

HDMI/3G-SDI Triple Display, 4K/30

User Manual 500840-V2



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1. Safety Precautions

To ensure the best performance from the product, please read all instructions carefully before using the device. Save this manual for future reference.

- Follow basic safety precautions to reduce the risk of fire, electrical shock, and injury.
- Do not dismantle the housing or modify the module. It may result in electrical shock or burns.
- Do not open or remove the housing of the device as you may be exposed to dangerous voltage or other hazards.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture and do not install this product near water. Keep the product away from liquids.
- Spillage into the housing may result in fire, electrical shock, or equipment damage. If an object or liquid falls or spills on the housing, unplug the module immediately.
- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.
- Using supplies or parts not meeting the product specifications may cause damage, deterioration or malfunction.
- Refer all servicing to qualified service personnel.
- Install the device in a place with adequate ventilation to avoid damage caused by overheat.
- Unplug the power when left unused for a long period of time.
- Information on disposal of devices: do not burn or mix with general household waste, please treat them as normal electrical waste.

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2. Introduction

The HDMI/3G-SDI Triple Display, 4K/30 (model: 500840-V2) supports three independent 5 inch IPS LCD displays mounted conveniently and securely on a 2 RU 19" rack. These devices save a significant amount of space in multi-display Pro AV and Broadcast applications.

The unit supports input and loop-out of HDMI signals up to 4K/30, SDI signals up to 3G-SDI, and CVBS signals with Audio. The unit supports a tri-color Tally light indicator per display, customizable buttons allowing customers to tailor them to their needs, and advanced functions such as Center Marker, Safe Frames, Check Field, Focus Assist, Aspect Ratio, Image Flip, P2P, Vectorscope, histogram and Image Freeze.

3. Features

- Triple 5-inch TFT LCD displays
- Supports HDMI (4K/30), 3G-SDI and CVBS with Audio
- Fits 19-inch rackmount @ 2 RU
- Tri-color Tally light indicator per display
- Waveform: RGB, YUV, Y
- Histogram, Vectorscope
- Supports Center Marker, Safe Frames, Check Field, Focus Assist, Aspect Ratio, Image Flip, P2P & Image Freeze
- Customizable buttons tailored to customer needs
- Supports firmware update via mini USB

4. Package Contents

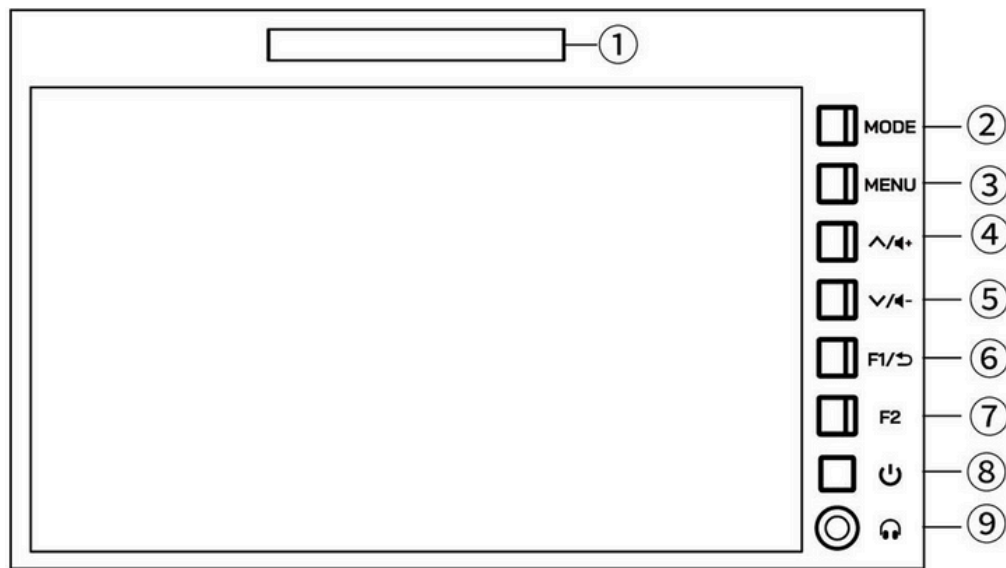
- One (1) HDMI/3G-SDI Triple Display, 4K/30
- One (1) Power adapter
- One (1) User manual (available via download)

5. Specifications

Specification	
Screen Size	Three 5" screens
Resolution	1920x1200 pixel
Dot Pitch	0.045(W) x 0.135 (H) mm
Aspect Ratio	16:9
Brightness	500cd/m ²
Contrast	500:1
Backlight	LED
Viewing Angle	70°/70°(L/R) 50°/70°(U/D)
Inputs	HDMI, 3G/HD/SD-SDI, HDMI, Audio(L/R), Video
Outputs	HDMI, 3G/HD/SD-SDI, Video, 3.5mm Audio Jack
SDI Support Format	720p (60/59.94/50/30/29/25/24/23.98) 1080i (60/59.94/50) 1080p (60/59.94/50/30/29.97/25/24/24sF/23.98/23.98sF)
HDMI Support Format	480i/576i/480p/576p 720p (60/59.94/50/30/29.97/25/24/23.98) 1080i (60/59.94/50) 1080p (60/59.94/50/30/29.97/25/24/23.98) 3840x2160p (30/29.97/25/24/23.98Hz) 4096x2160p (24Hz)
Power Consumption	≤21W
Input Voltage	9.0 to 24 VDC
Power Source	100-240VAC to 12VDC, 3A power supply
Working Temperature	0°C to 50°C
Storage Temperature	-20°C to 60°C
Install Way	Rack Mount
Dimensions	19.00" x 3.46" x 1.34" (482.6mm x 88.0mm x 34.0mm)
Weight	3.45lbs (1.57kg)
Warranty	2 years
Order Information	500840-V2 HDMI/3G-SDI Triple Display, 4K/30 (UPC: 627699028407)

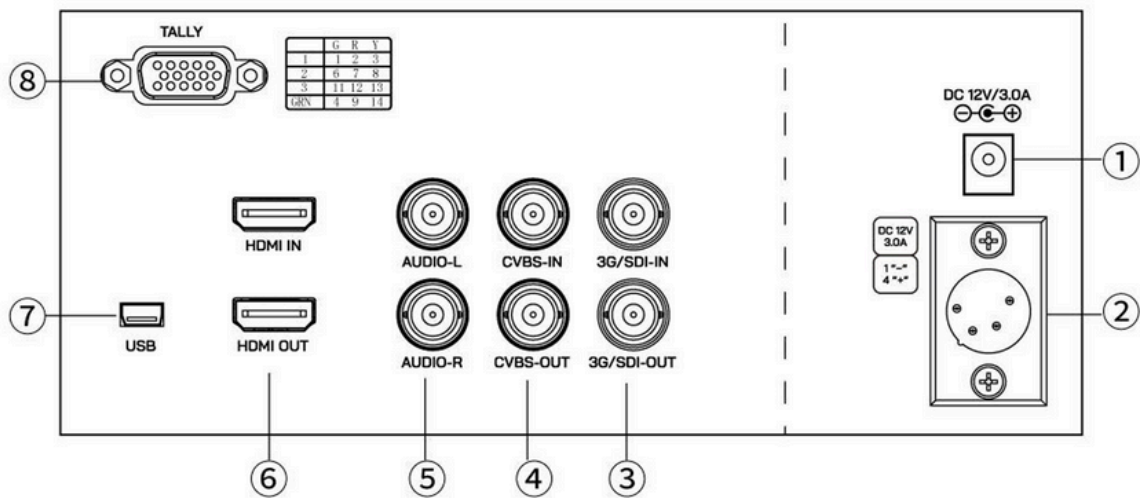
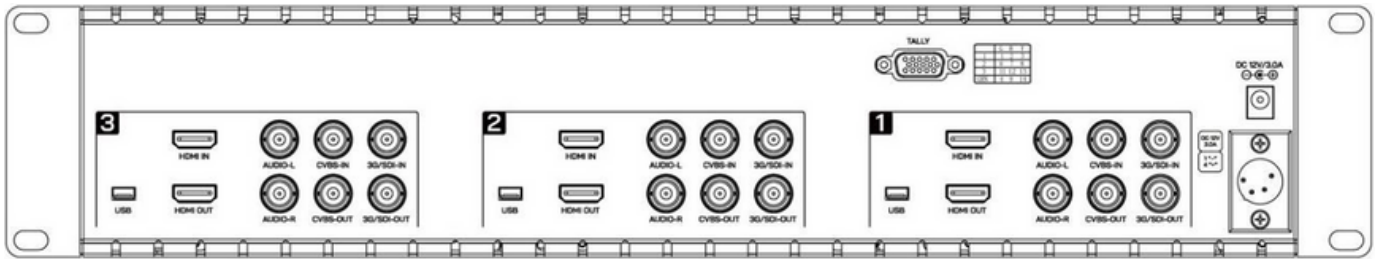
6. Product Instructions

6.1 Front Panel



No	Name	Description
1		Tally indicator
2	MODE	Input signal selection
3	MENU	Menu button, enter/confirm
4	^/4+	Previous item selection/parameters increasing after enter the menu; Volume increasing adjustment when menu without display
5	v/4-	Next item selection/parameters decreasing after enter the menu; Volume decrease adjustment when menu without display
6	F1/5	Custom function short cut button Menu return/exit
7	F2	Custom function shortcut button
8	⏻	ON/Standby button
9	🎧	Earphone jack port

6.2 Rear Panel



No	Name	Description
1		12VDC Power Input
2		4-pin XLR 12VDC power input
3	3G/SDI	IN (SDI serial data input) OUT (SDI serial data output)
4	CVBS	IN (Composite video broadcast signal input) OUT (Composite video broadcast signal output)
5	AUDIO	L (Audio signal left stereo input), R (Audio signal right stereo input)
6	HDMI	IN (High definition multimedia interface input) OUT (High definition multimedia interface output)
7	USB	Firmware update, LUT file importing port
8	TALLY	TALLY indicator input port

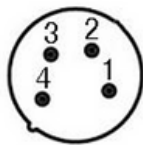
6.3 Power Input Way

There are two ways of power supply to our monitor:

- A. The direct plug-in DC power input port supply. You can use the standard Barrel Jack 5.5*2.1mm DC power adapter, power input polarity as shown below:

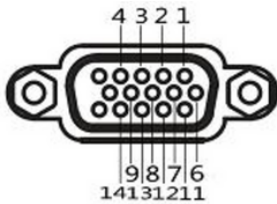


- B. Via 4 pin XLR interface power supply. Polarity of the 4-pin XLR power input as shown below, please note the polarity of the power input, otherwise it may damage monitor.



Pin Number	Signal
1	GND
2	No connection
3	No connection
4	+12VDC

6.4 TALLY Indicator Connection



Screen #1	Screen #2	Screen #3	Tally
1	6	11	Green Light
2	7	12	Red Light
3	8	13	Yellow Light
4	9	14	Ground

7. Operation Instruction





1. After connecting to the DC12V power supply, the three monitors automatically turn on.
2. Connect the signal for each monitor separately, the screen will display the connected video image.
3. Press "MENU" key to enter to main menu, press $\wedge/\blacktriangleleft$ or \vee/\blacktriangleright button to select the first level menu, press "MENU" key to confirm after selecting and enter the second level menu.
4. Press $\wedge/\blacktriangleleft$ or \vee/\blacktriangleright button to selection the function of second level menu, press "MENU" key to confirm after selecting and enter the third level menu.
5. Press $\wedge/\blacktriangleleft$ or \vee/\blacktriangleright button select open/close function or select the needed parameters, press "MENU" key to confirm after selecting.
6. Press **F1/S** key to return/exit menu.







Remark: the buttons on each monitor are independently control.

8. Menu Function Instruction




Functional Assist

 All Waves	<p>On, Off</p> <p>After turning on, waveform, vector, histogram and embedded audio will be shown.</p>
 Waveform	<p>On, Off</p> <p>Mode : RGB, YUV, Y</p> <p>This essential feature assists with the calibration of professional video cameras. It shows the overall brightness of the image assisting the video professional in correcting exposure. The waveform feature also checks the evenness of the lighting when lighting a chromakey or background.</p> <p>Waves Trans. : Off, 25%, 50%, 75%</p>
 Vector	<p>On, Off</p> <p>shows how saturated the image is and where the pixels in the image land on the color spectrum.</p>
 Histogram	<p>On, Off</p> <p>Mode: RGB1、RGB2、Y</p> <p>RGB Histogram:It can display the graphic of color tone distribution, can intuitively display the exposure status of the image, and display overlapping histograms in red, green, and blue channels</p> <p>Y Histogram: A quantitative tool to check the picture brightness, display different color for different brightness.</p>

 Focus Assist	<p>On, Off</p> <p>Color : (Red, Green, Blue)</p> <p>Peaking Level :you can adjust the peaking level after turning on (1 ~ 10)</p> <p>It highlights the areas that are in focus so you are able to quickly focus the camera and not miss crucial shots.</p>
 Embedded Audio	<p>On, Off</p> <p>The Audio Level Meters provide numerical indicators and headroom levels. The audio meter is green, and will turn yellow when exceeds -20dB, and turn red when exceeds -9dB.</p> <p>The Audio Level Meters provide numerical indicators and headroom levels.</p>
 Over Exposure	<p>On, Off</p> <p>Exposure Level : you can adjust the exposure level after turning on (10~100)</p> <p>Areas of the image over a certain threshold are filled with a striped pattern to dramatically highlight areas where too much light is falling on the image sensor.</p>
 Check Field	<p>On, Off</p> <p>Mode : Red, Green, Blue, Mono</p> <p>When enabled, hue and saturation adjusted quickly and accurately</p>
 False Colors	<p>On, Off</p> <p>An image that depicts an object in colors that differ from those a photograph (a true color image) would show.</p>
 Time Code (Only under SDI signal)	<p>On, Off</p> <p>Mode: LTC, VITC</p>










Mark

 Nine Grid	On, Off Color: Red, Green, Blue, Black, White, Gray The area of the picture can be divided into 9 equal grids
 Safe Frames	On, Off Mode: 80%, 85%, 90%, 93%, 96%, 2.35:1 Color: Red, Green, Blue, Black, White, Gray
 Center Marker	On, Off Color : Red, Green, Blue, Black, White, Gray
 Ratio Marker	On, Off Mode: 4:3、 13:9、 14:9、 15:9、 16:9、 1.85:1、 2.35:1 Color: Red, Green, Blue, Black, White, Gray Modified Mark : 0~5












Display

 Scan Mode	Under Scan, Over Scan
 Aspect Ratio	Auto, 16:9, 16:10, 4:3, 5:4, 1.85:1, 2.35:1, Full Screen Provides a wide variety of aspect ratio to match different camera anamorphic lenses.
 Anamorphic	On, Off Mode: 1.33X, 1.6X, 2.0X, 2.0X MAG, User Under the User , can be customized (1.20X~2.00X)






	Allows you to use anamorphic lenses or adapters and see the image unsqueezed, even if your camera does not de-squeeze in camera.
 Image Flip	On, Off Mode: H Flip, V Flip, H_V Flip
 Zoom Mode	On, Off Mode: 2X、 4X、 9X、 16X、 User Under the User , can be customized (100%~200%)
 Image Freeze	On, Off
 P2P	On, Off Enable the filmmaker to check the image from the 1:1 signal source without scaling.This feature is essential for capturing optimum detail.

 **User**

 LUT	On, Off After the LUT Switch is turned on, you can use the Lut (SLOG2, SLOG3, LOGC, VLOG) . Lut Import: Confirm Lut Table Show the 4 built-in Lut and the custom load Lut (up to 32)
 Display Adjustment	Backlight: 0~100 Adjust the screen brightness Brightness: 0~100

	<p>Adjust the image brightness</p> <p>Contrast: 0~100</p> <p>Adjustment of the ratio between the brightest and darkest parts of the image . When adjusting, pay attention to the sense of hierarchy in the image. If the proportion is too large or too small, it can cause the image to lose its colorful appearance.</p> <p>Saturation: 0~100</p> <p>Adjustment of color concentration</p> <p>Tint: 0~100</p>
 <p>Color Adjustment</p>	<p>Color Temp.: 5600K, 6500K, 9300K, User</p> <p>Under the User, the red, green and blue of the image can be adjusted (0~255)</p>
 <p>Shortcut Key</p>	<p>All Waves, Waveform, Vector, Histogram, Embedded Audio, Center Marker, Safe Frames, Nine Grid, Focus Assist, False Colors, Over Exposure, Anamorphic, Image Freeze, Check Field, Zoom, Image Flip, Aspect Ratio</p> <p>To set the 2 shortcut custom button F1, F2 on the panel e.g.: Press MENU button enter menu ,  /  ,  / </p> <p>button select User and press "MENU" button to confirm. Then select  Shortcut Key and press "MENU" to confirm, select F1 and confirm to pop-up function items, then select one of them and press to confirm, the cursor will be changed to gray color after confirmed. Same setting for F2</p>

 System

 Language	English、简体中文、Español、Português、Français、 Nederlands、Deutsch、日本語、繁體中文、한국어로、 русский язык
 OSD Option	OSD Time: Off, 15Sec, 30Sec, 45Sec OSD Trans: Off, 25%, 50%, 75% No Signal: Red, Green, Blue, Black, White, Gray
 Volume	On, Off 0~100
 Reset	Scroll the wheel to select Reset and press Confirm , the system back to original setting.
 Firmware Update	After copying the upgrade file to the USB flash drive and inserting it into USB adapter cable (USB-female to mini-USB), press "MENU" wheel button Confirm to update. Don't power off during the upgrade processing


9. How to Load LUT

1. Prepare tool: USB flash driver, mini USB to USB cable




2. USB flash driver format must be FAT32.
3. The maximum file limit is 32 Lut files.
4. File requirements:
 - The LUT file format suffix should be .cube
 - Single file not exceeded to 7.9Mb
 - Support LUT-3D-Size 16,17,32,33,64,65

Remark: LUT file name must be English or Arabic numerals

5. Make sure USB flash driver insert to the mini USB to USB can and connect with the USB interface of monitor.
6. Enter main menu  --LUT--Lut Import -- press the "MENU" key and then confirm to import the 3D LUT file; the monitor will auto detect the USB flash driver.
If there is valid Lut file in USB flash driver, the monitor will load LUT files and show "[n] name. The [n] shows the quantity number. The "name" should in LUT files' name. If load successful, the screen will show "complete[n]". [n] Stands for the quantity number for Lut files should under 32.

How to clear up the imported LUTs?

Insert a empty USB flash driver to the monitor, enter main menu  --LUT--Lut Import -- press the "MENU" key Confirm, the imported LUTs will be clear up.

10. Trouble Shooting

If there is any problem when using the unit, please try following ways to inspect and solve. Please contact us if you still can not solve it or have other problems.

• Without image display	Trouble shooting
◆ Video cable off or connect incorrectly	Check the quality of the cable, make sure the correct input interface
◆ Without video signal input	Check the signal source and output interface connect is correct or not
◆ Monitor is not be powered on	Check whether the power is connected
◆ Supply voltage instability	The power adapter plug is poor connected with the socket
◆ self-contained power supply, polarity connect inversely	Reference "Power Input Way" and reconnect

• Image/color display abnormal	Trouble shooting
◆ Video cable poor contact	Change the video cable, try again
◆ Video signal interfered by external environment	Move to another environment to try again
◆ Video input signal amplitude too low	Check signal source video output, or change signal source and have a try.
◆ Menu color saturation adjustment closing	Enter menu to check color, or reset to factory settings
◆ Check Field set in mono or black & white	Reset Check Field, back to the color
◆ Image deformation	Reset the image ratio

•Earphone without sound

Trouble shooting

◆ Audio cable off or connection properly	Confirm connected with the corresponding input port
◆ Volume adjustment was closed	Reset the volume control and adjust to a proper position.
◆ HDMI cable poor Connected	Check the quality of cable, or change cable and have a try
◆ No sound after switch video signal	Check whether there is an AUDIO signal input in AV Mode.