

X-CAM A22-3H for SONY NEX5 3 Axis Gimbal User Manual



X-CAM A22-3H has been finished with all the adjustments before launch the market, **READY TO RUN.**

Parameters

Weight: 800g (without Camera & Lens) Stabilization frequency: 5800Hz
Input voltage: 11.1v~22.2v (3S ~ 6S Lipo) Tilt travel: +-90 degree; Rolling travel: +-45 degree
YAW travel: 360 degrees with unlimited rotation Built-in HDMI to AV Module
Auto Pilot System supporting is not required Support Lens: 16mm Fixed(**Default**), 16-50mm, 16mm +0.75 wide angle
Support Camera: SONY NEX5 Series (**Default**), NEX7、BMPCC、SONY A5000、A6000

Accessories



- X-CAM A22-3H Gimbal Frame X 1
- X-CAM A22-3H Main Controller X 1
- USB Cable X 1
- PPM Cable X 1
- The camera fixed screw X 1
- Damping balls X 15
- HDMI To AV Card x 1

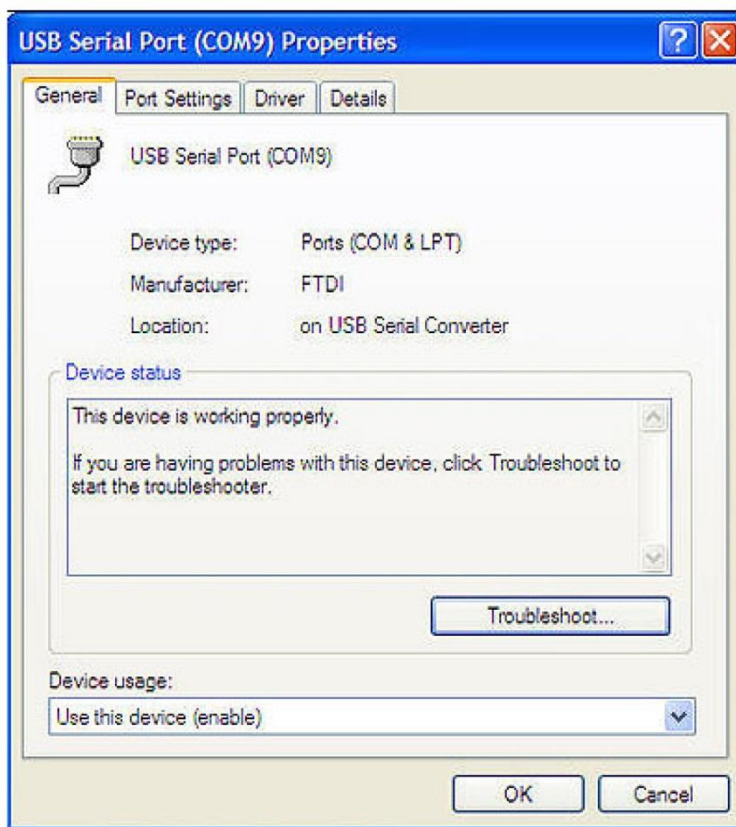
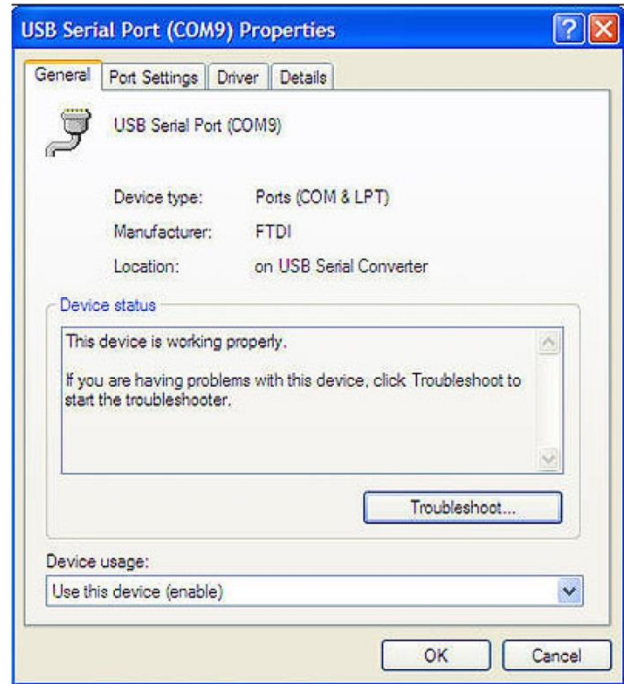
Connection Instructions



PC Software

Connect with PC

Uses the USB adapter to connect with your PC , Normally the Windows can find the driver automatically, you could find the PORT number in the device Manager



Launch the X-CAM Gimbal Stabilization Module Assistant , choose the correct port number and click CONNECT



BEEP BEEP will be shouted after the connection succeed, the parameters will be read out automatically.

The parameters as below:

1. Gains

There are 2 gains, Position Gain and Acceleration Gain

Pos. Gain: Inclined the gimbal to one position slowly and watch the image is horizontal or not, if not just adjust the Pos. Gain.

Acc. Gain: After adjusting the Pos. Gain, Inclined the gimbal to one position quickly and watch the image is horizontal in time, if not just adjust the Acc. Gain.

Notice: the A10-3H has been finished the adjusting, does not need to adjust again in normally

Axis	Position Gain	Accelerated Gain	Speed Gain	Push Speed	Follow Speed
TILT Axis	110	180	2	10	168
ROLL Axis	160	200	2	10	246
PAN Axis	50	180	2	10	18

2. Gimbal Control

The A10-3H provides 2 ways to control the TILT, Linear Mode or Tracking Mode

Linear Mode: Push the TILT stick to high or low for moving the camera mount to up or down until the stick back to midpoint

Tracking Mode: Push the TILT stick to high or low, the camera mount will follow the stick position.

SENSOR

X 128 Auto Calibration

Y 128 Sensor Calibration

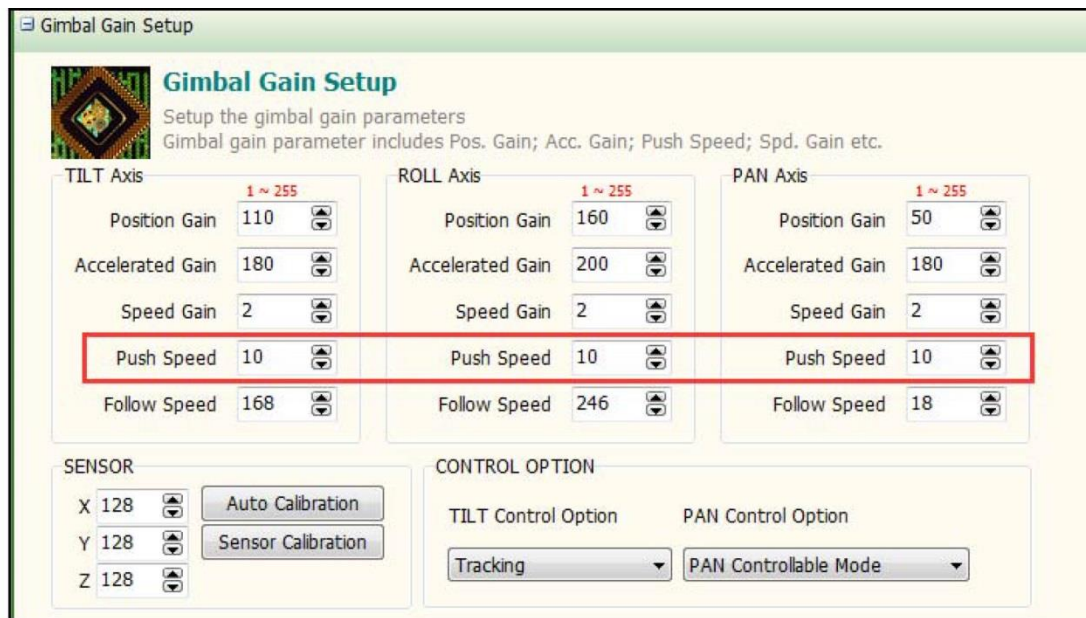
Z 128

CONTROL OPTION

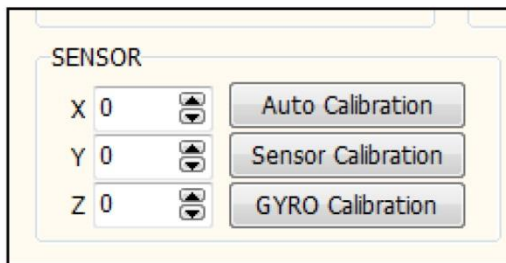
TILT Control Option: Tracking

PAN Control Option: PAN Controllable Mode

Push speed: Setup the camera mount moving speed, high value set high speed; low value set low speed.



3. Sensor calibration



Auto Calibration

If the screen frame is not horizontal please do the "Auto Calibration" as below:

1. Put a Balance of bubble ball on the camera frame and make the camera frame is perpendicular to the ground by 90 degree.
2. make the camera frame is horizontal manually
3. hold the camera frame and click "Auto Calibration"

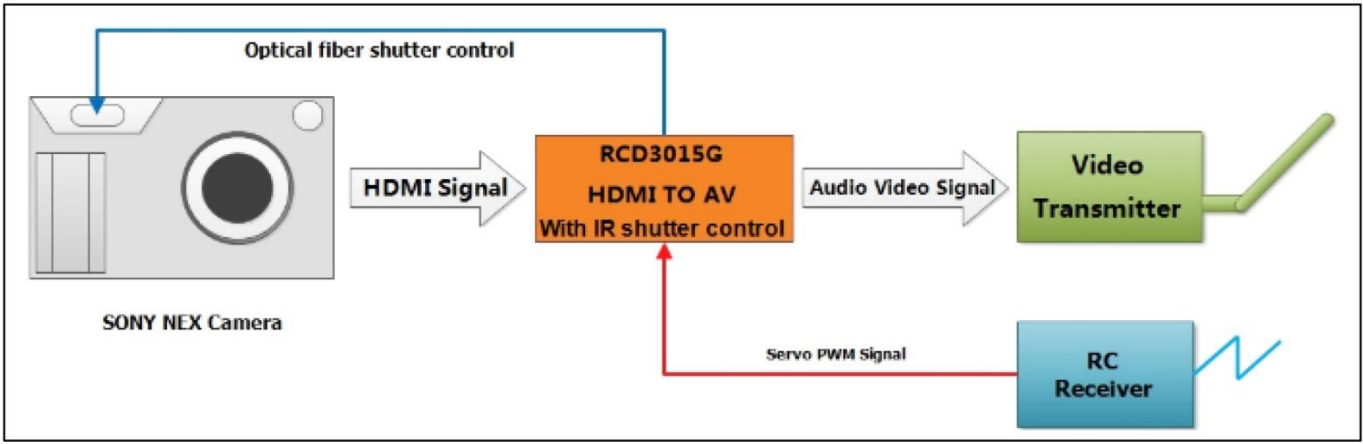
Sensor Calibration

If the screen frame is still not horizontal then you have to set the "Sensor Calibration", input the X,Y,Z offset value and click "Sensor Calibration"

GYRO Calibration

Make sure the gimbal in quietude and click "GYRO Calibration", this function will reduce the error which comes from the environment temperature

Please notice these setup must be set very carefully, we strongly recommend set these parameters with X-CAM supporting.



Initial Settings:

1. Set the camera HDMI output to auto resolution mode.
2. Set the video mode to infrared remote control mode.
3. Connect RCD3015G HDMI converter with the camera, connect the servo cable of shutter controlling with the remote control receiver.
4. Initialize the Camera by pressing the shutter once to get the camera out of review mode.
5. Install the optical fiber on RCD3015G converter, stick the other end of the optical fiber over the window of infrared receiver on the camera.

Important Note:

You need to have a transmitter with a 3 position switch. Map this 3 position switch to a spare channel and connect the servo cable from the RCD3015G to this channel. If there is no connection, RCD3015G works only as a HDMI to AV converter.

The control of 3-pos switch:

1. Up: Takes a photo (Shutter is pressed)
2. Middle: Shutter is off / Recording is off
3. Down: Video recording is on.

It is very important that the 3-position switch is set in the middle (neutral) position before you power up your RCD3015G converter. (Note : RCD3015G powers up when you turn on the camera or power supply of receiver) When the shutter control 3-pos switch is in the middle(stop/neutral) position, the red LED is on constantly. If there is no signal from the receiver, the red LED flashes 4 times per second, it reminds customer to check if the receiver is powered and the transmitter is turned on.

Taking Photos :

Toggle the 3-POS switch from middle position to the up position, the camera will start taking photos until the 3-POS switch is toggled to the middle position. In this mode the red LED flashes 2 times per second.

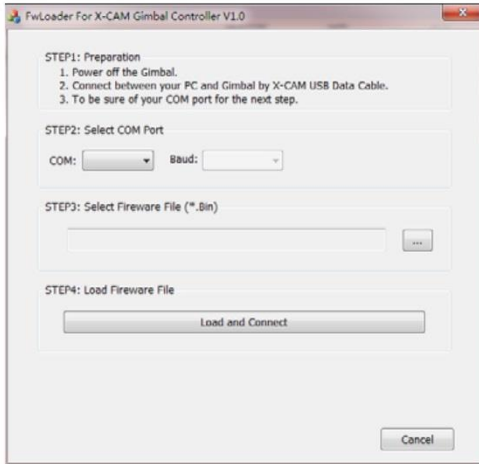
Recording video:

Toggle the 3-POS switch from the middle position to down position, the camera starts recording a video till the 3-POS switch is toggled to the middle position. Video is saved in this position. In this mode, the RED LED blinks continuously.

Attention:

There must be a 5 second interval between each operation of the 3-POS switch. e.g. Switching from neutral to recording position and then back to neutral (recording stop). Please wait for 5 seconds between each mode change. The 5 second interval is required by the camera firmware. It allows the camera to clear the buffer and safely write the video file to storage. Operating the the 3-POS switch without observing the 5 second gap will cause the camera to hang and can result in corrupt video files.

Firmware upgrade



1. Turn off the X-CAM A10-3H
2. Uses the USB cable to connect with your PC, Normally the windows can find the driver automatically, you will find the PORT number in the device manager.
3. Select the COM port number
4. Open the firmware file (*.bin)
5. Click "Load and Connect" button
6. Turn on the X-CAM A10-3H, it will upgrade the firmware automatically

Notice: Please do not touch anything and keep the power on during the upgrade, if the upgrade is break please back to STEP 1 and try again, normally it could be fix automatically. It will beep 4 times after upgrade and the system will be restarted.

Announcements

1. Do not touch the gimbal during the initialization after turn on, Keep the gimbal in quietude
2. Do not use BEC for the gimbal power, use 3~6S Lipo battery
3. Strongly recommend using 12mm tube to mount the gimbal
4. Make sure the center of gravity of the gimbal is correct before using.

保修及免责声明

The gimbals are covered by one year limited warranty. Please do not disassemble or modify mechanical structure in the warranty period. The customized program of the control module is based on the gimbal structure and motors, and all debugging has been completed in factory. Any direct or indirect damages caused by a user during use or damage will not be covered by our warranty, and X-CAM will not compensate the loss and the corresponding liability.

X-CAM does not take any responsibility toward any damage or loss in using the gimbal.

产品保修登记 : <http://warranty.x-camtech.com/cgi-bin/XCamWarranty.dll>