

SWIT®

SWIT ELECTRONICS CO., LTD.

BM-NDI® 4K Studio LCD Monitor

Model: BM-215NDI, 245NDI



User Manual

Thank you for choosing SWIT products, please read this user manual seriously before using.

Ver:A

Statement

Any internal technology (including hardware equipment, software design and product trademark) of the product shall be protected by law, and any infringement of intellectual property rights of the product shall be investigated for legal liability.

All the brand and trademark in this product are protected by law, all other company's brand and trademark in this product are protected by their owner's law.

In order to better service majority users, SWIT products will keep improving and developing, SWIT keep the right to revise and improve this user manual without previous notice.

The warranty period of this product are two years, the following condition are not covered by the warranty:

- (1) The appearance and the LCD panel are damaged by man-made out force;
- (2) The amount of defective pixels are under three;
- (3) The product is damaged by using incompatible power adaptor;
- (4) The product is damaged by failure to use, maintain or storage according to the user manual.;
- (5) The product is disassembled by user in the process of using;
- (6) Other faults or damages not caused by design, technology, manufacture and quality.

*Any sales person have no right to provide extra warranty beyond these terms.

Please feel free to contact with us by phone, fax or email when you have any question or need any help in the process of using.

—— This user manual applies to all BM-NDI model monitor, all the illustration take BM-215-NDI for example, any difference of specification or appearance, this manual will be attached text explanation;

—— The function with mark " #" in this user manual have not been realized yet.

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Warning

1. Do not put the monitor in rainy or wet environment to avoid the dangerous of fire or electric shock;
2. Do not put the monitor close to any device with high-intensity magnetic.

Warning of power connection

1. Please using original power adaptor to avoid damage;
2. When using other DC power ,make sure the range of voltage,output power and polarity of it meet requirements;
3. Please cut off the power including AC power cable or battery under below conditions:
 - (A) \ If the monitor will not be used for a long time.
 - (B) \ If the power cable or power socket is damaged.。
 - (C) \ If the housing of the monitor is broken by out-force or falling.

Warning of using

1. Do not touch the surface of screen directly to avoid damage,also the fingerprint on the screen will be hard to clean.
2. Do not put pressure on the LCD screen because LCD screen is fragile;
3. Do not put the monitor on anywhere unstable to avoid falling.

Maintenance and cleaning

1. Use soft dry cloth and LCD screen clean liquid to clean the dust and stain on the screen.
2. Do not put pressure on LCD screen when doing cleaning.
3. Do not clean the LCD screen by water or other chemical liquid to avoid damage.

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Packing list

No.	Standard accessories	Quantities
1	Monitor	x 1
2	Battery plate (V-mount or Gold-mount)	x 1
3	Monitor stand	x 2
4	Power cable	x 1

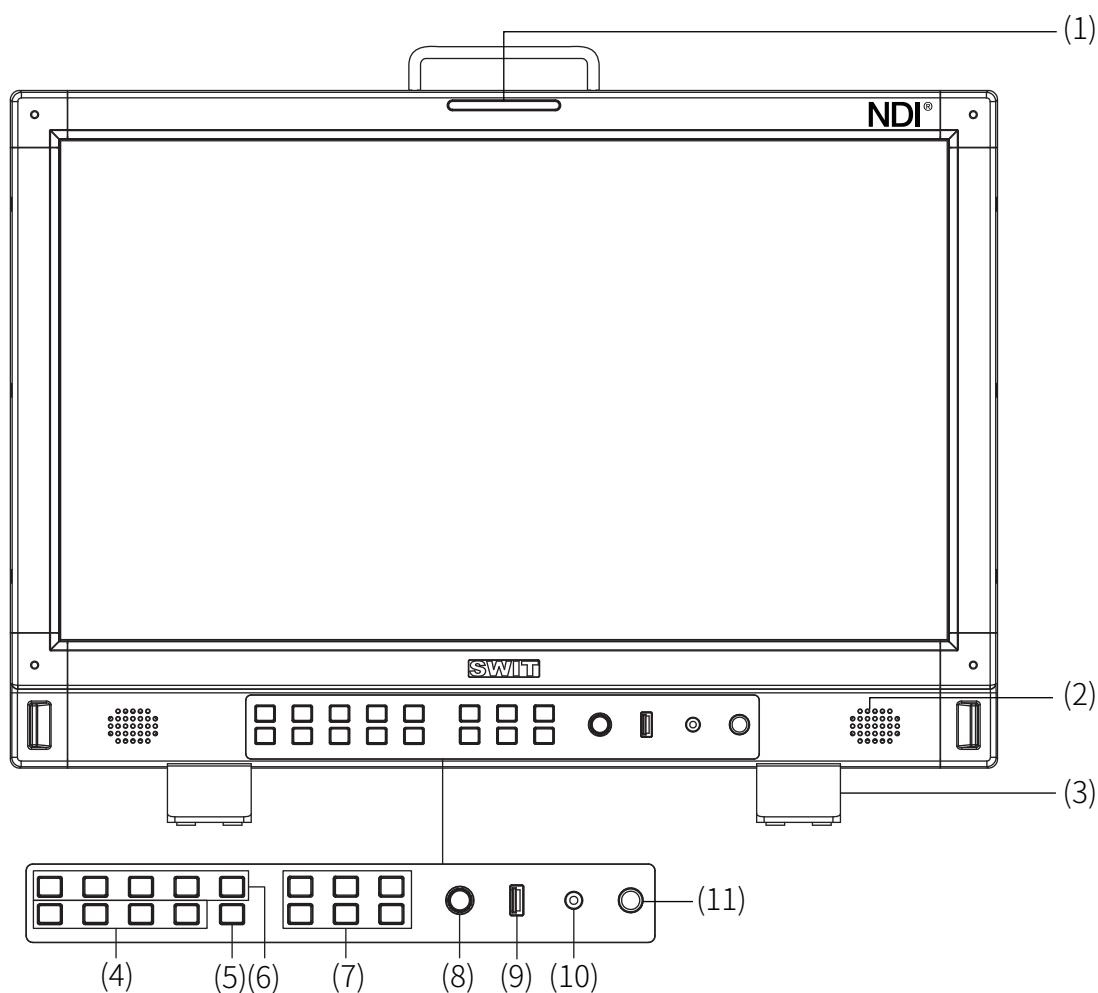
Overview

The resolution of BM-NDI series LCD monitor is up to 1920*1080, H178°/ V178° super wide angle of view, support 2* 3G/HD/SD-SDI input、1* HDMI 2.0 input and 1* NDI input, 1* 3G/HD/SD-SDI loop out、1* NDI to SDI loop out, 1* 3.5mm jack input and speaker.

Features:

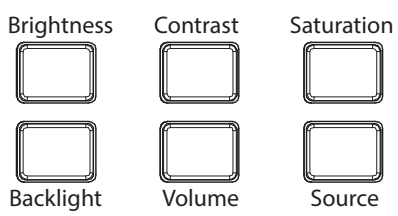
- 1920×1080 HD resolution;
- Support NDI signal input、multi signal source input;
- Support 16 channel embedded audio bar,any of two channel can be chosen to output;
- Waveform Y/Cb/Cr/R/G/B/RGB, support single line waveform;
- Support vector scope、R/G/B/Y histogram、red/blue focus assist;
- Support 3DLUT (17x17x17) Auto self-calibration;
- Support TSL UMD and text TALLY (TSL 3.1/4.0) ;
- Safety Marker:4:3/13:9/14:9/15:9/16:9/1.85:1/2.35:1/2.39:1/2:1/User 1/User 2;
- Support USB firmware update and LOG file uploading (The format of USB driver should be FAT 32) ;
- Support Green mode.

• Front panel view



- (1) Tally light: Can be set to red, green and yellow;
- (2) Speaker: Can play embedded audio of HDMI, SDI and NDI. (Speaker will not work when earphone is connecting) ;
- (3) Desktop stand feet ;
- (4) User1~User4: In order to quickly enter in the mode which was preset already .Hold the shortcut button to save current user setting. Specific please see “The menu content-VIII. System” ;
- (5) INFO: Press ”INFO” to remove or recover all current function in display like status information and A/V analyzed pattern; Press “INFO” to exit menu when the menu is on;
- (6) F1~F5 Function key: User can set these function key to different function according to their requirement;

(7)

 <p>Brightness Contrast Saturation Backlight Volume Source</p>	Brightness: Brightness control, Range: -100~100, Default value: 0
	Contrast: Contrast control, Range: -100~100, Default value: 0
	Saturation: Saturation control, Range: -100~100, Default value: 0
	Backlight: Backlight control, Range: 0~100, Default value: 16
	Volume: Volume control, Range: 0~100, Default value: 36 Source: Input signal source selection
<p>Press “Brightness”、“Contrast”、“Saturation、Backlight”、“Volume” on the front panel to choose corresponding functions, turn “MENU” knob left and right to control the corresponding value. If no operation is performed within 5 seconds, the selection will automatically be cancelled, the button light will turn off; long press to recover to default value; long press the “VOLUME” button to enter in mute mode.</p>	
<p>“NDI Source” and “NDI setting” in the menu is to choose the input source under NDI channel, here are the details:</p> <ol style="list-style-type: none">1. NDI Source: Detect and show all NDI device and all NDI signal name of NDI device in the same network, turn “MENU & ENTER” to change different signal source.2. NDI Setting: Set the IP address of secondary network device of monitor to be able to detect secondary device and the signal source.	

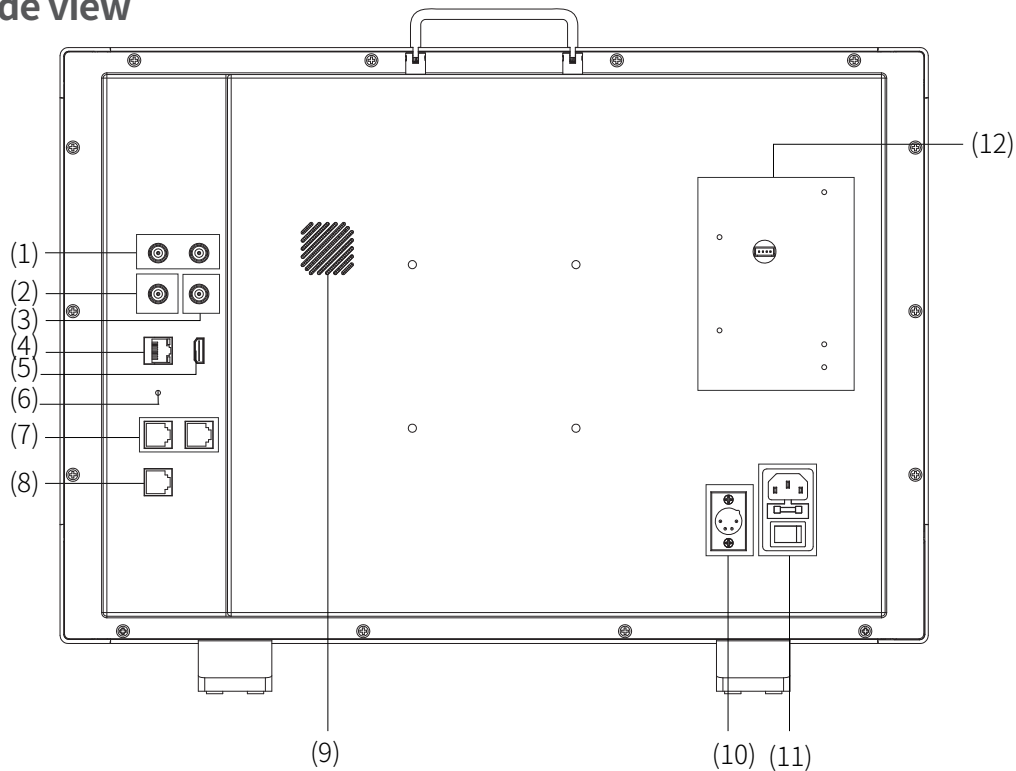
(8) Menu/Enter: When menu is off, press the button directly to open the Main Menu; rotate “MENU” to choose different setting selection or adjust the value; press the knob to confirm the setting;

(9) LUT/Firmware: Firmware update or LUT file upload;

(10) PHONE: 3.5mm jack input, monitor embedded SDI and HDMI audio signal;

(11) Power: power switch.

• Back side view



(1) SDI IN1/2: 3G-SDI

(2) NDI-SDI loop out: 3G-SDI

(3) SDI loop out: 3G-SDI

(4) NDI IN: 12G /3G-SDI

(5) HDMI 2.0 IN: The DHCP protected content is not displayed

(6) Reset: Formatting button

Instruction (Do not do this without SWIT permission) :

1. Switch off monitor;

2. Touch and keep pressing the small button with suitable tool

(Do not release it when switch on monitor) ;

3. Switch on monitor with “POWER” button, Tally light will show red light

(release the reset button after tally light shows red light) ;

4. Wait for 5~10s, Tally light shows green;

5. Reboot monitor to finish resetting.

(7) RS485 #: TSL UMD control port

(8) GPI #: GPI control port

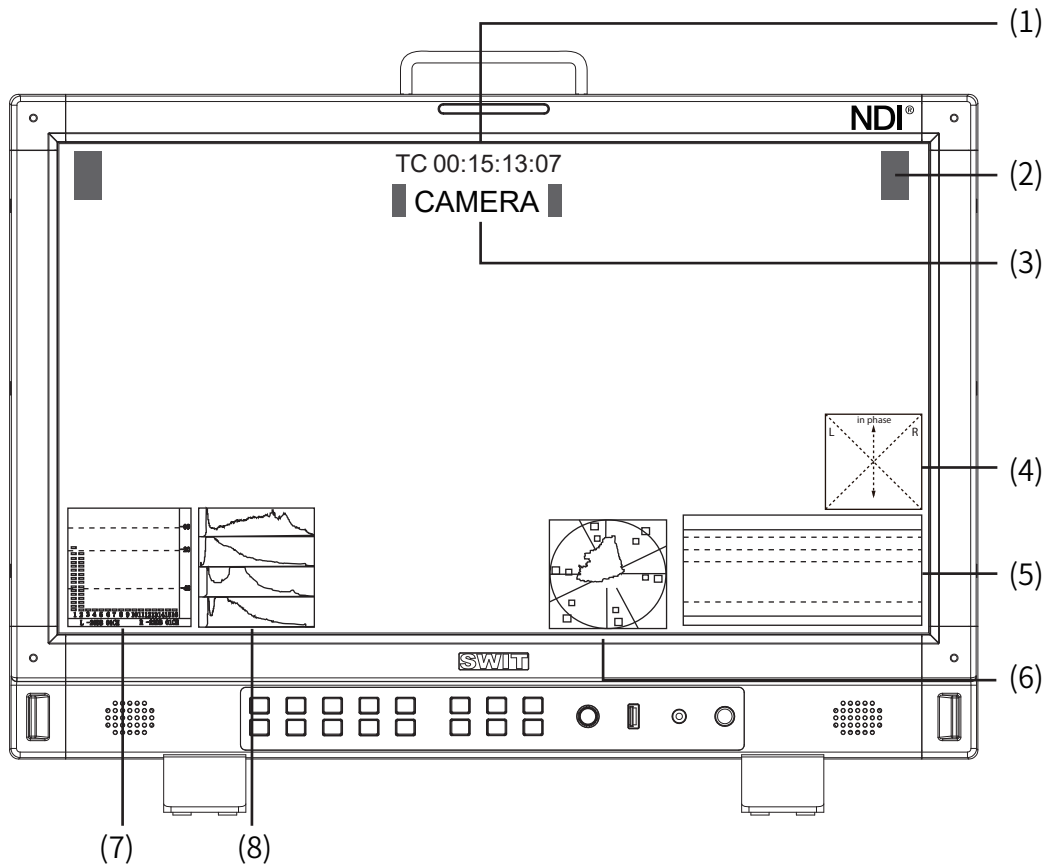
(9) Fan

(10) DC IN: 12V~17V

(11) AC IN: 100V~240V

(12) Battery plate: Support V-mount battery or Gold-mount battery

• OSD



(1) Time code (SDI)

Display the information of time code which is embedded in SDI signal (LTC, VITC1&2) , monitor will show “TC:UNLOCKED” if no time code information is detected. User can set shortcut key (F1~F5) or GPI pin to “time code” function, in order to quickly switch on/off this function.

(2) On screen TALLY

The tally signal is controlled by GPI.

(3) Source ID/UMD

Display/UMD (TSL3.1/4.0) , user can set in the UMD menu.

(4) Lissajous pattern

Lissajous pattern will show audio signal, user can set shortcut key (F1~F5) or GPI pin to “Lissajous pattern” function, in order to quickly switch on/off this function.

(5) Waveform

User can switch on/off “Waveform” function or choose different type of waveform by setting shortcut key (F1~F5) or GPI pin to “Waveform” function on the front panel. The parameters such as on-screen-position, transparency and color of “waveform” can be set in MENU.

(6) Vector scope

User can switch on/off “Vector scope” function by setting shortcut key (F1~F5) or GPI pin to “Vector scope” on the front panel. The parameters such as on-screen-position, transparency and color of “Vector scope” can be set in MENU.

(7) Audio meter

In order to monitor audio signal, User can switch on/off “Audio meter” function by setting shortcut key (F1~F5) or GPI pin to “Audio meter” function on the front panel. The parameters such as on-screen-position, transparency and numbers of audio channel of “Audio meter” can

be set in MENU.

(8) Histogram

User can switch on/off “Histogram” function by setting shortcut key(F1~F5) or GPI pin to “Histogram” function on the front panel.

Status

Main Menu		Status		
Exit&Status	>	Format	XX	(1)
Input	>	Channel	XX	(2)
Picture	>	Color Temp	XX	(3)
Color Management	>	F1	XXX	(4)
Scanning	>	F2	XXX	
Control	>	F3	XXX	
Assist	>	F4	XXX	
De-embed	>	F5	XXX	
Auto Calibration	>	Loaded Profile	XX	(5)
NDI Source	>	Network	XX	(6)
NDI Settings	>	Version	XX	(7)
Multiview Setting	>	Host Name	XX	(8)

Press “Menu/Enter”, the menu will show in the top left corner of screen, “Exit & status” will show current working status of monitor.

(1) Format

Show current input signal format; Will show “NO SIGNAL” when there is no recognizable input signal”. Will show the format of current SDI source when the input source is SDI.

(2) Channel

Show current chosen input source.

(3) Color temp

Show current color temperature.

(4) Function Key F1~F5

Show the function of Key F1~F5.

(5) Loaded Profile

Show current user mode.

(6) Network

Show the connection status of Internet.

(7) Version

Show version of current firmware .

(8) Host name

Show the model of this monitor.

Operation

Steps

1. Press “Menu/Enter” knob, the menu will show on top left corner of screen.
2. Turn “Menu/Enter” left and right to choose different sub-menu, the chosen one will show yellow backlight, press “Menu/Enter” knob to set the corresponding parameter.
3. Turn “Menu/Enter” knob left and right to set corresponding parameter, press “Menu/Enter” knob, the chosen one will show yellow backlight.
4. Turn “Menu/Enter” knob left and right to set corresponding parameter, press “Menu/Enter” knob to save the setting after finish adjustment.
5. Turn “Menu/Enter” knob to choose “EXIT”, press “Menu/Enter” knob, exit the sub menu, choose “EXIT & STATUS” in the main menu, press “Menu/Enter” knob to exit main menu.

Attention

- * The options which shown grey can not be set.
- * The menu will save and exit automatically when no operation is performed within a period of time.

The menu content

“The menu content” will introduce the specific contents of setting in menu and sub-menu, the menu option which is noted with “*” will be explained in detail under the list.

I、Input—Set the color of input video

Menu option	Instruction	The range of value
Input range *1	Set the input range of video	0-1023,4-1019,64-940, 64-1023
YUV Color Matrix	Choose YUV Color Matrix	Auto, BT.601, BT.709, BT.2020
Red Gain	Adjust the value of Red Gain	-100 ~ +100
Green Gain	Adjust the value of Green Gain	-100 ~ +100
Blue Gain	Adjust the value of Blue Gain	-100 ~ +100
Red Bias	Adjust the value of Red Bias	-100 ~ +100
Green Bias	Adjust the value of Green Bias	-100 ~ +100
Blue Bias	Adjust the value of Blue Bias	-100 ~ +100
Reset	Reset the value of Gain and Bias	/

*1 Input range

Set the input range to compatible with input video signal, the default input range is 64-940 which is compatible with broadcast application program.

II、Picture *1—Set the display of input video

Menu option	Instruction	The range of value
Contrast	Adjust the contrast of video	-100 ~ +100
Brightness	Adjust the brightness of video	-100 ~ +100
Saturation	Adjust the saturation of video	-100 ~ +100
Sharpness	Adjust the sharpness of video	0 ~ +100
Backlight	Adjust the backlight of video	0 ~ +100

*1 Picture

The value of “Contrast”, “Brightness”, “Saturation”, “Sharpness” and “Backlight” can be quickly adjusted by the shortcut key on the front panel.

III、Color management—Set the color of input video

Menu option		Instruction	The range of value
Color Gamut *1		Set the Color Gamut	LCD Panel, DCI-P3, Rec.709, Rec.2020
Gamma		Set the value of Gamma	1.0, 1.8, 2.2, 2.4, 2.6, PQ1000, HLG1000, S-Log3
These option will only show under the value of specific Color Gamut and Gamma	HLG System Gamma *2	Set HLG System Gamma	1.0,1.1,1.2 (default) ,1.3,1.4,1.5
	D-Log to 709 *3	Set the camera LUT when Color Gamut is Rec 709.	OFF, J-Log1, Log-C, S-Log2, C-Log, V-Log, RedLogFilm, S-Log3, User-Log
	D-Log to PQ	Set the camera LUT when Color Gamut is Rec.2020, Gamma is PQ1000	OFF,ARRI_LogC_PQ,Canon_CLog2Cin_PQ Canon_CLog3Cin_PQ, Panasonic_VLog_PQ, RED_L3G10_PQ, Sony_SLog3_Cin_PQ, Sony_SLog3_SG3_PQ
	D-Log to HLG	Set the camera LUT when Color Gamut is Rec.2020, Gamma is HLG1000	OFF,ARRI_LogC_HLG,Canon_CLog2Cin_HLG Canon_CLog3Cin_HLG, Panasonic_VLog_HLG, RED_L3G10_HLG, Sony_SLog3_Cin_HLG, Sony_SLog3_SG3_HLG
Color temp		Set the value of color temperature	2000K~10000K, D55,D65,D75,D93,USER1,USER2
Color temp(USER)		Set the value of color temperature (USER)	2000K~10000K, D55, D65, D75, D93
Red Gain		Adjust the value of Red Gain(USER)	-100 ~ +100
Green Gain		Adjust the value of Green Gain(USER)	-100 ~ +100
Blue Gain		Adjust the value of Blue Gain(USER)	-100 ~ +100
Red Bias		Adjust the value of Red Bias(USER)	-100 ~ +100
Green Bias		Adjust the value of Green Bias(USER)	-100 ~ +100
Blue Bias		Adjust the value of Blue Bias(USER)	-100 ~ +100
Import*4		Choose the cube file which need to be imported	None, 3DLut.cube

*1 Color Gamut

Set the Color Gamut to match with input video.

*2 HLG System Gamma

Only adjustable when Gamma is HLG1000

*3 D-Log to 709: Only adjustable when Color Gamut is Rec.709 and Gamma is between 1.0, 1.8, 2.2, 2.4, 2.6

*4 Import

Put the cube file in the root of USB driver, connect USB driver with the monitor via USB interface on the front panel, choose and import corresponding file in the menu.

IV、Control

Menu option	Instruction	Selection
F1*1	Set the function of shortcut key	Time Code, Color Temp,Waveform, Waveform type,Single line waveform, Marker,Blue only,Audio Bar,Zebra,Vector, Histogram,Odd/Even Frame,Lissajous pattern,Focus assist,False color ,H/V delay
F2		
F3		
F4		
F5		

*1F1~F5

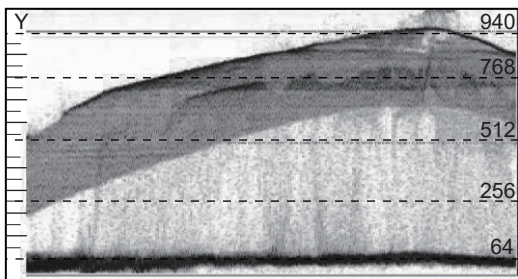
Now only support “Waveform,Vector,Audio Bar,Blue only,Marker”.

V、Assist

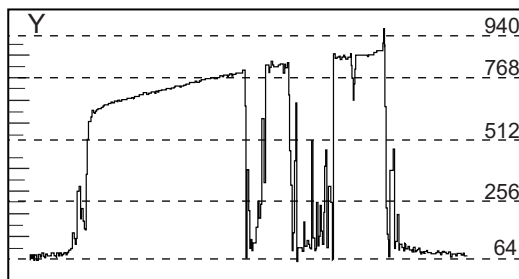
Menu option	Instruction	Selection
False color	Switch on/off false color function	OFF,ON
Blue only	Switch on/off Blue only function	OFF,ON
Focus assist	Switch on/off Focus assist function and choose the color of it.	OFF,Blue,Red
Zebra	Switch on/off Zebra function	OFF,ON
Waveform Setting	Waveform	Switch on/off waveform function
	WFM Type	Set the type of Waveform
	WFM Position	Set the display position of Waveform pattern
	WFM Blending	Set the transparency of the background of Waveform pattern
	WFM Color	Set the color of the Waveform
	WFM Single Line*1	Switch on/off Single line Waveform function
	WFM Line Count	Adjust to show Waveform of specific lines
Vector Setting	Vector	Switch on/off Vector function
	CIE	Switch on/off color gamut pattern
	Vector Position	Set the display position of Vector pattern.
	Vector Blending	Set the transparency of the background of Vector pattern .
	Vector color	Set the color of Vector pattern
Histogram setting	Histogram	Switch on/off Histogram pattern
	Histogram Blending	Set the transparency of the background of Histogram pattern .
Marker setting	Marker	Switch on/off Marker function
	Marker Select	Set the ratio of Marker
	Horizontal*2	Set the X value of Marker function
	Vertical	Set the Y value of Marker function
	Safety area	Set the ratio of Safety area
	Fit Marker	Switch on/off Fit Marker function
	Center Marker	Switch on/off Center Marker function
	Marker Color	Set the color of Marker
	Marker Type	Set the type of Marker
Marker Outside	Switch on/off Marker Outside function and change the color.	

***1 WFM Single line**

Switch on “WFM Single line” function, Monitor only show one line waveform of video. Turn “Menu/Enter” knob left and right to choose the number of waveform lines. (The selected range of waveform lines depends on the current signal format.)



WFM Single Line: OFF



WFM Single Line: ON

***2 Horizontal/Vertical**

When the “Marker Select” is “USER 1” or “USER 2”, User can adjust X value and Y value of Marker according to their requirement, the value is adjustable between 50%~99% (0~1920 and 0~1080).

VI、De-embed

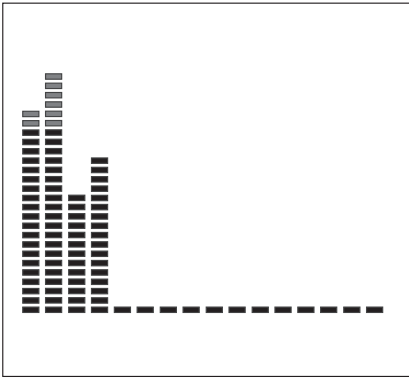
Menu option	Instruction	Selection
Lissajous	Switch on/off Lissajous pattern	OFF,ON
Lissajous Position	Set the display position of Lissajous Pattern	Bottom left, Bottom right, Top left, Top right
Audio Bar	Switch on/off Audio Bar function	OFF,ON
Bar Position	Set the display position of Audio Bar	Bottom left, Bottom right, Top left, Top right
Bar blending	Set the transparency of the background of Audio Bar .	OFF,LOW,HIGH
Bar type*1	Set the type of Audio Bar	Type 1, Type 2
Left Channel	Select left input audio channel	Channel 1~16
Right Channel	Select Right input audio channel	Channel 1~16
Volume	Adjust the volume of audio signal	0~100
H/V delay*2	Switch on/off H/V delay function	ON,OFF

***1 Bar type: Audio bar show 16 channel**

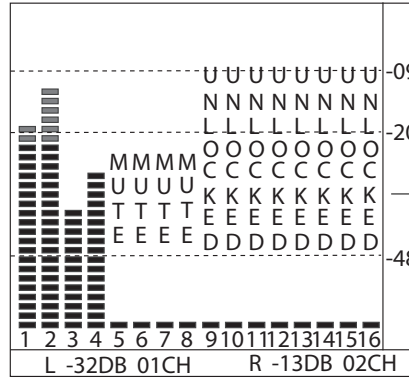
Type 1: Audio bar only

Type 2: Show db value of audio signal, audio warning signal and right/left channel information

Type 1



Type 2



Audio alarm information

Left Channel:1 Green

Right Channel:2 Red

*2. H/V Delay

H/V Delay is not displayed on HDMI channel.

VII. Auto Calibration*1

Menu option	Instruction	Selection
Probe Select*2	Select the calibrator	X-rite I1 Pro OEM, Jeti Specbos 1211
Start Calibration*3	Start to calibrate or not	NO/YES
Measurement*4	Test current color	NO/YES

*1 Auto Calibration

Monitor internally installed 3DLUT Calibrate software, support to directly connect with below calibrator via USB interface on the front panel.

When start to calibrate, calibrate probe will read the standard color created by monitor and upload the result to monitor via USB interface.

Monitor will compare the color which created by calibrate probe with standard color and create a 3D LUT file and finish calibrating automatically.

*2 Probe Select

This monitor support below kinds of calibrate probe:

BRAND	MODE
X-rite	I1 Pro OEM
JETI	Specbos 1211

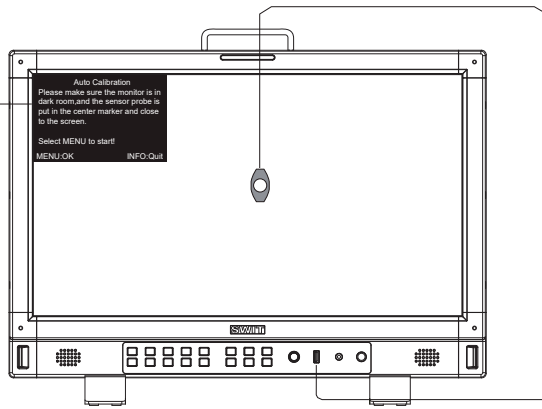
*3 Start Calibration

Steps:

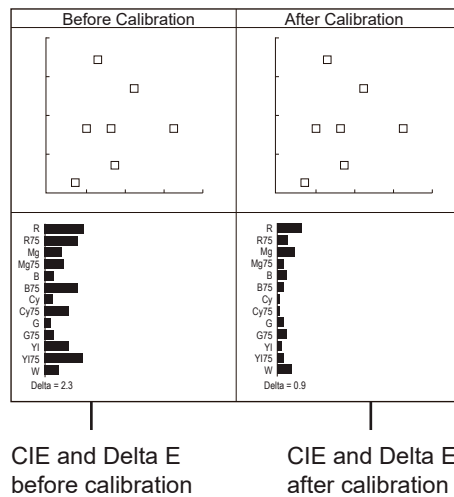
1. Switch on monitor.
2. Connect Calibrator with monitor via USB interface on the front panel (Compatible with X-rite and JETI). Make sure monitor and calibrator is in good condition and the aging time of monitor is over 30 minutes.
3. Select "MENU" - "AUTO CALIBRATION" - "Probe Select" to select current calibrate probe.
4. Select "Start Calibration" - "YES" to start calibrating. Monitor will show info box and calibrate position hint box, make sure the lens of calibrator is forward to the calibrate position hint box. Do not push the LCD screen when setting the calibrator.

Auto Calibration
Please make sure the monitor is in dark room, and the sensor probe is put in the center marker and close to the screen.
Select MENU to start!
MENU:OK INFO:Quit

Auto Calibration
Progress 23%
Please wait...
Select INFO to Cancel!
INFO: Quit



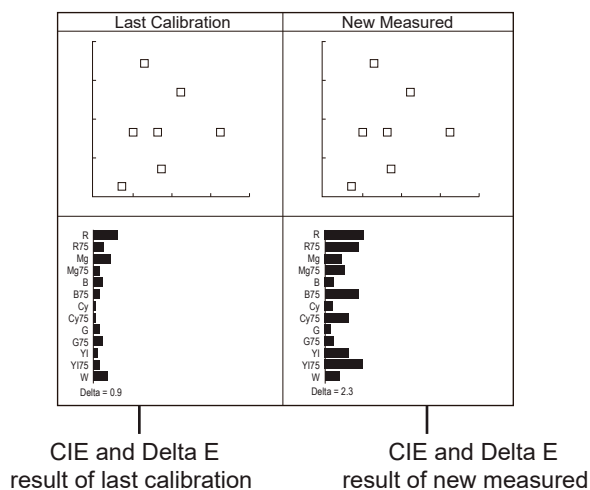
5. Select "OK" to do auto-calibratio. Calibrator will measure the color of screen and calibrate the screen automatically, please pay attention to the progress bar.
6. Press "INFO" to stop calibration. When the progress bar reach to 100%, auto calibration finished. Press "INFO" to exit menu after auto-calibration, monitor will recover to normal.
7. The screen will show the Delta value before and after calibration, shown as below:



*4 Measurement

Monitor have calibrated in factory already but also need to re-calibrate after a period of time using. Before re-calibrating, "Measurement" function will show Delta value of last time calibration, user can decide to calibrate or not from comparing the Delta value.

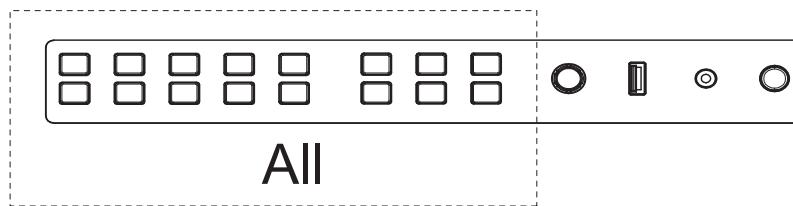
Connect calibrate probe with monitor and put it on the right position, Select "Auto Calibration" - "Measurement", Monitor will create part of color and finish testing within 30 seconds. Testing result shown as below:



VIII. System

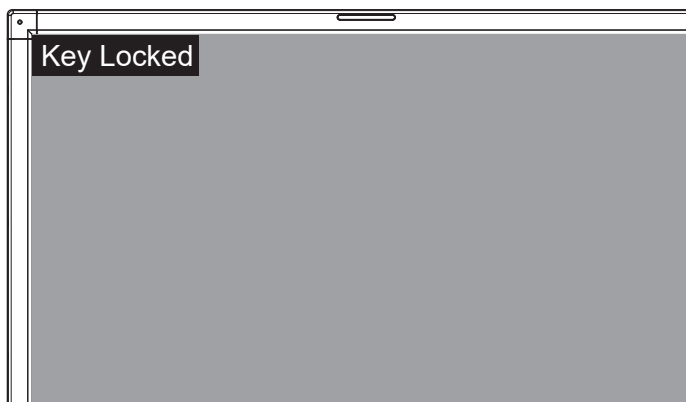
Menu option	Instruction	Selection
Key Lock *1	Set key lock function	OFF,Lock All,Lock Rotary Knobs, Lock Key Buttons
Recall Profile *2	Select current Mode	Factory, USER1~USER4
Save Profile	Save current setting to one of USER setting	USER1~USER4
Green Mode	Set the display mode of Green Mode	Black Bcklight,Grey Backlight
Idle Duration	Set the stand-by time before switch on Green Mode	30s, 1hour, 2hour, 4hour, OFF
DHCP*3	Switch on/off DHCP Mode	ON,OFF
IP *4	Show current network information of monitor	192.168.001.200
Net mask		255.255.255.000
Gateway		192.168.001.001
OSD TIME	Set the lasting time of OSD	5~180s
Language	Select the operation language of monitor	中文(Chinese), English
System Reset	Reset all setting in the menu	NO/YES
Update *5	To do update for monitor	NO/YES

*1.Key Lock



When “Key Lock” function is “ON”, part of menu will be hidden,only “Menu” button is available, other button will be locked.

Screen will show “Key Locked” when the locking button is pressed,shown as below:



*2 Recall Profile/Save Profile

Monitor supply 4 User setting, User can save current setting according to demand and habit to (USER1~USER4). After that, user only need to select “USER1~USER4” to show corresponding menu setting.

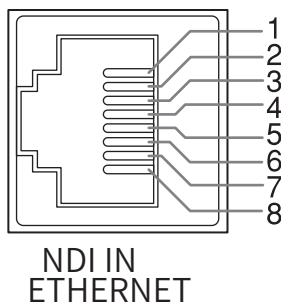
For example: Adjust “Color Temp” to 2200K, switch on assist function such as “Histogram”, set function key such as F1 to “Only Blue”, now save all these setting to “USER 1”, turn “Menu/Enter” to select “Recall Profile” - “USER 1”, monitor will change all setting to the setting which saved in “USER 1”.

*3 DHCP

The IP address will be assigned by router or switch automatically when “DHCP” function is “ON”; User can set IP/Net mask/Gateway manually to match their own Network segment when “DHCP” function is “OFF” in order to detect the NDI signal source in system.

*4 IP

Connect monitor to the LAN with NDI IN/ETHERNET port in order to control monitor by website.



Pin No	Pin Name
1	TX+
2	TX-
3	RX+
4	
5	
6	RX-
7	
8	

Website loading: Open browser and enter the IP address to load the monitor web page.

- ⦿ Make sure the network cable which used to connect monitor with computer directly is cross line cable.
- ⦿ Make sure the network cable which used to connect monitor with router is straight-through cable.
- ⦿ If you have any problem with your network connection, please ask your network administrator for help.

*5 Update

Firmware can be updated via USB port, update steps as below:

- 1、 Update the latest firmware to the root of USB driver
- 2、 Switch on monitor, connect your USB driver with monitor
- 3、 Select “MENU” - “SYSTEM” - “Update”, the monitor will update automatically.
- 4、 Press “Power” button to switch off and reboot monitor after successfully updating.

<div style="background-color: black; color: white; padding: 10px; text-align: center;"> <p>UPDATE</p> <p>Do you want to update now? Select MENU to start !</p> <p>MENU:OK INFO: Quit</p> </div>	<p>※Caution</p> <ol style="list-style-type: none"> 1、Make sure only one firmware is copied to the root of USB driver one time. 2、Do not cut off the power when doing update.
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IX. Multiview Setting

Menu option	Instruction	Selection
Multiview Type*1	Set the type of Multiview function	PBP,PIP
PIC 1 *2	Set the signal channel of Multiview function	SDI1, SDI2, HDMI, NDI
PIC 2		
PIP Window Position	Set the Position of PIP on screen	Bottom left,Bottom right,Top left,Top right, Center
Border	Set the border of PIP function	ON, OFF

*1 Multiview Type

“Multiview Setting” is available when signal channel is Multiview,otherwise “Multiview setting” will show grey and unavailable;

The “Input range”, “Color gamut”, “Gamma”, “UMD” and “Payload ID” of each video can be set separately when signal channel is “Multiview”;

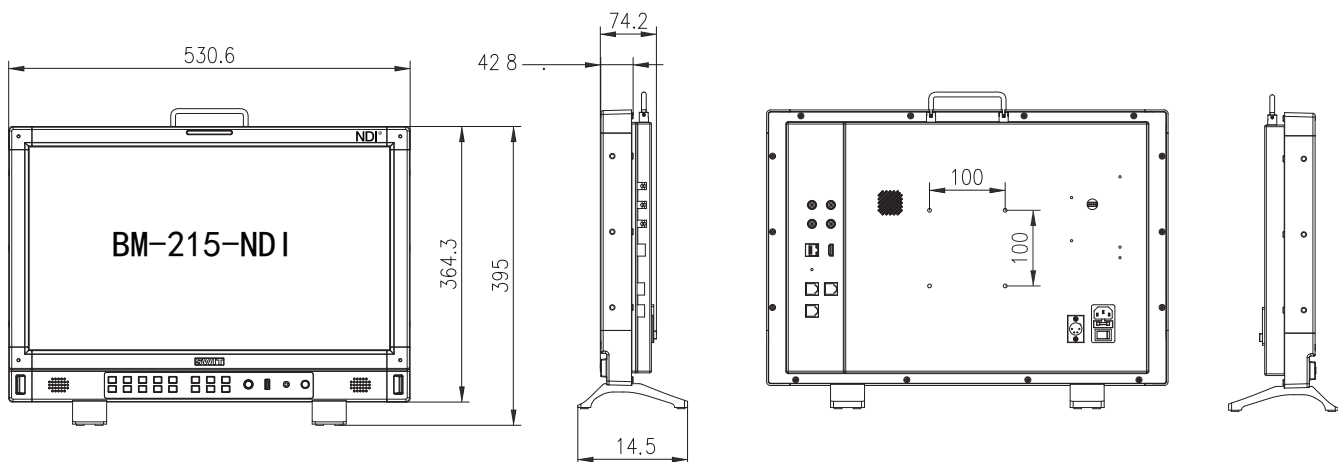
Part of menu function will be disabled when signal channel is Multiview.

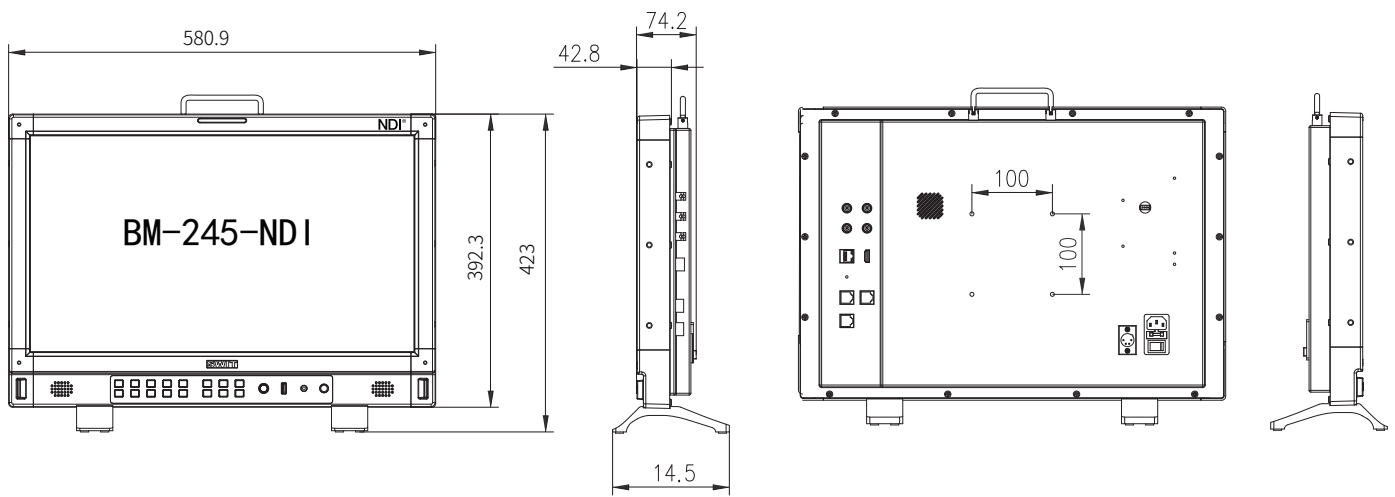
*2 PIC 1, PIC 2

When signal channel is “Multiview”, “PIC 1” and “PIC 2” can select to display any signal channel.

Overall Dimension

Dimension (mm)





Specification

LCD Performance		
Model	BM-215-NDI	BM-245-NDI
Size	21.5	23.8
Display area	495.6×292.2mm	543.0×316.72mm
Resolution	1920*1080	1920*1080
Display color	16.7M	16.7M
Display ratio	16:9	16:9
Brightness	400	400
Contrast	3000:1	3000:1
Viewing angle	H/V:178°/ 178°	H/V:178°/ 178°
Input /Output		
Input	BNC×2	3G/HD/SD-SDI×2
	HDMI×1	HDMI Input
	RS-485×2	UMD×1
	GPI×1	
	USB×1	
	ETHERNRT/NDI	12G/6G/3G/HD/SD
Output	BNC×1	3G/HD/SD-SDI×1
	BNC to NDI×1	3G/HD/SD-NDI×1
	RS-485×1	UMD×1
Other specification		
Working voltage	AC:100V~240V	
	DC/Battery:12V~17V	
Power consumption	45W	
Working Temperature	0°C~+50°C	
Working Humidity	10%~90%	
Storage Temp	- 15°C~ + 60°C	
Storage Humidity	10%~90%	
Overall Dimension	530.6×364.3×74.2mm	580.9×392.3×74.2mm
Net weight (Only monitor body)	5.90KG	8.87KG

Supported format: Below signal format can be displayed on the monitor

No.	Format	Input terminal			Signal format shown in the Status Display as		
		SDI1/2	NDI	HDMI	SDI	HDMI	NDI
1	720×480/60I	√	—	—	720*480I60	—	—
2	720×480/60P	√	—	√	720×480/60P	720*480P60	—
3	720×576/50I	√	—	—	720×576/50I	—	—
4	720×576/50P	√	—	√	720×576/50P	720*576I50	—
5	1280×720/23.98P	√	—	√	1280×720/23.98P	1280*720P24	—
6	1280×720/24P	√	—	√	1280×720/24P	1280*720P24	—
7	1280×720/25P	√	—	√	1280×720/25P	1280*720P25	—
8	1280×720/29.97P	√	—	√	1280×720/29.97P	1280*720P30	—
9	1280×720/30P	√	—	√	1280×720/30P	1280*720P30	—
10	1280×720/50P	√	√	√	1280*720P50	1280*720P50	1280*720P50
11	1280×720/59.94P	√	√	√	1280*720P59.94	1280*720P60	1280*720P59.94
12	1280×720/60P	√	√	√	1280*720P60	1280*720P60	1280*720P60
13	1920×1080/50I	√	√	√	1920*1080I50	1920*1080I50	1920*1080I50
14	1920×1080/59.94I	√	√	√	1920*1080I59.94	1920*1080I60	1920*1080I60
15	1920×1080/60I	√	√	√	1920*1080I59.94	1920*1080I60	1920*1080I60
16	1920×1080/23.98PSF	√	—	√	1920×1080/23.98PSF	1920*1080PSF24	—
17	1920×1080/24PSF	√	—	√	1920×1080/24PSF	1920*1080PSF24	—
18	1920×1080/23.98P	√	√	√	1920×1080/23.98P	1920*1080P24	1920*1080P24
19	1920×1080/24P	√	√	√	1920*1080P23.98	1920*1080P24	1920*1080P24
20	1920×1080/25P	√	√	√	1920*1080P25	1920*1080P25	1920*1080P25
21	1920×1080/29.97P	√	√	√	1920*1080P29.97	1920*1080P30	1920*1080P30
22	1920×1080/30P	√	√	√	1920*1080P29.97	1920*1080P30	1920*1080P30
23	1920×1080/48P	√	—	√	1920×1080/48P	1920*1080P48	—
24	1920×1080/50P	√	√	√	1920*1080P50	1920*1080P50	1920*1080P50
25	1920×1080/59.94P	√	√	√	1920*1080P59.94	1920*1080P60	1920*1080P59.94
26	1920×1080/60P	√	√	√	1920*1080P59.94	1920*1080P60	1920*1080P60
27	2048×1080/23.98PSF	√	—	√	2048×1080/23.98PSF	2048*1080PSF24	—
28	2048×1080/24PSF	√	—	√	2048×1080/24PSF	2048*1080PSF24	—
29	2048×1080/25PSF	√	—	√	2048×1080/25PSF	2048*1080PSF25	—
30	2048×1080/29.97PSF	√	—	√	2048×1080/29.97PSF	2048*1080PSF30	—
31	2048×1080/30PSF	√	—	√	2048×1080/30PSF	2048*1080PSF30	—
32	2048×1080/23.98P	√	—	√	2048×1080/23.98P	2048*1080P24	—
33	2048×1080/24P	√	—	√	2048×1080/24P	2048*1080P24	—
34	2048×1080/25P	√	—	√	2048×1080/25P	2048*1080P25	—
35	2048×1080/29.97P	√	—	√	2048×1080/29.97P	2048*1080P30	—
36	2048×1080/30P	√	—	√	2048×1080/30P	2048*1080P30	—
37	2048×1080/47.94P	√	—	√	2048×1080/47.94P	2048*1080P50	—
38	2048×1080/48P	√	—	√	2048×1080/48P	2048*1080P48	—
39	2048×1080/50P	√	—	√	2048×1080/50P	2048*1080P50	—

No.	Format	Input terminal			Signal format shown in the Status Display as		
		SDI1/2	NDI	HDMI	SDI	HDMI	NDI
40	2048×1080/59.94P	√	—	√	2048×1080/59.94P	2048*1080P60	—
41	2048×1080/60P	√	—	√	2048×1080/60P	2048*1080P60	—
42	3840×2160/23.98P	—	√	√	—	3840*2160P24	3840*2160P23.98
43	3840×2160/24P	—	√	√	—	3840*2160P24	3840*2160P24
44	3840×2160/25P	—	√	√	—	3840*2160p25	3840*2160p25
45	3840×2160/29.97P	—	√	√	—	3840*2160P30	3840*2160P29.97
46	3840×2160/30P	—	√	√	—	3840*2160P30	3840*2160P30
47	3840×2160/47.94P	—	—	√	—	3840*2160P50	—
48	3840×2160/48P	—	—	√	—	3840*2160P48	—
49	3840×2160/50P	—	—	√	—	3840*2160P50	—
50	3840×2160/59.94P	—	—	√	—	3840*2160P60	—
51	3840×2160/60P	—	—	√	—	3840*2160P60	—
52	4096×2160/23.98P	—	—	√	—	4096*2160P24	—
53	4096×2160/24P	—	—	√	—	4096*2160P24	—
54	4096×2160/25P	—	—	√	—	4096*2160P25	—
55	4096×2160/29.97P	—	—	√	—	4096*2160P30	—
56	4096×2160/30P	—	—	√	—	4096*2160P30	—
57	4096×2160/47.94P	—	—	√	—	4096*2160P48	—
58	4096×2160/48P	—	—	√	—	4096*2160P48	—
59	4096×2160/50P	—	—	√	—	4096*2160P50	—
60	4096×2160/59.94P	—	—	√	—	4096*2160P60	—
61	4096×2160/60P	—	—	√	—	4096*2160P60	—

※ 3G support level A/level B; support RGB444

Troubleshooting

Problem	Possible fault reasons	Solution
No video	Monitor have not switched on	Check the power connection of monitor,press “POWER” button on the front panel.
	Wrong input source is selected.	Press “Source” button to change the input source
	No NDI signal source is selected	Select NDI signal in “NDI source”
	Input voltage is not stable	Reconnect the power
	Signal cable loose/wrong connection	Check signal cable,make sure the signal cable connection is right
	The battery power is out of power when powered by battery	Change a new battery
	The polarity is reversed when using DIY power supply	Reconnect the cable refer to standard power supply.
	The Network segment of monitor and NDI source is not same.	1. Make sure the segment of monitor and NDI source is same ; 2. Switch on “DHCP” function to assign the IP address automatically
Image or color abnormal	Signal cable is in poor contact	Change a new signal cable
	Video signal interference	Remove interference sources
	Parameters of color is over adjust	Upload User mode to “Factory”
	Video is distorted	Reset the aspect ratio
	Video show all blue	Switch off “Blue only” function
	The “focus assist” function is “ON”	Switch off “Focus assist” function
	The “False Color” function is “ON”	Switch off “False Color” function
No audio output	Monitor is set to mute mode	Turn “MENU/ENTER” knob left and right to adjust volume
	Audio cable is in poor contact	Change audio cable
	Audio cable is disconnected or connect wrong.	Check and reconnect the audio cable

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