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Mars M1 Enhanced

Quick Guide

V1.0

Introduction

Thank you for purchasing the Hollyland Mars M1 Enhanced which can operate as a wireless monitor or an HD video transmission device. It adopts the latest image encoding and decoding technology and 5G wireless transmission technology. The Mars M1 Enhanced is a versatile solution for a wide range of applications, such as promotional video production, micro movie production, short video production, and TVC shooting.
Please scan the QR code to download the instructions with more language options.

Key Features

- Integrated wireless video transmission and monitoring solution
- Switchable transmitter and receiver modes
- 1 TX + 1 RX and 1 TX + 2 RX operating modes
- Line-of-sight (LOS) transmission range of up to 450ft (150m)
- Monitoring on mobile phones through the HollyView app
- Ultra-low transmission latency of 0.08s, meeting professional film and television production requirements
- 5.1–5.8GHz frequency bands, supporting frequency configurations in different countries and regions
- Dynamic frequency selection (DFS) feature
- Video playback and automatic trigger recording capabilities
- Custom 3D lookup table (LUT) import via a USB flash drive
- Extended battery life when working as a monitor with video transmission Wi-Fi disabled
- Professional data analysis tools (Luma waveform, RGB waveform, vectorscope, and histogram)
- Multiple auxiliary monitoring functions (Zebra pattern, focus assist, false color, aspect mark, anamorphic desqueeze, zoom-in, center mark, and crosshatch)
- Compatibility with the Mars family of products — Mars 300 Pro, Mars 400S Pro, Mars 4K, and Mars M1

Note: The LOS range of up to 450ft (150m) and transmission latency of 0.08s provided above are based on laboratory testing results.
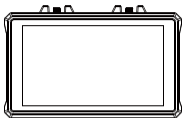
Monitor

Capsule Antenna
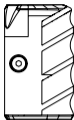
OTG Adapter

Tempered Glass Screen Protector

Quick Guide

Warranty Card

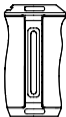Packing List Card

Note: The item list varies by product configuration.
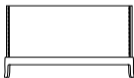
Item List

Rosewood Handle

T-shaped Handle

Wrist Strap

Storage Case

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Shoulder Strap

Monitor Hood (with Bracket)
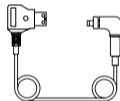
D-Tap to Locking DC Cable

Note: The item list varies by product configuration.

RP-SMA Male
Antenna Interface (Left) Ventilation RP-SMA Male
Antenna Interface (Right)

HDMI Input

Power Button

HDMI Output/
Loopout

DC Output
(with Locking Nut)

DC Input
(with Locking Nut)

Battery
Slot

SDI Input

3.5mm
Headphone Jack

1/4" Threaded
Hole

USB-C Interface

1/4" Threaded Hole

Touchscreen Description

Device Mode

Channel Number

Signal Strength

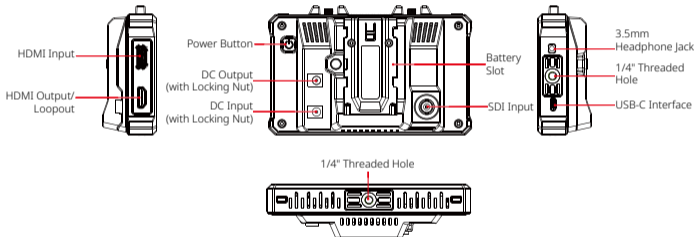Video Resolution

LUT Name

USB Flash Drive

Headphone

Power Supply Mode (Battery Level)

Transmitter   CH1   HDMI 1080P   LUT Name

Screen Lock Notification

Screen Locked
Tap the unlock icon or press the power button to unlock the screen

Lock/Unlock Screen

Recording

Playback

Image Analysis Function Activation Icons

Image Analysis Function Settings

Touchscreen Description

Settings Interfaces

Wireless Information Display Area   Video Resolution Diaplay Area   External Device Connection Diaplay Area
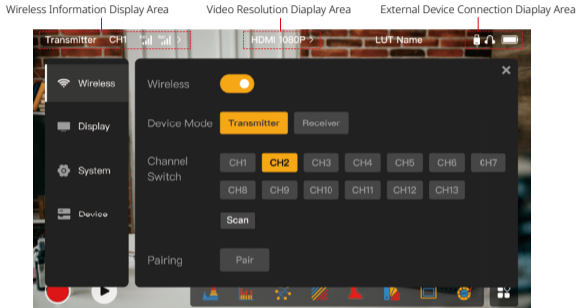
Wireless: Tap on the wireless information display area to enter the wireless settings interface when the top information bar is displayed.

Display: Tap on the video resolution display area to enter the display settings interface when the top information bar is displayed.

System: Tap on the external device connection display area to enter the system settings interface when the top information bar is displayed.

Device: Tap on the **Device** area (on the left) to enter the device information interface.

Note: After entering a settings interface, you can tap any other settings icon on the left to enter the corresponding settings interface.

Touchscreen Description

1. Status Display in Transmitter Mode

- When the device is disconnected from a receiver, **X** is displayed at the signal strength display area on the left of the top information bar.
- When the device is connected to a receiver, the connected receiver number and the signal strength are displayed at the signal strength display area on the left of the top information bar.
- When the device is connected to a video source, the video resolution is displayed in the middle of the top information bar. When there is no input video source connected, **NO VIDEO** is displayed instead.

2. Status Display in Receiver Mode

- When the device is disconnected from a transmitter, **X** is displayed at the signal strength display area on the left of the top information bar and **NO VIDEO** is displayed in the middle of the top information bar.
- When the device is connected to a transmitter, the device number and the signal strength are displayed at the signal strength display area on the left of the top information bar.
- When the connected transmitter is connected to a video source, the video resolution is displayed in the middle of the top information bar.

3. Low Battery Notification

● When the battery level is low, a low battery notification is displayed and the battery icon turns red.

Function Description

Waveform
Displays the horizontal representation of exposure levels in an image, clearly showing overexposed and underexposed areas in the image.

Histogram
Displays the proportion information of exposure levels in an image, clearly showing the overall exposure balance of the image.

Vectorscope
Displays the overall range of color hue and saturation in an image.

Zebra Pattern
Displays a stripe pattern over a specific brightness range (IRE) on an image. You can customize the upper IRE value and the lower IRE value as needed.

Focus Assist
Paints a highlight around in-focus edges with colored lines (red, green, blue, yellow, white, or black), enabling very fast and accurate focusing.

False Color
Assigns different colors to areas of different brightness in an image to get quick exposure readings.

Aspect Mark
Defines the aspect ratio of an image by cropping certain parts on the corners of the image. The transparency ranges from **0** to **100**. The aspect mark function supports the following aspect ratios: 16:9, 16:10, 4:3, 1:1, 1.85:1, and 2.35:1. You can also customize the aspect ratio as needed.

LUT
Allows you to preview the color processing result during shooting by importing LUTs via a USB flash drive.

Image Flip
Allows you to flip an image to meet your needs of operation.

Crosshatch
Overlays a geometric grid pattern over an image with customizable rows and columns to display the image in nine grids, sixteen grids, or twenty-five grids.

Zoom-in
Supports 2x and 4x zoom-in. You can swipe across the screen to change the area to be zoomed in.

Anamorphic Desqueeze
Restores footage to its original aspect ratio, allowing you to correctly view images when using anamorphic lenses.

Volume Column
Displays the volume level of a video.

Button Description
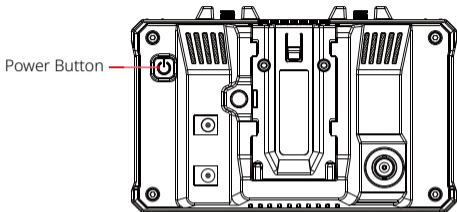
Power Button

Power Button

ON: Press the power button to turn on the device (when the device is connected to a power source).
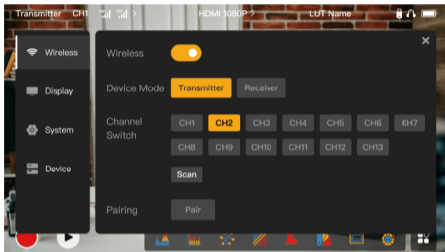
OFF: Press and hold the power button for 3 seconds to turn off the device.

Lock Screen: Press the power button to lock the screen (when the device is turned on).

Unlock Screen: Press the power button to unlock the screen (when the screen is locked).

Settings Description

1. Wireless Settings

Wireless
- This function is only available in transmitter mode. If it is disabled, video transmission Wi-Fi will be disabled, which will extend battery life.
- If this function is disabled, the device (in transmitter mode) cannot be paired with a receiver. To pair with a receiver, enable this function and wait until the channel number is displayed in the upper left corner before pairing.

Device Mode
- You can switch between transmitter and receiver modes as needed.

Channel Switch
- Tap a channel number in the channel list to select a channel.

Settings Description

- For China: Wi-Fi connection on channels CH5 to CH10 is not supported on some mobile phones. Please use other available channels.
- For Japan: Wi-Fi connection on channels CH3 to CH8 is not supported on some mobile phones. Please use other available channels.
- For the United States and Europe: Wi-Fi connection on channels CH1 to CH8 is supported on mobile phones.
- For other countries and regions: Please refer to the local wireless regulations and select the channels supported in China, Japan, the United States, or Europe accordingly.

Scan

- This function is only available in receiver mode. It scans the Wi-Fi signal strength in the environment. In the channel scan result, the yellow bar indicates the channel currently used by the device, the green bar indicates low-interference channels, and the red bar indicates strong-interference channels. You are advised to use the channels indicated by the green bar.
- To switch channels, simply tap the corresponding bar in the channel scan result.

Pairing

- You can perform pairing after the device is turned on and the channel number is displayed.
- 1 TX + 1 RX pairing: Start pairing on both the transmitter and the receiver at the same time.
- 1 TX + 2 RX pairing: After pairing the transmitter with receiver 1, pair the transmitter with receiver 2. The transmitter cannot be paired with two receivers at the same time.

2. Display Settings
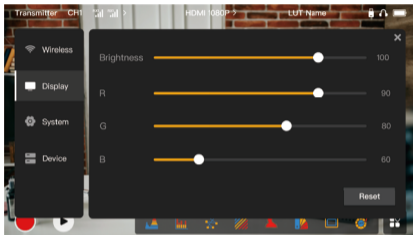
Brightness
- Adjust the brightness of the screen backlight in the range of **0** to **100.**
- The default value is **100**.

R
- Adjust the red gain of the screen in the range of **50** to **100.**
- The default value is **100.**

G
- Adjust the green gain of the screen in the range of **50** to **100.**
- The default value is **100.**

B
- Adjust the blue gain of the screen in the range of **50** to **100.**
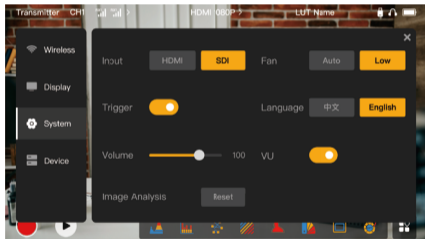- The default value is **100.**

Reset
Reset all the parameters on the display settings interface to their default values.

3. System Settings

Input
- Tap either **HDMI** or **SDI** to manually switch the signal input mode.

Trigger

- This function is enabled by default, indicating that the recording function of the device is controlled by the camera trigger information.

Volume

- Adjust the output volume for headphone monitoring in the range of **0** to **100.**
- The default value is **50.**

Image Analysis

- Tap **Reset** to reset all the parameters of the image analysis functions to their default values.

Fan

- Switch the fan mode between **Auto** and **Low**.
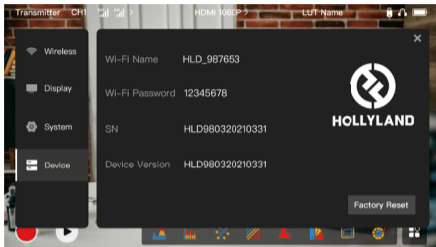- The default value is **Low**.

Language

- Switch the device language between Chinese and English.

VU

- Enable or disable this function to display the VU meter or not.
- This function is disabled by default.

Settings Description

4. Device Information

Device Info

- In transmitter mode, the Wi-Fi name and password of the device are displayed. In receiver mode, the Wi-Fi name of the connected transmitter are displayed.
- The serial number (SN) and version information of the device are also displayed.
- The version information of the new firmware (if available) on the USB flash drive is also displayed.
- Tap **Factory Reset** to reset all the device parameters to their default values.

Device Upgrade

1. Copy the upgrade file to a USB flash drive.
2. Turn on the device, attach the USB flash drive to the OTG adapter, and connect the OTG adapter to the device via the USB-C interface.

3. Tap **OK** in the dialog box that is displayed, or tap **System Upgrade** and then tap **OK**.
4. The upgrade is complete when the device restarts automatically.

Note:

a. Do not power off the device during the upgrade process.

b. Please use a USB flash drive formatted as FAT32 or NTFS.

c. Please ensure that the wireless transmission function is enabled during the upgrade process.

Monitoring Through the HollyView App

● **Installation and Connection**

1. **Installation:** For Android systems, download the HollyView app from Hollyland's official website or the app store. For iOS systems, download the app from the App Store.

2. **Automatic Connection:**
   The app automatically scans and connects to the device. Then, you can start monitoring on the main interface of the app.

   Manual Connection:
   Manually connect to the device by entering the device ID number. Then, you can start monitoring on the main interface of the app.

Specifications

Device Mode	Transmitter mode	Receiver mode
Video Input Interface	HDMI 1.4b IN (Type-A female) 3G-SDI IN (BNC female)	/
Video Output Interface	HDMI 1.4b LOOPOUT (Type-A female)	HDMI 1.4b OUT (Type-A female)
Antenna Interface	Two RP-SMA male interfaces	Two RP-SMA male interfaces
Power Input Interface	DC IN (2.0mm core socket)	DC IN (2.0mm core socket)
Power Output Interface	DC OUT (2.0mm core socket)	DC OUT (2.0mm core socket)
Headphone Jack	3.5mm	3.5mm
Upgrade Interface	USB-C (USB-2.0 OTG)	USB-C (USB-2.0 OTG)
Screen Size	5.5" touchscreen	5.5" touchscreen
Screen Resolution	1920x1080 pixels	1920x1080 pixels
Pixel Density	403 PPI	403 PPI
Aspect Ratio	16:9	16:9
Screen Brightness	1,000 nits	1,000 nits
Contrast Ratio	1000:1	1000:1
Power Input Voltage	DC IN: 7–16V 2.5A (nominal 12V) NP-F battery: 6.8V–8.4V	DC IN: 7–16V 2.5A (nominal 12V) NP-F battery: 6.8V–8.4V
DC Output Voltage	8.4V±5%	8.4V±5%
Power Consumption	<16W	<13.6W
Net Weight	Approx. 400g (14.1oz) with external antennas excluded	Approx. 400g (14.1oz) with external antennas excluded

Specifications

Dimensions	(L x W x H): 152mm x 96mm x 40mm (5.98" x 3.78" x 1.57") with external antennas excluded	(L x W x H): 152mm x 96mm x 40mm (5.98" x 3.78" x 1.57") with external antennas excluded
Input Video Resolution	HDMI IN:	/
	720p50/59.94/60 Hz	/
	1080i50/59.94/60 Hz	/
	1080p23.98/24/25/29.97/30/50/59.94/60 Hz	/
	3840x2160p23.98/24/25/29.97/30 Hz	/
	4096x2160p23.98/24/25/29.97/30 Hz	/
	SDI IN:	/
	720p50/59.94/60 Hz	/
	1080i50/59.94/60 Hz	/
	1080p23.98/24/25/29.97/30	/
	1080p50/59.94/60 Hz (3G-SDI level A)	/
	1080p50/59.94/60 Hz (3G-SDI level B)	/
Output Video Resolution	HDMI LOOPOUT (HDMI IN)	HDMI OUT:
	720p50/59.94/60 Hz	720p50/59.94/60 Hz
	1080i50/59.94/60 Hz	1080i50/59.94/60 Hz
	1080p23.98/24/25/29.97/30/50/59.94/60 Hz	1080p23.98/24/25/29.97/30/50/59.94/60 Hz

Specifications

Output Video Resolution	3840x2160p23.98/24/25/29.97/30 Hz	1080p50/59.94/60 Hz
	4096x2160p23.98/24/25/29.97/30 Hz	1080p50/59.94/60 Hz
	HDMI LOOPOUT (SDI IN)	HDMI OUT:
	720p50/59.94/60 Hz	720p50/59.94/60 Hz
	1080i50/59.94/60 Hz	1080i50/59.94/60 Hz
	1080p23.98/24/25/29.97/30/50/ 59.94/60 Hz	1080p23.98/24/25/29.97/30/ 50/59.94/60 Hz
	Note: When the device (in receiver mode) is connected to the Mars 4K transmitter, if the HDMI input video resolution of the Mars 4K transmitter is 3840x2160p24/25/30 Hz, the HDMI output video resolution of the device is 1920x1080p24/25/30 Hz.	
Display Latency	<0.05s (test data when 1080p60 signals are transmitted in a laboratory environment. The display latency varies by video resolution.)	/
Operating Frequency	5.1GHz–5.8GHz	
Codec Technology	H.264	
Bit Rate	12Mbps	
TX Power	≤21+/-1.5dBm	
Transmission Latency	Approx. 0.08s (test data when 1080p60 signals are transmitted in a laboratory environment)	

Specifications

LOS Range	Up to 450ft (150m) (test data in an unobstructed outdoor environment free of interference)
Bandwidth	20MHz
Audio Format	Eight audio channels for the HDMI 1.4b
Operating Temperature	–10℃ to 60℃ (14°F to 140°F)
Storage Temperature	–40℃ to 60℃ (–40°F to 140°F)

Note: The operating frequency and TX power vary by country and region. In some countries and regions, the 5.1GHz, 5.2GHz, and 5.8GHz frequency bands are prohibited, or the 5.1GHz and 5.2GHz frequency bands are only allowed for indoor use. Please refer to local laws and regulations for more information.

Safety Precautions

1. **Image Retention**
- Avoid displaying an image or text on the screen for an extended period. Otherwise, the risk of image or text burn-in may occur and then result in image retention on the screen.

2. **Upgrade Failure**
- Ensure that the upgrade file is stored in the root directory of the USB flash drive.
- Check whether the USB flash drive is properly attached to the OTG adapter.
- Ensure that the USB flash drive is formatted as FAT32 or NTFS.
- Check whether the wireless transmission function is enabled.

3. **App Connection**
- If the device Wi-Fi cannot be found on the mobile phone, please use a non-DFS channel.

4. **Power Adapter Selection**
- To ensure that the device can provide a stable power supply to the camera via the DC OUT interface during normal operation, please use a 12V power adapter with 2.5A or higher specifications.

Note:
Do not place the product near or inside heating devices (including but not limited to microwave ovens, induction cookers, electric ovens, electric heaters, pressure cookers, water heaters, and gas stoves) to prevent the device from overheating and exploding.

Support

If you encounter any problems in using the product or need any help, please contact Hollyland Support Team via the following ways:

- Hollyland User Group
- HollylandTech
- HollylandTech
- HollylandTech
- support@hollyland.com
- www.hollyland.com

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