EPTZ智能教师跟踪摄像机

Lecturer-Tracking ePTZ Camera

KEDACOM

快速安装指南

Quick Start Guide

一前言

感谢您购买我司产品，如对本公司产品有疑问或需要，请随时和我们联系。

此内容（手册）的目的是确保用户正确使用本产品，以避免危险或财产损失。在使用产品之前，请认真阅读此手册并妥善保存以备日后参考。如果用户因没有按照以下安全说明，致使设备不能正常使用或损坏等情况，我司恕不负责，感谢您的配合。

二安全使用注意事项

1.电源要求

- 请在安装使用设备过程中，严格遵守当地各项电气安全规定。
- 请使用满足安全电压要求的电源，在设备运行之前检查供电电源是否正确。
- 请在安装配线时装入易于使用的断电设备，以便必要时进行紧急断电。
- 请保护电源软线免受踩踏或紧压，特别是在插头、电源插座和从装置引出的接点处。
- 请在断电状态下连接电源、音频、RS485等线缆，严禁在设备上电的情况下连线。

2.使用环境要求

- 请勿将摄像机对准强光（如灯光照明、太阳光等处）聚焦，否则容易引起过亮或漏光现象 (这并非摄像机故障) 也将影响摄像机寿命。
- 请在允许的湿度和温度范围内运输、使用和存储设备。
- 请勿将设备置于潮湿、多尘、极热、极冷、强电磁辐射或照明条件不稳定等场所。
- 请勿让任何液体流入设备，以免内部元件受损。
- 请勿阻挡设备附近的通风口，以免热量积蓄。
- 请在运送设备时，重新以出厂时的包装进行包装，或用同等品质的材质包装。
- 请勿在运输、存储及安装过程中重压、剧烈震动、浸泡设备。
- 本产品非密封防水设备，不能单独工作于室外露天环境。

工作环境			
工作电源	DC12V±10%/POE，802.3at	功耗	15W Max
温度	-20℃ ~ +40℃		
湿度	10%~95% (无凝结)		
海拔高度	-60m~3000m		
大气压	86kPa~106kPa		

3. 日常维护与保养

- 请勿直接触碰设备发热部件，以免烫伤。
- 镜头沾染灰尘或油脂时，用棉布或镜头擦拭布擦拭。若遇污垢难以清除，蘸上少量镜片清洁液，自镜头中心向外旋转轻轻擦拭，直到干净为止。禁止使用有机溶剂（苯、酒精等）对镜头和护罩前脸进行除尘、清洁。
- 请不要以任何方式拆卸或修改产品。（对未经认可的修改或维修导致的问题，本公司不承担任何责任）。
- 如果设备工作不正常，请联系经销商或最近的服务中心。

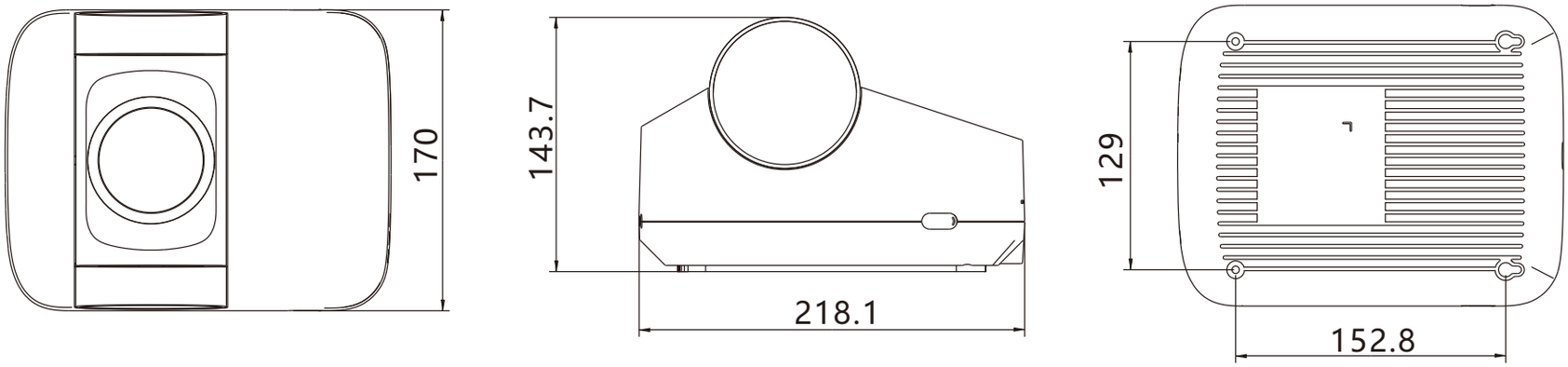
4. 特别声明

- 本手册中的图示仅供参考，产品请以实物为准。
- 我们尽最大努力来保证本手册信息的正确性，如因升级等原因发生信息修改，恕不另行通知。
- 本手册能作为多个型号产品的使用指导，但不一一列举每个产品的使用情况，请您根据实际产品自行对照。
- 本产品使用IPCSearch激活后方能使用，激活时请填写有效邮箱，方便找回密码。IPCSearch请至官网下载，下载地址：https://www.kedacom.com/cn/softtools/index.jhtml
- 为了提高产品网络使用的安全性，建议您设置高强度密码：密码长度必须达到8-16个字符，且至少由数字和字母或特殊字符中的两种或两种以上类型组合而成。请您定期更改用户名的密码，建议每三个月更新一次密码。如果设备在较高安全风险的环境中使用，建议每月或每周更新一次。请妥善保管好您的用户名与密码。
- 将本产品接入互联网需自担风险，包括但不限于产品可能遭受的网络攻击、黑客攻击、病毒感染等，本公司不对因此造成的产品工作异常、信息泄露等问题承担责任，本公司将及时为您提供产品相关技术支持。
- 如需获取最新文档，请至官网下载，官网地址www.kedacom.com。

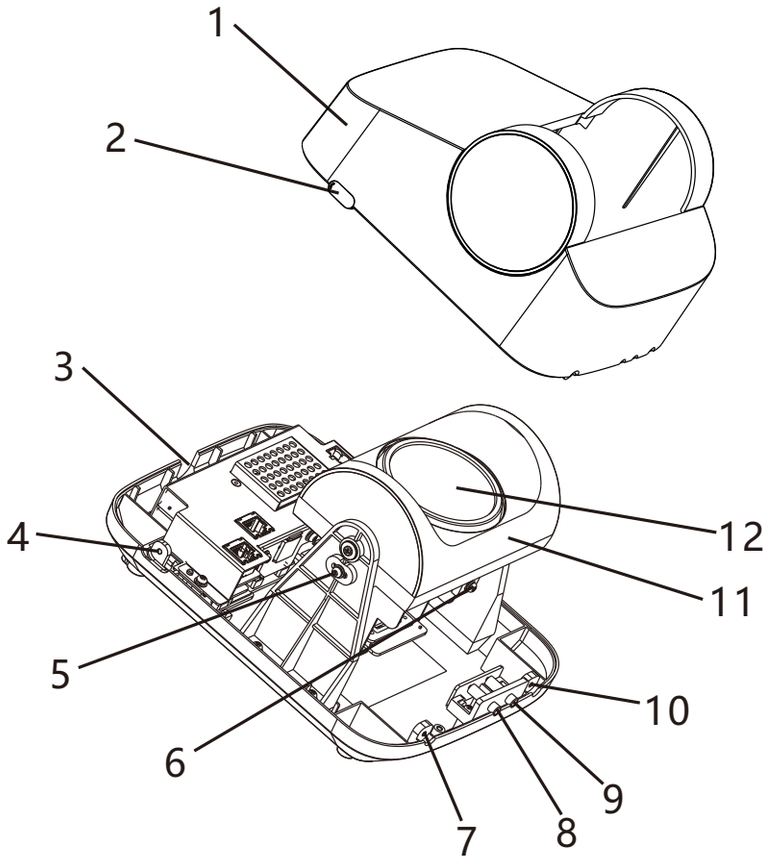
三设备尺寸及外观

外观尺寸：

单位：mm



外观部件：



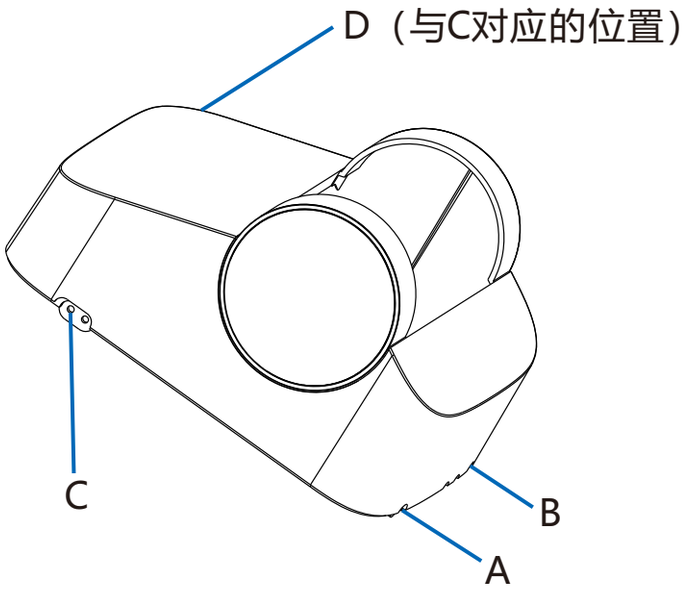
编号	部件名称
1	上盖
2	橡胶帽
3	出线孔
4	上盖固定螺钉
5	镜头角度调节螺钉（垂直方向）
6	镜头角度调节螺钉 （水平方向）
7	上盖固定螺钉
8	指示灯
9	指示灯
10	上盖固定螺钉
11	镜头调节面板
12	镜头

四设备安装

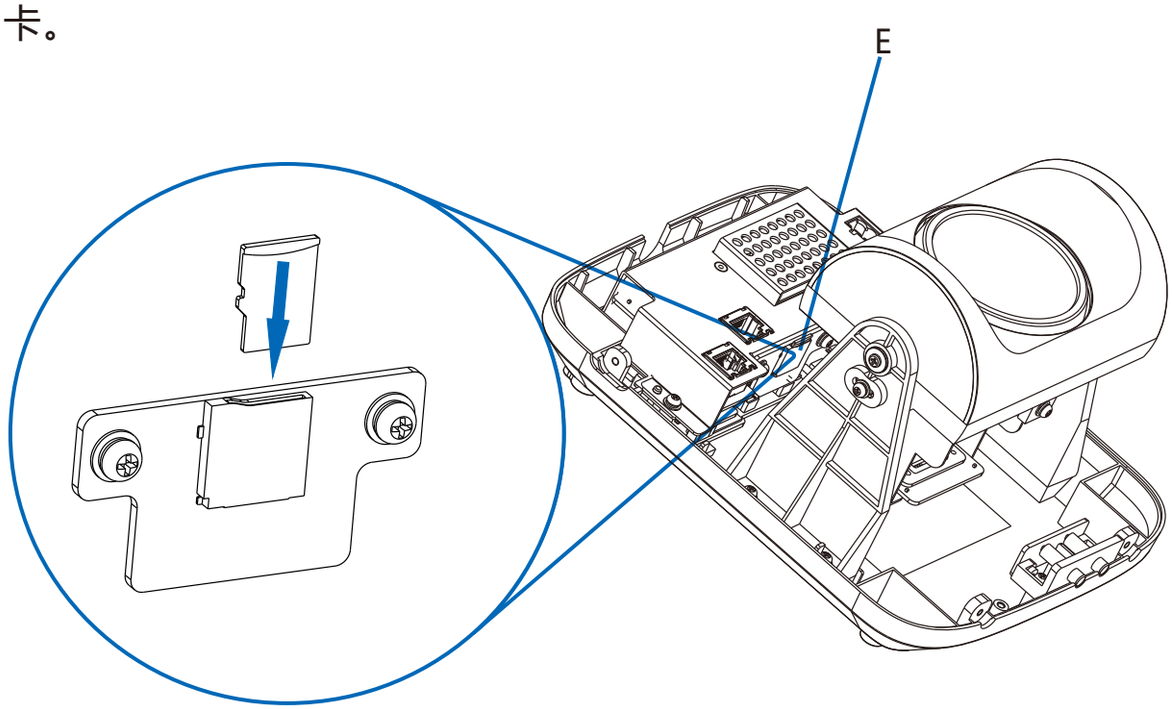
安装存储卡（可选）

【说明】存储卡最大支持256G，不建议热插拔存储卡，首次使用时需格式化。

1. 拧松A、B、C、D四处螺钉，取下外罩。

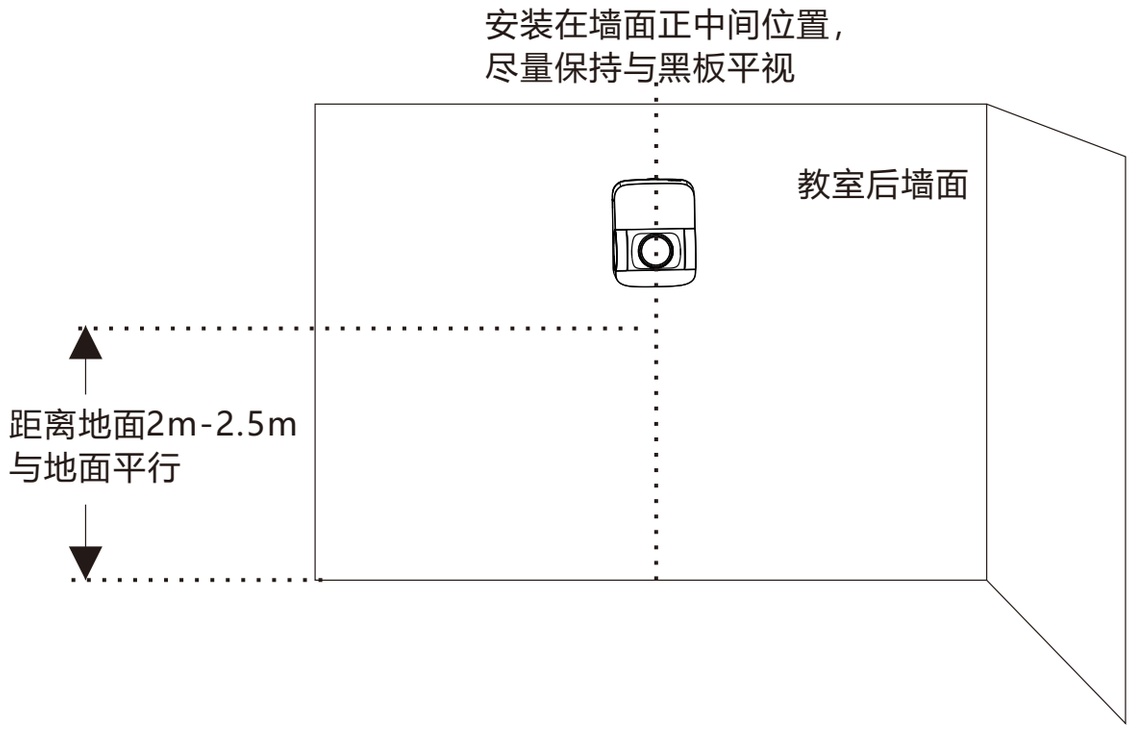


2. 在E处插入Micro SD卡。



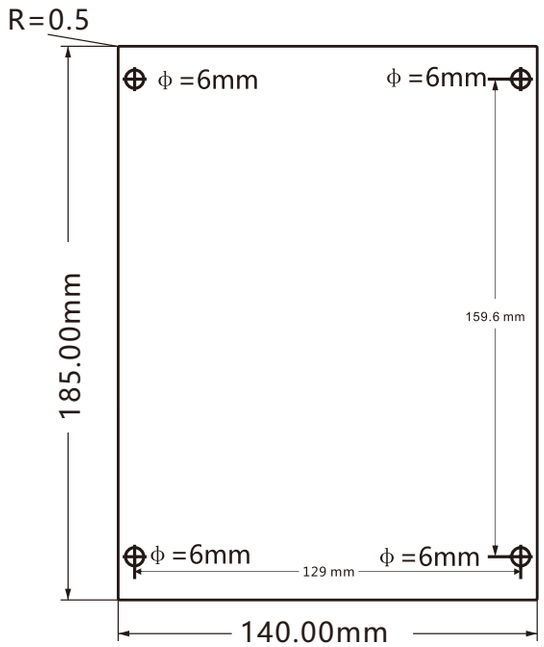
安装设备

1. 确定安装位置。

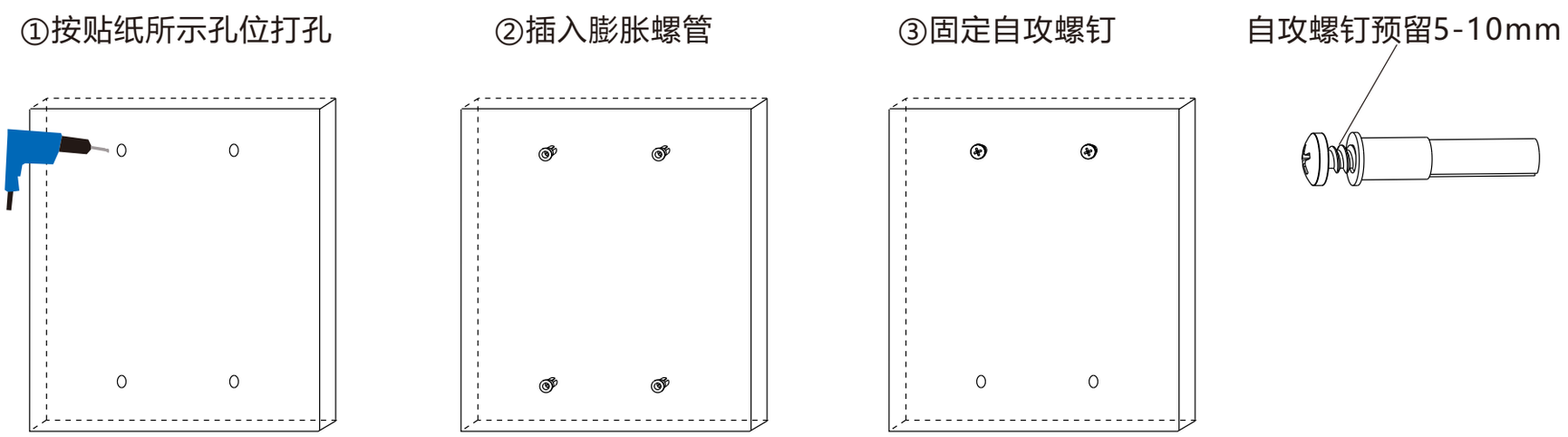


【说明】普通教室建议安装高度为2m-2.5m，当安装在阶梯教室或其他类型的教室时，安装高度需根据实际情况进行调整，以监控画面能完全拍到教师的活动区域且视野边缘与黑板不能有夹角为原则。

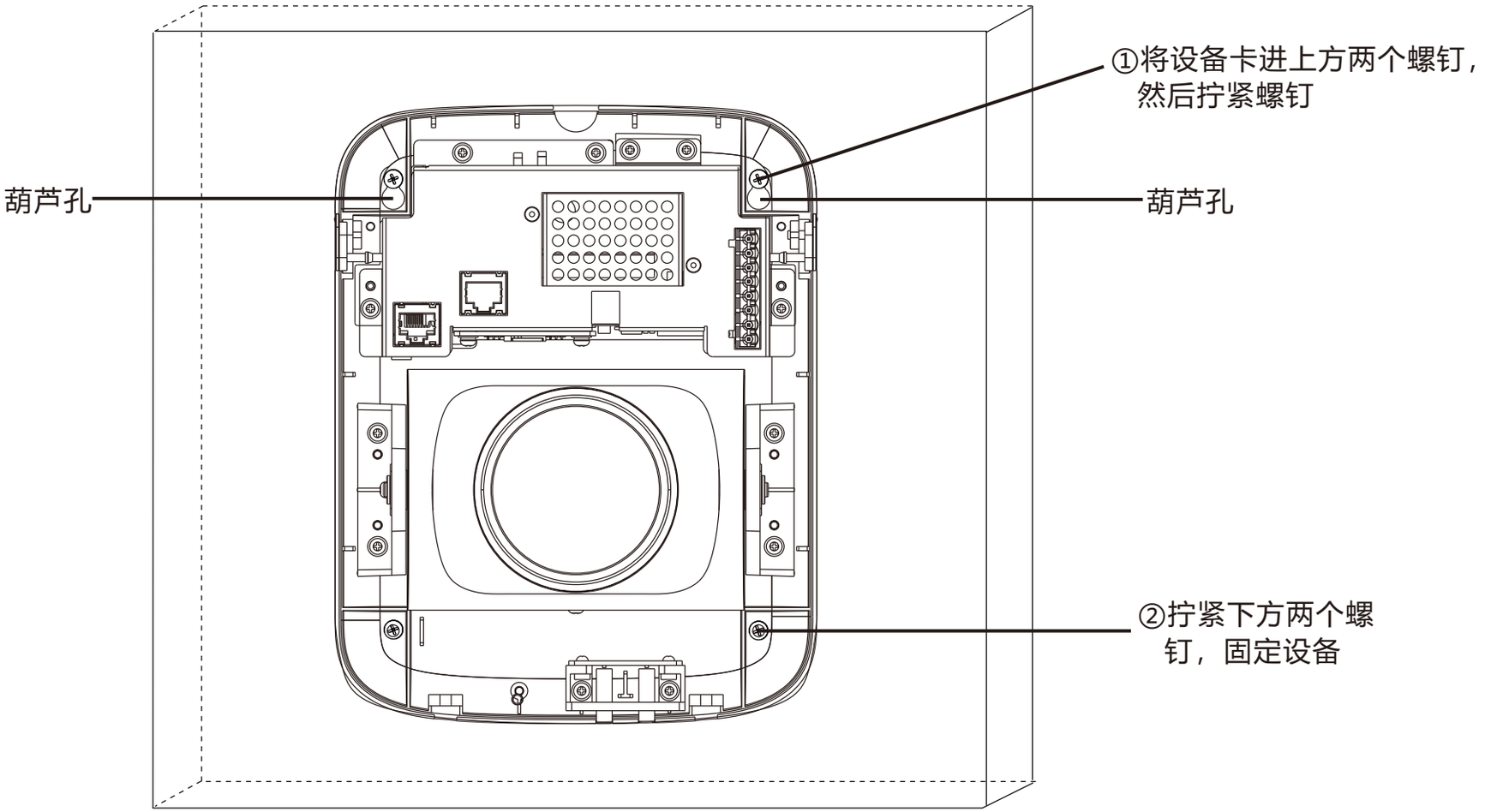
2. 将安装贴纸贴在墙面并根据贴纸所示孔位打孔。安装贴纸如下图所示。



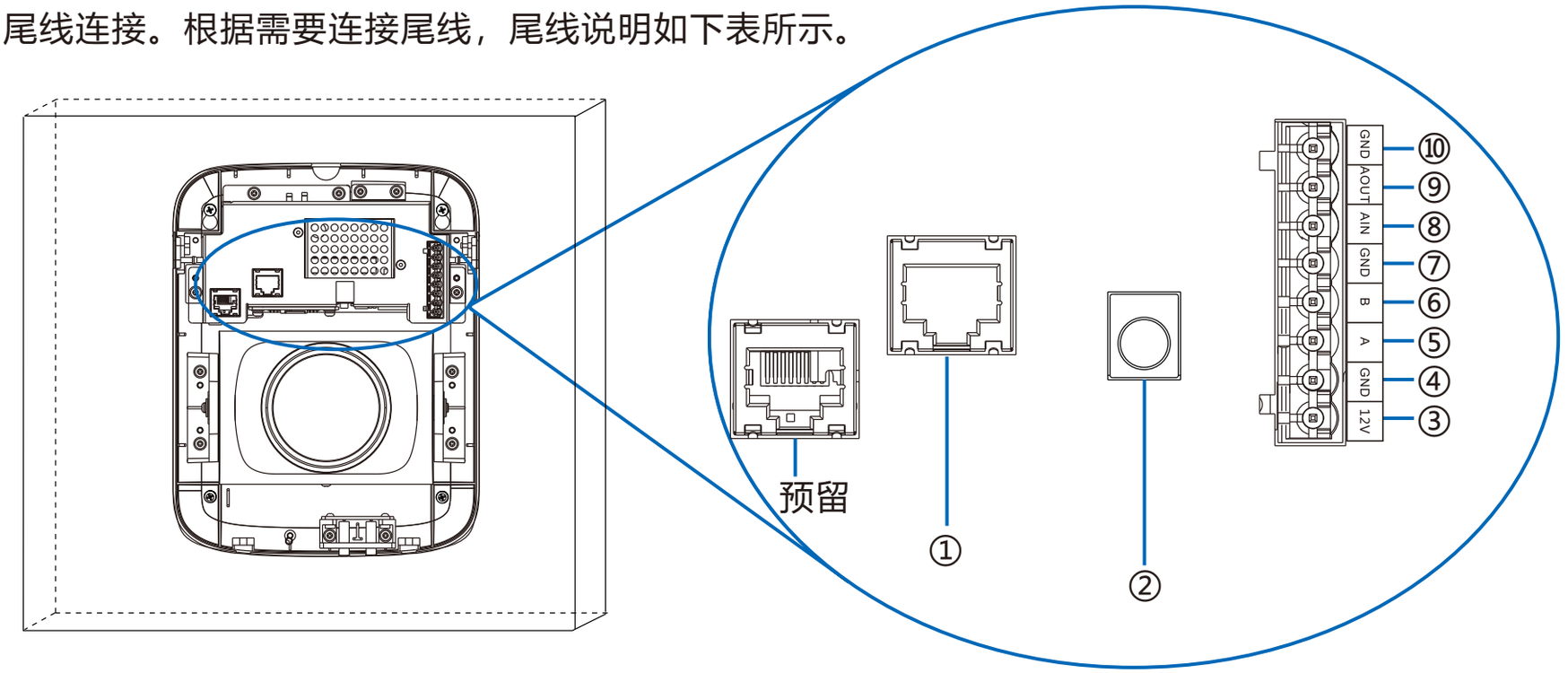
3. 将膨胀螺管插入孔内，在上方的两个膨胀螺管上锁上自攻螺钉，并预留5-10mm长度露在外。



4. 将设备背面的葫芦孔卡进螺钉并将螺钉拧紧，然后拧紧下方的两个螺钉，固定设备。



5. 尾线连接。根据需要连接尾线，尾线说明如下表所示。



序号	接口名称	功能描述
①	网络接口	连接交换机等网络接入设备
②	电源接口	连接DC12V电源适配器
③	12V	电源接口端子，集中供电时使用
④	GND	电源接地线，请将其连接到可靠的接地点上
⑤	A	RS485串口，与外界设备交互控制， 如控制第三方设备
⑥	B	
⑦	GND	音频输入接地
⑧	AIN	音频输入接口，输入音频信号。可连接的设备：拾音器等
⑨	AOUT	音频输出接口，输出音频信号。可连接的设备：音箱等
⑩	GND	音频输出接地

【说明】线缆连接完成后，根据以下指示灯说明查看设备是否工作正常。
LINK：联机指示灯：正常连接网络时绿灯常亮，未连接时灯灭。
RUN：运行指示灯，设备正常运行时绿灯闪烁（1秒亮1秒灭）。

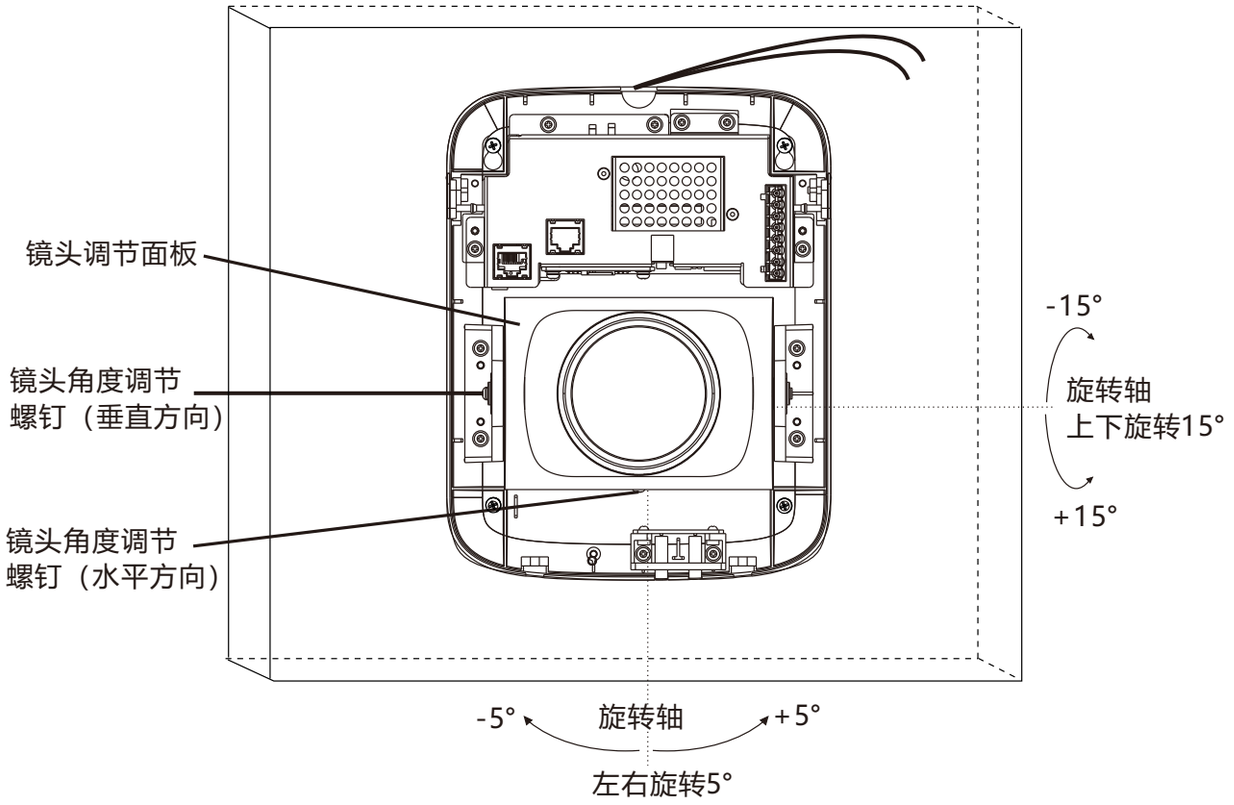
6. 上电，根据监控画面调整镜头方向。

- 调整水平方向：

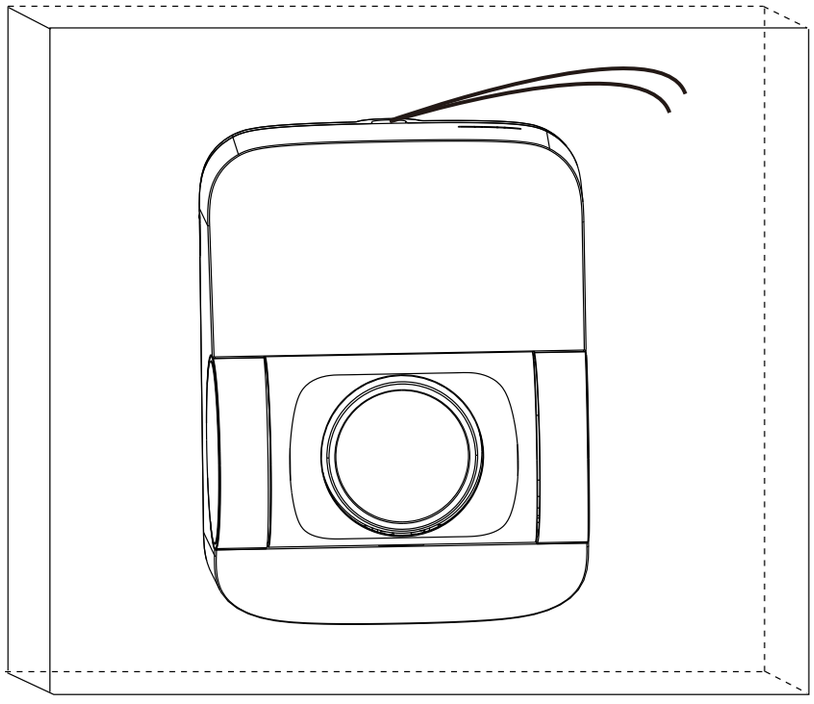
  ①拧松镜头角度调节螺钉（水平方向）
  ②手握镜头调节面板调整镜头水平监控方向
  ③拧紧螺钉

- 调整垂直方向：

  ①拧松镜头角度调节螺钉（垂直方向）
  ②手握镜头调节面板调整镜头垂直监控方向
  ③拧紧螺钉



7. 将尾线卡在出线孔并拧紧上盖固定螺钉盖紧上盖。



五登录客户端

1.最低配置和系统环境

- 处理器：3.3GHz酷睿®i3系列及以上或相同性能的其他处理器
- RAM内存：4GB及以上
- 操作系统：Windows7操作系统或更高版本
- 浏览器：推荐使用IE内核浏览器，使用其他内核浏览器会影响客户端部分功能的使用
- DirectX：9.0c

2.设备激活

第一次使用时请运行IPCSearch，在IPCSearch中将显示设备的IP地址、网关等信息。若IPC设备所接入的网络有DHCP服务，DHCP服务器将自动给IPC分配IP地址。

- 批量激活：在IPCSearch中选中设备，点击**批量处理**，在弹出的界面中设置admin用户的密码和找回密码时需要用的邮箱，点击**激活**按钮激活设备。待设备重启。
- 单个激活：在IPCSearch中选择设备，单击右键，选择**设备激活**。填写用户名、密码、找回密码时需要用到的邮箱。点击**激活**按钮激活设备。待设备重启。

- Web客户端激活：也可以通过Web客户端激活。将PC机与设备设为同一网段，登录Web界面。可在界面设置管理员密码和密码恢复邮箱，点击**激活**。

3.修改设备IP

点击**修改网络参数**，在弹出的界面中配置网络参数。静态分配IP地址时，请选择自定义地址，填写以太网参数。修改参数配置，需要填写管理员用户用户名（admin）及激活设备时所设置的密码。完成IP配置后，设备将自动重启，重启时间约为60秒。

4.登录设备

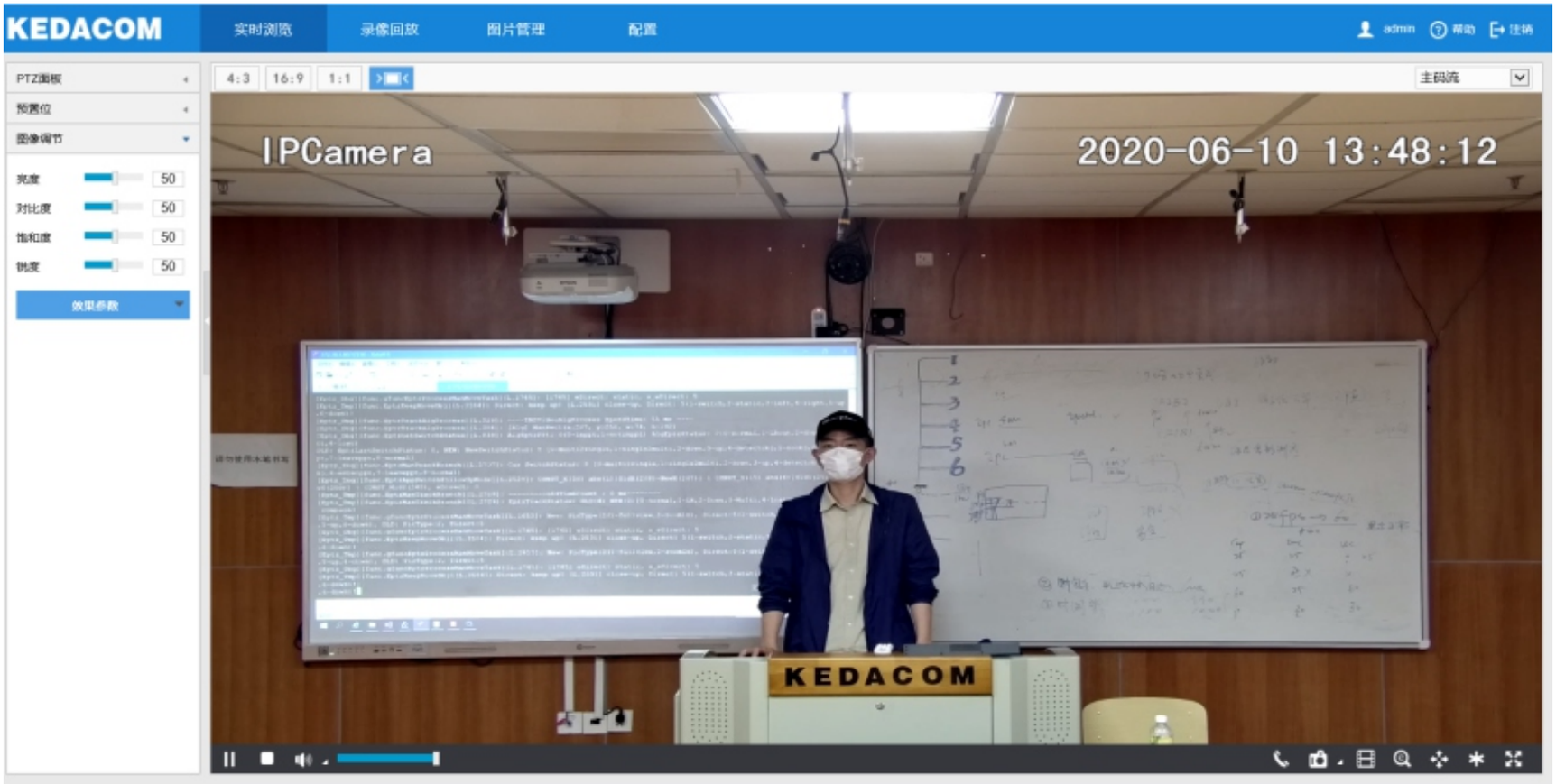
1）在IPCSearch中双击设备或点击**登录设备**，输入用户名和密码，登录Web客户端。

2）登录成功后，下载并安装视频插件。

3）进入客户端后，直接浏览图像。

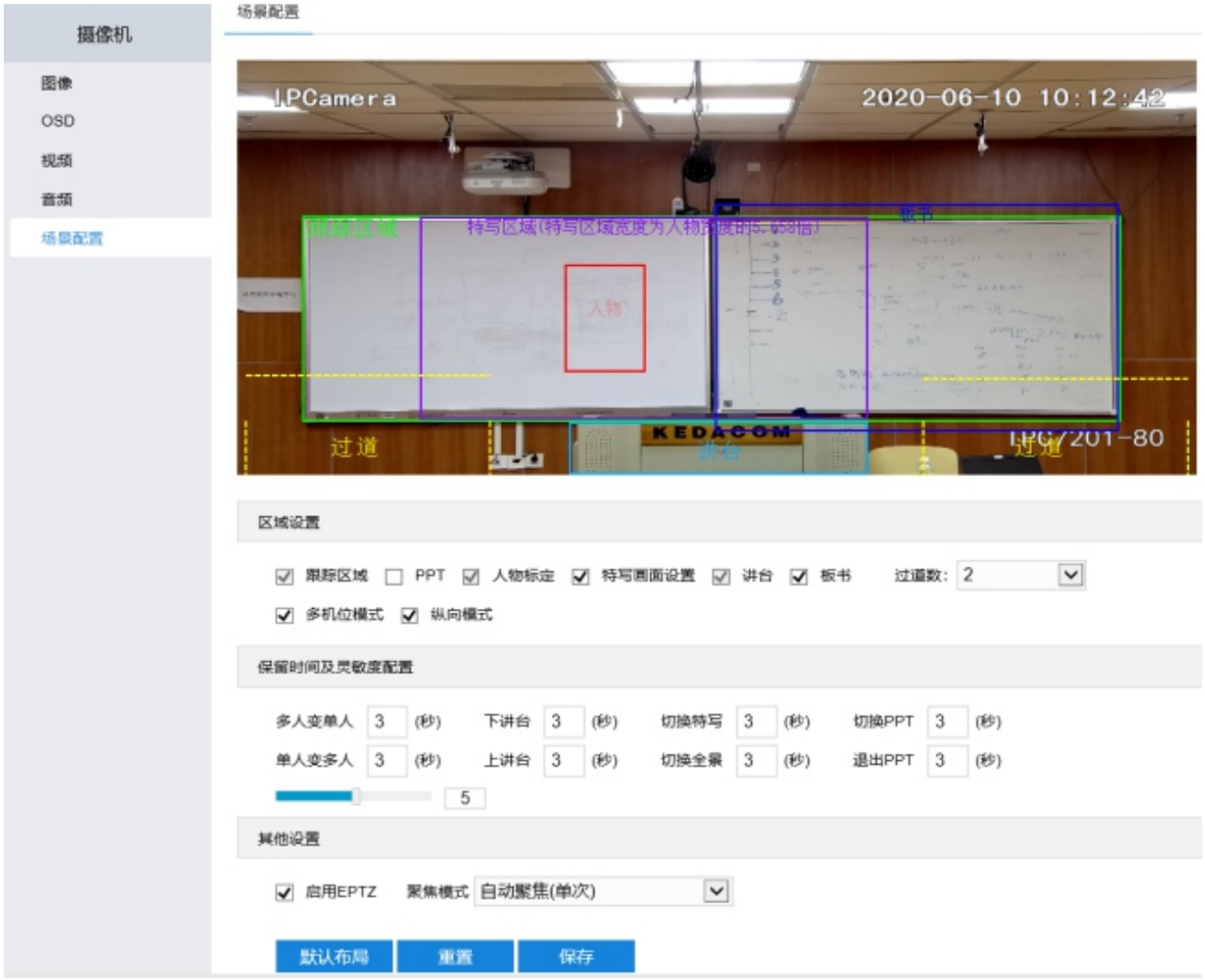
【说明】不同型号，浏览界面略有差异，请以实际界面为准。更多客户端说明请参考客户端帮助文档。

调整设备方向，在Web客户端上进行参数调整，直到浏览画面达到预定要求。



六场景配置

点击**配置-摄像机-场景配置**进入场景配置界面，对追踪区域、保留时间及灵敏度参数等进行配置。



各参数说明如下表所示，根据实际场景需要进行设置。

跟踪区域	默认勾选，不能取消。追踪区域矩形框为绿色，用于框选跟踪区域的范围，只可设置一个追踪区域，仅可在设定的追踪区域内跟踪移动物体，追踪区域不可小于人物标定区域的大小。
PPT	根据需要勾选。PPT矩形框为灰色，用于框选场景中PPT的大小，只可设置一个PPT。PPT设置时应与场景中的PPT外框重合。
人物标定	默认勾选，不能取消。人物标定矩形框为红色，用于框选被跟踪人物的大小，只可设置一个人物标定。将需要标定的人物的上半身框在矩形框内，矩形框宽度为人物的肩宽。人物标定区域不可大于追踪区域的大小。

特写画面设置	默认开启。特写画面设置矩形框为紫色，用于框选教师特写画面的宽度，只可设置一个特写画面。特写画面的宽度为人物肩宽的4倍到6倍。
讲台	默认勾选，不能取消。讲台矩形框为青色，用于框选场景中讲台的大小，只可设置一个讲台。根据讲台的实际位置设置讲台区域。
板书	根据需要勾选。板书矩形框为蓝色，用于框选场景中板书的大小，只可设置一个板书区域。板书设置的区域为固定16:9的比例。
过道数	每个过道由两条黄色直虚线组成，用于在跟踪区域下方设置过道位置，过道数量为0-3个，默认为2个。过道的顶部为黄色虚横线位置，底部为全景画面的底部位置。
多机位模式	默认开启。当教师在跟踪区域中移动或离开跟踪区域，切换至全景画面。当教师在跟踪区域停止后，切换至近景状态跟踪教师。
纵向模式	默认开启。允许特写画面以教师为中心垂直方向跟踪教师。未开启该模式时，仅允许特写画面以教师为中心水平方向跟踪教师。
保留时间	保留时间为当前跟踪状态所保留的时间，在保留时间内不触发下一种跟踪状态。设置范围为1-10秒，默认为3秒。
灵敏度配置	用于设置检测特写画面中教师移动的灵敏度。 拖动拉条进行设置，范围0-10，默认为5。
启用EPTZ	默认开启。用户在浏览界面中的PTZ相关操作则根据EPTZ的功能进行。
聚焦模式	与图像中的聚焦模式相同，聚焦模式中包含：手动聚焦、自动聚焦(多次)、自动聚焦（单次）、镜头锁定。
默认布局	点击按钮恢复为默认界面布局位置及参数。
重置	点击按钮恢复到用户修改配置但未做保存之前的配置状态。
保存	点击按钮保存当前配置。

附录：DC12V线径与传输距离关系表

当线径大小一定，DC12V电压损耗率低于10%时，不同传输功率推荐的最大传输距离。

（对于DC 12V直流供电设备，其最大允许电压损耗率为10%。下面表格中所用线缆均为铜线，铜的电阻率为ρ = 0.0175Ω *mm²/m)

距离 m(feet) / 线径 mm / 功率W	0.80 (20AWG)	1.00 (18AWG)	1.25 (16AWG)	2.00 (12AWG)
5	38(125)	61(199)	96(315)	244(801)
10	19(63)	30(99)	48(157)	122(400)
15	13(42)	20(66)	32(105)	81(267)
20	10(31)	15(50)	24(79)	61(200)
25	8(25)	12(40)	19(63)	49(160)
30	6(21)	10(33)	16(52)	41(133)
35	5(18)	9(28)	14(45)	35(114)
40	5(16)	8(25)	12(39)	31(100)
45	4(14)	7(22)	11(35)	27(89)
50	4(13)	6(20)	10(31)	24(80)
55	3(11)	6(18)	9(29)	22(73)
60	3(10)	5(17)	8(26)	20(67)
65	-	5(15)	7(24)	19(62)
70	-	4(14)	7(22)	17(57)
75	-	4(13)	6(21)	16(53)
80	-	4(12)	6(20)	15(50)
85	-	4(12)	6(19)	14(47)
90	-	3(11)	5(17)	14(44)
95	-	3(10)	5(17)	13(42)
100	-	3(10)	5(16)	12(40)

【说明】1) 传输功率超过60W，需用1.0（18AWG）或以上线径；

2) 线径要求适用于单根、实心、圆形的铜线，多股绞线的电缆AWG，值由所有线的总横截面积决定。

保修说明

本保修卡适用于您购买的本公司系列产品。

1.免费保修期一年（仅限中国大陆地区，中国大陆以外地区请参考英文说明）。

2.凡保修期内，由于本产品自身引起的故障，请与公司售后服务部联系。

3.保修时我们将使用您的保修卡信息，请认真填写。

4.以下情况，属于有偿保修范围：

-人为原因造成的设备故障

-因使用环境不符合本产品要求造成的故障

-因不可抗力造成的产品损坏

-无保修卡

-已过免费保修期

用户信息

用户名称：

详细地址：

传真：　　电话：

邮箱：　　邮编：

产品名称：

产品型号：

购买日期：

I Preface

Thank you for purchasing our product. If there are any questions, or requests, please do not hesitate to contact us.

The intention of writing this Guide is to ensure that user can use the product correctly to avoid danger or property loss. Please read this Guide carefully before using, and keep it properly for future reference. If the product cannot work normally or is damaged because the user does not follow the safety instructions, we shall not assume any responsibility. Your cooperation will be highly appreciated.

II Safety Instruction

1. Power Supply

- During installing and using the device, please follow local electrical safety regulations strictly.
- Please use power supply in the safe voltage range of our product. Make sure the power supply is correct before running the device.
- Please install an easy-to-use breaker during installation and wiring in case it is necessary to make an emergency break.
- Please prevent the power cord from being trampled or pressed especially the plug, socket and the connecting part led out from the device.
- Please connect cables of power, audio and RS-485 with the power off. Hot-line wiring is not allowed.

2. Working Environment

- Do not focus the camera lens on strong light such as the sun or incandescent lamp; otherwise the strong light will cause overexposure or light leak (not camera malfunction), which may shorten camera lifetime.
- Please transport, use and store the device within defined humidity and temperature ranges.
- Do not expose it in damp, dusty, extremely hot or cold places or places with intense electromagnetic radiation or with unstable lighting.
- Keep the camera away from water or any liquid to avoid damage to internal components.
- To avoid heat accumulation, please do not block the ventilation around the device.
- While shipping the camera, pack it in the factory packing or use materials with equivalent quality.
- When shipping, storing and installing the device, try to prevent it from damages caused by pressure, violent vibration and soaking.
- This device is not waterproof and cannot work outdoor in the open air alone.

Operating Environment	
Voltage	DC12V±10%/PoE(802.3at)
Power Consumption	15W Max
Temperature	-20°C ~ +40°C
Humidity	10%~95% (non-condensing)
Altitude	-60m~3000m
Pressure	86kPa~106kPa

3. Daily Maintenance

- Do not touch the heat component of the device directly to avoid empyrosis.
- When the lens is contaminated by dust or grease, use cotton cloth or lens clean cloth to wipe it off. When it is hard to clean, dip some lens cleanser and wipe gently and rotate outward from the middle until it is clean. Never apply any organic solvent with ethanol or benzene to clean the lens and housing.
- Do not disassemble or repair the device in any way by yourself. We shall not assume any responsibility for problems caused by unauthorized repair or maintenance.
- If the product does not work properly, please contact your dealer or the nearest service center.

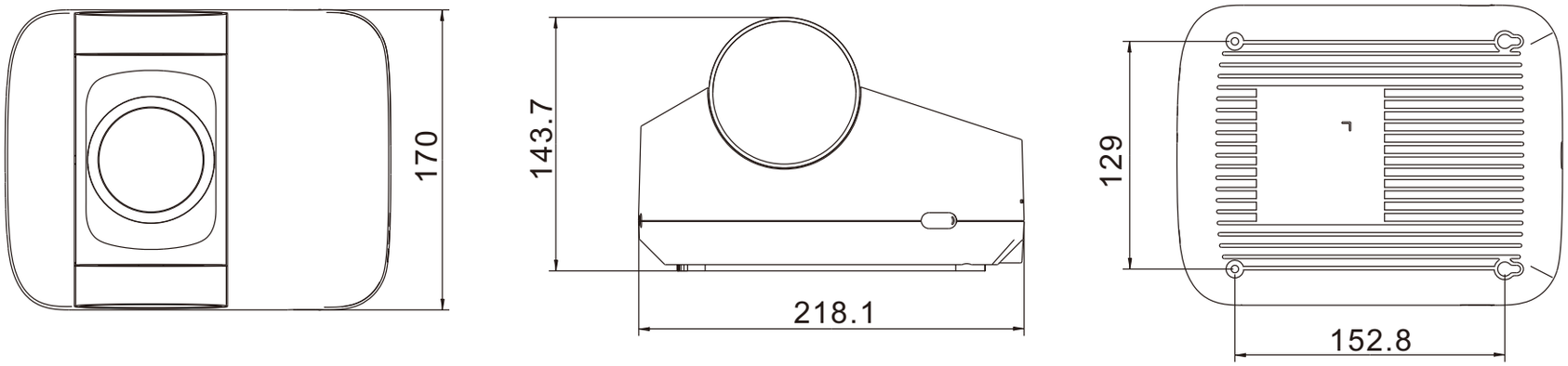
4. Special Statement

- The product appearance is subject to the actual device. Pictures in this Guide are for your reference only.
- Every effort has been made to ensure the accuracy and validity of this Guide. Any update of this Guide caused by version upgrade is subject to change without notice.
- This Guide is made for multiple models but it will not illustrate all models one by one. Please refer to it according to the actual products you are using.
- This device can be used after being activated through IPCSearch. During activation please fill a valid email address for finding back the password. You can download IPCSearch from our website, address: https://www.kedacom.com/cn/softtools/index.jhtml
- For safety's concern, it is strongly recommended that you set a strong password which is composed of at least 2 kinds of the following, digits, case-sensitive letters or specific symbols, and whose length ranges from 8 to 16 bits. Please modify the password periodically and once every 3 months is recommended. If the device is used in highly risky environment, suggest modifying the password monthly or weekly. Please keep your user name and password safe.
- You should be responsible for all risks of accessing the camera to the Internet, including but not limited to possible cyber-attack, hacking attack, virus infection and etc. This company is not responsible for product failures and information disclosure caused thereby, but will provide timely technical support for the camera.
- For the latest files, please download from our website www.kedacom.com.

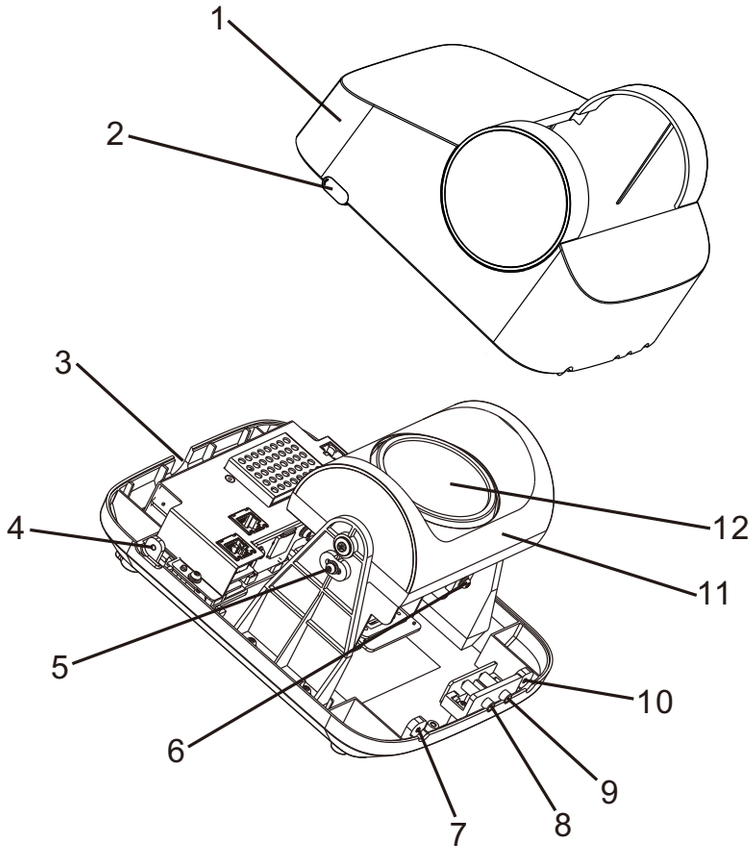
III Dimensions and Appearance

Dimensions:

Unit: mm



Components:



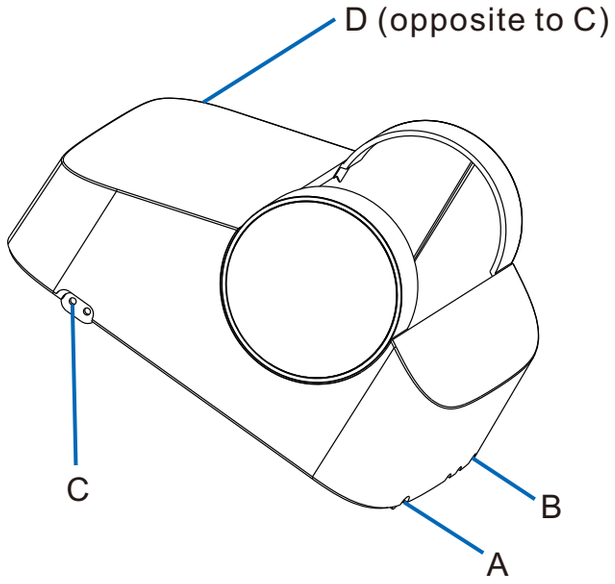
No	Component
1	Cover
2	Rubber Cap
3	Cable Hole
4	Cover Fix Screw
5	Lens Angle Adjust Screw (vertical)
6	Lens Angle Adjust Screw (horizontal)
7	Cover Fix Screw
8	Indicator Light
9	Indicator Light
10	Cover Fix Screw
11	Lens Adjust Panel
12	Lens

IV Installation

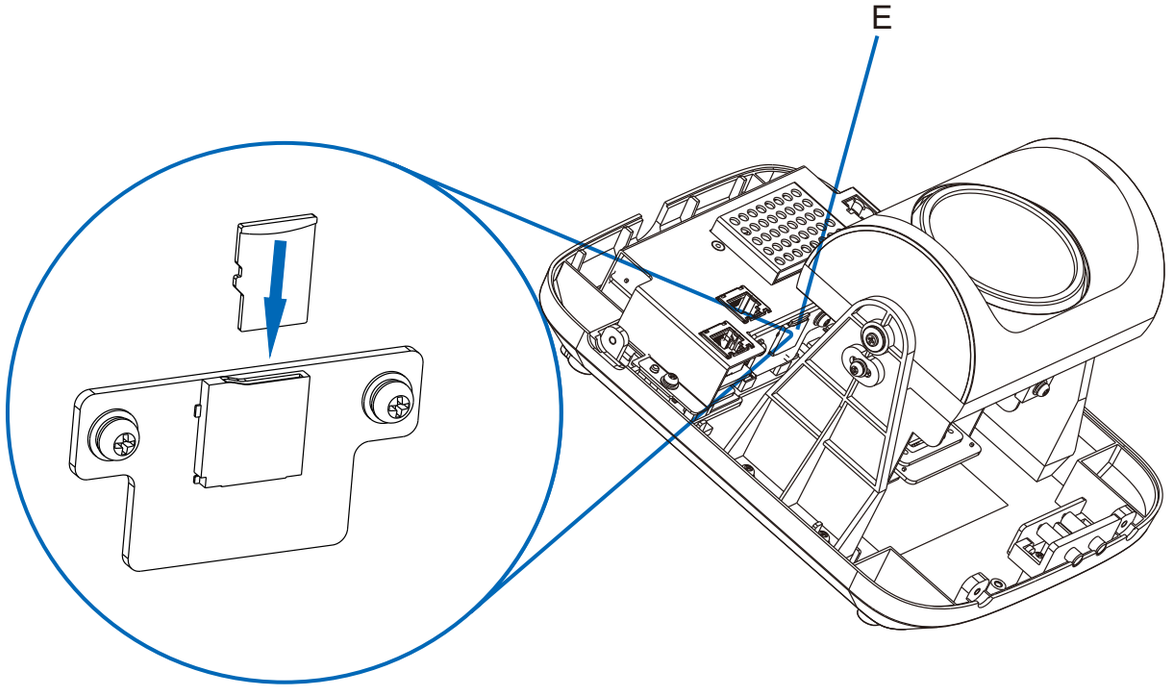
Install Storage Card (optional)

[Note] The storage card supports maximum 256G. Hot swapping of the storage card is not recommended. Please format the card during use for the first time.

1. Loosen screws at A, B, C and D and take down the cover.

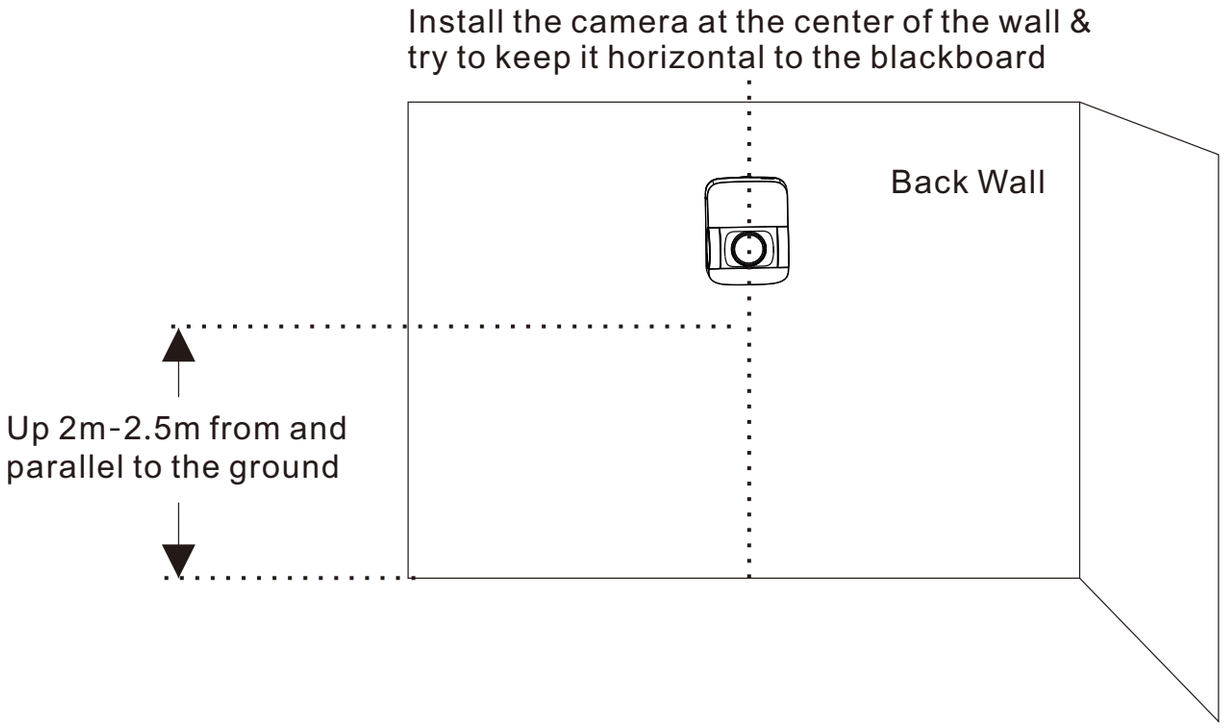


2. Insert Micro SD card into E.



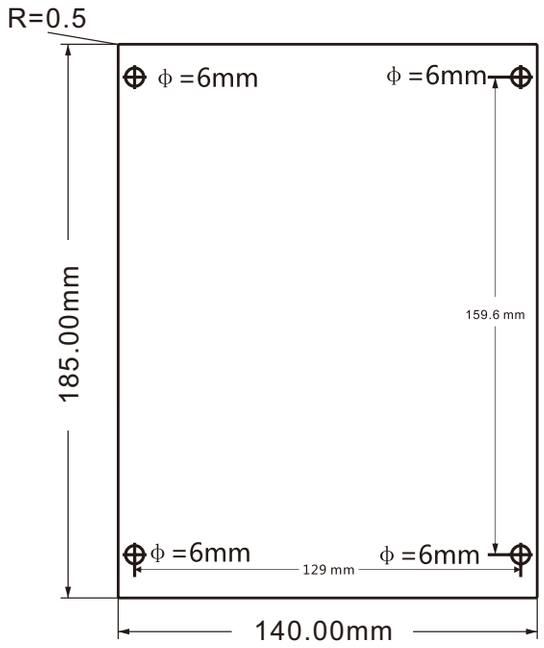
Install the Device

1. Confirm installation position.



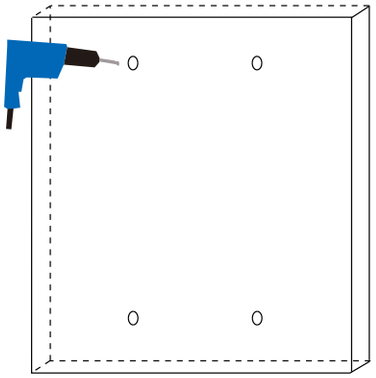
[Note] For common classroom, the suggested installation height is 2m-2.5m; for terrace or other kind of classrooms, the installation height should be adjusted according to the actual situation, following the principle of shooting the whole active area of the lecturer and allowing no angle between the blackboard and the edges of view.

2. Paste the installation sticker onto the wall and drill holes according to the hole marks on it, as shown below.

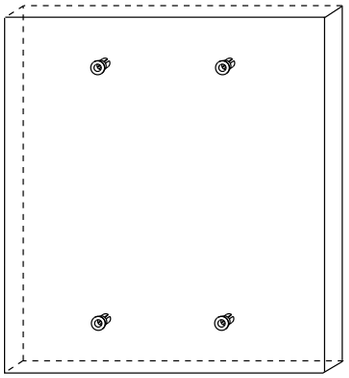


3. Insert the expansion screw tubes into the holes and lock tapping screws in the top 2 pipes, reserving 5-10mm outside.

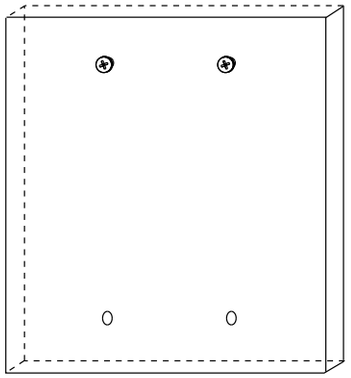
① Drill holes by marks on the sticker



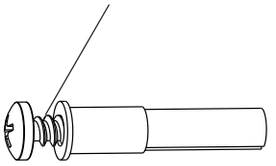
② Insert expansion screw tubes



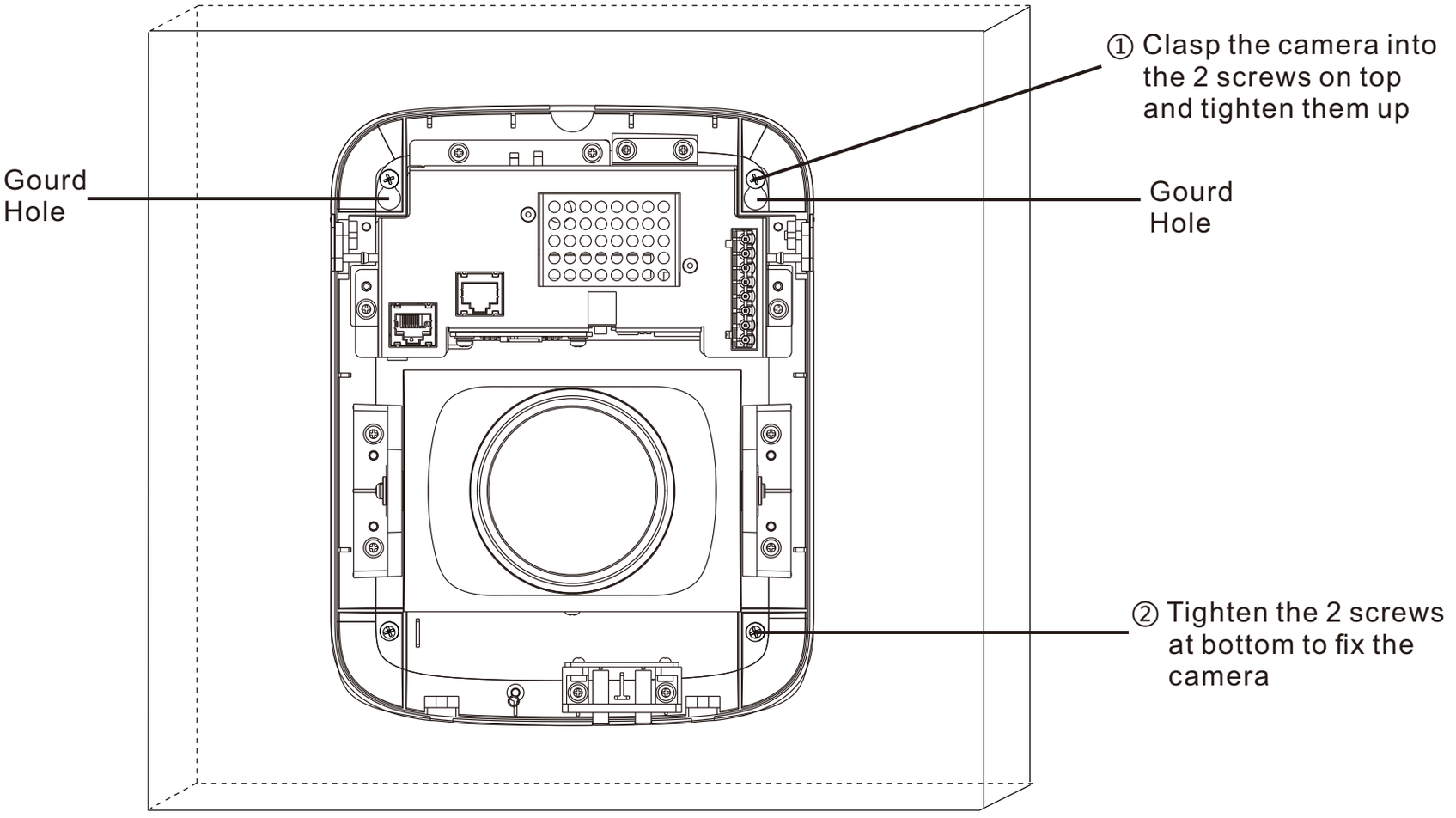
③ Fix expansion screws



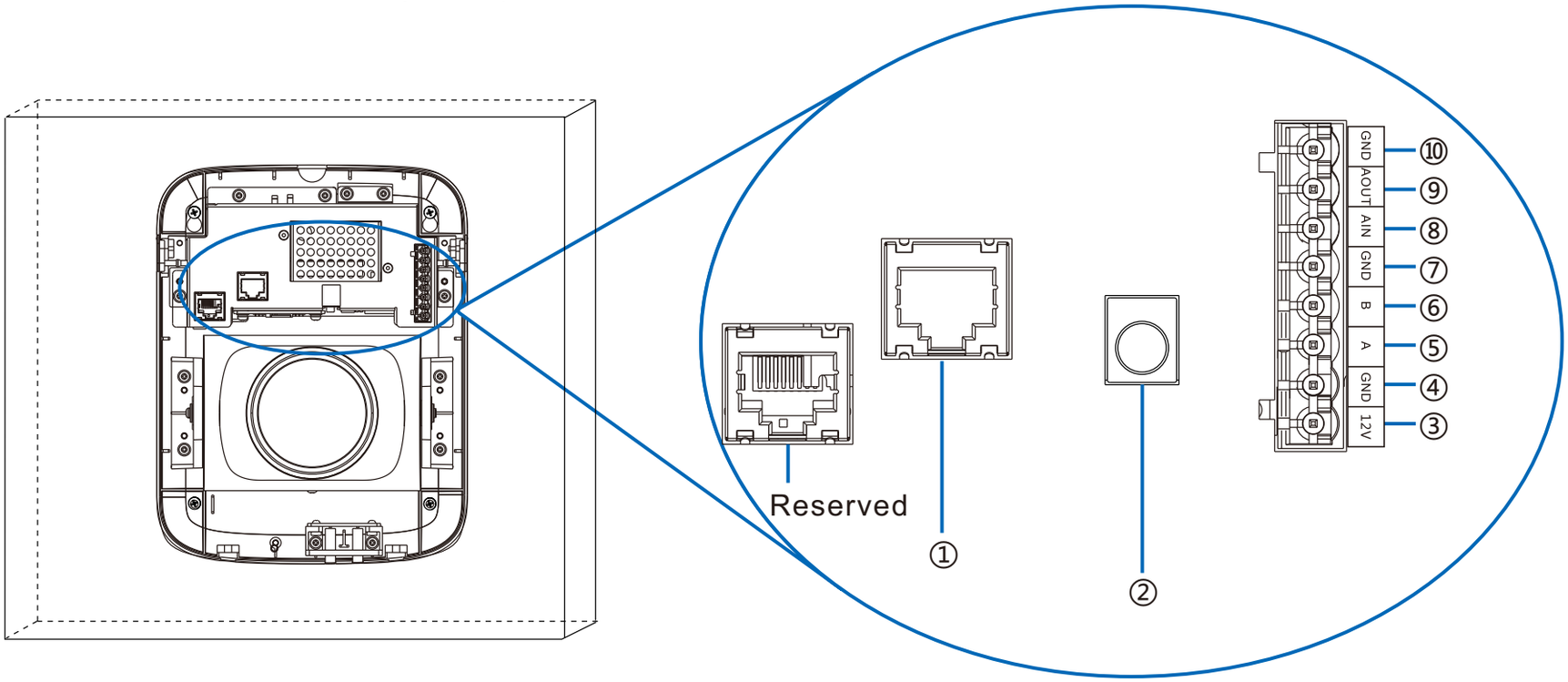
Reserve 5-10mm outside



4. Clasp the back gourd holes into the screws and tighten the screws at the bottom to fix the camera.



5. Connect the buttcock lines up to request. Notes of the wires are introduced as follows.



No	Port	Note
①	Network port	Connect to a switch or other internet access device
②	Power supply	Connect to power adaptor of DC 12V
③	12V	Power supply terminal, used for centralized power supply
④	GND	Power grounding wire, connect it to reliable grounding point
⑤	A	RS-485 serial port, mutual control with external devices such as third-party device
⑥	B	
⑦	GND	Audio intput grounding
⑧	AIN	Audio input port, inputting audio signal; connect to sound pick-up
⑨	AOUT	Audio output port, outputting audio signal; connect to loudspeaker box
⑩	GND	Audio output grounding

[Note] After the wires are connected, check the lights by the notes below to see if the device works normally.

LINK: network status indicator, green and normally on when connected, off when disconnected.

RUN: running indicator, green and flashing (1s on, 1s off) when working normally.

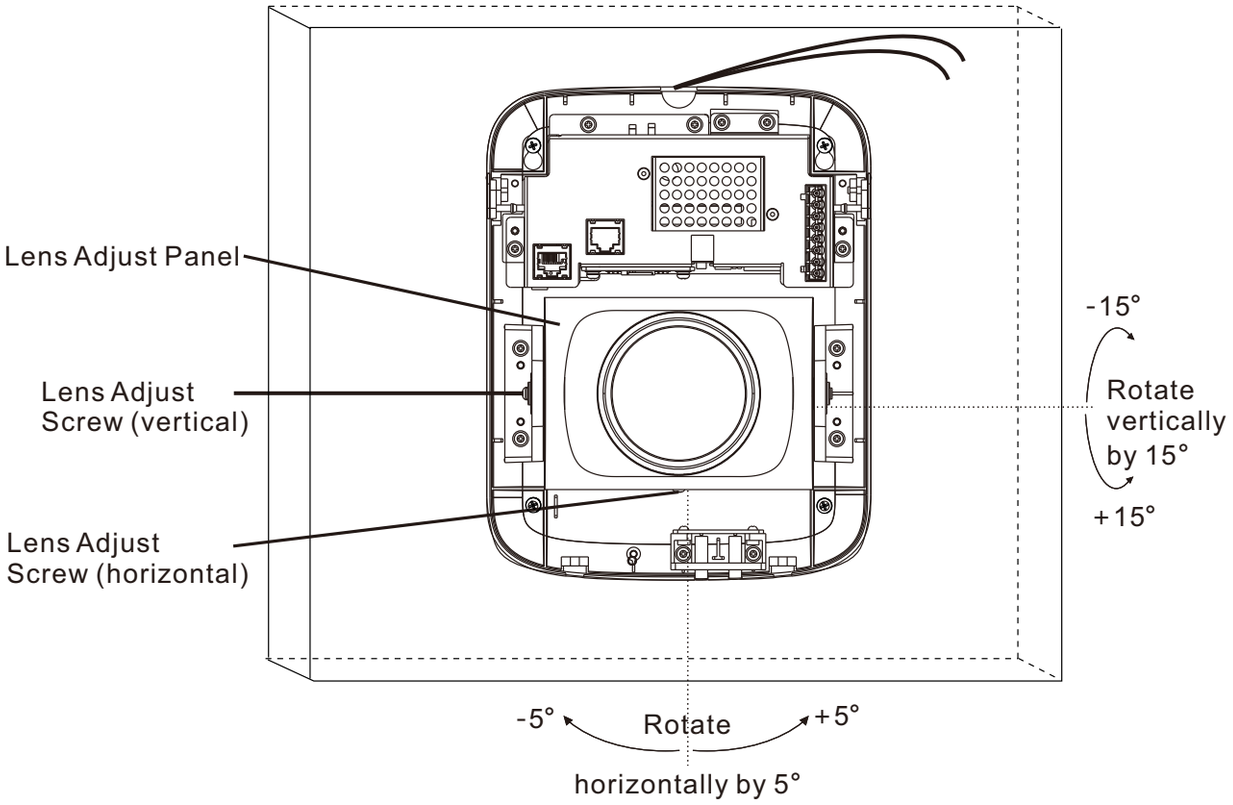
6. Power on and adjust lens direction according to the surveillance image.

- Adjust horizontally:

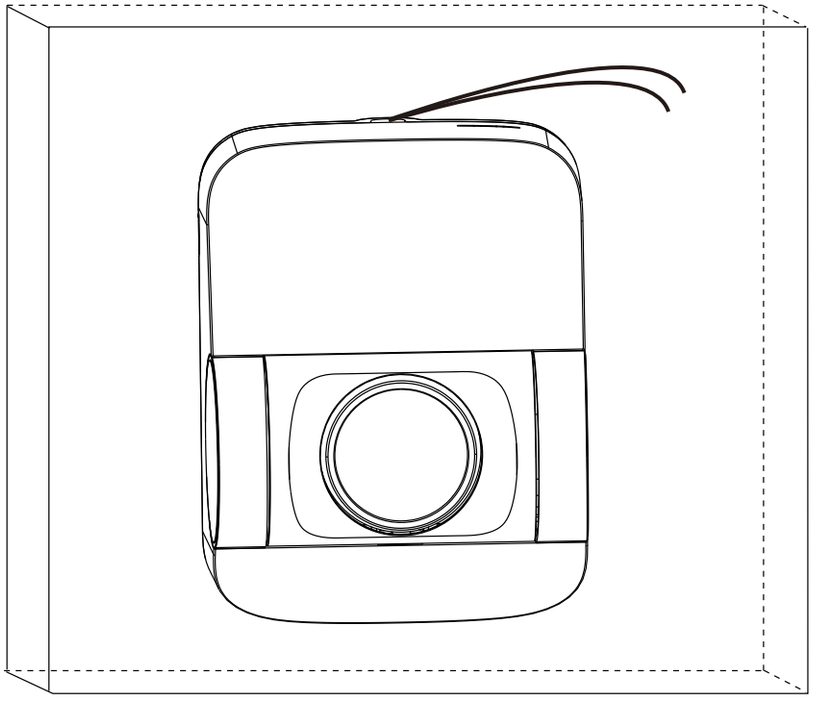
  ① Loosen lens adjust screw (horizontal)
  ② Hold lens adjust panel to adjust the horizontal direction
  ③ Tighten the screw

- Adjust vertically:

  ① Loosen lens adjust screw (vertical)
  ② Hold lens adjust panel to adjust the vertical direction
  ③ Tighten the screw



7. Lock the wires at the cable hole and tighten the fix screws on the cover and shut the cover.



V Login to the Web Client

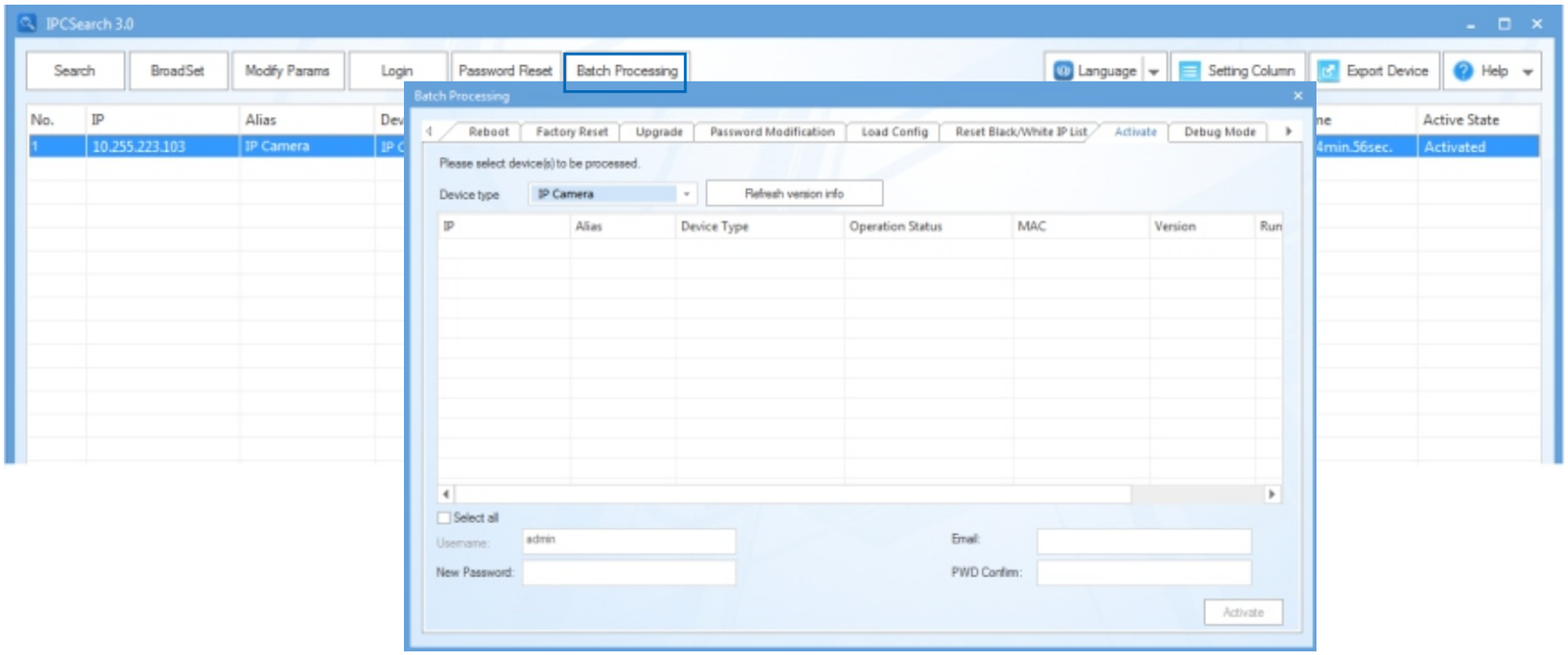
1. Minimum System Configurations and Requirements

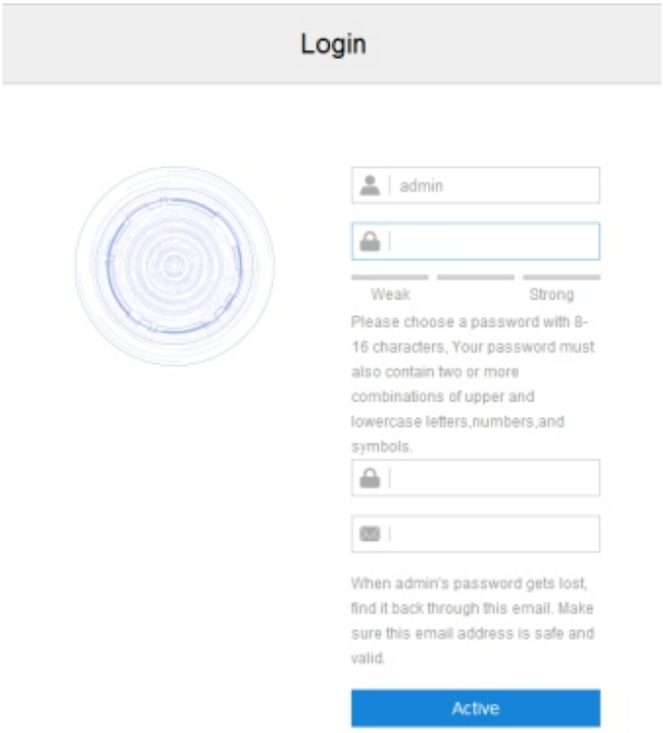
- Processor: 3.3 GHz CORE®i3 series or other equivalent processors
- RAM Memory: 4GB or above
- Operating System: Windows 7 or later
- Browser: Suggest IE kernel browsers, using other browsers may disable some functions of the client
- DirectX：9.0c

2. Device Activation

When using the device for the first time, IPCSearch will display the device IP address, gateway and etc. If the network provides DHCP service, DHCP server will assign IP for the camera automatically.

- Batch: Select the device and click “**Batch processing**”. In the popup interface, set admin user's password and the email address to find back the password. Click “**Activate**” and wait for rebooting.
- Individual: Select the device from IPCSearch and right click to select “**Activate**” . Fill admin user name and password and the e-mail address to find back the password. Click “**Activate**” and wait for rebooting.
- Web client: the device can also be activated through the web client. Set PC and the device in the same network segment and login to the web. User can set admin password and password reset email on the interface and click "**Activate**".



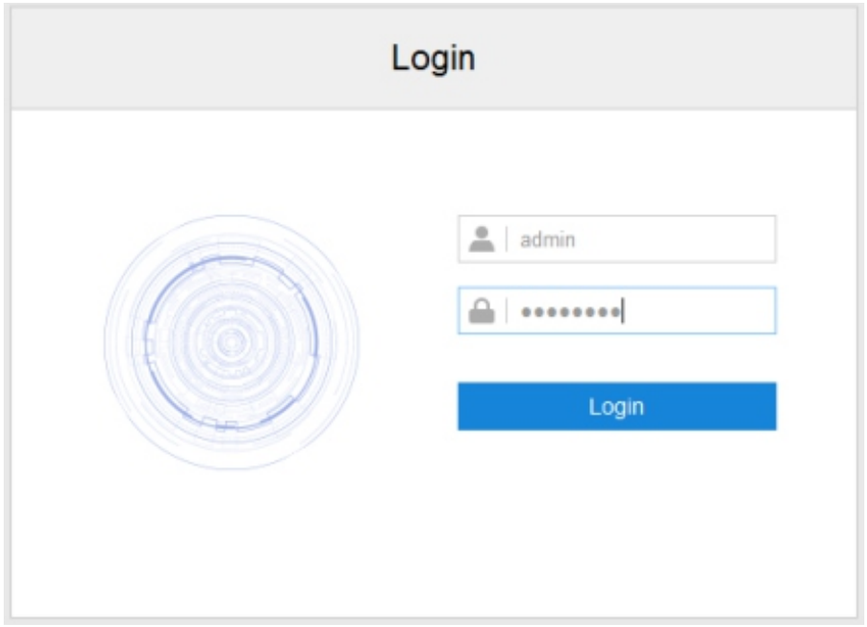


3. Modify Device IP Address

Click "**Modify Params**" and set the network parameters. When configuring a static IP for the camera, please check "Custom device address (Close DHCP)" and fill the Ethernet parameter. During the modification, the user name (admin) and the password set before activation should be entered. After configuration, the camera will reboot automatically.

4. Login to the Device

1) Double click the device in IPCSearch or click "**Login**". Enter user name and password to login the web client.

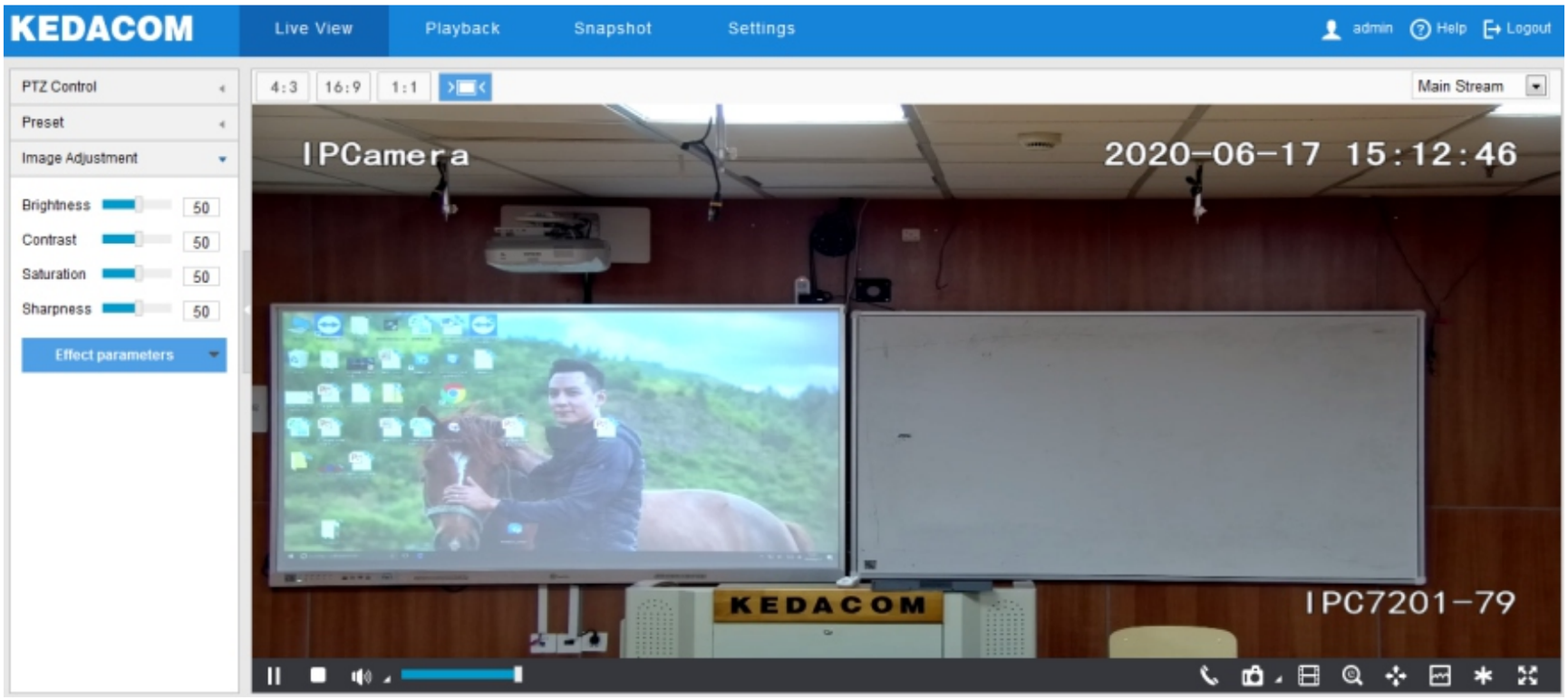


2) After login, download and install the plug-in (IE Kernal browser).

3) Re-login to the web client and view live video directly.

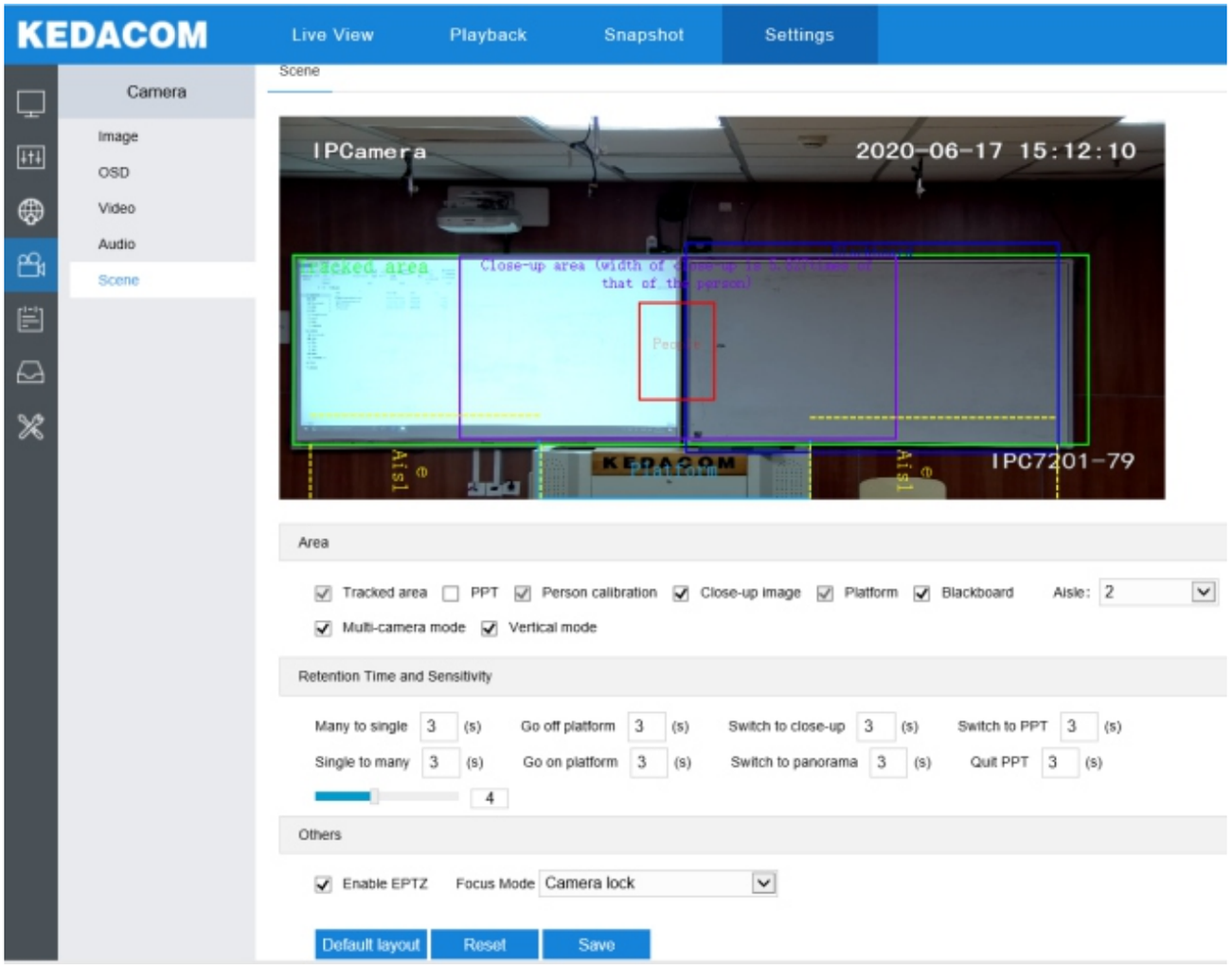
[Note]: Interface of different models may differ. Please subject to the actual product. Please refer to the *Help* file for detailed explanation.

Adjust camera direction, configure camera parameters in web client until the live view meets requirement.



VI Scene Configuration

Go to **Settings > Camera > Scene** and configure tracked area, retention time and sensitivity.



Tracked Area	Checked by default and cannot be unchecked. It's in green rectangle which can be dragged to adjust the area. Only one tracked area can be set and only moving objects in the set area can be tracked. The area must be larger than the person calibration area.
PPT	Optional, in gray rectangle, for defining the PPT size in the scene. Only one PPT area can be set and its borders should coincide with that of the PPT in the scene.
Person Calibration	Checked by default and cannot be unchecked. It's in red rectangle for defining the size of the tracked person. Only one such area can be set. Circumscribe the upper part of the person into the rectangle, the width of which is that of the person's shoulder. The area must be smaller than the tracked area.

Close-up Image	Checked by default. It's in purple rectangle, for defining the width of the close-up image of the lecturer. Only one such area can be set. Its width is 4 to 6 times as that of the person's shoulder.
Platform	Checked by default and cannot be unchecked. It's in cyan rectangle, for defining the size of the platform in the scene. Only one such area can be set. Define the area according to the actual position of the platform.
Blackboard	Optional, in blue rectangle, for defining the size of the blackboard in the scene. Only one such area can be set. The area should be set in proportion of 16:9.
Aisle	Every aisle is made up of 2 yellow straight dotted lines, for setting aisle positions under the tracked area. The range of aisle number is 0~3 and by default 2. The top of the aisle is the position of the yellow dotted lines and the bottom of it is the bottom of the panoramic image.
Multi-Camera Mode	Checked by default. When the lecturer walks in or leaves the tracked area, switch to the panoramic image. When the lecturer stops in the tracked area, switch to the close shot and track the lecturer.
Vertical Mode	Checked by default. Allow the close-up image to center on the lecturer and track vertically. When it's unchecked, only allow the close-up image to center on the lecturer and track horizontally.
Retention Time	It's the retention time of current tracking state, during which it will not trigger the next tracking state. The range is 1~10s, by default 3s.
Moving sensitivity of close-up image	To set the moving sensitivity of the lecturer in the close-up image. Drag the slide bar to adjust. The range is 0~10, by default 5.
Enable ePTZ	Checked by default. User can perform PTZ operations on Live View interface through ePTZ function.
Focus Mode	The same as that on the Image > Focus setting interface, focus mode including Manual, Single Focus, Continuous Focus and Camera Lock.
Default Layout	Click the button to restore to the default layout and settings.
Reset	Click the button to reset to the previous configuration.
Save	Click the button to save current configuration.

Appendix: DC12V Wire Diameter VS. Transmission Distance

The recommended max transmission distance when the wire diameter is certain and the DC12V voltage loss rate is less than 10%

(For DC12V powered devices, the maximum allowed voltage loss rate is 10%. All the wires in the following table are cooper wires, whose electrical resistivity is ρ = 0.0175Ω*mm²/m)

Diameter mm / Distance m (feet) / Power W	0.8 (20AWG)	1.0 (18AWG)	1.25 (16AWG)	2.0 (12AWG)
5	38 (125)	61(199)	96(315)	244(801)
10	19(63)	30(99)	48(157)	122(400)
15	13(42)	20(66)	32(105)	81(267)
20	10(31)	15(50)	24(79)	61(200)
25	8(25)	12(40)	19(63)	49(160)
30	6(21)	10(33)	16(52)	41(133)
35	5(18)	9(28)	14(45)	35(114)
40	5(16)	8(25)	12(39)	31(100)
45	4(14)	7(22)	11(35)	27(89)
50	4(13)	6(20)	10(31)	24(80)
55	3(11)	6(18)	9(29)	22(73)
60	3(10)	5(17)	8(26)	20(67)
65	-	5(15)	7(24)	19(62)
70	-	4(14)	7(22)	17(57)
75	-	4(13)	6(21)	16(53)
80	-	4(12)	6(20)	15(50)
85	-	4(12)	6(19)	14(47)
90	-	3(11)	5(17)	14(44)
95	-	3(10)	5(17)	13(42)
100	-	3(10)	5(16)	12(40)

[Note] 1) When the transmission power is over 60W, you must use wires with diameter of 1.0 (18AWG) or above;

2) The requirements of diameter apply to single, solid and round cooper wire. The AWG value of multi-stranded wires depends on the total CSA (Cross Sectional Area) of all wires.

Kedacom Two (2) Year Limited Hardware Warranty

WHAT IS COVERED BY THIS WARRANTY?

Kedacom warrants the Kedacom-branded hardware product and accessories contained in the original packaging (hereinafter referred to as "Kedacom Product") against defects in materials and workmanship when used normally in accordance with Kedacom's published guidelines for a period of TWO (2) YEARS from the date of original retail purchase in areas other than mainland China by the end-user purchaser (hereinafter referred to as "Warranty Period"). For the Kedacom Product purchased in mainland China, see the simplified Chinese version of this warranty for details. Kedacom's published guidelines include but are not limited to information contained in technical specifications, user guides, and service communications.
The preceding applies unless otherwise agreed in the contract.

WHAT IS NOT COVERED BY THIS WARRANTY?

This warranty does not apply to any non-Kedacom branded hardware products or any software, even if packaged or sold with Kedacom hardware. Manufacturers, suppliers, or publishers, other than Kedacom, may provide their own warranties to you but Kedacom, in so far as permitted by law, provides their products "AS IS". Software distributed by Kedacom with or without the Kedacom brand (including, but not limited to system software) is not covered by this warranty. Please refer to the licensing agreement accompanying the software for details of your rights with respect to its use. Kedacom does not warrant that the operation of the Kedacom Product will be uninterrupted or error-free. Kedacom is not responsible for damage arising from failures to follow instructions relating to the Kedacom Product's use.

This warranty does not apply: (a) to consumable parts, such as batteries, unless failure has occurred due to a defect in materials or workmanship; (b) to cosmetic damage, including but not limited to scratches, dents, and broken plastic on ports; (c) to damage caused by use with another product; (d) to damage caused by acts outside the control of Kedacom, including without limitation acts of God, accidents, abuse, misuse, fire, storms, earthquakes, flood, or other external cause; (e) to damage caused by exposure of the product to heat, bright light, sun, liquids, sand, or other contaminants; (f) to damage caused by operating the Kedacom Product outside Kedacom's published guidelines; (g) to damage caused by service (including upgrades and expansions) performed by anyone other than a representative of Kedacom, Kedacom employee, or authorized Kedacom agent; (h) to an Kedacom Product that has been modified to alter functionality or capability without the written permission of Kedacom; (i) to defects caused by normal wear and tear or otherwise due to the normal aging of the Kedacom Product, or (j) if any serial number has been removed or defaced from the Kedacom Product.

YOUR RESPONSIBILITIES

If your Kedacom product is capable of storing data and other information, you should make periodic backup copies of the information contained on the storage media to protect the contents and as a precaution against possible operational failures.

Before receiving warranty service, Kedacom or its authorized agents may require that you furnish proof of purchase details, respond to questions designed to assist with diagnosing potential issues, and follow Kedacom's procedures for obtaining warranty service. Before submitting your Kedacom Product for warranty service, you should maintain a separate backup copy of the contents of its storage media, remove all personal information that you want to protect, and disable all security passwords.

During warranty service, it is possible that the contents of the Kedacom product's storage media will be lost, replaced or reformatted. In such an event, Kedacom and its authorized agents are not responsible for any loss of data or other information contained on the storage media or any other part of the Kedacom product serviced.

Following warranty service, your Kedacom Product or a replacement product will be returned to you as your Kedacom Product was configured when originally purchased, subject to applicable updates. You will be responsible for reinstalling all other data and information. Recovery and reinstallation of other data and information are not covered under this warranty.

WHAT WILL KEDACOM DO IF THE WARRANTY IS BREACHED?

If during the Warranty Period, you submit a valid claim to Kedacom or an authorized Kedacom agent, Kedacom will, at its option, (i) repair the Kedacom Product using new or previously used parts that are equivalent to new in performance and reliability, or (ii) exchange the Kedacom Product for a refund of your purchase price.

A Kedacom replacement part or product, including a user-installable Kedacom part that has been installed in accordance with instructions provided by Kedacom, assumes the remaining warranty of the Kedacom Product or ninety (90) days from the date of replacement or repair, whichever provides longer coverage for you. When a product or part is replaced or a refund provided, any replacement item becomes your property and the replaced or refunded item becomes Kedacom's property.
Kedacom reserves the right to refund the purchase price as its exclusive warranty remedy.

HOW TO OBTAIN WARRANTY SERVICE?

To seek warranty service, please contact a local authorized Kedacom agent. When contacting the agent via telephone, other charges may apply depending on your location.

User Information

Complete the form below and keep for ready reference.

User Name:	
Address:	Postal Code:
Tel:	Mobile:
Fax:	E-Mail:
Product Name:	Product Model:
Date of Purchase:	

客户咨询热线：**400-828-2866**

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苏州科达科技股份有限公司
Suzhou Keda Technology Co.,Ltd.

中国: 江苏省苏州市高新区金山路131号(215011)
Tel: +86-512-68418188 Fax: 86-512-68412699
Suzhou Keda Technology Co.,Ltd.
Singapore: 627A Aljunied Road, #09-07, BizTech Centre, Singapore 389842
Tel: +65-6842-5700 Fax: +65-6842-5900

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