

智能跟踪系统

Intelligent Tracking System

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 安全说明

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网络、电源等线缆，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。
- 请勿安装在非牢固的支架、墙面、或屋顶上，否则会导致人机受损。
- 室内机型不能安装在有雨淋和潮湿的地方，如室内机型悬挂支架有连接杆，注意连接杆不能有孔，以防进水。
- 室外机型须完全密封，杜绝受潮；悬挂支架连接杆不能有孔，以防进水。

工作环境	
工作电源	AC24V±10%/POE (802.3at)
功耗	24W Max
温度	-40°C~+70°C
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

- 请勿直接接触设备发热部件，以免烫伤。
- 镜头玻璃表面沾染灰尘或油脂时，用棉布或镜头清洁布擦拭。若遇污垢难以清除，蘸上少量镜片清洁剂，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）对镜头玻璃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（对未经认可的操作导致的问题，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。本手册可作为多个型号产品的使用指导，由于篇幅有限，不一一列举每个产品的使用情况，请根据实际产品自行对照。
- 本产品使用 IPCSearch 激活后方能使用（IPCSearch 可在官网下载，下载链接 <https://www.kedacom.com/cn/softtools/index.jhtml>），激活时请填写有效邮箱，方便找回密码。强烈建议您将密码设置为强密码：由数字、大/小写字母或特殊符号中两种或两种以上类型组合而成，且密码长度满足 8-16 位。请您定期更改用户名的密码，建议每 3 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。
- 如需获取最新文档，请至官网下载，官网地址 www.kedacom.com。

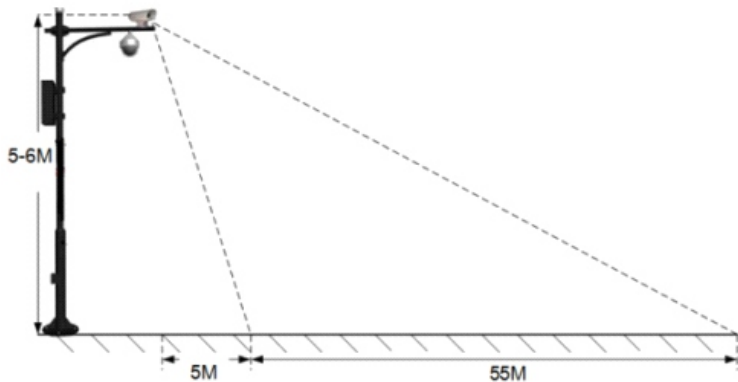
三 安装环境

设备安装前，需要对设备安装的环境进行点位勘察，为保证设备运行效果，在环境勘察时，务必参考以下注意事项。

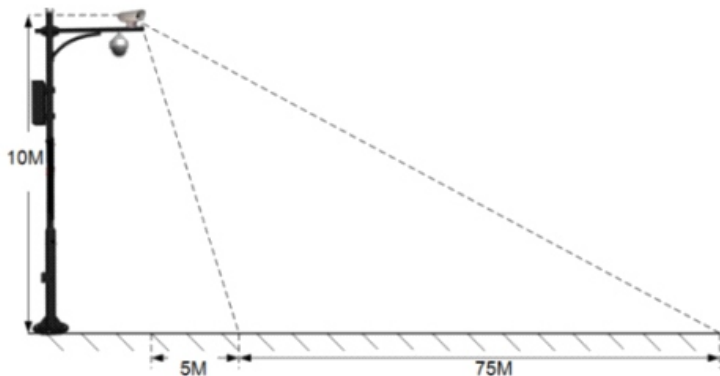
- 智能跟踪系统合适的安装高度范围在 5-30m 之间，立杆安装推荐高度为 6m，挂壁安装推荐高度为 15m。
- 设备安装位置周围无固定的强烈震动源。
- 挂壁安装的墙面较为垂直，立杆安装的地面较为水平，无明显坡度。
- 设备安装的墙面或立杆必须有足够的强度，可承受 8 倍枪机、球机、支架等附件的总重量，承受九级以下台风。
- 智能跟踪系统的监控范围和高度的关系如下表：

安装高度	适合监控距离范围	枪机和球机相对距离要求
5m~6m	5m~60m	0.5m以内
10m	5m~80m	0.5m以内
20m	5m~100m	1m以内
30m	5m~120m	1m以内

如安装高度为 5-6m, 则适合监控距离的范围为 5-60m, 如图所示:



如安装高度为 10m, 则适合监控距离的范围为 5-80m, 如图所示:

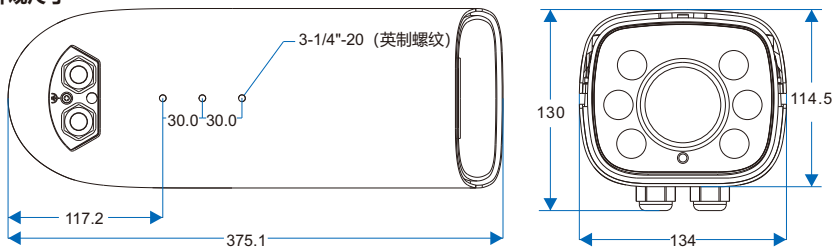


- 【注意】** 1) 若安装高度低于 5m，球机的跟踪效果将受到影响，可能无法正常放大跟踪目标。
2) 枪、球机的距离为 0.5~1m，枪、球机不能相互遮挡对方的画面。

四 设备安装

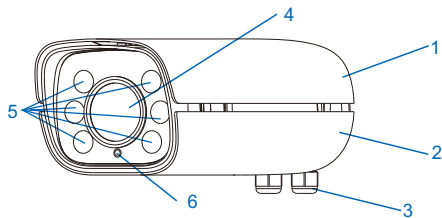
1. 枪机安装

外观尺寸



单位: mm

外观部件



序号	部件名称
1	上盖
2	下盖
3	Pg头 (穿线)
4	镜头
5	6×补光灯
6	光敏

尾线

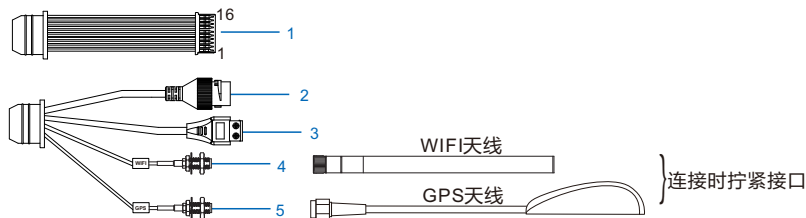


表1 线缆接口介绍

接口	接口名称	功能描述
1	用户线缆组合	包含告警输入/输出, 音频输入/输出, RS485串口等
2	网络接口	连接交换机等网络接入设备
3	电源接口	连接AC24V电源
4	WIFI接口	连接WIFI天线
5	GPS接口	连接GPS天线

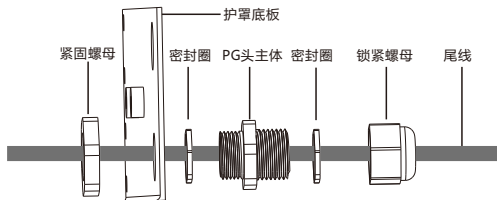
表2 用户线缆组合接口介绍

接口名称	序号	颜色	接口名称	功能描述
用户线缆组合	1	白	RS485_B	RS485串口, 与外界设备交互控制, 如控制第三方设备
	2	灰	RS485_A	
	5	绿/白	AUDIO_GND	音频接地
	6	绿	AUDIO_IN_2	音频输入接口, 输入音频信号或进行语音对讲
	7	橙/白	AUDIO_GND	音频接地
	8	橙	AUDIO_IN_1	音频输入接口, 输入音频信号或进行语音对讲
	9	黑/白	AUDIO_GND	音频接地
	10	粉红	AUDIO_OUT	音频输出接口, 输出音频信号
	11	紫	ALARM_IN_GND	告警输入接地

接口名称	序号	颜色	接口名称	功能描述
用户线缆组合	13	黄	ALARM_IN_2	告警输入接口，输入告警信号
	14	棕	ALARM_IN_1	
	15	白棕	ALARM_OUT_1A	告警输出接口，输出告警信号
	16	白红	ALARM_OUT_1B	

- 【说明】** 1) 告警输出ALARM_OUT 1A和ALARM_OUT 1B不分正负极，组成一路告警输出。
 2) 两路告警输入（ALARM_IN_1和ALARM_IN_2）共用告警地线。

PG头安装



- 1) 打开护罩，一手握住PG头主体，一手卡住紧固螺母，逆时针旋转PG头主体将护罩上的PG头拆下。
- 2) 逆时针旋转锁紧螺母将其拆下，将已经穿好金属包塑波纹的线缆依次穿入紧固螺母、PG头主体、锁紧螺母，然后顺时针拧紧锁紧螺母。

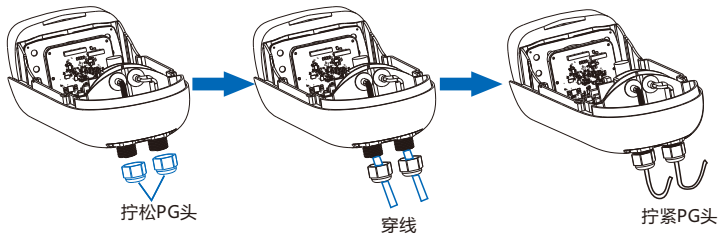
【说明】 拆装过程中请勿丢弃密封圈，并确保不要漏装。

- 3) 将穿入线缆的PG头顺时针安装在护罩上，拧紧PG头，预留适当长度的线缆即可。
- 4) PG头底部和金属包塑波纹接触点，用防水胶带由上而下逆时针均匀缠绕，之后再顺时针均匀缠绕，做好防水、防尘处理。
- 5) 穿线完成后，盖好护罩上盖，以便将设备安装到支架上。

连接线缆

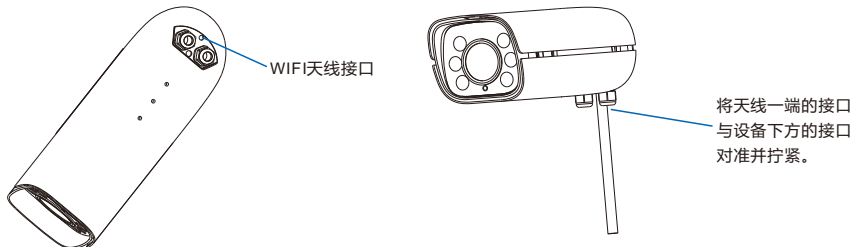
- 1) 按机身内线缆标签，对摄像机尾线做相应连接。
- 2) 穿线。线缆连接完成后，将线缆从PG头穿出。

【说明】穿线时，建议将网线和电源线从不同的PG头穿出。



3) WIFI天线和GPS天线连接

WIFI天线接口在设备下方，连接时从包装箱中取出WIFI天线，将天线一端的接口与设备下方的接口对准并拧紧。



GPS天线接口由单独一根线缆引出。连接时，从包装箱中取出GPS天线，将设备引出的GPS接口与天线的接口对准并拧紧。GPS天线的磁铁用于固定天线，可以吸附在金属部件上。

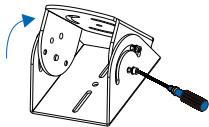
【说明】请不要将GPS天线放置于被遮挡的区域，如天桥下，以免影响信号。

支架安装

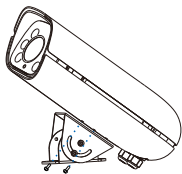
摄像机支持横杆安装、吊装和壁装。横杆装、吊装、壁装支架为选配件，请根据需要进行选购。

• 横杆安装

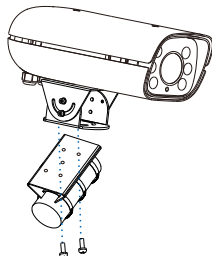
横杆安装需配合万向节，安装方法如下：



- ① 拧松万向节螺钉，调整万向节角度



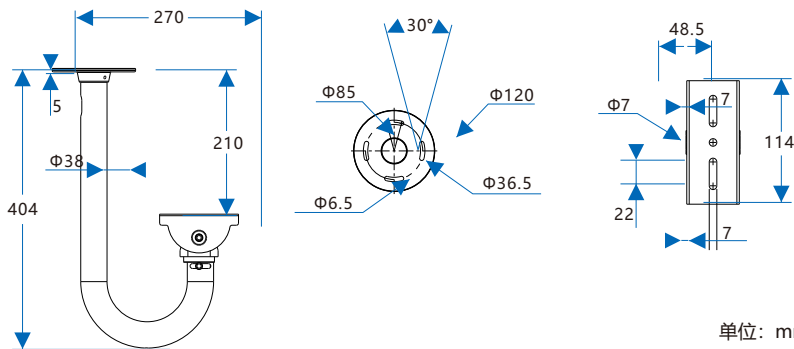
- ② 将万向节固定在设备底部的安装板上



- ③ 将设备固定在横杆上

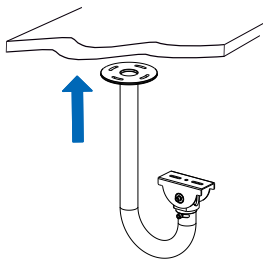
• 吊装

我司选配吊装支架尺寸如下：

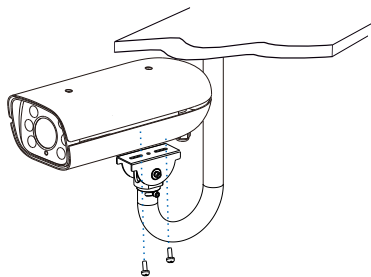


单位：mm

吊装安装方法如下：



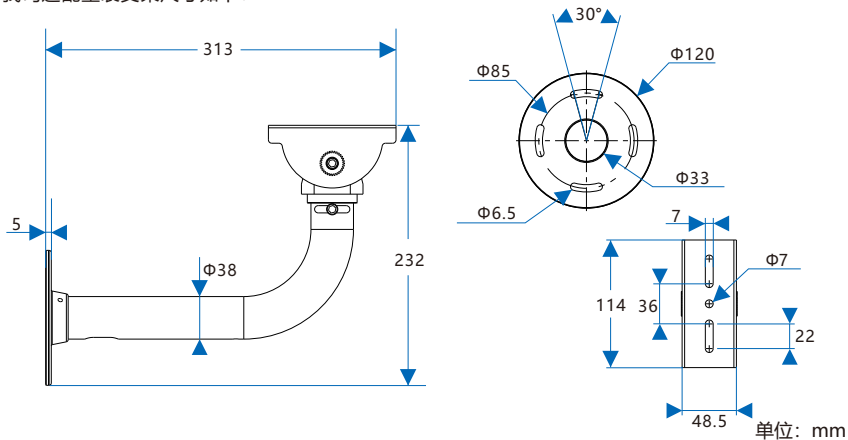
① 将吊装支架固定在天花板上



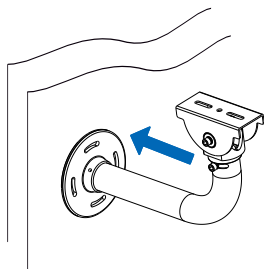
② 将设备固定在吊装支架上

• 壁装

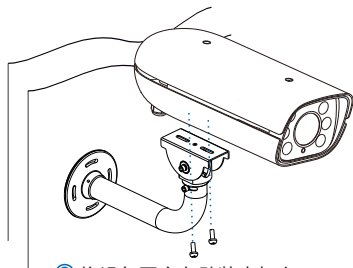
我司选配壁装支架尺寸如下：



壁装安装方法如下：



① 将壁装支架固定在墙面上



② 将设备固定在壁装支架上

2. 球机安装

球机安装及尾线连接请参考《高清红外球形网络摄像机快速安装指南》、《高清球型网络摄像机快速安装指南》。

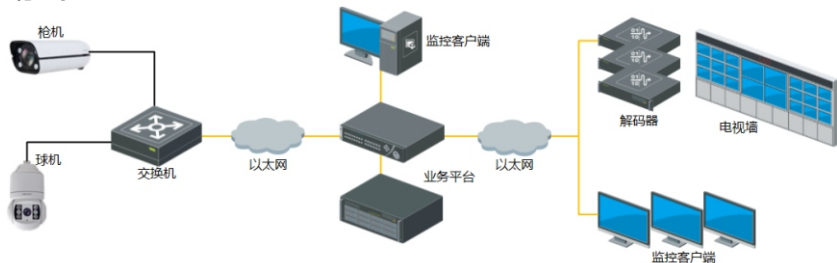
【说明】 请根据搭配使用的球机型号自行选择参考对应的快速安装指南。

【注意】 在配电箱中，枪机和球机的网口接线必须插在同一个网络交换设备上，且网络交换设备的各个网口之间数据能够互通，无网口隔离。

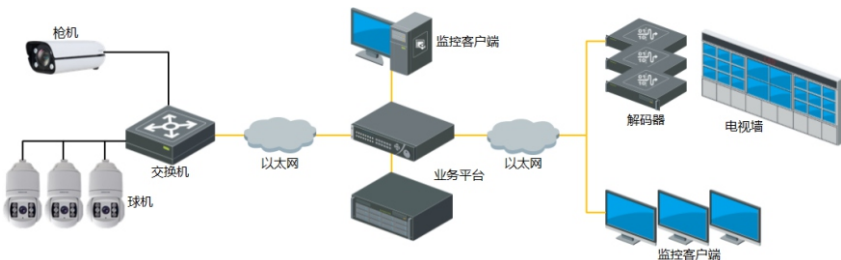
3. 组网示例

一个枪机可搭配 1 个、2 个或 3 个 智能球机，系统组网图如下：

一枪一球



一枪三球



五 登录客户端

1. 最低配置和系统环境

200万/400万像素球机智能跟踪系统

- 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(32 位)：360 浏览器，IE11.0 及以上版本，Firefox(51.0 及以下版本)，Google Chrome (41.0 及以下版本)
- DirectX: 9.0c

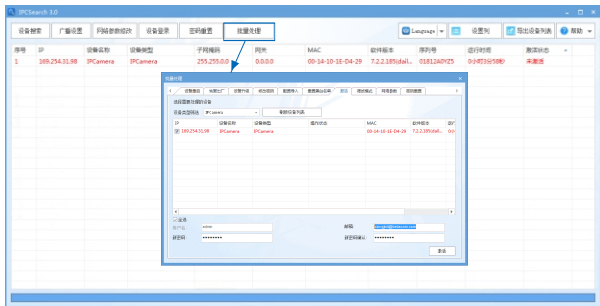
800万像素球机智能跟踪系统

- 处理器：酷睿®i5-7500及以上
- 显卡：HD630核显及以上
- RAM内存：8GB及以上
- 操作系统：Windows7操作系统或更高版本
- 浏览器(32 位)：360 浏览器，IE11.0 及以上版本，Firefox(51.0 及以下版本)，Google Chrome (41.0 及以下版本)
- WEB插件：硬解插件
- DirectX: 9.0c

2. 设备激活

第一次使用时请安装运行 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 设备分配 IP 地址。智能跟踪系统中必须对IPC设备进行静态IP配置。

- 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所需的邮箱，点击**激活**，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、找回密码时所需的邮箱。点击**激活**，激活设备。待设备重启。
- Web 客户端激活：将 PC 机 IP 地址与设备 IP 地址设为同一网段，进入 Web 端登录界面。可在该界面设置管理员和找回密码所需的邮箱，点击**激活**，激活设备。



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）及激活设备时设置的密码。完成 IP 配置后，设备将自动重启。

【注意】需确保修改的枪机与球机的 IP 地址，二者在同一网段且互通。

4. 登录设备

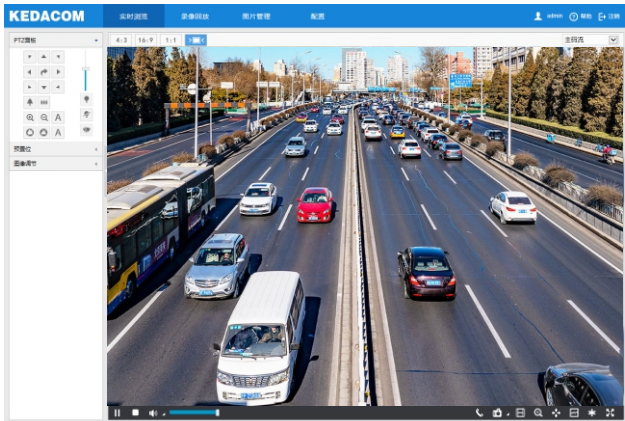
1) 在 IPCSearch 中双击设备或点击设备登录，输入用户名和密码，登录 Web 客户端；



2) 登录成功后，根据提示下载并安装视频插件；

3) 进入客户端后，便可直接浏览图像。

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



六 快速配置

设备安装激活完成后，为保证系统基本功能的正常运行，需要首先登录枪机 Web 端进行初始配置、定标配置、跟踪配置和布防配置。

1. 初始配置

进入智能展示>智能配置>初始配置，可添加球机，具体操作如下：



- 1) 根据实际安装环境填写对应球机的安装高度；
- 2) 点击**添加球机**，在弹出的窗口填写正确的 IP 地址；
- 3) 选中添加的球机，点击**连接检测**，检测枪机和球机之间的网络通信情况。如果添加的球机和枪机之间的网络通信均无误，点击**连接检测**后，连接的球机云台会发生转动。

【注意】 1) 填写球机 IP 地址前，球机必须上电且正常运行。

2) 此处添加的球机和枪机型号需要符合智能跟踪系统指定类型型号，且配置的IP在同一网段，球机IP需在前端安装和调试时就完成配置。

3) 须保证枪机与球机的管理员密码一致，方可添加成功。

【说明】 若枪机搭配 2 个或 3 个球机，重复上述操作添加球机。

2. 定标配置

添加球机后，需要将枪机和球机的视频画面的对应点进行精确匹配，这个过程称为定标。定标分为自动定标和手动定标。推荐使用自动定标，若自动定标失败，可选择手动定标。

【注意】 定标之前，需检查是否已经撤防。

自动定标

进入**智能展示>智能配置>初始配置**，选择已经添加好的球机，点击**一键配置**，弹出正在定标的进度条窗口。待自动定标完成，配置状态应显示为已配置，则配置成功。同时，该界面下方视频画面显示区域将实时播放球机监控画面。



- 【注意】**
- 1) 请在白天或者光线明亮的时候进行自动定标。若在晚上进行自动定标，可能失败。
 - 2) 若在白天或者光线明亮的时候自动定标仍然失败，请重新尝试几次；若仍定标失败，请尝试在跟踪区域中加入一些便于定标的标志物如路障等，以协助定标。
 - 3) 自动定标提示失败或自动定标后效果不佳，需要重新定标时。请先进入**智能展示>智能配置>初始配置**界面删除球机，重新添加后再进行手动定标，否则会影响定标效果。

手动定标

进入**智能展示>智能配置>自定义配置>定标配置**，选择已添加好的球机，可进行手动定标，具体操作如下：



- 1) 通过视野缩小/放大和 PTZ（云台控制）按钮控制球机画面，选择一个清晰、尖锐、易于辨别的点作为定标参考点。用鼠标点击选择的定标参考点后该点即可居中显示，同时球机画面中红色十字标记符将转移到该点，即表明该点被选中。
- 2) 点击**新增定标点**，在枪机画面中鼠标所在点将在画面左上角放大显示，且由红色十字辅助指定位置。找到与球机定标参考点对应的定标点后，点击鼠标左键，该点被红色十字标定，定标点添加成功。若需要删除定标点，则应先勾选**编辑定标点**，选择需要删除的定标点，点击**删除定标点**即可删除该定标点。
- 3) 在枪机和球机画面中均新增对应的定标点后，点击**建立标定关系**，确定定标点在枪机与球机上的对应关系。
- 4) 重复以上步骤，根据需要继续增加若干组匹配定标点。每次定标需要指定至少 4 对定标点，最多支持 30 对定标点，通常指定 4~8 对定标点最佳。定标点的选择尽量分散，覆盖整个监控区域，至少保证有 3 个定标点不在同一直线上。
- 5) 确定所有匹配定标点后，点击**手动定标**，提示标定完成。若提示标定失败，则需依照上述步骤重新操作。
- 6) 定标成功后，点击**验证定标**。在枪机画面监控区域任意位置单击左键作为验证点，若球机能准确转到对应该点，则定标准确；若不能准确转到对应该点，则定标不准确。可增加、删除或调整定标点直至定标准确。如果在验证定标的过程中发现定标结果误差较大，可通过多次尝试手动定标直到定标准确为止。
【说明】 验证点在紫色框内表示定标精确；验证点在红色框内表示定标较为准确。
- 7) 定标点验证准确后，点击**停止验证定标**，手动定标完成。
【说明】
 - 1) 定标点应选择清晰、尖锐、易于辨别的点，如地面交叉线、树木根部、房屋棱角等。
 - 2) 定标点遍及范围须较大，切勿所有定标点在同一直线上。
 - 3) 若监控区域平整且无凸出标志，可加入一些便于定标的物体如路障等，以协助定标。

3. 跟踪配置

完成定标后，进入**智能展示>智能配置>自定义配置>跟踪配置**，需要根据相机架设的实际场景，调整相关参数，以满足跟踪和抓拍效果。

跟踪配置

灵敏度 1 5

自动跟踪时切换下一目标时长(单位:s)

球机高级配置

球机放大因子 0.1 5

抓拍参数配置

当前图片保存路径

【说明】

- 1) 跟踪配置的灵敏度的值越小，虚警越少，小目标漏检就越严重；灵敏度的值越大，虚警越多，小目标漏检就越少。
- 2) 当跟踪警戒区内的目标时间超过设置的时间，则会切换到下一个目标继续跟踪。
- 3) 调节球机放大因子的值，数值越大，视野越小，目标越大。

4. 布防配置

进入**智能展示>智能配置>自定义配置>布防配置**，配置布防方式和布防时间。

【说明】定标前，请先撤防；完成定标后，请重新布防。

全天设防

撤防

周期监控

全选 星期一 星期二 星期三 从:

星期四 星期五 星期六 星期日 到:

星期	开始时间	结束时间
----	------	------

增加时间段

删除时间段

保存 重置

附录一 AC 24V 线径与传输距离关系表

当线径大小一定, AC 24V 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 AC 24V 交流供电设备, 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 $\rho = 0.0175\Omega \cdot \text{mm}^2/\text{m}$)

线径mm 距离mm (feet) 功率W	0.8 (20AWG)	1.0(18AWG)	1.25(16AWG)	2.0(12AWG)
5	122 (401)	194 (636)	307 (1008)	781 (2562)
10	61 (201)	97 (318)	154 (504)	391 (1281)
15	41 (134)	65 (212)	102 (336)	260 (854)
20	31 (100)	48 (159)	77 (252)	195 (641)
25	24 (80)	39 (127)	61 (202)	156 (512)
30	20 (67)	32 (106)	51 (168)	130 (427)
35	17 (57)	28 (91)	44 (144)	112 (366)
40	15 (50)	24 (79)	38 (126)	98 (320)
45	14 (45)	22 (71)	34 (112)	87 (285)
50	12 (40)	19 (64)	31 (101)	78 (256)
55	11 (36)	18 (58)	28 (92)	71 (233)
60	10 (33)	16 (53)	26 (84)	65 (214)
65	9 (31)	15 (49)	24 (78)	60 (197)
70	9 (29)	14 (45)	22 (72)	56 (183)
75	8 (27)	13 (42)	20 (67)	52 (171)
80	8 (25)	12 (40)	19 (63)	49 (160)
85	7 (23)	11 (37)	18 (59)	46 (151)
90	7 (22)	11 (35)	17 (56)	43 (142)
95	6 (21)	10 (33)	16 (53)	41 (135)
100	6 (20)	10 (32)	15 (50)	39 (128)

【备注】 线径要求适用于单根、实心、圆形的铜线, 多股绞线的电缆 AWG 值是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. 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 network and power 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.
- Do not install the device on unstable bracket, wall or roof; otherwise it may damage people and the device.
- Indoor models cannot be mounted at places with rain or moisture. For example, as the pendent bracket has a connecting lever, note that there cannot be holes on the lever; otherwise water may leak in.
- Outdoor models should be completely sealed to prevent dampness; no holes can be on the connecting lever of the pendent bracket to prevent water.

Operating Environment	
Voltage	AC 24V±10% /PoE (802.3at)
Power Consumption	24W Max
Temperature	-40°C ~ +70°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 glass surface of 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 operations.
- 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 due to limited space. 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.

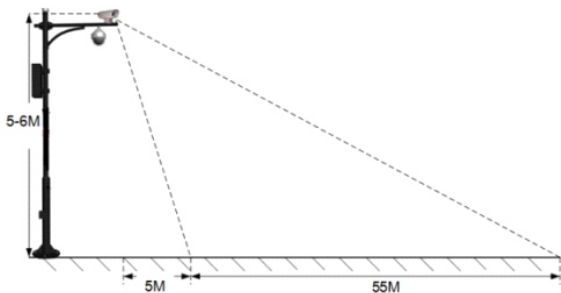
III Installation Environment

Before installation, a survey on point locations in the installation environment is necessary to ensure the normal operation of the devices. During the survey, please refer to the following instructions.

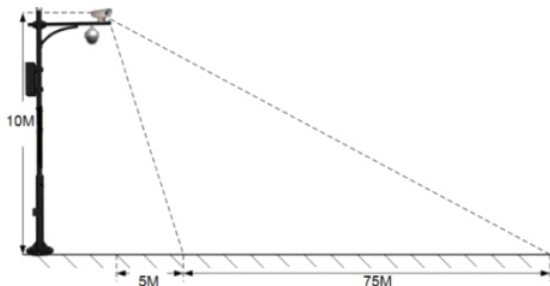
- The proper installation height of the intelligent tracking system should be within 5 ~ 30m, the recommended height for pole mounting being 6m and that for wall mounting being 15m.
- There should be no regular fierce vibration source around the devices.
- The mounting wall for wall mount should be fairly vertical and the mounting ground for pole mount should be quite horizontal without obvious slope.
- The wall or the pole for mounting the devices must be firm and steady enough to bear 8 times of the total weight of the box camera, the dome camera, the bracket and the accessories and be susceptible to strong gale.
- The relationship table between the surveillance scope and the installation height of the intelligent tracking system is shown below:

Installation Height	Range of Surveillance Distance	Relative Distance between the Box and the Dome Camera
5m ~ 6m	5m ~ 60m	Within 0.5m
10m	5m ~ 80m	Within 0.5m
20m	5m ~ 100m	Within 1m
30m	5m ~ 120m	Within 1m

For example, when the installation height is 5~6m, the applicable range of surveillance distance is 5~60m, as shown below:



Another example, when the installation height is 10m, the applicable range of suitable surveillance distance is 5~80m, as shown below:

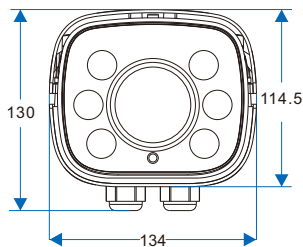
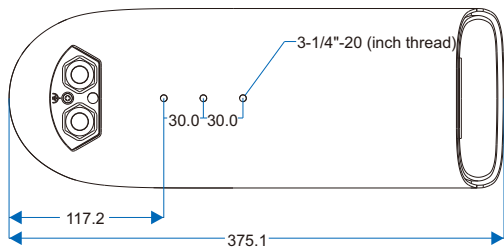


- [Attention] 1) If the installation height is less than 5m, the tracking of the dome camera will be affected, i.e. it may not be able to magnify the tracked targets normally.
- 2) The distance between the box and the dome camera should be in the range of 0.5~1m, and they cannot shield each other's image.

IV Installation

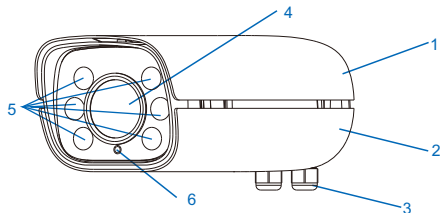
1. Installation of Box Camera

Dimensions:



Unit: mm

Components:



No.	Component Name
1	Upper Cover
2	Lower Cover
3	PG Head (thread wire)
4	Lens
5	6 x Fill Light
6	Photosensor

Buttcock Line

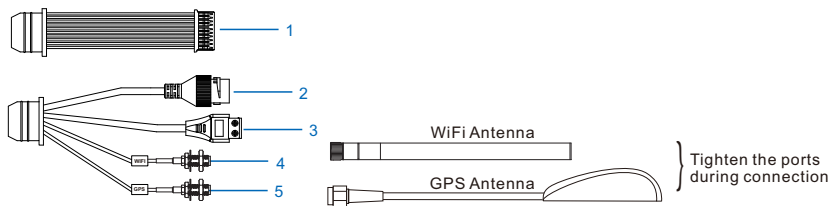


Table 1 Wiring Interface

No.	Interface Name	Function
1	User cable group	Including alarm in / out, audio in / out, RS-485 serial port and etc.
2	Network port	Connect to network access devices like a switch
3	Power supply	Connect to power supply of AC24V
4	WiFi port	Connect to WiFi antenna
5	GPS port	Connect to GPS antenna

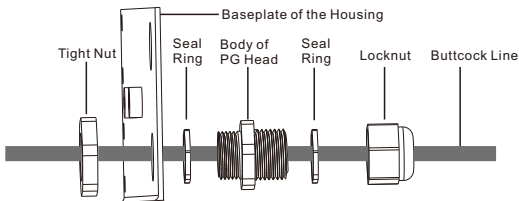
Table 2 User Cable Group Interface

Interface	No.	Color	Name	Function
User Cable Group	1	White	RS485_B	RS-485 serial port to control peripheral devices such as third-party device
	2	Grey	RS485_A	
	5	Green/White	AUDIO_GND	Audio grounding
	6	Green	AUDIO_IN_2	Audio input port for inputting audio signal or intercom
	7	Orange/White	AUDIO_GND	Audio grounding
	8	Orange	AUDIO_IN_1	Audio input port for inputting audio signal or intercom
	9	Black/White	AUDIO_GND	Audio grounding
	10	Pink	AUDIO_OUT	Audio output port for outputting audio signal
	11	Purple	ALARM_IN_GND	Alarm input grounding
	13	Yellow	ALARM_IN_2	Alarm input port for inputting alarm signal
	14	Brown	ALARM_IN_1	
	15	White/Brown	ALARM_OUT_1A	Alarm output port for outputting alarm signal
16	White/Red	ALARM_OUT_1B		

[Note]:

- 1) Alarm output ALARM_OUT 1A and ALARM_OUT 1B are regardless of positive and negative polarities and they form a group of alarm output.
- 2) The ALARM_IN_1 and ALARM_IN_2 wires share the alarm grounding wire.

Assembling of PG Head



- 1) Open the housing, hold the body of PG head with one hand and steady the tight nut with another hand. Rotate the body of PG head anti-clockwise and take it down from the housing.
- 2) Rotate the locknut anti-clockwise and take it down. Thread the wires that have threaded through the metal-covered corrugated cable through the tight nut, the body of PG head and the locknut in order, and then tighten the locknut clockwise.

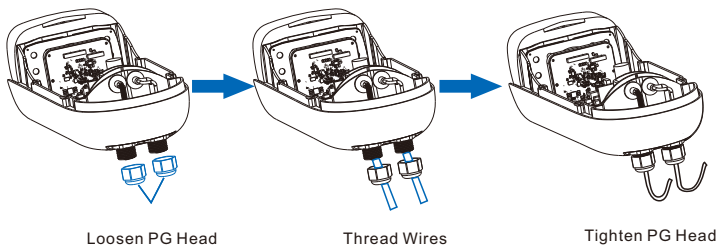
[Note] During disassembling and assembling, do not discard the seal ring and make sure it is in.

- 3) Install the PG head that has threaded through the wires onto the housing and make it tight with certain length of wires reserved.
- 4) For the connecting point at the bottom of the PG head with the metal-covered corrugated cable, bind it evenly anti-clockwise from top to bottom with waterproof adhesive tape, and then bind it evenly clockwise. Make good waterproof and dustproof treatment to it.
- 5) After finish threading wires, cover the upper cover of the housing so as to mount it onto the bracket.

Connect Cables

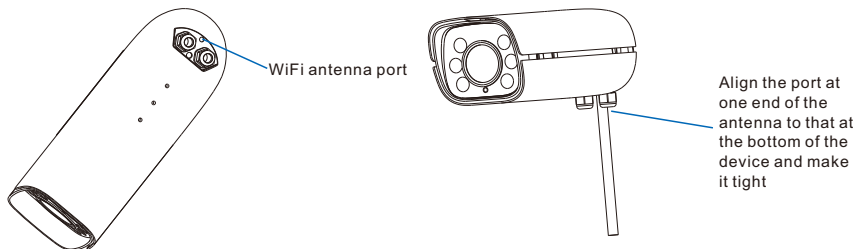
- 1) Connect the buttcock lines of the camera according to the tags on the wires.
- 2) Thread wires. After finish wire connections, thread the wires out through the PG head.

[Note] When threading wires, suggest threading the network cable and the power cord from different PG heads.



- 3) Connect WiFi antenna and GPS antenna

The WiFi antenna is at the bottom of the device. Take out the WiFi antenna from the packing, align the port at one end of the antenna to that at the bottom of the device and make it tight.



GPS antenna port is lead out by a single cable. Take out the GPS antenna, align the port on the antenna to the GPS port lead out from the device and make it tight. The magnetic iron on the GPS antenna is used to fix the antenna on metal parts.

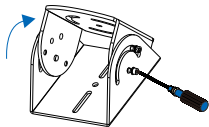
[Note] Please do not put the GPS antenna at shielded areas such as under the overbridge, otherwise the signal of it may be affected.

Bracket Mount

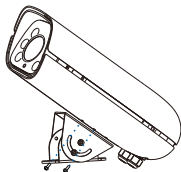
The camera supports cross-bar mount, pendent bracket mount and wall bracket mount, the brackets of which are all optional. Please purchase separately if necessary.

- Cross-Bar Mount

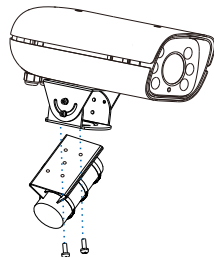
Cross-bar mount needs a cardan joint, the steps of which are as follows:



- ① Loosen the screws on the cardan joint to adjust its direction



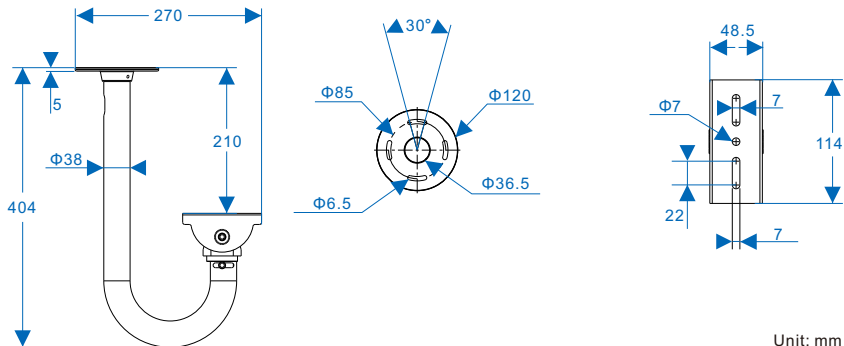
- ② Fix the cardan joint onto the baseplate at the bottom of the device



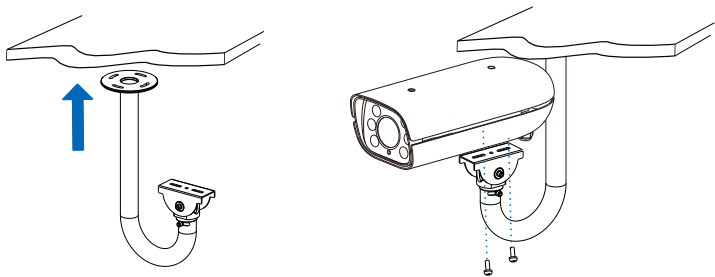
- ③ Fix the device onto the cross-bar

- **Pendent Bracket Mount**

Dimensions of the optional pendent bracket of this company:



The steps of pendent bracket mount:

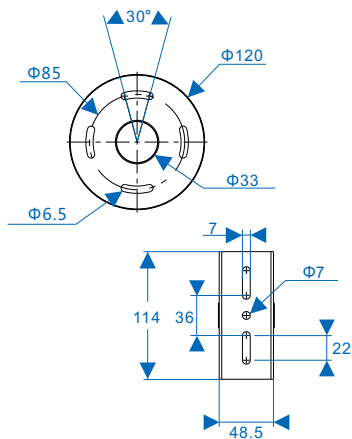
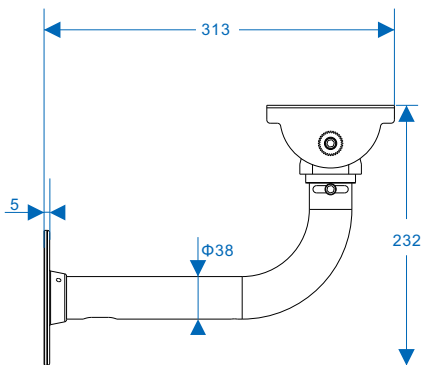


① Fix the pendent bracket on the ceiling

② Fix the device onto the pendent bracket

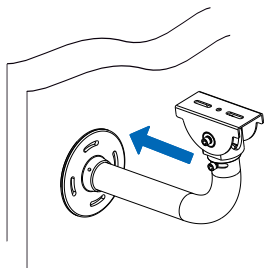
- Wall Bracket Mount

Dimensions of the optional wall bracket of this company:

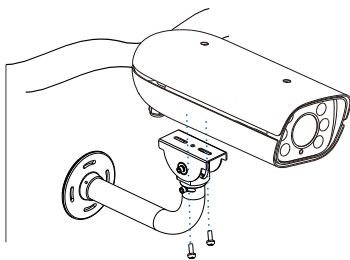


Unit: mm

The steps of wall bracket mount:



① Fix the wall bracket on the wall



② Fix the device onto the wall bracket

2. Installation of Dome Camera

For the installation and wiring of dome cameras, please refer to the *Quick Start Guide for Network IR Speed Dome Camera* and the *Quick Start Guide for 8.0MP HD Speed Dome Camera*.

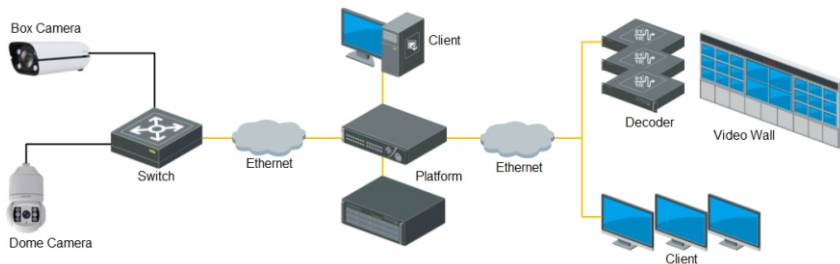
[Note] Please refer to the *Quick Start Guides* according to the selected models of dome cameras.

[Attention] In the distribution box, the LAN port wires of the box camera and the dome camera must be inserted into the same switch, and all the ports of the switch should be able to communicate with each other without isolation.

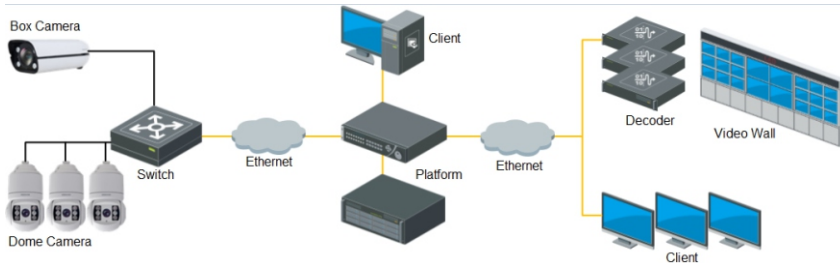
3. Typical Topology

One box camera can work with one, two or three intelligent dome cameras. Their topologies are shown below:

One Box and One Dome Camera



One Box and Three Dome Cameras



V Login to Web Client

1. Minimum System Configurations and Requirements

Intelligent Tracking System with 2.0MP/4.0MP Dome Camera

- Processor: 3.3 GHz CORE®i3 series or other equivalent processors
- RAM Memory: 4GB or above
- Operating System: Windows 7 or higher version
- Browser (32 bits): 360 browser, IE11.0 or newer, Firefox (51.0 and lower versions), Google Chrome (41.0 and lower versions)
- DirectX : 9.0c

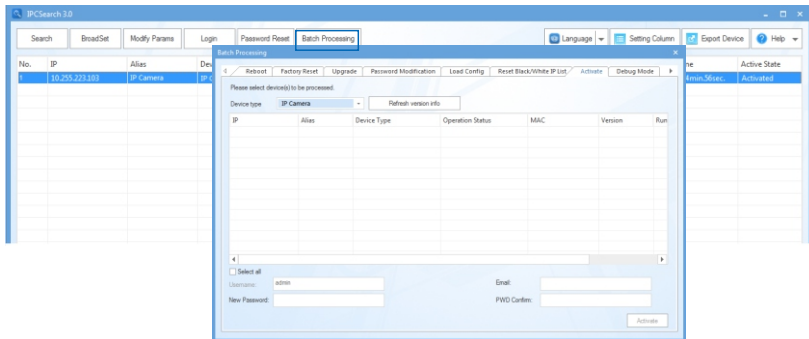
Intelligent Tracking System with 8.0MP Dome Camera

- Processor: CORE®i5-7500 and higher
- Display Card: HD-630 GPU or above
- RAM Memory: 8GB or above
- Operating System: Windows 7 or higher version
- Browser (32 bits): 360 browser, IE11.0 or newer, Firefox (51.0 and lower versions), Google Chrome (41.0 and lower versions)
- WEB Plug-in: Hardware decoding plug-in
- DirectX : 9.0c

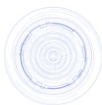
2. Device Activation

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. For the intelligent Tracking System, user must configure static IP addresses for the cameras.

- 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**".



Login



admin

[Password Field]

Weak Strong

Please choose a password with 8-16 characters. Your password must also contain two or more combinations of upper and lowercase letters, numbers, and symbols.

[Email Field]

[Phone Field]

When admin's password gets lost, find it back through this email. Make sure this email address is safe and valid.

Active

3. Modify Device IP Address

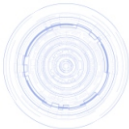
Click **"Modify Params"** and set the network parameters. When configuring a static IP for the camera, please check "Custom device address (Close DHCP)" and fill the Ethernet parameter. During the modification, the user name (admin) and the password set before activation should be entered. After configuration,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

[Attention] Make sure the IP addresses of the box camera and the dome camera are in the same network segment and can communicate with each other.

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.

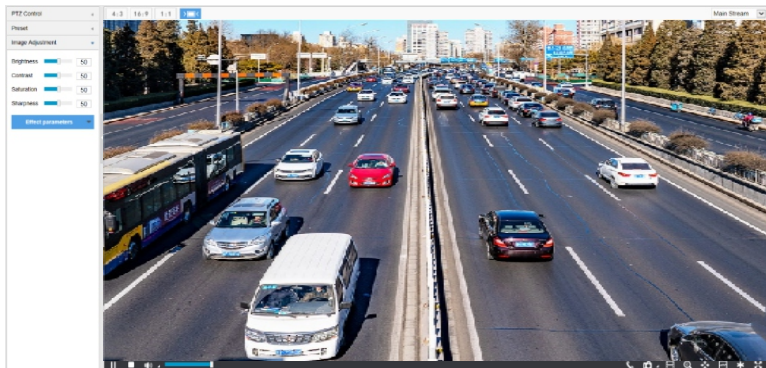
Login



2) After login, download and install the plug-in.

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.



VI Quick Settings

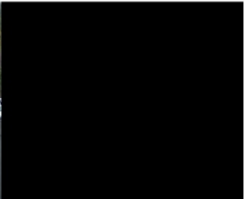
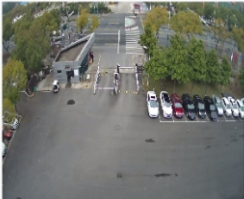
After installing and activating the devices, to ensure the normal operation of the system, user needs to log into the web of the box camera and perform operations such as initial configuration, calibration and arming configuration.

1. Initial Setting

Go to **Intelligent > Settings > Initial Setting**. Add dome camera and establish communication between the box camera and speed dome camera(s).

Dome Camera Height (unit: m):

	ID	Dome Camera IP	Config Status
<input checked="" type="radio"/>	1	10.184.1.233	<input type="button" value="Configured"/>
<input type="radio"/>	2	10.184.1.234	<input type="button" value="Configured"/>
<input type="radio"/>	3	10.184.1.235	<input type="button" value="Configured"/>



- 1) Input dome camera height according to the actual installation of the dome camera.
- 2) Click **"Add"** and on the popup window enter the correct IP address; Before adding, configure the dome camera IP address in the same network segment as that of box camera.
- 3) Select the added dome camera and click **"Link Detection"** to detect if the communication between the box camera and dome camera(s) is smooth. If the communication is fine, the live scene of dome camera will rotate after clicking **"Link Detection"**.

[Attention] 1) Before entering the IP address of the dome camera, it must have been powered on and work normally.

2) The added IP addresses of the dome and box cameras must be in the specific models for intelligent tracking system and they must be configured in the same network segment. The address of the dome camera must be configured during installation and adjustment.

3) Only if the admin password of the box camera and the dome camera is the same can the IP address be added.

[Note] When the box camera co-works with 2 or 3 dome cameras, repeat the above steps.

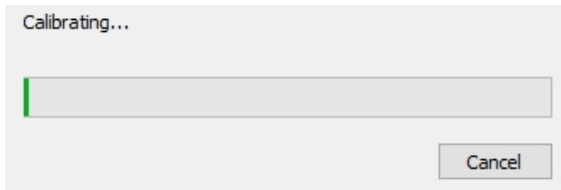
2. Calibration

After adding dome camera(s), user needs to match the points in the image of box camera precisely with those in the image of dome camera, the process of which is called calibration. There are auto and manual calibrations, and auto calibration is recommended. If auto calibration fails, calibrate manually.

[Attention] Before calibration, check if the system has disarmed.

Auto Calibration

Go to **Intelligent > Settings > Initial Setting**. Select the added dome camera and click **"One Click Config"** for auto calibration. After auto calibration is finished, when the "Config Status" is "Configured", it means the configuration is done successfully. Meanwhile, the live view image of the dome camera will display in the following window.



- [Attention]** 1) Auto calibration should be done at day time or when there is sufficient sunlight. Auto calibration at night may fail.
- 2) If auto calibration at day time or when there is sufficient sunlight fails after all, please try some more times; if it still fails, please try to put some objects such as roadblocks in the tracking area to help calibration.
- 3) If it indicates failure of auto calibration or its effect is not good, it's necessary to calibrate again. Go to **Intelligent > Settings > Initial Setting** and remove the dome camera. Then add the dome camera again and perform manual calibration; otherwise the calibration effect may be affected.

Manual Calibration

Go to **Intelligent > Settings > Custom Setting > Manual Calibration**, and select an added dome camera to perform manual calibration, as shown below:

	ID	Dome Camera IP
<input checked="" type="radio"/>	1	10.184.1.233
<input type="radio"/>	2	10.184.1.234
<input type="radio"/>	3	10.184.1.235

- Operate on the image of the dome camera through PTZ control and zoom buttons, and select a clear, sharp and distinguishable point in the image as calibration reference. Double-click this point to make it centered and meanwhile the red cross mark in the image of dome camera will switch to this point, which means this point has been selected.
- Click **"Add Point"** and the point where the mouse locates in the image of the box camera will be amplified and displayed at the top left corner with a red cross mark. After finding the calibration point corresponding to that in the image of dome camera, left click on the mouse and this point will be calibrated with red cross mark and be added successfully. To remove the added calibration point, select **"Edit Point"** and select the point to be removed, and click **"Delete Point"** to remove the point.
- After adding the calibration points to the images of the box and the dome cameras, click **"Build"** to establish the corresponding relationship of the calibration point between the box and the dome cameras.
- Repeat the above steps to add multiple pairs of calibration points if necessary. Each time at least 4 pairs of calibration points are necessary and usually the optimum is 4 to 8 pairs. The distribution of calibration points should be as scattered as possible and be better cover the whole surveillance area. At least, make sure that there are no 3 calibration points on the same straight line.
- After all calibration points are added, click **"Manual Calibration"**. If it indicates that calibration fails, repeat operations by the above steps until it prompts calibration is successful.

6) After calibration succeeds, click "**Verify Calibration**". Left click on any point in the image of box camera to verify, and if the dome camera can rotate to the point precisely, it means the calibration is accurate; otherwise, the calibration is inaccurate. User can add, delete or adjust calibration points until the calibration is accurate. During the verification, if the deviation gap is too large, try some more times until the calibration is accurate.

[Note] When the verification point is in purple frame, it means the calibration is accurate while when in red frame, it means the calibration is relatively accurate.

7) When the calibration points are verified accurate, click "**Stop**" to finish manual calibration.

[Note] 1) Try to select clear, sharp and distinguishable points as the calibration points, such as crossroad, tree root, house corners and etc.

2) The calibration points should be as scattered as possible and avoid selecting those on one straight line.

3) If the surveillance area is flat without bulges, put some objects such as roadblocks in the area to help calibration.

3. Tracking

After finishing calibration, go to **Intelligent > Settings > Custom Setting > Tracking**, and configure the parameters according to the actual installation and scenes of the cameras so as to get satisfactory tracking and snapshot results.

Tracking Config

Sensitivity 1 5

Interval to switch to next target (unit:s)

Advanced

Magnifying Factor 0.1 5

Snapshot Param

Save path of current picture

Appendix A: AC24V Wire Diameter VS. Transmission Distance

The recommended max transmission distance when the wire diameter is certain and the AC24V voltage loss rate is less than 10%

(For AC24V powered devices, the maximum allowed voltage loss rate is 10%. All the wires in the following table are cooper wires, whose electrical resistivity is $\rho = 0.0175\Omega \cdot \text{mm}^2/\text{m}$)

Distance m (feet) Power W	Diameter mm 0.8 (20AWG)	1.0(18AWG)	1.25(16AWG)	2.0(12AWG)
5	122 (401)	194 (636)	307 (1008)	781 (2562)
10	61 (201)	97 (318)	154 (504)	391 (1281)
15	41 (134)	65 (212)	102 (336)	260 (854)
20	31 (100)	48 (159)	77 (252)	195 (641)
25	24 (80)	39 (127)	61 (202)	156 (512)
30	20 (67)	32 (106)	51 (168)	130 (427)
35	17 (57)	28 (91)	44 (144)	112 (366)
40	15 (50)	24 (79)	38 (126)	98 (320)
45	14 (45)	22 (71)	34 (112)	87 (285)
50	12 (40)	19 (64)	31 (101)	78 (256)
55	11 (36)	18 (58)	28 (92)	71 (233)
60	10 (33)	16 (53)	26 (84)	65 (214)
65	9 (31)	15 (49)	24 (78)	60 (197)
70	9 (29)	14 (45)	22 (72)	56 (183)
75	8 (27)	13 (42)	20 (67)	52 (171)
80	8 (25)	12 (40)	19 (63)	49 (160)
85	7 (23)	11 (37)	18 (59)	46 (151)
90	7 (22)	11 (35)	17 (56)	43 (142)
95	6 (21)	10 (33)	16 (53)	41 (135)
100	6 (20)	10 (32)	15 (50)	39 (128)

[Note]:

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

KEDACOM

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