

10.4" Night Vision All-Weather Monitor

User Manual



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Important Safety Instructions:



The device has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipment, the device should be used with care. Please read and follow the safety instructions to protect yourself from possible injury and to minimize the risk of damage to the unit.

- Please do not place the display screen towards the ground to avoid scratching the LCD surface.
- Please avoid heavy impact.
- Please do not use chemical solutions to clean this product. Simply 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-shooting to adjust the product.

Internal adjustments or repairs must be performed by a qualified technician.

- Please keep user guide for future reference.
- Please unplug the power if long-term no-use, or thunder weather.

1. Product Description

1.1 Main Features

- 10.4" LCD
- High sensitivity, support gloves touch
- -30°C~70°C operating temperature, supports all-weather display
- Night vision/daylight dual-mode imaging system, supports 0.03nits low brightness; 1000nits high brightness;
- 50000h LED panel life time
- Supports multiple Video input interfaces: HDMI/VGA
- IP65 dustproof and waterproof
- Metal casing

1.2 Front Case



1. Display mode Button: Built in two display systems. Press this Button to switch between the high brightness mode and the NVIS night vision mode. The brightness of the two modes can be adjusted independently in the menu.

2. MENU Button: Press the MENU Button when the power is on, and the menu interface pops up on the screen. After selecting the desired option, press the MENU Button to confirm the option.

3. + Button: Select an option in the menu; adjust the menu value.

4. - Button: Select an option in the menu; adjust the menu value.

5. EXIT Button: Exit the current interface.

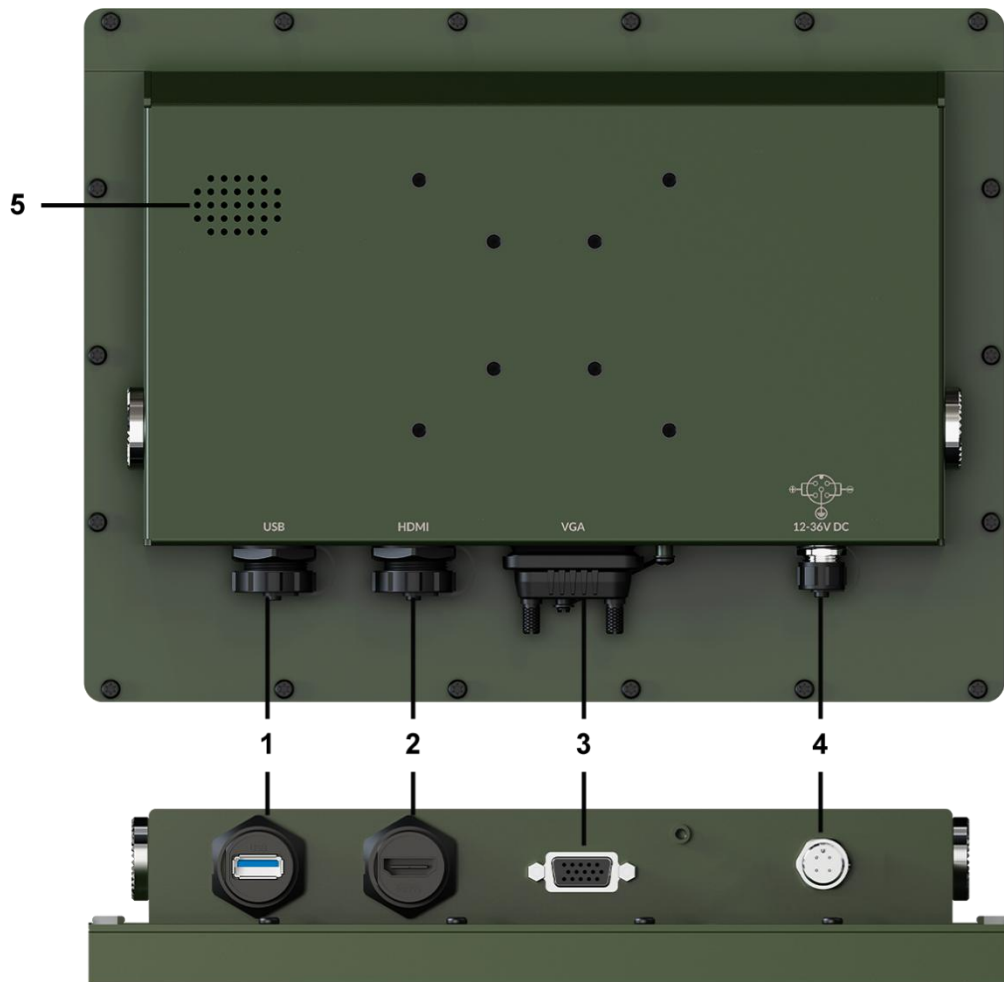
6. INPUT Button: Switch between VGA and HDMI signals.

7. Power Button

8. Top indicator light: Green indicates day mode, blue indicates night mode, and red indicates heating mode is active. (When heating is enabled, the red light takes priority.)

Bottom indicator light: Green indicates the device is powered on, and red indicates it is powered off. (When powered off, the top indicator light is turned off.)

1.3 Rear Case



1.USB2.0 interface: For touch and upgrade

2.HDMI interface

3.VGA interface

4.Power input: 12-36V

5.Waterproof speaker

2. Menu Setting

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

2.1 Menu Button & “+/-” Button

- Press MENU button, the menu will pop up on the screen. Then select item as the following sequences via pressing “+/-” button: PICTURE, FUCTION, VGA, AUDIO, SYSTEM. Press MENU button again to enter into the item you select.
- Press “+/-” button to adjust options or values in the selected item. Then press MENU button to apply and save the setting, and press EXIT button to exit.
- When Menu is inactivated, press “+/-” button to adjust backlight. Then select item as the following sequences via pressing MENU button: Backligh, Volume, Brightness, Contrast, Saturation. Press “+/-” button again to adjust the value in the selected item.

2.2 Menu Operation

2.2.1 PICTURE



ITEMS	OPTIONS
Brightness	0-100
Contrast	0-100
Saturation	0-100

Hue	0-100		
Sharpness	0-4		
Gamma	Off / 1.8 / 2.0 / 2.2 / 2.4		
Color Temperature	6500K / 7500K / 9300K / User		
	Red Gain	0-255	Note: Only available when under [User] mode to adjust R/G/B gain and offset.
	Green Gain	0-255	
	Blue Gain	0-255	
	Red Offset	0-511	
	Green Offset	0-511	
	Blue Offset	0-511	

- **Brightness**

Adjust the brightness of the LCD Screen, adjustable range: 0-100.

- **Contrast**

Adjust the contrast of image, adjustable range: 0-100.

- **Saturation**

Adjust the saturation, adjustable range: 0-100.

- **Hue**

Adjust the hue of the image, adjustable range: 0-100.

- **Sharpness**

Adjust the sharpness of image, adjustable range: 0-4.

- **Gamma**

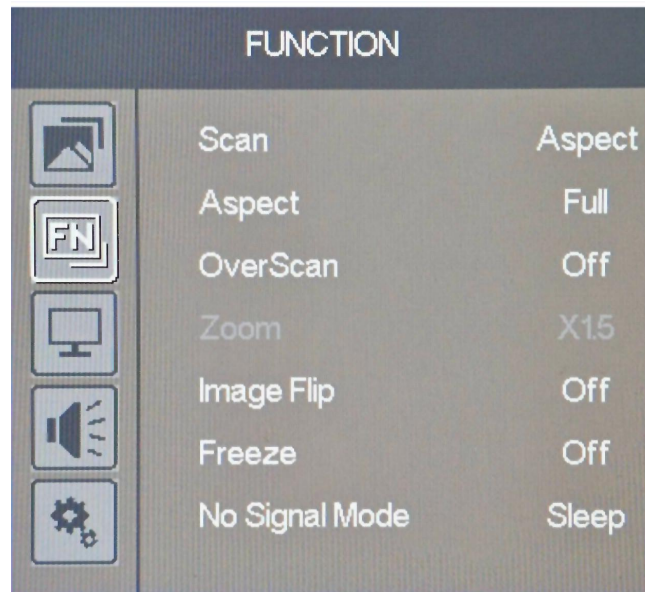
Options: Off / 1.8 / 2.0 / 2.2 / 2.4

- **Color Temperature**

Options: 6500K / 7500K / 9300K / User. The standard color temperature is 6500K.

Note: Only available when under [User] mode to adjust R/G/B gain and offset.

2.2.2 FUNCTION



ITEMS	OPTIONS	
Scan	Aspect / Pixel To Pixel / Zoom	
Aspect	Full / 16:9 / 4:3 / 3:2	Only available under [Scan]-[Aspect] mode
Overscan	Off / On	
Zoom	X1.5 / X2 / X3 / X4	Only available under [Scan]-[Zoom] mode
Image Flip	Off / H&V / H / V	
Freeze	Off / On	
No Signal Model	Normal/Sleep/Power Off	

- **Scan**

Options: Aspect / Pixel To Pixel / Zoom.

- **Aspect**

Options: Full / 16:9 / 4:3 / 3:2.

Note: Only available under [Scan]-[Aspect] mode.

- **Overscan**

Options: Off / On

- **Zoom**

Options: X1.5 / X2 / X3 / X4

Only available under [Scan]-[Zoom] mode. Users can select zoom ratio according to different needs.

- **Image Flip**

Options: Off / H&V / H / V

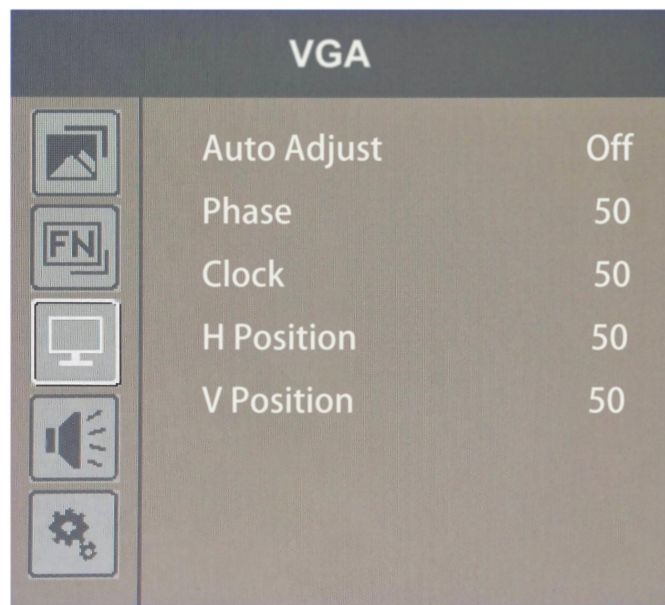
- **Freeze**

Options: On / Off. Activate freeze function to freeze current picture.

- **No Signal Model**

Options: Normal / Sleep / Power Off.

2.2.3 VGA



ITEMS	OPTION
Auto Adjust	On / Off
Phase	0-100
Clock	0-100
H-Position	0-100
V-Position	0-100

- **Auto Adjust**

Select [On], the monitor can automatically adjust the position of the image. Select [Off], users can manually adjust the position of the image.

- **Phase**

Adjust internal phase sequence difference. Adjustable range: 0-100.

- **Clock**

Adjust internal oscillation frequency when interference occurs. Adjust this item, the image can be compressed or stretched left or right. Adjustable range: 0-100.

- **H-Position**

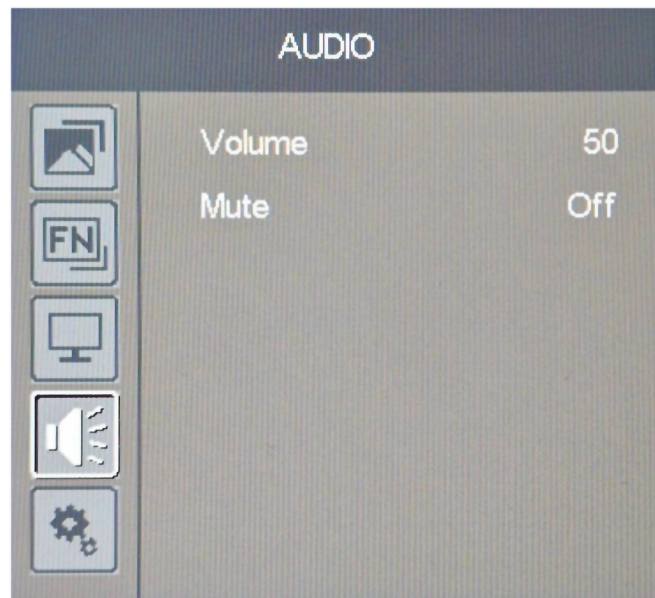
Horizontally adjust the position of the image on the screen. Adjustable range: 0-100.

- **V-Position**

Vertically adjust the position of the image on the screen. Adjustable range: 0-100.

Note: VGA menu Only available under VGA mode.

2.2.4 AUDIO



ITEMS	OPTION
Volume	0-100
Mute	On / Off

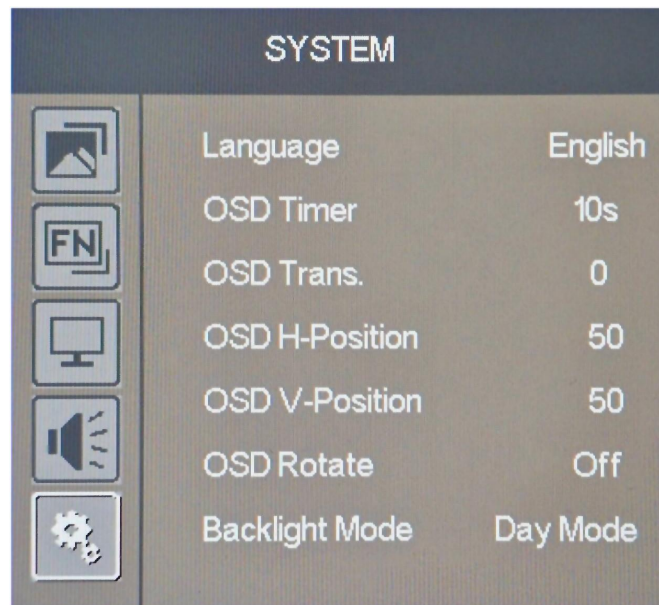
- **Volume**

Adjust the volume of built-in speaker or earphone. Adjustable range: 0-100.

- **Mute**

Stop any audio output.

2.2.5 SYSTEM



ITEMS	OPTION
Language	English /Chinese
OSD Timer	10s / 20s / 30s
OSD Trans.	0-100
OSD H-Position	0-100
OSD V-Position	0-100
OSD Rotate	Off / 90° / 180° / 270°
Backlight Mode	Day Mode / Night Mode
Day Backlight	0-100
Night Backlight	0-100
Heating Mode	Auto/Not Heated
Reset	Off / On

- **Language**

Options: English / Chinese.

- **OSD Timer**

Options: 10s / 20s / 30s.

- **OSD Trans.**

Adjust the transparency of OSD. Adjustable range: 0-100

- **OSD H-Position**

Adjust the OSD Horizontal Position. Adjustable range: 0-100

- **OSD V-Position**

Adjust the OSD Vertical Position. Adjustable range: 0-100

- **OSD Rotate**

Adjust the OSD Rotate. Options: Off / 90° / 180° / 270°

- **Backlight Mode**

Two backlight systems are available: Day mode and Night mode.

The brightness of each system can be adjusted independently.

- **Day Backlight**

Adjustable range: 0-100.

- **Night Backlight**

The night backlight mode offers ultra-low brightness levels, ensuring compatibility with NVIS (Night Vision Imaging System) equipment. Adjustable range: 0-100.

- **Heating Mode**

Optional heating modes: non-heating or automatic heating.

When auto-heating is enabled, the device will not start if the internal temperature is below -15°C at power-on. It will automatically heat up to -15°C before starting, and continue heating until it reaches 25°C. If the temperature drops below -10°C again, heating will resume and stop once it reaches 25°C.

- **Reset**

If there is any problem unknown, please select [On]. The monitor will restore factory defaults.

3. Parameters

DISPLAY	Panel	10.4" LCD
	Touch Screen	5-wire resistive touch+AG Capacitive touch+AG+AF(Optional) EMI Glass (Customizable)
	Resolution	1024×768
	Brightness	Day Mode:1000nit NVIS Mode:Dimmable under 0.03nits
	Aspect Ratio	4:3
	Contrast	1000:1
	Viewing Angle	170°/ 170°(H/V)
	LED Panel Life Time	50000 Hours

SIGNAL INPUT	HDMI	1
	VGA+AUDIO	1
	USB	1×USB-A (For touch and upgrade)
SUPPORT FORMATS	VGA	1080p 24/25/30/50/60, 1080pSF 24/25/30, 1080i 50/60, 720p 50/60...
	HDMI	2160p 24/25/30, 1080p 24/25/30/50/60, 1080i 50/60, 720p 50/60...
AUDIO IN/OUT	HDMI	2ch 24-bit
	Built-in Speakers	1
POWER	Input Voltage	DC 12-36V
	Power Consumption	≤13W (15V, Normal mode) ≤ 69W (15V, Heating mode)
ENVIRONMENT	Protection Rating	IP65, NEMA 4X
	Operating Temperature	-30°C~70°C
	Storage Temperature	-30°C~80°C
OTHER	Dimension(LWD)	276mm×208mm×52.5mm
	VESA mounting holes	75×75mm
	RAM mounting holes	30.3mm×38.1mm
	Weight	2kg (With Gimbal Bracket)

4. Accessories

1) Power Connector Cable	1 piece
2) VGA Cable	1 piece
3) HDMI A-A Cable	1 piece
4) USB A-A Cable (for touch and upgrade)	1 piece
5) Gimbal Bracket	1 piece
6) E-User Manual	1 piece

5. Trouble Shooting

- **Only black-and-white display:**

Check whether the color saturation is properly setup or not.

- **Power on but no pictures:**

Check whether the cables of HDMI, and VGA are correctly connected or not.

Make sure the night vision backlight mode is not enabled in a bright environment.

Please use a 90W or higher power adapter. Lower power may cause the device to stop working when heating is enabled.

- **Wrong or abnormal colors:**

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

- **Other problems:**

Please press MENU button, choose [SYSTEM]→ [Reset]→[On].

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