

WISeNeT

网络摄像机

用户手册

PND-9080R/PNO-9080R/PNV-9080R



网络摄像机 用户手册

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商标

本文件中的每个商标均经过注册。本产品的名称以及本手册中提到的其他商标均为各自公司的注册商标。

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❖ 设计和规格可能会随时更改，恕不提前通知。

❖ 初始管理员ID为“admin”，而密码则应在首次登录时设置。
请每三个月更改一次密码，以妥善保护个人信息并防止信息泄露造成的损害。
请注意，由于没有妥善管理密码而造成安全或其他方面的问题，由用户自行承担。

重要的安全说明

1. 请阅读这些说明。
2. 请您妥善保存这些说明。
3. 请您遵守所有的操作说明。
4. 请您注意所有的警告说明。
5. 请您不要在水源附近运行本机器。
6. 使用柔软干布或湿布清洁产品表面的污染区域。
(请勿使用含有酒精、有机溶剂或表面活性剂、或含油成分的清洁剂或化妆品, 此类物质可能使产品变形或受损。)
7. 请您不要堵塞通风口, 在装入机器时, 请您注意制造商的说明。
8. 请您不要将此机器放置在热源附近, 如散热器, 炉子或其它发热设备。
9. 请您绝对不要移去双线插头或有接地插头的安全装置, 双线插头有两个不同宽度的插塞接点, 接地插头有两个插塞接点和第三个接地接点。较宽的插塞接点或附加的接地接点是用来确保您的安全的, 如果随同供货的插头规格不适合您的插座, 请您委托电工更换适当的插座。
10. 请您正确铺设电源线, 使其不会被踩踏和尖角损坏。请您尤其注意插头处, 加长电缆和电线延伸到机器处必须具备充分的保护。
11. 请您使用制造商推荐的附加设备或配件。
12. 仅可使用厂商指定或随设备出售的运载车、支脚、三脚架、支架或工作台。使用运载车时, 请小心避免在移动运载车/设备组合时翻覆。
13. 在雷雨天气或长时间不用的情况下, 请拔下本设备的插头。
14. 请您委托具备资格的售后服务人员进行保养工作。出现以下情况时, 有必要进行保养, 例如当机器被损坏时(如电线或插头损坏), 有物体或液体进入到机器内部时机器受到雨淋或潮湿后, 机器运行不正常或摔落在地上时。
15. 本产品旨在供标记有“Class 2 (Class 2)”或“LPS (LPS)”且额定值为 24 Vac (50/60 Hz) 1.0 A 或 12 Vdc 1.0 A 的已认证的电源装置使用。



警告

为防止火灾或电击等引起的破坏, 不要把产品暴露于水中或潮湿处。请勿穿过设备上的通风栅格或其他开口插入任何金属物体。

请勿将设备放置于滴水或溅水的地方, 且勿将装有水的物体(如花瓶)放在设备上面。

为了避免造成人身伤害, 必须按照安装说明牢固地把本设备固定在墙壁/天花板上。

注意

	注意 不要擅自拆装机器, 避免电击	
注意: 为避免触电危险, 不得取下机器后盖。 机器内部没有用户可修理的部件。 修理工作只允许由具备资格的人员进行		

图形符号说明



等边三角形内带箭头的闪电符号用于警告用户: 产品机壳内存在“危险电压”, 其电压量足以对人员构成电击危险。



等边三角形内的感叹号用于警告用户: 产品附带的文字中包含重要的操作和维护(维修)说明。

概述

CLASS I 构造

具有 CLASS I 构造的设备应连接到具有保护接地连接的电源插座。

电池

电池（安装的电池组或电池）不得暴露在过多的热量下（如阳光、火焰或类似物体）。

断开设备

如果设备出现故障，请拔下其电源插头。并请致电当地的维修人员。

当在美国以外使用时,可以利用所用的 HAR 代码和许可代理机构的接待处。

注意

如更换的电池类型不正确，可能发生爆炸。
按照说明妥当处理废旧电池。

这些维修说明仅供合格的维修人员使用。
为减少电击的危险，除了操作说明中所描述的之外，请勿执行其他任何维修工作，除非您合格这么做。

本产品提供的 CVBS 输出端子是为了便于安装，建议不要用于监视目的。

请将输入电源仅用于一部摄像机，并且不能连接其他设备。

ITE 只能连接到 PoE 网络，无需路由到外部工厂。

产品内有害物质信息

部件名称	有毒有害物质元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 Cr (VI)	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
印制电路板组件	×	○	○	○	○	○
金属部品	×	○	○	○	○	○
电缆	×	○	○	○	○	○
塑料部品	○	○	○	○	○	○

○：部品中有毒有害物质含量在(含量标准)的标准值内。

×：部品中有毒有害物质含量超出(含量标准)的标准值。

本表格表明机器内部含有有害物质，数据是根据部件类型，由部件制作商提供并在Hanwha Techwin内部验证后做成的。
某些部品包含的有害物质，按照现在的技术基准不能替代，Hanwha Techwin一直在为改善此项而努力。

请仔细阅读以下建议的安全预防措施。

- 请勿将本设备放置于不平的表面上。
- 请勿安装在暴露在直射阳光下、靠近供暖设备或非常寒冷区域的表面上。
- 请勿将本设备放置在传导物体附近。
- 请勿自行维修本设备。
- 请勿将一杯水放在产品上。
- 请勿安装在任何磁源附近。
- 请勿堵塞任何通风口。
- 请勿在产品上放置任何重物。
- 在安装/拆卸摄像机时，请佩戴防护手套。
产品表面温度较高，可能有烫伤的危险。

用户手册是如何使用产品的指导书。

书中所用符号的含义如下。

- 参考：用于提供产品用法的帮助信息
- 注意：如果不遵照说明是否有可能对物品和人员造成任何损害
- ※ 在使用物品之前请阅读本手册以保证安全，并将它保存在安全的地方。

在某些安装环境下，可能会发生无线通信干扰。
如果产品和附近的无线通信设备之间发生电磁干扰，建议增加与无线通信设备的距离或调整通信天线的方向。

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概述

推荐 PC 技术规格

- CPU：Intel(R) Core(TM) i7 3.4 GHz 或更高版本
- 支持的操作系统：Windows 7、8.1、10、Mac OS X 10.9、10.10、10.11
- 无插件 web 查看器
支持的 web 浏览器：Google Chrome 47、MS Edge 20
- 有插件 Web 查看器
支持的 web 浏览器：MS Explorer 11、Mozilla Firefox 43、Apple Safari 9 ※ 仅支持 Mac OS X
- VGA：如要以 30fps 帧率播放 4K (4096 x 2160) 分辨率视频，必须使用支持 4096 x 2160 分辨率和 4K/H.264 解码的 GPU

建议的 MICRO SD/SDHC/SDXC 存储卡规格

- 建议容量：4GB ~ 128GB
- 对您的摄像机，我们建议您使用以下厂商制造的存储卡：
Micro SD/SDHC/SDXC 存储卡：Sandisk, Transcend
- 如要保存 4K 分辨率视频，建议使用存储空间为 16GB 或更大容量的 10 Class（MLC 类型）内存卡。

NAS 建议规格

- 建议容量：200GB 或更高
- 同时访问：一套 NAS 可以同时接受最多十六个摄像机访问。
- 对于本摄像机，建议使用符合以下制造商规格的 NAS。

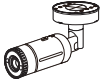
建议产品	可用尺寸
Netgear NAS	最多 16 个摄像机可同时访问。
Synology NAS	最多 16 个摄像机可同时访问。



- 使用 Netgear 公司的 NAS 设备时，不要分配要使用的容量。
- 如果使用 NAS 设备的目的不是为了保存视频，可以减少可访问摄像机的数量。

随机提供的物品

请检查产品包装内是否已包括摄像机和所有附件。
(配件因销售国家/地区而异。)

外观	品名	数量	功能	型号名称
	摄像机	1		PND-9080R
		1		PNO-9080R
		1		PNV-9080R
	简介 (可选)	1		PND-9080R/ PNO-9080R/ PNV-9080R
	保修卡 (可选)	1		PND-9080R/ PNO-9080R/ PNV-9080R
	用于测试显示器的电缆	1	用于测试摄像机至便携式显示设备的连接	PND-9080R/ PNO-9080R/ PNV-9080R
	模板	1	产品安装指南	PND-9080R/ PNV-9080R
	电源接线板	1	插入电源插头	PND-9080R/ PNV-9080R
	L 型扳手	1	用于控制摄像机的方向/ 用于拆装圆顶盖	PNO-9080R/ PNV-9080R

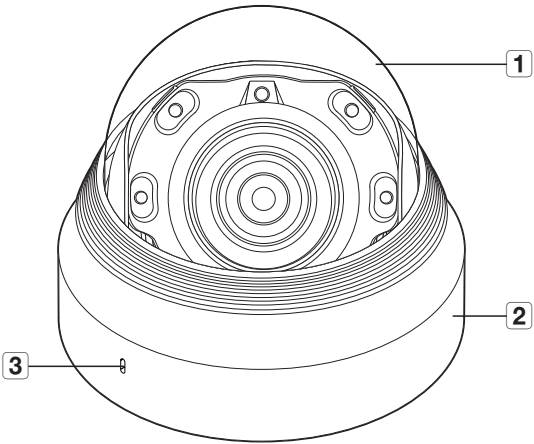
外观	品名	数量	功能	型号名称
	警报器电缆	1	用于连接警报器	PND-9080R
	支架螺钉	2	用于墙壁或天花板上的安装	PND-9080R
		4		PNO-9080R
		3		PNV-9080R
	RJ45 防水配件	1	用于安装在潮湿的地方	PNO-9080R
	防晒罩	1	它可让摄像机避免阳光直射。	PNO-9080R
	防晒罩固定螺钉	1	它将防晒罩与摄像机固定在一起。	PNO-9080R
	电源线	1	用于插入电源插座	PNV-9080R
	音频/警报器电缆	1	用于连接音频和警报器端口	PNV-9080R
	线缆保护衬套	1	用于连接直径为7到8.5毫米的局域网线缆。	PNV-9080R

概述

外观	品名	数量	功能	型号名称
	塑料固定器	3	用于固定螺钉，已插入孔中（增强固定力量）	PNV-9080R
	机器螺钉	3	在将产品安装在管道、墙上安装支架等上时，用于装配圆顶盒；或者用于堵塞孔。	PNV-9080R
	干燥剂	1	安装时固定在产品内部，用于防潮。	PNV-9080R
选件(未包括)				
	柱式安装支架		圆柱式安装支架	PNO-9080R
	室内掩藏式摄像机的外套		用于安装室内掩藏式摄像机的外套	PND-9080R/ PNV-9080R

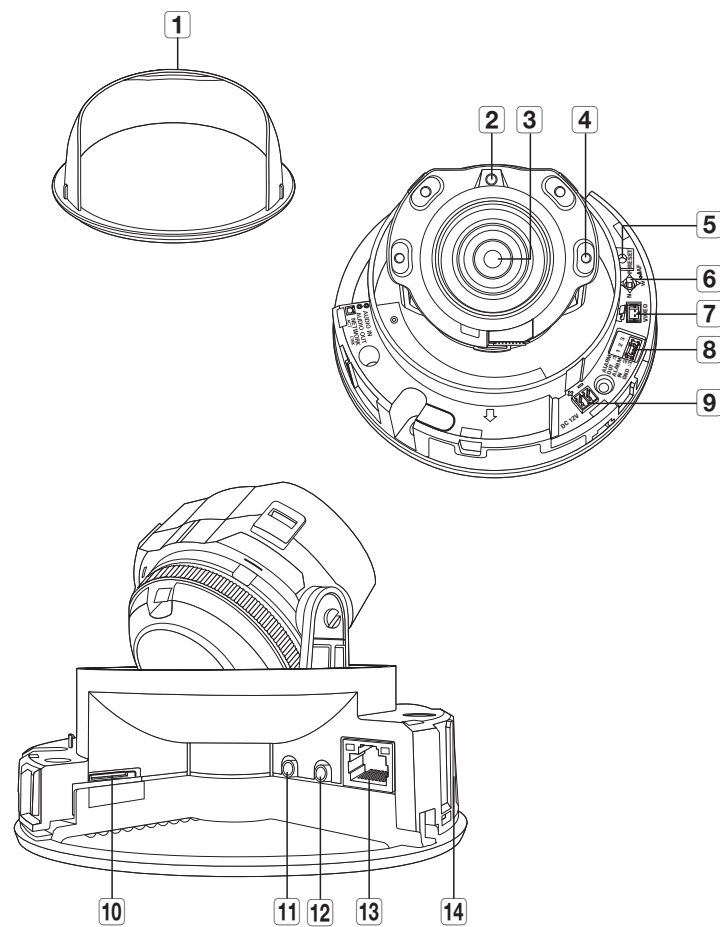
简图 (PND-9080R)

外观



名称	功能
1 球罩	用于保护镜头和机身的护盖。
2 摄像机外壳	盖住摄像机机身的外壳部分。
3 麦克风孔	内置麦克风。

组件

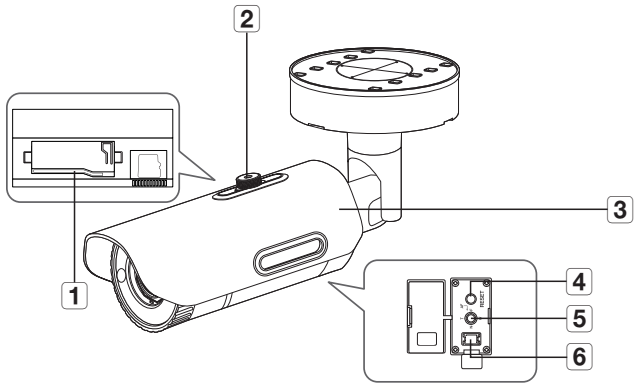


名称		功能
1	内盖	主机身防护盖。
2	照度传感器	检测进入光线以控制红外 LED。
3	镜头	摄像机的镜头。
4	红外 LED	这些红外 LED 由照度传感器控制。
5	重置按钮	该按钮会将所有摄像机设置恢复为出厂默认值。按住约 5 秒钟可重启系统。 ■ 摄像机被重置后，其网络设置会变为 DHCP。如果网络中没有 DHCP 服务器，则必须运行 IP Installer 程序更改基本的网络设置，如 IP 地址、子网掩码、网关等，然后才能连接到网络。
6	缩放/焦点控制按钮	T 拉近（望远）
		W 拉近（宽）
		N 聚焦近处物体（近）
		F 聚焦远处物体（远）
		焦点控制 按下该按钮可自动进行焦点控制。
7	测试显示器输出	用于测试监视视频输出的输出端口。使用测试监视器电缆来连接至移动显示器并检查测试视频。
8	警报 I/O 端口	ARM-IN 用于连接警报输入传感器或外部日夜传感器。
		ARM-OUT 用于连接警报输出信号。
		GND 有通用端口可以连接报警输入/输出信号。
9	电源端口	用于电源接线板的端口。
10	Micro SD 存储卡插入口	用于插入 Micro SD 存储卡的端子。
11	音频输入插孔	用于连接到麦克风。
12	音频输出插孔	用于连接到扬声器。
13	网络端口	用于连接 PoE 或网络连接的以太网电缆。
14	麦克风孔	内置麦克风。

概述

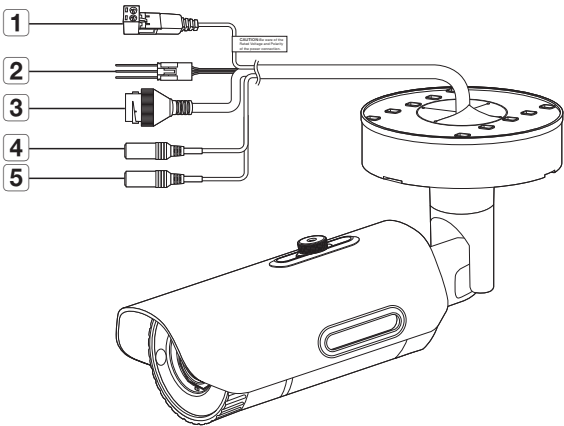
简图 (PNO-9080R)

外观



名称	功能	
1 内存卡槽	(产品的内部空间) 您可以将内存卡插入此卡槽。	
2 防晒罩固定螺钉	它将防晒罩与摄像机固定在一起。	
3 防晒罩	它可以让摄像机避免阳光直射。	
4 重置按钮	该按钮会将所有摄像机设置恢复为出厂默认值。 按住约 5 秒钟可重启系统。 ■ 摄像机被重置后，其网络设置会变为DHCP。如果网络中没有 DHCP 服务器，则必须运行 IP Installer 程序更改基本的网络设置，如 IP 地址、子网掩码、网关等，然后才能连接到网络。	
5 变焦/聚焦控制按钮	T	拉近 (Tele)
	W	拉远 (Wide)
	N	聚焦近处物体 (Near)
	F	聚焦远处物体 (Far)
	聚焦控制	按下该按钮可自动进行聚焦控制
6 CVBS视频输出	用于方便摄像机安装的CVBS视频输出端口。使用连接线缆连接至便携式显示器，方便摄像机的安装。	

组件

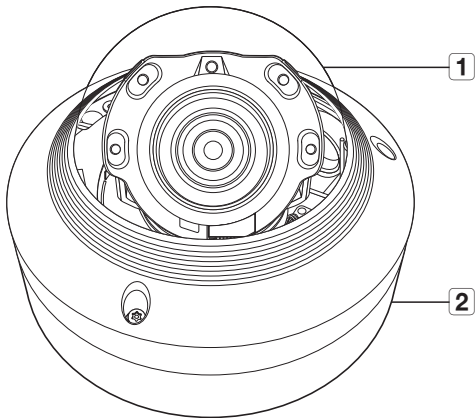


名称	功能	
1 电源端口	用于插入电源线。	
2 警报 I/O 端口	ARM-OUT	用于连接警报输出信号。
	GND	有通用端口可以连接报警输入/输出信号。
	ARM-IN	用于连接警报输入传感器或外部日夜传感器。
3 网络端口	用于连接 PoE 或网络连接的以太网电缆。	
4 音频输出插孔	用于连接到扬声器。	
5 音频输入插孔	用于连接到麦克风。	

■ 用于方便摄像机安装的CVBS视频输出端口。使用连接线缆连接至便携式显示器，方便摄像机的安装。

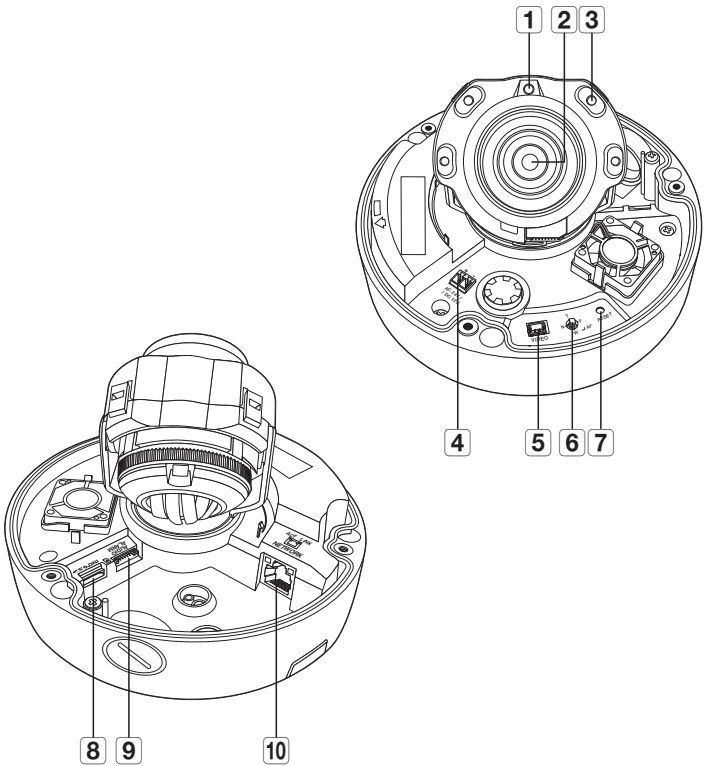
简图 (PNV-9080R)

外观



名称	功能
1 球罩	用于保护镜头和机身的护盖。
2 摄像机外壳	盖住摄像机机身的外壳部分。

组件



概述

名称		功能
1	照度传感器	检测进入光线以控制红外 LED。
2	镜头	摄像机的镜头。
3	红外 LED	这些红外 LED 由照度传感器控制。
4	电源端口	用于电源接线板的端口。
5	CVBS视频输出	用于方便摄像机安装的CVBS视频输出口。使用连接线缆连接至便携式显示器，方便摄像机的安装。
6	缩放/焦点控制按钮	T
		拉近（Tele）
		W
		拉近（Wide）
		N
7	重置按钮	聚焦近处物体（Near）
		F
		聚焦远处物体（Far）
8	Micro SD存储卡插入口	聚焦控制
		按下该按钮可自动进行聚焦控制
		该按钮会将所有摄像机设置恢复为出厂默认值。
		按住约 5 秒钟可重启系统。
		摄像机被重置后，其网络设置会变为DHCP。如果网络中没有 DHCP 服务器，则必须运行 IP Installer 程序更改基本的网络设置，如 IP 地址、子网掩码、网关等，然后才能连接到网络。
9	音频和警报器端口	将音频和警报器电缆插入该端口,与外置警报器设备/麦克风/扬声器相连接。
10	网络端口	用于连接 PoE 或网络连接的以太网电缆。

安装与连接

安装 (PND-9080R)

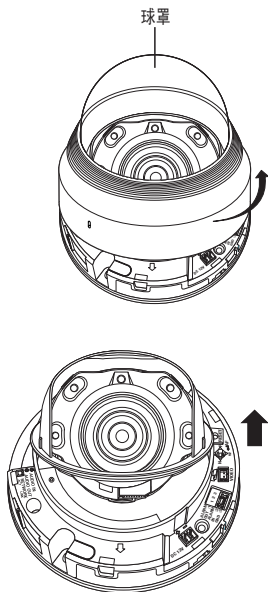
安装前注意事项

安装之前，请确保阅读下列说明：

- 用于安装它的区域（天花板或墙壁）的可承受重量必须至少 5 倍于包括安装支架在内的摄像机重量。
- 注意电缆夹在不适当的地点或电缆皮受损，以免发生火灾或产品破损。
- 为安全起见，让其他人远离安装地点。请立刻收拾放在安装地点下面的贵重品。

拆解

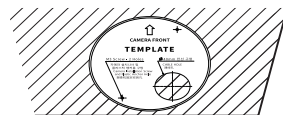
1. 用一只手握住摄像机底部，另一只手逆时针转动内罩。



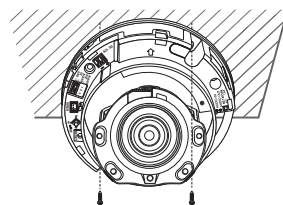
2. 向上提升内罩以将其分离。

安装

1. 将安装模板贴到所选的安装区域，然后如图所示打出 3 个孔。



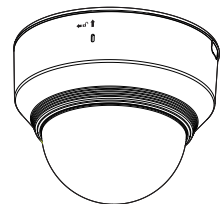
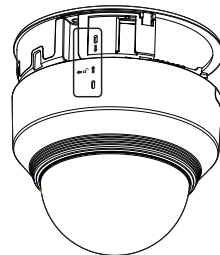
2. 使用随附产品提供的 2 个自攻螺钉，将摄像机固定在安装模板钻的 2 个孔中。
 - 使摄像机上压印的 <◁> 标志朝向摄像机监视方向。
3. 使用适当的电缆连接摄像机内部端子。
4. 请参阅“调整摄像机的监视方向”来调整镜头，使其面向所需的方向。（第 18 页）



- ! 我们建议您不要触摸镜头，因为在最终制造流程中摄像机镜头已正确对焦。如果触摸镜头，镜头可能会无法对焦或者沾染灰尘或异物。

5. 请将内罩连接到主体上。
6. 用手握住摄像机底部时，请用另一只手握住并推它的护罩让两个箭头标记对齐，如图所示。

- ! 要装配圆顶盖，确保箭头相互对准，然后牢牢按下圆顶盖。如在组装过程中球盖安反，或未能正确组装，可能出现漫反射现象，也可能使镜头部分安反，从而导致拍摄范围发生变化。
- 确保球盖已经如图所示，正确连接至底座部分。如卡扣未能正确连接，球盖可能坠落、导致受伤。



安装与连接

安装 (PNO-9080R)

- 此摄像机防水并且符合 IP66 规格，但连接到外部电缆的插孔不防水。建议您将本产品安装在屋檐下，防止电缆因暴露在外而受损。

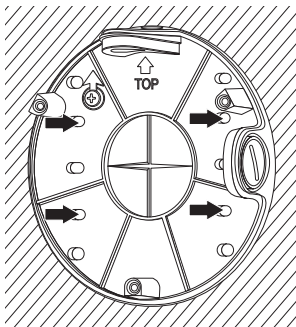
安装前注意事项

安装之前，请确保阅读下列说明：

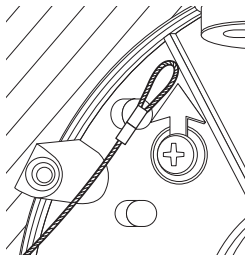
- 用于安装它的区域（天花板或墙壁）的可承受重量必须至少 5 倍于包括安装支架在内的摄像机重量。
- 注意电缆夹在不适当的地点或电缆皮受损，以免发生火灾或产品破损。
- 为安全起见，让其他人远离安装地点。请立刻收拾放在安装地点下面的贵重品。

安装

1. 使用提供的4枚自攻螺钉固定底盖。

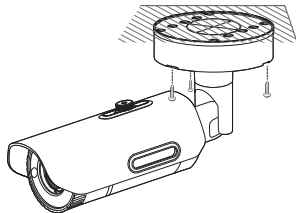


2. 将保险索挂到底盖上箭头状的挂钩上。
3. 将适当的电缆连接至摄像机终端。
4. 使用提供的L型扳手将顶盖上的3个螺钉拧紧。



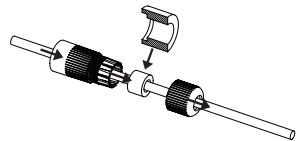
5. 使用提供的L型扳手调整摄像机的方向。

- 当您使用支架调整摄像机的位置时，请松开支架螺丝、调整摄像机，随后将支架螺丝拧紧。如果您在螺丝拧紧时试图强行调节摄像机，可能会导致划伤或其他问题。

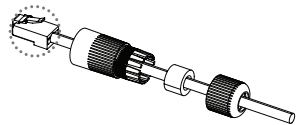


如何将 RJ45 防水电缆连接到 LAN 电缆

1. 沿箭头方向插入。

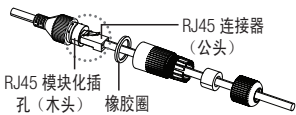


2. 将 LAN 连接器（公头）连接到电缆。

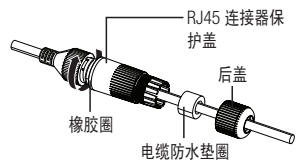


3. 将 RJ45 模块化插孔（木头）连接到 RJ45 连接器（公头）。

- 请保留拆下的每个零部件。

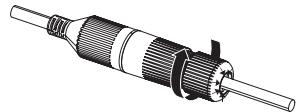


4. 通过顺时针旋转 RJ45 模块化插孔（木头）和 RJ45 保护盖（按箭头方向）来进行组装。



5. 通过顺时针旋转 RJ45 保护盖和后盖（按箭头方向）来进行组装。组装后盖时，使用电缆防水垫圈与电缆紧密相连，以使其能够防水。

- 您必须安装彻底，以将后盖向上旋转至 RJ45 连接器螺纹的末端。

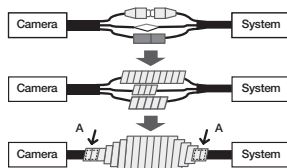


室外安装

当您本产品安装在建筑外部时，请用防水丁基橡胶带对其进行防水处理（商店有售），防止水从连接到外部的电缆缝隙中渗入。

1. 连接电源、I/O、音频和 LAN 电缆。
2. 用防水带(丁基橡胶)，包裹住黑色电缆套管（区域 A）和电缆连接区域，确保一半以上的丁基橡胶带重叠。

- ❗
- 如未对电缆套管进行适当的防水操作，它可能直接导致漏水。确保使用橡胶带保护电缆。
 - 防水丁基橡胶带由丁基橡胶制成，可拉伸为正常长度的 2 倍。



安装 (PNV-9080R)

- ❗
- 此摄像机防水并且符合 IP66 规格，但连接到外部电缆的插孔不防水。建议您将本产品安装在屋檐下，防止电缆因暴露在户外而受损。

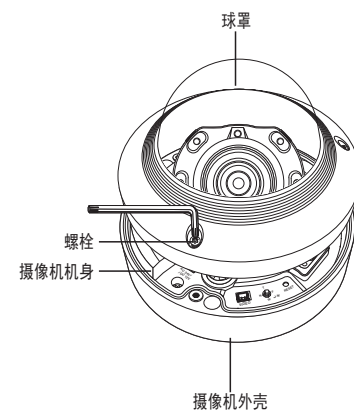
安装前注意事项

安装之前，请确保阅读下列说明：

- 用于安装它的区域（天花板或墙壁）的可承受重量必须至少 5 倍于包括安装支架在内的摄像机重量。
- 注意电缆夹在不适当的地点或电缆皮受损，以免发生火灾或产品破损。
- 为安全起见，让其他人远离安装地点。
请立刻收拾放在安装地点下面的贵重品。

拆解

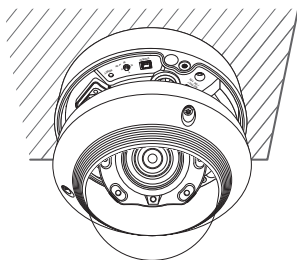
1. 使用随附提供的 L 型扳手，按照逆时针方向拧松 3 颗紧固螺栓，即可卸下顶盖。



安装与连接

安装

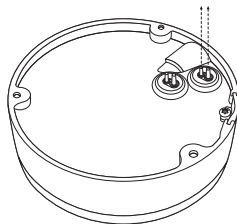
1. 钻出一个用于安装壳体底座的孔（直径：6mm，深度：最小 55mm），并将本产品随附的膨胀塑胶螺丝插到底端。
2. 将底孔套入固定器也，然后插入并固定支架螺钉（M4.5xL50）。
3. 连接和排放必要的电缆，以免在安装摄像机时损坏或缠绕它们。
4. 请参阅“调整摄像机的监视方向”来调整镜头，使其面向所需的方向。（第 18 页）
5. 闭合球罩。
 - 使用 L 型扳手拧紧固定螺栓可防止渗水。



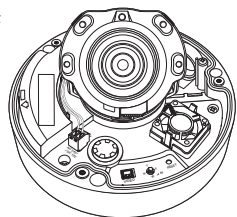
连接防水电源线和 LAN 电缆

1. 卸下球罩和壳体。
2. 拉出底座上橡皮塞的长突出部，然后如图所示将其取下。

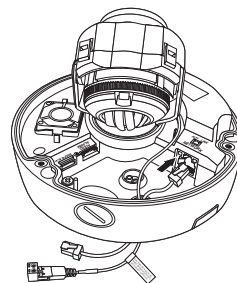
- !** ■ 将适当的线缆保护衬套用于要连接的局域网线缆。
- 基础摄像机:使用直径为5到6.5毫米的线缆。
 - 所提供组件:使用直径为7到8.5毫米的线缆。



3. 将电源线插入在上述步骤 2 中取下橡皮塞突出部后出现的小孔，然后在长凹槽中布置电缆。
4. 将电源线连接到电源接线板。

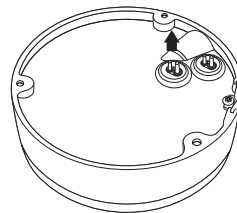


5. 将 LAN 电缆插入在上述步骤 2 中取下橡皮塞突出部后出现的大孔。
6. 使用电缆剪剥除外皮，然后对齐电缆。
7. 为 LAN 电缆接上一个 LAN 接头，然后插入 LAN 工具。
8. 将准备就绪的 LAN 电缆连接到以太网端口。

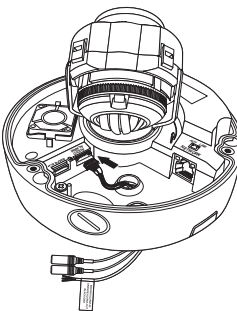


连接警报器和音频线缆

1. 卸下球罩和壳体。
2. 如图所示，拉出底座上的橡皮塞。



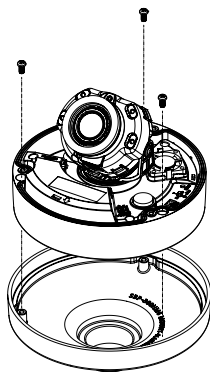
3. 在卸下 2 号橡胶帽后会出现一个孔，将警报器/音频线缆插入此孔中，并将该线缆连接至警报器端子。
4. 对齐电缆，以便在安装摄像机时不会损坏或挤压电缆。
5. 将警报器/音频线缆上的橡胶帽插入到孔中。
6. 请参阅“调整摄像机的监视方向”来调整镜头，使其面向所需的方向。（第 18 页）
7. 联接球罩。



连接至非捆绑销售的适配器

选择并购买下列其中一个必要的选件（非捆绑销售），它应该适合您的安装位置或为您提供方便。

1. 从壳体取下球罩，参考“拆解”部分。（第 15 页）
2. 使用随附的机器螺钉将摄像机外壳固定到非捆绑销售的适配器上。
3. 连接和排放必要的电缆，以免在安装摄像机时损坏或缠绕它们。
4. 以“拆解”的相反顺序安装摄像机机身。
5. 请参阅“调整摄像机的监视方向”来调整镜头，使其面向所需的方向。（第 18 页）
6. 闭合球罩。
 - 使用 L 型扳手拧紧固定螺栓可防止渗水。

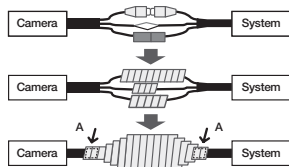


室外安装

当您本产品安装在建筑外部时，请用防水丁基橡胶带对其进行防水处理（商店有售），防止水从连接到外部的电缆缝隙中渗入。

1. 连接电源、I/O、BNC 和 LAN 电缆。
2. 用防水带（丁基橡胶），包裹住黑色电缆套管（区域 A）和电缆连接区域，确保一半以上的丁基橡胶带重叠。

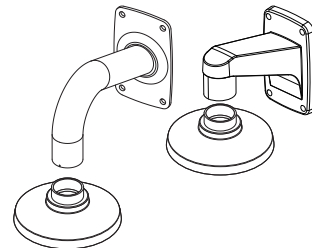
- ❗
- 如未对电缆套管进行适当的防水操作，它可能直接导致漏水。确保使用橡胶带保护电缆。
 - 防水丁基橡胶带由丁基橡胶制成，可拉伸为正常长度的 2 倍。



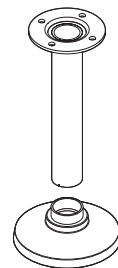
可选的安装附件

为了更方便安装，您可以购买可选的附件。

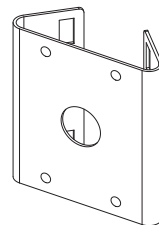
1. 墙上安装适配器（SBP-300WM 或 SBP-300WM1）/ 悬挂安装适配器（PND-9080R：SBP-300HM8, PNV-9080R：SBP-300HM6）
将圆顶摄像机安装到墙上时使用该适配器。



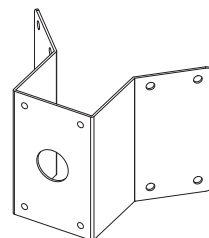
2. 天花板安装适配器（SBP-300CM）/ 悬挂安装适配器（PND-9080R：SBP-300HM8, PNV-9080R：SBP-300HM6）
将圆顶摄像机安装到混凝土天花板上时使用该适配器。



3. 柱式安装适配器（SBP-300PM）
这是在直径大于 80 毫米的柱子上安装墙上安装适配器（SBP-300WM 或 SBP-300WM1）时使用的适配器。

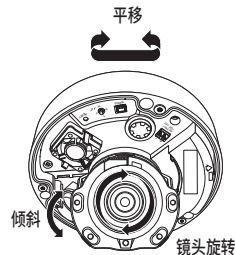


4. 角落安装适配器（SBP-300KM）
这是在墙角安装墙上安装适配器（SBP-300WM 或 SBP-300WM1）时使用的适配器。



安装与连接

调整摄像机的监视方向 (PND-9080R/PNV-9080R)



■ 调整监视方向

仅当摄像机固定到天花板上时才能调整摄像机方向。
调整时，左右旋转摄像机装置称为“平移”，调整倾斜度称为“倾斜”，沿镜头轴转动镜头称为“旋转”。

- 平移的有效范围是共 354 度。
- 旋转的有效范围是共 355 度。
- 倾斜的有效范围是共 67 度。



- 某些角度的图像会被摄像机壳遮住。
- 在拆卸球罩和摄像机壳构成的整体后，不要用力转动焦点/缩放镜头。否则可能会导致因马达故障而不能正确聚焦。

■ 调整方法

1. 安装摄像机之后，根据监视方向调整平移角度。
2. 设置为水平角度，使图像不会颠倒。
3. 调整倾斜角度，以便摄像机面朝监视的对象。

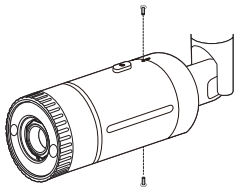
插入/取出 MICRO SD 存储卡



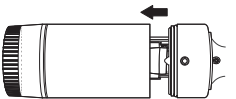
- 安装摄像机前，请先从摄像机拔下电源线后，插入 Micro SD 保存卡。
- 请不要将 Micro SD 存储卡往逆方向强行插入，以免存储卡破损。
- 下雨或湿度较高时，不建议插拔内存卡。
- 产品盖子的拆卸应该在5分钟之内完成，否则会有内部结露的风险。

插入 Micro SD 存储卡 (PNO-9080R)

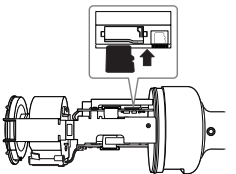
1. 请先松开摄像机的两个螺丝。



2. 将前盖拉出并与摄像机分开。

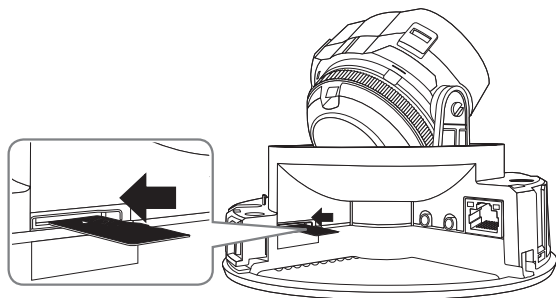


3. 按照图中箭头所示方向插入内存卡。

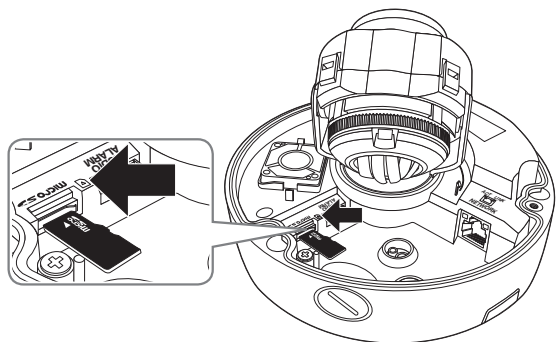


插入 Micro SD 存储卡 (PND-9080R/PNV-9080R)

1. 将摄像机的圆顶盖分开。
2. 按照图中箭头所示方向插入内存卡。



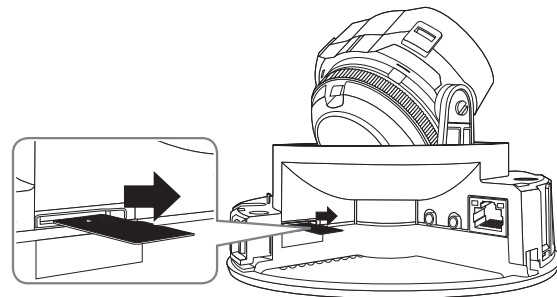
<PND-9080R>



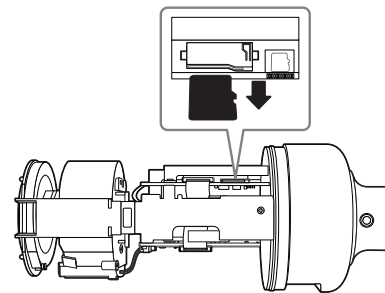
<PNV-9080R>

取出 Micro SD 存储卡

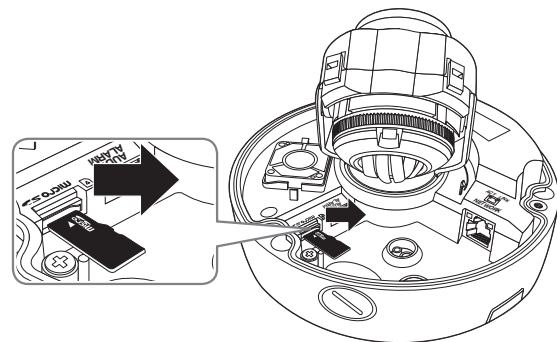
轻轻地按压存储卡露在外面的一端，依图示的方式从拆槽中弹出存储卡。



<PND-9080R>



<PNO-9080R>



<PNV-9080R>

安装与连接

- 
- 过度用力按Micro SD存储卡，可能会导致存储卡从卡槽中猛然弹出。
 - 移除微型 SD 存储卡之前，关闭摄像机或转到<存储器操>后设置为<关>，最后按 [应用 ()]] 按钮。（第 55 页）
 - 将数据保存在Micro SD存储卡时，若取出存储卡或关掉电源，会导致已存数据的损失。

存储卡信息(未包含)

什么是存储卡？

存储卡是一种外部数据储存设备，它的开发为使用数字设备进行录制和共享音频、视频和文本数据提供了崭新的方式。

选择一款适合您的存储卡

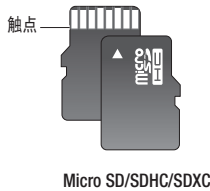
本摄像机支持 Micro SD/SDHC/SDXC 存储卡。
根据存储卡的型号和制作材料不同，您可能会遇到兼容性的问题。

对您的摄像机，我们建议您使用以下厂商制造的存储卡：
Micro SD/SDHC/SDXC 存储卡：Sandisk, Transcend

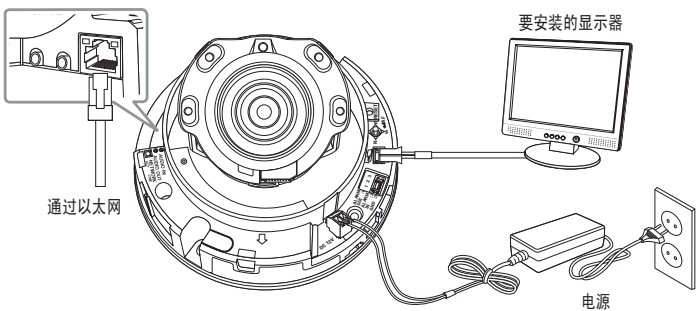
建议将 4GB ~ 128GB 的存储卡与本摄像机配合使用。

播放速度取决于存储卡的读写速度。若储存卡读写速度不够快，播放速度会变慢。请使用读写速度快的存储卡。
如要保存 4K 分辨率视频，建议使用存储空间为 16GB 或更大容量的 10 Class（MLC 类型）内存卡。

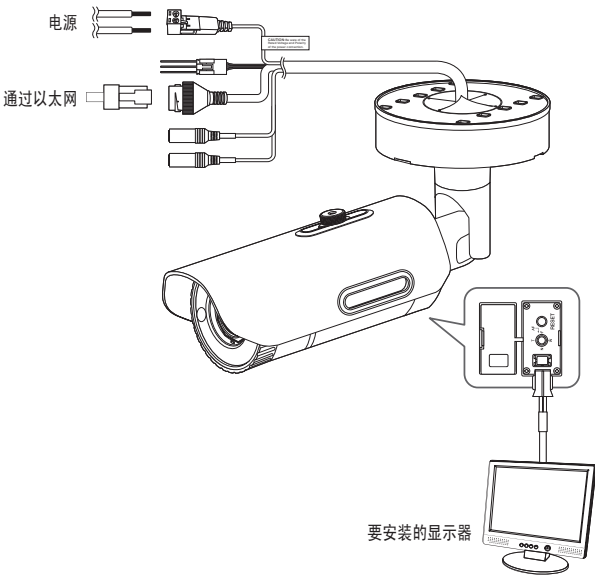
存储卡组件



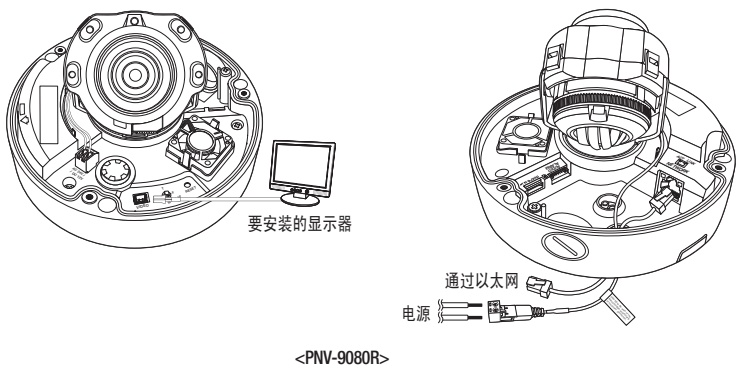
与其他设备连接



<PND-9080R>



<PNO-9080R>



■ 本产品提供的 CVBS 输出端子是为了便于安装，建议不要用于监视目的。

以太网连接

将以太网电缆连接到本地网络或互联网。

电源 (PND-9080R)

使用螺丝刀将每股电源线 (+, -) 连接至摄像机的相应电源端口。

- 如果同时供应 PoE 和 DC 12V，将采用来自 PoE 的电源为产品供应。
 - 您也可以使用具有 PoE 功能的路由器为摄像机供电。
 - 使用符合 IEEE 802.3af 协议的 PoE。
 - 仅可使用 PoE 和 DC 12V 的电源之一。
- 在连接电源线时，切勿弄反极性。
- 如果要连接外部设备，则必须先关闭外部设备再进行。

电源 (PNO-9080R/PNV-9080R)

使用螺丝刀将每股电源线 (+, -) 连接至摄像机的相应电源端口。

- ! ■ 如果同时打开 PoE 和 DC12V 或 PoE 和 AC24V，设备会使用外部电源 (DC12V、AC24V) 进行供电。
 - 您也可以使用具有 PoE 功能的路由器为摄像机供电。
 - 使用符合 IEEE 802.3af 协议的 PoE。
 - 建议使用 PoE、DC12V 和 AC24V 中的一种电源为设备供电。
- 在连接电源线时，切勿弄反极性。
- AC 24V 可以通过非极性联合的方式连接。
- 如果要连接外部设备，则必须先关闭外部设备再进行。

每个型号的电源电缆规格

对于 DC 12V 输入：

股线类型 (AWG)	#22	#20	#18
电缆长度 (最大)	24米	38米	60米

对于 AC 24V 输入：

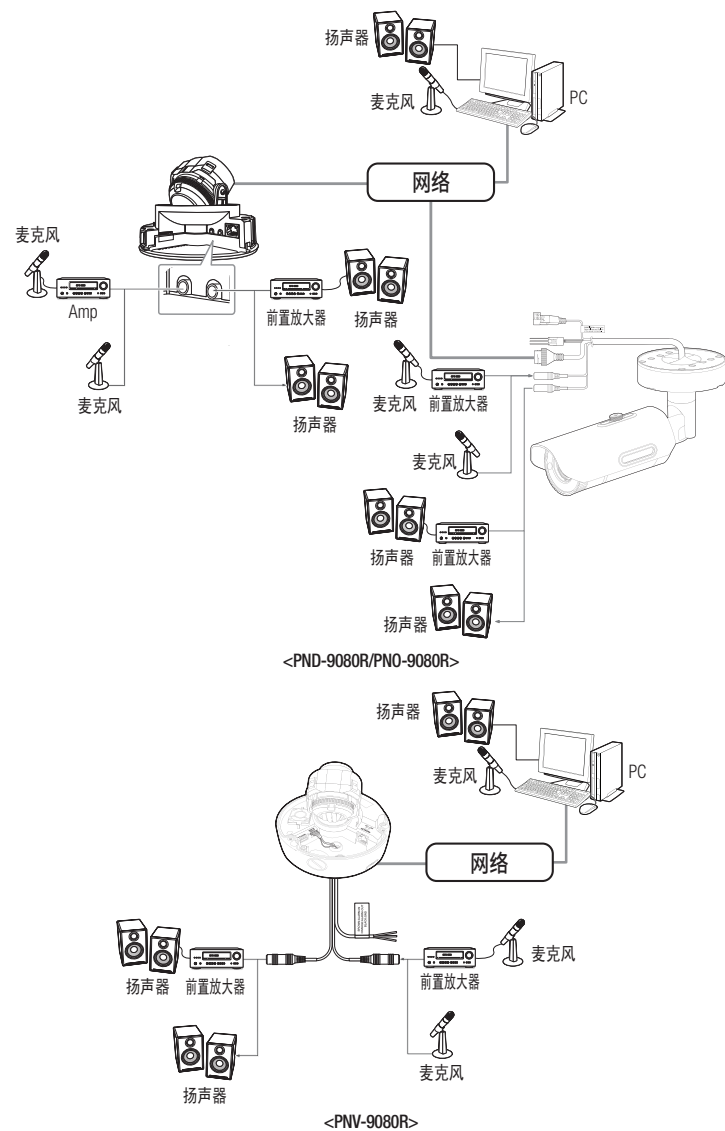
股线类型 (AWG)		#22	#20	#18
电缆长度 (最大)	PNO-9080R	34米	55米	88米
	PNV-9080R			

网线规格

名称	内含物	备注
连接器	RJ45 (10/100/1000BASE-T)	
以太网	10/100/1000BASE-T	如采用 1000BASE-T 网线，千兆集线器应使用 UTP 6 类或更高级别的电缆。
电缆	UTP 超6类	
最大距离	100米	
PoE 支持	IEEE 802.3af	

安装与连接

连接音频输入/输出



1. 将摄像机的音频输入端口连接至麦克风或麦克风连接至的扩音器的线性输出端口。

■ 可以使用摄像机内置麦克风，而无需连接外部麦克风。
(仅适用于 PND-9080R)

2. 将摄像机的音频输出端口连接至扬声器或扬声器连接至的扩音器的线性输入端口。

3. 检查音频输入的规格。

• 音频编解码器

- 音频输入：G.711 PCM(比特率:64kbps / 采样频率:8kHz), G.726 ADPCM(比特率: 16Kbps、24Kbps、32Kbps、40Kbps / 采样频率:8kHz), AAC(比特率:48kbps / 采样频率:16kHz)

• 全双工音频

• 音频输入 (PND-9080R): 可选 (麦克风/线路输入/内置麦克风)，支持的电压: 2.5VDC (4mA)，输入电阻: 2K 欧姆

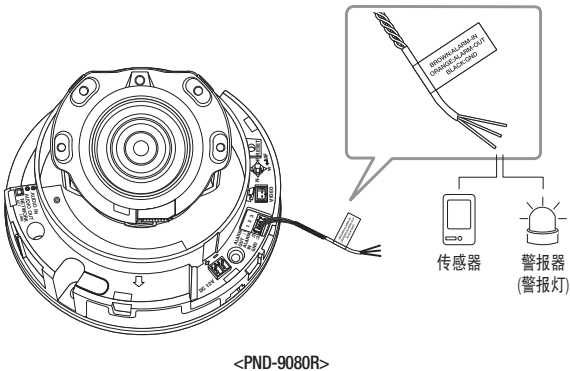
• 音频输入 (PND-9080R/PNV-9080R): 可选 (麦克风/线路输入)，支持的电压: 2.5VDC (4mA)，输入电阻: 2K 欧姆

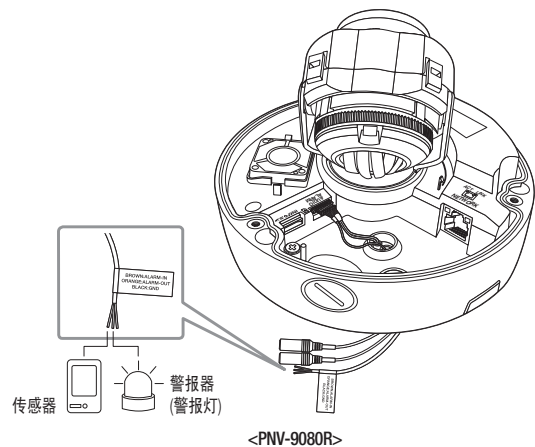
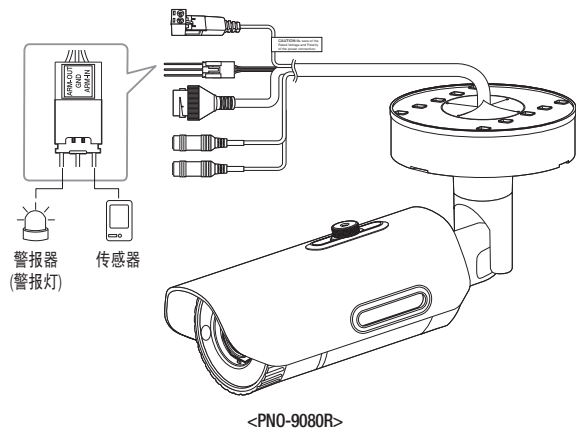
• 音频输出: 线路输出 (3.5mm 单声道插孔)，最大输出: 1Vms

• 线路输出阻抗: 600Ω

连接到 I/O 端口

将警报输入/输出电缆连接到端口盒的相应端口。





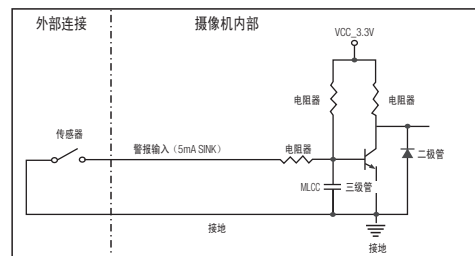
- ALARM-IN：用于连接警报输入传感器或外部日夜传感器。
- ALARM-OUT：用于连接警报输出信号。
- GND：警报输入/输出信号的公共端。

❗ 如果使用开路集电极方法连接超出电压和电流规格的设备（如闪光灯和报警器），它可能导致故障。
在连接超出电压和电流规格的设备时，参考“警报输出线路图”。（第 23 页）

连接外接传感器

将传感器每根信号线（2 线）的一股线连接至 [ALARM IN] 端口，并将另一股线连接至 [GND] 端口。

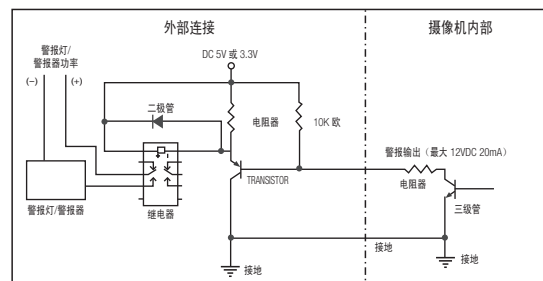
警报输入线路图



要连接警报输出

如果使用开路集电极方法连接超出电压和电流规格的设备（如闪光灯和报警器），它可能导致故障。
在连接超出电压和电流规格的设备时，参考下面的警报输出连接线路图。

警报输出线路图



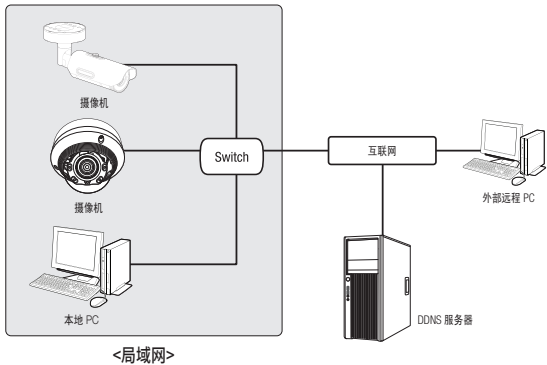
网络连接和设置

可根据您的网络配置来设置网络的设定。

在LAN环境下直接安装摄像机

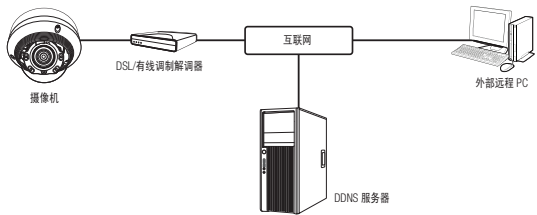
连接局域网内的本地 PC 和摄像机

- 1. 启动本地 PC 上的Web浏览器。
- 2. 在浏览器地址栏中输入要访问的摄像机IP地址。



- 在正确设置防火墙或端口转发前，局域网外部的远程互联网 PC 可能无法连接安装于内部网的摄像机。在此情况下，联系网络管理员解决问题。
- 在IP安装程序中，您可以使用初始密码“4321”来设置IP地址、子网掩码、网关、HTTP端口、VNP端口或IP类型。在更改网络接口后，为了提高安全性，请访问Web查看器并更改密码。
- 出货时，摄像机被设置为DHCP服务器自动分配IP地址。如果没有可用的 DHCP 服务器，则会将 IP 地址设置为 192.168.1.100。要更改 IP 地址，请使用 IP Installer。有关 IP Installer 使用的详细信息，请参阅“静态 IP 设置”。（第 26 页）

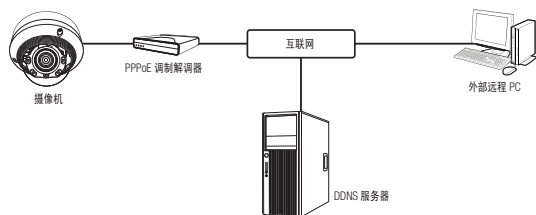
将摄像机直接连接至基于 DHCP 的 DSL/有线电视网调制解调器



- 1. 直接将用户 PC 与网络摄像机连接。
- 2. 运行 IP Installer 并更改摄像机的 IP 地址，以便可以使用桌面上的 Web 浏览器连接至互联网。
- 3. 使用Web浏览器连接至 Web Viewer。
- 4. 移至 [设置] 页面。
- 5. 移至 [网络] - [DDNS] 并配置 DDNS 设置。
- 6. 移至 [Basic] - [IP & 端口]，并将网络类型设置为 [DHCP]。
- 7. 将摄像机与用户PC分开，并直接连接到调制解调器。
- 8. 重新启动摄像机。

- 有关配置 DDNS 设置，请参阅“DDNS”。（第 51 页）
- 有关注册 DDNS 设置，请参阅“注册 DDNS”。（第 51 页）
- 有关配置IP类型设置，请参阅“IP & 端口”。（第 44 页）

直接将摄像机连接到 PPPoE 调制解调器



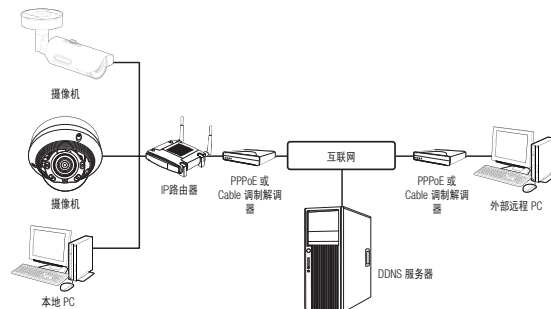
1. 直接将用户 PC 与网络摄像机连接。
2. 运行 IP Installer 并更改摄像机的 IP 地址，以便可以使用桌面上的 Web 浏览器连接至互联网。
3. 使用 Web 浏览器连接至 Web Viewer。
4. 移至 [设置] 页面。
5. 移至 [网络] - [DDNS] 并配置 DDNS 设置。
6. 移动到 [Basic] - [IP & 端口] 设置页面，将“IP 类型”设置为 [PPPoE]，然后输入网络服务的 ID 和密码。
7. 将摄像机与用户 PC 分开，并直接连接到调制解调器。
8. 重新启动摄像机。



- 有关配置 DDNS 设置，请参阅“DDNS”。(第 51 页)
- 有关注册 DDNS 设置，请参阅“注册 DDNS”。(第 51 页)
- 有关配置 IP 类型设置，请参阅“IP & 端口”。(第 44 页)

将摄像机与使用 PPPoE/CABLE 调制解调器的 IP 路由器连接

适用于小型网络环境，如家庭、SOHO 以及普通的商店。



配置与 IP 路由器连接的本地 PC 的网络设置

在配置连接到 IP 路由器的本地 PC 的网络设置时，遵循以下说明。

- 选择：<网上> → <属性> → <本地连接> → <常规> → <属性> → <Internet 协议 (TCP/IP)> → <属性> → <自动获得 IP 地址> 或 <使用下面的 IP 地址>。
- 若您选择的是 <使用下面的 IP 地址>，遵照以下说明操作：

例1) 若 IP 路由器的地址 (LAN IP) 为 192.168.1.1

IP 地址：192.168.1.100
子网掩码：255.255.255.0
默认网关：192.168.1.1

例2) 若 IP 路由器的地址 (LAN IP) 为 192.168.0.1

IP 地址：192.168.0.100
子网掩码：255.255.255.0
默认网关：192.168.0.1

例3) 若 IP 路由器的地址 (LAN IP) 为 192.168.xxx.1

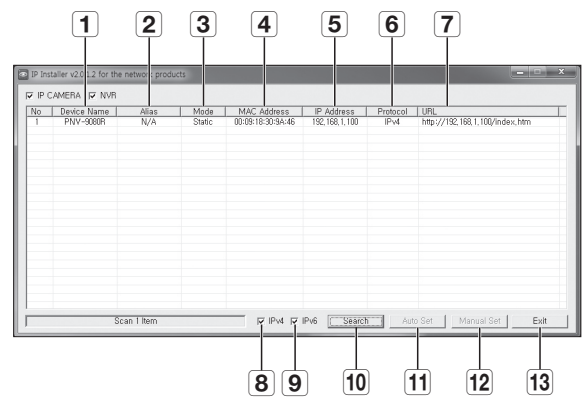
IP 地址：192.168.xxx.100
子网掩码：255.255.255.0
默认网关：192.168.xxx.1



- 关于 IP 路由器的地址，请参见产品文档。
- 如需 IP 路由器的正向端口的更多信息，请参阅“路由器端口设置”。(第 28 页)

网络连接和设置

IP安装器按钮的名称和功能



名称	功能
1 Device Name	已连接摄像机的型号名称。 单击此列标可以按型号名称对列表进行排序。 但是，如果在搜索时单击将会停止搜索。
2 Alias	此功能当前不可用。
3 Mode	在<Static>、<Dynamic> 和 <PPPoE>中，显示现在的网络状态。
4 MAC(Ethernet) Address	已连接摄像机的以太网地址。 单击此列标可以按以太网对列表进行排序。 但是，如果在搜索时单击将会停止搜索。
5 IP Address	IP 地址。 单击此列标可以按 IP 地址对列表进行排序。 但是，如果在搜索时单击将会停止搜索。
6 Protocol	摄像机的网络设置。 出厂默认设置为“IPv4”。 使用 IPv6 设置的摄像机将显示“IPv6”。
7 URL	可以从外部网络访问的DDNS URL地址。 若DDNS注册失败，该列标将显示为摄像机的<IP Address>。
8 IPv4	扫描使用 IPv4 设置的摄像机。

名称	功能
9 IPv6	扫描使用 IPv6 设置的摄像机。 只能在符合 IPv6 的环境中激活。
10 Search	扫描当前连接到网络的摄像机。 但是，如果没有选取 IPv4 也没有选取 IPv6，该按钮将呈灰色。
11 Auto Set	IP Installer 自动配置网络设置。
12 Manual Set	手动配置网络设置。
13 Exit	退出 IP Installer 程序。

■ 对于 IP Installer，请仅使用在安装 CD 中提供的版本，或者最新版本（如果可以获得）。
可以从 Hanwha Techwin网站下载最新版本。

静态 IP 设置

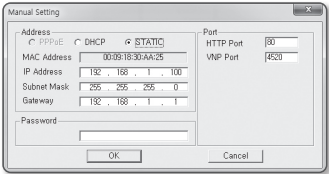
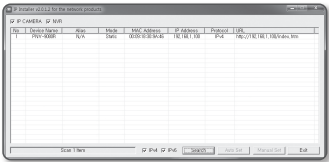
手动网络设置

运行 <IP Installer_v2.XX.exe> 以显示摄像机搜索列表。
在初始启动时，[Auto Set] 和 [Manual Set] 将呈灰色。

■ 对于以 IPv6 设置为基础的摄像机，这些按钮将呈灰色，因为摄像机不支持此功能。

- 从搜索列表选择一个摄像机。
在摄像机的标签上检查摄像机的 MAC 地址。
将激活 [Auto Set] 和 [Manual Set] 按钮。
- 单击 [Manual Set]。
Manual Setting 对话框将会出现。
摄像机的 <IP Address>、<Subnet Mask>、<Gateway>、<HTTP Port> 和 <VNP Port> 均显示为预设值。
- 在 <Address> 窗格中，提供必需的信息。
 - MAC (Ethernet) Address：印在摄像机标签上的 MAC 地址会自动显示，不需要用户设置。

■ 只有在未选中 DHCP 的情况下才能设置 IP 相关参数。



如果不使用IP路由器

若要设置 <IP Address>、<Subnet Mask> 和 <Gateway>，请联系网络管理员。

4. 在 <Port> 窗格中，提供必需的信息。

- HTTP Port：用于使用Web浏览器访问摄像机，默认值为 80。
- VNP Port：用于控制视频信号传输，默认值为 4520。

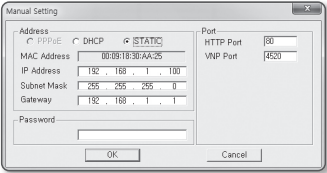
5. 输入密码。

输入用来访问摄像机的“admin”帐户的密码。

- 出于安全考虑，建议您的密码使用数字、大小写字母以及特殊符号的组合。
- 如果您要更改密码，请参考用户设置的“管理员密码更改”。（第 43 页）

6. 单击 [OK]。

将完成手动网络设置。



如果使用IP路由器

- IP Address：输入IP路由器提供的 IP 范围内的地址。
例) 192.168.1.2~254, 192.168.0.2~254, 192.168.XXX.2~254
- Subnet Mask：IP路由器的 <子网掩码> 将是摄像机的 <子网掩码>。
- Gateway：IP路由器的 <本地 IP 地址> 将是摄像机的 <Gateway>。

- 设置可能因连接的IP路由器型号而异。
有关详细信息，请参阅适用路由器的用户手册。
- 如需IP路由器的正向端口的更多信息，请参阅“路由器端口设置”。（第 28 页）



如果IP路由器连接了多个摄像机

分别设置摄像机的IP相关项目和Port相关项目。

例)

	类别	摄像机 1	摄像机 2
IP 相关设置	IP Address	192.168.1.100	192.168.1.101
	Subnet Mask	255.255.255.0	255.255.255.0
	Gateway	192.168.1.1	192.168.1.1
端口相关设置	HTTP Port	8080	8081
	VNP Port	4520	4521

- 如果 <HTTP Port> 设置为除 80 以外的值，您必须在Web浏览器的地址栏中提供 <Port> 号，才能访问摄像机。
例) http://IP address: HTTP Port
http://192.168.1.100:8080

自动网络设置

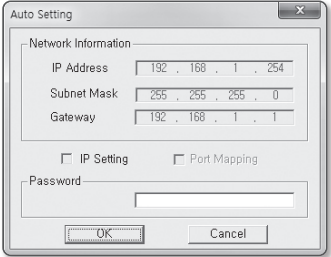
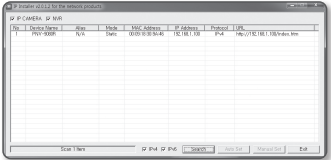
运行 <IP Installer_v2.XX.exe> 以显示摄像机搜索列表。
在初始启动时，[Auto Set] 和 [Manual Set] 将呈灰色。

- 对于以 IPv6 设置为基础的摄像机，这些按钮将呈灰色，因为摄像机不支持此功能。

1. 从搜索列表选择一个摄像机。
在摄像机的标签上检查摄像机的 MAC 地址。
将激活 [Auto Set] 和 [Manual Set] 按钮。
2. 单击 [Auto Set]。
Auto Setting 对话框将会出现。
显示自动搜索到的<IP Address>、<Subnet Mask>和 <Gateway>。
3. 输入密码。
输入用来访问摄像机的“admin”帐户的密码。

- 出于安全考虑，建议您的密码使用数字、大小写字母以及特殊符号的组合。
- 如果您要更改密码，请参考用户设置的“管理员密码更改”。（第 43 页）

4. 单击 [OK]。
将完成自动网络设置。



网络连接和设置

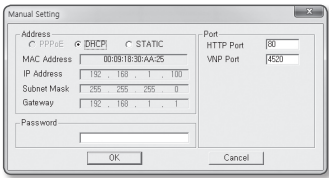
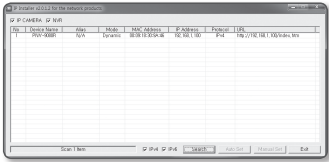
动态 IP 设置

动态 IP 环境设置

- 动态 IP 环境示例
 - 如果连接了摄像机的IP路由器由 DHCP 服务器分配了 IP 地址
 - 将摄像机直接连接到使用DHCP方式的调制解调器时
 - 在LAN环境下, 从内部DHCP服务器获取IP时

检查动态 IP

- 在用户的本地计算机上运行 IP Installer。
获取<Dynamic IP>的摄像机将会显示在列表中。
- 从搜索结果中选择摄像机。
- 单击 [Manual Set] 按钮, 然后检查摄像机的 <Dynamic IP> 地址。
如果取消选择 <DHCP>, 您即可将 IP 更改为 <Static>。

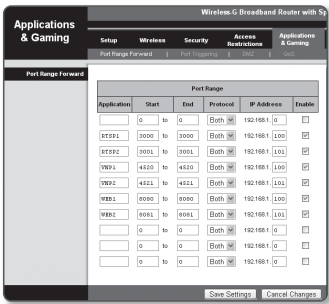


路由器端口设置

如果您安装了连接摄像机的IP路由器,就必须设置在IP路由器上前移的端口范围,以便远程 PC 可以其中的摄像机。

手动端口设置

- 从IP路由器的 Setup 菜单中, 选择 <Applications & Gaming> - <Port Range Forward>。
关于第三方IP路由器端口转发的菜单位置和设置方法, 请参阅各个IP路由器制造商提供的用户手册。
- 对连接到IP路由器的每个摄像机选择 <TCP> 和 <UDP Port>。
应当按照摄像机 web 查看器<设置> - <Basic> - <IP & 端口> 中指定的端口数量设置要配置给 IP 路由器的各端口数量。



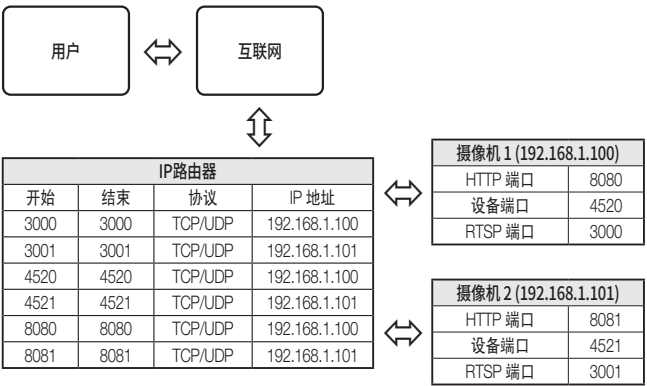
- 完成后, 单击 [Save Settings]。
将保存设置。

- 以上样本说明基于 CISCO 的IP路由器。
- 设置可能因连接的IP路由器型号而异。
有关详细信息, 请参阅适用路由器的用户手册。

设置多个网络摄像机的端口范围前移

- 在路由器的设置页面, 可设置路由器的端口转发。
- 用户可以使用摄像机设置屏幕更改每个端口。

当摄像机 1 和摄像机 2 连接至同一路由器时：

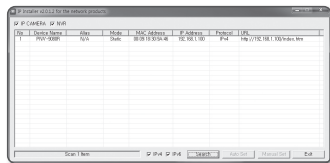


- 如果路由器支持 UPnP (通用即插即用) 功能, 无需额外路由器设置即可实现端口转发。
在连接网络摄像机后, 在“设置 → 网络 → DDNS”菜单中将 <Wisenet DDNS> 的 <Quick connect> 设置为 <开>。

从共享的本地 PC 连接到摄像机

1. 运行 IP Installer。
它将扫描连接的摄像机，并显示摄像机列表。
2. 双击要访问的摄像机。
Web浏览器将启动，并连接到摄像机。

 ■ 您也可以在Web浏览器的地址栏中键入所发现摄像机的 IP 地址的方式访问摄像机。



从远程 PC 通过互联网连接到摄像机

在IP路由器外部的远程PC上，无法使用IP安装器。用户可利用摄像机的DDNS URL，访问IP路由器内部的摄像机。

1. 您应该设置IP路由器端口范围前移，然后才能访问IP路由器网络中的摄像机。
2. 为了从外部的远程PC访问摄像机，启动浏览器后，在地址栏上输入DDNS URL地址或IP路由器的IP地址。
例) <http://ddns.hanwha-security.com/ID>

 ■ 有关注册 DDNS 设置，请参阅“注册 DDNS”。（第 51 页）

web 查看器

连接到摄像机

通常,您应该

1. 启动Web浏览器。
2. 在地址栏中键入摄像机的 IP 地址。
例) • IP 地址 (IPv4) : 192.168.1.100 → http://192.168.1.100
- 将会出现登录对话框。
• IP 地址 (IPv6) : 2001:230:abcd:ffff:0000:0000:ffff:1111 →
http://[2001:230:abcd:ffff:0000:0000:ffff:1111] - 将会出现登录对话框。

如果 HTTP 端口为除 80 以外的值

1. 启动Web浏览器。
2. 在地址栏中键入摄像机的 IP 地址和 HTTP 端口号。
例) IP 地址 : 192.168.1.100:HTTP 端口号(8080)
→ http://192.168.1.100:8080 - 将会出现登录对话框。

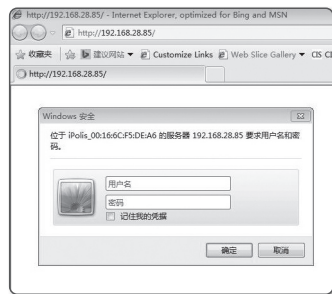
使用 URL

1. 启动Web浏览器。
2. 在地址栏中键入摄像机的 DDNS URL。
例) URL 地址 : http://ddns.hanwha-security.com/ID
- 将会出现登录对话框。

 在只有Local网的环境下, 无法访问摄像机。

通过 UPnP 连接

1. 运行支持 UPnP 协议的客户端或操作系统。
2. 单击搜索到的摄像机名称。
若是Windows操作系统, 单击在网络菜单上被搜索到的摄像机名称。
- 登录窗口即显示出来。



通过 Bonjour 连接

1. 运行支持 Bonjour 协议的客户端或操作系统。
2. 单击搜索到的摄像机名称。
若是Mac操作系统, 在Safari的Bonjour选项卡上, 单击被搜索到的摄像机名称。
- 登录窗口即显示出来。

检查 DDNS 地址

如果摄像机直接连接到 DHCP 有线电视网调制解调器、DSL 调制解调器或 PPPoE 调制解调器, 每当您尝试连接到 ISP (互联网服务提供商) 服务器时, 您的网络 IP 地址都会更改。

在这种情况下, 将不会通知您 IP 地址已被 DDNS 更改。

一旦您向 DDNS 服务器注册了基于动态 IP 的设备, 当尝试访问该设备时, 就可以轻松检查更改的 IP。

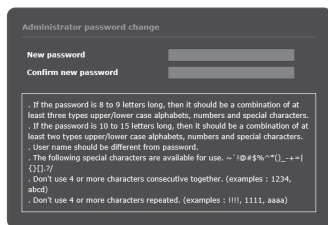
要向 <DDNS> 服务器注册您的设备, 请访问 <http://ddns.hanwha-security.com> 并先注册您的设备, 然后将 Web Viewer 的 <网络> - <DDNS> 设置为 <Wisenet DDNS>, 在<产品ID>上输入已在DDNS服务器上所注册的产品ID。

密码设置

首次访问产品时，必须先注册登录密码。
出现“密码更改”窗口时，输入新密码。



- 对于 8 到 9 位的新密码，必须至少使用下列 3 种类型：大写字母/小写字母、数字和特殊字符。对于 10 到 15 位的密码，必须至少使用上述两种类型。
 - 允许使用的特殊字符为：~!@#\$%^&*()_-=+[]{}?/
- 为了获得较高的安全性，建议您不要重复使用相同的字符作为密码，也不要使用连续的键盘输入作为密码。
- 如果您丢失了密码，可按住[RESET]按钮初始化该产品。因此请使用记事簿写下或记住您的密码以防丢失。



登录

每当访问摄像机时，登录窗口都会出现。
输入用户 ID 和密码以访问摄像机。

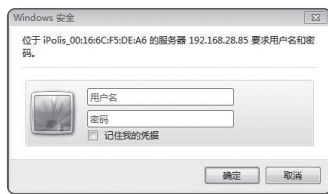
- 在 <用户名> 输入框中输入“admin”。
管理员 ID，即“admin”是固定的，无法更改。
- 在 <密码> 输入字段中输入密码。
- 单击 [确定]。
如果已成功登录，您将会看到 Live Viewer 屏幕。



- 因视频数据没加密，访问摄像机网络查看器时应格外注意。



- 如果您在完成输入之后选中“记住我的密码”选项，则从下次起将自动登录，而不会提示输入登录信息。
- 如果屏幕大小是 100%，则您可以体验最佳视频质量。降低该比率可能会切掉边框上的图像。



各浏览器插件支持规格

现有插件 web 查看器和新的无插件 web 查看器已嵌入一起。
因此，甚至可以在 Chrome 和 EDGE 等不支持插件的最新浏览器环境中使用 web 查看器。
由于浏览器环境不同，可能会出现以下区别。



- Chrome、EDGE 浏览器：**虽然上述浏览器不支持插件，但嵌入无插件 web 查看器时，您依然可以使用 web 查看器。
 - 由于无插件 web 查看器的性能不如插件 web 查看器，其在监控高品质配置文件和播放保存的视频时可能会受到限制。使用有插件 web 查看器或智能查看器 (SmartViewer) 均可监控高品质配置文件及播放保存的视频。
 - 无插件配置文件生成条件：当所选的配置文件是 FHD 20fps 或更高帧率 (H.264)/FHD 10fps 或更高帧率 (H.265) 或 4M 1fps 或更高帧率 (MJPEG) 情况下会生成无插件配置文件。
 - 无插件播放条件：以高清或更低分辨率录制的视频
 - 出现以下情况时，检测性能可能受损或出现故障。
 - 单调的监控环境、夜间或低照明度环境
 - 摄像机剧烈晃动和光线的突然变化
- IE、Firefox 或 Safari 浏览器：**即使您未安装现有的有插件 web 查看器，也可以使用 web 查看器。
 - 如要流畅地监控/播放已保存的视频，必须安装插件。
 - 出现以下情况时，检测性能可能受损或出现故障。
 - 单调的监控环境、夜间或低照明度环境
 - 摄像机剧烈晃动和光线的突然变化

web 查看器

安装 WEBVIEWER 插件

如要访问有插件 web 查看器并播放实时视频 (H.264/H.265) 或录制的视频, 将弹出一条安装消息。此时, 您需要安装 web 查看器插件, 才能恰当使用该功能。

1. 在第一次访问监控页面时, 屏幕会显示安装页面。 单击 [Click Here] 以开始安装。
- !

- 如果 Internet Explorer 浏览器中的插件安装文件下载状态停留在 99%, 请在“工具 → SmartScreen 筛选器”中选择“释放 SmartScreen 筛选器”。
2. 在消息窗口中单击 [Run]。
3. 当通知窗口指示将关闭所有浏览器窗口时, 单击 [Yes]。
- ✂

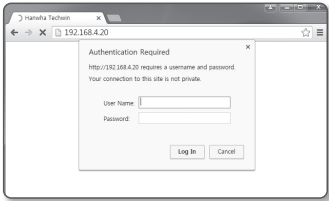
- 如果尚未安装任何 Web 浏览器插件, 将跳过步骤 4 和 5。
4. 如果已安装了旧版本的 Web 浏览器插件, 屏幕会显示一个通知窗口以指示旧版本将被删除。
在该通知窗口中单击 [Yes]。
5. 单击 [OK]。
旧版本的 Web 浏览器插件即被删除。
6. 单击 [Install], 开始安装 Web 浏览器插件。
7. 单击 [Finish]。
Web 浏览器插件即完成安装。
- !

- 在您的 Internet 浏览器中, 如果在安装 webviewer 插件后移到安装屏幕, 请检查“工具 → 其他功能管理”菜单中的 webviewer_activeplugin_lib.control 是否“已启用”。如果未启用且一直有问题, 请选择“工具 → Internet 选项 → 常规”并删除所有搜索记录。

使用无插件 WEB 查看器

如果您使用 Google Chrome 或 MS Edge web 浏览器访问摄像机, 无需另行安装插件即可实时控制摄像机图像。

1. 输入用户名和密码登录。
2. 成功登录后即显示摄像机实时视图屏幕。



使用现场屏幕 (无插件 WEB 查看器)



名称	功能
1 设置	移至设置屏幕。
2 摄像机型号名称	显示所访问的摄像机的型号名称。
3 查看器屏幕	显示屏幕上的现场视频。 ■ 在 Viewer 屏幕中, 可以使用鼠标滚轮来激活数码缩放。
4 切换视图模式	屏幕调整 () 一种视图模式, 摄像机视频尺寸将自动适应 web 浏览器尺寸。
	原始大小 () 以实际分辨率播放视频的视图模式。
	纵横比 () 调整纵横比以最适分辨率的视图模式。
	全屏 () 双击视频屏幕, 当前播放的视频将按照显示器大小全屏播放。
5 播放	移动到您可以搜索 Micro SD 存储卡或 NAS 中保存的视频录制的屏幕。 ■ 如要搜索已录制的视频, 移动至播放屏幕, 将鼠标悬停在视频上然后双击。

名称	功能
6 配置文件类型	可以在 <Basic> 设置菜单下的 <视频配置文件> 中选择配置文件类型。 ■ 点击图标即可显示当前配置文件的名称。 ■ 如果在监视页面中播放视频，以下情况可能会发生残影。 - 由于配置文件变化，分辨率发生变化。 - 配置文件变化时，由于网络延迟，传入数据变慢。 - Web 浏览器窗口大小和位置发生变化。
7 捕捉	将快照保存为 png 格式的图像文件。
8 切换 PTZ 模式	将摄像机切换至数字变焦/PTZ/DPTZ 模式。
	 切换至数字变焦模式。
	 切换至 PTZ 模式。
	 切换至 DPTZ 模式。 ■ 如要使用 PTZ 功能，进入<视频配置文件>屏幕，添加 DPTZ 配置文件并在监控屏幕的配置文件 [] 标签中选择该配置文件，以激活 DPTZ 配置文件。
9 数字式自动跟踪	自动跟踪屏幕上的移动物体或人体。
10 警报输出	激活警报输出端口。

捕捉快照

1. 在场景上单击 [捕捉 ()] 进行捕捉。
2. 保存捕捉到的视频时，会显示通知信息。
捕捉到的图像将按照浏览器类型保存在指定文件夹中。

使用全屏

1. 将鼠标放在视频画面上，然后双击。
2. 这将使查看器使用全屏。
3. 要退出全屏模式，请按键盘上的 [Esc]。

使用自动数字跟踪功能的步骤

1. 点击[数字式自动跟踪 ()]图标。
2. 图标被激活后，将开启跟踪功能。
3. 再次点击该图标，图标被停用后，将关闭跟踪功能。

-  ■ 在跟踪移动期间，如果您控制移动屏幕键盘的光标和缩放按钮，跟踪功能将自动停用。

web 查看器

使用现场屏幕 (有插件 WEB 查看器)



名称	功能
1 正在监视	移至监视屏幕。
2 播放	移动到您可以搜索 Micro SD 存储卡或 NAS 中保存的视频录制的屏幕。
3 设置	移至设置屏幕。
4 配置文件访问信息	您可以读取配置文件信息。
5 查看器屏幕	显示屏幕上的现场视频。 ■ 在 Viewer 屏幕中，可以使用鼠标滚轮来激活数码缩放。
6 Web 查看器插件安装	安装 web 查看器插件可以播放实时视频或录制的视频。
7 配置文件类型	可以在 <Basic> 设置菜单下的 <视频配置文件> 中选择配置文件类型。 ■ 连接 Web Viewer 后，将会显示当前使用的配置文件的信息。 ! 如果在监视页面中播放视频，以下情况可能会发生残影。 - 由于配置文件变化，分辨率发生变化。 - 配置文件变化时，由于网络延迟，传入数据变慢。 - Web 浏览器窗口大小和位置发生变化。

名称	功能
8 屏幕优化	来自摄像机的视频尺寸将放大为与 Web 浏览器尺寸一样大。
9 固定分辨率	不管在摄像机中配置的分辨率设置如何，系统都会将分辨率设置为 640x480。再按一次它会切换回默认分辨率。
10 全屏	将当前视频切换至显示器的最大大小。
11 捕捉	将快照保存为 .jpg 格式的图像文件。
12 手动录制	用户可将视频保存在计算机中。
13 音频/麦克风控制	启动音频和麦克风，并调整音量。 ■ 只能控制音频音量。
14 警报输出	激活警报输出端口。
15 像素计数器	检查视频画面选定区域的图像像素。
16 PTZ	控制摄像机的平移/倾斜/缩放运动。
17 隐藏上下文菜单	左上角的上下文菜单将会消失，只留下菜单图标。

捕捉快照

1. 在场景上单击 [捕捉 (📷)] 进行捕捉。
2. 保存捕捉到的视频时，会显示通知信息。
捕捉到的图像将按照浏览器类型保存在指定文件夹中。

📝 如在 Windows 7 或更高版本操作系统中使用 IE 浏览器无法捕捉屏幕，请使用管理员权限运行 IE 浏览器。

如何手动录制视频

1. 按 [手动录制 (📹)]。
2. 要结束录制，再次按 [手动录制 (📹)]。

📝 将录制文件以 avi 文件格式保存在计算机中。指定路径然后保存视频。

使用全屏

1. 单击 [全屏 (🖥️)] 按钮。
2. 这将使查看器使用全屏。
3. 要退出全屏模式，请按键盘上的 [Esc]。

使用音频

1. 单击 [音频 (🔊)] 图标以激活音频通信。
2. 使用 [🔊] 滑块控制音量。

📝 如果设备运行中插入和拔出音频插头时没有声音，单击 [音频 (🔊)] 图标以将其再次启用。

使用麦克风

单击 [麦克风 (🎤)] 图标以激活麦克风。

📝 Mac OS X 系统运行的 Safari 浏览器不支持该功能。

计算图像像素的步骤

1. 点击 [开 (🔛)] 图标激活该功能。
2. 在视频画面拖动鼠标以选择区域。
3. 检查视频画面选定区域的图像像素。

控制 PTZ 的步骤

1. 点击 [PTZ (📡)] 选项卡。
2. 移动“移动屏幕”键盘 [📡] 的光标即可移动摄像机方向或调整变焦或聚焦。

📝 如要使用 PTZ 功能，进入 <视频配置文件> 屏幕，添加 DPTZ 配置文件并在 [Monitoring] 屏幕的配置文件 [📡] 选项卡中选择该配置文件，激活 DPTZ 配置文件。

使用自动数字跟踪功能的步骤

1. 点击 [PTZ (📡)] 选项卡。
2. 点击 [On (🔛)] 图标。
3. 点击 [关 (Off (🔒))] 图标停用该功能。

📝 在跟踪移动期间，如果您控制移动屏幕键盘的光标和缩放按钮，跟踪功能将自动停用。

■ 相同的移动探测功能设置适用于数字自动追踪模式下的移动探测。
如需了解关于移动探测设置的更多信息，请参阅“MD/VA”部分（第 59 页）。

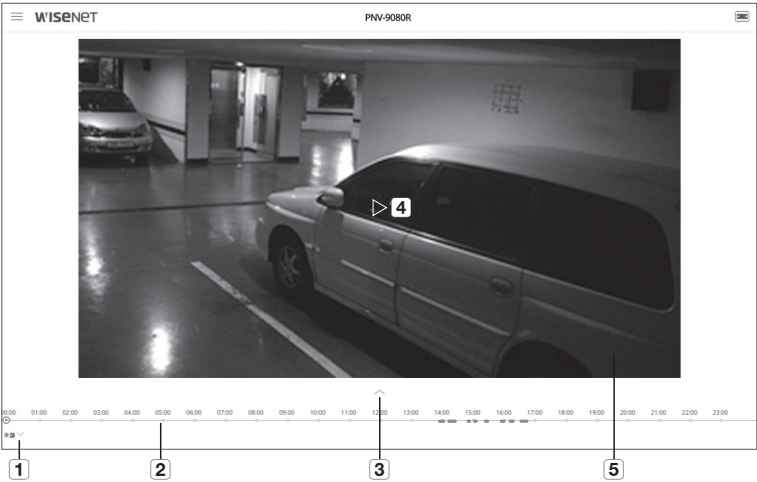


web 查看器

播放录制的视频 (无插件 WEB 查看器)

- 
- 在播放视频之前，必须配置录制设置。有关录制设置的详细信息，请参阅“存储器”。(第 55 页)
 - 如要搜索特定日期录制的视频，移动至播放屏幕，将鼠标悬停在视频上然后双击。

事件搜索屏幕的名称及其功能



名称	功能
1 搜索事件设置	在搜索期间内，设置要搜索的事件类型。
2 时间条	移动时间条可播放所需时间的视频。
3 移动菜单	可在实时和播放录制视频菜单之间来回切换。
4 播放	播放/暂停播放视频。
5 全屏	双击视频屏幕，当前播放的视频将按照显示器大小全屏播放。

在按事件搜索后播放内容

1. 在实时屏幕上，点击[显示 (∨)]按钮。
2. 如搜索日期当天录制了视频，则时间条上将显示相应的视频。
3. 如要执行特定事件搜索，点击时间条底部的[全部]按钮，选择事件类型。
4. 点击[确认]按钮。
时间条上将显示搜索到的事件。
5. 点击[播放 (▷)]按钮。
6. 如要暂停播放视频，点击[暂停 (⏸)]按钮。



时间搜索屏幕的名称及其功能



名称	功能
1 设置	移至设置屏幕。
2 视频信息	显示所播放视频的时间信息。
3 播放速度	控制播放速度。

名称	功能
4 捕捉	将当前正在播放的视频以 jpg 格式保存为图像文件。
5 搜索日期设置	在日历中设定所需的时间和日期。 ■ 保存视频的数据将在日期下方圈出。
6 切换视图模式	切换屏幕上显示的图像的大小。
7 播放	播放/暂停播放视频。
8 移动播放间隔	点击 ◀/▶ 按钮可前移/后移 1 帧。
9 时间条	移动[时间条 (▶)]可播放所需时间的视频。
10 搜索事件设置	设置要在搜索字段中搜索的事件类型。
11 搜索事件	显示所搜索事件的类型和时间。

在按时间搜索后播放

1. 在实时屏幕上，点击[显示 (∨)]按钮。
2. 将鼠标放在视频画面上，然后双击。
画面将变为全屏。
3. 点击[搜索 (Q)]图标。
4. 在日历中，设置搜索日期、开始时间和结束时间。
时间条上将显示搜索到的事件。
5. 如要执行特定事件搜索，点击时间条底部的[全部]按钮，选择事件类型。
6. 点击[播放(>)]按钮。
将从选定时间开始播放视频。
7. 视频在播放时，屏幕将显示当前播放视频的录制时间。
8. 向前和向后搜索视频和调整播放速度。
 - 如何移动播放间隔
选择 ◀/▶ 按钮可前移/后移 1 帧。
 - 如何控制播放速度
点击 1x、2x、4x 或 8x 按钮时，播放速度将相应提高。
点击 -1x、-2x、-4x 或 -8x 按钮时，播放速度降至 -1x、-2x、-4x 或 -8x，反向播放速度增加。
9. 移动[时间条 (▶)]的位置可播放选定时间的视频。

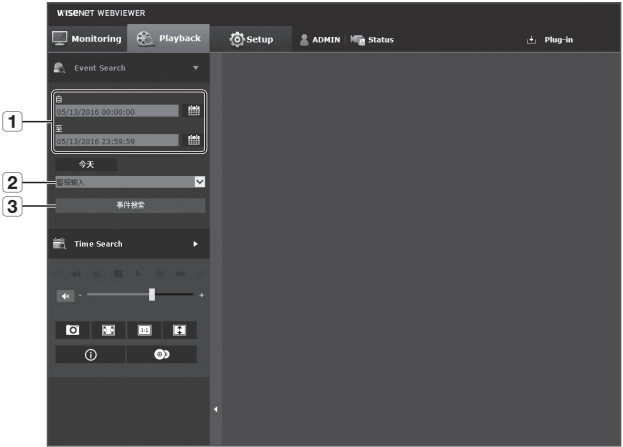


web 查看器

播放录制的视频 (有插件 WEB 查看器)

■ 在播放视频之前，必须配置录制设置。有关录制设置的详细信息，请参阅“存储器”。（第 55 页）

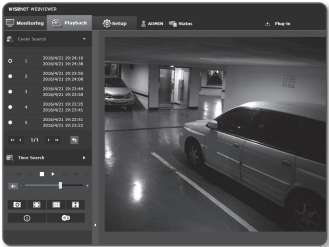
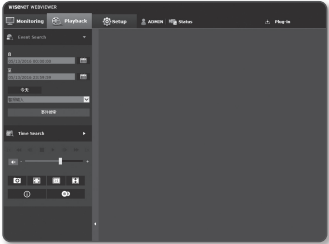
事件搜索屏幕的名称及其功能



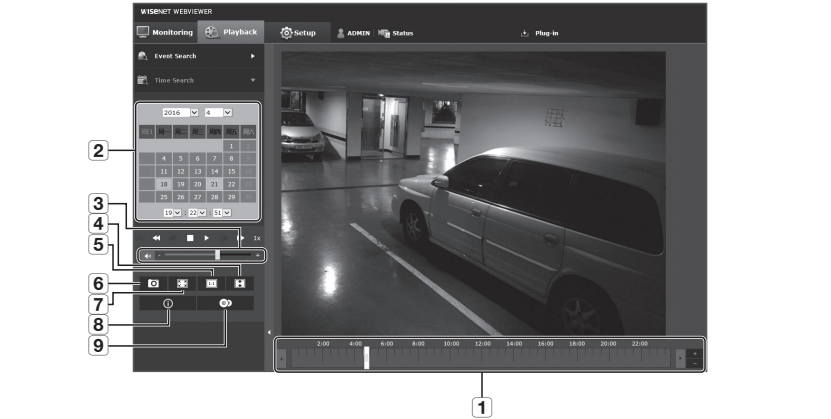
名称	功能
1 搜索范围设置	对保存在Micro SD储存卡或NAS的数据, 进行搜索日期和时间范围设置。
2 搜索事件设置	在搜索期间内, 设置要搜索的事件类型。
3 事件搜索	运行事件搜索。

在按事件搜索后播放内容

1. 单击 [Playback (⏮)] 按钮。
 2. 指定搜索的开始和结束时间。
 3. 选择指定时间段内搜索的事件类型。
 4. 单击 [事件搜索] 按钮。
搜索结果将显示在列表中。
- 若在搜索期间内，所保存的事件视频数量超过800个的话，您可搜索到的最后日期为事件录制数量超过800个的那一天。例如，您将搜索期间指定为10日到15日，而10日~11日所录制的事件视频数量超过了800个。此时，您只能搜索到截止11日的800个视频，无法搜索12日以后的视频。
5. 在搜索列表中选择要播放的数据项目。
 6. 单击 [播放 (▶)] 按钮。
 7. 要停止播放视频，请单击 [停止 (■)]。
 8. 要返回到搜索屏幕，请单击 [退出 (↶)]。



时间搜索屏幕的名称及其功能



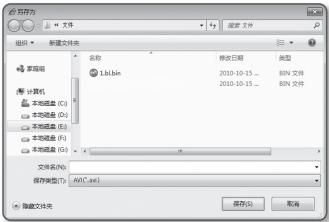
名称	功能
1 时间条	通过移动时间条播放特定时间段的视频。
2 搜索日期设置	使用日历设置搜索日期。 ■ 如果这一天有数据保存到 Micro SD 存储卡或 NAS 中，则会在日历上将这一天标记为一个方框。
3 音频	若要收听录制视频中的语音信号（如果有），则需要在播放时激活语音信号图标。
4 屏幕优化	转换摄像机图像，使它适合 Web 浏览器窗口。
5 固定分辨率	不管在摄像机中配置的分辨率设置如何，系统都会将分辨率设置为 800x600。再按一次它会切换回默认分辨率。
6 捕捉	当前图像保存为 .jpg 图像文件。
7 全屏	转换当前图像，使它覆盖显示器的最大尺寸。
8 视频信息	屏幕上将显示回放视频的时间数据。
9 备份	指定时间段后，备份保存在 Micro SD 存储卡或 NAS 的视频。 ■ 创建已保存视频的备份时，最多可以设置为 5 分钟。

在按时间搜索后播放

- 单击 [Time Search (🔍)]。
- 在日历中单击所需日期。
将会播放指定日期上的视频。
- 如果视频播放已停止，请选择时间，然后单击 [播放 (▶)]。
将会播放所选日期上的视频。
- 播放视频时，将会显示当前视频的录制时间。
- 向前或向后搜索视频，并控制播放速度。
 - 如何控制播放间隔
 - ▶：选择该按钮可前移 1 帧。
 - ◀：选择该按钮可后移 1 秒。
 - 控制播放速度
如果选择 ▶▶，按钮将切换为 x1, x2, x4, x8, 并且播放速度变快。
选择 ◀◀ 按钮，播放速度将降至 -1x, -2x, -4x 或 -8x, 反向播放速度增加。
 - 控制播放方向
正向播放时，倍速显示在(▶▶)按钮上。逆向播放时，倍速显示在(◀◀)上。
 - 如何设置时间条
如果按 [📊] 按钮，则可以查看时间条部分的详细信息。
如果按 [📅] 按钮，则可以查看更广的时间范围并且可以更轻松地选择所需的时间。
- 先将 [时间条 (📊)] 移至视频的所需时间点再播放。
包含标准录制文件的时间将以蓝色突出显示；包含事件录制内容的时间将以红色突出显示。

备份搜索到的视频

- 在播放期间，在场景上单击 [📷] 进行备份。
备份开始和结束时间的计划窗口将会出现。
- 单击 [📷] 按钮。
另存为窗口将会出现。
- 确认保存路径，然后单击 [保存(S)] 按钮。
备份的视频数据将备份到指定的路径中。



播放备份视频

备份的视频数据保存为 .avi 格式。建议使用兼容该格式的 Gom Player、VLC Player 或 Window Media Player 媒体播放器。

■ 如果使用 Windows Media Player，请在使用前从 www.windows7codecs.com 下载最新的编解码器，然后安装。

播放 AVI 文件

(1) Micro SD 存储卡

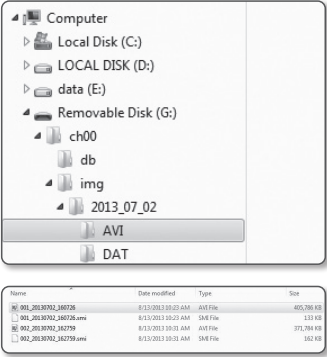
1. 从摄像机取出 Micro SD 存储卡。

■ 在取出 Micro SD 存储卡前，将“设置 → 事件 → 存储器”菜单中的 <设备> 设置为 <关>。

2. 将 Micro SD 存储卡插入 PC。

3. 使用媒体播放器播放 “\ch00\img\YYYY_mm_DD\AVI” 目录中的 AVI 文件。

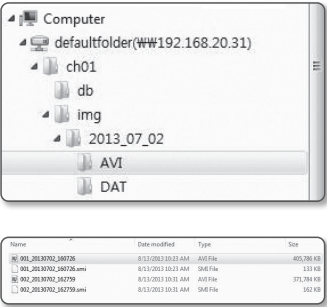
- 文件名以 “001_YYYYMMDD_HHMMSS.avi” 的格式开始，其中文件编号逐一递增。
YYYYMMDD_HHMMSS 表示数据保存的开始时间。
- “001_YYYYMMDD_HHMMSS.smi” 文件是一个字幕文件，只与 AVI 文件在同一个目录时，才能看到它。
- 每个 AVI 文件的最大录制时间是 5 分钟。
- 如果受损，Micro SD 存储卡中的数据将无法在 Web Viewer 的 [Playback] 中播放。



(2) NAS（网络连接存储器）

1. 在 Windows 浏览器中，使用 \\<ip address>\ 来访问。
ex) \\192.168.20.31\defaultfolder\ch01\img\2013_07_02\AVI
2. 转到 <Computer> → <Network drive connection> → 输入 1。
3. 已连接到 NAS。
该目录结构与 Micro SD 存储卡使用的目录结构相同。

- 文件名以 “001_YYYYMMDD_HHMMSS.avi” 的格式开始，其中文件编号逐一递增。
YYYYMMDD_HHMMSS 表示数据保存的开始时间。
- “001_YYYYMMDD_HHMMSS.smi” 文件是一个字幕文件，只与 AVI 文件在同一个目录时，才能看到它。
- 每个 AVI 文件的最大录制时间是 30 分钟。
- 如果自行更改或损坏所保存数据，它将无法正常播放或保存。



设置屏幕

设置

在网络中,您可以设置关于摄像机、视频和音频、网络、事件和系统的基本信息。

1. 在实时屏幕上, 点击[菜单 (≡)]按钮。
2. 在菜单列表中, 点击[设置 (⚙️)]选项卡。
3. 设置屏幕将会出现。

基础设置

视频配置文件

1. 从设置菜单, 选择 <Basic (≡)> 选项卡。
2. 单击 <视频配置文件>。
3. 设置 <像素模式>。
如模式选择发生改变, 屏幕上将弹出一条确认初始化视频设置的消息。
点击[确认]按钮可更改视频设置。
以下 8MB 模式和 12MB 模式下的设置将单独保存。
(音频和视频: 视频设置 / 音频设置 / 摄像机设置 / 聚焦设置, 事件: 篡改检测 / 音频检测 / 散焦检测 (但是, 移动和移动事件设置不发生变化))

❗ 将设置更改为 8MB 或 12MB 模式时, 将自动关闭浏览器窗口并重启摄像机。请稍候尝试再次访问。

4. 设置 <视频配置文件连接策略>。
 - 在更改配置文件设置时, 保持已连接的视频: 即使已连接的配置文件设置发生变化, 也会输出预设值。
如果未选中, 已连接的配置文件设置发生变化, 会重新进行连接。
5. 选择每个配置文件属性。
如需更多信息, 请参阅“添加/更改视频配置文件”。(第 42 页)



6. 单击每个项目的输入框, 并输入/选择所需的值。
 - 上下文菜单可能因所选的编解码器类型而异。
 - 默认配置文件: 如果在使用 Web Viewer 时未选择配置文件, 则会应用默认视频配置文件。
 - 电子邮件/FTP配置文件: 将传送至指定的电子邮件或 FTP 站点的视频配置文件。
 - 只能将 MJPEG 编解码器设置为电子邮件/FTP 配置文件。
 - 录制配置文件: 对 Micro SD 卡或 NAS 进行视频录制时所使用的配置文件。
 - DPTZ 配置文件: 使用 PTZ 时应用的配置文件。
 - 如要使用 PTZ, 先添加一个 DPTZ 配置文件。

7. 选择是否在视频中输入音频。
选择<音频输入> 复选框即可在视频中输入音频。
8. 根据您的情况, 设置 ATC (自动传输控制) 模式。

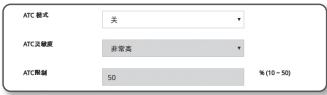
- ATC 模式: 它可以根据网络带宽的变化调整视频属性, 以控制比特率。
根据 ATC 模式调整比特率。
 - 控制帧速率: 如果网络带宽下降, 则降低帧速率。
 - 控制压缩: 如果网络带宽下降, 则控制压缩率。
压缩调整可能会导致图像质量下降。
 - 事件(MD): 设定移动探测 (MD) 事件时被激活。事件发生时, 帧速率将发生调整。
如在周围区域未检测到任何移动, 将输出最小帧数, 节省带宽的使用。
- 如果 <比特率控制> 设置为 <CBR>, 则根据 ATC 模式, 按如下所示固定编码优先级:

比特率控制/ATC 模式	控制帧速率	控制压缩	事件(MD)
CBR	压缩	帧速率	帧速率

- ATC 灵敏度: 根据网络带宽的变化影响传输速率。
如果带宽为 <非常高>, 传输速率将调整为最高, 如果带宽为 <非常低>, 则调整为最慢。
- ATC 限制: 如果调整帧速率的质量, 此属性将更改为针对上一设置值 (100%) 的应用值 (%)。
请注意, 如果您将此属性值降低太多, 屏幕上可能会闪烁。因此, 建议在阈值范围内调整该值。

- ❗
- 建议您仅对支持 ATC 的摄像机应用 ATC 控制。
 - 在网络带宽变化较大的网络环境中, 将 ATC 灵敏度设置为 <非常低>。
 - 如果网络连接不稳定, 屏幕可能会闪烁。

9. 完成后, 请单击 [应用 (⌂)]。



设置屏幕

添加/更改视频配置文件

根据录制条件，可以添加或修改配置文件设置来适应不同的配置文件。

- 1. 在<视频配置文件>中，点击<添加>按钮。
- 2. 提供名称并选择编解码器。
- 3. 指定将应用编解码器的条件。
- 4. 指定所选编解码器的详细信息，包括分辨率和帧率。
点击<显示>按钮即可显示详细内容。
 - 分辨率：设置 H.264/H.265 和 MJPEG 文件的视频大小。
 - 帧率：设置每秒的最大视频帧数。



由于摄像机百万像素值和传感器模式设置不同，可设置的最大帧率也有所不同。

像素/传感器	8M/25 fps	8M/30 fps	12M/20 fps
帧率	1~25 fps	1~30 fps	1~20 fps

- 最大比特率：当比特率控制设置为 VBR 时设置视频的最大比特率。
 - ! 由于比特率可以根据清晰度、帧频和屏幕复杂性进行有限的调整，所以实际比特率可能比最大比特率要大。所以在设定值时必须考虑使用环境。
- 目标比特率：当比特率控制设置为 CBR 时设置目标比特率。
- 比特率控制：您可从恒定比特率和可变比特率中选择一种方式进行压缩。恒定比特率意味着改变视频质量或帧速率时网络传输的比特率是固定的，可变比特率意味着改变比特率时优先考虑视频质量。
 - ! 为比特控制设置恒定比特率之后，如果选择视频质量优先模式，则为了保证对于给定的比特率获得最佳的视频质量，实际传输的帧速率可能会与帧速率设置有所不同（取决于屏幕的复杂程度）。
- 编码优先权：可以将视频传输的优先级设置为帧速率或压缩。
- 视频组长度：选择H.264/H.265编解码器时，设置从一个I-Frame到下个I-Frame间分配的帧数。(一个I-Frame+0~多个P-Frame)
- 配置文件：可以选择 H.264/H.265 配置文件方式。
- 熵编码：减少可能因编码引起的压缩损失。
- 智能编码：指定使用智能编解码器。
 - 🔒 当比特率控制值为恒定比特率时，可使用此项。详细的设置项可在音频和视频选项卡中智能编码中配置。(第 50 页)

- 动态 GOV：当 H.264/H.265 编解码器比特率控制为 VBR 时，视频组长度将自动变为最大动态视频组的设定值。
- 多播(SVNP): 设置是否使用SVNP协议。
 - IP地址: 输入可连接IPv4网络的IPv4地址。
 - 端口: 设置控制视频传送的端口。
 - TTL: 可设置SVNP数据包的TTL。
- 多播(RTSP): 设置是否使用RTSP协议。
 - IP地址: 输入可连接IPv4网络的IPv4地址。
 - 端口: 设置控制视频传送的端口。
 - TTL: 可设置RTP数据包的TTL。



若您将多播地址设置为224.0.0.0~224.0.0.255,多播功能有时在特定环境下无法正常启动。发生问题时，请变更更多播地址。

什么是视频组长度？

GOV(Group of Video object planes、视频组)是用于 H.264/H.265 压缩的视频帧，表示从初始图像帧（关键帧）到下一个图像帧的帧集合。视频组由 2 类帧组成：I 帧和 P 帧。

I 帧是压缩的基本帧，也称为关键帧，包含一幅完整图像的数据。

P-Frame仅包含与I-Frame相比发生变化(移动)的数据。

H.264/H.265 编解码器可设置GOV长度。

若用H.264/H.265编解码器设置录制配置文件，GOV长度将变为framerate/2。

什么是动态视频组 (GOV)？

动态视频组功能可使视频组按照视频情况在最小视频组长度设定值和最大动态视频组长度设定值之间自动变化。

在几乎没有移动事件的视频中，视频组以动态视频组设置值运行，此时整个视频的比特率将有所降低。检测到移动后会立即输出 I 帧，在移动消失之前，视频组均以视频组长度设置运行。

如使用该功能，视频的视频组将以最小视频组长度设置值运行。

用户

1. 从设置菜单，选择 <Basic (≡)> 选项卡。
2. 单击 <用户>。
3. 提供必要的用户信息。
 - 管理员密码更改：更改管理员的密码。



- 出于安全考虑，建议您的密码使用数字、大小写字母以及特殊字符的组合。
- 建议每三个月更改密码一次。
- 密码长度和限制如下所示。
 - 大写、小写、数字和特殊字符中至少选3种类型。：8 到 9 个字符。
 - 大写、小写、数字和特殊字符中至少选2种类型。：10 到 15 个字符。
 - 密码应与 ID 不同。
 - 不得重复使用同一字母、特殊字符超过 4 次。
 - 不得使用 4 个或 4 个以上连续的字符。（例如：1234、abcd）
 - 不得重复使用字符 4 次或 4 次以上。（例如：!!!!、1111、aaaa）
 - 允许使用的特殊字符为：~!@#\$%^&*()-+=|[]_.?/
 - 进行出厂设置之后，会初始化管理员和用户密码。您需要重置密码。
 - 在首次或者初始化后访问摄像机网页时，您将转到管理员密码设置菜单。
 - 在此菜单中，您先要重置密码后再次登录，才能使用摄像机网页菜单。
 - 如果现有密码不匹配，则更改管理员密码时，无法更改该密码。
 - 在更改密码后，如果有摄像机连接到 CMS 或 NVR 客户端，则需要使用新更改的密码重新注册。如果仍使用相同的密码连接摄像机，则帐户可能被锁定，因为客户端使用的是以前的密码。
- 如果您尝试使用注册的帐户登录，5 次或更多次连续密码验证失败，则帐户可能会被锁定三十秒钟。
- 在更改密码时，如果从 PC 发出多个活动状态连接，则浏览器可能功能不正常。在此情况下，请重新连接到服务器。



- 访客设置：如果选择了 <允许访客访问>，则访客帐户可以访问 Web Viewer 屏幕，但是只能查看 Live Viewer 屏幕。
 - 访客帐户的 ID/密码是 <guest/guest>，无法更改。
- 认证设置：如果您选择了 <启用不需要认证的 RTSP 连接>，则您不需要登录就可以访问 RTSP 并查看视频。

- 当前用户：如果您选择了 <使用>，则您可以设置或更改用户权限。
 - 管理者可以设置音频输入/输出和警报输出。
 - 音频输入/音频输出/警报输出：使用当前用户账户可以在实时模式下启用/禁用音频输入/音频输出/警报输出。
 - 配置文件：如果您选择了 <默认>，则您只能查看默认配置文件视频；如果选择了 <全部>，则您可以查看全部配置文件视频。



- 若授权用户中有人要设置可用 ONVIF 的账户，其功能将根据已设置的权限受到限制。

4. 完成后，请单击 [应用 (应用)]。

日期和时间

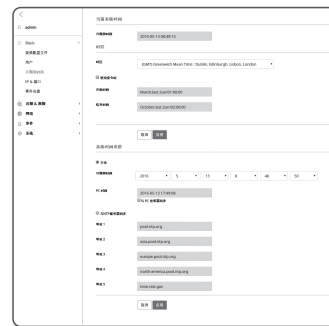
1. 从设置菜单，选择 <Basic (≡)> 选项卡。
2. 单击 <日期和时间>。
3. 指定将应用于摄像机的时间和日期。

- 当前系统时间：显示系统的当前时间设置。
- 时区：设置以标准时间(GMT)为基准的本地时区。
- 使用夏令时：如果选中将在指定的时间段内将时间设置成比当地时区早一小时。
 - 仅在应用夏令时的地区显示此选项。
- 系统时间设置：指定将应用于您的系统的时间和日期。
 - 手动：手动设置摄像机的当前时间。
 - 选择 <与 PC 查看器同步>复选框，web 查看器时间将被设置为运行此 web 查看器的计算机所显示的时间。
 - 与 NTP 服务器同步：与指定的服务器地址的时间同步。

4. 完成后，请单击 [应用 (应用)]。



- 如果您选择 <与 PC 查看器同步>，应该分别设置 PC 和摄像机的标准时区。



设置屏幕

IP & 端口

1. 从设置菜单，选择 <Basic (≡)> 选项卡。
2. 单击 <IP & 端口>。
3. 单击 <IP 地址>。
4. 配置 <IPv4 设置>。
 - IP 类型：选择 IP 连接类型。默认值为 80(TCP)。
 - 手动：指定 IP 地址、子网掩码、网关、DNS1 和 DNS2。
 - DHCP：指定 DNS1 和 DNS2。
 - PPPoE：指定 DNS1、DNS2、ID 和密码。
 - 如果将其设置为 <手动>，则应手动指定 IP、子网掩码、网关和 DNS 1 和 2。
 - MAC 地址：显示 MAC 地址。
 - IP 地址：显示当前 IP 地址。
 - 子网掩码：显示所设 IP 的 <子网掩码>。
 - 网关：显示所设 IP 的 <网关>。
 - DNS1/DNS2：显示 DNS（域名服务）服务器地址。
5. 配置 <IPv6 设置>。
 - 设置为 <使用> 以使用 IPv6 地址。
 - 默认：使用默认 IPv6 地址。
 - DHCP：显示并使用从 DHCP 服务器获取的 IPv6 地址。
 - 手动：输入并使用用户临时设置的 IPv6 地址和网关。



- ! ■ IP 寻址系统将默认为 DHCP。如果未找到 DHCP 服务器，将自动恢复之前的设置。
- 完成编辑之后，单击 [应用 (应用)] 以应用更改，并且浏览器将会退出。一小会之后，使用更改后的 IP 再次连接。

6. 单击 <端口>。
7. 在端口菜单的每个项目中键入所需信息。
 - 设置端口时，不可使用端口 0~1023 和 3702。

- HTTP：用于通过 Web 浏览器访问摄像机的 HTTP 端口。默认值是 80(TCP)。
 - 安全策略不允许将 Safari 和 Google Chrome 浏览器的 HTTP 端口设置为 65535。
- HTTPS：在这个版本中，加强了 Web 通信协议 HTTP 的安全性。在 SSL 中设置 HTTPS 模式时可以使用该端口。初始值设置为 443(TCP)。
 - 可用的设置范围为 1024~65535。（为了安全起见，Safari 和 Google Chrome 浏览器上，不应将 HTTPS 端口设置为 65535。）
- RTSP：用于以 RTSP 模式传输视频，默认值为 554。
- 使用 超时提示：连接到 RTSP 时，如果一段时间内没有响应，此功能会重置连接。
- 设备端口：设置用于根据 Wisenet 协议传输视频信号的端口。



- ✎ ■ 如果更改了 HTTP 端口，则浏览器会退出。重新连接时，将重置的 HTTP 端口写在 IP 地址后面。
例) IP 地址：192.168.1.100，HTTP 端口：分配了 8080 → http://192.168.1.100:8080
(如果将 HTTP 端口设置为 80，则不需要指定端口号)
- 建议使用 RTSP 和 HTTPS，以便防止图像信息被还原。

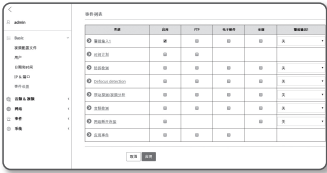
8. 完成后，请单击 [应用 (应用)]。

事件设置

您可以轻松设置事件探测项，并移到具体设置。

1. 从设置菜单，选择 <Basic (≡)> 选项卡。
2. 单击 <事件设置>。
3. 激活“事件列表”中的所需项。
4. 完成后，请单击 [应用 (应用)]。

- ✎ ■ 如要配置详细的事件设置，点击所需类型即可。将重定向至详细设置。



音频与视频设置

视频设置

- 1. 从设置菜单，选择 <音频 & 视频 (🔊)> 选项卡。
- 2. 单击 <视频设置>。
- 3. 选择 <视频源> 模式。
 - 翻转模式：使摄像机捕捉的图像上下翻转。
 - 镜像模式：使摄像机捕捉的图像水平翻转。
 - 过道视图：按照指定角度，旋转摄像机所拍的视频。可以将视频画面旋转 0、90 或 270 度。
 - 如果更改设置，浏览器将退出后重新启动。待会重新连接。
- 4. 选择“启用”或“禁用”模拟视频输出。
- 5. 选择视频类型。
- 6. 指定隐私区域。
- 7. 完成后，请单击 [应用 (🔧)]。



设置加密区域

为了保护隐私，您可以设置摄视频中要隐藏的部分。

- 1. 将其设置为 <开>。
- 2. 单击 [应用 (🔧)]。
- 3. 使用鼠标在屏幕上选择 4 个顶点以指定区域。
- 4. 输入名称，选择颜色，然后单击 [确认]。
- 5. 如果想删除列表中的某个名称，请将其选中并单击 [删除 (🗑️)]。



音频设置

可以配置摄像机的音频源的 I/O 设置。

- 1. 从设置菜单，选择 <音频 & 视频 (🔊)> 选项卡。
- 2. 单击 <音频设置>。
- 3. 设置音频输入。
 - 来源：设置音频输入。
 - 线：将电缆连接到音频设备。
 - 内置麦克风：安装在摄像机中的内置麦克风。（仅适用于 PND-9080R）
 - 外部麦克风：使用外部麦克风。
 - 为外部麦克风供电：当外部麦克风未接通电源时，选中此复选框后，将通过摄像机为麦克风供电。在选择<外部麦克风>时，可对设置项进行配置。
 - 编解码器：指定音频编解码器。
 - G.711：使用64Kbps脉冲编码调制(PCM)音频编码法的音频编解码器标准。这是可用PSTN或PBX传输数码音频的格式，属于ITU标准音频编解码器。
 - G.726：ITU 标准音频编解码器，将可变比特率 40/32/24/16 Kbps 的 ADPCM（自适应差分脉冲编码调制）应用于 64 Kbps PCM 编码。
 - AAC：高级音频编码的缩写，是继 MP3 格式之后的一项国际标准。使用当前的 G.711 或 G.726 编解码器时，可以使用采样率更高的音频。
 - 采样率：是指对模拟声道进行数字化处理时取样的次数。此值越高，音质越出色。
 - 比特率：如果使用 G.726 编解码器，则设置比特率以区分压缩比。
 - 增益：指定音频输入放大倍数。
 - 如果声源的音量或增益值设置过度，可能会发生音质下降或振鸣。
- 4. 设置音频输出级别。
 - 启用：设置是否使用音频输出。
 - 增益：指定音频输出放大倍数。
- 5. 完成后，请单击 [应用 (🔧)]。

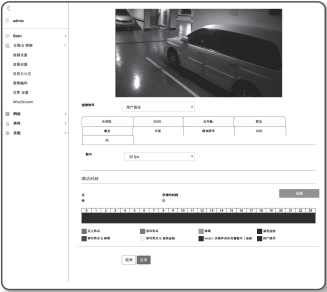


设置屏幕

摄像机设置

可以根据摄像机所在的环境更改摄像机设置。

1. 从设置菜单，选择 <音频 & 视频 (🔊)> 选项卡。
2. 单击 <摄像机设置>。
3. 根据需要配置以下各项的设置：图像预设、传感器、SSDR、白平衡、背光、曝光、日夜、附加菜单、OSD、IR
4. 完成后，请单击 [应用 (📌应用)]。
 - 如果在更改设置之后经过一定的时间未按 [应用 (📌应用)] 按钮（超时：240 秒）设定值将回到变更前。



如果希望设置图像预设

用户可以轻松设置预设。
在配置的时间段内将运行所选择的图像预设模式，但在其他时间则反映在用户预设模式中配置的值。

1. 从图像预设中选择所需的模式。
 - 定义焦点：这是摄像机的出厂设置。选择此项来录制视频，着重于再现性。
 - 移动焦点：清晰录制移动物体。如果存在许多移动物体（例如在道路上或者博物馆等人多场所），应选择此项。

■ 在低照度环境中，噪音级别会增大，灵敏度会降低。

- 降噪：如果需要在低照度环境中录制低噪音视频，应选择此项。
- 调亮视频：此项可使整个视频中的黑暗区域变得更亮。

■ 但同时会降低视频对比度效果。

- 移动焦点&降噪：当存在许多移动物体（例如在道路上或者博物馆等人多场所），或者需要在低照度环境中录制低噪音视频时，应选择此项。
- 移动焦点&调亮视频：当存在许多移动物体（例如在道路上或者博物馆等人多场所），或者需要使整个视频中的黑暗区域变得更亮时，应选择此项。
- Vivid（多媒体异步传输模式）视频：整个视频将以生动色彩显示。

■ 视频对比度降低，同时色彩再现性能有所下降。



- 用户预设：如果您想用自己选择的设置来显示视频，则选择该选项。
- 选择预设模式之外的其他模式时，无法设置快门速度、AGC、SSDR、SSNR 和色彩。
2. 为每个图像预设模式设置摄像机项目。
 3. 设置 <激活时间>。
 - 关：摄像机将始终执行指定的图像预设操作。
 - 仅预约时间：摄像机将在您于每个日期设置的时间段内执行指定的图像预设操作。
 4. 单击 [设置 (⚙️设置)] 按钮。
 5. 设置 <模式> 和 <时间>。
 6. 完成后，请单击 [应用 (📌应用)]。



每种图像预设模式的初始设置

图像预设	最小快门	最大快门	自动增益	SSDR	SSNR	COLOR
定义焦点	默认 (1/5)	1/12000	默认 (高)	默认 (12)	默认 (12)	默认 (50)
移动焦点	1/30	1/12000	默认 (高)	默认 (12)	4	默认 (50)
降噪	1/15	1/12000	中	默认 (12)	默认 (12)	默认 (50)
调亮视频	默认 (1/5)	1/12000	默认 (高)	18	默认 (12)	默认 (50)
移动焦点&降噪	1/30	1/12000	中	默认 (12)	4	默认 (50)
移动焦点&调亮视频	1/30	1/12000	默认 (高)	18	4	默认 (50)
Vivid（多媒体异步传输模式）视频	默认 (1/5)	1/12000	默认 (高)	18	默认 (12)	90
用户预设	手动	手动	手动	手动	手动	手动

- 预设设置功能可帮助用户配置设置。如果您不想使用预设功能，请在使用前将其停用。
- 如图像预设发生变化，仅快门/AGC/SSDR/SSNR/色彩将重置为各型号对应的默认值。
- 在预设之间“摄像机设置”值不会改变。

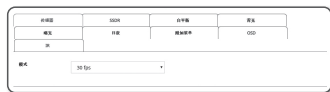
设置传感器

指定摄像机 CMOS 传感器每秒钟将捕捉多少帧。

1. 选择 <传感器>。
2. 选择 <模式>。



■ 请参考“视频配置文件”，了解基于模式设置的 <视频配置文件> 的帧率设置范围。（第 41 页）



设置 SSDR

在明暗差异非常大的场景中，您可以单独增加黑暗区域的亮度以调整总亮度。

1. 选择 <SSDR>。
2. 将 <模式> 设置为 <开>。
3. 配置必要的 <级别> 和 <范围> 设置。
 - 级别：调整动态范围的级别。
 - 范围：选择动态范围的幅度区域。



设置白平衡

在任何照明条件下，可以基于白色校正图像颜色。

1. 选择 <白平衡>。
2. 选择 <模式>。
 - 自动追踪白平衡：自动校正摄像机视频的颜色。
 - 手动：可以手动调整摄像机视频的颜色。
 - 室外：根据室外环境进行优化，自动校正摄像机的视频颜色。
 - 室内：根据室内环境进行优化，自动校正摄像机的视频颜色。
 - 自动白平衡：根据当前照明条件和屏幕模式进行优化，校正摄像机视频的颜色。要获得当前照明的最佳条件，请将摄像机的焦点对准白纸，然后按 [设置] 按钮。若环境变，应重新调整。



■ 在自动白平衡模式中，如果要保留当前图像的白平衡级别，请单击 [设置] 按钮。



■ 在下列情况下，白平衡可能无法正常工作：在这种情况下，请切换到“自动白平衡”模式。

- 如果物体周围环境条件超出色温校正范围
示例）清澈的蓝天，日落
- 如果物体的周围环境黑暗
- 如果摄像机的焦点直接面对荧光灯照明，或者如果将摄像机安装在照明变化的位置，白平衡操作可能会不稳定。

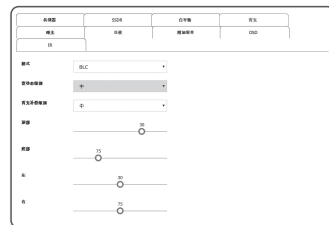
设置 BLC

用户可在视频上指定自己要的区域，并将此显得更加鲜明。

1. 选择 <背光>。
2. 将 <模式> 设置为 <BLC>。
3. 设置 <背光补偿级别>。
可以更改等级以调整监视区域的亮度。
4. 设置 <顶部，底部，左，右> 等级以指定目标区域。



- 设置 BLC（背光补偿）时，屏幕上将显示一个绿色对话框，该对话框将显示 15 秒。
- 为了避免在 BLC（背光补偿）时出现异常动作，BLC 区域的上下间隔限为最大 60/最小 40，左右间隔限为最大 60/最小 30。



设置 WDR

将在同时存在明亮和阴暗区域的场景中显示尖锐的物件图像。

1. 选择 <背光>。
2. 将 <模式> 设置为 <WDR>。
3. 指定 <宽动态级别>。



- 建议在室内环境中使用宽动态。
- 在宽动态模式下，黑暗区域和明亮区域之间可能存在噪音。
- 无论何时打开或关闭宽动态模式，均会初始化最大和最小快门值。
- 如果在手动模式下使用光圈优先镜头或防抖快门，WDR（宽动态）的部分性能可能受到限制。
- 使用 WDR 时，帧速率将减半。
示例）在使用 30fps 模式和 WDR 模式时，将输出帧速率为 15fps 的视频。



设置屏幕

设置曝光

可以调整摄像机的曝光级别。

1. 选择 <曝光>。

2. 设置各个项目。

- 亮度：调整屏幕亮度。
- 最小快门：最长曝光时间的限值。
 - 快门是用于设置传感器曝光时间范围的模式，该范围指定了电子快门移动的上限和下限。
 - 如果快门值低于传感器模式中指定的值，在黑暗条件下可以降低帧率。
- 最大快门：最短曝光时间的限值。
- 防闪烁：用于防止周围光线和频率之间不协调引起的屏幕闪烁。
- SSNR
 - 开：视频噪点已消除。
 - 智慧 NR：当视频中出现移动物体时自动调整降噪级别，以提高可识别性。
- SSNR 级别：调整降噪级别。
- 光圈：选择在手动模式还是自动模式下使用摄像机镜头。
 - 自动：光圈将按照周围环境的光线亮度自动调整。
 - P-光圈：这是深度优先模式。您可以在白天关闭快门获得较好的深度，在夜晚打开快门获得更多光线。
- P-光圈：设置 P-Iris。
- 自动：光圈根据周围光线量自动进行调节。
- 手动：将光圈手动设置到所需的位置。
- P-光圈位置：设置 P-Iris 位置。
- 自动增益：选择自动增益控制模式。

因在低照度环境下摄影而视频亮度低于特定值时，通过调整视频增益的控制感度，调整整个亮度。



- 根据快门的设置范围，图像曝光有可能饱和。
- 从启用 WiseNR 模式到应用/释放实际效果可能需要一段时间。
- WiseNR 模式启用后，视频的可识别性将提高，同时噪音可能会增加。
- 在噪点较少的明亮环境中，WiseNR 效果可能不明显。
- 设置 WiseNR 时，MD 功能将在内部使用，用于检测运动，检测依据是 MD 事件的执行情况。如需了解更多信息，请参阅“MD/VA”（第 59 页）。

设置日夜

1. 选择 <日夜>。

2. 设置各个项目。

- 模式：“模式”用于将颜色调整为彩色或黑白。
 - 彩色：始终以彩色输出视频。
 - 黑白：始终以黑白输出视频。
 - 自动：通常设置为彩色，但在夜晚亮度较低时使用黑白。
 - 如果 <曝光> 菜单中的 AGC 设置为 <关>，无法将日夜模式设置为 <自动>。
 - 外部：控制当警报输入端子与外部设备同步时的视频颜色。
 - 计划：设置摄像机以彩色模式工作的时间段。
- 等待时间：为启动日夜切换模式，设置各个亮度条件的维持时间。
- 持续时间：指定光照模式转换的时间间隔。
- 警报输入：当警报传感器打开或关闭时，视频设置为彩色或黑白。
 - 如果“日夜”模式设置为“外部输入”，将禁用“事件警报输入”页面的警报输入功能。
- 激活时间（彩色）：指定彩色模式工作的时间计划。
 - 如果设置此项，从开始时间 00 秒 到结束时间 59 秒 会保持彩色模式。
- 切换日夜模式时，无法检测 MD/VA 事件。



设置附加菜单

1. 选择 <附加菜单>。

2. 设置各个项目。

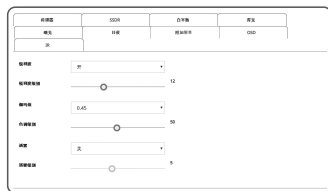
- 锐利度：调整图像的锐利度。如果选择了<开>，您可以调整图像的锐利级别。
- 锐利度级别：级别越高，图像轮廓变得越清晰和越清楚。
- 伽玛值：调整图像的对比度。
- 色调级别：调整视频颜色的强度。
- 透雾：在有雾或多云天气时补偿视频。
默认设置为 <关>。当视频在有雾天气看起来模糊时使用附加菜单项。
 - 关：禁用去雾功能。
 - 自动：调整 <透雾级别> 以增强效果。
 - 手动：用户手动设置每个图像的补偿量。

❗ 如果去雾模式设置为 <自动>，其去雾级别与模糊程度成正比。如需保持去雾级别不变而不考虑模糊程度，可将去雾模式设置为 <手动>。

- 如果在薄雾中手动去雾级别较高，图像可能变得过于黑暗。

- 透雾级别：控制去雾级别。

✎ 降低当摄像机由于外部因素（如风）晃动时导致的图像抖动程度。



- 覆盖图像：用户所选图像将显示在屏幕左上方。
 - 浏览：搜索并选择位图类型文件。
 - 上传：上传选定的文件。
 - 删除：删除选定的文件。



- 适用文件要求包括 16 位（不支持 RGB565）或 24 位的位图文件，宽、高为 128 像素且文件大小为 52KB 及以下。



- 若可调整位置的项目(摄像机名称、日期&时间)被固定的其他OSD项目所覆盖，有可能无法显示在屏幕上。
- 如果您更改了语言，X-Y 坐标将予以初始化。
建议设置完语言之后再设置 X-Y 坐标。

设置 IR

1. 选择 <IR>。

2. 设置各个项目。

- 模式：黑白模式下，IR LED 亮起，因可防止视频中心的饱和现象，在近距离也能识别被摄体。
 - 关：将禁用红外模式。
 - 自动1：根据中心屏幕上物体的亮度调节红外亮度。
 - 自动2：IR 亮度将按照屏幕中间或边缘的物体亮度自动调整。
 - 手动：手动调整红外亮度。
- 级别：如果将红外模式设置为手动，则您可以在 1 和 99 之间调整红外指示灯的亮度级别。



设置 OSD

1. 选择 <OSD>。

2. 设置各个项目。

- 摄像机名称：指定要显示在屏幕上的摄像机名称。
- 选择<使用>复选框即可添加摄像机名称。
- 添加：点击<添加>按钮，共可添加 5 行内容，每行 15 个字符，共可添加 60 个字符。
- 摄像机名称 X、Y 位置：指定显示在屏幕上的摄像机名称的位置。
- 日期和时间：设置屏幕上的时间显示和日期格式。
- 日期和时间 X、Y 位置：指定在屏幕上显示时间的位置。
- 工作日显示：设置在屏幕上是否显示星期信息。
- 大小：将 OSD 大小设置为小/中/大。
- 颜色：将 OSD 颜色设置为白色/红色/蓝色/绿色/黑色/灰色。
- 透明：将透明度设置为不透明/透明度 1/透明度 2/透明度 3。



设置屏幕

智能编码

设置来自摄像机的所需视频进入区域作为 ROI 区域，并指定该区域的探测灵敏度。

1. 从设置菜单，选择 <音频 & 视频 (🔊)> 选项卡。
2. 单击 <智能编码>。
3. 选择要监控的区域。
单击并拖曳鼠标即可选择所需区域。
 - 最多可以指定 5 个独立的区域。
4. 设置图像质量。
ROI 区域将以指定的质量显示。
5. 要取消区域的所有设置，请单击 [清除 (🗑️)] 按钮。
6. 完成后，请单击 [应用 (📌)]。



❗ ■ 如果在 <视频配置文件> 中将智能编解码器设置为 <关>，则它不活动。(第 41 页)

对焦设置

您可以调节视频图像的焦点和缩放比率。

1. 从设置菜单，选择 <音频 & 视频 (🔊)> 选项卡。
2. 单击 <对焦设置>。
3. 按照以下步骤设置聚焦。
 - 1) 焦点初始化：按 [🔄] 按钮移动聚焦至默认位置 (x1)。
 - 2) 对焦 (镜头调整)：调整镜头焦距 (远 ↔ 近) 并锐化图像。
 - 3) 缩放 (镜头调整)：手动调整变焦倍率 (宽 ↔ 望远)。
 - 4) 简单对焦：在屏幕上拖曳鼠标以指定要设置自动对焦的位置。按 [👁️] 按钮使视频自动聚焦。
- 快速模式：快速调整聚焦。



- ❗ ■ 在下列情况下，简单对焦模式可能无法正确调适：
- 在简单对焦模式下突然切换至物体 (突然移动、出现或消失)
 - 在简单对焦模式下亮度彻底改变
 - 图像对比度低
 - 摄像机前面或周围有强光源时
- 如果焦点不适当的离开上面提到的位置，请使用 [100] [50] [1] [1] [10] [100] 按钮来手动调节焦点。
- 在难以应用简单对焦的情况下，请尝试使用手动对焦模式。

WiseStream

用于检测未发生大幅度运动环境下的视频复杂度并调整视频质量降低输出比特率的功能。生成运动时变回至视频质量原始设置值，以防止视频信息丢失。

1. 从设置菜单，选择 <音频 & 视频 (🔊)> 选项卡。
2. 单击 <WideStream>。
3. 选择智能流的亮度。
 - 关：将禁用智能流功能。
 - 低：小幅降低视频图像质量。当比特率设为“关”时，图像质量最多可降低 15%。
 - 中：中等幅度降低视频图像质量。当比特率设为“关”时，图像质量最多可降低 30%。
 - 高：大幅降低视频图像质量。当比特率设为“关”时，图像质量最多可降低 50%。
4. 完成后，请单击 [应用 (📌)]。



- ❗ ■ 出现以下情况时，智能流 (WiseStream) 功能可能出现故障。
- 突然进行屏幕切换可能导致视频失真。
 - 不宜用于屏幕上显示过多移动和运动事件的环境下。

网络设置

DDNS

DDNS(动态域名服务)是Dynamic Domain Name Service的缩写, 该服务将摄像机的 IP 地址转换成一般主机名, 以便用户可以轻松记住它。

■ 您只有在接通互联网时才能使用DDNS服务。

1. 从设置菜单, 选择 <网络 (🌐)> 选项卡。
2. 单击 <DDNS>。
3. 选择 <DDNS> 连接类型。
4. 根据所选类型键入 DDNS 项目。
 - Wisenet DDNS: 如果使用 Hanwha Techwin 提供的 DDNS 服务器, 请选择此项。
 - 产品 ID: 输入向 Wisenet DDNS 服务注册的产品 ID。
 - Quick connect: 当与支持 UPnP (通用即插即用) 的路由器配合使用时, 它会自动设置端口转发。

■ 如果不使用支持UPnP功能的路由器、或不使用Quick connect而要使用DDNS的话, 在路由器上手动设置端口转发。有关如何设置端口转发, 请参阅“路由器端口设置”。(第 28 页)

- 公共 DDNS: 在提供的公开网站中, 使用公共DDNS服务器时, 选择此项。
 - 服务: 选择要使用的公共DDNS服务器。
 - 主机名: 输入向 DDNS 服务器注册的主机的名称。
 - 用户名: 输入 DDNS 服务器的用户名。
 - 密码: 输入 DDNS 服务器的密码。
5. 完成后, 请单击 [应用 (🔧)]。

■ 如果选择了 <Quick connect>, 请确保选择 Wisenet DDNS 服务。



注册 DDNS

向 Wisenet DDNS 注册您的产品

1. 访问 Wisenet DDNS 网站(<http://ddns.hanwha-security.com>)并注册会员。

2. 从顶部的菜单栏, 选择 <MY DDNS>。



3. 单击 [Register Product] 选项卡。

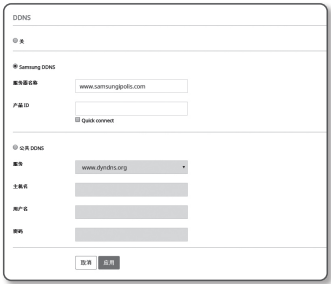
5. 指定 <Type> 和 <Model>。
6. 指定产品位置及说明 (如有必要)。
7. 单击 [Product Registration]。您可在列表中看到新注册的产品信息。

No.	Product ID	Model	Connection Status	Product Registration	View	Delete
1	HW-1234	HW-1234	OK	1.0.0.0/0.0.0.0	View	Delete
2	HW-5678	HW-5678	OK	1.0.0.0/0.0.0.0	View	Delete

设置屏幕

在摄像机设置中连接至 Wisenet DDNS

1. 从 DDNS 设置页面，将 <DDNS> 设置为 <Wisenet DDNS>。
 2. 提供向 DDNS 网站注册产品 ID 时指定的 <产品 ID>。
 3. 单击 [应用 ()]。
- 成功进行连接后，屏幕上将显示消息 <(成功)>。



在摄像机设置中配置公共 DDNS

1. 在 DDNS 设置页面，将 <DDNS> 项目设置为 <公共 DDNS>。
 2. 输入相应站点的主机名、用户名和密码。
 3. 单击 [应用 ()] 按钮。
- 如果正确建立连接，<(成功)> 将会出现。
4. 完成后，请单击 [应用 ()]。

 要正确使用 DDNS 服务，需要 DDNS 设置和路由器的端口转发设置。对于端口转发设置，请参阅“路由器端口设置”。（第 28 页）

IP 过滤

对于特定 IP，可创建允许或拒绝它的 IP 列表。

1. 从设置菜单，选择 <网络 ()> 选项卡。
 2. 单击 <IP 过滤>。
 3. 选择 <过滤类型>。
 - 拒绝：如果选择此项，将限制过滤列表的那些 IP 进行的访问。
 - 允许：如果选择此项，将只接受过滤列表的那些 IP 进行的访问。
 4. 单击 [添加 ()] 按钮。
- 将会创建 IP 列表。
5. 输入要允许或拒绝的 IP。
- 输入 IP 地址和前缀时，可用的 IP 地址列表将出现在右侧过滤范围列中。



-  如果为 IP 过滤 选择了 <允许> 并且 <IP & 端口> 的 <IPv6 设置> 设为 <使用>，则应该分配当前计算机配置的 IPv4 和 IPv6 地址。
- 不能将用于当前设置的计算机的 IP 地址添加至 <拒绝>，应该将它添加至 <允许>。
- 只有设置为 <使用> 的 IP 地址才会显示在过滤器列中。

6. 从列表中选择要删除的 IP。
- 单击 [删除 ()] 按钮。
7. 完成后，请单击 [应用 ()]。

HTTPS

可以选择安全连接系统或安装公共证书用于此目的。

1. 从设置菜单，选择 <网络 ()> 选项卡。
2. 单击 <HTTPS>。
3. 选择安全连接系统。
 - 若要使用 HTTPS 模式访问摄像机，您必须以 https://<Camera_IP> 形式键入摄像机的 IP 地址。

如果未在 Internet Explorer 中以 HTTPS 模式配置 Web Viewer 设置，请按如下所示编辑 Internet 选项：<菜单 → 工具 → Internet 选项 → 高级 → 安全 → 取消选择 TLS 1.0 并选择 TLS 1.1、TLS 1.2>
4. 搜索要安装在摄像机上的公共证书。

要将证书安装在摄像机上，需要提供证书名称（可由用户随意分配）、认证机构颁发的证书文件以及密钥文件。

 - 仅当安装了公共证书，<HTTPS (使用公共证书的安全连接模式)> 项目才会活动。
5. 完成后，请单击 [应用 ()]。



安装证书

1. 输入证书名称。
2. 单击 [浏览 ()] 按钮，选择要安装的公共证书文件和密钥文件，然后单击 [安装 ()] 按钮。

删除证书

1. 单击 [删除 ()] 按钮。
2. 要删除公共证书，应该在 <HTTP (不使用安全连接)> 或 <HTTPS (使用自用证书的安全连接模式)> 模式下访问网络视频解码器。

802.1x

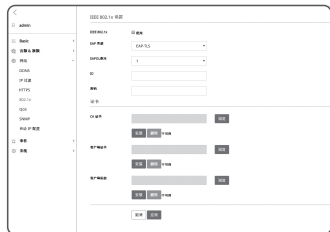
连接网络时，您可以选择是否使用 802.1x 协议，然后安装证书。

1. 从设置菜单，选择 <网络 (🌐)> 选项卡。

2. 单击 <802.1x>。

3. 设置 <IEEE 802.1x 设置>。

- IEEE 802.1x：指定使用 802.1x 协议。
- EAP 类型：选择 EAP-TLS 或 LEAP。
- EAPOL 版本：选择版本 1 或 2。
- ID：在 EAP-TLS 中输入客户端证书 ID，在 LEAP 中输入用户 ID。
- 密码：在 EAP-TLS 中输入客户端私钥密码，在 LEAP 中输入用户密码。如果它使用未加密的密钥文件，则无需在 EAP-TLS 中输入密码。



- 如果连接的网络设备不支持 802.1x 协议，那么即使您设置了该协议，它也不会正常执行。
- LEAP 是一种安全性较差的身份验证方法。仅在 EAP-TLS 不可用的情况下使用。

4. 安装/移除证书。

只有 EAP-TLS 需要证书。

- CA 证书：选择包含公共密钥的公共证书。
- 客户端证书：选择包含客户端证书密钥的公共证书。
- 客户端私钥：选择包含客户端私钥的公共证书。

5. 完成后，请单击 [应用 (应用)]。

安装/删除与 802.1x 相关的证书

- 按每个项目的 [浏览 (浏览)] 按钮并选择要安装的证书。
- 如果未安装任何证书，则会看到“不可用”出现在所选项目旁边。
- 按 [安装 (安装)] 按钮以开始安装，并在项目旁边显示消息“已安装”。
- 按 [删除 (删除)] 按钮以删除证书。

QoS

您可以指定优先级以确保特定 IP 的传输率稳定。

1. 从设置菜单，选择 <网络 (🌐)> 选项卡。

2. 单击 <QoS>。

3. 单击 [添加 (添加)] 按钮。
将会创建 IP 列表。

4. 输入将应用 QoS 的 IP 地址。

- 默认前缀对于 IPv4 是 32；对于 DSCP，默认值设置为 63。
- 只能为设置为 <使用> 的 IP 地址设置优先级。

5. 从列表中选择要删除的 IP。

单击 [删除 (删除)] 按钮。

6. 完成后，请单击 [应用 (应用)]。



SNMP

通过 SNMP 协议，系统或网络管理员可以监视远程站点上的网络设备，以及配置环境设置。

1. 从设置菜单，选择 <网络 (🌐)> 选项卡。

2. 单击 <SNMP>。

3. 指定 <SNMP>。

- 启用 SNMP v1：SNMP V1 将处于活动状态。
- 启用 SNMP v2c：SNMP V2c 将处于活动状态。
 - 读取社区：为访问 SNMP 信息，输入只读社区名称。默认名称为 <public>。
 - 写入社区：为访问 SNMP 信息，输入只写社区名称。默认名称为 <write>。
- 启用 SNMP v3：SNMP V3 将处于活动状态。
 - 密码：指定 SNMP V3 的默认密码。
 - 默认密码有被泄露的风险，建议安装产品后立即更改密码。请注意，未更改密码导致的安全和其他相关问题，用户自己承担责任。
 - 密码长度应该为 8 - 16 个字符。



设置屏幕

- 启用 SNMP Trap：SNMP Trap用于将重要事件和情况发送到管理员系统。
 - 社区：输入用于接收消息的Trap社区名称。
 - IP 地址：输入消息将发送到的 IP 地址。
 - 认证失败：指定当社区信息无效时是否生成事件。
 - 网络连接：指定当网络断开后恢复连接时是否生成事件。

4. 完成后，请单击 [应用 ()]。

- 
- 仅当安全连接模式是 HTTPS 时，才能设置 SNMP v3。
请参阅“HTTPS”。(第 52 页)
 - 如果您不使用 SNMP v3，则可能出现安全问题。

自动 IP 配置

自动设置既能访问摄像机又能搜索的 IP。

1. 从设置菜单，选择 <网络 ()> 选项卡。
2. 单击 <自动 IP 配置>。
3. 设置 <链路-本地IPv4地址>。
可以分配一个额外的 IP 地址以从链路本地网络访问摄像机。
 - 自动配置：指定“启用”或“禁用”链路本地 IPv4 地址。
 - IP 地址：显示所分配的 IP 地址。
 - 子网掩码：显示所分配 IP 的子网掩码。
4. 设置 <UPnP discovery>。
可以在支持 UPnP 协议的客户端和操作系统中自动搜索摄像机。
 - UPnP discovery：指定“启用”或“禁用”UPnP 发现。
 - 友好名称：显示摄像机名称。
友好名称的显示格式为 WISENET- <型号名称>-<MAC 地址>。

- 
- 在基本支持 UPnP 的 Windows 操作系统中，连接到网络的摄像机将显示出来。

5. 设置 <Bonjour>。
可以在支持 Bonjour 协议的客户端和操作系统中自动搜索摄像机。
 - Bonjour：指定“启用”或“禁用”Bonjour 发现。
 - 友好名称：显示摄像机名称。
友好名称的显示格式为 WISENET- <型号名称>-<MAC 地址>。

- 
- 在默认支持 Bonjour 的 Mac 操作系统中，已连接的摄像机将自动显示在 Safari Web浏览器的 Bonjour 书签中。
如果 Bonjour 书签没有显示出来，请在“首选项”菜单中检查书签设置。

6. 完成后，请单击 [应用 ()]。



事件设置

FTP / 电子邮件

可以配置 FTP/电子邮件服务器设置，以便在事件发生时可以将使用摄像机拍摄的图像传输到您的计算机。

1. 从设置菜单，选择 <事件 ()> 选项卡。
2. 单击 <FTP / 电子邮件>。
3. 选择 <FTP 配置> 或 <E-mail 配置> 并输入/选择所需的值。

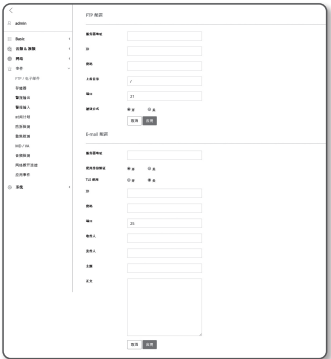
• FTP 配置

- 服务器地址：输入您将警报或事件图像传输到的 FTP 服务器的 IP 地址。
- ID：输入用于登录 FTP 服务器的用户 ID。
- 密码：输入用于登录 FTP 服务器的用户帐户密码。
- 上传目录：指定警报或事件图像将传输到的 FTP 路径。
- 端口：FTP 服务器的默认端口为 21；但是，可以根据 FTP 服务器设置使用不同的端口号。
- 被动方式：如果由于防火墙或 FTP 服务器设置需要以被动模式连接，请选择 <开>。

• E-mail 配置

- 服务器地址：输入您将警报或事件图像传输到的电子邮件服务器的 SMTP 地址。
- 使用身份验证：选择是否使用身份验证。
- TLS 使用：指定使用 TLS。
- ID：输入用于登录电子邮件服务器的用户 ID。
- 密码：输入用于登录电子邮件服务器的用户帐户密码。
- 端口：电子邮件服务器的默认端口为 25；但是，可以根据电子邮件服务器设置使用不同的端口号。
- 收件人：输入电子邮件收件人的地址。
- 发件人：输入电子邮件发件人的地址。如果发件人地址不正确，来自发件人的电子邮件可能会被电子邮件服务器分类为垃圾邮件，这样可能不发送。
- 主题：输入电子邮件的主题。
- 正文：为邮件提供文本。将警报或事件图像附加至准备的电子邮件。

4. 完成后，请单击 [应用 ()]。



存储器

您可以在设备上激活录制，选择录制条件，检查已保存数据占用的容量，对设备自身进行格式化。

1. 从设置菜单，选择 <事件 (当)> 选项卡。
2. 单击 <存储器>。
3. 选择用来保存数据的设备。



- 如果设备正在正确录制数据，将显示“录制”。
- 如果显示“错误”信息，请检查以下各项：
 - 检查存储器，确认它已连接到设备。
 - 检查存储器中的文件，确认它们是否受损。
 - 检查存储器，确认它们是否受到物理损伤。
- 如果按照上面指示操作之后“错误”消息仍未消失，请格式化 Micro SD 卡。
- 格式化之后，如果错误消息仍然存在，请更换 Micro SD 卡。
- 如果您不在设置中将按钮移到“关”位置就移除 Micro SD 卡或者如果您将摄像机连接到不稳定的电源，那么 Micro SD 卡可能会受损。



- 录制模式启动后重新连接时，可同时连接的配置文件数量限为2个。

在 Micro SD 存储卡上进行录制

1. 将 SD 卡录制设置为 <开>。
2. 单击 [应用 (应用)] 按钮。
3. 检查存储卡的 <可用大小> 和 <总大小>。
您可以通过单击 <格式化> 按钮来格式化 Micro SD 卡。
 - 如果 Micro SD 存储卡以低于建议值的速度运行，可能会跳过某些帧。
如需更多信息，请参阅“建议的 Micro SD/SDHC/SDXC 存储卡规格”。(第 6 页)
 - 对于大容量的 Micro SD 存储卡，格式化将相应变慢。
 - 将摄像机设置为较高分辨率、较高位速率或较高帧率时，数据流量会增大。
如果数据流量较大，可能会跳过某个帧，但仍会将其全帧存储。
 - 发生跳帧时，将以最低每秒一幅图像的速度保存图像。
4. 指定存储操作。
 - 录制配置文件：显示要录制的配置文件名称。
 - 普通：以特定帧速率进行录制。
 - 事件：设置发生的特定事件的录制类型。

- 事件前持续时间：指定警报发出之前的时间点；从该时间点开始，将传输图像。最多可以指定警报发出之前 5 秒。
- 事件后持续时间：指定事件发生后图像的传输时间。最长可保存事件发生 120 秒后的图像。
- 录制文件类型：指定所录制图像的文件格式。
 - STW：Hanwha Techwin 独有的文件格式。
 - AVI：传统的 avi 格式。



- 如果存储文件类型改变，那么现有数据将被格式化。

- 覆盖：如果 Micro SD 存储卡已满，将删除旧数据后保存新数据。
- 自动删除：删除指定时间段的数据，不删除其他数据。
可以设置的范围是 1 到 180 天。



- 如果超出保留时间段，将自动删除相应数据并录制新数据。数据一旦删除即无法恢复。

5. 设置<SD文件系统>。

- 类型：摄像机支持 VFAT 和 ext4 作为 SD 卡文件系统，用户可对其进行配置。
(但为使 ext4 文件系统与 Window o/s 交互，需要额外的应用程序。)
- 如上述设置发生变化，现有数据将被格式化。
- 对 ext4 文件格式的 SD 卡进行格式化可能需要长达 10 分钟的时间。

6. 指定 <标准录制设置>。

- 始终：始终将录制的视频保存在 Micro SD 存储卡中。
 - 如果设置为始终，则激活时间无法更改。
- 仅预约时间：仅在指定星期几的指定时间录制。
- [清除(清除)]：清除选择选定的时间。

7. 完成后，请单击 [应用 (应用)]。

设置屏幕

如果希望录制到 NAS 中

1. 设置保存操作和基本录制。

只有 NAS 符合建议规格，才能支持自动删除。

2. 输入在 NAS 中注册的信息。

- IP 地址：为NAS分配的固有的IP地址。
- ID：这是 NAS 中注册的一个 ID。
- 密码：NAS 中注册的密码。
- 默认文件夹：指定用来保存数据的 NAS 用户文件夹。

3. 单击 [测试] 按钮来查看是否可以成功连接到 NAS。

如果显示成功消息，则意味着您可以成功地将数据保存到 NAS 中。

如果显示失败消息，请检查以下方面。

- 确认 NAS 的 IP 地址有效。
- 确认 NAS 的 ID/密码有效。
- 确认您可以访问使用 NAS 的 ID 指定为基本文件夹的文件夹。
- 确认 NAS 的 SMB/CIFS 项已被取消选中。
- 确认 NAS IP 地址和摄像机 IP 地址的格式正确。
Ex) NAS 和摄像机子网掩码的初始值是 255.255.255.0。
如果 IP 地址是 192.168.20.32，NAS IP 地址的范围应该是 192.168.20.1~192.168.20.255。
- 检查在未对已存或使用过的默认文件夹进行格式化前，是否以其他用户进行连接。
- 确认使用了建议的 NAS 设备。

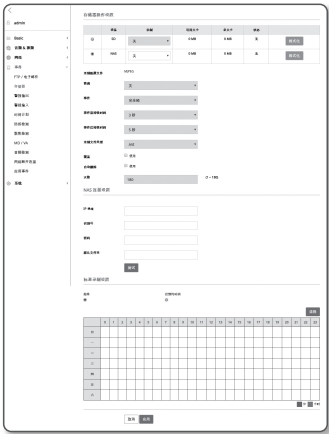
4. 设置结束后，将 NAS 装置设置为 <开>。

5. 单击 [应用 (应用)] 按钮。

6. 登录 NAS 并检查 <可用大小> 和 <总大小>。

您可以通过单击 <格式化> 按钮来格式化在 NAS 连接设置中指定的默认文件夹。

- 由于使用 NAS 时临时网络中断之后可能没有保存数据，因此我们建议您同时使用 SD 防止录制的图像丢失。
- 将摄像机设置为较高分辨率、较高位速率或较高帧率时，数据流量会增大。
如果数据流量较大，可能会跳过某个帧，但仍会将其全帧存储。
- 发生跳帧时，将以最低每秒一幅图像的速度保存图像。

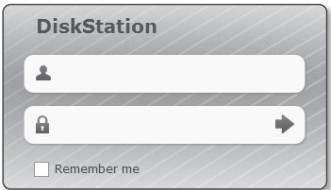


NAS(网络连接存储器)指南

- 由于使用 NAS 时临时网络中断之后可能没有保存数据，因此我们建议您同时使用 SD 防止录制的图像丢失。
- 如果设置允许同时连接和使用 Micro SD 存储卡和 NAS，NAS 享有较高录制优先级。
- 如果NAS的覆盖设置为<关>，并可用容量低于1%，视频将保存在Micro SD卡上。
- 如果正将数据保存到 NAS，在插入其他摄像机使用的 Micro SD 存储卡时，可能无法保存数据。
- NAS 建议规格：请参阅“NAS 建议规格”。（第 6 页）
- 如果在数据保存到 NAS 期间更改 NAS 保存设置，该更改将不会立即在系统中反映出来。
- 如果在数据保存期间移除 NAS 设备，或者网络断开，NAS 保存操作将异常终止。
- NAS 保存只允许一台摄像机访问一个文件夹。不允许使用另一台摄像机登录，图像将不会保存。

下面描述了如何按照 Synology NAS（建议产品之一）方法使用 NAS 保存数据。

1. 以管理员(Admin)账户访问Synology NAS。
在本例中，NAS IP 地址设置为 [192.168.20.253]。



2. 如果作为管理员访问，将显示以下屏幕。单击 [Control Panel]。



3. 在文件共享和权限菜单中单击 <Shared Folder>。



4. 单击 [Create] 按钮。

5. 在输入共享文件夹名称 (ID) 后，单击 [OK] 按钮来创建共享文件夹。
在本例中，共享文件夹名称是 [testDirectory]。

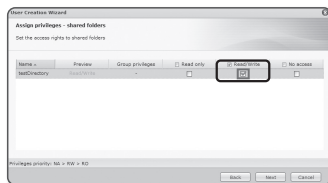
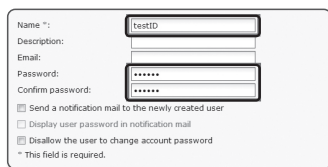
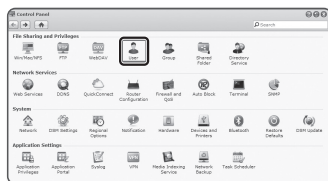
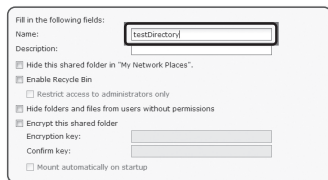
6. 在 Windows 中，针对 NAS 访问，如下设置共享文件夹的权限。
选中管理员的 [Read/Write] 权限。

7. 在文件共享和权限菜单中单击 <User>。

8. 单击 [Create] 按钮后，输入名称 (ID) 和密码。
在本例中，名称 (ID) 设置为 [testID]，密码设置为 [testID]。

■ 根据 NAS 建议，在使用 Netgear 的 NAS 设备时，不要分配要使用的容量。

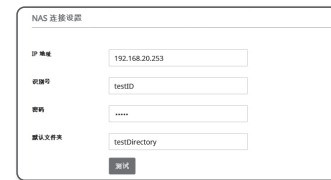
9. 在 Windows 中，设置 NAS 访问的权限。
选中在第4阶段所创建的共享文件夹“testDirectory”的 [Read/Write]权限。



10. 至此 NAS 中的基本设置已完成。
将摄像机连接到实际 NAS。
如下所示，输入 NAS 连接设置项。

11. 在输入项目 10 后，选中 <开>。

12. 单击 [应用 (应用)] 按钮。
通过使用 NAS 来完成保存。



警报输出

1. 从设置菜单，选择 <事件 (当)> 选项卡。

2. 单击 <警报输出>。

3. 配置摄像机警报输出设置。

■ 如果您更改警报输出类型，监视页面上的警报输出按钮和事件设置页面上显示的警报输出类型会相应地更改。

• 类型

- 常开：如果将警报输出设备“开路”状态视为正常，当触发警报事件时，则变成“闭路”状态。
- 常闭：如果将警报输出设备“闭路”状态视为正常，当触发警报事件时，则变成“开路”状态。

• 模式：设置警报输出方式。

■ 以下是在禁用时单击警报输出按钮时操作之间的差异。

- 脉冲：在持续时间（切换间隔）指定的时间段内激活，然后自动变成不活动。
- 活动/不活动：它保持为已激活，直到用户再次单击按钮以使它不活动为止。

• 转换条件：如果模式设置为脉冲，则设置保持激活的警报持续时间：1 到 15 秒。

4. 完成后，请单击 [应用 (应用)]。



设置屏幕

警报输入

可以设置警报输入类型、激活时间和工作模式。

1. 从设置菜单，选择 <事件 (当)> 选项卡。
2. 单击 <警报输入>。
3. 设置是否 <启用>。
4. 选择类型。
 - 常开：它通常是打开的，但是如果关闭，将触发警报。
 - 常闭：它通常是关闭的，但是如果打开，将触发警报。
5. 指定 <激活时间>。
 - 始终：当警报发出时，将始终检查。当警报发出时，它将在运行的模式下激活。
 - 如果设置为 <始终>，激活时间将无法更改。
 - 仅预约时间：警报发出时，在一周指定的一天检查指定的时间长度。当警报发出时，它将在运行的模式下激活。
 - [清除 (清除)]：重置全部设置。
 - 分：单击“激活时间”中的某个区域并以分钟为单位设置时间。
 - 时：在“激活时间”上拖动鼠标并以小时为单位设置时间。
6. 指定警报发出时将执行的操作。
 - FTP：在警报输入设置中指定使用 FTP 传输。
 - 有关详细信息，请参阅“FTP/电子邮件”。(第 54 页)
 - 电子邮件：在警报输入设置中指定电子邮件传输的使用。
 - 有关详细信息，请参阅“FTP/电子邮件”。(第 54 页)
 - 录制：在使用时，您可以将警报记录设置至 Micro SD 卡或 NAS。
 - 在 <存储器> 中将 <设备> 设置为 <开>。(第 55 页)
 - 警报输出 1：选择如果警报进入是否设置警报输出，并指定警报输出时间。
7. 完成后，请单击 [应用 (应用)]。



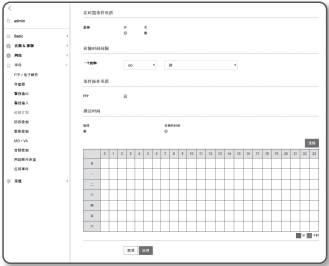
时间计划

无论是否发生事件，均可在计划操作时间以固定时间间隔配置的传输图像设置。

1. 从设置菜单，选择 <事件 (当)> 选项卡。
2. 单击 <时间计划>。
3. 设置是否 <启用>。
4. 指定 <传输时间间隔>。
5. 指定 <激活时间>。
 - 始终：始终启动已设置的模式。
 - 仅预约时间：仅在指定的星期和时间启动已设置的模式。
6. 指定激活条件。
 - FTP：指定事件发生时 FTP 传输的使用。
 - 有关详细信息，请参阅“FTP/电子邮件”。(第 54 页)
7. 完成后，请单击 [应用 (应用)]。



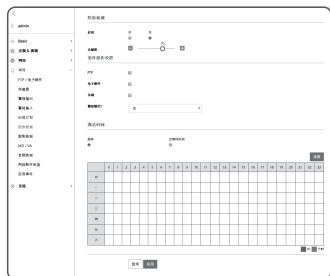
■ 传输间隔设置值必须小于预设激活间隔才能成功进行图像传输。



防拆检测

可将摄像机设置为在侦测篡改时(例如,视频被遮挡或移动),发出事件信号。

1. 从设置菜单,选择<事件 (当)> 选项卡。
2. 单击<防拆检测>。
3. 设置是否<启用>。
4. 设置防拆检测灵敏度。灵敏度越高,越能检测最小的拆离尝试。
5. 指定激活时间和激活条件。
 - 有关<激活时间>和<动作>的详细信息,请参阅“警报输入”。(第58页)
6. 完成后,请单击[应用 (应用)]。

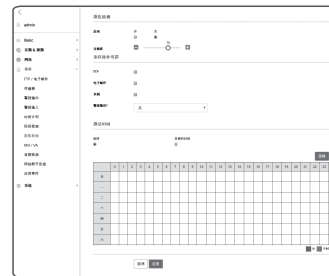


- ! ■ 在下列情况下,默认防拆检测功能可能无法正常工作:
- 在简单背景或低照度以及夜晚情况下,可能会降低检测灵敏度。
 - 摄像机摇晃严重或照明激烈变化会导致错误地视为拆离。
 - 防拆检测可能会在拆离发生之后的一定时间(最多5秒)进行。
 - 一旦检测到拆离,摄像机将继续在特定稳定性时间(大约5秒)之后继续标准操作,在此稳定性期间不会执行任何检测。
 - 如频繁生成错误警报,需逐渐降低灵敏度以减少错误警报数量。如果选择较低灵敏度,则仅进行突然的篡改检测。
 - 如果使用较高灵敏度,即使是出现极小的变化,也可能会生成警报,但也可能会因物体或亮度发生变化而出现错误检测。

散焦检测

可以配置设置,以在检测到摄像机镜头出现散焦时生成警报信号。

1. 从设置菜单,选择<事件 (当)> 选项卡。
2. 单击<散焦检测>。
3. 设置是否<启用>。
4. 设置灵敏度。灵敏度值越高,散焦检测精度越高。
5. 指定激活时间和激活条件。
 - 有关<激活时间>和<动作>的详细信息,请参阅“警报输入”。(第58页)
6. 完成后,请单击[应用 (应用)]。



- ! ■ 在出现散焦情况之后,检测散焦过程可能需要一段时间(最多5秒)。
- 出现以下情况时,散焦检测性能可能受损或出现故障。
 - 单调的监控环境、夜间或低照度环境
 - 光线突然变化(即关闭室内光源)
 - 镜头被大体积物体遮挡,覆盖几乎整个屏幕画面
 - 更改摄像机位置可以变更聚焦对象。

MD / VA

可将动作探测和视频分析的事件设置为触发事件信号输出。

1. 从设置菜单,选择<事件 (当)> 选项卡。
2. 单击<MD / VA>。
3. 根据您的用途,从移动探测和智能视频分析中选择。
4. 设置<灵敏度>、<大小>和<区域>。
选择智能视频分析时,还需要设置<分析>。
5. 指定激活时间和激活条件。
 - 有关<激活时间>和<动作>的详细信息,请参阅“警报输入”。(第58页)
6. 完成后,请单击[应用 (应用)]。



设置屏幕

- 相同的移动探测设置（灵敏度/大小/区域）适用于数字自动追踪模式。
- 在使用之前，设置最小和最大移动大小以适合要探测的所需移动范围。
- 物体的探测到大小与实际大小可能会有差异，视其形状而定。
- 从屏幕顶部开始，最多可以显示 16 个物体。
- 如果摄像机拍摄到较近的对象，视频分析功能可能会变弱。
- 在以下情况下，移动探测和智能视频分析功能可能会下降或导致不正确的探测结果。
 - 拍摄对象的颜色或亮度与背景类似。
 - 摄像机视野边界区域周围的小活动。
 - 由于场景变化、照明快速变化或其他原因，多次移动随机连续发生。
 - 固定的对象在一个位置连续不断地移动。
 - 位置变化不大的移动，例如逐渐靠近摄像机或从摄像机中慢慢消失。
 - 移动的对象离摄像机太近
 - 对象隐藏在其他对象后面。
 - 2 个或更多对象重叠，或者 1 个对象被分成多个对象。
 - 对象速度太快（若要探测，一个对象应该在邻近的帧之间重叠）。
 - 由于太阳直射、照明或头灯等强光而出现反射 / 视线模糊 / 阴影。
 - 在大雪、大雨、大风或黎明 / 黄昏环境中。

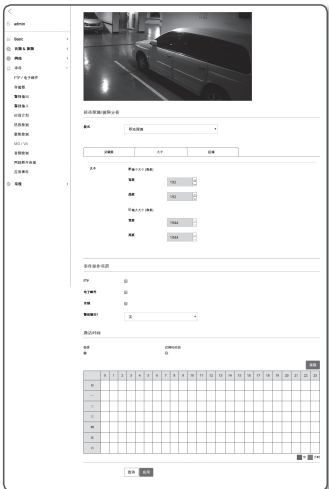
使用移动探测

它会探测满足灵敏度、大小和区域指定的所有条件的移动。

1. 选择移动探测模式。
2. 选择 <灵敏度> 选项卡以设置灵敏度级别。可以设置传感器的灵敏度以检测监视视频中脱离背景的移动。

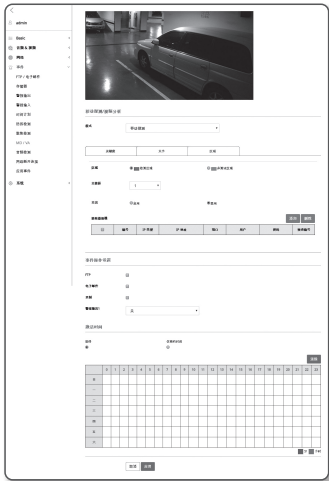
- 在可以清楚区分物体与背景的情况下，将此项设置为低灵敏度级别。在难以区分物体的相反情况下，如低照度环境中，请将此项设置为高级别。

3. 选择 <大小> 选项卡。
您可以限制要探测的移动的最小/最大大小。
 - 最小大小（像素）：要设置被探测移动的最小大小，请选择 <最小大小（像素）>，然后使用鼠标指向屏幕上的位置并拖动至所需大小。
 - 最大大小（像素）：要设置被探测移动的最大大小，请选择 <最大大小（像素）>，然后使用鼠标指向屏幕上的位置并拖动至所需大小。



- 无法探测小于指定最小大小或大于最大大小的移动。为了避免大小杂讯导致的意外探测，请根据环境相应地设置最小/最大大小。
请注意，相同位置处的相同移动在其检测大小方面可能会检测到不同；建议您在设置最小/最大探测大小时，考虑并包括允差。

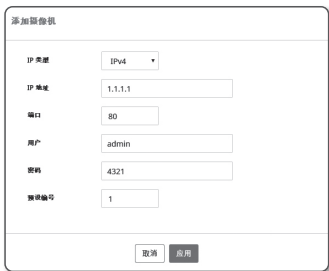
4. 选择 <区域> 选项卡。
您可以指定屏幕上要包括到探测中或从探测中排除的区域。您最多可以指定 8 个区域。
 - 检测区域：将整个屏幕设置为从探测中排除，并将指定的区域添加为移动探测区域。使用鼠标在图像上选择 4 个顶点以指定探测区域。
 - 非测试区域：将整个屏幕设置为移动探测区域，并排除指定的区域作为不探测的区域。使用鼠标在图像上选择 4 个顶点以指定非探测区域。
5. 如要删除指定区域，在视频画面上单击鼠标右键，点击弹出窗口中显示的[删除]按钮。
6. 点击[应用 ()]按钮。
7. 选择是否使用切换功能。



8. 点击<添加>按钮以输入接收器摄像机信息。
发生运动时，您将被重定向至互操作 PTZ 摄像机的预设位。
 - IP 类型：选择 IPv4 或 IPv6。
 - IP 地址：输入接收器摄像机的 IP 地址。
 - 端口：输入接收器摄像机的端口。
 - 用户：输入接收器摄像机的 ID。
 - 密码：输入接收器摄像机的密码。
 - 预设编号：可从 1 至 255 之间选择一个预设位编号。

- 检测运动/分析视频：仅可在<地区>选项卡中对设置项进行配置。
- 仅兼容 Techwin 生产的摄像机产品。

9. 完成后，请单击 [应用 ()]。



使用智能视频分析

它会检测满足灵敏度、大小和区域以及事件条件规则指定的所有条件的事件。

1. 选择视频分析模式。
2. 设置 <灵敏度>、<大小> 和 <区域>。
有关设置的详细信息，请参阅“使用移动探测”。（第 60 页）
3. 选择 <分析> 选项卡。
4. 选择视频分析类型。
 - 通过：探测通过用户设置的虚拟线的物体。
 - 进入/退出：探测进入或退出用户设置的区域的物体。
 - 出现（消失）：检测从用户定义区域或整个屏幕区域上出现或消失的移动。
5. 设置视频分析规则。
有关设置的详细信息，请参阅“设置视频分析规则”。（第 61 页）
6. 完成后，请单击 [应用 (应用)]。



设置视频分析规则

通过

1. 将类型设置为 <通过>。
2. 在屏幕上，单击虚拟线的首选起点和终点，然后一个弹出菜单将会出现。
3. 选择所需规则：
 - 右：检测在虚拟线上从左到右运动的移动。
 - 左：检测在虚拟线上从右到左运动的移动。
4. 单击 [确认]。
5. 要除去已定义的规则，请右键单击显示的虚拟线以打开弹出式上下文菜单，然后选择 [删除] 按钮。

进入/退出

1. 将类型设置为 <进入/退出>。
2. 在屏幕上，单击四个顶点以定义检测区域，一个弹出窗口将会出现。
3. 选择所需规则：
 - 进入：检测中心点从区域外部进入已定义区域的移动物体的移动。
 - 出去：检测中心点从已定义区域内部移动到外部的移动物体的移动。
4. 单击 [确认]。
5. 要除去已定义的规则，请右键单击区域的显示的虚内部线以打开弹出式上下文菜单，然后选择 [删除] 按钮。

出现(消失)

1. 将分析类型设置为 <出现(消失)>。
2. 在屏幕上，单击四个顶点以定义检测区域，一个弹出窗口将会出现。
3. 选择所需事件规则：
 - 出现/消失：它会检测出现在区域中并且在未通过区域边界时保留一定时间段的出现物体，以及相反情况下存在于区域中的物体消失。
在屏幕上，单击四个顶点以定义检测区域。
4. 单击 [确认]。
5. 如要移除所定义的规则，右击单击屏幕即可打开弹出式上下文菜单，选择 [删除] 按钮。

设置屏幕

音频检测

可以设置为探测超过指定音量的声音并相应地触发事件。

- 1. 从设置菜单，选择 <事件 (当)> 选项卡。
- 2. 单击 <音频检测>。
- 3. 设置是否 <启用>。
- 4. 选择音频探测的音量。
音量越低，可探测到的声音变化越小。

■ 设计了自动探测级别，为的是将输入数据规格为介于 1 和 100 之间的值，并且探测大于该阈值级别的信号。它与 分贝 (dB) 级别无关。

- 5. 指定激活时间和激活条件。
 - 有关 <激活时间> 和 <动作> 的详细信息，请参阅“警报输入”。
(第 58 页)

- 6. 完成后，请单击 [应用 (应用)]。

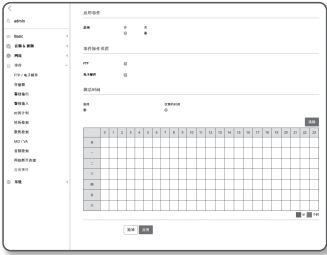
- 选择 <音频 & 视频> - <音频设置> 并为麦克风设置适当的音量作为音频输入源，以便音频探测功能能够正常工作。
- 如果探测到的音量太低，请在 <音频设置> 中将音频输入增益设置为较高级别。
- 当摄像机连接到音频输入设备时，可使用音频探测功能。



应用事件

可以将系统设置为发生应用中已定义事件时生成信号。提供的事件信号因应用功能不同而异。

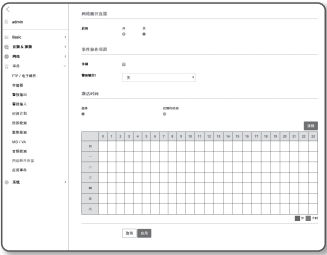
- 1. 从设置菜单，选择 <事件 (当)> 选项卡。
- 2. 单击 <应用事件>。
- 3. 设置是否 <启用>。
- 4. 指定激活时间和激活条件。
 - 有关 <激活时间> 和 <动作> 的详细信息，请参阅“警报输入”。
(第 58 页)
- 5. 完成后，请单击 [应用 (应用)]。



网络断开连接

断开网络连接时，将视作保存事件。

- 1. 从设置菜单，选择 <事件 (当)> 选项卡。
- 2. 单击 <网络断开连接>。
- 3. 设置是否 <启用>。
- 4. 指定激活时间和激活条件。
 - 有关 <激活时间> 和 <动作> 的详细信息，请参阅“警报输入”。
(第 58 页)
- 5. 完成后，请单击 [应用 (应用)]。



系统设置

产品信息

1. 从设置菜单，选择 <系统 ()> 选项卡。
2. 单击 <产品信息>。
3. 检查摄像机信息，或根据网络环境提供详细信息。
 - 型号：产品的型号名称。
 - 序列号：产品序列号。
 - 设备名称：提供将在现场屏幕上显示的设备名称。
 - 位置：指定安装摄像机的位置。
 - 描述：提供有关摄像机位置的详细信息。
 - 备忘录：提供有关摄像机的说明以便更好理解。
 - 语言：选择 Web 查看器 OSD 的首选语言。



- 默认语言设置为 <中文>。

4. 完成后，请单击 [应用 ()]。

升级 / 重启

1. 从设置菜单，选择 <系统 ()> 选项卡。
2. 单击 <升级 / 重启>。
3. 选择所需的项目并进行适当设置。
 - 升级：执行系统升级。
 - 出厂默认设置：重置为出厂默认值：对所有设置信息进行初始化，包括将摄像机设置为出厂重置状态。（但不将对日志进行初始化。）
 - 排除设置：如果选中<网络>复选框，则不对网络设置进行初始化。



- 如果重置摄像机，IP 寻址系统将默认为 DHCP。如果未找到 DHCP 服务器，将自动恢复之前的设置。

- 配置备份与恢复：在执行恢复流程之前，备份当前的系统设置。备份或恢复之后，系统会自动重新启动。
- 重新启动：重新启动系统。

执行升级

1. 单击 [浏览] 并指定要升级的文件。
2. 单击 [升级]。
3. 将弹出显示升级状态的“升级”进度条。
4. 完成升级之后，浏览器将会退出，并且摄像机机会重新启动。



- 升级过程大约需要 10 分钟。
如果强行终止升级流程，升级将无法正确完成。
- 在重启系统期间，无法访问 Web Viewer。
- 可以从 Hanwha Techwin 网站下载最新版本。

备份当前设置

1. 单击 [备份]。
“bin”文件格式的文件的存储路径是” Library”->“Document”->“Downloads”。

恢复备份设置

1. 要恢复备份设置，请单击 [恢复]。
2. 选择所需的备份文件。



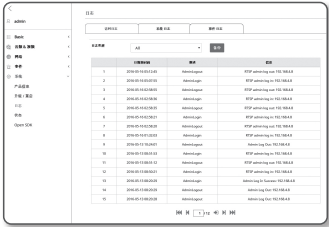
- 如果执行备份或恢复，Web 浏览器将关闭，且摄像机将重新启动。
- 如果您试图恢复其它型号上备份的配置 文件，有些功能可能会失去作用，您需要手动更改设置。

设置屏幕

日志

可以检查系统日志或事件日志。

1. 从设置菜单，选择 <系统 ()> 选项卡。
2. 单击 <日志>。
3. 选择日志类型。
 - 访问日志：查看含有用户访问和访问时间的日志信息。
 - 系统日志：您可以检查系统日志，其中记录了所有系统更改，包括时间信息。
 - 事件日志：可以检查事件日志，包括时间信息。
4. 从右边的日志列表，选择要搜索的项目。
 - 如果在左上角的下拉列表中选择了 <All>，将显示适用日志类型的所有日志。
5. 如果一页无法显示所有可用的日志，请使用底部按钮以移至前一个、下一个或最后项目。
6. 单击 <备份> 按钮可将当前所选模式的所有日志数据保存在浏览器 download 文件夹的“摄像机在型号名称-模式-摄像机中创建的时间戳值.txt”文件中。



-  每页显示 15 个日志，最新的日志显示在顶部。
- 每一日志包含最多 1,000 条记录，当保存记录达 1,000 条之后，生成最新记录时将删除最早的日志。

状态

您可以检查配置文件信息。

1. 从设置菜单，选择 <系统 ()> 选项卡。
2. 单击 <状态>。
3. 将显示配置文件信息屏幕。
 - 配置文件访问：显示新添加的配置文件的信息。
 - 配置文件：显示新添加的编解码器的信息。
 - 比特率(kbps)：显示实际比特率和设置的比特率。
 - 帧率(fps)：显示实际帧速率和设置的帧速率。
 - ATC(%)：显示 ATC 状态。
 - 并行用户计数：显示访问配置文件的并行用户数。
 - 当前用户：显示有关用户访问 Web Viewer 的信息并显示监视视频。
 - 配置文件：显示用户访问的配置文件的名称。
 - 比特率(kbps)：显示当前比特率。
 - 网络连接状态：它表明网络是否工作正常。
 - IP：显示当前用户的 IP 地址。



-  要检查有关当前使用的配置文件的信息，请再次单击 [更新] 以刷新它。应用更改需要一些时间。
- 点击[菜单 ()]-[状态 ()]选项卡即可查看配置文件访问状态。

Open SDK

用户可以在摄像机上安装应用程序来执行更多功能。

1. 从设置菜单，选择 <系统 ()> 选项卡。
2. 单击 <Open SDK>。
3. 单击 [浏览 ()] 按钮从用户文件夹选择 *.cap 文件。
4. 单击 [安装 ()] 按钮可安装应用程序。
5. 列表中显示所安装应用程序的信息。
 - 卸载：删除已安装或运行中的应用程序。
 - 转至应用程序：将重定向至每一应用程序的应用页面。
 - 启动：执行已安装的应用程序
 - 停止：终止正在运行的应用程序。
 - 健康：显示当前运行的应用程序的资源占用率、线程数和执行时间等。
 - 优先级：设置运行中应用程序的优先级。
如果摄像机（包括主任务和应用程序）的总资源利用率超出 80%，将强制终止某个正在运行的应用程序。此时将使用用户设置的优先级，确定应首先停止哪个应用程序。
 - 自动启动：当摄像机的电源或主任务开始运行时，已经激活自动执行的指定应用程序将自动运行。
 - 任务管理器：显示摄像机中当前运行的应用程序的资源占用率。
 - 内存使用情况 (%)：这是每个应用程序的内存使用率。
 - CPU 使用情况 (%)：这是每个应用程序的 CPU 使用率。
 - 线程计数：这是每个应用程序创建的线程计数。
 - 持续时间：这是每个应用程序的总执行时间。
 - 终止任务：终止应用程序。
 - 使用情况总计：这是摄像机（包括主任务和应用程序）的总资源占用率。



■ 有关应用程序使用或安装的问题，请参阅 Techwin 开发人员网站。

故障排除

故障	解决方法
在 Safari 上通过 HTTPS 访问无插件 web 浏览器时,将不会播放任何视频。	- 在初次访问 https 时出现的验证演出窗口中,点击"查看验证证书"然后选择"连接至指定 web 查看器 IP 时始终信任"复选框。 - 如在下列消息窗口中选择“下一步”之后,web 查看器依然无法播放视频,请按命令键 + Q 退出 Safari 浏览器,再次访问并执行上述步骤。
无法使用Web浏览器访问摄像机。	- 检查摄像机的网络设置 是否正确。 - 检查网络线缆是否正确 连接。 - 若使用 DHCP 连接、检查摄像机是否能够 无故障地获得动态 IP 地址。 - 若摄像机与IP路由器连接、确认是否 正确设置了端口转发。
查看器在监视期间断开。	- 已连接的查看器在摄像机或网络配置发生更改时会断开。 - 检查所有的网络连接。 - 若摄像机通过 PPPoE 网络进行连接, 查看器在网络状况不佳的情况下可能会断开。
IP 安装程序未检测到连接至网络的摄像机。	关闭 PC 上的防火墙设置、再次搜索摄像机。
图像重叠。	检查是否将多个摄像机应当设置的不同地址设为了同一多播地址。多个摄像机共享同一地址可能会导致图像的重叠。
无图像出现。	如果传输方法设置为多播, 请检查摄像机所连接的 LAN 中是否有路由器支持多播。
<事件> 的 <MD/VA> 设置为 <启用> 但我未收到任何电子邮件通知,甚至发生了分析事件也是如此。	- 按以下顺序验证设置： A. 检查 <日期和时间> 设置。 B. <MD / VA> 应设置为 <启用>。 C. 检查 <事件设置> 菜单的 <电子邮件> 选项是否选择为使用。
即使我未使用 <MD / VA>, 是否也可以定义事件规则?	是, 可以。无论智能视频分析设置如何, 您均可设置事件规则。

故障	解决方法
即使在产生智能视频分析事件时,在报警输出端口也找不到信号。	检查警报输出端口设置。
无法录制到 Micro SD 内存卡。	检查内存卡是否有缺陷。
插入了 Micro SD 内存卡,但摄像机操作不正常。	- 检查是否以正确的方向插入内存卡。 不能保证本摄像机装置能正常使用由其他设备格式化的内存卡 - 在 <设置> → <事件> → <存储器> 菜单中, 再次格式化内存卡。
无法录制到 NAS。	确认 NAS 中注册的信息正确无误。
系统报告 NAS 设置失败。	- 确认 NAS 的 IP 地址有效。 - 确认 NAS 的 ID/密码有效。 - 确认您可以访问使用 NAS 的 ID 指定为基本文件夹的文件夹。 - 确认 NAS 的 SMB/CIFS 项已被取消选中。 - 确认 NAS IP 地址和摄像机 IP 地址的格式正确。 Ex) NAS 和摄像机子网掩码的初始值是 255.255.255.0。 如果 IP 地址是 192.168.20.32, NAS IP 地址的范围应该是 192.168.20.1~192.168.20.255。 - 检查在未对已存或使用过的默认文件夹进行格式化前, 是否以其他用户进行连接。 - 确认使用了建议的 NAS 设备。

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iproute2-4.3.0	GPL 2.0	
iptables-1.4.21	GPL 2.0	http://ftp.netfilter.org/pub/iptables
ethtool-4.2	GPL 2.0	
mtdd-1.5.2	GPL 2.0	ftp://ftp.infradead.org/pub/mtdd-utils
mi-diag-2.11	GPL 2.0	
rp-pppoe-3.11	GPL 2.0	http://www.roaringpenguin.com/pppoe/
wpa_supplicant-2.5	GPL 2.0	
bash-4.3.30	GPL 3.0	
zerocoinf	GPL 2.0	

LGPL SW

Component Name	License	URL
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inetutils	LGPL 3.0	
neon-0.29.6	LGPL 2.0	http://www.webdav.org/neon/

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- Version 1.1

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It appears that the arithmetic coding option of the JPEG spec is covered by patents owned by IBM, AT&T, and Mitsubishi. Hence arithmetic coding cannot legally be used without obtaining one or more licenses. For this reason, support for arithmetic coding has been removed from the free JPEG software. (Since arithmetic coding provides only a marginal gain over the unpatented Huffman mode, it is unlikely that very many implementations will support it.) So far as we are aware, there are no patent restrictions on the remaining code.

The IJG distribution formerly included code to read and write GIF files. To avoid entanglement with the Unisys LZW patent, GIF reading support has been removed altogether, and the GIF writer has been simplified to produce "uncompressed GIFs". This technique does not use the LZW algorithm; the resulting GIF files are larger than usual, but are readable by all standard GIF decoders.

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established by T-Engine Forum
on January 23, 2004
revised on June 17, 2004
revised on December 21, 2006
revised on March 24, 2009

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The data format used by the zlib library is described by RFCs (Request for Comments) 1950 to 1952 in the files <http://www.ietf.org/rfc/rfc1950.txt> (zlib format), [rfc1951.txt](http://www.ietf.org/rfc/rfc1951.txt) (deflate format) and [rfc1952.txt](http://www.ietf.org/rfc/rfc1952.txt) (gzip format).



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