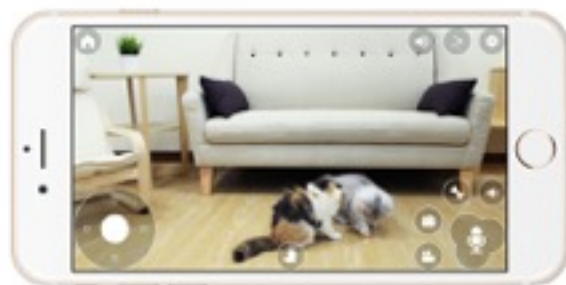




Pawbo⁺

PPC-21CL Interactive Pet Camera



User Manual

Product Features

Pawbo+ allows you to see, hear and even interact with your pets anytime, anywhere.

- **Requires wireless network at home and broadband internet access.**

Features

- The free App for your mobile device facilitates easy interaction with your pets. (supports iOS/Android platforms)
- HD 720P live video with high quality sound.
- Supports digital zoom, your pet's every move to see more clearly.
- Supports IEEE 802.b/g/n wireless network connection.
- Push-to-Talk function allows your pets to hear your voice instantly.
- Pawbo+'s personalized design allows each Pawbo+ to have a unique name of your choice.
- Supports up to 8 people operating the interactive functions of Pawbo+ simultaneously.
- Six built-in ringtones to attract your pet's attention.
- Allows you to share photos/videos instantaneously to your favorite social networking sites. (Currently supports Facebook/Twitter/Instagram)
- Supports video storage via Dropbox and Google Drive, allowing a maximum 15 minutes of video recording.
- Built-In games for interacting with your pet, with the capability of extending functions via wireless connection.
- Built-In food dispenser for feeding your pets their favorite treats.
- Exclusive network technology "Smart Link" installation guide for a simple installation process. (Requires wireless network security mode to be set to WPA / WPA2 (preferred) / WPA Mixed setting; encryption method (cipher type) should be set to AES.
- Reminders to update your device firmware allows your Pawbo+ to always be running the newest version of firmware with the newest features.
- Intelligent image adjustment automatically adjusts video streaming quality based on the quality of connection. When poor internet connection is detected, your screen will display a turtle icon.
- **Pawbo+ can support the controlling of peripheral devices and expansion functions. Diverse peripheral accessories allow you to have more choices for interacting with your pets. You can play with them, perform behavior training or even feed them more snacks!**

Before You Begin...

- Please save this guide for future reference.
- Read this Quick Install Guide before using your product.
- Do not cover the speaker holes.
- Do not cover this product with a blanket.
- Only use dry cloth for cleaning.
- Do not place on or drop into water or other liquids.
- Do not attempt to open or disassemble this product.
- This product does not replace proper pet owner supervision.
- Do not direct the laser beam into the eyes of pets and others.



WARNING - STRANGULATION HAZARD

Pets have been STRANGLED by cords. Fix adapter cord with tape or cable ties. Beware when using extension cords. This product is NOT intended to replace proper supervision of pets.

Please check the content of the package



PPC-21CL Interactive Pet Camera



Power adapter



Quick Start Guide / Warranty Card /
Compliance Declaration

If your package is missing any of the contents mentioned above, please contact your distributor.

Technical Requirements

MOBILE DEVICE COMPATIBILITY:

- The Pawbo Life App supports iOS 8.0 or later (iPhone & iPad) / Android 4.0.3 or later.

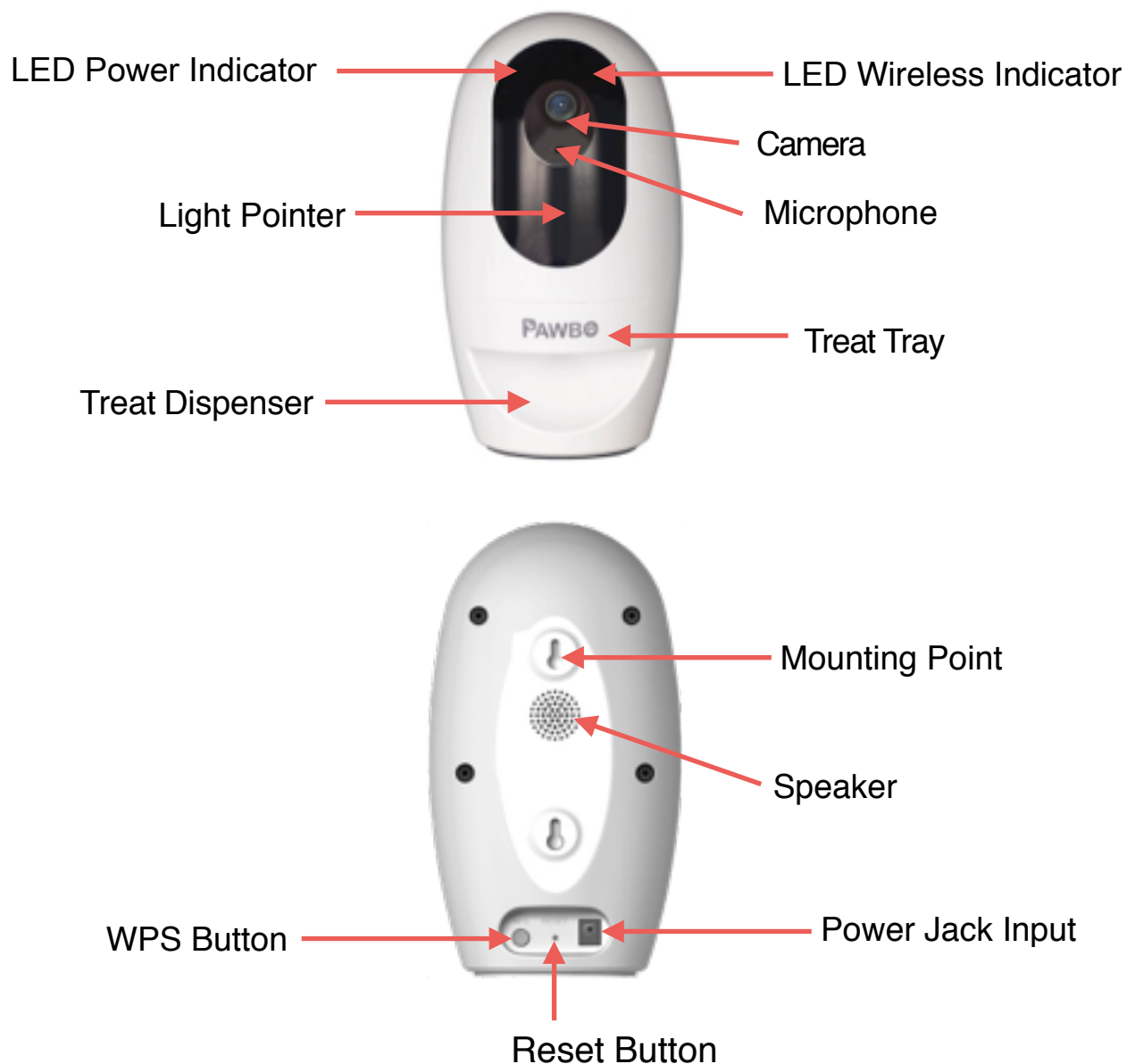
WIRELESS NETWORK:

- Recommended use of this product under 802.11n(2.4GHz) and router with WPA2-AES encryption.

NETWORKING REQUIREMENTS:

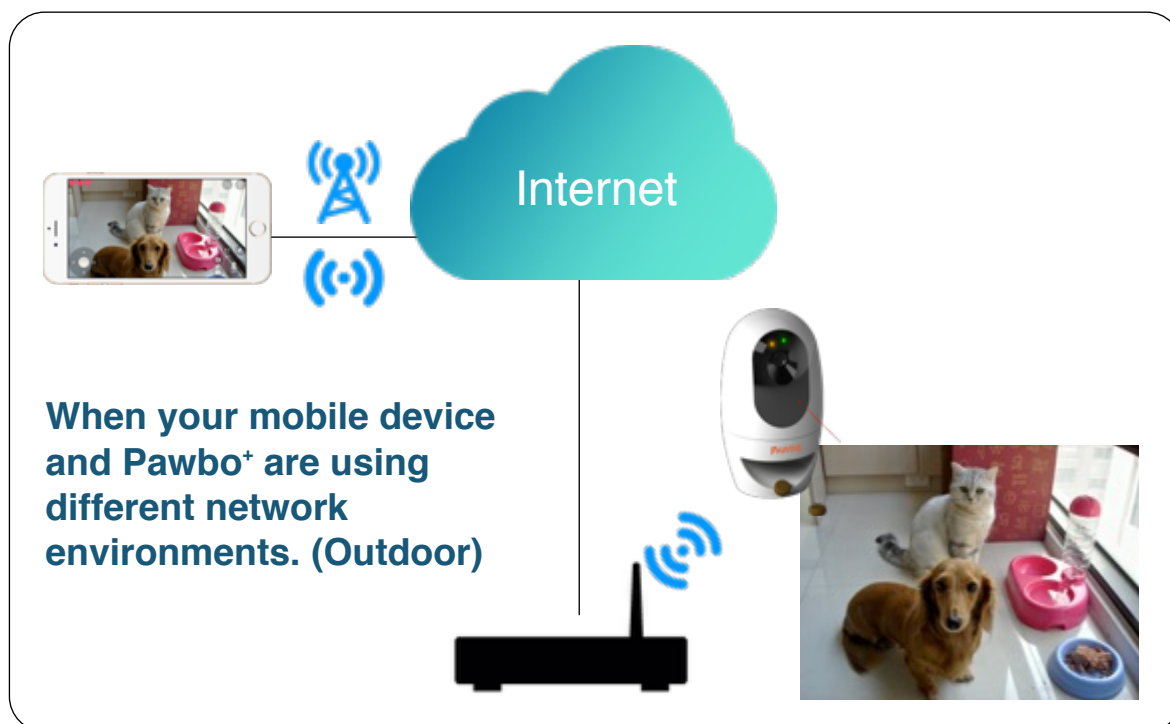
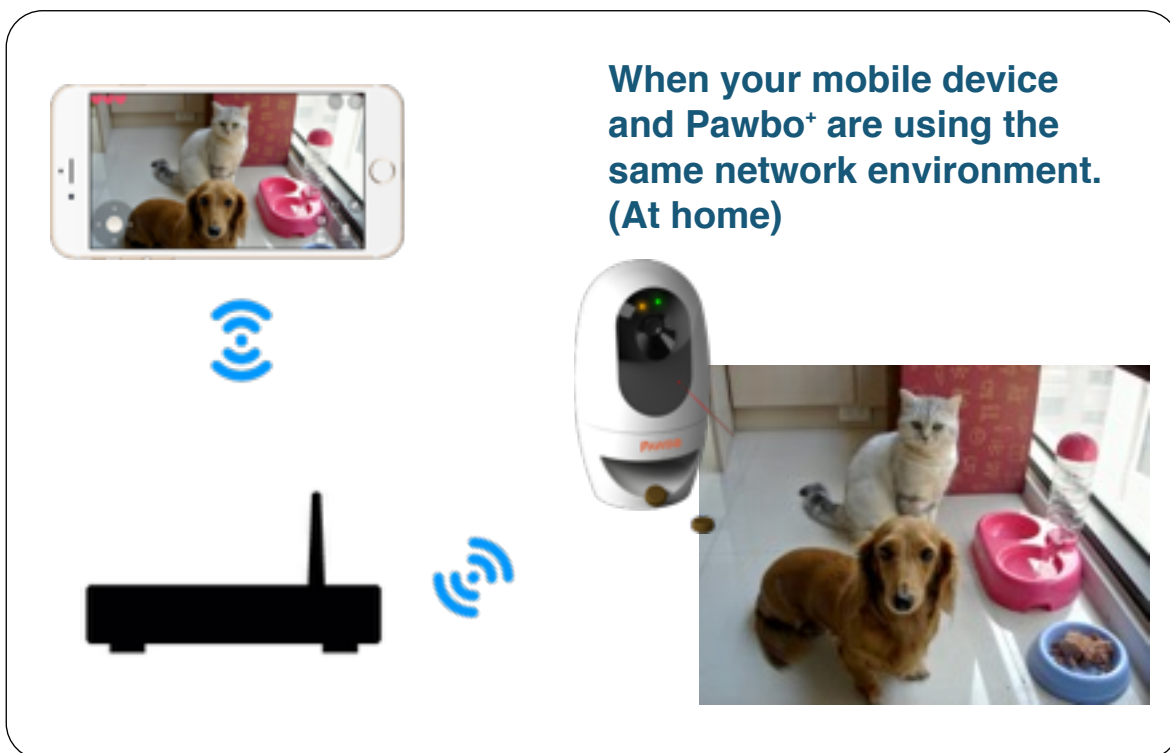
- Requires minimum upload speed of 768Kbps for single client. (Optimum image quality requires 1.2Mbps or above.)

Appearance and Functional Specifications



Buttons	Description of Function
WPS Button	Short press WPS button to enter WPS Installation Mode. Press and hold for over 5 seconds to install in wireless AP Mode.
Reset Button	Hold down the button until you hear “reset success” then let go. Pawbo+ will then reset system to default. <i>Remark: All the configuration data are stored in your Pawbo+, such as wireless network setting data/ time zones/ Name of your Pawbo+/ selected ringtone/ device password, will be deleted and restored to default.</i>
Power Supply	5V2A

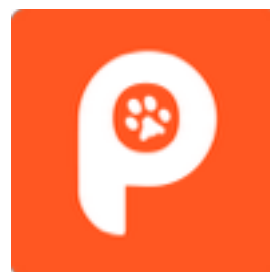
Pawbo+ Networking Instructions



Note: Your mobile device can directly link to this product (without Wireless Internet connection), but please note: when using direct connection, there is a maximum range between your mobile device and Pawbo. Once exceeded, the direct link will be broken. Please go to www.pawbo.com for more information.

Installation

- 1 Connect your mobile device to your home wireless network, and download the free Pawbo Life App to your mobile device.



Pawbo Life App

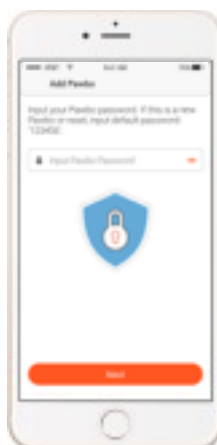
- 2 Open the Pawbo Life App. You will be automatically guided through the installation process.



Pawbo Life App



- 3 Follow installation instructions to complete installation and settings.





Installation - Light Indicator Status

● Power indicator ● Wireless network connection indicator



Steady red light - Pawbo+ is on.

Blinking red light - Pawbo+ device is ready for user to configure home wireless settings.

- When the Pawbo+ is reset or first initialized, it will enter smart wireless connection mode once turned on. You can use the smartphone app to set the Pawbo+ to connect to the wireless network at home under this mode. (During this time the red light will keep flashing and the green light will be off.)  ●
- Once Pawbo+ successfully connects, you will see a steady red light and slow blinking green light. ● 


Advanced setup mode: At any time, to enter advanced setup mode, press the WPS button on the back of your Pawbo+. (Under normal circumstances, advanced setup mode is not required.)

WPS Setup -

- Press the WPS button in the rear of Pawbo+ to enter awaiting pairing status. The red light will be off and the green light will flash quickly. ● 
- When wireless network connection is successful, you will see a steady red light and slow blinking green light. ● 

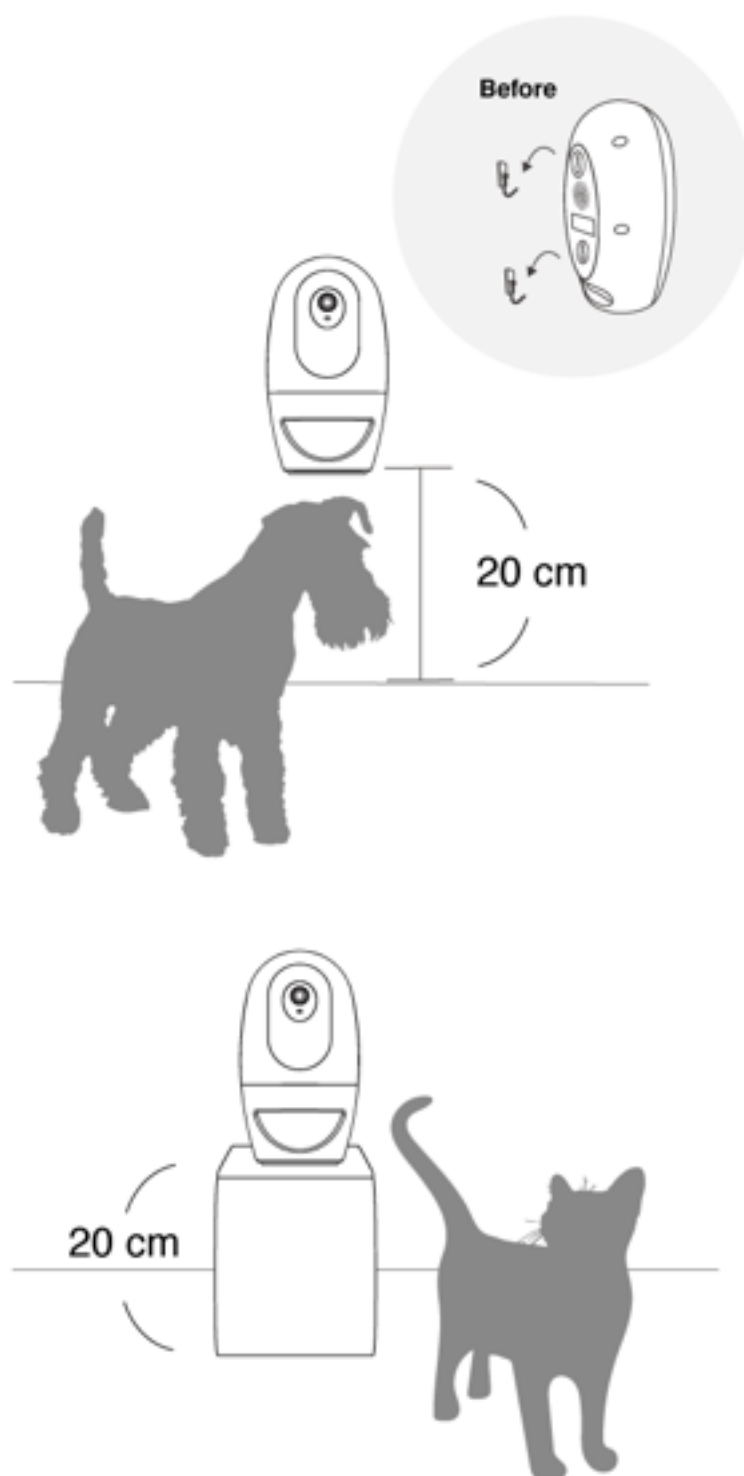
Wireless network AP Mode -

(In this mode, your mobile device can be directly linked to your Pawbo+, without the need for wireless network)

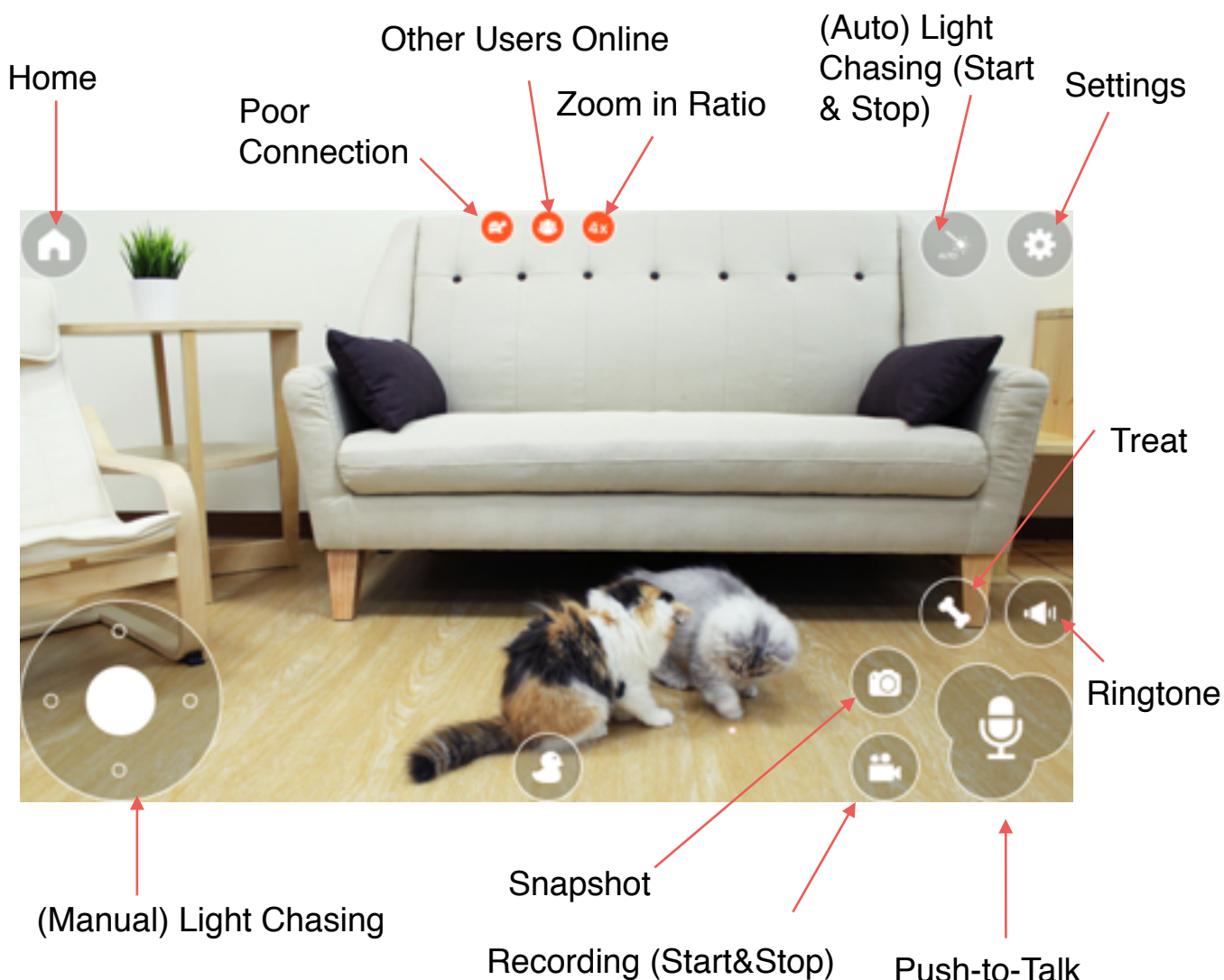
- Press the WPS button on the back of your Pawbo+ for over 5 seconds to enter wireless network AP Mode. You will see a steady red light and steady green light. ● ●
- When wireless network connection is successful, you will see a steady red light and slow blinking green light. ● 

Pawbo+ Height Recommendation

The suggested height for this product is 20cm above ground (please adjust the actual height for the optimum angle for your pets). This product can be placed directly on a platform or mounted on the wall.

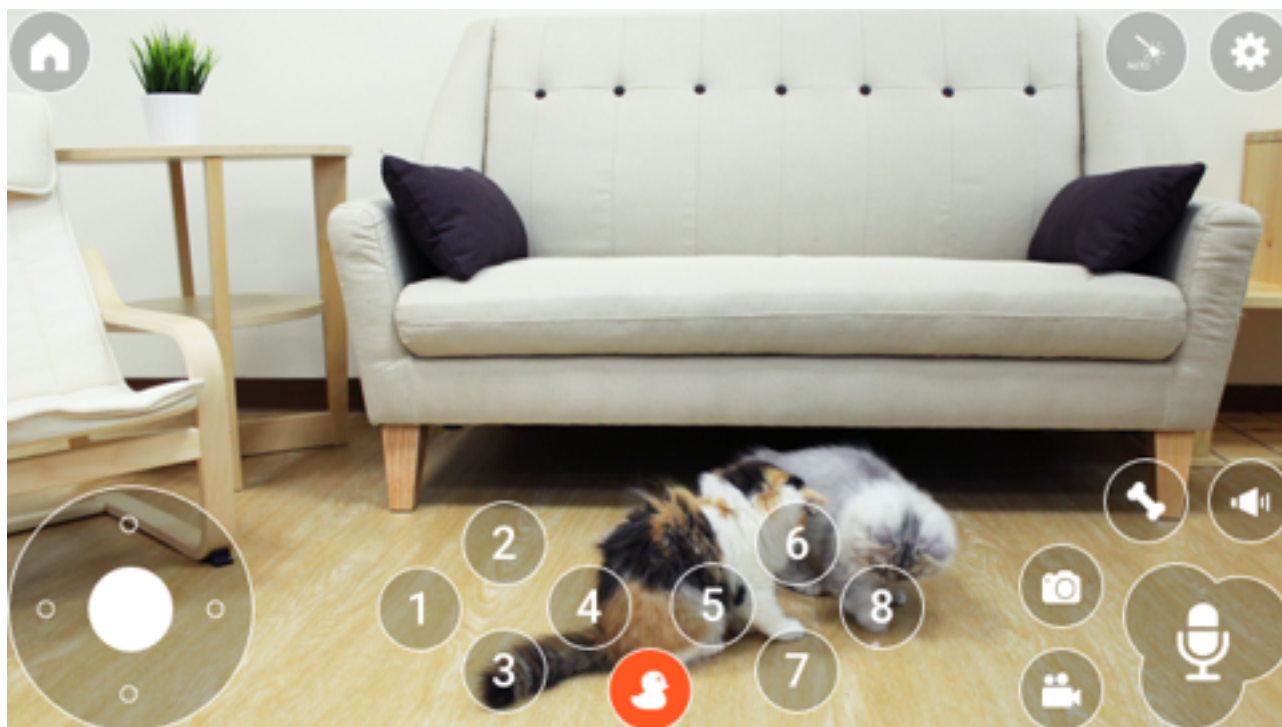


App Interface Functions



- **Tap on the screen to hide/display buttons.**
- **Recording:** After press the button, the icon turns red. This indicates that recording has begun. Press again or close the app to stop recording. Prior to recording, please setup your Dropbox or Google Drive account to enable video storage. (Settings > Cloud Storage)
- **Zoom in:** Pinch on screen to zoom in / zoom out.

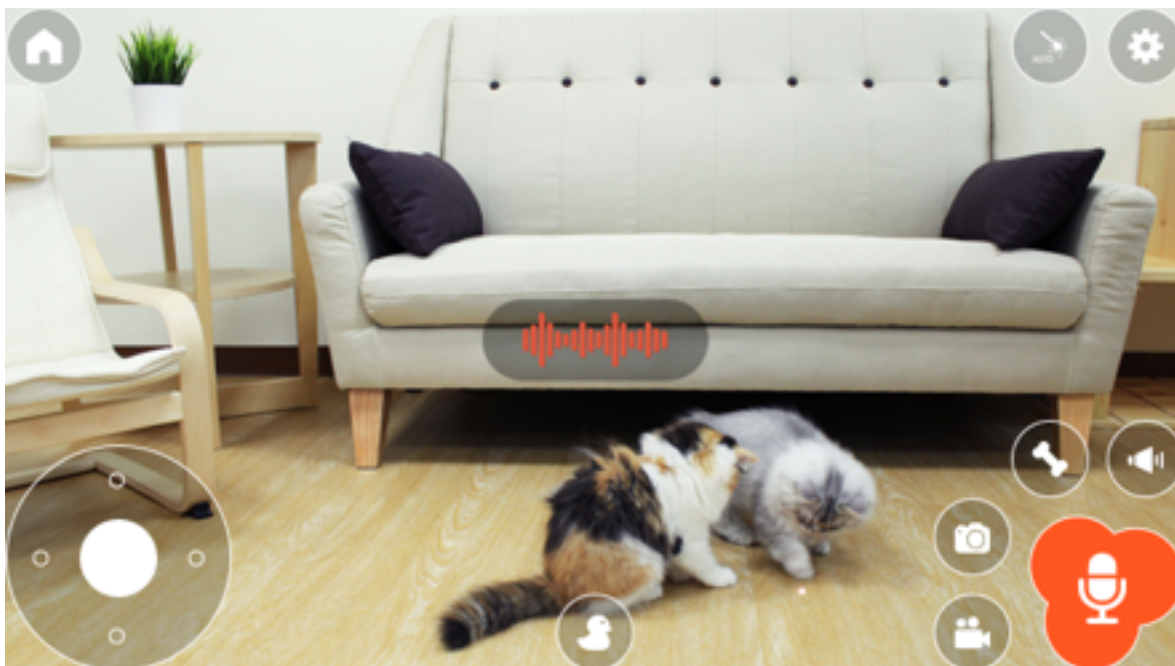
App Interface Functions



- **Virtual Remote :**

The numbers correspond to the control code of expansion toys(optional purchase). For example: When you set 1 to a particular expansion toy, you can activate it by pressing 1 on the virtual remote.

App Interface Functions



- **Microphone (Push-to-Talk):**

Press and hold to use microphone function to speak to your pets.
Release to end microphone function.

- **Treat :**

Treats are dispensed at a maximum speed
of 1 treat every 3 seconds.

- **Opening the treat dispenser :**

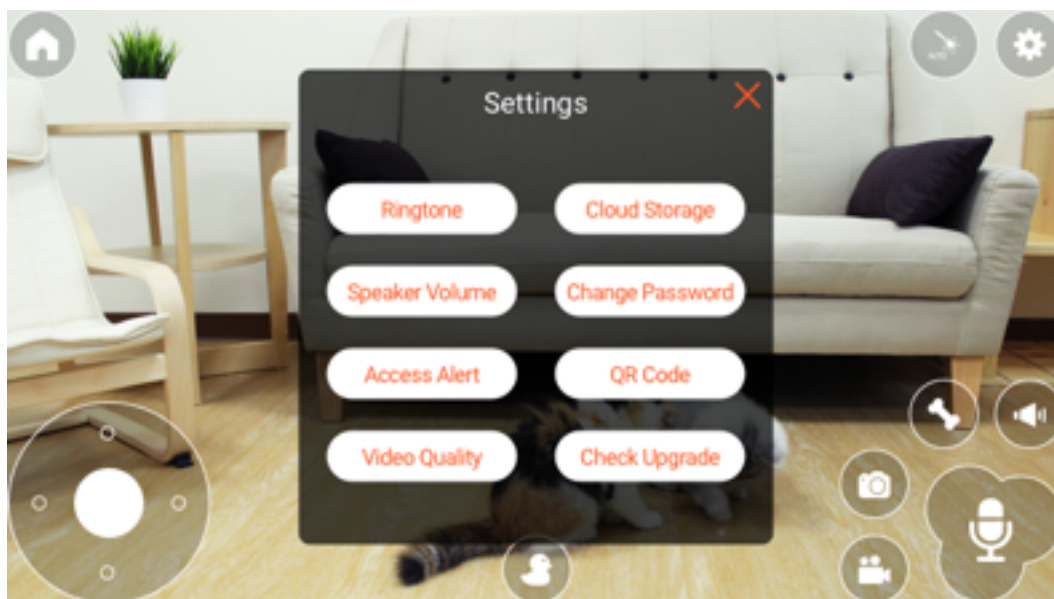
Pull the tray outward based on the
direction of the arrow. (Use a moist cloth
to clean the treat tray. Do not let any
metal parts come in contact with
moisture.



- **Sharing via social media :**

Download the social media apps and login to your account, prior to use.

App Settings



- **Ringtone:** Select ringtone for calling pets.
- **Speaker Volume:** Select the volume of your Pawbo+ based on 3 levels(High / Medium / Low). The default volume is high. This affects all Pawbo+ functions that produce sound.
- **Video Quality:** The default is set to high, but if you are using older mobile devices or have multiple user connections, video may lag. Change settings to lower resolution to improve connection quality.
- **Access Alert:** Pawbo+ will alert you with a sound for any user connections.
- **Cloud Storage:** Connect to your Dropbox / Google Drive account for video storage.
- **Change Password:** Change your login password, for security purposes. The password must be 6 to 16 alphanumeric characters(password is case sensitive, symbols cannot be used).
- **QR Code:** Save the QR Code image to send to other people so they can read/load it directly when adding new Pawbo+ to complete the installation.
- **Check Upgrade:** Check for latest firmware and upgrade online.

FAQ - Installation

Q. When I plug in my new Pawbo+, I do not see the red power indicator.

- A. Please verify that the power cord is properly plugged in on both ends, and that the power outlet is providing electricity. If the problem persists, please contact customer service :
service@pawbo.com

Q. After Pawbo+ is plugged in, I see a red LED light and hear “ready for setup”, after which the red LED light starts to blink. Is this normal?

- A. Pawbo+ is not connected to your home wireless network when it is brand new or has been reset. A blinking red light indicates that it is ready for wireless network setup. Please follow the Pawbo Life App instructions to complete setup.

Q. I followed the SmartLink method for setting up Pawbo+ on my home wireless network, but connection keeps failing.

- A. Please troubleshoot by following the steps listed below:
1. Make sure that your mobile device is connected to your home wireless network.
 2. Make sure that Pawbo+ and wireless AP are near one another (distance affects the strength of wireless transmission).
 3. Your wireless AP name (SSID) cannot contain characters other than alphabets, numbers, _(underscore)*
 4. For better security, set your wireless AP password encryption to WPA2(AES).
 5. Please use WPA2(AES) or WPA-Mixed AES for password encryption. Oftentimes, SmartLink fails due to incompatible encryption settings.
 6. Pawbo+ supports 2.4G wireless network, if your wireless AP has both 2.4G and 5G channels, make sure your mobile device is connected to the 2.4G channel before Pawbo+ installation.
 7. Please set your wireless AP mode to 802.11 b/g/n(or Auto). To ensure a stable connection, make sure that during the installation process, you maintain no more than one meter between your mobile device and Pawbo+.

FAQ - Installation

Q. During installation, I am receiving error messages for the new password I have chosen.

A. To ensure privacy, passwords must be 6-16 characters, and include both alphabets and numbers(password is case sensitive, symbols cannot be used).

Q. My Pawbo+ is installed at home, how can family members living overseas access it?

A. In your Pawbo Life App settings, select “QR code”, then store the QR code to your mobile device. You can share the access of your Pawbo+ with your family members by sending them the QR code along with your Pawbo+ password. After receipt of the QR Code, ask them to open the Pawbo+ App. On the first page of setup, tap “No” -> “QR Code” -> “Load” to locate QR code. After inputting the correct Pawbo+ password, they will have access to your Pawbo+.

FAQ - Video Streaming

Q. My phone and Pawbo+ are connected to the same wireless network, but the video stream does not run smoothly.

A. Please follow the steps below:

1. Is your Pawbo+ and wireless AP too far away from one other, located in different rooms or on different floors? If so, please move your Pawbo+ closer to your wireless AP to see if there is improvement. (Wireless network transmission reduces in strength with distance)
2. If Pawbo+ is connected to a wireless network that is being used by many people simultaneously, this may affect the speed and quality of live video streaming. It is recommended to connect your Pawbo+ to its own wireless router/network.

Q. I attempted to connect to my Pawbo+ at home, but the video streaming is not running smoothly.

A. Live video streaming continuously transmits data from point to point. The following reasons may be the cause of the problem:

1. Your home wireless network might have encountered momentary interference or someone at home is transmitting large amounts of data, thus interrupting the live video streaming.
2. If your phone is connected to a public wireless network at a coffee shop or airport or other public locations, there may be too many people on the public wireless network or perhaps the public wireless AP has a limit on traffic for each user, thus affecting the speed of the live video streaming.
3. If your mobile phone is connected to your Pawbo+ via 3G / 4G connection, you may have entered an area with poor signal, thus affecting the speed of the live video streaming.
4. Pawbo+ itself has no built-in night vision function, so when there is insufficient lighting, the video will not stream smoothly, or you may not even be able to connect to Pawbo+. This is a normal phenomenon. Therefore, we strongly recommend to ensuring that your Pawbo+ is placed in a properly lit environment or use the Pawbo+ light sensor expansion to compensate for insufficient lighting.

FAQ - Video Streaming

Q. I can view live video streaming on my Pawbo+ with no problems. However, my video streaming is intermittent or not streaming smoothly when other people access my Pawbo+ at the same time.

A. Pawbo+ supports eight connections simultaneously, but if one user's connection quality is low, it may affect the connection speed for both users. We recommend changing video quality settings to "low".

Q. When I connect to Pawbo+, I feel that the video quality is not displaying at 720P HD.

A. The video quality of the Pawbo+ is 720P HD. If the image is not clear, please follow the steps below:

1. Make sure that the protective film in front of the camera has been removed.
2. Connect your mobile device to the same wireless network as your Pawbo+.
3. If you connect your mobile device to the same wireless network as your Pawbo+ and the signal is strong, this will ensure that video streaming is at high quality.
4. If you have followed the steps above and achieved high quality streaming video, then there is no problem with the video function on your Pawbo+. When you access Pawbo+ remotely, video quality depends on the quality of your internet connection. Too many people using the same wireless network, wireless network restriction settings, complex wireless networks or poor signal when using 3G/4G networks are all conditions that may cause poor quality video streaming. Whenever Pawbo+ detects that you have poor internet connection, Pawbo+ will automatically lower its image compression quality to ensure the image can be transmitted. When connection improves, Pawbo+ will automatically adjust improve its image quality.

Q. Can I hide the function buttons on my screen?

A. Tap anywhere in the middle of the screen to hide function buttons on the screen, tap again and they will reappear.

FAQ - Feeding Treats

Q. When feeding treats, why is it that when I press the button two consecutive times, I do not receive a response for the second time?

A. When Pawbo+ receives a feeding command, the motors are activated. To protect the life span of the motor, there is a 3 second interval in between receiving each command.

Q. Pawbo+ is not responding to the feeding command.

A. Please follow the below steps:

1. Pull out the dispenser tray and reinsert to make sure the tray is properly installed.
2. Check to make sure there are still treats in the food dispenser. If not, please add some.
3. Please use appropriately sized treats to prevent them from getting stuck in the dispenser.
4. If the problem persists, please contact customer service: service@pawbo.com

FAQ - Ringtones

Q. If I change the ringtone setting on my Pawbo Life App, will other people with access to my Pawbo+ be able to use the new ringtone?

A. The ringtone setting is stored in your Pawbo+, so any changes made to the ringtone setting will also change for the other people who have access to your Pawbo+.

Q. I am unable to receive audio when the “Push-to-Talk” function is in use.

A. This is normal. Pawbo+ pauses audio when the “Push-to-Talk” function is in use.

Q. When more than one person is connected to Pawbo+ simultaneously, both people are unable to use the “Push-to-talk” function at the same time.

A. Pawbo+ allows only one person to use the “Push-to-Talk” function at a time. Priority is given to the first person who activates the function.

Q. Why do I hear an echo when using the voice function at home?

A. This is because your mobile device is too close to your Pawbo+. When you use the “Push-to-Talk” function, the audio from your Pawbo+ speaker will be captured by your mobile device, thus forming the echo. Therefore, to avoid an echo, keep your mobile device at a distance from your Pawbo+ when using voice and audio.

Q. When using an iOS device (iPhone / iPad) with the volume set to high, there is a lot of background noise coming from Pawbo+.

A. Pawbo+ is equipped with a microphone enhancing function (AGC), and audio is processed differently on different mobile devices. The audio capability on an iOS device is higher than an Android device, so we recommend that iOS users reduce the volume on your devices slightly to decrease the amount of background noise being heard.

FAQ- Password

Q. I am trying to modify my password in settings, but keep receiving error messages for the new password I have chosen.

A. To ensure privacy, passwords must be 6-16 characters that include both alphabets and numbers (password is case sensitive, symbols cannot be used).

Q. What should I do if I forget my Pawbo+ password?

A. To reduce security risks, your passwords are stored on your Pawbo+ and not in any server system. If you forget your Pawbo+ password, reset your Pawbo+ by pressing the reset button at the rear of Pawbo+ with a pin or needle (i.e. paper clip) while Pawbo+ is plugged in. Insert the pin and press down until you hear “reset success” and see a blinking green light appear. Please note that after you reset, all of your Pawbo+ settings will be restored to default and you will need to complete setup again.

Q. Is my Pawbo+ password kept in the service host?

A. No. We don't save any of your passwords in our service host, please keep your password safe.

FAQ - Cloud Video

Q. How does cloud video work? Do I need to install the Dropbox / Google Drive App first?

A. The cloud video function does not require for you to install the Dropbox / Google Drive App. However, we do recommend that you have a Dropbox / Google Drive account setup and ready to go, so that you are prepared to record and share videos at any time.

Q. How do I save videos to Cloud Storage?

A. On the main screen, tap Settings > Cloud Storage > Login to either your Dropbox / Google Drive account. After you have successfully logged into your account, you will be directed back to the Pawbo Life App, which will indicate that your cloud storage account has been linked. From now on, video files will automatically sync to cloud storage.

Q. Can the videos that have been synced to Dropbox / Google Drive be accessed from other devices?

A. Dropbox / Google Drive is supported on PC, MAC, iOS, and Android, so you can watch or share your videos from various devices.

Q. If I exit the app after pressing the video recording function, will the video continue to record?

A. Exiting the app will cause video recording to stop, unless someone else is still connected to your Pawbo+.

Q. What is the longest duration for a single recording?

A. To limit file size and excessive time required to sync files, a single video will automatically stop after 15 minutes of recording and sync to your Dropbox / Google Drive account for storage.

FAQ - Cloud Video

Q. When I connect to Pawbo+, video recording is initiated before I press the video recording function.

A. Pawbo+ supports up to eight simultaneous connections. Please check if someone else is connected. When more than 1 person is connected to Pawbo+ simultaneously, if one person presses the video recording function, the recording icon will also appear on the other person's screen. Press the video recording button again to stop, or the video will automatically stop after 15 minutes and begin to synchronize.

Q. When I preview the video file, some parts of the clip are unclear or pause, is this normal?

A. Pawbo+ is a remote accessible camera, video function is the complete real-time recording of the video and quality while you are connected to Pawbo+, so any instance of poor network connection will be recorded as well.

Q. I am playing the video using Quicktime, but there is no sound. I am editing the video in iMovie, but there is no sound.

A. To play mp4 format videos on your Mac, please install VLC Player or change the video file format to mov.

Q. Why is video quality good on a mobile phone, but blurry / unclear when it is played at full screen on a computer?

A. Pawbo+ images are saved at 1280 x 720. When viewed on the smaller screen of a mobile phone, the quality will look good, versus viewing on a computer or larger screen (especially in MAC Retina or high resolution screens). Therefore, we recommend playing videos on a smaller screen.

FAQ - Sharing Pictures

Q. Are the photos taken stored to my mobile phone?

A. Photos are stored directly to mobile phones. When two people access at the same time, they can both take pictures and simultaneously access to share or post pictures.

Q. After I taking photos, I tried to share them by tapping the social network icon, but received no response, why is that?

A. Your mobile device must have the social network App installed, and logged in with your account.

Q. I have an Android phone. After successfully sharing on my social network, the app will automatically reconnect when I return to the main screen.

A. On Android phones, when accessing another app, your phone will momentarily exit you from Pawbo Life App, which is why when you return to the Pawbo Life App, it will need to reconnect.

FAQ - Light Chasing Game

Q. When the red dot is moving, I cannot see it on my mobile phone screen.

A. For safety considerations, we have limited the output power of the laser source to safety standards, so when the environment is bright or if the floor is of similar color to the light, it will not show clearly on your mobile phone screen. To be able to see the light more clearly, try to slightly lower lighting conditions around your Pawbo+.

Q. I am connected and trying to control the laser light, but the red dot does not move smoothly.

A. If network connection is not ideal, image quality will be lowered, causing video streaming to be intermittent. At this time, when you play the light chasing game, there may be delays. (A turtle icon that appears at the top of the screen indicates slow internet connection). Please wait until network connection is back to normal to play the light chasing game.

Q. I did not press the auto mode when playing the light chasing game, but auto mode is suddenly activated.

A. Pawbo+ supports up to two simultaneous connections. Please check if someone else is connected. When more than one person are connected to Pawbo+ simultaneously, if one person activates the auto mode, this may affect the other person.

FAQ - Others

Q. I noticed that the timestamp of the video files synced to Dropbox are wrong.

A. Pawbo+ synchronizes with the time zone of your mobile device at setup. So if the time zone on your mobile device is incorrect during setup, Pawbo+ will have the incorrect time zone. To correct this problem, make sure your mobile device has the correct time zone setting, then reset and setup your Pawbo+ again.

Q. If I bring my Pawbo+ to use at another location, will I be required to reset Pawbo+?

A. Pawbo+ is designed on the account that 80% of users will rarely change the location of their Pawbo+, after installation. Therefore, if you move your Pawbo+ to a new location, generally, you will be required to reset Pawbo+. But if the wireless AP at your new location has a WPS button, you can plug in Pawbo+, press the WPS button at the rear of Pawbo+, release it when the green blinking light begins to flash quickly, then press and hold the WPS at the rear of the wireless AP for 3 seconds. This is a quick method to configure your Pawbo+ to the new wireless network, without having to reset your Pawbo+.

Peripheral Expansion

Q. The new generation Pawbo+ has expansion functions. What does that mean?

A. Pawbo+ is equipped with rich and diverse peripheral accessories. Peripheral applications range from fun interactive toys for behavior training of the pets, creating a dedicated pet paradise for you.

Q. How can I know whether my Pawbo+ supports the peripheral expansion function?

A. Only Pawbo+ (Model: PPC-21CL) supports the peripheral expansion function. You can find the model description on the label behind the product, or get more information at www.pawbo.com.

Q. How do I use the expansion function of Pawbo+?

A. Please place the expansion accessory at a place visible within the Pawbo Life App screen, and face the infrared receiver on the accessory towards the Pawbo+ lens. Please refer to related explanations of the accessory for the optimal placement location.

Q. What functions are available for expansion?

A. Pawbo+ currently supports cat teasers, whack-a-mole, snack feeder and fill-light for taking low-brightness photos. Other fun peripherals are currently being developed. Please stay tuned.

Q. Can I use Pawbo+ peripheral toys at home even if I don't own a Pawbo+?

A. Sure! Thank you for supporting our products. Currently the peripheral toys also support dedicated remote controls. Please visit our official website to get more information.

Specification

OS	Embedded Linux
CPU	ARM9
Image Sensor	1/4" CMOS MEGA Pixels
Lens	<ul style="list-style-type: none"> • Focal length : 2.8mm • Max aperture : F2.0 • 130 view angle
Image Compression Format	H264
Image Transfer Rate	1280x720 (High) 640X360 (Low) (QOS Dynamically adjust video quality)
Image Processing	<ul style="list-style-type: none"> • AGC / AWB / AES • Automatic image brightness/ contrast/ sharpness/ saturation
MIC	Prevent high frequency noise
Wireless Internet	Built-in 802.11 b/g/n
Security	<ul style="list-style-type: none"> • Device ID / Password • Support WPA/WPA2 Encryption • HTTPS encryption transmission
Communication Protocol	TCP/IP, HTTP, UDP, ICMP, ARP, DHCP, NTP, IPv4, 802.1x
Laser Light Source	LED indicator (Complies with US FDA Class 2)
Treat Dispenser Tray	<ul style="list-style-type: none"> • Fits 9 treats (Treat size should be smaller than 15x15x15 mm) • Treat Tray can be removed for ease of cleaning.
Method for update	Supports online upgrade. Users will receive notice when new firmware becomes available.

Systems supported	iOS / Android
Remote interactive games	Operate built-in laser pointer and peripherals using virtual joystick and virtual remote control.
Remote treat dispenser	Transmits command to dispense treat to the device end.
Virtual Remote	Press corresponding button to control peripheral toys or start the device.
Remote snapshot	Pictures can be taken remotely via a mobile device and shared on social networks such as FB / Twitter / Instagram
Remote video recording	Videos can be taken remotely, while recording is finished on the device end and automatically uploaded to Dropbox / Google Drive cloud services. Setup your accounts prior to use.
Numbers of simultaneous connections	8
Suitable operating environment	Indoors
Operating Temperature	-10°C ~ 40°C (14°F ~ 104°F)
Operating Humidity	95%RH
Power Supply	5V/2A
Dimensions	Body : 112 x 112 x 200 mm (L x W x H)
Weight	455g (Excl. packaging, based on actual product)
Accessory	Power adapter (100-240V)

More Information

This manual provides only one type of installation method, if you need to read about other advanced installation methods, please refer to: www.pawbo.com

You can access more Pawbo⁺ resources and supports at www.pawbo.com or contact our customer service directly.



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Dec, 2016