to choose one of the Camera Log modes as the following sequence: [SLog2ToLC-709], [SLog2ToLC-709TA], [SLog2ToSLog2-709], [SLog2ToCine+709], [SLog3ToLC-709], [SLog3ToLC-709TA], [SLog3ToSLog2-709], [SLog3ToCine+709], [ArriLogCTo709], [ArriLogCToP3DCI],

[CLogToV709], [VLogToV709], [JLog To709], [JLogTo709HLG], [JLogTo709PQ], [Z7 NLogTo709], [D780 NLog To709].

- [User Log]: Use this item to choose one of the User Log modes (1-6). Please install the User Log as following steps:

The User Log must be named with. cube in the suffix. Please note: the device only supports the format of User Log: 17x17x17 / 33x33x33; Data order is BGR; Table order is BGR. If the format does not meet the requirement, please use tool “Lut Tool.exe” to transform it. Naming the User Log as User1-User6.cube, then copy the user Log into USB flash disk. Insert the USB flash disk to the device, the User Log is saved to the device automatically at the first time. If the User Log is not loaded for the first time, the device will pop up a prompt message, please choose whether to update or not.

- Gamma

Use this item to choose the display Gamma: [Off], [1.8], [2.0], [2.2], [2.35], [2.4], [2.6], [2.8].

Gamma 1.8 Gamma 2.8

Note: Gamma mode can be only activated while HDR function closed.

- HDR

Use this item to choose one of the HDR presets: [Off], [ST 2084 300], [ST 2084 1000], [ST 2084 10000],

[HLG].

- Color Temp.

  Use this item to choose one of the color temperature presets: [5500K], [6500K], [7500K], [9300K], [User].

  Note: Only available under [User] mode to adjust R/G/B Gain and Offset.

- R/G/B Gain

  Adjust the R/G/B Gain of the current Color Temperature from 0 to 255. Default value: 128.

- R/G/B Offset

  Adjust the R/G/B Offset of the current Color Temperature from 0 to 511. Default value: 256.

2.2.3 MARKER

Center Marker	Off/On
Aspect Marker	Off/16:9/1.85:1/2.35:1/2.39:1/4:3/3:2/Grid/User
User H1	1-1920
User H2	1-1920
User V1	1-1080
User V2	1-1080
Safety Marker	Off/95%/93%/90%/88%/85%/80%
Marker Color	Red/Green/Blue/White/Black
Aspect Mat.	0ff/1/2/3/4/5/6/7
Thickness	1-7

- Center Marker

  Select [On] to display the center marker “+” and [Off] not to display it.

- Aspect Marker

Select the aspect ratio of the marker: [Off], [16:9], [1.85:1], [2.35:1], [2.39:1], [4:3], [3:2], [Grid], [User].

- User H1 / H2 / V1 / V2

  When the Aspect Marker is in User mode, the position of lines in all four directions can be freely adjusted.

  User H1: 1-1920

  User H2: 1-1920

  User V1: 1-1080

  User V2: 1-1080

- Safety Marker

  - Select [Off] not to display the safety marker. When this item is used with the aspect marker, it is only in aspect marker. When [Aspect Marker] is selected as [User], the safety marker does not be changed.

  - Select the size of the safety markers: [95%], [93%], [90%], [88%], [85%], [80%].

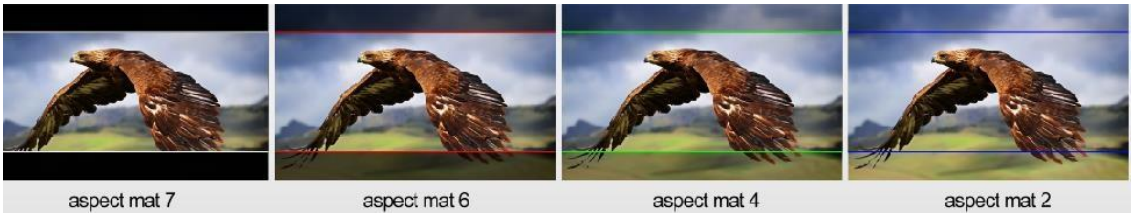
  Note: When [Aspect Marker] is selected as [Grid], the safety marker cannot be displayed.

- Marker Color

  Select the color of marker displayed on the screen: [Red], [Green], [Blue], [White], [Black].

- Aspect Mat.

  When activated, it can be selected from 1-7 (Step value is 1).



- Thickness

  Adjust the thickness of all the marker lines from 1-7 (Step value is 1).

2.2.4 FUNCTION

Scan	Aspect/Pixel To Pixel/Zoom
Aspect	Full/4:3
Anamorphic	Off/1.3X/1.5X/1.8X/2.0X/2.0X MAG
Overscan	Off/On
H/V Delay	Off/H/V/ H/V
Check Field	Off/Red/Green/Blue/Mono
Zoom	10%-90%
Freeze	Off/On

- Scan

  Adjust the scan mode among [Aspect], [Pixel To Pixel], [Zoom].

  Note: Aspect and overscan functions only can be adjusted only under [Aspect] mode. Both of them cannot be adjusted in [Zoom] and [Pixel To Pixel] modes.

- Aspect

  Select the aspect of the image among [Full], [4:3].

- Anamorphic De-squeeze

  Restore the deformation of image caused by anamorphic lens. Select the option among [Off], [1.3X], [1.5X], [1.8X], [2.0X] and [2.0X MAG].

- Overscan

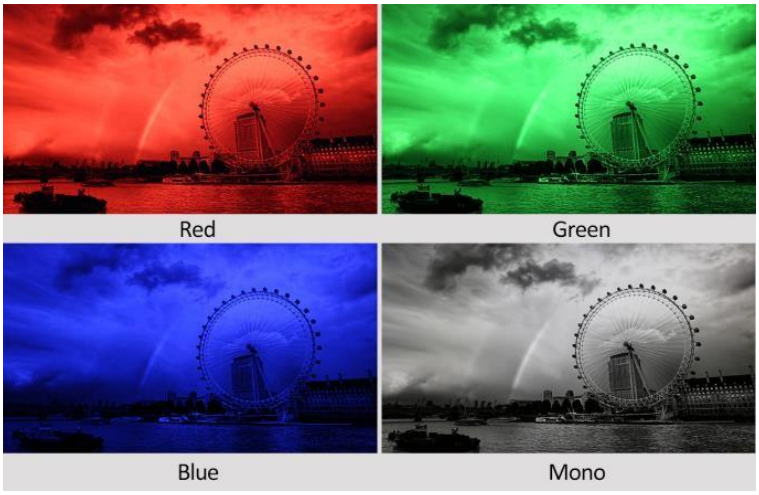
  Use this item to activate or deactivate overscan.

- H/V Delay

  Select one of the H/V modes: [OFF], [H], [V], [H/V]. When H/V Delay on, the blanking portions of the input signal will be displayed horizontally and vertically.

- Check Field

  Select one of check field modes: [Off], [Red], [Green], [Blue], [Mono].



- Zoom

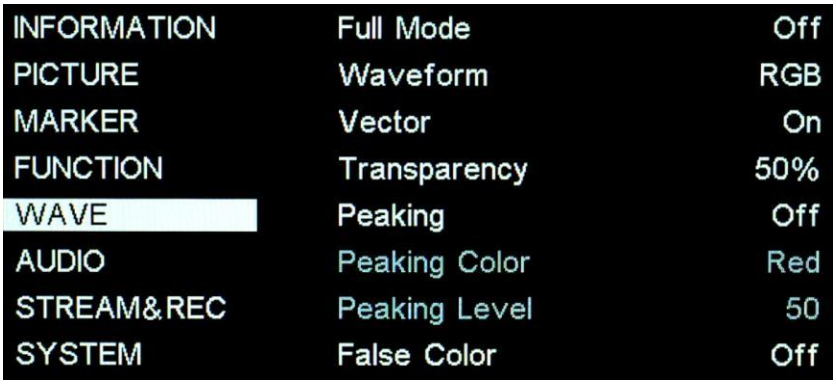
  Select zoom scale from 10% to 90% (Step value is 10%).

  When you select [Scan] as [Zoom], any part of the enlarged image can be displayed on the screen.

- Freeze

  Choose [On] to capture one frame of current image on the screen, and choose [Off] to close freeze function.

2.2.5 WAVEFORM



Full Mode	Off/Y/YCbCr/RGB/Vector/Histogram
Waveform	Off/Y/YCbCr/RGB
Vector	Off/On
Transparency	Off/25%/50%
Peaking	Off/On

Peaking Color	Red/Green/Blue/White/Black
Peaking Level	1-100
False Color	Off/Default/Spectrum/ARRI/RED
False Color Table	Off/On
Exposure	Off/On
Exposure Level	50-100IRE
Histogram	Off/Y/RGB/Color
TimeCode	Off/LTC/VITC

- Full Mode

  Some features can be displayed in full screen to show more detail: [Waveform Y], [Waveform YCbCr], [Waveform RGB], [Vector], [Histogram].

- Waveform

  Use this item to activate or deactivate Waveform. Select the waveform mode from among [Y], [YCbCr], [RGB].

  - [Y]: Display Y Waveform.

  - [YCbCr]: Display YCbCr Waveform.

  - [RGB]: Display R/G/B Waveform.

Waveform Y Waveform YCbCr Waveform RGB

- Vector

  Use this item to activate or deactivate Vector.

- Transparency

  Adjustment of transparency can support waveform, vector, histogram, audio vector, level meter. Transparency can be selected from among [off], [25%], and [50%].

  - [Off]: The background of waveform is shown at black.

  - [25%]: The background of waveform is shown at 25% intensity.

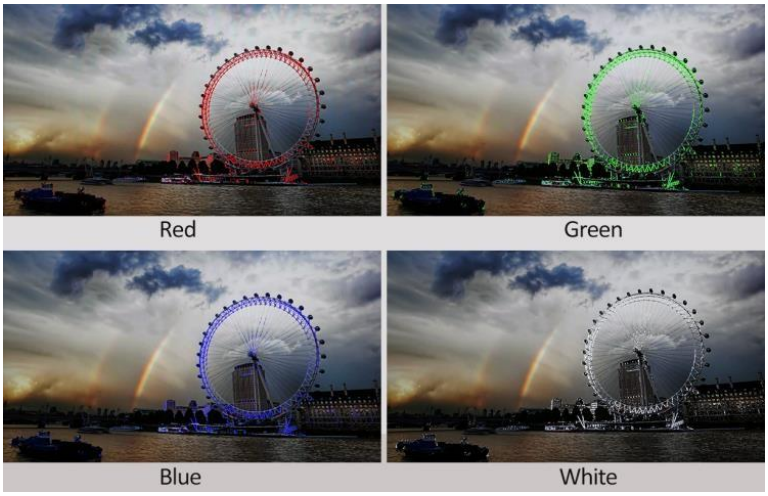
  - [50%]: The background of waveform is shown at 50% intensity.

- Peaking

  Use this item to activate or deactivate the peaking function.

- Peaking Color

  Select one of the peaking colors: [Red], [Green], [Blue], [White], [Black].



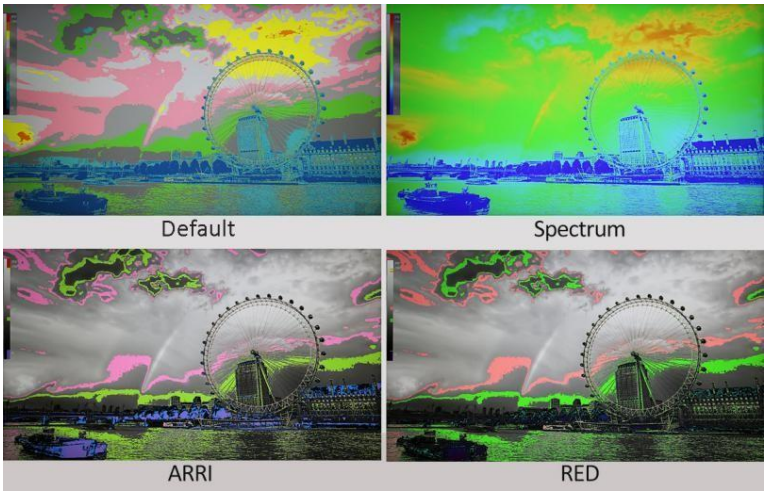
- Peaking Level

  Use this item to adjust the level of peaking from 1-100. The higher peaking level is, the more obvious peaking effect is.

- False Color

  Use this item to activate or deactivate the false color function.

  When activated, [Default], [Spectrum], [ARRI], [RED] are for optional.



- False Color Table

  Use this item to activate or deactivate the false color table. The range of the false color table is between 0-100 IRE.

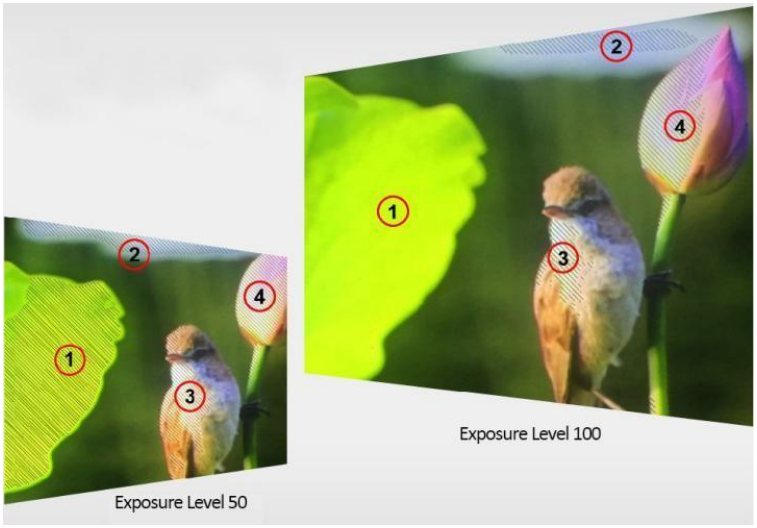
- Exposure

  Use this item to activate or deactivate the exposure function.

When activated, exposure works if the input signal exceeds the designated exposure level.

- Exposure Level

  Use this item to adjust the level of exposure between 50-100 IRE.



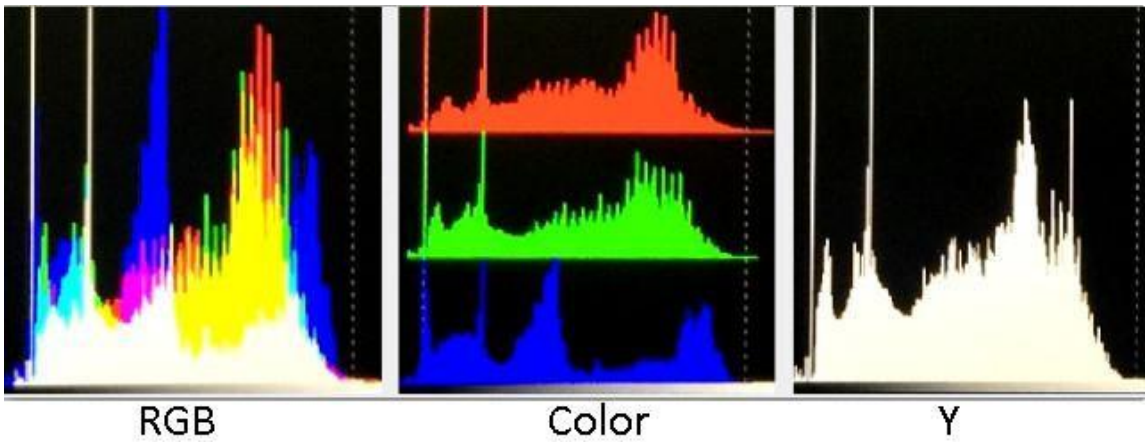
- Histogram

  Use this item to activate or deactivate histogram. When activated, [Y], [RGB], [Color] are for optional.

  - [Y]: Display Y histogram.

  - [RGB]: Display RGB mixed histogram.

  - [Color], Display RGB separated histogram.



- Time Code

  Use this item to activate or deactivate the Time Code. When activated, [LTC], [VITC] are for optional.

  Note: Time code is only available under SDI mode.

2.2.6 AUDIO

Master Volume	0~100
Master Mute	Off/On
Audio Source	Mix/Audio-in/Source-in
Audio-in Volume	0~100
Source-in Volume	0~100
Level Meter	Off/On
Audio CH	CH1&CH2/CH3&CH4/CH5&CH6/CH7&CH8 (HDMI) CH1&CH2 (SDI) CH1&CH2 (MEDIA)

- Master Volume

  Adjust the master volume among 0-100.

  Audio Source: SDI/HDMI/MEDIA.

- Master Mute

  Disable any sound.

- Audio Source

  Select a different current audio source for monitor.

  - [Audio-in]: the audio source from 3.5mm audio cable of external device.

  - [Source-in]: the audio source from HDMI, SDI or MEDIA source video signal.

  - [MIX]: Play the both audio-in and source-in.

- Audio-in Volume

  Adjust the audio-in volume among 0-100.

- Source-in Volume

Adjust the audio-in volume among 0-100.

- Level Meter

  Select whether to activate or deactivate level meter.

- Audio Channels

  In HDMI mode, select one of the audio channels among [CH1&CH2], [CH3&CH4], [CH5&CH6], [CH7&CH8].

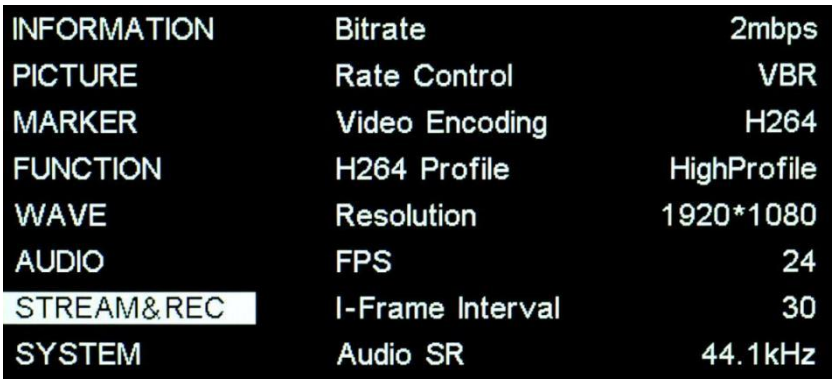
  Default: [CH1&CH2]

  In SDI mode, the audio channels is [CH1&CH2].

  In MEDIA mode, the audio channels is [CH1&CH2].

  Note: Audio Channels are only available when video signal is connected.

2.2.7 STREAM & REC



Bitrate	2mbps/4mbps/8mbps/12mbps/16mbps/ 24mbps/ 32mbps
Rate Control	VBR/CBR
Video Encoding	H264/H5
H264 Profile	High Profile/Baseline Profile/Main Profile
Resolution	1920*1080/720*480/1280*720
FPS	24/25/30/50/60
I-Frame Interval	30/60/90/120
Audio SR	44.1kHz/48kHz
Audio Bitrate	64kbps/128kbps/256kbps/320kbps
Stream Platform 1	Off/On
Stream Platform 2	Off/On
Stream Platform 3	Off/On
REC Enable	Off/On
REC Format	TS/MP4
Overwrite	Off/On

Format SD Card	No/Format
Pull Stream	Off/On
SD Playback	Off/On
Split Rec File	Off/1mins/5mins/10mins/20mins/30mins/60mins
NDI Server	Off/On

Note: The <Bitrate>, <Rate Control>, <Video Encoding>, <H264 Profile>, <Resolution>, <FPS>, <I-Frame Interval>, <Audio SR> options under the <STREAM&REC> menu are available for both Record and Push/Pull stream functions.

- Bitrate

  The higher the bitrate the better the video quality and the more memory the video takes up: [2mbps], [4mbps], [8mbps], [12mbps], [16mbps], [24mbps], [32mbps].

- Rate Control

  Select from [VBR] and [CBR].

  - [VBR]: Allows the bitrate to be automatically adjusted according to the complexity of the content.

  - [CBR]: Keeps the bitrate constant, fixed coding.

- Video Encoding

  Select from [H264]/[H5] video encoding protocol.

- H264 Profile

  Select from [High Profile], [Baseline Profile] and [Main Profile].

  - [Baseline Profile]: Basic picture quality. Supports I/P frames, Progressive and CAVLC only.

  - [Main Profile]: Mainstream picture quality. Supports P/B frames, Progressive.

  - [High Profile]: High picture quality. Adds 8x8 internal prediction, custom quantization, lossless video encoding and more YUV formats to the main Profile.

- Resolution

  Select video recording resolution: [1920*1080], [1280*720], [720*480].

- FPS

  Select video recording FPS: [24], [25], [30], [50], [60].

- I-Frame Interval

  In longer I-Frame Intervals, the file sizes are smaller, but the compression efficiency and video quality are compromised. Shorter I-Frame Intervals, on the other hand, can improve quality but at the cost of larger

file sizes.

Select among [30], [60], [90], [120].

- Audio SR

  Usually measured per second, using kilohertz (kHz) or cycles per second.

  - [44.1kHz]: CDs standard sample rate, which means every second, 44100 samples were taken.

  - [48kHz]: DVDs standard sample rate, which means every second, 48000 samples were taken.

- Audio Bitrate

  The higher the bitrate the better the audio quality and the more memory the audio takes up: [64kbps], [128kbps], [256kbps], [320kbps].

- Stream Platform 1-3

  Turn [Off]/[On] to open the channel of push stream function. There are a total of three push stream channels and can be active at one channel.

- REC Enable

  Turn [Off]/[On] the recording function. When recording start, a red signal will be displayed in the upper left corner and the record time will keep moving forward.

Note: The Speed Class must be greater than Class 10 (10MB/s).

- REC Format

  Select from [TS] and [MP4].

- Overwrite

  Turn [Off]/[On]. When this feature is turned on, when the video recorded on the SD card exceeds the capacity, the old files will be deleted automatically to continue recording.

- Format SD Card

  If you turn on this function, the file in SD card will be deleted. Please use it with caution!

- Pull Stream

  Pull Stream function is available when it is turned on.

- SD Playback

  Open the playback list of the SD card video to play the recorded content.

  Note: Unable to record and playback at the same time.

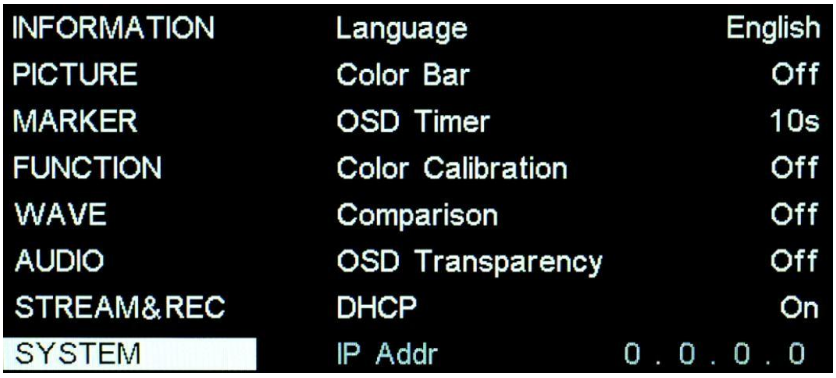
- Split Rec File

  Automatically splits the recorded video into equal parts during the recording process: [Off], [1mins], [5mins], [10mins], [20mins], [30mins], [60mins].

- NDI Sever (Optional Function)

  Turn on/off the NDI video stream server.

2.2.8 SYSTEM



Language	English/Chinese
Color Bar	Off/100%/75%
OSD Timer	10s/20s/30s
Color Calibration	Off/On
Comparison	Off/Gamma&HDR/Color Space/Camera Log
DHCP	Off/On
IP Addr	0.0.0.0
Sub. Mask	255.255.255.0
Gateway	0. 0. 0. 0
NTP	On/Off
Year	2017-2037
Month	1-12
Day	0-31
Hour	1-23
Minute	0-59
Time Format	12H/24H
Back Color	Blue/Black
No Signal Mode	Normal/Shutdown
Reset	Off/On

- Language

Option: [Chinese], [English].

- Color Bar

  Turn on/off color bar. When the color bar on, it can be selected: [100%], [75%]

- OSD Timer

  Option: [10s], [20s], [30s].

- Color Calibration

  Select [On] or [Off].

  If the device needs to be calibrated color, please operate as following:

  1) Connect the device with the PC via HDMI interface.

  2) Make sure the device and color calibration equipment to work more than 30 minutes.

  3) After the previous step, activate the Color Calibration function of the device and color calibration software to calibrate the color (See the document “CMS Color Calibration Process” for details).

  4) It will generate a document “Rec709.cube” after calibrated, then copy this document to USB flash disk.

  5) Insert the USB flash disk to the device and save the document. This document “Rec709.cube” will be found under Color Space Option.

- Comparison

  Use this setting to activate or deactivate the Comparison En function.

  When activated, the screen displays the comparison of Original image and customized image, as shown,

  Option: [Off], [Gamma/HDR], [Color Space], [Camera Log]. Default: [Off].

- DHCP

  - [On]: The monitor will automatically get an IP address from network via various programs.

  - [Off]: Manually configure IP address.

- IP Address

Manually configure IP address: xxx.xxx.xxx.xxx
Note: When [DHCP] on, IP address cannot be manually set .

- Sub net Mask

  Manually configure Sub net Mask: xxx.xxx.xxx.xxx

  Note: When [DHCP] on, Sub net Mask cannot be manually set .

- Gateway

  Manually configure Gateway: xxx.xxx.xxx.xxx

  Note: When [DHCP] on, Gateway cannot be manually set .

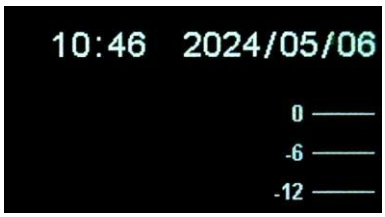
- NTP

  - [On]: Automatically syncs the system time with the network time server to ensure precision.

  - [Off]: Manually configure the system time.

- Year / Month / Day / Hour / Minute

  Users can freely adjust the start time of video. The time is shown on the upper right corner under MEDIA source.



  - Year: options from [2017]-[2037].

  - Month: options from [1]-[12].

  - Day: options from [0]-[31].

  - Hour: options from [1]-[23].

  - Minute: options from [0]-[59].

- Time Format

  Options: [12H], [24H].

- Back Color

  Select the background color when in standby mode, option: [Black], [Blue].

- No Signal Mode

  Adjust the status of the display when there is no signal input, optional: Normal, Shutdown.

- Reset

  Select the Reset option, press the Menu knob to automatically reset.

4. Product Parameters

DISPLAY	Panel	15.6”	21.5”
	Resolution	1920×1080	
	Brightness	1200 cd/m²	1000 cd/m²
	Contrast	1000:1	
	Viewing Angle	160°/160°(H/V)	178°/178°(H/V)
INTERFACES	Input	3G-SDI, HDMI 2.0	
	Output	3G-SDI, HDMI 2.0, LAN (1000M, optional PoE)	
	SDI Support Formats	1080p 24/25/30/50/60, 1080pSF 24/25/30, 1080i 50/60...	
	HDMI Support Formats	2160p 24/25/30/50/60, 1080p 24/25/30/50/60, 1080i 50/60, 720p 50/60...	
	IP Support Formats	Push / Pull Streaming: YCbCr 4:2:2 Video Code (32 Mbps@1080p60)	
	Streaming Formats	Push Streaming: SRT, RTMP; Pull Streaming: RTMP, RTSP, HTTP, HTTPS, NDI (Optional)	
RECORD	Video Resolution	1920×1080 / 1280×720 / 720×480	
	Frame Rates	60/50/30/25/24	
	Codes	H.264/H5	
	Storage	SD Card, support up to 512GB	
AUDIO	Earphone	3.5mm	
	Built-in Speaker	1	
POWER	Power In	DC 9-24V	
	Power Consumption	39W (15V)	53W (15V)
ENVIRONMENT	Operating Temperature	0~50°C	
	Storage Temperature	-20~60°C	
OTHER	Dimensions (LWD)	376×247.7×49.3mm	508×321×47mm
	Weight	3.15KG	4.75KG

5. Accessories

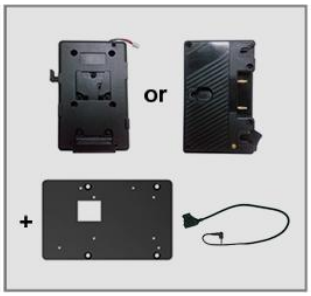


- Standard:

1) 15V/4A DC Adapter 1 pair

2) Base Bracket 1 pair

3) E-User Manual 1 pc

- Optional:

4) Carrying Case + Sunshade 1 pair

5) V-Lock or Anton Bauer Battery Mount 1 pair

6) Gimbal Bracket (only available on the 15.6” model.) 1 pair

6. Trouble Shooting

1) Only black-and-white display:

Check whether the color saturation is properly setup or not.

2) Power on but no pictures:

Check whether the cables of SDI and HDMI are correctly connected or not. Please use the standard power adapter coming with the product package. Improper power input may cause damage.

3) Wrong or abnormal colors:

Check whether the cables are correctly and properly connected or not. Broken or loose pins of the cables may cause a bad connection.

4) When on the picture shows size error:

Press “MENU → FUNCTION → Overscan” to zoom in/out pictures automatically when receiving HDMI signals.

5) Other problems:

Please press “MENU” button and choose “MENU→SYSTEM→ Reset →On”.

Note: Due to constant effort to improve products and product features, specifications may change without notice.

Appendix 1: 3D LUT Loading

3D LUT supports upload color calibration document and User Log via USB flash disk.

- Format Requirement
  - LUT format

    Type: .cube

    3D Size: 17x17x17/33x33x33

    Data Order: BGR

    Table Order: BGR
  - USB flash disk version

    USB: 2.0

    System: FAT32

    Size: <16G
  - LUT format Color calibration document: Rec709. cube
  - User Log: User1. cube-User6.cube

- LUT Format conversion

  Please convert LUT format according to the following steps.

  Note: For Mac users, please copy the "mac OS" file to Mac, then click and follow the steps below.

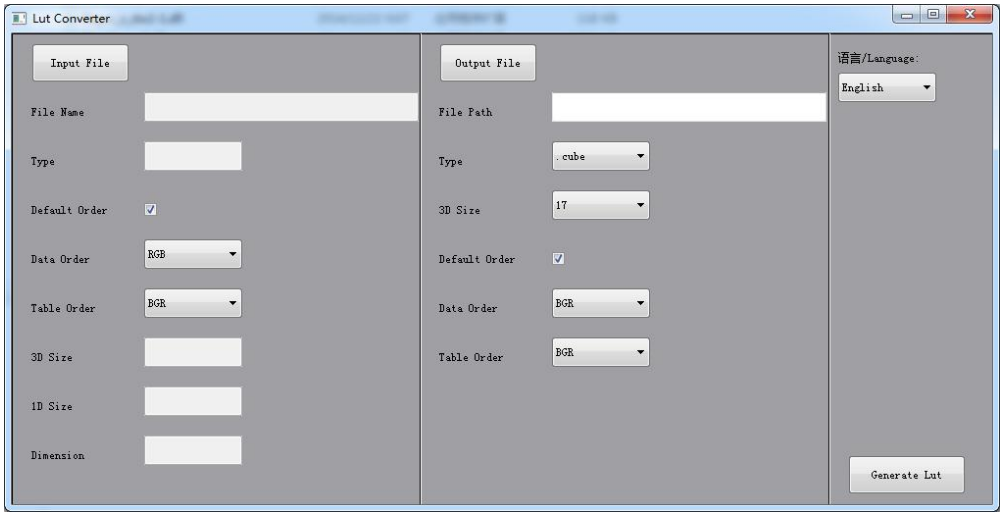
  - Activate Lut converter

One individual Product ID for one computer. Please send the ID number to Sales to get an Enter Key.

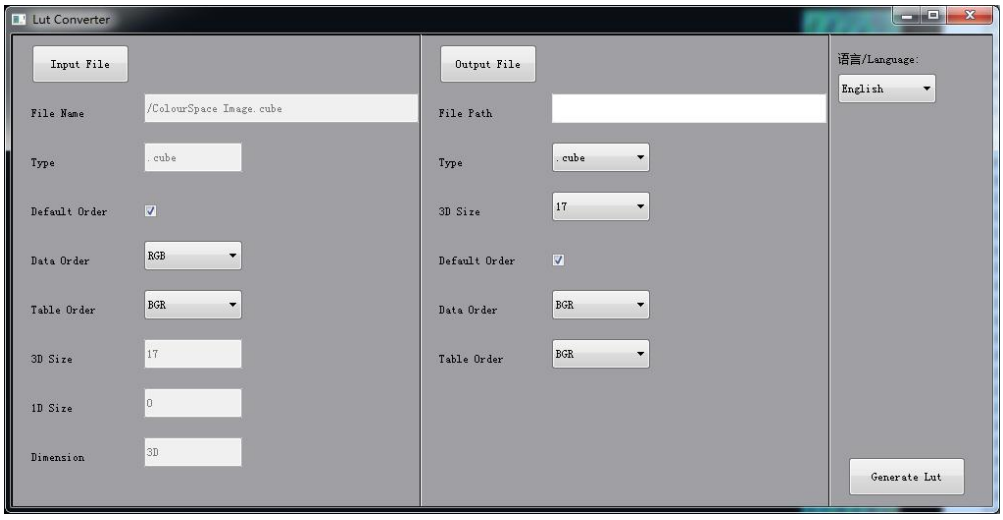
Then the computer gets the permission of the Lut Tool after input the Enter Key.

- LightSpace CMS software user demo

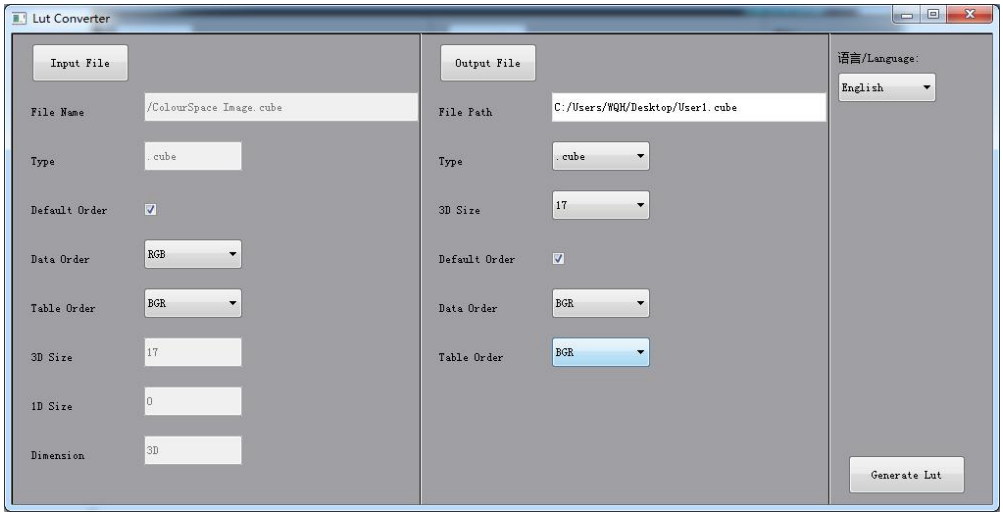
  - Activate LUT Tool.exe.



  - Click Input File, then select *LUT.



  - Click Output File, choose the file name.



- Click Generate Lut button to finish.

- USB Loading

Copy the needed files to the root directory of the USB flash disk. Plug the USB flash disk into USB port of the device after power on. Click “Yes” on the pop-up prompt window (If the device doesn’t pop-up the prompt window, please check the LUT document name or the USB flash disk version), then press Menu button to update automatically. It will pop-up a prompt message if the update completed.

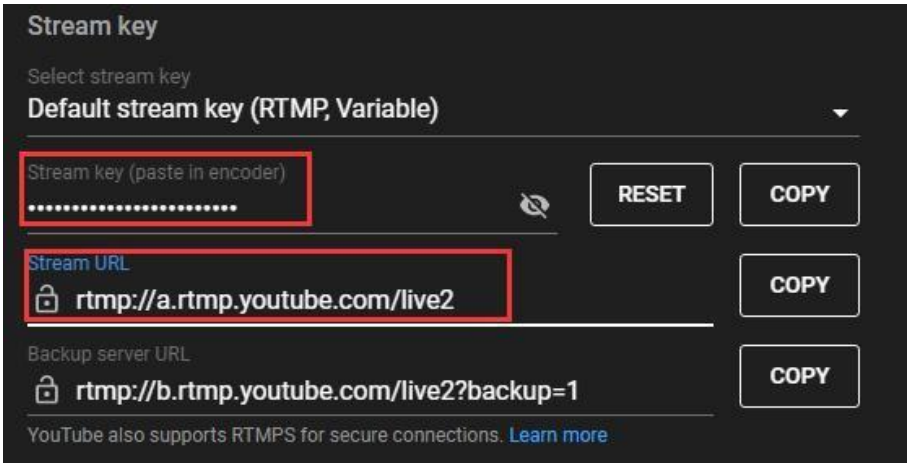
Appendix 2: Push / Pull Streaming

- Push Stream in Internet
  - Prepare in Advance

- Network Cables
- Router
- Computer
- USB Drive Disk

  - Push Stream Steps

- Connect the monitor's LAN port to the router and the router to a computer. Ensure that the computer is able to access the Internet properly and that the monitor can read the IP address.
- Access the live streaming settings of the stream platform and obtain and copy the Stream URL and Stream Key.



- Then create a new TXT text file named "StreamAddr". The content as follows:

Note: Three URL and Stream Key can be uploaded at the same time, please copy the Stream Key directly after the URL without spaces!

- Copy the text file to the USB drive disk and plug in USB port of monitor. The address will be uploaded automatically.

Note: Press the EXIT button to check the address.

- Open the monitor's <STREAM&REC> menu and turn on <Stream Platform 1>.

- Finally, open the live stream link and start playing!

- Pull Stream in Ethernet/Internet

  - Prepare in Advance

- Network Cables

- Router

- Computer

- USB Drive Disk

  - Pull Stream Steps

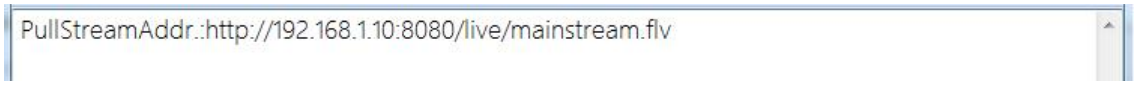
- Connect the monitor's LAN port to the router and the router to a computer.

- Get a pull stream address.

E.g.

http://192.168.1.10:8080/live/mainstream.flv

- Then create a new TXT text file named "StreamAddr". The content as follows:



- Copy the text file to the USB drive disk and plug in USB port of monitor. The address will be uploaded automatically.

Note: Press the EXIT button to check the address.

- Open the monitor's <STREAM&REC> menu and turn on <Pullstream>.

- Finally, switch the video source to MEDIA and start playing!

- Website Pull Stream

  - Introduction

- Import push/pull streaming link, control push/pull streaming function, and operate the recording related function through the website page.

- Turn on the NDI interface on the website to get NDI video streams, and NDI only supports pull streams at present.

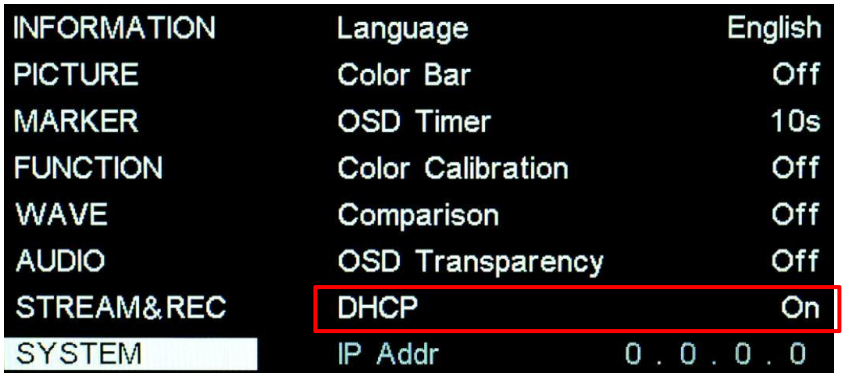
  - Prepare in Advance

- Monitor
- Network Cables
- Router
- Computer

- How to connect

Connect the monitor and computer to the same IP network segment, either static or dynamic environment, keep the network smooth, then enter the IP address of the monitor device in the computer's Internet browser to enter the login interface of the website.

The IP address acquisition method is shown in the figure below, when connecting to the router, the IP address is assigned by the router, and the IP address will be acquired automatically when <DHCP> is turned on.

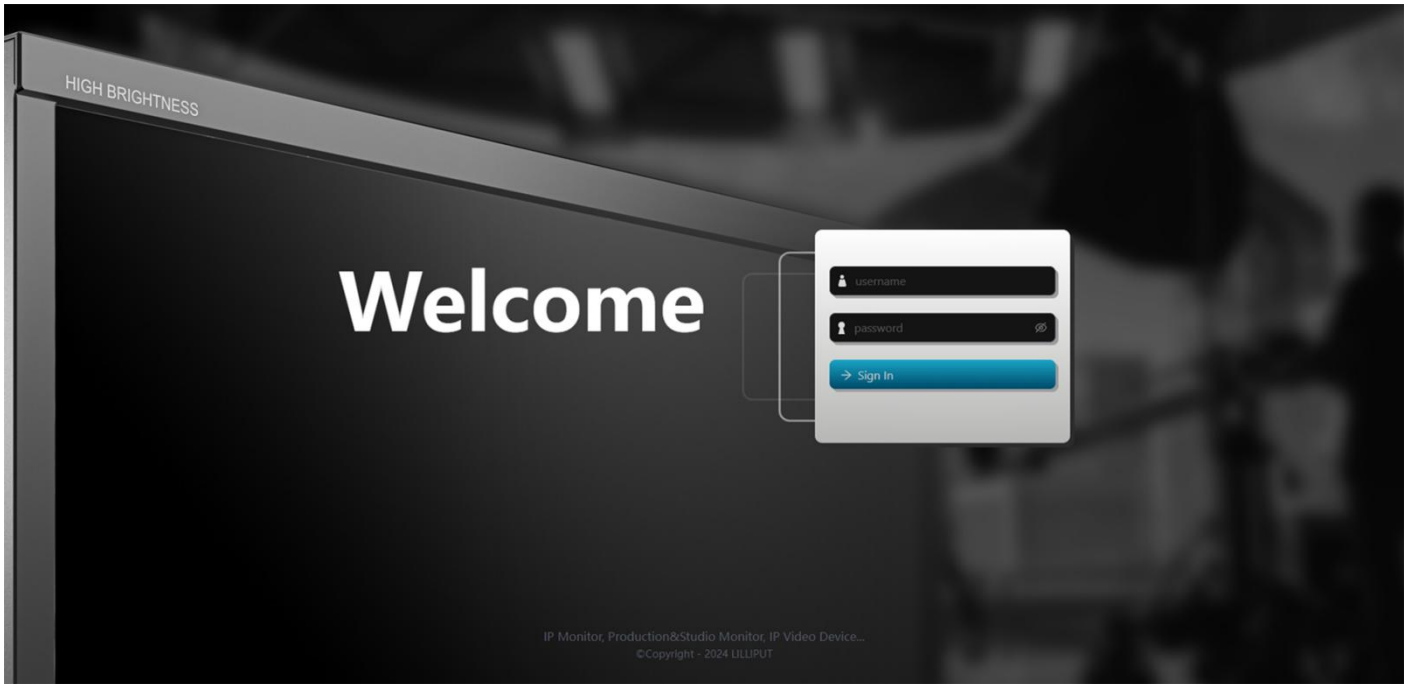


- Web Interface Introduction

1. Log in

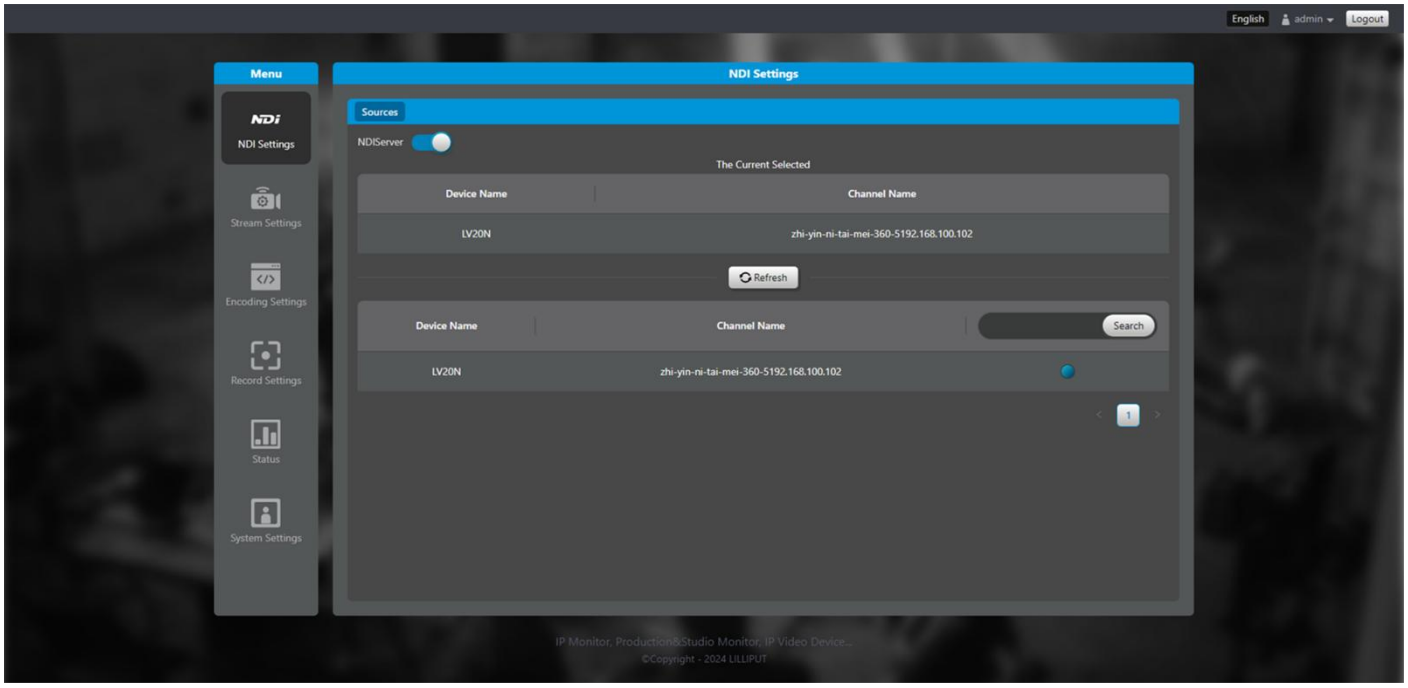
Initial login username: admin

Password: admin



2. NDI Settings (Only for optional NDI function)

The method to get the NDI video stream is shown below:

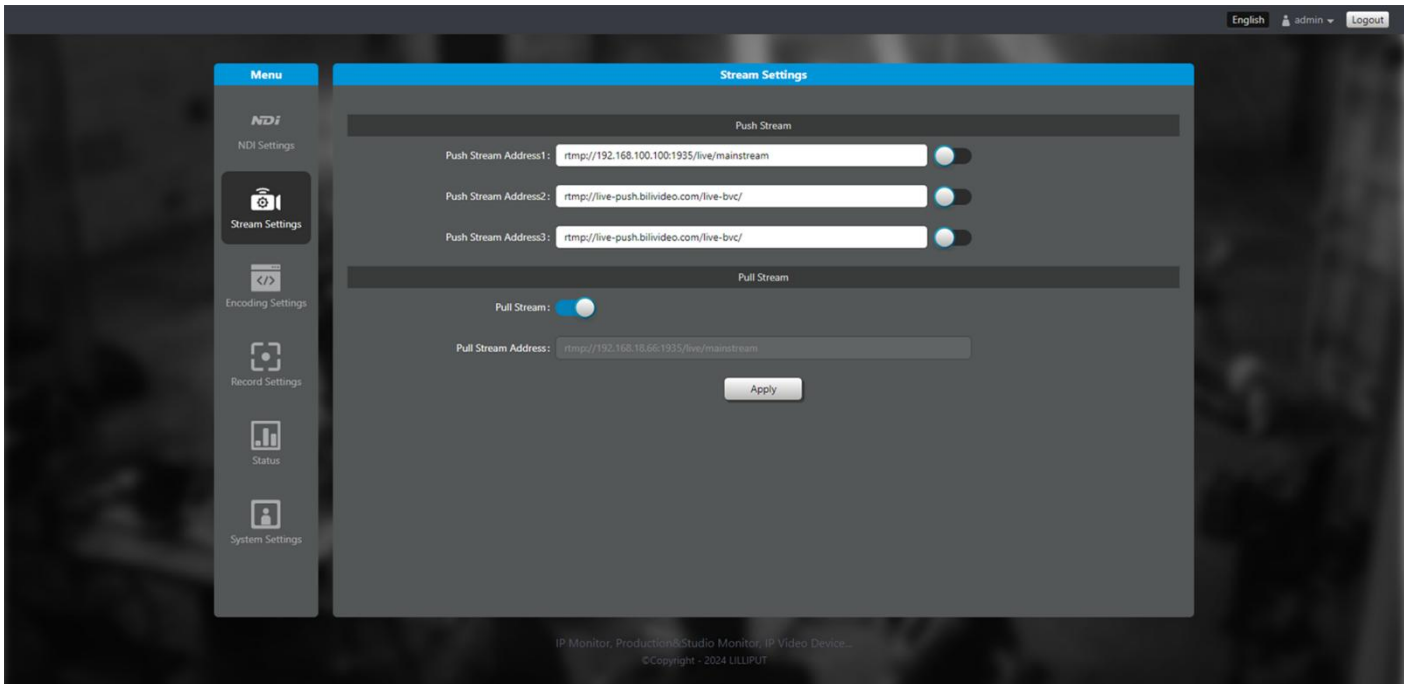


Turn on the "NDI Server" switch in the upper left corner (<NDI Server> and <Pull Stream> under < STREAM&REC> menu of the monitor device will also be turned on automatically). When the monitor gets the video streams from the connected devices, the web interface will automatically list the current video streams, when more than one video streams are acquired, the first one in the list will be selected by default (the list will be sorted by A-Z order), and the other video streams need to be selected manually. After pulling streams successfully, user can watch the video screen under the MEDIA source of the

monitor.

3. Streaming Settings

The interface of streaming settings is shown below:

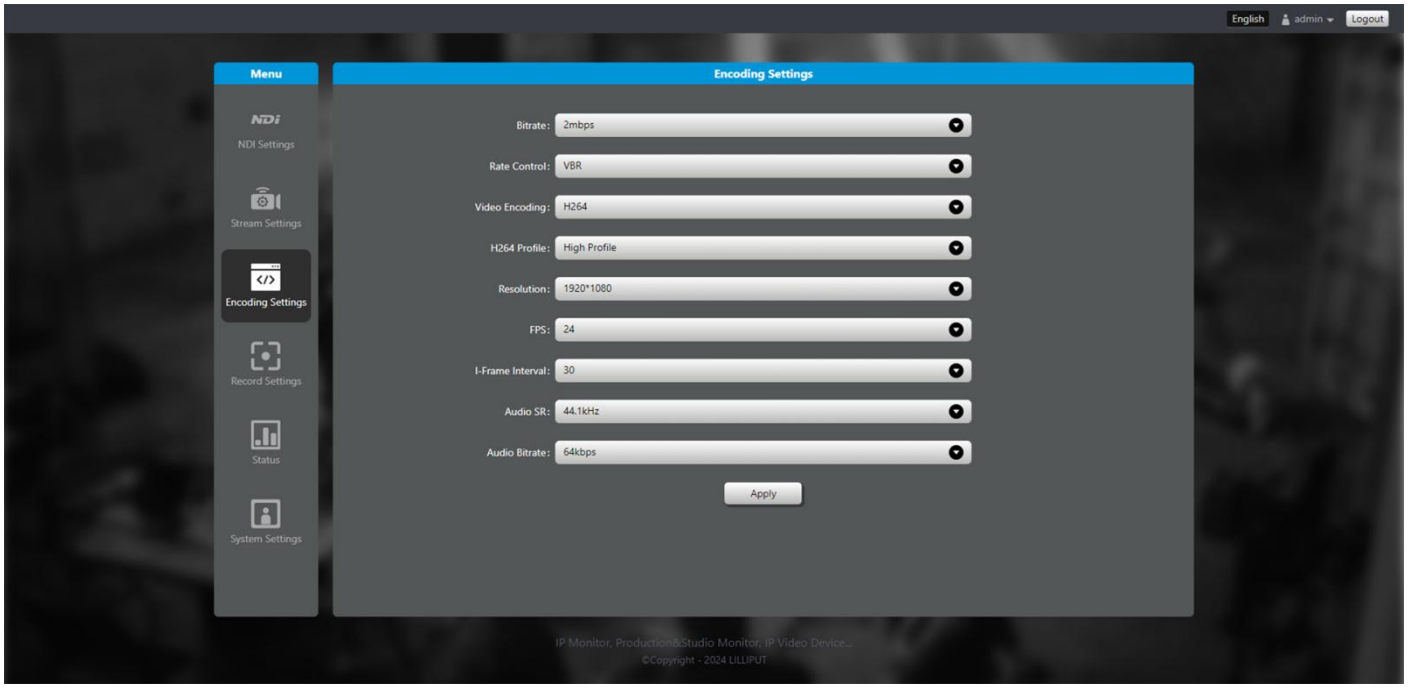


Push and pull stream link addresses can be entered directly in this interface, the switch after the address can be used to control whether the address is effective or not, after clicking "Apply", the monitor's push and pull stream addresses will be synchronised with the website, press the monitor EXIT button to check whether the imported address is correct.

4. Encoding Settings

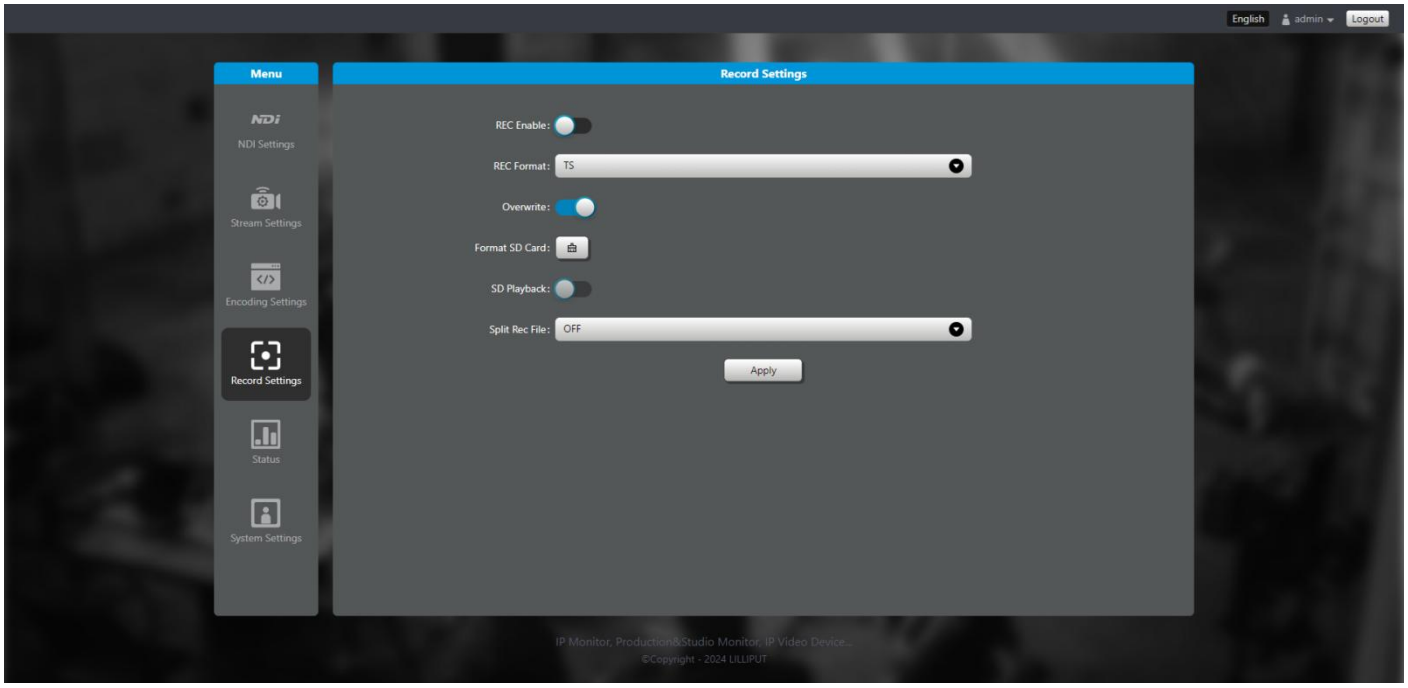
The interface of encoding settings is shown below:

This interface is used to configure the encoding format and audio format for push streaming and recorded video.



5. Recording Settings

The interface of recording settings is shown below:



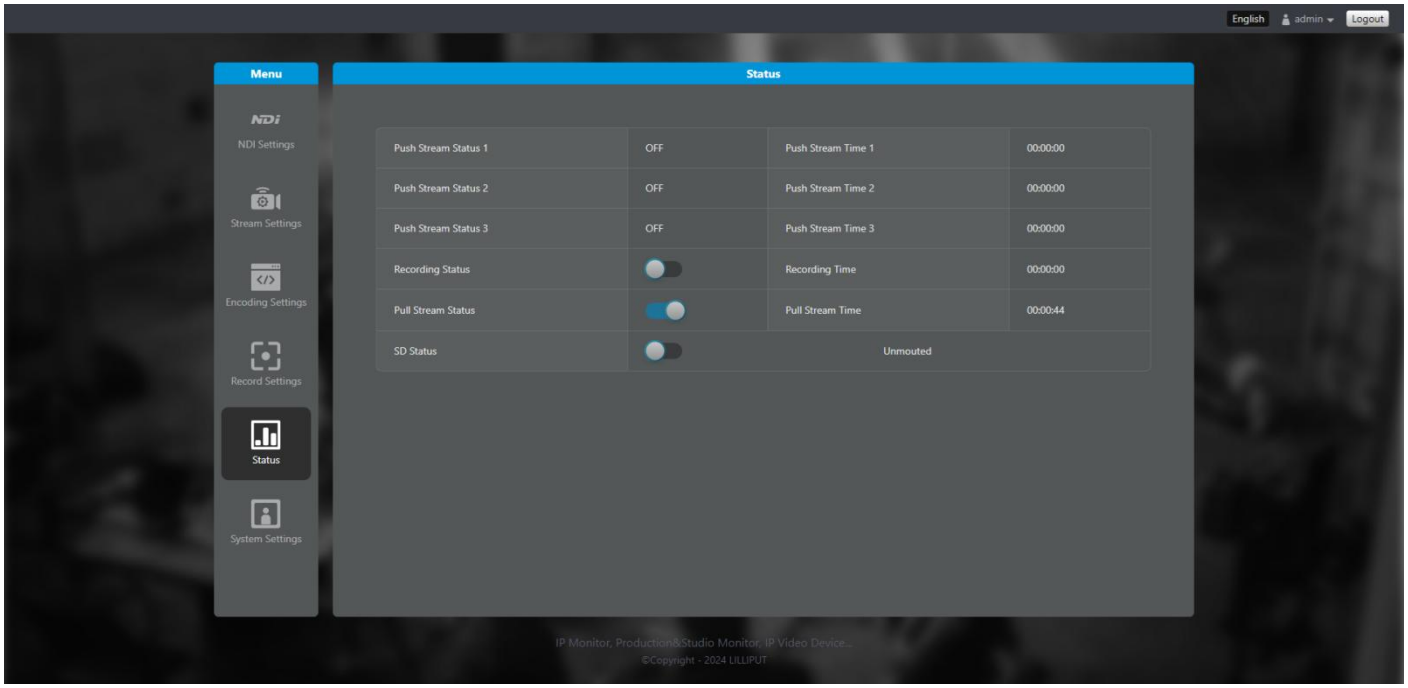
This interface is used to configure the settings of recording and playback.

Note: Please remember to turn off the pull stream function before playback the recording video in SD card.

6. Status

The interface of recording settings is shown below:

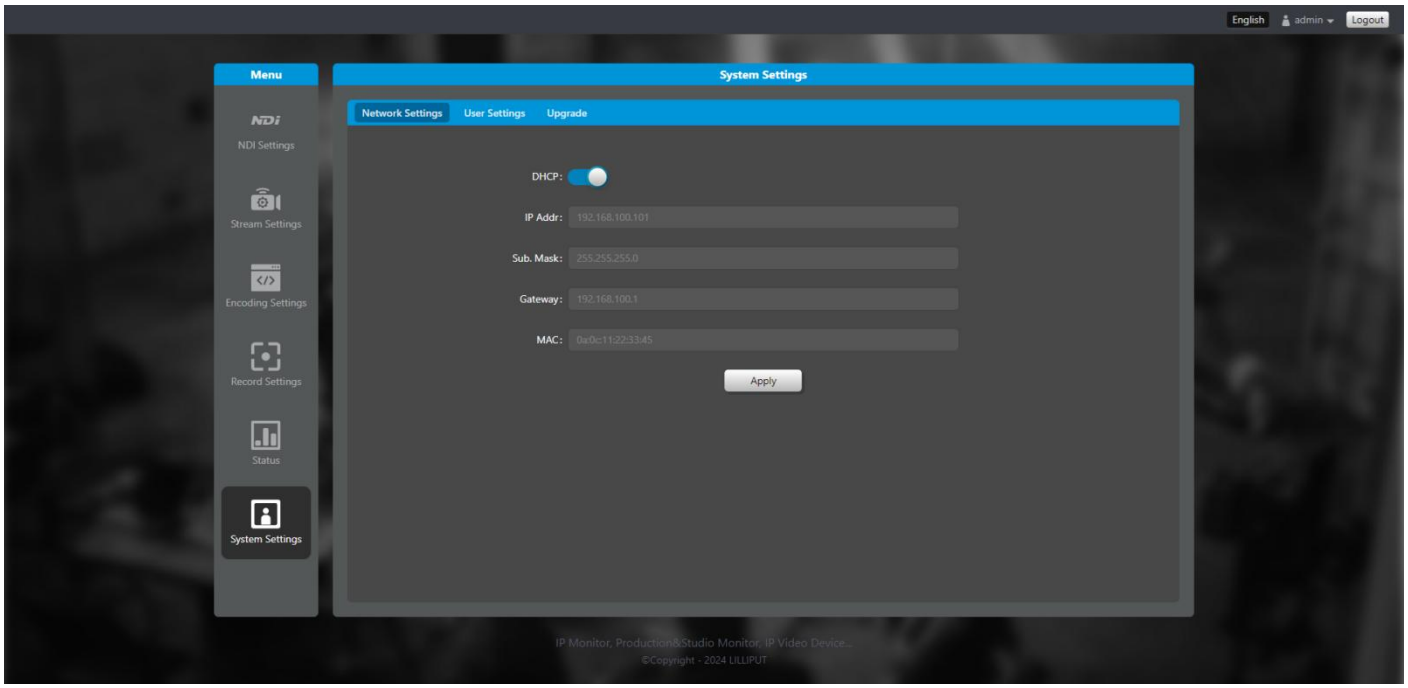
This interface is used to view information such as push and pull streams, recording status, and SD card storage capacity.



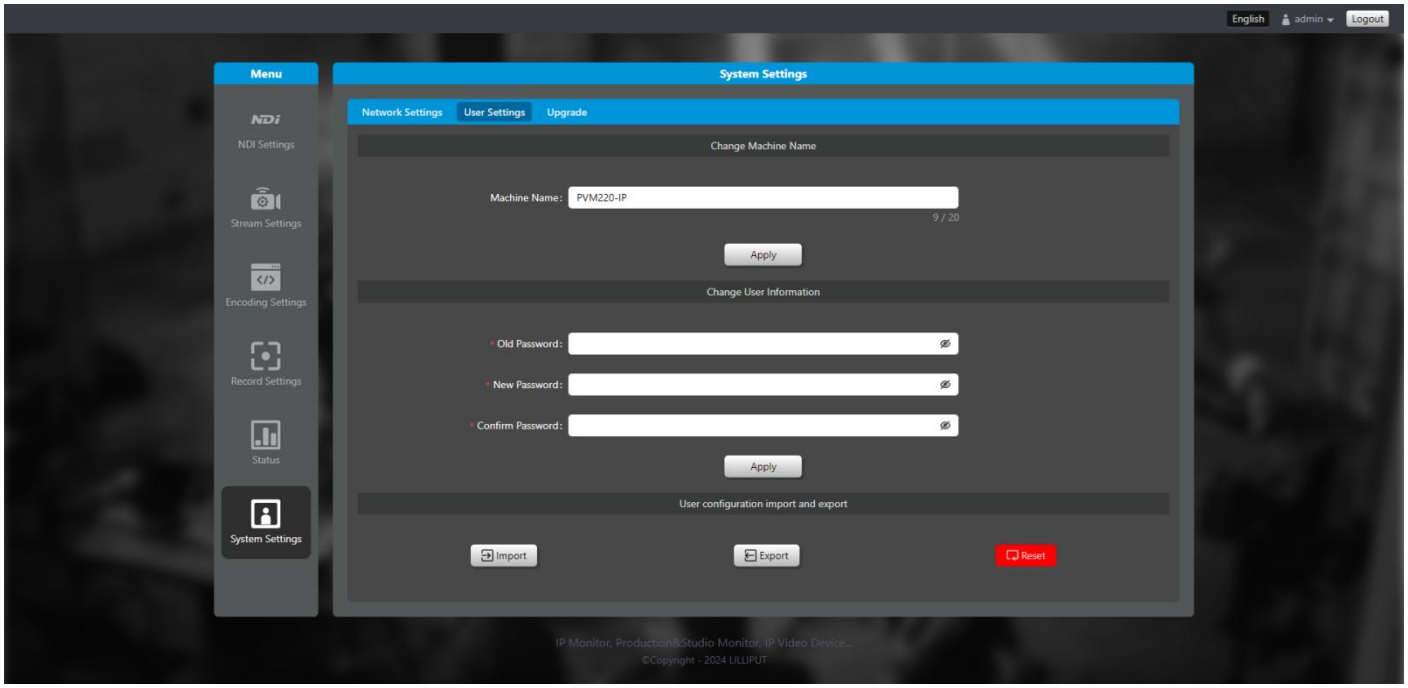
7. System Settings

The interface of system settings is shown below:

(1) Network Settings: Used to set a dynamic or static IP address.

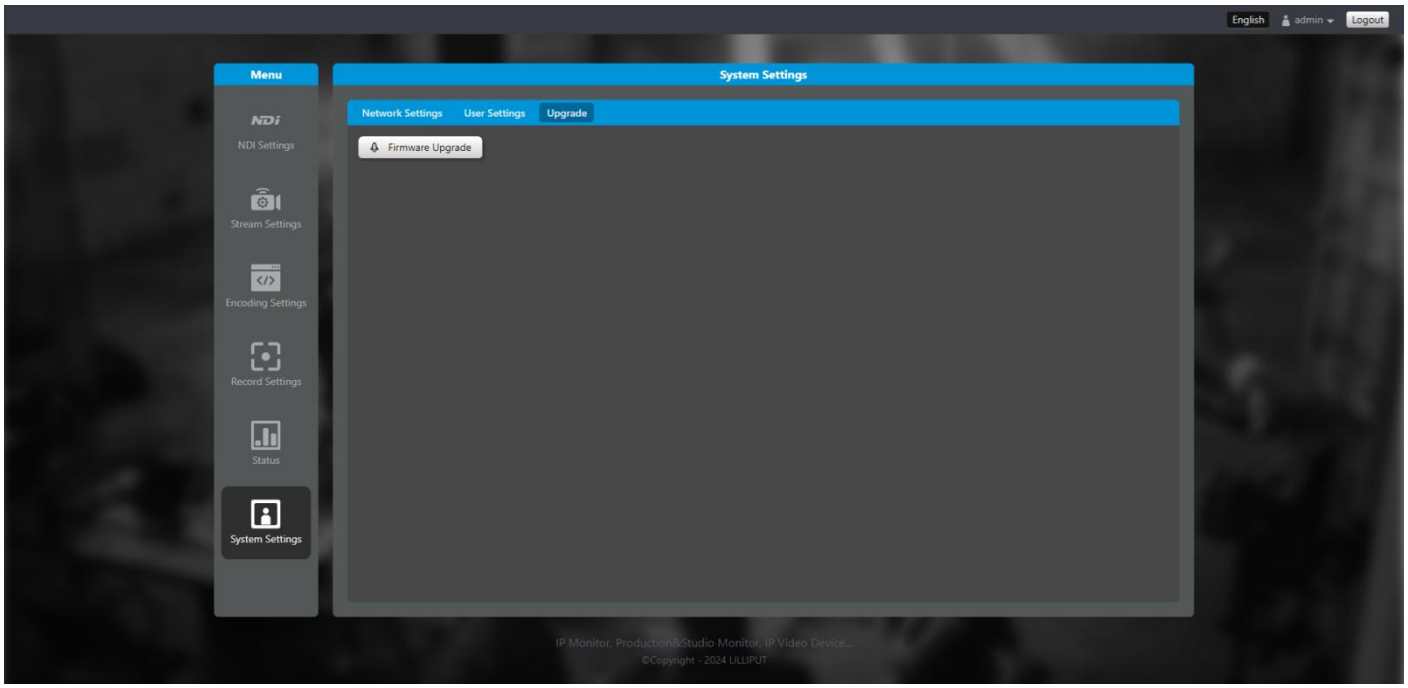


(2) User Settings: Used to set the monitor name, change the login password and other operations.



(3) Upgrade: Used for website upgrades.

Note: Please operate under the guidance of an engineer.



- Note

1. If the browser does not display the login screen properly, please update your browser to the latest version.

2. If the image is stuttering or static when NDI streaming, you can turn off <NDI Server> and <Pull Stream> and turn on again.

3. NDI streaming with H.265 encoding format is not supported.