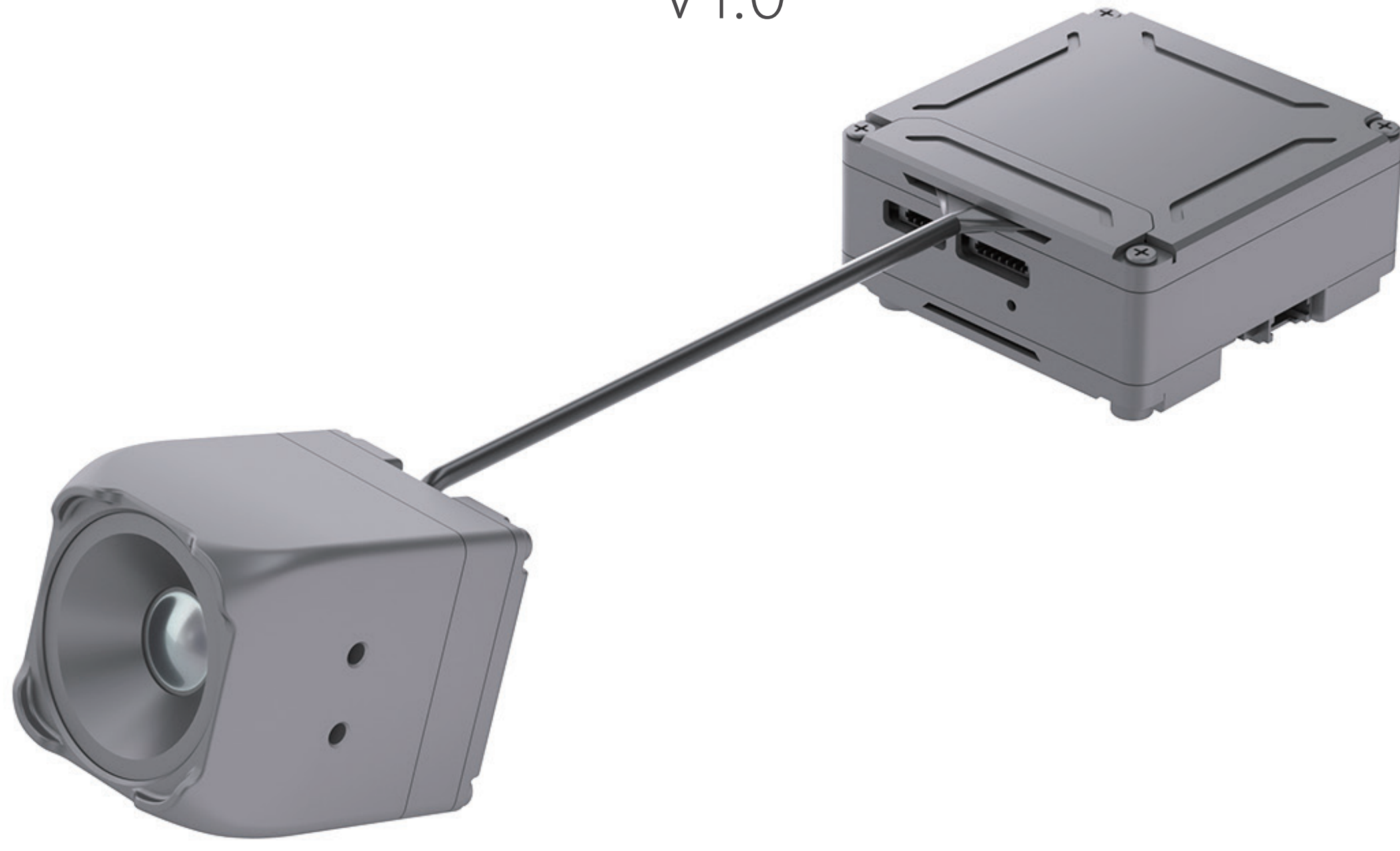


Eclipse 005SL

Quick Start Guide

V1.0



Product Introduction

- With Pixelpump-Gen3 technology, image quality is clearer and heat sources are more prominent;
- supports analog PAL interface output;
- supports customizable OSD text display;
- supports UVC image output.

Third-generation Pixelpump-Gen3 Technology

The Eclipse 005SL is equipped with third-generation Pixelpump-Gen3 technology. Figures 1 and 2 respectively show the image effects captured by the "hawkeye" analog receiver. Figure 1 was taken with a camera not equipped with Pixelpump-Gen3 technology, while Figure 2 was captured using a camera with this technology. The comparison clearly shows that images captured with Pixelpump-Gen3 technology offer a significant advantage in clarity and present richer detail.

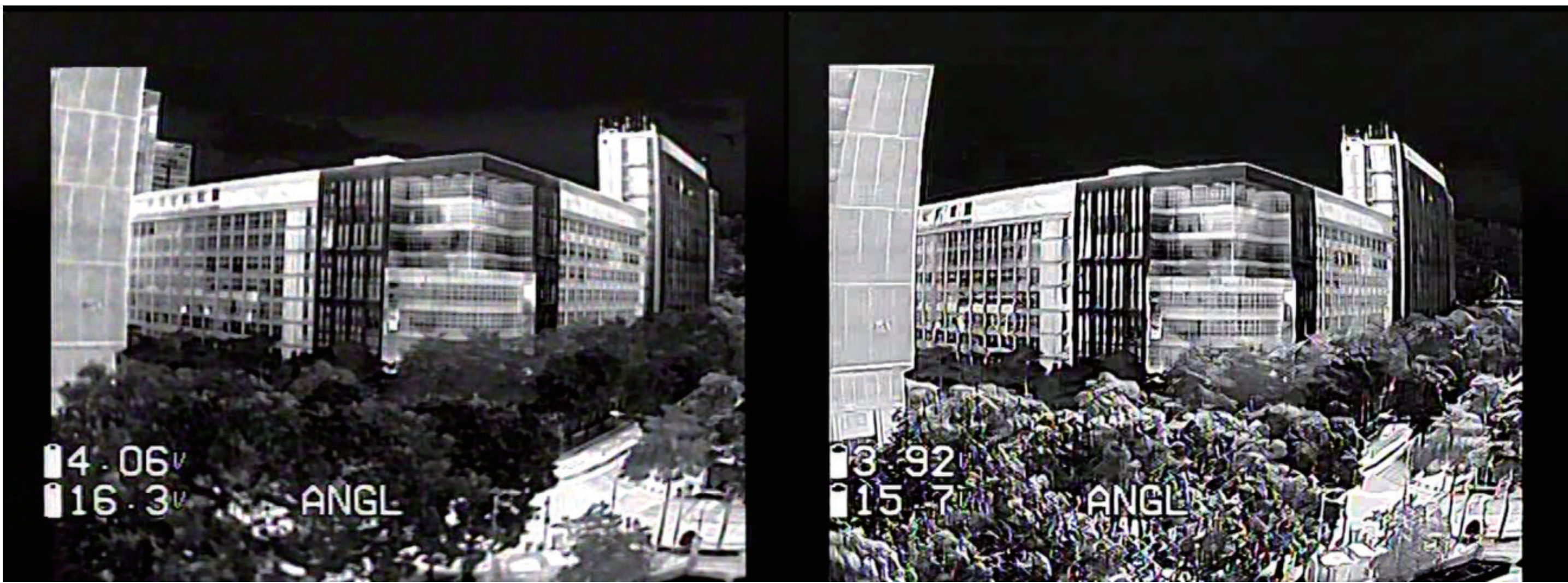
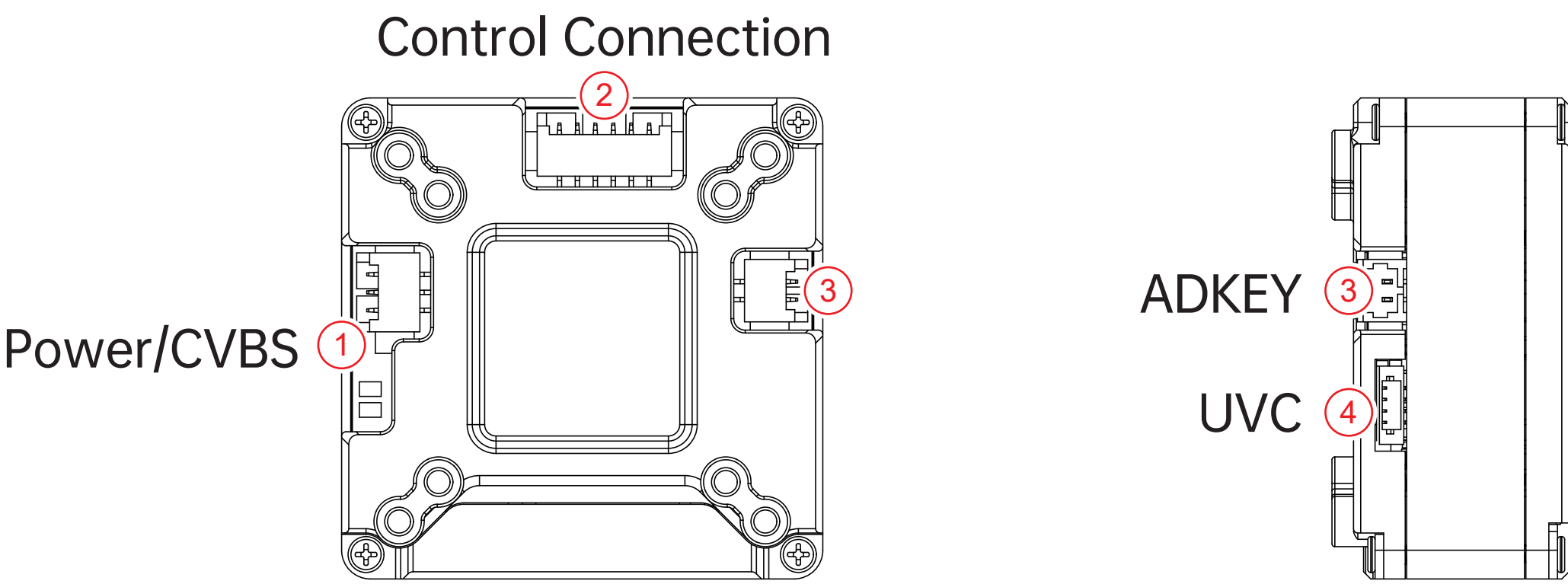


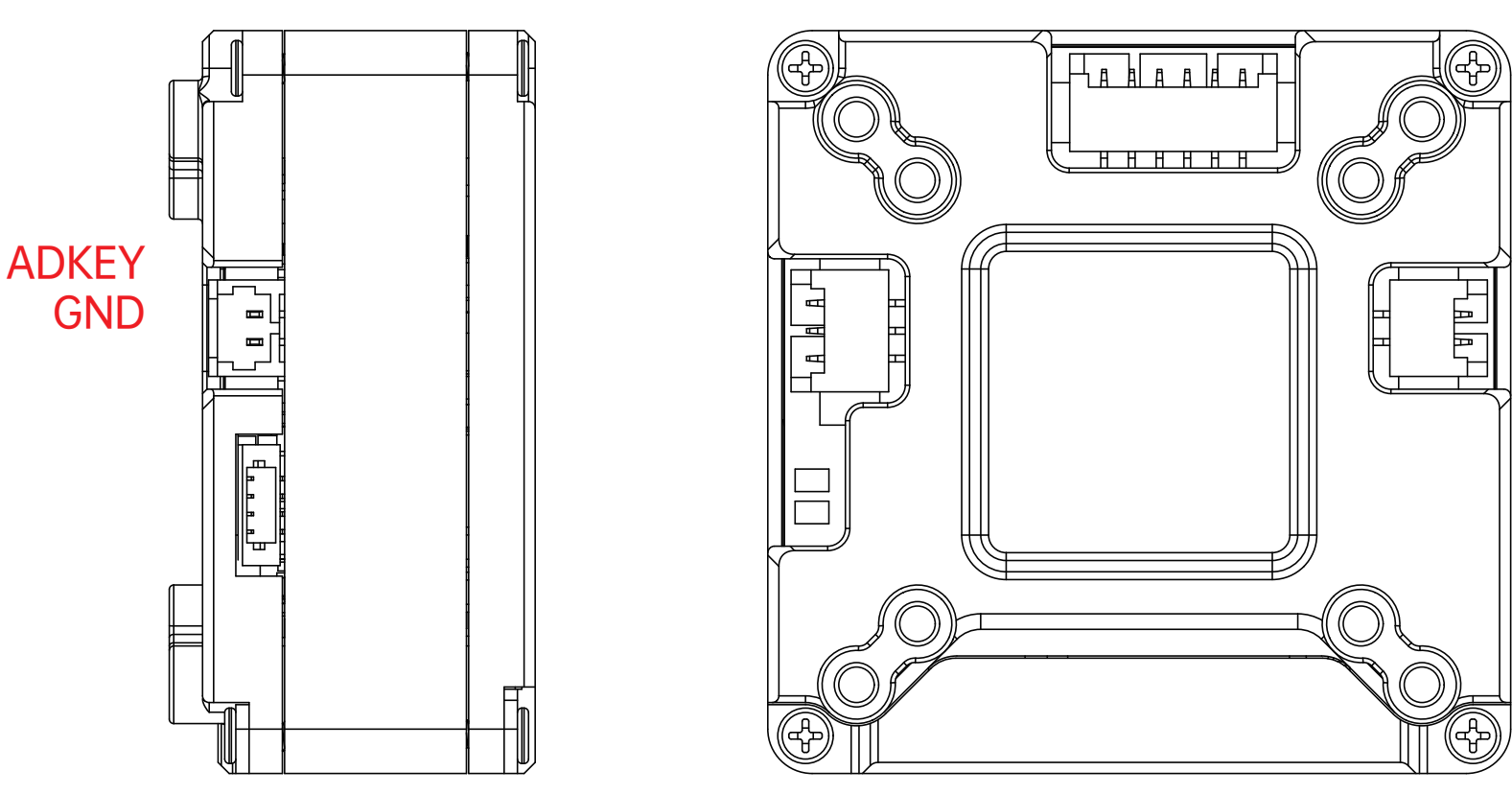
Figure 1: Image captured without Pixelpump-Gen3 technology Figure 2: Image captured with Pixelpump-Gen3 technology

Interface Definition



UVC Function

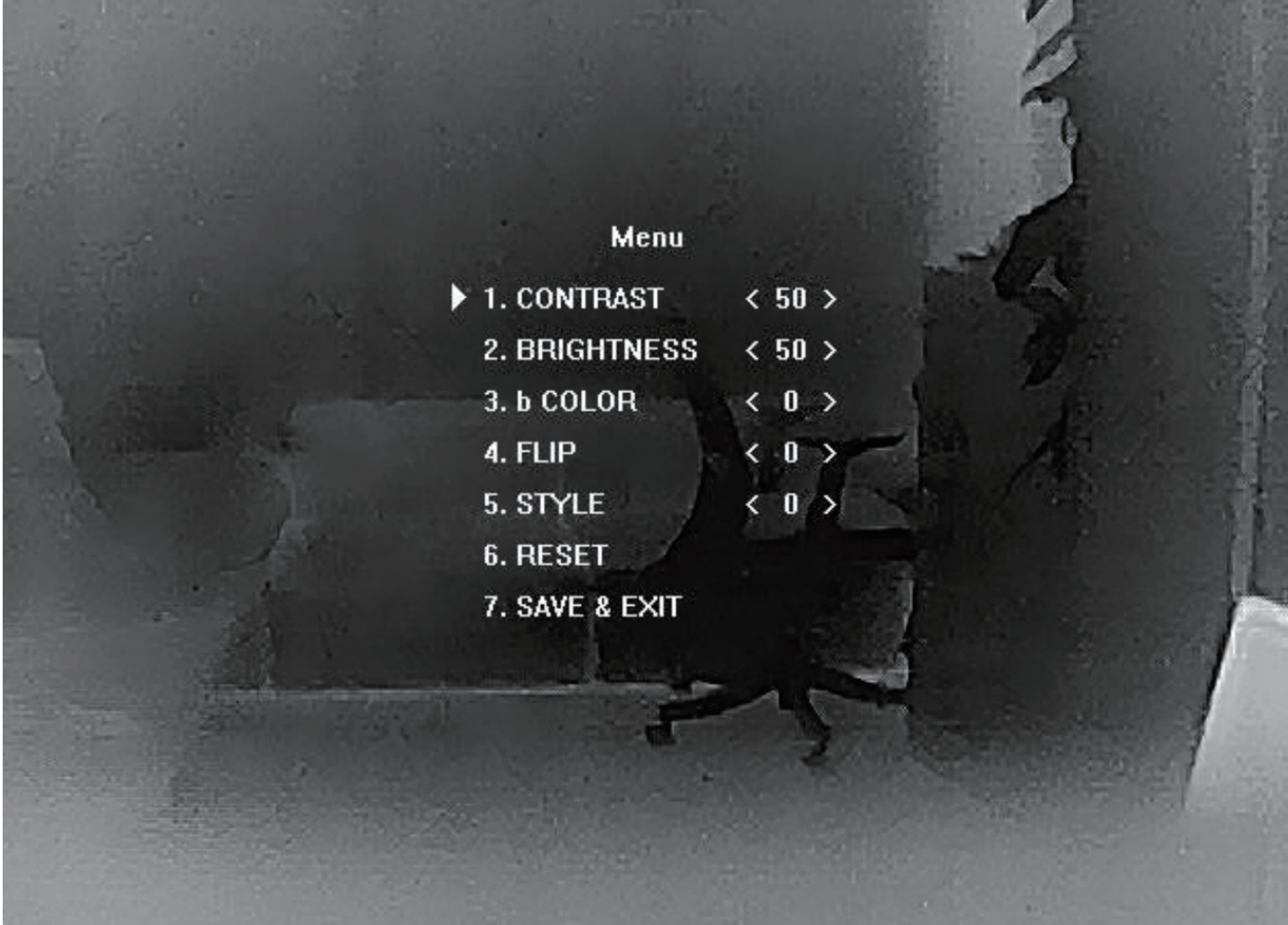
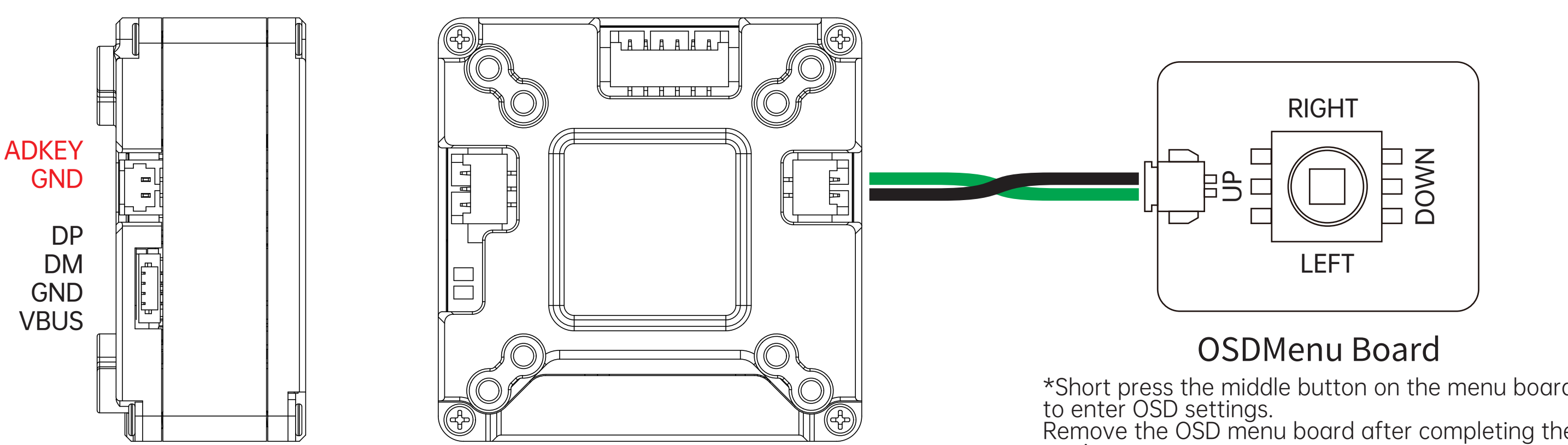
By connecting a UVC (USB Video Class) cable, UVC data output is supported in MJPEG format with a resolution of 640×512.



Dynamic adjustment is implemented through the Processing Unit (PU) control defined by the UVC protocol, where the brightness adjustment interface is UVC_PU_BRIGHTNESS_CONTROL, the contrast adjustment interface is UVC_PU_CONTRAST_CONTROL, and the pseudo-color adjustment interface is UVC_PU_HUE_CONTROL.

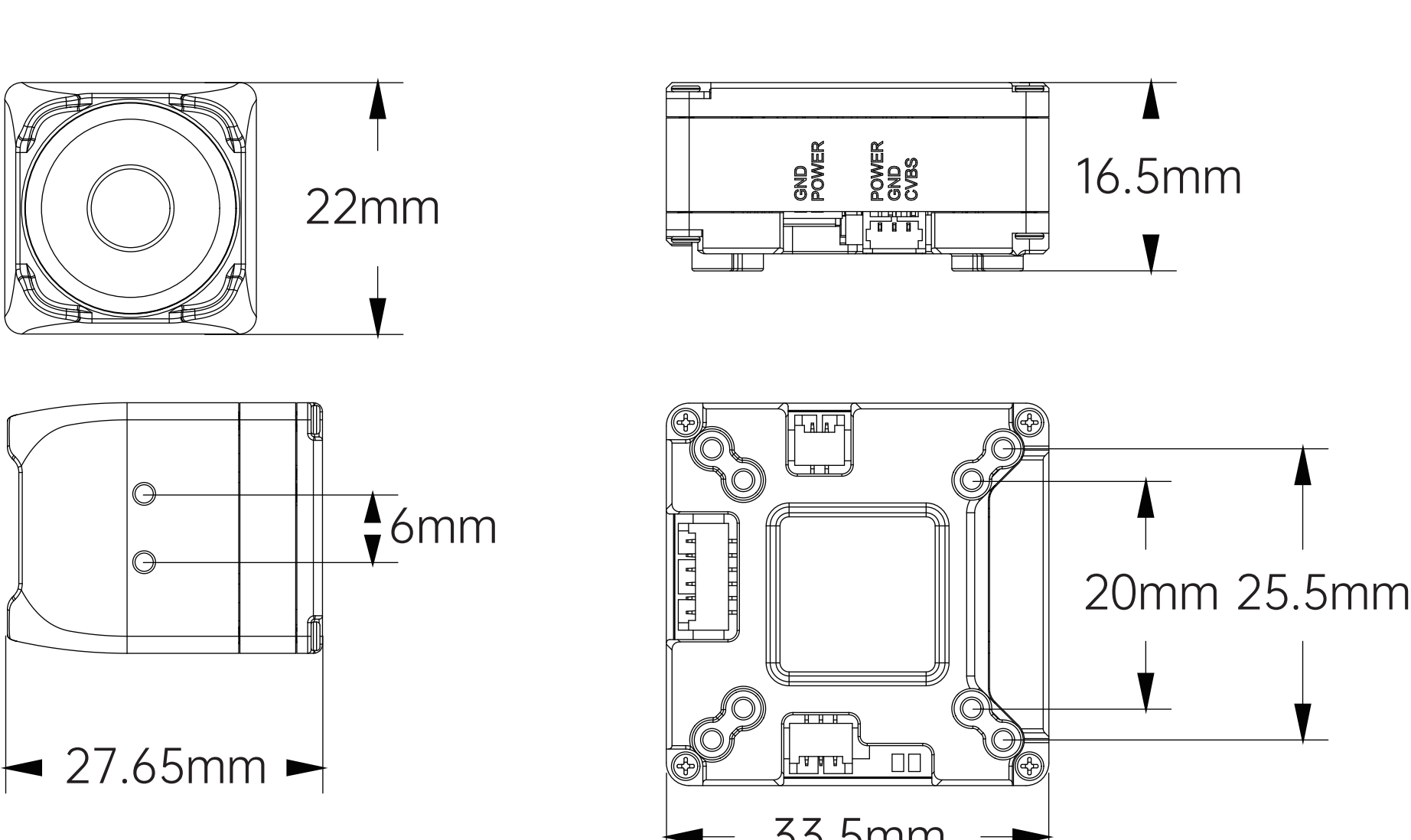
ADKEY Function

The camera's ADKEY and GND support external keypad connection for customizing OSD strings displayed on the video.



The menu board provides an intuitive operation experience through the ADKEY interface: press briefly to enter the menu, use the up/down keys to select functions, and the left/right keys to adjust parameter values. Adjustable parameters include contrast, brightness, pseudo color, image rotation, and picture style, among other display settings.

Specifications



Specifications

Model	Eclipse 005SL
Resolution	576*432 (Pixelpump)
Frame Rate	50Hz
Video Interface	PAL + UVC (simultaneous analog and digital output)
Supply Voltage	4.5V~20V
Typical Power Consumption	<1.5W
Focal Length	5.1mm
F.NO	F1.0
FOV	56° (H) *41°(V)
Adjustment Method	UVC/ ADKEY
Luminance / Contrast	0-100 (optional)
Color Palette	0-4 (optional)
Digital Zoom	1.0~4.0× Stepless Zoom (controllable via UVC)
Image Flip	Horizontal / Vertical / Diagonal
Operating Temperature	-20℃~50℃

Elipse 005SL

使用说明

V1.0



产品简介

- 使用 Pixelpump-Gen3 技术，画质更加清晰，热源更加凸显；
- 支持模拟PAL接口输出；
- 支持客户自定义OSD 字符显示；
- 支持UVC图像输出。

第三代Pixelpump-Gen3技术

Elipse 005SL 搭载第三代Pixelpump-Gen3技术。图1 与图2 分别展示了"小飞手"模拟接收机采集的图像效果对比。其中，图1 采用未搭载Pixelpump-Gen3技术的相机拍摄，而图2 则使用搭载该技术的相机进行图像采集。通过对比可见，搭载Pixelpump-Gen3技术的图像在清晰度方面具有显著优势，且细节呈现更为丰富。

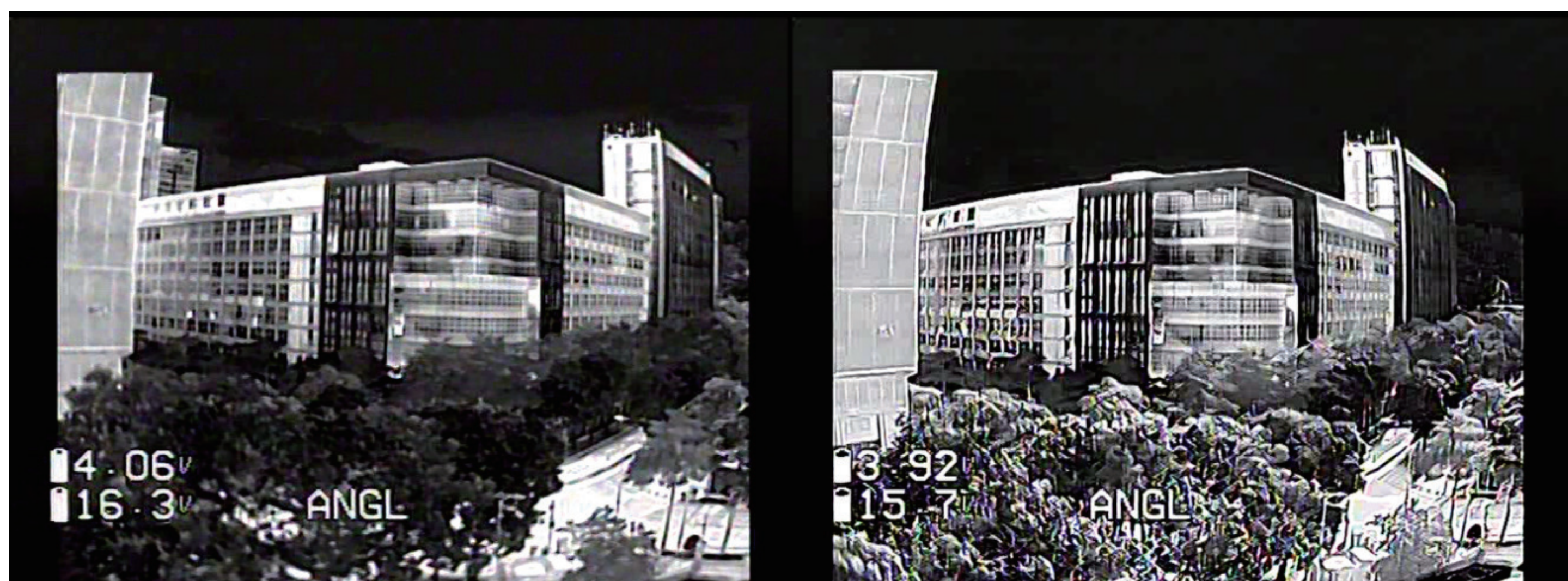
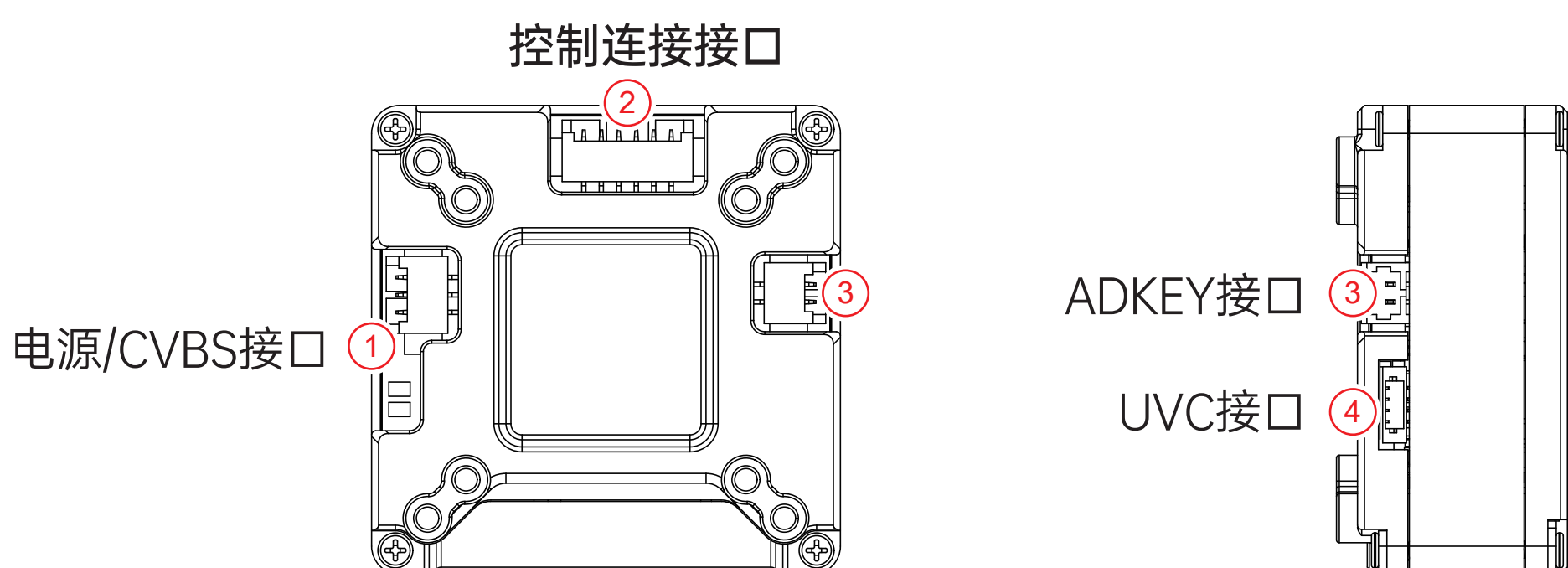


图1 未采用 Pixelpump-Gen3 技术的成像画面

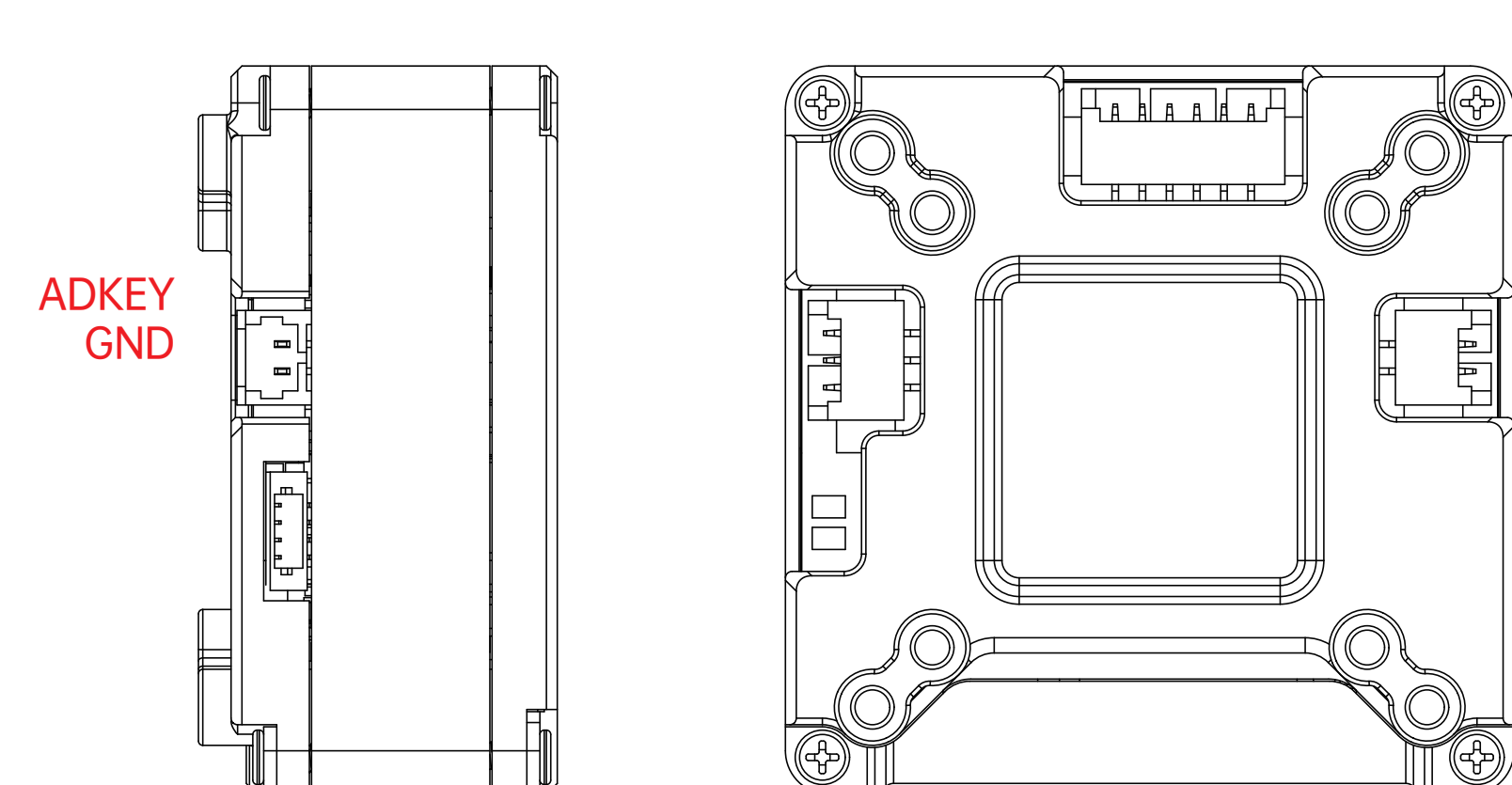
图2 采用 Pixelpump-Gen3 技术的成像画面

接口定义



UVC功能

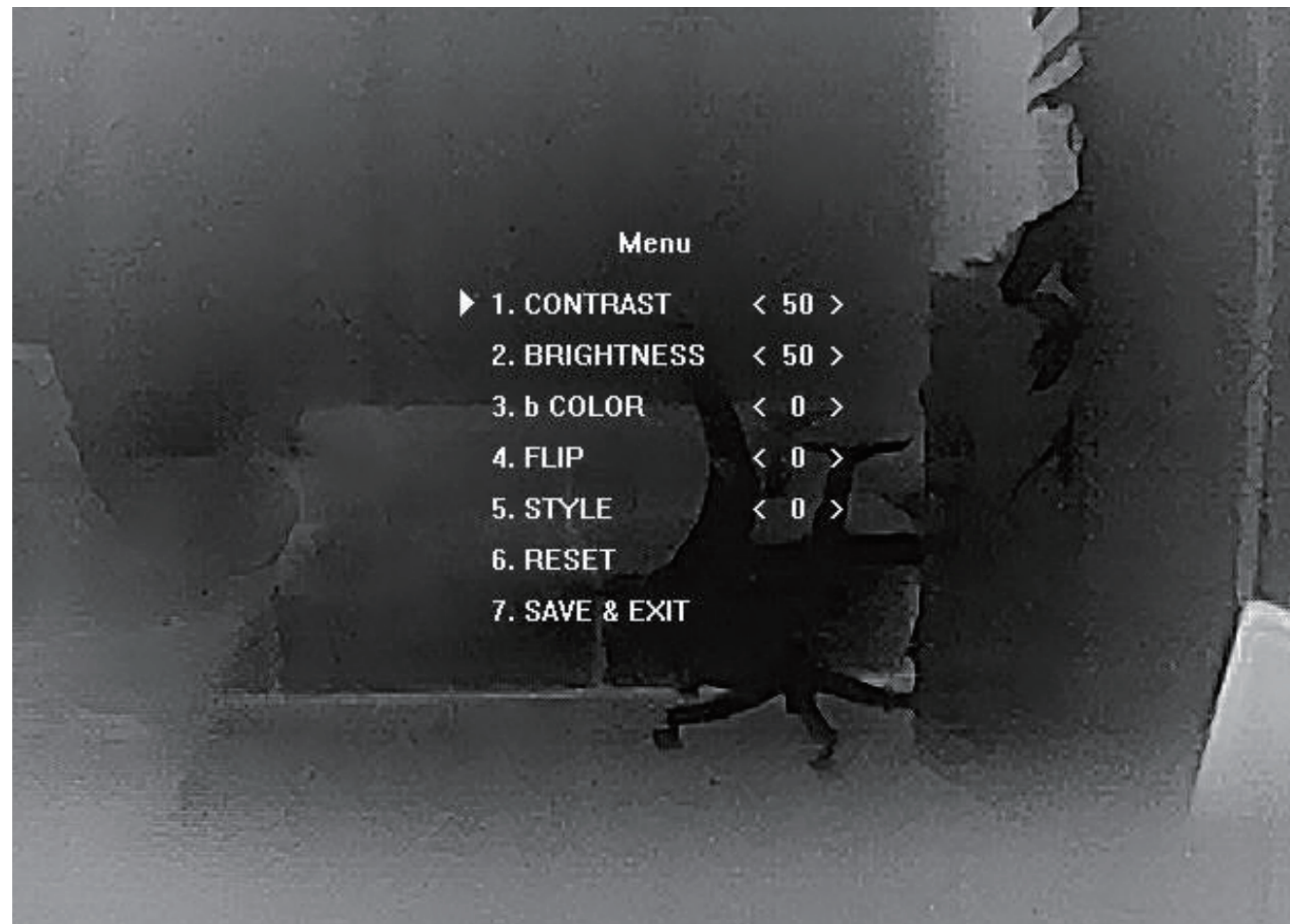
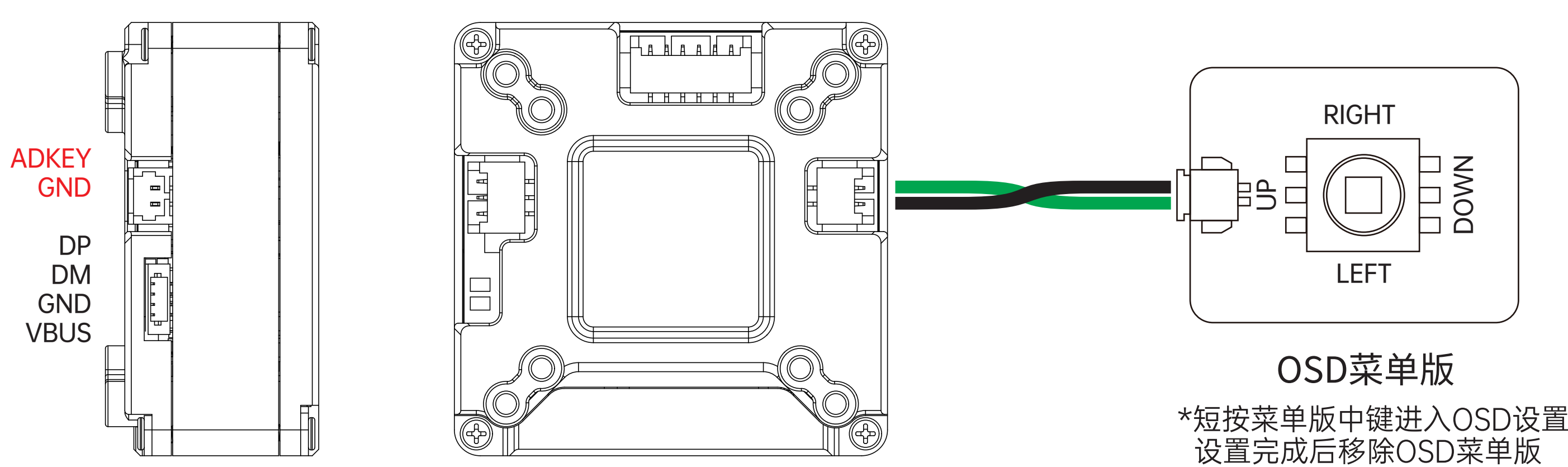
通过连接UVC（USB Video Class）线缆可支持UVC数据输出，格式为MJPEG, 分辨率为640×512。



通过UVC协议定义的 **Processing Unit (PU)** 控制单元实现动态调节，其中亮度的调节接口为 **UVC_PU_BRIGHTNESS_CONTROL**，对比度的调节接口为 **UVC_PU_CONTRAST_CONTROL**，伪彩色的调节接口为**UVC_PU_HUE_CONTROL**。

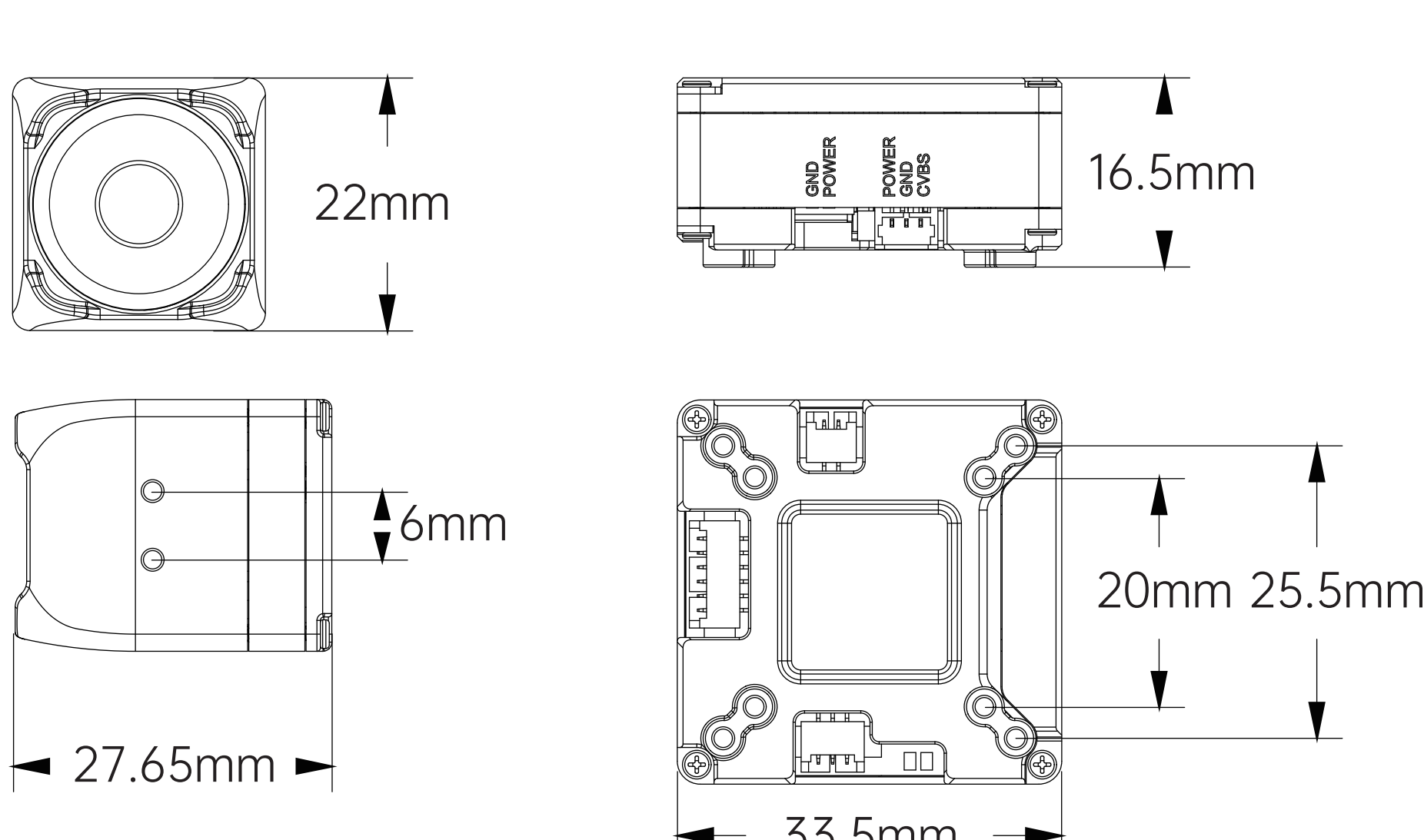
ADKEY功能

相机的ADKEY 和 GND 支持通过外接按键板自定义视频显示的OSD字符串。



菜单板通过ADKEY接口提供直观的操作体验：短按进入菜单，上下键选择功能项，左右键调整参数值。可调节参数包括对比度、亮度、伪彩色、画面旋转及画质风格等多项显示设置。

产品规格



产品规格

型号	Eclipse 005SL
分辨率	576*432 (Pixelpump)
输出帧频	50Hz
视频接口	PAL+UVC（模拟数字可同时输出）
供电范围	4.5V~20V
功耗	<1.5W
焦距	5.1mm
光圈	F1.0
视场角	56° (H) *41°(V)
调节方式	UVC/ ADKEY
亮度/对比度	0-100 可选
色板	0-4 可选
数字变倍	1.0-4.0 无级变倍（UVC可控制）
图像镜像	水平/垂直/斜角
工作温度	-20℃~50℃