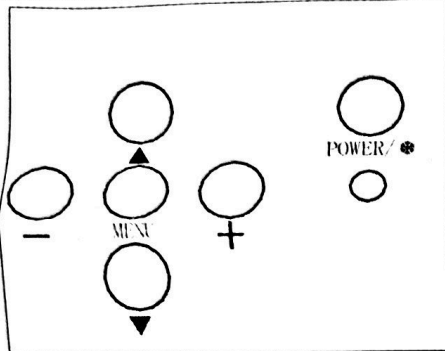# HDMI/VGA Industrial Camera Operating Instructions

The HD industrial camera has 30 built-in movable horizontal lines and 30 built-in movable vertical lines , and 1 to 30 of them can be selected through the menu, and the color of the single line can be selected; The maximum resolution of VGA/HDMI/TYPE C (USB) output is 1920*1080 60Hz. To ensure safety, please read the operating instructions carefully.

I、 Interface and Button Functions:

	HDMI	HDMI output interface
	VGA	VGA output interface (interface optional)
	Type C	5V power interface/USB output interface
	MENU	Primary menu key
	▲	Cursor up/line selection
	▼	Cursor down/line selection
	-	Value minus/line movement/line color selection
	+	Value addition/OK/line movement/line color selection
	POWER/●	Power key (long press) / freeze / unfreeze

II、 Installation:

The industrial lens is installed in the CS interface of the camera, and the VGA/HDMI interface is connected to the display input interface; Type C cable connected to the camera, USB port connected to 5V power adapter or computer USB, after power-on, the indicator light turns from red to green, indicating that the camera has been working normally.

III、 Camera Parameters:

1、 2 million 1/2.8, 1/2 (optional) inch CMOS, effective pixels 1920X1080, frame rate 60FPS, definition 900 lines.

2、 Resolution:1920*1080(16:9)、 1920*1080(16:10) 、1280*720(16:9) 、1024*768(4:3).

3、 With CS/C lens mount, you can choose any CS/C mount lens.

4、 Power supply: +5V allowable deviation of 10%, current not less than 0.5A.

IV、 Menu Actions:

1、 Press the MENU key once to open the main menu, and press the MENU key again to close the main menu.

2、 Use the "▲/▼" key to move the cursor to select the corresponding submenu.

3、 Use the "+/-" keys to enter the submenu where the cursor is located.

4、 Adjust the current value or "Yes/No" via the "+/-" keys in the submenu.

5、 Return to the parent menu > opt out/press the MENU key once.

V、 Crosshair/Scale Bar Operation:

1、 After the menu is closed, there is a prompt "Changing the line color state...", select the line to change color by using the ▲/▼ key, and the line is selected in the dotted state. Use "+, -" keys to change the line color.

2、 After the menu is closed, select the line to be moved by using the ▲/▼ key, and the line is selected in the dotted state. The line position can be changed by using the "+, -" keys.

3、 Open MENU-> Scale-> "Open", change the current value to "Yes"-> "Type" (change the current display type) with the "+" key.

VI、 Several Ways to Adjust the Best Image Effect:

1、 Open MENU-> White Balance-> Put a white paper under the lens and press the "+" key to trigger "Do a white balance calibration".

2、 Adjust the brightness of the LED light source to achieve the desired imaging effect.

3、 Open MENU->Images-> by +/- keys to adjust the value of the corresponding category.

4、 Open MENU->Image-> "Auto Exposure", change the current value to "No" with the "+" key, and then adjust the brightness of the LED light source.

5、 If you need to restore factory parameters, open MENU->Settings-> "Factory Default Settings", confirm by the + key, at this time the parameters are restored to factory state.

6、 Under a low-light/high-magnification microscope, when the brightness is still dark by increasing the brightness through the LED: open MENU-> Image-> "Increase Auto Exposure Brightness", and adjust the value by +/- keys to increase its overall brightness.

VII、 Common Problems and Solutions:

1、 The indicator light is green, the monitor has no image or indicates "out of frequency": disconnect the power, hold the "+" key for a long time, then connect the power supply, when the indicator flashes, releases the "+" key.

2、 The LCD display screen is incomplete and has black edges: press the AUTO button on the monitor

3、 Dust on the lens or imaging element: wash with anhydrous alcohol (absolute ethanol) or wipe off with a spectacle cloth.

4、 Forcibly restore factory parameters: disconnect the power supply, hold down the "POWER" key for a long time, and then connect the power supply, when the indicator flashes, releases the POWER key.