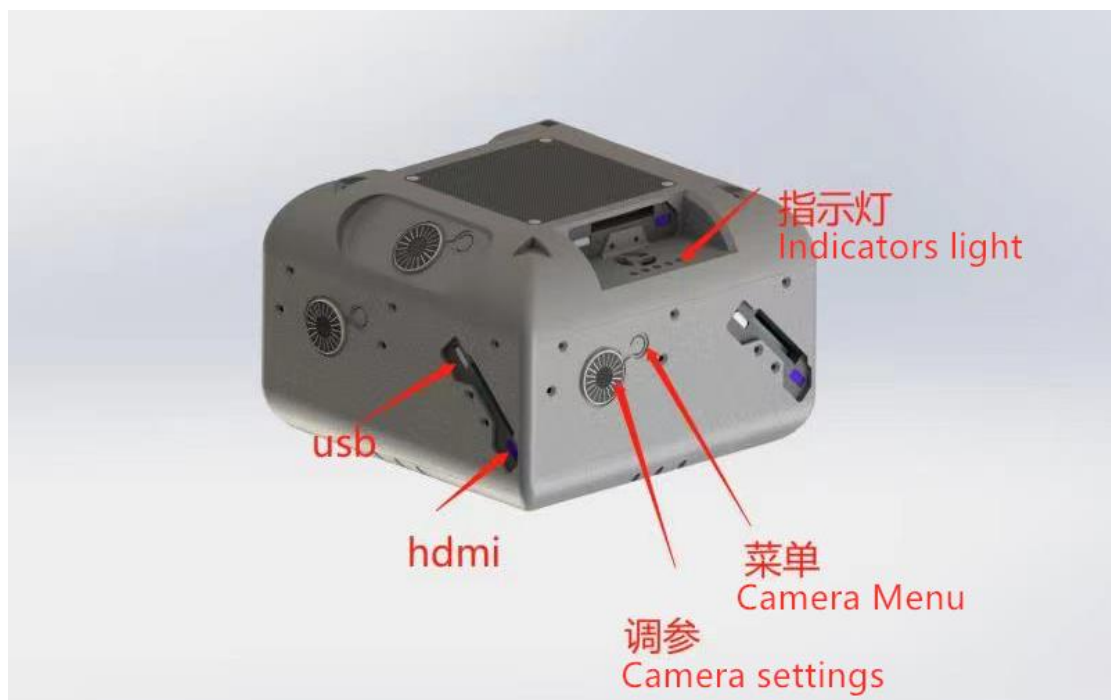# Oblique Camera XS
# User Manual

Version 1.0

1. **Power the camera:**

   Please power the camera with 8-28 V DC power only, if the voltage is higher than 28V, please using step down DC-DC power module, any directly connection with over 28V DC power, will damage the camera control board.

2. **Know the camera lights and Buttons:**



   a. The camera has indicators light – once the camera powered on, the light will flash once, and once the camera will take photo, the each of the indicator light indicates each of the sensor taking photo and writing photo to its SD card, if the LED light is not on, please contact our technical team for problem fixing.
   b. Each sensor has a USB and HDMI ports, USB can connect to your PC, to transfer SD card images without taking the card out from the sensor (you need to make sure the camera settings is 【Set the USB Connection or Transfer mode setting in the camera menu to Mass Storage or Auto】). HDMI can connect to a display for sensor setting changes.
   c. Each sensor has a camera setting wheel, and camera menu button, that are used for corresponding sensor settings change. Please note and make sure all the sensor settings change are exactly the same OR the five sensor will not take photos simultaneously!

**3. Preparing for Your Mapping Mission:**



when camera is on, will need to push for focus

after focus,need to push for manually shutter once before mission

对焦 开机后 需要往复按一次  拍照

开关 来回拨动一次保存

ON/OFF button, also off and on camera for saving the new settings.

a. Once the Camera is powered in, please press the lens focus button twice, it will automatically focus all five sensor lenses, once it is done, please press the manually shutter button to test if all five sensors capture photos simultaneously.
Note: if the sensors are not taking photos, please power off the camera by disconnecting the power with camera, and power back again, and press the focus button and wait a bit longer this time, then test the sensor capturing by manually press the button.
If you note all sensors are not taking photos at same time, you will need to check all five sensor camera settings, they are needed to be exactly the same, the factory settings are the best settings for this oblique camera for all oblique mapping mission, we DO NOT recommend to change the settings unless you know your mission needs absolutely different settings, please contact our technical team if you have any questions or concerns.

b. Before you change any setting, the lens focus button needs to be off, then it will unlock the wheels of each sensor, The ON/OFF button is the button to save the new settings, if you change the sensor settings you will need to switch the ON/OFF button in order to save the new settings.

4. **Camera total cable:**

You should receive a total cable that can plug in the camera only cable port, the total cable include power cable (8-28V), camera PWM cable or TTL cable, camera PPK cable, please check all cable marks, do not plug in the wrong one.

5. **Questions:**
   - One indicator light of the camera does not light up: Plug in the HDMI screen and follow the on-screen prompts. Generally, the card needs to be reset. If the screen is black, please turn on the power and check whether it self-tests for the first time. If it does not, please contact our technical staff.
   - Even the five lights of the camera are not on after changing the card: Connect the HDMI display and initialize the image database.
   - A certain camera performs normal self-test but shuts down as soon as a photo is taken, and the screen displays a camera error: The service life of the shutter curtain has expired. Please contact our technicians and pay attention to dust when using it. Sand and dust will greatly reduce the life of the shutter.
   - Camera photos are blurry: Check whether the aircraft's shock absorption is properly installed, and the shutter setting cannot be lower than 800.
   - After the mission is finished, I found that there are few photos missing: be sure to trigger the camera shutter several times every time you land. If five lights are on, it is normal. If some lights are not on, there may be two issues:

     1. There is no image on the screen. Restart and the camera is normal. The temperature is high. At this time, the reason is that the camera has installed in a poor heat dissipation and automatically shuts down. In this case, it usually happened that the camera is installed in a confined payload bay ( inside the fuselage of a fixed wings or VTOL plane) without any heat dissipation system during the hot weather condition, so as a proper engineering heat dissipation system installed or designed in fuselage is a way to prevent such situation happening.

     2. When the screen prompts a camera error, this situation usually means that the life of the shutter curtain has expired. Please contact technical staff, please note the mechanical shutter does not have infinite lifetime, usually 30000-150000 counts), it will have to be replaced. The lifetime really depends on the working environment, especially the high dust and sandy also high humidity working environment will significantly reduce the mechanical shutter lifetime.