



User manual

Z5S

UHD 4K Video Gimbal Camera

Compatible with DJI M200/M210/V2/M300RTK



Images are for reference only, please subject to the actual product.

Contents

ZSS High-precision Camera

| | |
|---|---|
| Camera introduction..... | 1 |
| Camera description..... | 1 |
| Mechanics@Electronic characteristics..... | 2 |
| Application description..... | 2 |
| 1. Menu instruction..... | 2 |
| 2. Camera Settings..... | 3 |
| 3. Payload Settings..... | 4 |
| 3.1 Display real time data..... | 4 |
| 3.2 Gimbal on/off..... | 5 |
| 3.3 Gimbal recenter..... | 6 |
| 3.4 Gimbal speed..... | 7 |
| 3.5 Gimbal Angles Setting..... | 7 |
| Specification..... | 8 |

Camera Introduction

Z5S is a combination of 3 axis gimbal and SONY a5100 camera with APS-C sensor. The 3-axis gimbal based on FOC technology features high stability, accuracy and sensitivity. The gimbal can be controlled in three directions: YAW, ROLL and PITCH, we use FOC solution can greatly compensate the vibration of UAV. Combined Sony APS-C sensor with a5100 interchangeable lens, Z5S have been widely used in various fields like electrical industry, transmission towers, electric substations, zoom aerial photography and other industries in the application of drones. It can be used on DJI drones M200 / M210 / M210RTK and V2, and controlled directly by APP DJI PILOT. The one-key to center function will allow the gimbal return to initial position automatically and rapidly. You can input a degree in APP Payload Setting and get the gimbal attitude exactly.

Camera Description



Please make sure that the motor is not stopped by any object during the rotation, if the gimbal is blocked during rotation, please remove the obstruction immediately.

Mechanics@Electronic Characteristics

| | | | |
|-----------------|---------------|--------------------------|-------------|
| Input voltage | 3S~ 4S | Idle current | 330mA@12V |
| Dynamic current | 450mA@12V | Working environment temp | 0 C ~ +40 C |
| Size | 127*125*130mm | Weight | |

Pitch/Tilt: Pitch angle range of action : ± 90

Roll: Roll angle range of action : $\pm 85^{\circ}$

Yaw/Pan: Yaw angle range of action : $\pm 360^{\circ}$ N

Vibration angle: Pitch/Roll: $\pm 0.02^{\circ}$, Yaw: $\pm 0.03^{\circ}$

Application Description

DJI Pilot

After mounting Z5S on DJI drone and connecting with remote control, you can operate the gimbal camera via APP DJI Pilot. The gimbal attitude angles (tilt and pan) can be controlled by DJI remote control. Control method please refer to DJI related user manual.

1. Menu instruction

The image shows a screenshot of the DJI Pilot app interface. The main display is a live video feed of a cityscape. On the right side, there is a vertical control panel with several buttons and indicators. A red circle highlights the 'AF/MF' button at the top, with a label 'Auto / Manual focus' pointing to it. Below it, another red circle highlights the 'MENU' button, with a label 'Payload Settings' pointing to it. Further down, a red circle highlights the 'Picture and record switch' button, with a label 'Camera Settings' pointing to it. Below that, a red circle highlights the 'Zoom times' button, with a label 'Picture and record switch' pointing to it. Below that, a red circle highlights the 'Shutter button', with a label 'Zoom times' pointing to it. At the bottom of the control panel, a red circle highlights the 'Return to 1.0x zoom' button, with a label 'Shutter button' pointing to it. The bottom of the screen shows camera settings: '1/125', 'F11', 'ISO', 'D N/A', 'H.S. N/A', and '10000'. A green line points to the top left corner of the video feed, labeled 'Real time data'. The top of the screen shows the DJI logo and 'Ready to GO (Vision)'.

2. Camera setting

2.1 Photo mode setting

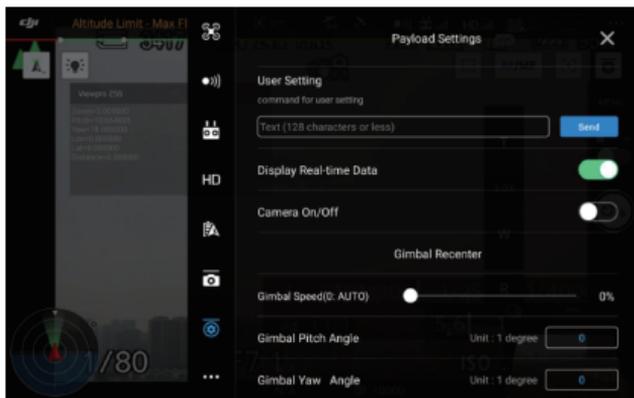
You can choose single shot, burst mode or interval mode.



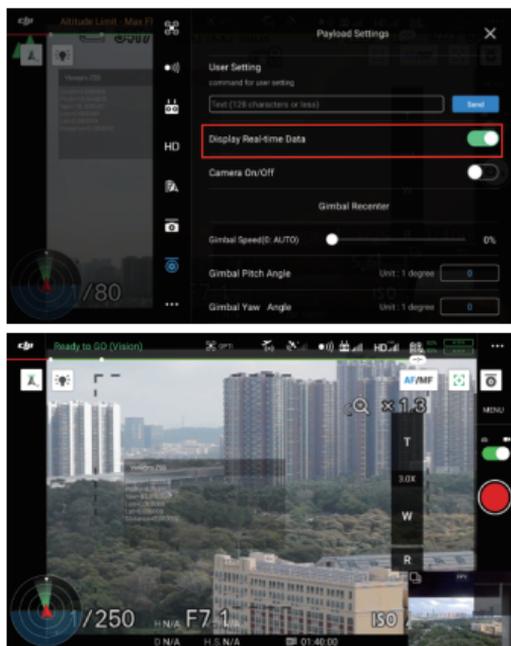
2.2 Record mode setting



3. Payload Settings

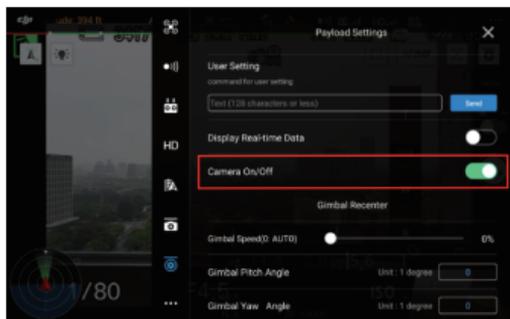


3.1 Display real time data:



3.2 Camera on/off: to switch both On and Off the camera, you need to turn on and off the button once as one action.

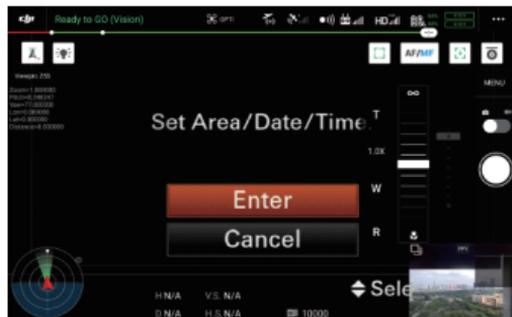
- All camera settings can only be saved after camera on/off.
- Turn off the camera before power off so that setting requirements won't pop-up again when you reboot
- Turn camera off could protect the camera lens during taking off and landing.



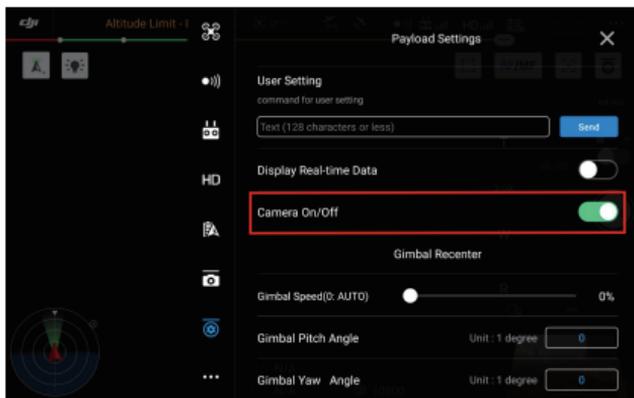
Turn off camera: "No video signal" on OSD



Turn on camera: Set the camera as needed (Area, Date, Time, Language...)
(For more camera setting instruction please refer to user manual of SONY a5100.)

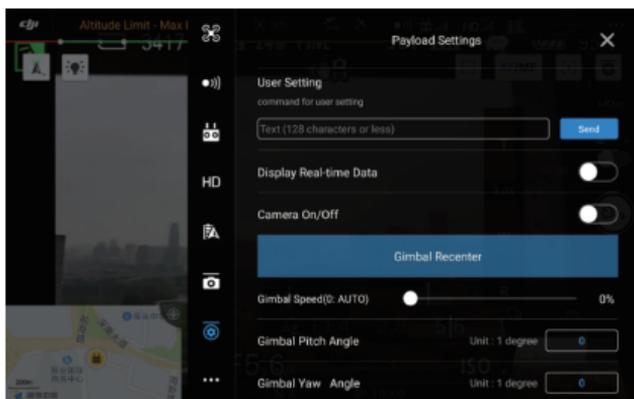


Note: Make sure camera is off before shutting down.



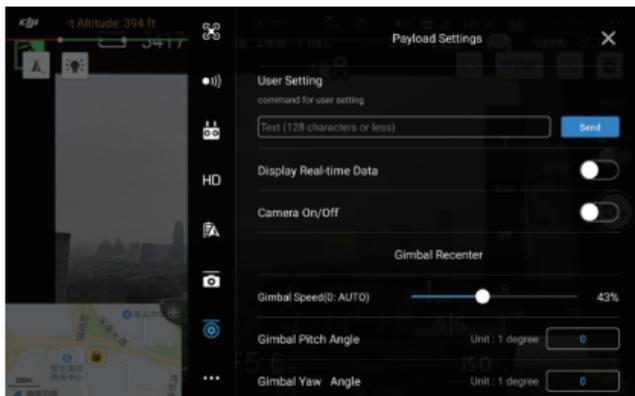
33 Gimbal recenter:

Gimbal recenter will allow the gimbal return to initial position automatically and rapidly.



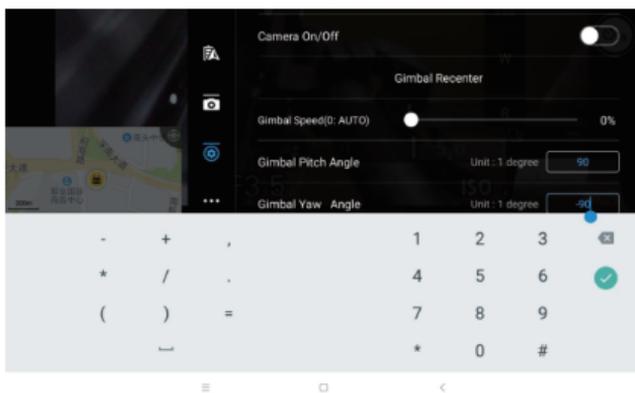
3.4 Gimbal speed

Gimbal speed is adjustable. When it's 0%, the speed will adjust automatically, quick speed for wide end, slow speed for tele end. When you adjust it to 1% manually, the speed will be low even in wide end. The high the percentage is, the quicker the speed will be.



3.5 Gimbal Angles Setting

Input the pitch / yaw angle degrees to get exact attitude angles directly.



Specification

| Hardware Parameter | |
|---------------------------|--|
| Working voltage | 12V ~ 16V |
| Input voltage | 3S ~ 4S |
| Output voltage | 5V (connected with PWM) |
| Dynamic current | 450mA @ 12V |
| Idle current | 330mA @ 12V |
| Power consumption | ≤5.4W |
| Working environment temp. | 0℃ ~ +40℃ |
| Output | Slipport |
| Local-storage | SD card (Up to 64G, class 4, FAT32 or ex FAT format) |
| Control method | DJI Pilot (control zoom, focus, photograph, record, on/off camera) |
| Gimbal Spec | |
| Pitch/Tilt | -45° ~ +90° |
| Roll | ±45° |
| Yaw/Pan | ±360° |
| Vibration angle | Pitch/Roll: ±0.02°, Yaw: ±0.03° |
| One-key to center | √ |
| Camera Spec | |
| Imager Sensor | SONY Exmor CMOS, 23.5x15.8mm (APS-C) |
| Lens | 16~50mm, F3.5-5.6 OSS |
| Zoom | 2x optical zoom |
| Digital zoom | 4x |
| Effective pixel | 24.3MP |
| Total pixel | 24.7MP |
| Image Sensor aspect ratio | 3:2 |
| Recording format | AVCHD 2.0 / MP4 / XAVC S |
| Image format | JPEG (DCF Ver. 2.0, Exif Ver.2.3, MPF Baseline compliant), RAW (Sony ARW 2.3 format) |
| Image size (pixels), 3:2 | L: 6000 x 4000 (24 M) M: 4240 x 2832 (12 M) S: 3008 x 2000 (6.0 M) |
| Dynamic range functions | Auto High Dynamic Range (Auto Exposure Difference, Exposure Difference Level (1-6 EV, 1.0 EV step)) Dynamic Range Optimizer (Auto/Level (1-5)) Off |
| Backlight compensation | Yes |
| Shutter speed | Movies: 1/4000 to 1/4 (1/3 steps) up to 1/60 in AUTO mode (up to 1/30 in Auto slow shutter mode) Still Images: 1/4000 to 30 sec, Bulb |
| White balance | Auto |
| Focus type | Fast Hybrid AF (phase-detection AF/contrast-detection AF) |
| AF mode | AF-A (Automatic AF), AF-S (Single-shot AF), AF-C (Continuous AF), DMF (Direct Manual Focus), Manual Focus |
| Exposure compensation | Still images: +/- 3.0EV (1/3EV steps), Movies: +/- 2.0EV (1/3EV steps) |
| Gain | Auto |
| OSD | Yes |
| Facial Detection | On, On (Regist. Faces), Off |
| Packing Information | |
| N.W. | 570g |
| Product meas. | 127*125*130mm |
| Accessories | 1pc gimbal camera device / High quality plastic box with foam cushion |