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*Reading software such as Adobe Reader is needed to support the functions above.



SMOOTH-X2

User Guide

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Product List

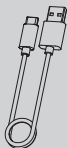
Before using this product, please check carefully that all the following items are included in the product package. In case that any item is found missing, please contact ZHIYUN or your local selling agent.



SMOOTH-X2 x1



Tripod x1



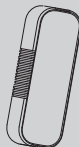
USB Type-C cable x1



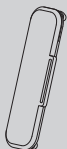
Storage Pouch x1



Storage Bag* x1



Magnetic Fill Light* x1



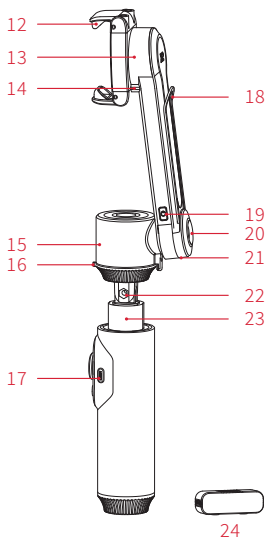
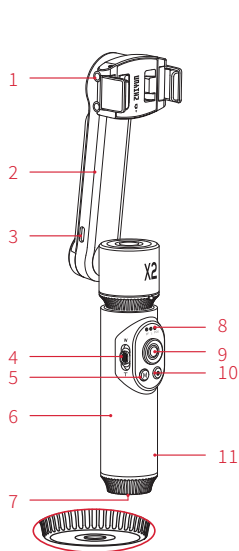
Fill Light Filters* x4



Membership Card* x1

Items marked "*" are included in SMOOTH-X2 COMBO.

Get to Know SMOOTH-X2



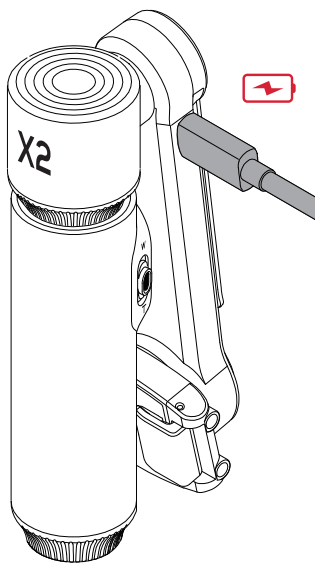
1. Magnetic Fill Light Slot
2. Vertical Arm
3. Type-C Charging/Firmware Upgrade Port
4. Zoom Rocker
5. M Button
6. Handle
7. 1/4 Screw Hole
8. Gimbal Mode Status Light
9. Joystick
10. Photo/Video Button
11. Battery Level Indicator Light

12. Phone Clamp
13. Roll Axis Motor
14. Phone Clamp Lock Pin
15. Pan Axis Motor
16. Pan Axis Lock Pin
17. Magnetic Fill Light Button
18. Retaining Clip
19. Power Button
20. Status Indicator Light
21. Vertical Arm Rotate Axis
22. Tilt Adjust Axis
23. Extensive Rod
24. Magnetic Fill Light (In SMOOTH-X2 Combo)

Battery and Charging

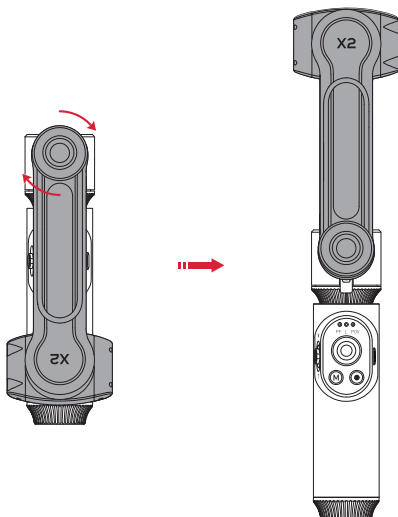
SMOOTH-X2 is equipped with built-in battery. When using SMOOTH-X2 for the first time, please fully charge the batteries to activate them and to ensure the proper function of the gimbal.

Charging method: Use provided USB Type-C cable to connect the USB charger (not provided, recommend 5V2A) to the charging port of SMOOTH-X2. When the battery level indicator light is a solid white light, the charging is complete.



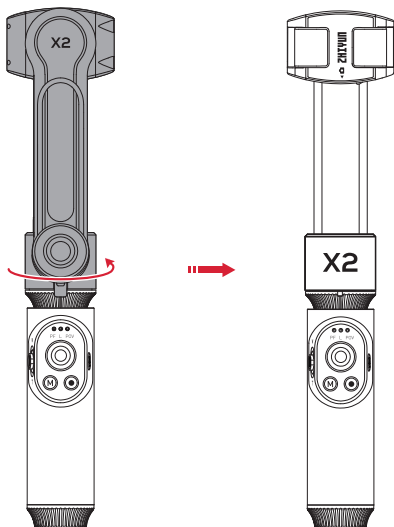
Mounting the Phone

1. Expand the vertical arm as shown in the image.



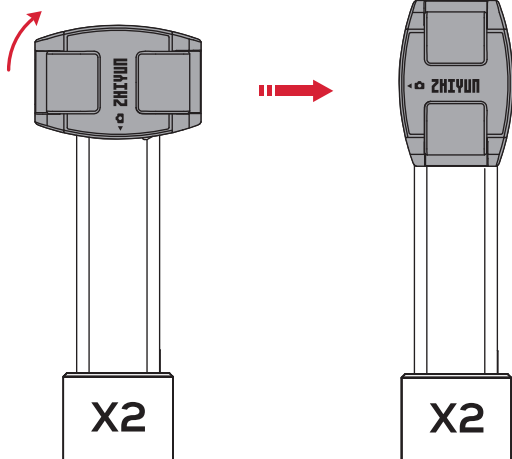
💡 Can be rotated clockwise or counterclockwise.

2. Unlock the pan axis.



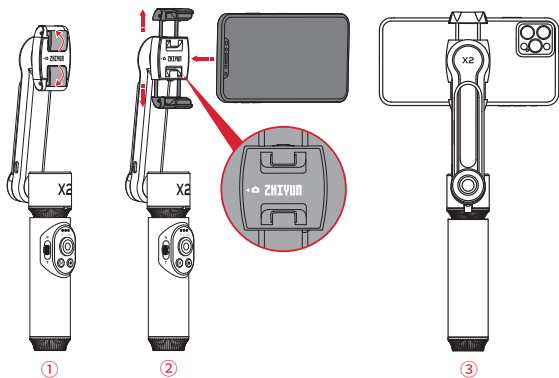
! When using, please rotate in the correct direction as shown in the image to prevent the pan axis lock pin from damaging.

3. Unlock the phone clamp.



⚠ When using, please rotate in the correct direction as shown in the image to prevent the pan axis lock pin from damaging.

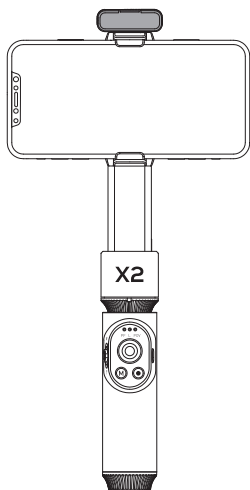
4. Mount the mobile phone to the phone clamp.



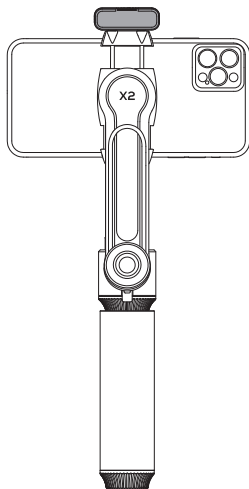
- ① When mounting the mobile phone, please note the installation direction of the phone cameras as shown in the image.
- ② When mounting the mobile phone, please make sure that the entire mobile phone is fixed in the phone clamp firmly.
- ③ Before powering on SMOOTH-X2, please mount the mobile phone and balance the gimbal.

Installing the Fill Light

If you purchase SMOOTH-X2 Combo, the package will come with the magnetic fill light. Install the magnetic fill light on the front or rear camera according to the actual filming scenario and make sure a firm installation.

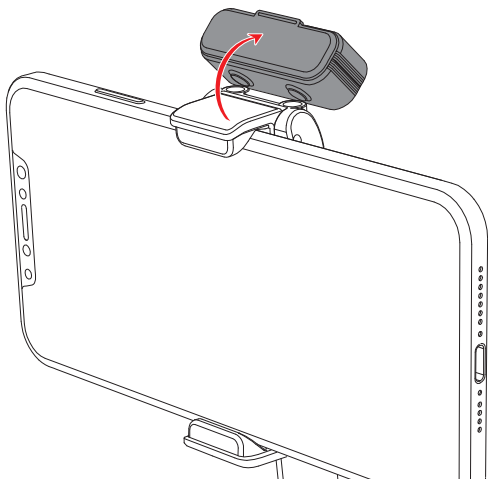


Fill Light on Front Camera

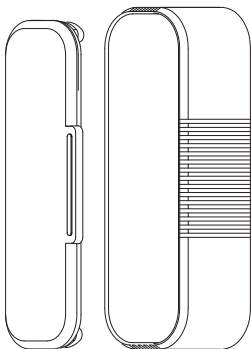


Fill Light on Rear Camera

- ① Detach the fill light as shown in the image to avoid pulling the phone clamp.

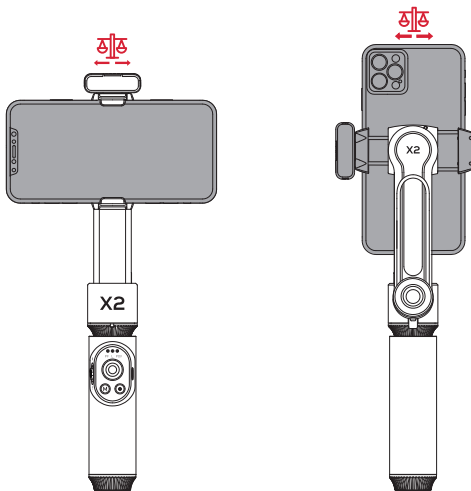



- ② You can change the fill light filter according to the actual filming scenario.



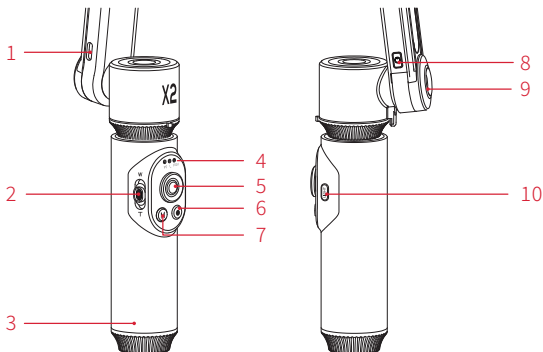
Balancing






1. When the phone is in landscape mode, adjust the position of the phone left or right until the phone is steady and is at almost level with the ground.
2. When the phone is in portrait mode, move the phone clamp left or right until the phone is steady and is at almost level with the ground.





-  Mount the mobile phone before powering on the gimbal. The balance state of the mobile phone will affect the gimbal runtime. The gimbal can work normally if unbalanced, but it will consume more battery power and weaken the motor strength.


Buttons/Lights/Ports Introduction





- 
1 Type-C Charging/Firmware Upgrade Port
 Charge the gimbal/connect to computer for firmware upgrade via this port.
- 
2 Zoom Rocker
 Toggle up/down to control the camera zoom when in ZY Cami app.
- 
3 Battery Level Indicator Light
 Display current battery level of the gimbal. (Solid white: 100%, Slow flashing white: 70%-99%, Slow flashing orange: 40%-70%, Slow flashing red: 20-40%, Quick flashing red: below 20%, Slow blinking white: standby)
- 
4 Gimbal Mode Indicator Light
 Display current mode of the gimbal (Solid white light in "PF"/"L"/"POV").
- 
5 Joystick
 Push the joystick up/down/left/right to control the gimbal to rotate.

- **Photo/Video Button**


Single press: When in photo mode of ZY Cami app, single press to take photo.
When in video mode of ZY Cami app, single press to start/stop filming video.
Double press: When in ZY Cami app, double press to switch between photo/video mode.
Triple press: when in ZY Cami app, triple press to switch between front/rear camera.
- **M Button**

Single press: Switch gimbal modes (PF-L-POV)
Double press: Gimbal reposition
Triple press: Switch between landscape/portrait mode
Press and hold: Enter/exit standby mode
- **Power Button**

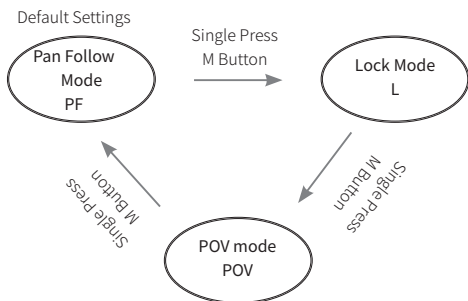
Press and hold: Power on/off the gimbal
Press eight times: Reset Bluetooth
- **Status Indicator Light**


Display current status of the gimbal. (Solid green light: SmartFollow. Light off: Not following. Slow flashing red: Charging when in very low battery level. Red/green flashing alternatively: Upgrading firmware. Slow flashing yellow: Failed to upgrade firmware. Slow flashing green, off after 3 secs: Firmware upgraded successfully)
- **Magnetic Fill Light Button**

Single press: Switch fill light brightness
Press and hold: Power on/off magnetic fill light

 When connected via Bluetooth, SMOOTH-X2 is able to control the native phone camera without ZY Cami. This feature is available with a mobile phone which supports camera control using the volume button. Bluetooth connection with SMOOTH-X2 doesn't require password.

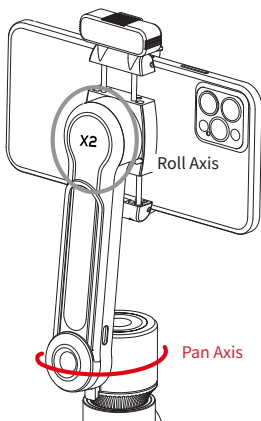
Operation Mode Description



 The red circle means the motor rotates along with the grip movement. The gray circle means the motor is locked and cannot move along with the grip movement.

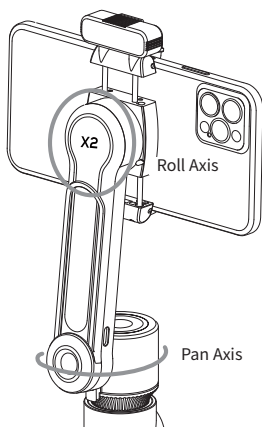
Pan Follow Mode (PF)

Mobile phone pans left/right following the movement of the gimbal handle while roll axis motors are locked. Push the joystick up/down to control the roll axis manually, and push left/right to control the pan axis manually.



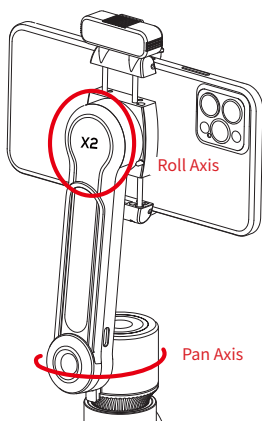
Lock Mode (L)

This mode locks the movement of both axes and the orientation of the mobile phone is fixed. Push the joystick up/down to control the roll axis manually, and push left/right to control the pan axis manually.



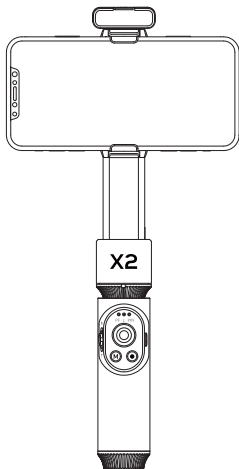
POV Mode (POV)

Roll axis motor and pan axis motor move following the grip movement in this mode. Push the joystick up/down to control the roll axis manually, and push left/right to control the pan axis manually.

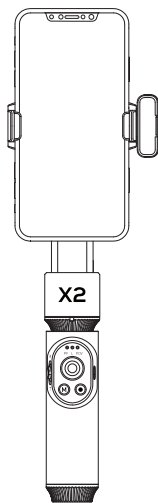


Landscape & Portrait Mode Switch

Triple press M button



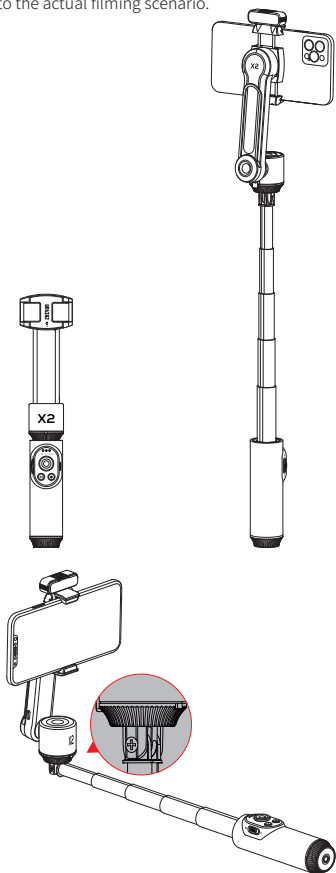
Landscape Mode



Portrait Mode

Extension Mode

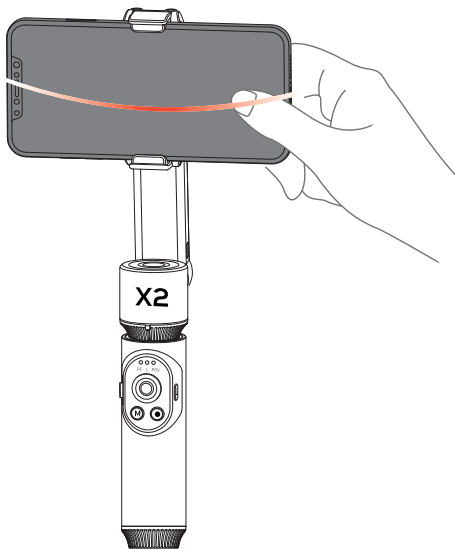
Pull the extensive rod up to enter extension mode. You can adjust the tilt axis angle according to the actual filming scenario.



💡 The maximum length for the extensive rod is 265mm. The control range of tilt axis is 90° . Rotation exceeds the angle will cause damage to SMOOTH-X2. Use a cross screwdriver to tighten the tilt axis if loosen.

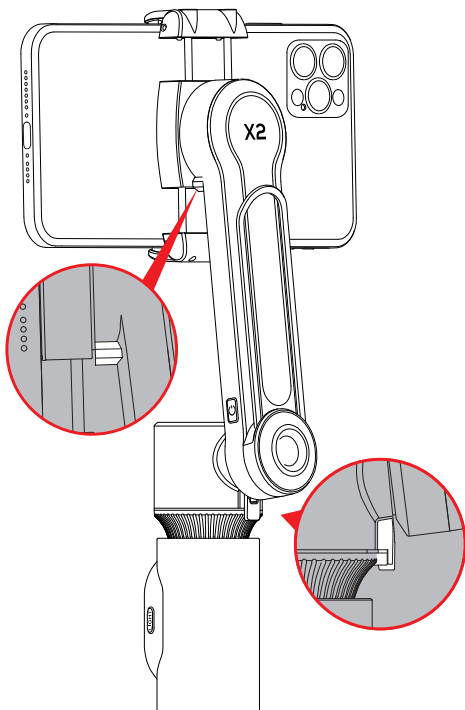
Manual Reposition

Under Lock Mode (L), the rotation angle of the pan axis can be adjusted manually by moving the pan axis to certain angle and hold for 2 seconds (please do not exceed the limit) to fix it in the angle.



Standby Mode

When SMOOTH-X2 is powered on, rotate the phone clamp or pan axis manually until the axis triggers the built-in lock device, then SMOOTH-X2 will enter standby mode automatically. Unlock the phone clamp and pan axis to wake up the gimbal.



Download App



Scan the QR code on the left (Android 7.0 and above, iOS 10.0 and above required) or search "ZY Cami" in App Store or Google Play to download.

- ① Users can make better use of the various functions of SMOOTH-X2 with the dedicated app "ZY Cami".
- ② ZY Cami is subject to update. Please always refer to the latest version.

How to Connect

1. Power on SMOOTH-X2 and turn on Bluetooth on the mobile phone.
2. Launch the "ZY Cami" app. Tap the icon in the upper left corner in the home screen to open the device list and select the SMOOTH-X2 device you wish to connect (the SMOOTH-X2 Bluetooth name can be checked on the vertical arm USER ID: XXXX).
3. Activation on the ZY Cami app is required if the SMOOTH-X2 is being used for the first time. Internet connection is required. After the activation succeeds, you can enter the camera interface of ZY Cami App.

ZY Cami Feature Description

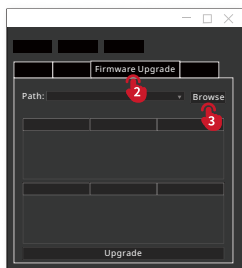
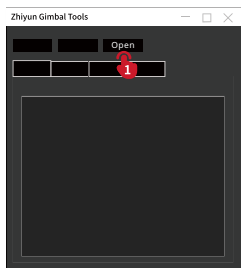
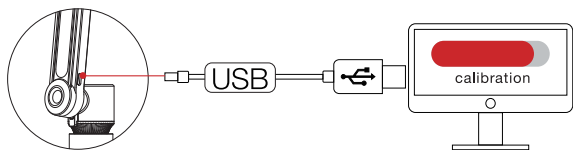


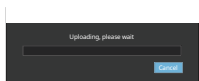
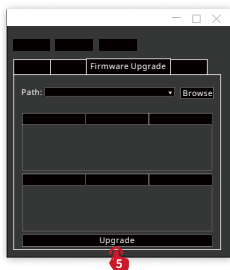
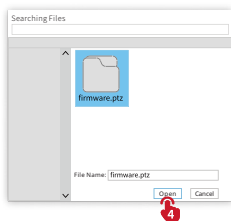
- 💡 For more details of the "ZY Cami" app features, please visit the official website of ZHIYUN (www.zhiyun-tech.com) and watch SMOOTH-X2 video tutorials.

You can use "Zhiyun Gimbal Tools" or "ZY Cami" App to upgrade the firmware of SMOOTH-X2.

Method 1:

1. Connect the Type-C charging/firmware upgrade port at the side of the SMOOTH-X2 vertical arm to the computer with the USB Type-C USB cable, power on SMOOTH-X2 and enter standby mode.
2. Visit the official website of ZHIYUN (www.zhiyun-tech.com), go to the SMOOTH-X2 product page, click "Download", find the USB driver, the ZHIYUN calibration upgrade tool and the firmware and download. (USB drivers are not required for Mac OS systems)
3. Install the driver and the software, unzip the firmware for the documents with the ".ptz" file extension.
4. Open "Zhiyun Gimbal Tools", select the corresponding port, click "Open", click "Firmware Upgrade". Click "Browse" under "Path" to select the latest firmware downloaded (with the ".ptz" file extension), and click "Upgrade" at the bottom to upgrade firmware. When the firmware upgrade finishes, SMOOTH-X2 will be automatically turned off.





Method 2:

Connect SMOOTH-X2 to the “ZY Cami” app. If “ZY Cami” app prompts to upgrade the firmware, follow the instructions to upgrade. Internet connection is required.

- ⚠ Before upgrading the firmware, please ensure that the SMOOTH-X2 has more than 50% power remaining. You will not be able to exit the app interface or access in the background during the upgrading process. Pay attention to the prompts on the app.

Product Model: SM116

	Min.	Standard	Max.	Remark
Operation Voltage	3.4V	3.7V	4.2V	
Operation Current	240mA	-	5000mA	
Charging Voltage	4.7V	5V	5.5V	
Charging Current	700mA	-	900mA	
Following Deviation in Static State	$\pm 0.01^\circ$	-	$\pm 0.04^\circ$	
Following Deviation in Motion State	$\pm 0.05^\circ$	$\pm 0.1^\circ$	$\pm 0.3^\circ$	
Roll Mechanical Range	-	268°	-	
Pan Mechanical Range	-	290°	-	
Controllable Roll Angle	-80°	-	180°	
Controllable Pan Angle	-145°	-	+145°	
Operation Temperature	-10°C	25°C	45°C	
Charging Temperature	0°C	25°C	45°C	
Battery Capacity	-	1300mAh	-	
Battery Runtime	-	4h	5.5h	Lab Data 1
Charging Time	-	2h	-	Lab Data 2
Valid Payload		200 \pm 35g		
Mounting Clamp Supporting Range	50mm	-	90mm	
Mobile Phone Thickness	7.5mm	-	9.5mm	
Extensive Rod	0	-	265mm	
Bluetooth		Bluetooth 4.2		
EIRP		≤ 4 dbm		
Operation Frequency		2.402GHz~2.480GHz		
Compatible Models	Mobile phones that their width is within the holder's capable width.			

"Lab Data 1": The above data is collected under the below conditions: a specified temperature of 25°C ; the gimbal has been balanced and mounted with an iPhone 12. The test time under the active state is 4 hours. The test time under standby state is 5.5 hours.

"Lab Data 2": This test is conducted with a 5V/2A rated power adapter at a specified temperature of 25 °C . The actual charging time varies with environmental factors. Besides, the lower the temperature, the longer the charging time.

All the data in this guide is gathered from internal experiments of ZHIYUN laboratories. Under different scenarios, data is different to some extent. Please refer to the actual use of SMOOTH-X2.

Thank you for purchasing SMOOTH-X2. The information contains herein affects your safety, legitimate rights and obligation. Please read this instruction carefully to ensure proper configuration before use. Failure to read and follow this instruction and warnings herein may result in serious injury to you or bystanders, or damage to your device or property. Guilin Zhishen Information Technology Co., Ltd (hereinafter referred to as "ZHIYUN") reserves all rights for final explanation on this instruction and other documents related to SMOOTH-X2. The information is subject to update without notice. Please visit www.zhiyun-tech.com to obtain the latest product information.

By using this product, you hereby signify that you have read this document carefully and that you understand and agree to abide by the terms and conditions herein. You agree that you are solely responsible for your own conduct while using this product, and for any consequences thereof. You agree to use this product only for purposes that are proper and in accordance with all terms, precautions, practices, policies and guidelines ZHIYUN has made and may make available.

ZHIYUN accepts no liability for damage, injury or any legal responsibility incurred directly or indirectly from the use of this product. Users shall observe safe and lawful practices including, but not limited to, those set forth herein.

ZHIYUN™ is the trademark of Guilin Zhishen Information Technology Co., Ltd and its affiliates. All product names or trademarks referred to herein are trademarks or registered trademarks of their respective holders.

Reading Tips

Legends



Hints and Tips



Important

Warnings

Read the ENTIRE User Guide to become familiar with the features of this product before operating. Failure to operate the product correctly can result in damage to the product or personal property and cause serious injury. This is a sophisticated product. It must be operated with caution and common sense and requires some basic mechanical ability. Failure to operate this product in a safe and responsible manner could result in injury or damage to the product or other property. This product is not intended for use by children without direct adult supervision. DO NOT use with incompatible components or in any way otherwise as mentioned or instructed in the product documents provided by ZHIYUN. The safety guidelines herein contain instructions for safety, operation and maintenance. It is essential to read and follow all of the instructions and warnings in the User Guide, prior to assembly, setup or use, in order to operate the product correctly and avoid damage or serious injury.

Safe Operation Guidelines

WARNING:

1. Never allow the product to come into contact with any liquid. Never immerse the product in water or make it get wet. Never use the product in the rain or a humid environment. Corrosion reaction may occur when the interior of the product is exposed to water, which may cause the battery to ignite spontaneously and may even cause an explosion.
2. If the product catches fire, please use water or water mist, sand, fire blanket, dry powder, carbon dioxide fire extinguisher immediately to put out the fire. Please choose the method according to the actual situation.
3. Please use the product in an environment with a temperature between -10°C and 45°C .
4. It is forbidden to disassemble the product in any way. If the battery is pierced during disassembly, it will cause the electrolyte inside the battery to leak or even cause fire or explosion.
5. Mechanical impact, rolling, or throwing of the product is prohibited. Do not place heavy objects on the product.
6. Do not heat the product. Do not place the product in a microwave oven or pressure cooker.
7. It is forbidden to place the product near a heat source (stove or heater, etc.) or inside the car in hot weather. Do not store the product in an environment above 45°C . The ideal temperature of storage is 22°C to 28°C .
8. Do not store the battery for a long time after it is completely discharged to avoid the battery entering the over-discharged state and causing damage to the battery cell, and it will not be able to resume use.

BE CAREFUL:

1. SMOOTH-X2 is a high-precision control device. Damage may be caused to SMOOTH-X2 if dropped or subject to external force, and this may result in malfunction.
2. Make sure the rotation of the gimbal axes is not blocked by external force when SMOOTH-X2 is turned on.
3. SMOOTH-X2 is not waterproof. Prevent contacts of any kind of liquid or cleaner with the SMOOTH-X2. It is recommended to use dry cloth for cleaning.
4. Protect SMOOTH-X2 from dust and sand during use.

CAUTION:

1. After the charging is complete, disconnect the product from the charger.
2. If you do not use the product for more than 10 days, please charge/discharge the battery to 40%-65% and store it to extend the battery life.

3. Recharge and discharge every 3 months to keep the battery active.
4. Keep the handle stable when powering on the SMOOTH-X2. Shakiness during power-on may fail to start.

Warranty Period

1. Customers are entitled to replacement or free repair service in case of quality deficits found in the product within 15 days upon receipt of the product.
2. Customers are entitled to free repair service from ZHIYUN for any product proven defective in material or workmanship that results in product failure during normal consumer usage and conditions within the valid warranty period, which is 12 months counting from the date of selling. However, warranty period varies by product component and country of purchase. Please contact our after-sales service team on ZHIYUN official website or your place of purchase for detailed warranty information.

Warranty Exclusions

1. Products subjected to unauthorized repair, misuse, collision, neglect, mishandling, soaking, accident, and unauthorized alteration.
2. Products subjected to improper use or whose labels or security tags have been torn off or altered.
3. Products whose warranty has expired.
4. Products damaged due to force majeure, such as fire, flood, lightning, etc.

Warranty Claim Procedure

1. If failure or any problem occurs to your product after purchase, please contact a local agent for assistance, or you can always contact ZHIYUN's customer service through email at info@zhiyun-tech.com or website at www.zhiyun-tech.com.
2. Your local agent or ZHIYUN's customer service will guide you through the whole service procedure regarding any product issue or problem you have encountered. ZHIYUN reserves the right to reexamine damaged or returned products.

Customer Information

Customer Name:

Phone Number:

Address:

Sales Information

Sales date:

Product Serial Number:

Distributor Name:

Distributor's Contact Number:

First Maintenance Record

Service Date:

Repairman Signature:

Cause of Problem:

Service Result:

Solved

Unsolved

Refunded/Replaced



Website



Weibo



Vimeo



Google+



Facebook
(Zhiyun Support)



Facebook
(Zhiyun Tech)



Youku



Youtube



Wechat



Instagram

Tel: +86 400 900 6868

USA Hotline: +1 808-319-6137,9:00-18:00 GMT-7,Mon-Fri

Europe Hotline: +49 (0) 61018132180,10:00-17:00 GMT+1,Mon-Fri

Web: www.zhiyun-tech.com

E-mail: info@zhiyun-tech.com

Address: 09 Huangtong Road, Tieshan Industrial Zone, Qixing District, Guilin, 541004, Guangxi, China

Certificate of Quality

This product is confirmed to meet quality standards and permitted for sale after strict inspection.

QC Inspector: _____



For full product information, please visit ZHIYUN's official website: Content on www.zhiyun-tech.com is subject to update without notice.

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All product names or brands referred to hereunder may be trademarks or registered trademarks of their respective holders.

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ZHIYUN-TECH.COM

FCC STATEMENT :

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

Warning: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

RF warning statement:

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.