X-CAM A10-3H for GOPRO 3 Axis Gimbal User Manual



X-CAM A10-3H for GOPRO 3 Axis Gimbal has been finished with all the adjustments before launch the market, READY TO RUN.

Parameters

Weight: 280g (without GOPRO) Stabilization frequency: 5200Hz Input voltage(DC): 7.4v ~ 16.8v (2S ~ 4S Lipo) Tilt travel: +-90 degree; Rolling travel: +-45 degree YAW travel: 360 degrees with unlimited rotation Built in AV ouput & Charging Module Auto Pilot System supporting is not required Built in 3 Gyroscope sensors & 1 Position sensor Supports automatic location function

Accessories



- 1 x X-CAM A10-3H Gimbal Frame
- 1 x X-CAM A10-3H Controller
- 1 x USB Cable
- 1 x PPM Cable
- 5 x Damping balls
- 4 x Rubber rings
- 4 x Fastener rings







X-CAM A10-3H for GOPRO 3 Axis Gimbal Connection Instructions



The S-BUS output comes with full functions which have been defined channel number:

Channel 1 : ROLL Control Channel 2: Return to HOME Channel 3: TILT Control Channel 4: YAW Control Channel 5: Mode switch

The recommend operation methods

- 1. Single control: Just connect PPM channel for HEAD FOLLOWING , HEAD LOCK and AUTO BACK TO HOME mode, S-BUS channel connection is not required, One receiver only.
- 2. Dual control: Only S-BUS output channel mode provides full functions. But 2 receivers are required

Notice: It does not required to supply the power to the receiver when under dual control mode, the A10-3H controller will supply the power to the receiver via the S-BUS.

The AV output adapter indicator: diagram





You may connect your own video transmitter here , the YELLOW wire is the video signal and the PINK wire is GND

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

🖳 Device Manager	
File Action View Help	USB Serial Port (COM9) Properties ?
+ → ∰ 67 68 12 23	
E-B SAMPSON	General Port Settings Driver Details
Ball Biometric B - B Computer B - B Display adapters B - B Display adapters	USB Serial Port (COM9)
	Device type: Ports (COM & LPT)
 	Manufacturer: FTDI
Mice and other pointing devices Modems	Location: on USB Serial Converter
🖲 😼 Monitors	C Device status
Beneficial Solutions Beneficial Solution Beneficial Solut	This device is working properly.
 	Troubleshoot
	Device usage:
 Intel(R) ICH8 Family US8 Universal Host Controller - 2831 Intel(R) ICH8 Family US8 Universal Host Controller - 2834 Intel(R) ICH8 Family US8 Universal Host Controller - 2835 	Use this device (enable)
Intel(R) ICH8 Family US82 Enhanced Host Controller - 2836 Intel(R) ICH8 Family US82 Enhanced Host Controller - 283A US8 Root Hub	OK Cancel

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

▼ 连接 (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

「云台感度参数设置								
	nes and servos, t	置 <u>More Info</u> his setup will be a large differenc 动机架和不同的舱机感度的差昇		,需要而	1心调试设置			
俯 <mark>仰蛇和(TTLT)</mark>		描:察蛇机(ROLL)		_	一 垂直转向 舵机 (PAN)			
1~255 位置感度 (Pos. Gain)	80	1~255 位置感度 (Pos. Gain)	80		1 ~ 255 位置感度 (Pos. Gain)	80	۲	
加速感度 (Acc. Gain)	160	加速感度 (Acc. Gain)	160		加速感度 (Acc. Gain)	160	۲	
	10	推行速度 (Push Speed)	10		推行速度 (Push Speed)	10		
减速比 (Reduction Rate)	1	减速比 (Reduction Rate)	1		减速比 (Reduction Rate)	1	۲	
传感器 (SENSOR)				云台 ((SIMBAL)			
X轴偏移量 (X Axis Offset)	10 🕃 Y轴	偏移量 (Y Axis Offset) 10	Ŧ	遥控フ	方式 (Control Way) 速度方式 定位方式			
					0212732			

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.

	es and se	rvos, th	5 <u>More Info</u> nis setup will be a large differenc 机架和不同的舵机感度的差异		,需要而	1心调试设置		
俯仰舵机 (TILT) 1 ~ 255			─橫滚舵机 (ROLL) 1 ~ 255			垂直转向舵机 (PAN) 1 ~ 255		
位置感度 (Pos. Gain)	80		位置感度 (Pos. Gain)	80		位置感度 (Pos. Gain)	80	
加速感度 (Acc. Gain)	160		加速感度 <mark>(</mark> Acc. Gain)	160		加速感度 <mark>(Acc. Gain)</mark>	160	
推行速度 <mark>(</mark> Push Speed)	10	۲	推行速度 (Push Speed)	10		推行速度 (Push Speed)	10	۲
减速比 (Reduction Rate)	1		减速比 (Reduction Rate)	1		减速比 (Reduction Rate)	1	
传感器 (SENSOR)					云台 (GIMBAL)		
X轴偏移量 (X Axis Offset)	10 🦉	Y轴(扁移量 (Y Axis Offset) 10		遥控刀	方式 (Control Way) 速度方式 定位方式		

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

	nes and	servos, t	置 <u>More_Info</u> his setup will be a large differenc 的机架和不同的舵机感度的差异		,需要而	1心调试设置		
俯仰舵机(TILT)			橫滚舵机 (ROLL)			垂直转向舵机 (PAN)		
1~255 位置感度 (Pos. Gain)	80	F	1 ~ 255 位置感度 (Pos. Gain)	80		1 ~ 255 位置感度 (Pos. Gain)	80	Ð
加速感度 <mark>(</mark> Acc. Gain)	160		加速感度 (Acc. Gain)	160		加速感度 (Acc. Gain)	160	
推行速度 (Push Speed)	10		推行速度 (Push Speed)	10		推行速度 (Push Speed)	10	
减速比 (Reduction Rate)	1	۲	减速比 (Reduction Rate)	1		减速比 (Reduction Rate)	1	۲
传感器 (SENSOR) X轴偏移量 (X Axis Offset)	10	子 Y轴	偏移里 (Y Axis Offset) 10			GIMBAL) 方式 (Control Way) 速度方式 定位方式		

3. Sensor Offset

Do not set this value without the technical support from X-CAM

俯仰舵机(TILT)		橫滚舵机 (ROLL)		垂直转向舵机 (PAN)		
1~255 位置感度 (Pos. Gain)	80	1 ~ 255 位置感度 (Pos. Gain)	80	1 ~ 255 位置感度 (Pos. Gain)	80	
加速感度 (Acc. Gain)	160	加速感度 (Acc. Gain)	160	加速感度 (Acc. Gain)	160	
推行速度 (Push Speed)	10	推行速度 (Push Speed)	10	推行速度 (Push Speed)	10	
咸速比 (Reduction Rate)	1	减速比 (Reduction Rate)	1	减速比 (Reduction Rate)	1	

Firmware upgrade

STEP1: Preparation			
1. Power off the		i by X-CAM USB Data Cable.	
	f your COM port for the r		
STEP2: Select COM	4 Port		
COM:	- Baud:	w	
STEP3: Select Fire	ware File (*.Bin)		
STEP4: Load Firew	are File		
	Load and C	Connect	

- 1. Turn off the X-CAM A10-3H
- 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 2~4S 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.

Disclaimer

X-CAM A10-3H gimbals are covered by one year limited warranty. Please do not disassemble or modify mechanical structure in the warranty period. The customized program of X140B control module is based on A10-3H 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 A10-3H gimbal.