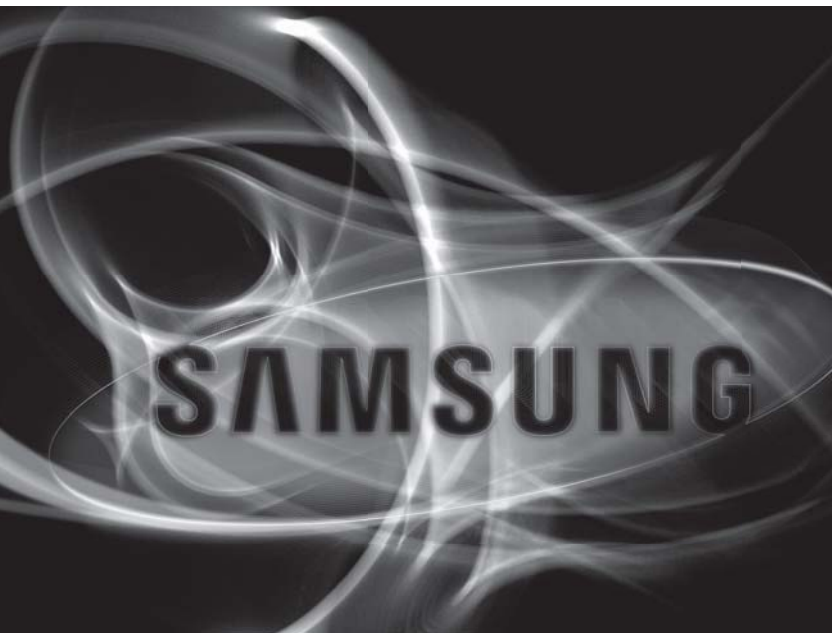


SAMSUNG TECHWIN

网络摄像机 用户手册

SNP-3430H



网络摄像机

用户手册

版权

©2011 Samsung Techwin Co., Ltd. 版权所有。

商标

 **SAMSUNG TECHWIN** 是 Samsung Techwin Co., Ltd. 的注册商标。

本产品的名称是 Samsung Techwin Co., Ltd. 的注册商标。

本手册中提及的其他商标属其相应公司的注册商标。

限制

Samsung Techwin Co., Ltd. 保留本文档的版权。在任何情况下，未经 Samsung Techwin 正式批准，不得复制、发行或更改本文档的一部分或全部。

免责声明

Samsung Techwin 尽力验证本文档中内容的完整性和正确性，但不能提供正式保证。

使用本文档及所产生的结果完全由用户自行负责。

Samsung Techwin 保留更改本文档的内容而不提前通知的权利。

保修

如果在正常条件下，产品无法操作，请告诉我们。Samsung Techwin 将免费解决问题。

保质期是 3 年。但是，不包括下列情况：

- 如果因为运行与系统操作无关的程序而导致系统行为异常。
- 使用时间长而导致性能下降或自然磨损

概述

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. 请您用干布清洁本机器。
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。



概述

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。

注意



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。

注意

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。

BNC 输出端 X 的安装过程。

如果保持连接 BNC 电缆，则闪光的风险可能会导致损坏产品或使产品功能异常。

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，由部件制造商提供并在三星内部验证后做成的。

某些部品包含的有害物质，按照现在的技术基准不能替代，三星一直在为改善此项而努力。

工作温度注意事项

1. 产品在低于 -50°C 的环境温度下无法工作。
2. 在 -50°C 以下，除霜可能无法工作，具体视安装位置而定。
3. 让产品一直开机，以让产品内部的温度保持在 -10°C 以上。
4. 产品保持在 -50°C 以下低温之后，即使让产品变暖，温度达到 -20°C ，产品也无法输出视频信号，而是保持蓝屏 30 分钟，再重置缩放模块；在此期间，产品无法正常工作。

因此，它会尝试初始化镜头模块，每 30 分钟一次，直到产品内部的温度达到正常工作温度为止。

概述

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。

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。

概述

3

- 3 重要的安全说明
- 9 产品特色
- 9 推荐 PC 技术规格
- 10 随机提供的物品
- 11 简图

安装与连接

15

- 15 DIP 开关设置
- 24 安装
- 29 插入/拔出 SD 存储卡
- 30 存储卡信息（不含）
- 31 与其他设备连接

网络连接和设置

35

- 35 将摄像头与局域网直接连接
- 36 将摄像机直接连接至基于 DHCP 的 DSL/有线电视网调制解调器
- 37 直接将摄像机连接到 PPPoE 调制解调器
- 38 将摄像头与使用 PPPoE/Cable 调制解调器的宽带路由器连接
- 39 在 IP Installer 中使用的按钮
- 40 静态 IP 设置
- 43 动态 IP 设置
- 44 路由器端口设置
- 46 从共享的本地 PC 连接到摄像机
- 46 从远程 PC 通过互联网连接到摄像机

概述

WEB 查看器

47

- 47 连接到摄像机
- 48 登录
- 49 安装 Silverlight Runtime
- 51 使用现场屏幕
- 55 播放
- 56 播放备份录制文件

设置屏幕

57

- 57 设置
- 57 音频与视频设置
- 71 网络设置
- 78 事件设置
- 83 系统设置

附录

88

- 88 规格
- 93 产品视图
- 94 故障排除
- 96 Open Source Announcement
- 98 GPL/LGPL Software License

产品特点

- **H.264/MPEG-4/MJPEG 多流**

本网络摄像机支持 H.264/MPEG-4/MJPEG 编解码器，并可以同时用不同的编解码器以不同的分辨率和质量显示视频。



但是，不能在网页上播放 MPEG-4 视频。如果要在网页上播放视频，请使用 CMS 软件。

- **支持各种通信协议**

支持 TCP/IP、UDP、RTP/RTSP、电子邮件、和 FTP 协议，以及多种因特网协议，例如 ARP、HTTP、HTTPS 和 DHCP。

- **基于 Web 浏览器的监视**

使用互联网 Web 浏览器在本地网络环境中显示图像

- **警报功能**

如果发生事件，会将与事件相关的视频传输至用户指定的 FTP/电子邮件，或者保存至 SD 存储卡，或者将事件信号发送至警报输出端口。

- **符合 ONVIF (Spec 1.01)**

本产品支持 ONVIF Core Spec. 1.01。

有关详细信息，请参阅 www.onvif.org。



Driving network video through global standardization

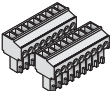
推荐 PC 技术规格

- CPU: Intel(R) Core(TM)2 2.00 GHz 或更高
- 操作系统: Windows XP、VISTA、7、Mac OS
- 分辨率: 1280X1024 像素或更高
- RAM: 1GB 或更大
- 网络浏览器: IE 6.0 或更高版本、
Firefox、Chrome、Safari
 - 既不支持测试版，也不支持开发者版，仅支持在公司官方网站发布的正式版本。
 - 在 Firefox v3.5 或更高版本上，显示警告消息对话框可能会导致错误。
 - 如果在 Windows XP 操作系统中使用本产品的 IPv6 功能，则可能会导致问题出现。
若需要使用 IPv6 功能，建议使用 Windows 7 操作系统。
- 显存: 128MB 或更大

概述

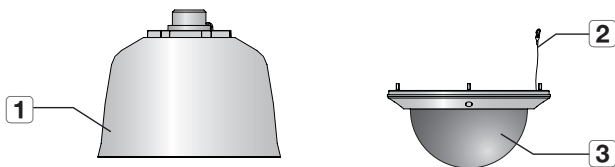
随机提供的物品

请检查产品包装内是否已包括摄像机和所有附件。

外观	项目名称	数量	说明
	用户手册/ Installer S/W, CMS S/W DVD	1	
	简介	1	
	9 针接线端子	2	用于警报连接
	4 针接线端子	1	用于 RS-485 通信
	3 针接线端子	1	用于电源连接
	L 型扳手	1	用于卸下/固定圆顶盖

简图

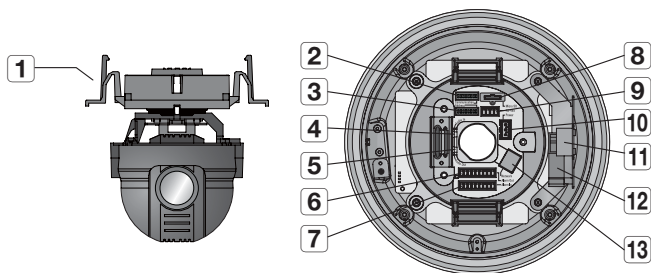
外观



项目	说明
1 遮阳和机盒单元	机盒可以保护内部 PTZ 机械装置, 避免阳光直射、受到雨淋或受外界影响。
2 圆顶安全线	防止圆顶盖掉下来。
3 圆顶盖	用于保护镜头和主设备的护盖。

概述

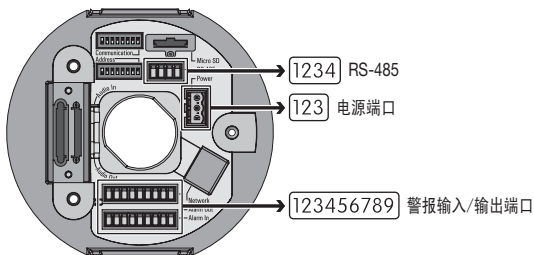
内部



项目	说明
1 PTZ 机械装置	控制摄像机的 PTZ 操作。
2 通信 设置开关	设置传输速率和协议。
3 ID 设置开关	指定摄像机 ID。
4 音频输入端口	用于连接音频输入线。
5 音频输出端口	用于连接音频输出线。
6 警报输出端口	用于连接警报输出线的接线端子端口。
7 警报输入端口	用于连接警报输入线的接线端子端口。
8 Micro SD 卡插槽	Micro SD 卡插槽。
9 通信端口	用于 RS-485 通信。
10 电源端口	此处用于连接电源。
11 加热器	在低温环境下,通过提高机盒的内部温度,给圆顶盖除霜。
12 风扇	为圆顶盖除霜以及去除湿气。
13 网络连接	网络电缆端口。

❖ 摄像机接线接口板

对于摄像机接线, 请参阅下图。



警报输入信号

编号	名称	用途
1	IN1	警报输入传感器端口 1
2	IN2	警报输入传感器端口 2
3	IN3	警报输入传感器端口 3
4	IN4	警报输入传感器端口 4
5	GND	接地
6	IN5	警报输入传感器端口 5
7	IN6	警报输入传感器端口 6
8	IN7	警报输入传感器端口 7
9	IN8	警报输入传感器端口 8

概述

警报输出信号

编号	名称	用途
1	OUT1	警报输出 1
2	OUT1	警报输出 1
3	OUT2	警报输出 2
4	OUT2	警报输出 2
5	DUMMY	未使用
6	OUT3	警报输出 3
7	OUT3	警报输出 3
8	OUT4	警报输出 4
9	OUT4	警报输出 4

RS-485 通信信号

编号	名称	用途
1	RS485+	控制器数据线
2	RS485-	控制器数据线
3	RS485+	控制器数据线
4	RS485-	控制器数据线

电源端口

编号	名称	用途
1	AC	AC 24V
2	F.G	地线
3	AC	AC 24V



- 电源适配器 (AC) 没有极性。



- 警报输出端口的最大容量是 30V DC/1A, 125V AC/0.5A。
- 当将摄像机连接到外部额定值超标产品时, 请使用单独的继电器设备以确保正确操作。
- 在测试监控时为防止可能进入的闪电电流, 请在 FG 端子接地的情况下执行测试。

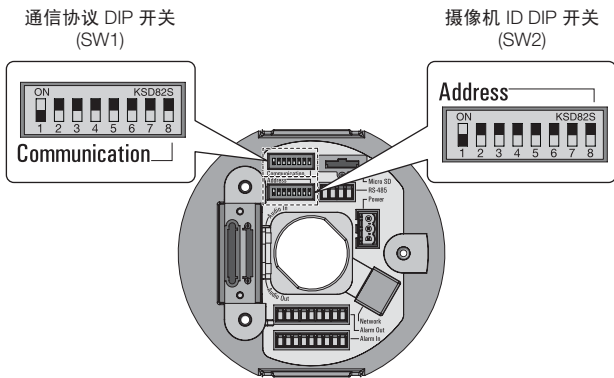
安装与连接

DIP 开关设置

如何设置协议和 ID DIP 开关

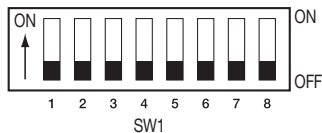
可以使用通信和 ID DIP 开关,来控制摄像机系统的各种设置。在安装产品之前,请根据安装环境设置 DIP 开关。

1. 根据安装环境设置开关。有关更详细的设置信息,请参阅下一页上的表。
2. 如果未完全打开/关闭开关,摄像机可能会功能异常;在完成设置之前,请仔细检查开关。



安装与连接

通信协议 DIP 开关设置 (SW1)



SW1 引脚编号	用途
1~4	协议设置
5~7	波特率设置
8	终端设置

• 协议设置

选择摄像机的通信协议

编号	协议	SW1-#1	SW1-#2	SW1-#3	SW1-#4
1	自动检测	OFF	OFF	OFF	OFF
2	SAMSUNG-T	ON	ON	ON	OFF
3	PELCO-D	ON	OFF	OFF	OFF
4	PELCO-P	OFF	ON	OFF	OFF
5	SAMSUNG-E	ON	ON	OFF	OFF
6	Panasonic	OFF	OFF	ON	OFF
7	GE	ON	OFF	ON	OFF
8	AD	OFF	ON	ON	OFF
9	VICON	OFF	OFF	OFF	ON
10	Honeywell (KD6)	ON	OFF	OFF	ON
11	BOSCH	OFF	ON	OFF	ON
12	Honeywell (VCLTP)	ON	ON	OFF	ON

• 波特率设置

选择所选通信协议的传输速度。

编号	波特率 (BPS)	SW1-#5	SW1-#6	SW1-#7
1	2400	OFF	OFF	OFF
2	4800	ON	OFF	OFF
3	9600	OFF	ON	OFF
4	19200	ON	ON	OFF
5	38400	OFF	OFF	ON

• 终端设置

为了防止摄像机和控制器之间的通信信号减弱, 必须通过终端设置来设置线路末端的项目。

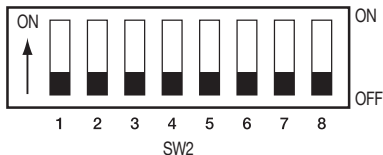
摄像机输入位置	SW1-#8
路径最长的终端	ON
路径上	OFF



- 在每个设置表格中, 对默认值加了阴影。
- 要将第三方控制器与本产品配合使用, 请与售后服务人员或技术部门联系。

摄像机 ID DIP 开关设置 (SW2)

要设置摄像机 ID, 请参阅下面的“摄像机 ID 图”。



安装与连接

• 摄像机 ID 图

ID	SW2-#1	SW2-#2	SW2-#3	SW2-#4	SW2-#5	SW2-#6	SW2-#7	SW2-#8
1	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
2	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
3	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
4	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF
5	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF
6	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF
7	ON	ON	ON	OFF	OFF	OFF	OFF	OFF
8	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF
9	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF
10	OFF	ON	OFF	ON	OFF	OFF	OFF	OFF
11	ON	ON	OFF	ON	OFF	OFF	OFF	OFF
12	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF
13	ON	OFF	ON	ON	OFF	OFF	OFF	OFF
14	OFF	ON	ON	ON	OFF	OFF	OFF	OFF
15	ON	ON	ON	ON	OFF	OFF	OFF	OFF
16	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF
17	ON	OFF	OFF	OFF	ON	OFF	OFF	OFF
18	OFF	ON	OFF	OFF	ON	OFF	OFF	OFF
19	ON	ON	OFF	OFF	ON	OFF	OFF	OFF
20	OFF	OFF	ON	OFF	ON	OFF	OFF	OFF
21	ON	OFF	ON	OFF	ON	OFF	OFF	OFF
22	OFF	ON	ON	OFF	ON	OFF	OFF	OFF
23	ON	ON	ON	OFF	ON	OFF	OFF	OFF
24	OFF	OFF	OFF	ON	ON	OFF	OFF	OFF
25	ON	OFF	OFF	ON	ON	OFF	OFF	OFF
26	OFF	ON	OFF	ON	ON	OFF	OFF	OFF
27	ON	ON	OFF	ON	ON	OFF	OFF	OFF
28	OFF	OFF	ON	ON	ON	OFF	OFF	OFF
29	ON	OFF	ON	ON	ON	OFF	OFF	OFF
30	OFF	ON	ON	ON	ON	OFF	OFF	OFF
31	ON	ON	ON	ON	ON	OFF	OFF	OFF
32	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF
33	ON	OFF	OFF	OFF	OFF	ON	OFF	OFF
34	OFF	ON	OFF	OFF	OFF	ON	OFF	OFF
35	ON	ON	OFF	OFF	OFF	ON	OFF	OFF
36	OFF	OFF	ON	OFF	OFF	ON	OFF	OFF
37	ON	OFF	ON	OFF	OFF	ON	OFF	OFF
38	OFF	ON	ON	OFF	OFF	ON	OFF	OFF
39	ON	ON	ON	OFF	OFF	ON	OFF	OFF
40	OFF	OFF	OFF	ON	OFF	ON	OFF	OFF
41	ON	OFF	OFF	ON	OFF	ON	OFF	OFF

ID	SW2-#1	SW2-#2	SW2-#3	SW2-#4	SW2-#5	SW2-#6	SW2-#7	SW2-#8
42	OFF	ON	OFF	ON	OFF	ON	OFF	OFF
43	ON	ON	OFF	ON	OFF	ON	OFF	OFF
44	OFF	OFF	ON	ON	OFF	ON	OFF	OFF
45	ON	OFF	ON	ON	OFF	ON	OFF	OFF
46	OFF	ON	ON	ON	OFF	ON	OFF	OFF
47	ON	ON	ON	ON	OFF	ON	OFF	OFF
48	OFF	OFF	OFF	OFF	ON	ON	OFF	OFF
49	ON	OFF	OFF	OFF	ON	ON	OFF	OFF
50	OFF	ON	OFF	OFF	ON	ON	OFF	OFF
51	ON	ON	OFF	OFF	ON	ON	OFF	OFF
52	OFF	OFF	ON	OFF	ON	ON	OFF	OFF
53	ON	OFF	ON	OFF	ON	ON	OFF	OFF
54	OFF	ON	ON	OFF	ON	ON	OFF	OFF
55	ON	ON	ON	OFF	ON	ON	OFF	OFF
56	OFF	OFF	OFF	ON	ON	ON	OFF	OFF
57	ON	OFF	OFF	ON	ON	ON	OFF	OFF
58	OFF	ON	OFF	ON	ON	ON	OFF	OFF
59	ON	ON	OFF	ON	ON	ON	OFF	OFF
60	OFF	OFF	ON	ON	ON	ON	OFF	OFF
61	ON	OFF	ON	ON	ON	ON	OFF	OFF
62	OFF	ON	ON	ON	ON	ON	OFF	OFF
63	ON	ON	ON	ON	ON	ON	OFF	OFF
64	OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF
65	ON	OFF	OFF	OFF	OFF	OFF	ON	OFF
66	OFF	ON	OFF	OFF	OFF	OFF	ON	OFF
67	ON	ON	OFF	OFF	OFF	OFF	ON	OFF
68	OFF	OFF	ON	OFF	OFF	OFF	ON	OFF
69	ON	OFF	ON	OFF	OFF	OFF	ON	OFF
70	OFF	ON	ON	OFF	OFF	OFF	ON	OFF
71	ON	ON	ON	OFF	OFF	OFF	ON	OFF
72	OFF	OFF	OFF	ON	OFF	OFF	ON	OFF
73	ON	OFF	OFF	ON	OFF	OFF	ON	OFF
74	OFF	ON	OFF	ON	OFF	OFF	ON	OFF
75	ON	ON	OFF	ON	OFF	OFF	ON	OFF
76	OFF	OFF	ON	ON	OFF	OFF	ON	OFF
77	ON	OFF	ON	ON	OFF	OFF	ON	OFF
78	OFF	ON	ON	ON	OFF	OFF	ON	OFF
79	ON	ON	ON	ON	OFF	OFF	ON	OFF
80	OFF	OFF	OFF	OFF	ON	OFF	ON	OFF
81	ON	OFF	OFF	OFF	ON	OFF	ON	OFF
82	OFF	ON	OFF	OFF	ON	OFF	ON	OFF
83	ON	ON	OFF	OFF	ON	OFF	ON	OFF
84	OFF	OFF	ON	OFF	ON	OFF	ON	OFF

安装与连接

ID	SW2-#1	SW2-#2	SW2-#3	SW2-#4	SW2-#5	SW2-#6	SW2-#7	SW2-#8
85	ON	OFF	ON	OFF	ON	OFF	ON	OFF
86	OFF	ON	ON	OFF	ON	OFF	ON	OFF
87	ON	ON	ON	OFF	ON	OFF	ON	OFF
88	OFF	OFF	OFF	ON	ON	OFF	ON	OFF
89	ON	OFF	OFF	ON	ON	OFF	ON	OFF
90	OFF	ON	OFF	ON	ON	OFF	ON	OFF
91	ON	ON	OFF	ON	ON	OFF	ON	OFF
92	OFF	OFF	ON	ON	ON	OFF	ON	OFF
93	ON	OFF	ON	ON	ON	OFF	ON	OFF
94	OFF	ON	ON	ON	ON	OFF	ON	OFF
95	ON	ON	ON	ON	ON	OFF	ON	OFF
96	OFF	OFF	OFF	OFF	OFF	ON	ON	OFF
97	ON	OFF	OFF	OFF	OFF	ON	ON	OFF
98	OFF	ON	OFF	OFF	OFF	ON	ON	OFF
99	ON	ON	OFF	OFF	OFF	ON	ON	OFF
100	OFF	OFF	ON	OFF	OFF	ON	ON	OFF
101	ON	OFF	ON	OFF	OFF	ON	ON	OFF
102	OFF	ON	ON	OFF	OFF	ON	ON	OFF
103	ON	ON	ON	OFF	OFF	ON	ON	OFF
104	OFF	OFF	OFF	ON	OFF	ON	ON	OFF
105	ON	OFF	OFF	ON	OFF	ON	ON	OFF
106	OFF	ON	OFF	ON	OFF	ON	ON	OFF
107	ON	ON	OFF	ON	OFF	ON	ON	OFF
108	OFF	OFF	ON	ON	OFF	ON	ON	OFF
109	ON	OFF	ON	ON	OFF	ON	ON	OFF
110	OFF	ON	ON	ON	OFF	ON	ON	OFF
111	ON	ON	ON	ON	OFF	ON	ON	OFF
112	OFF	OFF	OFF	OFF	ON	ON	ON	OFF
113	ON	OFF	OFF	OFF	ON	ON	ON	OFF
114	OFF	ON	OFF	OFF	ON	ON	ON	OFF
115	ON	ON	OFF	OFF	ON	ON	ON	OFF
116	OFF	OFF	ON	OFF	ON	ON	ON	OFF
117	ON	OFF	ON	OFF	ON	ON	ON	OFF
118	OFF	ON	ON	OFF	ON	ON	ON	OFF
119	ON	ON	ON	OFF	ON	ON	ON	OFF
120	OFF	OFF	OFF	ON	ON	ON	ON	OFF
121	ON	OFF	OFF	ON	ON	ON	ON	OFF
122	OFF	ON	OFF	ON	ON	ON	ON	OFF
123	ON	ON	OFF	ON	ON	ON	ON	OFF
124	OFF	OFF	ON	ON	ON	ON	ON	OFF
125	ON	OFF	ON	ON	ON	ON	ON	OFF
126	OFF	ON	ON	ON	ON	ON	ON	OFF
127	ON	ON	ON	ON	ON	ON	ON	OFF

ID	SW2-#1	SW2-#2	SW2-#3	SW2-#4	SW2-#5	SW2-#6	SW2-#7	SW2-#8
128	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON
129	ON	OFF	OFF	OFF	OFF	OFF	OFF	ON
130	OFF	ON	OFF	OFF	OFF	OFF	OFF	ON
131	ON	ON	OFF	OFF	OFF	OFF	OFF	ON
132	OFF	OFF	ON	OFF	OFF	OFF	OFF	ON
133	ON	OFF	ON	OFF	OFF	OFF	OFF	ON
134	OFF	ON	ON	OFF	OFF	OFF	OFF	ON
135	ON	ON	ON	OFF	OFF	OFF	OFF	ON
136	OFF	OFF	OFF	ON	OFF	OFF	OFF	ON
137	ON	OFF	OFF	ON	OFF	OFF	OFF	ON
138	OFF	ON	OFF	ON	OFF	OFF	OFF	ON
139	ON	ON	OFF	ON	OFF	OFF	OFF	ON
140	OFF	OFF	ON	ON	OFF	OFF	OFF	ON
141	ON	OFF	ON	ON	OFF	OFF	OFF	ON
142	OFF	ON	ON	ON	OFF	OFF	OFF	ON
143	ON	ON	ON	ON	OFF	OFF	OFF	ON
144	OFF	OFF	OFF	OFF	ON	OFF	OFF	ON
145	ON	OFF	OFF	OFF	ON	OFF	OFF	ON
146	OFF	ON	OFF	OFF	ON	OFF	OFF	ON
147	ON	ON	OFF	OFF	ON	OFF	OFF	ON
148	OFF	OFF	ON	OFF	ON	OFF	OFF	ON
149	ON	OFF	ON	OFF	ON	OFF	OFF	ON
150	OFF	ON	ON	OFF	ON	OFF	OFF	ON
151	ON	ON	ON	OFF	ON	OFF	OFF	ON
152	OFF	OFF	OFF	ON	ON	OFF	OFF	ON
153	ON	OFF	OFF	ON	ON	OFF	OFF	ON
154	OFF	ON	OFF	ON	ON	OFF	OFF	ON
155	ON	ON	OFF	ON	ON	OFF	OFF	ON
156	OFF	OFF	ON	ON	ON	OFF	OFF	ON
157	ON	OFF	ON	ON	ON	OFF	OFF	ON
158	OFF	ON	ON	ON	ON	OFF	OFF	ON
159	ON	ON	ON	ON	ON	OFF	OFF	ON
160	OFF	OFF	OFF	OFF	OFF	ON	OFF	ON
161	ON	OFF	OFF	OFF	OFF	ON	OFF	ON
162	OFF	ON	OFF	OFF	OFF	ON	OFF	ON
163	ON	ON	OFF	OFF	OFF	ON	OFF	ON
164	OFF	OFF	ON	OFF	OFF	ON	OFF	ON
165	ON	OFF	ON	OFF	OFF	ON	OFF	ON
166	OFF	ON	ON	OFF	OFF	ON	OFF	ON
167	ON	ON	ON	OFF	OFF	ON	OFF	ON
168	OFF	OFF	OFF	ON	OFF	ON	OFF	ON
169	ON	OFF	OFF	ON	OFF	ON	OFF	ON
170	OFF	ON	OFF	ON	OFF	ON	OFF	ON

安装与连接

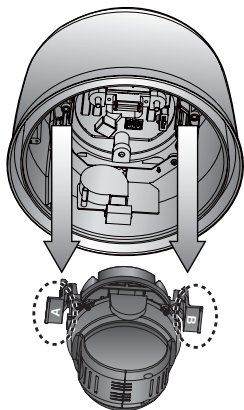
ID	SW2-#1	SW2-#2	SW2-#3	SW2-#4	SW2-#5	SW2-#6	SW2-#7	SW2-#8
171	ON	ON	OFF	ON	OFF	ON	OFF	ON
172	OFF	OFF	ON	ON	OFF	ON	OFF	ON
173	ON	OFF	ON	ON	OFF	ON	OFF	ON
174	OFF	ON	ON	ON	OFF	ON	OFF	ON
175	ON	ON	ON	ON	OFF	ON	OFF	ON
176	OFF	OFF	OFF	OFF	ON	ON	OFF	ON
177	ON	OFF	OFF	OFF	ON	ON	OFF	ON
178	OFF	ON	OFF	OFF	ON	ON	OFF	ON
179	ON	ON	OFF	OFF	ON	ON	OFF	ON
180	OFF	OFF	ON	OFF	ON	ON	OFF	ON
181	ON	OFF	ON	OFF	ON	ON	OFF	ON
182	OFF	ON	ON	OFF	ON	ON	OFF	ON
183	ON	ON	ON	OFF	ON	ON	OFF	ON
184	OFF	OFF	OFF	ON	ON	ON	OFF	ON
185	ON	OFF	OFF	ON	ON	ON	OFF	ON
186	OFF	ON	OFF	ON	ON	ON	OFF	ON
187	ON	ON	OFF	ON	ON	ON	OFF	ON
188	OFF	OFF	ON	ON	ON	ON	OFF	ON
189	ON	OFF	ON	ON	ON	ON	OFF	ON
190	OFF	ON	ON	ON	ON	ON	OFF	ON
191	ON	ON	ON	ON	ON	ON	OFF	ON
192	OFF	OFF	OFF	OFF	OFF	OFF	ON	ON
193	ON	OFF	OFF	OFF	OFF	OFF	ON	ON
194	OFF	ON	OFF	OFF	OFF	OFF	ON	ON
195	ON	ON	OFF	OFF	OFF	OFF	ON	ON
196	OFF	OFF	ON	OFF	OFF	OFF	ON	ON
197	ON	OFF	ON	OFF	OFF	OFF	ON	ON
198	OFF	ON	ON	OFF	OFF	OFF	ON	ON
199	ON	ON	ON	OFF	OFF	OFF	ON	ON
200	OFF	OFF	OFF	ON	OFF	OFF	ON	ON
201	ON	OFF	OFF	ON	OFF	OFF	ON	ON
202	OFF	ON	OFF	ON	OFF	OFF	ON	ON
203	ON	ON	OFF	ON	OFF	OFF	ON	ON
204	OFF	OFF	ON	ON	OFF	OFF	ON	ON
205	ON	OFF	ON	ON	OFF	OFF	ON	ON
206	OFF	ON	ON	ON	OFF	OFF	ON	ON
207	ON	ON	ON	ON	OFF	OFF	ON	ON
208	OFF	OFF	OFF	OFF	ON	OFF	ON	ON
209	ON	OFF	OFF	OFF	ON	OFF	ON	ON
210	OFF	ON	OFF	OFF	ON	OFF	ON	ON
211	ON	ON	OFF	OFF	ON	OFF	ON	ON
212	OFF	OFF	ON	OFF	ON	OFF	ON	ON
213	ON	OFF	ON	OFF	ON	OFF	ON	ON

ID	SW2-#1	SW2-#2	SW2-#3	SW2-#4	SW2-#5	SW2-#6	SW2-#7	SW2-#8
214	OFF	ON	ON	OFF	ON	OFF	ON	ON
215	ON	ON	ON	OFF	ON	OFF	ON	ON
216	OFF	OFF	OFF	ON	ON	OFF	ON	ON
217	ON	OFF	OFF	ON	ON	OFF	ON	ON
218	OFF	ON	OFF	ON	ON	OFF	ON	ON
219	ON	ON	OFF	ON	ON	OFF	ON	ON
220	OFF	OFF	ON	ON	ON	OFF	ON	ON
221	ON	OFF	ON	ON	ON	OFF	ON	ON
222	OFF	ON	ON	ON	ON	OFF	ON	ON
223	ON	ON	ON	ON	ON	OFF	ON	ON
224	OFF	OFF	OFF	OFF	OFF	ON	ON	ON
225	ON	OFF	OFF	OFF	OFF	ON	ON	ON
226	OFF	ON	OFF	OFF	OFF	ON	ON	ON
227	ON	ON	OFF	OFF	OFF	ON	ON	ON
228	OFF	OFF	ON	OFF	OFF	ON	ON	ON
229	ON	OFF	ON	OFF	OFF	ON	ON	ON
230	OFF	ON	ON	OFF	OFF	ON	ON	ON
231	ON	ON	ON	OFF	OFF	ON	ON	ON
232	OFF	OFF	OFF	ON	OFF	ON	ON	ON
233	ON	OFF	OFF	ON	OFF	ON	ON	ON
234	OFF	ON	OFF	ON	OFF	ON	ON	ON
235	ON	ON	OFF	ON	OFF	ON	ON	ON
236	OFF	OFF	ON	ON	OFF	ON	ON	ON
237	ON	OFF	ON	ON	OFF	ON	ON	ON
238	OFF	ON	ON	ON	OFF	ON	ON	ON
239	ON	ON	ON	ON	OFF	ON	ON	ON
240	OFF	OFF	OFF	OFF	ON	ON	ON	ON
241	ON	OFF	OFF	OFF	ON	ON	ON	ON
242	OFF	ON	OFF	OFF	ON	ON	ON	ON
243	ON	ON	OFF	OFF	ON	ON	ON	ON
244	OFF	OFF	ON	OFF	ON	ON	ON	ON
245	ON	OFF	ON	OFF	ON	ON	ON	ON
246	OFF	ON	ON	OFF	ON	ON	ON	ON
247	ON	ON	ON	OFF	ON	ON	ON	ON
248	OFF	OFF	OFF	ON	ON	ON	ON	ON
249	ON	OFF	OFF	ON	ON	ON	ON	ON
250	OFF	ON	OFF	ON	ON	ON	ON	ON
251	ON	ON	OFF	ON	ON	ON	ON	ON
252	OFF	OFF	ON	ON	ON	ON	ON	ON
253	ON	OFF	ON	ON	ON	ON	ON	ON
254	OFF	ON	ON	ON	ON	ON	ON	ON
255	ON	ON	ON	ON	ON	ON	ON	ON

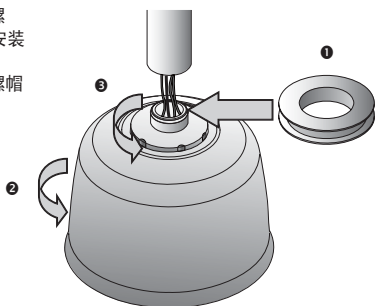
安装与连接

安装

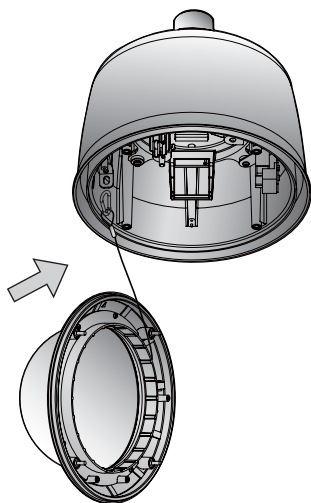
1. 在您可以连接电缆线之前，请按下 PTZ 机械装置的 A 和 B 手柄以将其取出。



2. 用防水带缠绕机盒顶部上的管道螺纹。至少缠绕 7 圈，再将上机盒安装到支架上。
要固定上机盒，请顺时针旋转双螺帽的手柄，直到尽头。

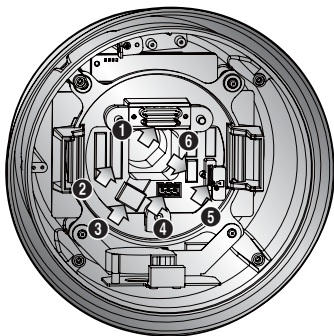


3. 请确保圆顶盖牢固地连接至安全线。



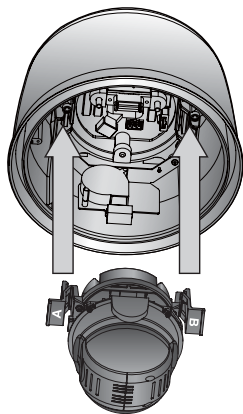
4. 将下列每根电线连接至适当的端口。

- ❶ 音频输入/输出
- ❷ 接线端子
- ❸ 网络
- ❹ 电源
- ❺ Micro SD 卡
- ❻ RS-485

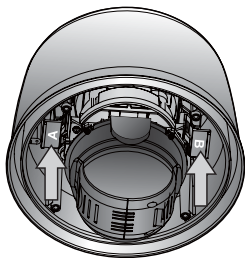


安装与连接

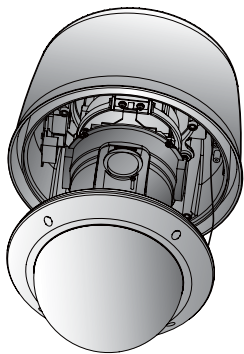
5. 在将 PTZ 机械装置放入上机盒的挂钩并将它往下按之前，请检查上机盒中一键式连接器的方向。



6. 要将 PTZ 机械装置固定在上机盒中，请按住两个黑色的手柄，直到听到咔嗒声为止。



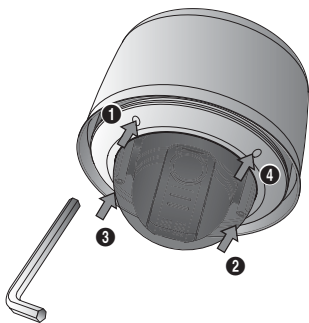
7. 盖上圆顶盖。请确保按箭头方向盖上圆顶盖。



8. 按图中所示的数字顺序，拧紧螺钉 (x4)。



- 要保持最佳密封性能，请以 0.5 N·m 和 1.0 N·m (0.37 ~ 0.73 lbf·ft) 之间的转矩，拧紧螺钉。



安装与连接

可选的安装附件

为了方便安装,您可以购买可选的附件。

1. 墙上安装适配器 (SCX-300WM)

将圆顶摄像机安装到墙上时使用该适配器。



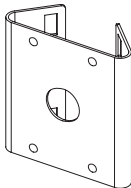
2. 天花板安装适配器 (SCX-300CM)

将圆顶摄像机安装到混凝土天花板上时使用该适配器。



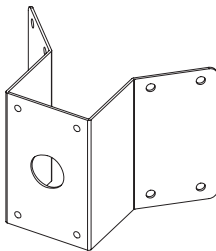
3. 柱式安装适配器 (SCX-300PM)

这是在直径大于 80 毫米的柱子上安装墙上安装适配器 (SCX-300WM) 时使用的适配器。



4. 角落安装适配器 (SCX-300KM)

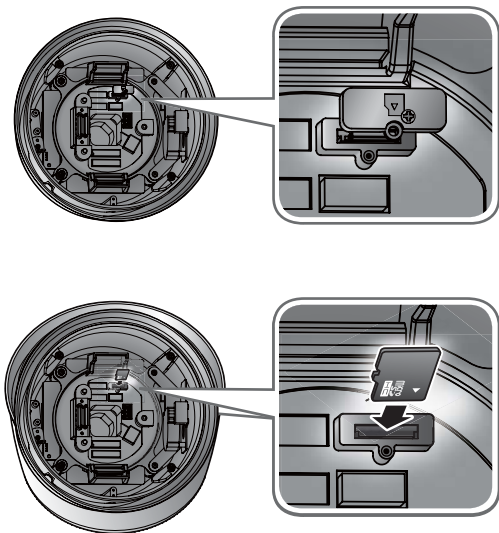
这是在墙角安装墙上安装适配器 (SCX-300WM) 时使用的适配器。



插入/拔出 SD 存储卡

插入 SD 存储卡

如图所示，拧松螺钉，然后取出 SD 存储卡。按箭头方向插入 SD 卡。

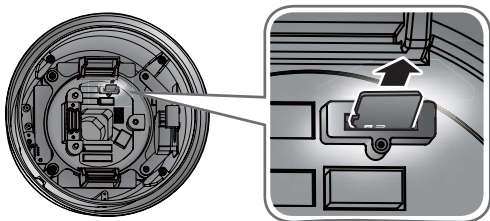


- 请勿在 SD 存储卡翻转时用力插入。否则，可能会损坏 SD 存储卡槽。

安装与连接

拔出 SD 存储卡

轻轻地按压存储卡露在外面的一端，依图示的方式从插槽中弹出存储卡。



- 过度用力按压 SD 存储卡可能会导致卡不可控制地从卡槽中弹出。
- 要卸下 SD 存储卡，请从 **<SD 录制>** 将 **<录制>** 设置为 **<关>**，然后按 **[应用 ()]**。
(第 79 页)
- 如果在 SD 存储卡中保存了数据，则卸下 SD 存储卡将损坏卡中存储的数据。

存储卡信息(不含)

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。

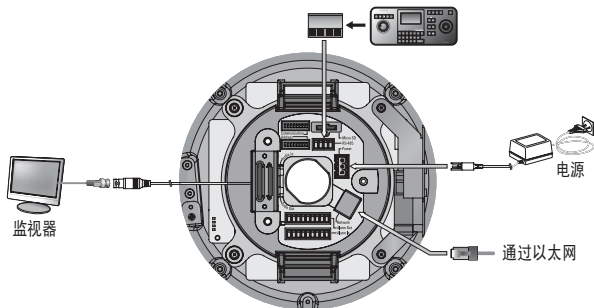
选择一款适合您的存储卡

您可以在本摄像机中使用 Micro SD/SDHC 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。

对您的摄像头，我们建议您使用以下厂商制造的存储卡：
Micro SD/SDHC 存储卡制造商：Sandisk, Transcend, Kingston
您的摄像机支持 2GB 至 32GB 的存储卡容量。

回放性能可能受存储卡速度的影响，因此，请使用高速存储卡。
我们建议，最好使用最小读/写速度 10Mbps，且符合 6 类规格的存储卡。

与其他设备连接



电源

在建立连接之前，请检查额定电压和电流。

额定功率	允许的输入电压	电流消耗
AC 24V	AC 19V ~ 29V	2.5 A



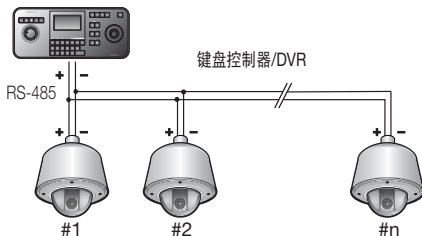
- 如果使用 PoE+，加热器将根本不起作用。
如果安装地点要求加热器操作，请使用适配器。适配器需单独购买。
- 连接监视器与摄像机时，请确保它们已关闭。

安装与连接

RS-485 通信

为了控制 PTZ 操作, 请将此线连接至 DVR。

要一次控制多个摄像机, 必须并行配置 RS-485 通信, 如下所示



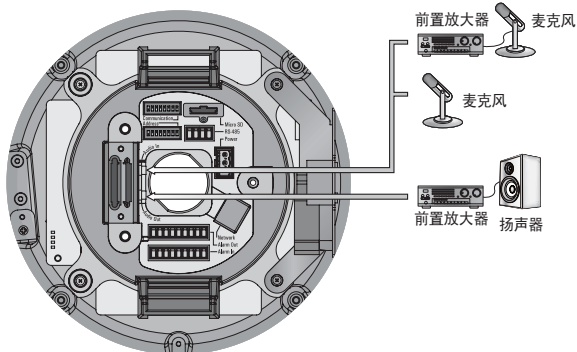
视频连接

使用 BNC 同轴电缆建立视频连接。



- BNC 输出端口只用于监视网络摄像机的安装过程。
如果保持连接 BNC 电缆, 则闪光的风险可能会导致损坏产品或故障。

连接音频输入/输出

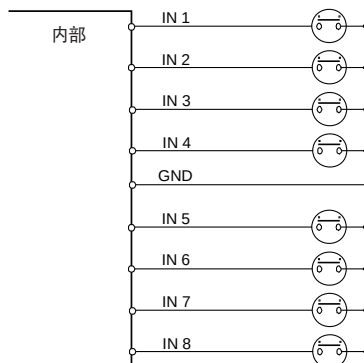


1. 将摄像头的 AUDIO IN 端口直接与麦克风连接，或与和麦克风连接的放大器的 LINE OUT 端口相连。
2. 将摄像头的 AUDIO OUT 端口与扬声器的 LINE IN 连接。
3. 检查音频输入的规格。

- **音频编解码器**
G.711 PCM. μ -law 64kbps 8kHz sampling
- **全双工音频**
- **音频输入**
使用单声道信号线路输入（最大2.4 Vpp）
- **音频输出**
使用单声道信号线路输出（最大2.4 Vpp）
- **线路输出阻抗**
600 Ω

安装与连接

警报输入接线图



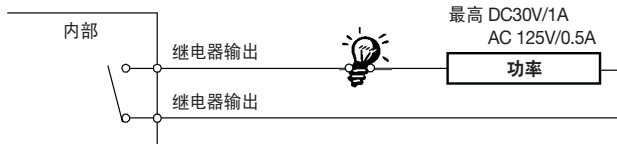
传感器输入

将 GND 连接至输入信号引脚表示激活警报。



- 如果您要激活警报输入，则必须在“设置”菜单中选择传感器类型。
- 您可以选择两种类型的传感器：常开和常闭。如果选择的传感器类型不正确，则可能会导致警报操作相反。

警报输出



- 有 4 个警报输出可用，所有这些输出的类型都是继电器触点。因此，您不需要注意交流频道极性、AC/DC 或绝缘。但是，请确保您已检查继电器触点上的功耗。

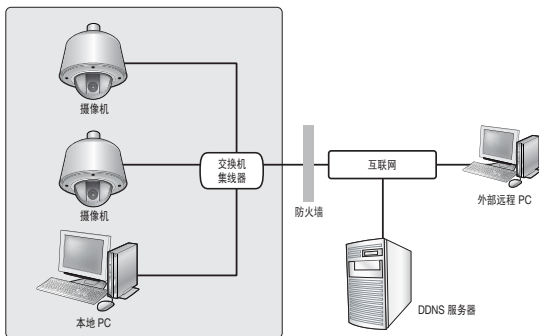
网络连接和设置

可根据您的网络配置来设置网络的设定。

将摄像头与局域网直接连接

连接局域网内的本地 PC 和摄像头

1. 启动本地 PC 上的网络浏览器。
2. 在浏览器的地址栏中输入 IP 地址。



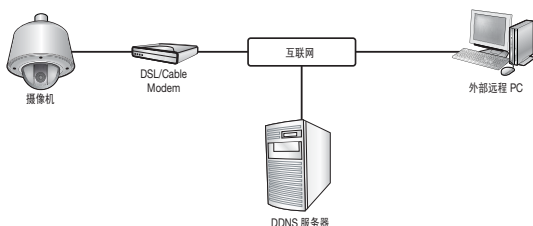
<局域网>



- 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头。
在此情况下，联系网络管理员解决问题。
- IP 地址默认设置为 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 40 页）

网络连接和设置

将摄像机直接连接至基于 DHCP 的 DSL/有线电视网调制解调器

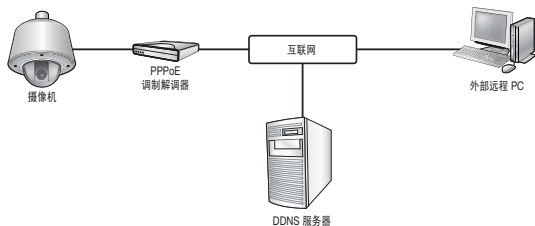


1. 使用交叉 LAN 电缆将网络电缆直接连接至您的 PC。
2. 运行 IP Installer 并更改摄像机的 IP 地址，以便可以使用桌面上的 Web 浏览器连接至互联网。
3. 使用互联网浏览器连接至摄像机。
4. 移至 [设置] 页面。
5. 移至 [网络] – [DDNS] 并配置 DDNS 设置。
6. 移至 [网络] – [接口]，并将网络类型设置为 [DHCP]。
7. 将摄像机（已从您的 PC 上拔下）直接连接至调制解调器。
8. 重新启动摄像机。



- 有关注册 DDNS 设置，请参阅“注册 DDNS”。(第 74 页)
- 有关配置 DDNS 设置，请参阅“DDNS”。(第 73 页)
- 有关设置网络类型，请参阅“接口”。(第 71 页)

直接将摄像机连接到 PPPoE 调制解调器



1. 使用交叉 LAN 电缆将网络电缆直接连接至您的 PC。
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. 使用互联网浏览器连接至摄像机。
4. 移至 [设置] 页面。
5. 移至 [网络] - [DDNS] 并配置 DDNS 设置。
6. 移至 [网络] - [接口]，并将网络类型设置为 [PPPoE]。
7. 将摄像机（已从您的 PC 上拔下）直接连接至调制解调器。
8. 重新启动摄像机。

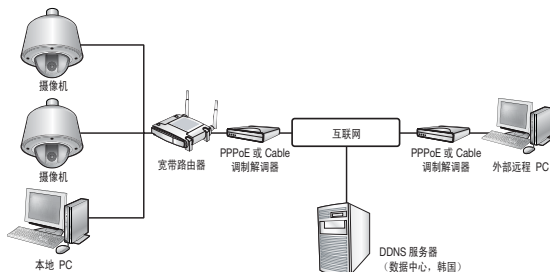


- 有关注册 DDNS 设置，请参阅“注册 DDNS”。(第 74 页)
- 有关配置 DDNS 设置，请参阅“DDNS”。(第 73 页)
- 有关设置网络类型，请参阅“接口”。(第 71 页)

网络连接和设置

将摄像头与使用 PPPoE/CABLE 调制解调器的宽带路由器连接

适用于小型网络环境，如家庭、SOHO 以及普通的商店。



配置连接到宽带路由器

在配置连接到宽带路由器的本地 PC 的网络设置时，遵循以下说明。

- 选择：<网上邻居> → <属性> → <本地连接> → <属性> → <常规> → <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) 若宽带路由器的地址 (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) 若宽带路由器的地址 (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) 若宽带路由器的地址 (LAN IP) 为 192.168.xxx.1

IP 地址: 192.168.xxx.100

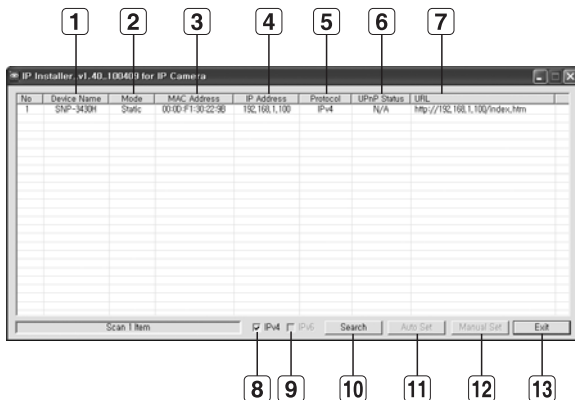
子网掩码: 255.255.255.0

默认网关: 192.168.xxx.1



- 关于宽带路由器的地址，请参见产品文档。
- 请参阅路由器设置的“**路由器端口设置**”章节。（第 44 页）

在 IP INSTALLER 中使用的按钮



项目	说明
1 Device Name	已连接摄像机的型号名称。 单击此列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 Mode	对当前网络连接状态显示 <Static>, <Dynamic> 和 PPPoE。
3 MAC(Ethernet) Address	已连接摄像机的以太网地址。 单击此列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。
4 IP Address	IP 地址。 单击此列可以按 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。 出厂默认设置为“192.168.1.100”。
5 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”。
6 UPnP Status	此功能当前不可用。

网络连接和设置

项目	说明
7 URL	DDNS URL 地址可以从外部互联网访问。 但是, 如果 DDNS 注册失败, 此按钮将被摄像机的 <IP Address> 代替。
8 IPv4	扫描使用 IPv4 设置的摄像机。
9 IPv6	扫描使用 IPv6 设置的摄像机。
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 DVD 中提供的安装程序版本, 或者使用最新版本 (如果可用)。您可以从产品网站下载最新版本。

静态 IP 设置

手动网络设置

运行 <IP Installer.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。

- 从搜索列表中选择一摄像机。
找到摄像机后面标签上的 MAC (以太网) 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。
将显示摄像机的 <IP Address>、<Subnet Mask>、<Gateway>、<HTTP Port> 和 <VNP Port> 默认值。

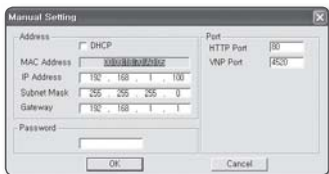


3. 在 **<Address>** 窗格中，提供必需的信息。

- **MAC (Ethernet) Address:** 将自动设置适用摄像机的 MAC (以太网) 地址，因此您无需手动输入。



- 只有在未选中 DHCP 复选框的情况下，才能配置静态 IP 设置。



如果使用宽带路由器

- **IP Address:** 输入宽带路由器提供的 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:** 宽带路由器的 **<子网掩码>** 将是摄像机的 **<子网掩码>**。

- **Gateway:** 宽带路由器的 **<本地 IP 地址>** 将是摄像机的 **<Gateway>**。



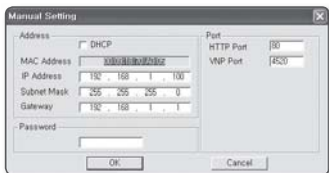
- 设置可能因连接的宽带路由器型号而异。有关详细信息，请参阅适用路由器的用户手册。
- 请参阅路由器设置的“**路由器端口设置**”章节。（第 44 页）

如果不使用宽带路由器

若要设置 **<IP Address>**、**<子网掩码>** 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:** 用于使用互联网浏览器访问摄像机，默认值为 80。使用键盘更改 HTTP 端口值。
- **VNP Port:** 用于控制视频信号传输，默认值为 4520。



网络连接和设置

5. 输入密码。
这是访问摄像机的“**admin**”用户的登录密码。
默认密码为“**4321**”。
6. 单击 **[OK]**。
将完成手动网络设置。
7. 在完成包括 IP 的手动设置后，摄像机将重新启动。

如果宽带路由器连接了多个摄像机

彼此清楚地配置 IP 相关设置和端口相关设置。

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，您必须在互联网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

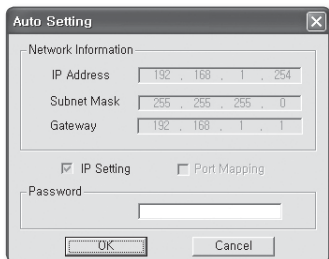
运行 <IP Installer.exe> 以显示摄像机搜索列表。
在初始启动时，[Auto Set] 和 [Manual Set] 将呈灰色。

-  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. 从搜索列表中选择一台摄像机。
找到摄像机后面标签上的 MAC（以太网）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。
将自动设置 <IP Address>、<Subnet Mask> 和 <Gateway>。



3. 输入密码。
这是访问摄像机的“admin”用户的登录密码。
默认密码为“4321”。
4. 单击 [OK]。
将完成自动网络设置。



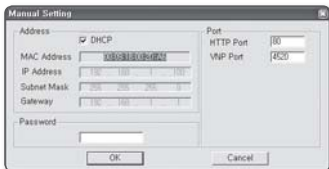
动态 IP 设置

动态 IP 环境设置

- 动态 IP 环境示例
 - 如果连接了摄像机的宽带路由器由 DHCP 服务器分配了 IP 地址
 - 如果使用 DHCP 协议将摄像机直接连接至调制解调器
 - 如果 IP 由内部 DHCP 服务器通过 LAN 分配

检查动态 IP

1. 在用户的本地计算机上运行 IP Installer，以显示分配有列表中的 <Dynamic IP> 地址的摄像机。
2. 从列表中选择摄像机，然后单击 [Manual Set] 检查摄像机的 <Dynamic IP>。
如果取消选择 <DHCP>，您即可将 IP 更改为 <Static>。



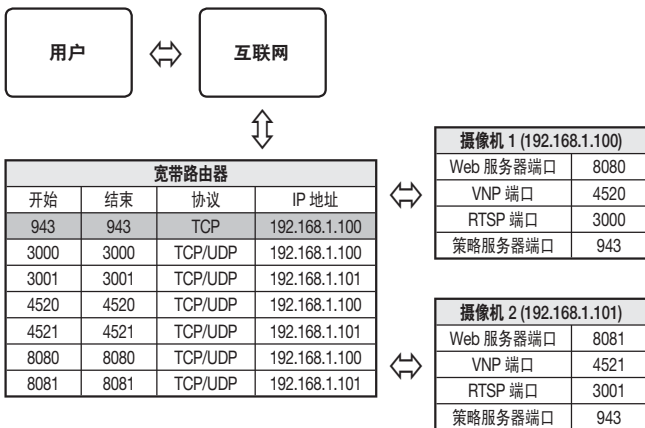
设置多个网络摄像机的端口范围前移

当多个网络摄像机连接到一个宽带路由器设备时，您应将路由器的 TCP 943 端口前移到所连接摄像机的 TCP 943 端口。

! 如果您没有正确设置路由器的 TCP 943 端口，则无法从摄像机的网页上获得任何视频流。

- TCP 943 端口是摄像机的 Silverlight 策略服务器端口。

当摄像机 1 和摄像机 2 连接至同一路由器时：



- 您可通过配置网页在宽带路由器设备上设置正向端口的规则。
- 您无法更改摄像机的 Silverlight 策略服务器端口。
- 您可通过其配置网页更改摄像机的端口，但不可更改策略服务器端口。

网络连接和设置

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。
互联网浏览器将启动，并连接到摄像机。



■ 您也可以在互联网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

由于不允许在不属于宽带路由器网络群集的远程计算机上使用 IP Installer，所以用户需通过摄像机的 DDNS URL 在宽带路由器网络内访问摄像机。

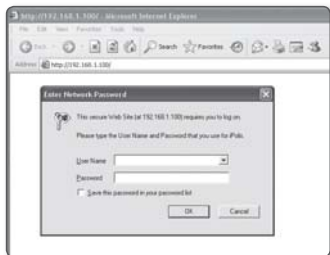
1. 您应该设置宽带路由器端口范围前移，然后才能访问宽带路由器网络中的摄像机。
2. 从远程 PC 启动互联网浏览器，并在地址栏中键入摄像机的 DDNS URL 地址，或宽带路由器的 IP 地址。
例) [http://www.samsungipolis.com/\[DDNS 域\]](http://www.samsungipolis.com/[DDNS 域])

web 查看器

连接到摄像机

通常,您应该

1. 启动互联网浏览器。
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. 启动互联网浏览器。
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. 启动互联网浏览器。
2. 在地址栏中键入摄像机的 DDNS URL。
例) URL 地址 : http://www.samsungipolis.com/[DDNS 域]
- 将会出现登录对话框。

web 查看器

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。

要将 IP 地址添加到 <DDNS> 服务器，请访问 www.samsungipolis.com 并注册您的设备，再将 DDNS 选项设置为 <Samsung DDNS>，然后提供 DDNS 服务器的主机名。

登录

默认的用户 ID 为“admin”，默认密码为“4321”。

1. 在 <User Name> 输入框中输入“admin”。
2. 在 <Password> 输入框中输入“4321”。
如果更改了密码，请输入更改的密码。
3. 单击 [OK]。
如果已成功登录，您将会看到 Live Viewer 屏幕。



- 为安全起见，请确保在 <系统> - <用户> 中更改了密码。
管理员 ID，即“admin”是固定的，无法更改。

- 如果您在完成输入之后选中“**Save this password in your password list**”选项，则从下次起将自动登录，而不会提示输入登录信息。



- 如果您使用 Internet Explorer 7.0 或 8.0 作为默认的 Web 浏览器，就可以使用 100% 的屏幕比查看最佳图像质量。降低该比率可能会切掉边框上的图像。

本网络摄像机使用 Microsoft Silverlight 来显示视频。

安装 SILVERLIGHT RUNTIME

如果您的计算机未安装 Silverlight Runtime 或只安装了 Runtime 旧版本,当访问 Web 查看器时,会自动将打开 Silverlight Runtime 安装页面。

1. 单击 **<Click Here>**。



2. 当文件下载对话框弹出时, 请单击 **<Run>**。



3. 完成下载后, 请单击 **<Run>**。



4. 将显示 Silverlight Runtime 安装页面。
单击 **<Install now>** 以进行安装。



web 查看器

5. 完成后，请单击 <Close>。



6. 关闭并重新启动 Web 浏览器，然后尝试访问 Web 查看器。
正确安装 Silverlight Runtime 后，将看到现场屏幕。



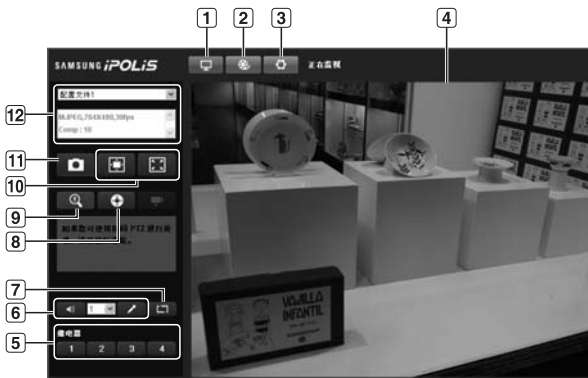
- 为了使安装正常进行，请按以下方式设置拦截弹出窗口设置：

例) Internet Explorer → 工具 → 拦截弹出窗口 → 总是允许当前网站的弹出窗口 (A)

- 但是，未连接至互联网的 MAC OS X 用户，可以使用提供的安装 DVD 来安装 Silverlight Runtime（运行 DVD 中的可执行文件 "Silverlight_xxx.dmg"。将会指导您完成软件的安装过程）。



使用现场屏幕



项目	说明
1 正在监视	移至监视屏幕。
2 播放	切换至播放 SD 存储卡中录制的数据的监视屏幕。
3 设置	移至设置屏幕。
4 查看器屏幕	显示屏幕上的现场视频。
5 警报输出	激活警报输出口。
6 音频	在屏幕上显示音频监听和交谈切换按钮。
7 重置警报	重置警报输出设置。
8 PTZ	可让您控制摄像机缩放镜头的操作。

web 查看器

项目	说明
9 数字 PTZ	可以使用鼠标滚轮以激活数码缩放。
10 屏幕优化,全屏	将屏幕调整为最佳大小,并在现场屏幕上显示全屏图标。
11 捕捉	以 .bmp 格式将快照另存为图像文件。
12 视频格式	可以在 <音频&视频> 设置菜单下的 <视频配置文件> 中选择配置文件类型。 ☑ 对于 IE 6.0 用户,如果未播放选择的配置文件,请按 <视频配置文件> 对话框旁边的“浏览”按钮,然后重新选择配置文件类型。 ☑ 如果显示“编解码器无效”消息,请再次从配置文件列表中选择配置文件类型。

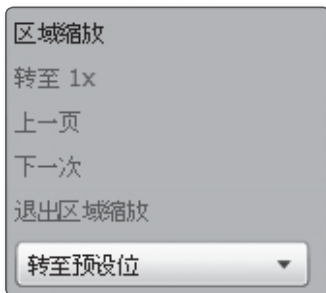


■ 如果温度低于操作范围,则可能不会产生视频信号。此种情况下,请等待视频。

启用缩放区域模式

从查看器屏幕右键单击以显示下面的上下文菜单
菜单项和说明

- 转至 1x: 将当前缩放因数更改为 x1。
- 上一页: 返回上一区域和设置。
- 下一次: 返回下一区域和设置。
- 退出区域缩放: 退出区域缩放模式。
- 转至预设位: 移至预设位置。



捕捉快照

1. 在场景上单击 [] 进行捕捉。
捕捉对话框将会出现。
2. 单击 [Save] 按钮。
屏幕截图会保存在指定的路径中。



- 如果使用 IE8 作为默认 Web 浏览器，请选择“工具-Internet 选项-安全”并取消选择“使用保护模式”。



切换音频声音

1. 单击 [音频 ()] 按钮。
查看器中将显示相应的按钮。
2. 单击该按钮以根据需要听取声音/静音。
此按钮工作方式切换按钮。



切换麦克风声音

1. 单击 [麦克风 ()] 按钮。
查看器中将显示相应的按钮。
2. 单击该按钮以开始/停止交谈。
此按钮工作方式切换按钮。
单击麦克风按钮时，Silverlight 权限对话框将会出现。



- 若没有麦克风，“无法找到音频录制设备”消息将会出现。



web 查看器

适合全屏

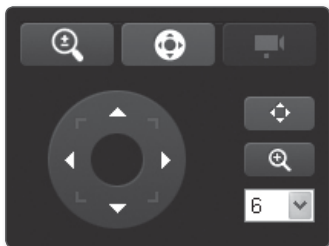
1. 单击 **[全屏 ()]** 按钮。
查看器中将显示相应的按钮。
2. 单击该按钮。
这将使查看器适合全屏。
3. 要退出全屏模式，请按键盘上的 **[Esc]**。

控制 PTZ

1. 按下 **[PTZ ()]** 按钮。
2. 当屏幕上出现 PTZ 按钮条时，请使用方向按钮根据您的喜好调整摄像机角度、变焦系数或聚焦。



- 有关 PTZ 使用的详细信息，请访问“**PTZ 设置**”。（第 65 页）



播放

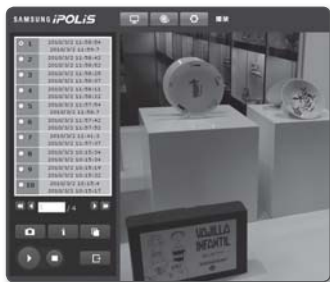
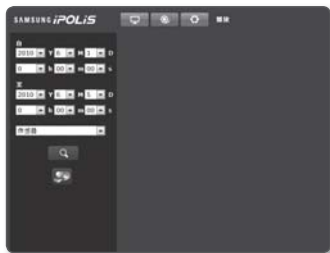
1. 单击 **[播放 (▶)]** 按钮。
2. 指定搜索的开始和结束时间。
3. 选择搜索类型。
4. 单击 **[搜索 (🔍)]** 按钮。
搜索结果将显示在列表中。



- 如果在搜索时间段内录制了超过 500 个事件，则搜索将限制为录制第 500 个事件的日期。

例如，如果搜索时间段在一个月的第 10 天和第 15 天之间，并且在第 10 天到第 11 天录制了超过 500 个事件，则搜索将限制为最多第 11 天（共 500 个事件），将找不到之后（从第 12 天开始）的事件。

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 (■)]**。
要返回到搜索屏幕，请单击 **[退出 (🏠)]**。



检查播放视频的时间信息

1. 单击 **[关于 (i)]** 按钮。
2. 日期和时间信息将会出现在屏幕上。

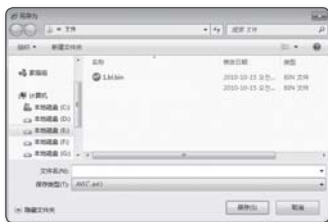
web 查看器

备份搜索到的视频

1. 在场景上单击 [] 进行备份。
另存为窗口出现。
2. 单击 [Save]。
屏幕截图将备份到指定的路径中。



- 如果使用 IE8 作为默认 Web 浏览器，请选择“工具-Internet 选项-安全”并取消选择“使用保护模式”。

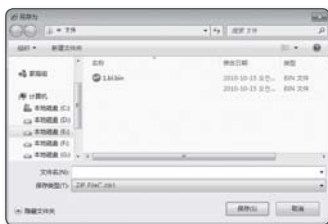


播放备份录制文件

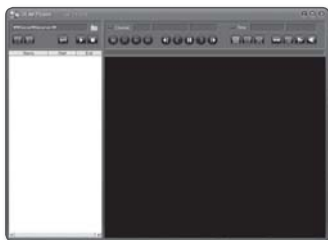
您可使用 SlimPlayer 播放备份录制文件。

下载 SlimPlayer

1. 单击 [SlimPlayer ()]。
将显示下载对话框，可在其中指定下载路径。
2. 指定路径以及正确的文件名，然后单击 [Save]。



3. 解压下载的文件，并运行可执行文件。



设置屏幕

设置

可以配置网络中的摄像机的音频与视频、网络、事件和系统设置。

1. 在现场屏幕中，单击 [设置 ()]。
2. 设置屏幕将会出现。

音频与视频设置

视频配置文件

1. 从设置菜单，选择 <音频 & 视频 ()> 选项卡。
2. 单击 <视频配置文件>。
3. 选择 <视频配置文件> 编号。
4. 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：这是默认视频配置文件。
- 固定帧率配置文件：不管其他配置文件的设置，使所选配置文件的帧率固定。
- 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：这是应用于视频录制的配置文件。

5. 完成后，请单击 [应用 ()]。



- 使用 H.264 编解码器的配置文件只能以 640x480 或更低分辨率存储在 SD 存储卡中。MPEG-4 视频不能存储在 SD 存储卡中。



设置屏幕

添加视频配置文件

可以根据需要添加许多编解码器，以便可以根据录制条件应用各种配置文件。

1. 选择配置文件编号。
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。
 - 分辨率：设置 MPEG-4、H.264 和 MJPEG 文件的视频大小。
 - 帧率：指定帧率。
 - 压缩：指定视频的压缩率。
 - 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。
CBR（恒定比特率）可改变视频质量并且固定网络传输比特率，而可变比特率则通过改变网络传输比特率来强调质量。
 - 目标比特率：指定传输视频将用的比特率。
 - 编码优先级：可以将视频传输方法设置为帧率或质量。
 - GOP 尺寸：在 1 至 15 之间选择 GOP 大小。
 - 配置文件：可以选择 H.264 靠模方法。
 - 熵编码：减少可能因编码引起的压缩损失。
 - 多播(VNP)：指定使用 VNP 协议。
 - IPv4：输入可用于连接至 IPv4 网络的 IPv4 地址。
 - 端口：指定视频通信端口。
 - TTL：为 VNP 数据包设置 TTL。
 - 多播(RTP)：指定 RTP 协议的使用。
 - IPv4：输入可用于连接至 IPv4 网络的 IPv4 地址。
 - 端口：指定视频通信端口。
 - TTL：可为 RTP 数据包设置 TTL。

GOP 大小是什么？

GOP(图片组)是用于 MPEG-4 和 H.264 格式压缩的视频帧，表示从初始 I 帧(关键帧)到下一个 I 帧的帧集合。GOP 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 帧仅包含与先前的 I 帧相比发生了变化的数据。

您可以对 MPEG-4 和 H.264 CODEC 在 1 与 15 之间进行设置。

视频设置

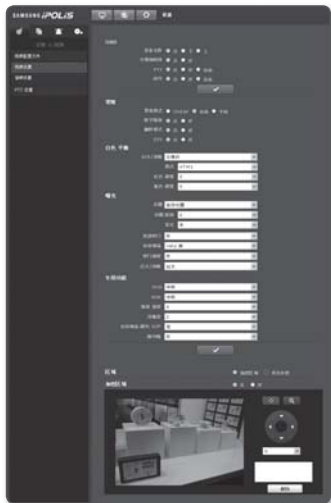
1. 从设置菜单，选择 <音频 & 视频 (🔊📺)> 选项卡。
2. 单击 <视频设置>。
3. 您可以根据偏好配置设置：OSD、常规、白色平衡、曝光和区域。

设置 OSD

- 设备名称：在现场屏幕上显示 <设备名称>，您可以在 <系统> 的 <产品信息> 中提供该名称。
- 日期和时间：在现场屏幕上显示日期和时间信息。
- PTZ：在现场屏幕上显示 PTZ 信息。如果将它设置为 <自动>，则只有在检测到 PTZ 动作时，才会显示 PTZ 信息，动作停止后，PTZ 信息便会消失。
- 动作：在现场屏幕上显示与预设位、回转、组或跟踪等操作相关的信息。

设置常规

- 聚焦模式
 - ONEAF：在使用“旋转”、“倾斜”或“变焦”功能之后，使摄像机自动聚焦一次。
 - 自动：执行连续自动聚焦。
 - 手动：将摄像机模式更改为“手动聚焦”。
- 数字缩放：设置使用数字变焦功能。如果将它设置为 <关>，则光学变焦仍然可操作，但是达到光学变焦最大值时，不会激活数字变焦。
- 翻转模式：如果将它设置为开，则会显示相反的图像。
- DIS（数字图像稳定器）：校正轻微抖动的图像的显示。借助 DIS，您可以取得清晰的图像，即使摄像机受环境震动或抖动的影响也是如此。此功能非常有用，如果您将摄像机安装在柱子顶部、桥梁中间、高速公路路肩或风大的位置，则尤其有用。



设置屏幕



- 与光学变焦不同，数字变焦的图形质量会下降，因为其变焦比率会提高。
- 在下列情况下，自动聚焦功能可能无法正常操作：
 - 明亮的光源，闪烁的光源，例如霓虹灯
 - 背景照度很低时
 - 使用低速快门时
 - 黑暗的物体
 - 背景照度太高时
 - 远距离物体和近距离物体同时出现在监视区域中时
 - 没有反差时，例如天花板或墙壁
 - 摄像机面对细小的水平线时
- “自动聚焦”会聚焦于屏幕中心的物体上；屏幕边缘周围的物体可能不能正确聚焦。

设置白平衡

“白平衡”菜单会在不同的光照条件下，调整屏幕颜色的平衡。

您可以独立地为“白天”模式和“夜晚”模式设置白平衡。

1. 选择“白天”模式。

2. 从 ATW1/ATW2/AWC/3200K/5600K 中选择白天条件的白平衡模式。

- ATW1, ATW2: 摄像机可以根据环境状况实时自动调整色温。允许的温度范围对于 ATW1 是在 2500K 和 9300K 之间，对于 ATW2 是在 2000K 和 10000K 之间。
- AWC: 对当前视频执行自动白平衡一次。
- 3200K: 针对 3200K 色温最佳化的模式。
- 5600K: 针对 5600K 色温最佳化的模式。

3. 通过为红色和蓝色设置选择 -32 和 32 之间的值来调整强度。

4. 选择“夜晚”模式。

从 ATW1/ATW2/AWC/3200K/5600K/关 中选择夜晚条件的白平衡模式。
为每种白平衡模式设置红色调整和蓝色调整。





- 如果夜晚模式设置为 <关>，<白平衡> 将以在白天模式中指定的模式工作，否则屏幕将切换到在 <白天/夜晚> 中指定的模式。
- 在下列情况下，“白平衡”可能无法正常工作。
 - 当主体周围环境的颜色温度超过控制范围时。
 - 当主体的环境照度很暗时。
 - 如果摄像机朝向荧光灯光，或者安装在照度显著变化的地方，则“白平衡”可能无法提供一致的结果。

设置曝光

“曝光”设置用于控制摄像机的曝光计。

光圈设置

1. 将光圈设置为自动光圈或手动。

- 自动光圈：在自动模式中，您可以设置光圈级别和背光。
- 手动：您可以手动设置光圈级别。

2. 在 -32 和 32 之间选择光圈级别。

3. 如果将光圈模式设置为自动光圈，请选择光圈级别并设置背光模式。

设置背光时，请选择关/背光补偿/宽动态范围之一。

- 关：不使用背光模式。
- 背光补偿：可以手动在视频上指定想要的区域和设置要更清晰显示的区域。
- 宽动态范围：在明暗区域同时存在的场景中，显示物体的清晰图像。

4. 如果将背光模式设为 BLC，则可以配置背光设置。

5. 如果将背光模式设置为宽动态范围，请配置宽动态范围权重、宽动态范围水平和宽动态范围白平衡的设置。

- 宽动态范围权重：选择低/中/高之一。
- 宽动态范围水平：选择 -9 和 9 之间的一个值。
- 宽动态范围自动白平衡：选择室内或室外。



- 如果将背光模式设为 BLC，则可以指定背光区域。

设置屏幕

低速快门

此项可让您控制摄像机的电子快门。

选择关/自动 x2 ~ x512 / 固定 x2 ~ x512 之一。

- 自动：此项会在夜晚或低对比度环境中快门速度显著下降时，通过累积视频帧来恢复亮度。
- 固定：此项会累积视频帧，而不管视频亮度如何。



- 如果将宽动态范围设置为开，则您不能将感光度设置为 **〈固定〉**。

自动增益

如果摄像机在低光照条件下捕捉到物体，则 AGC(自动增益控制)会调整摄像机的增益控制和屏幕亮度。



- 仅当将感光度设置为 **〈关〉** 或 **〈固定〉** 时，才会显示 AGC 菜单项。
- 如果将白天/夜晚模式设置为自动，则增益将固定为 **〈Very 高〉**。

移动

移动可让您调整黑暗场景中的增益级别。在感光度模式中时，它还会显示闪烁程度。选择非常慢/慢/正常/快/非常快之一。



- 仅当将感光度设置为 **〈自动〉** 时，才会显示移动菜单项。

快门速度

您可以控制摄像机的快门速度。

- 选择关 / 1/120 / 1/250 / 1/500 / 1/00 / 1/2000 / 1/4000 / 1/10K 之一。



- 如果将宽动态范围设置为开，则您不能调整快门速度。
- 只有在将感光度设置为 **〈关〉** 时，才能设置快门速度。

白天/夜晚

“日夜”功能可允许摄像机在“彩色”和“黑白”模式之间切换。您可以将白天/夜晚模式设置为自动/白天/夜晚。

- 模式
 - 自动：大部分时间以“彩色”模式操作，在夜间检测到低光照级别时，切换到“黑白”模式。
 - 白天：在所有时间都以“彩色”模式操作。
 - 夜晚：在所有时间都以“黑白”模式操作。

设置专用功能

DNR(动态降噪)

动态降噪可显著降低低照度噪声量。

- 选择关/低/中/高/用户1~16之一。



XDR(暗区补偿)

暗区补偿可以照亮影像的较暗点,同时保留较亮点的光照级别,以平衡明暗点对比强烈的图像的总亮度。

- 可用模式有“关”、“低”、“中”和“高”。

缩放 速度 (1~4)

您可以指定变焦速度。值越大,速度越快。

清晰度 (0~3)

您可以控制图像的整体轮廓。

自动增益 颜色 SUP

可根据自动增益控制调整颜色再现范围。

设置屏幕

画中画

可在同一个屏幕上与主图像一起显示子图像。

设置加密区域

可以指定为了您的隐私将保护摄像机视频的某些区域。

1. 从 **<区域>** 选择 **<加密区域>**
2. 选择 **<加密区域>** 中的 **<开>**。
3. 单击图像上的区域并选择 4 个角点以指定所需的区域。
弹出窗口将会出现，您可在其中为区域输入名称，然后单击 **[确认 ()]**。
 - 请勿拖动区域来指定加密区域；那不起作用。
4. 要删除所选区域，请单击 **[删除 ()]**。
5. 完成后，请单击 **[应用 ()]**。
 - 最多可以设置 12 个加密区域。



设置背光补偿的区域。

1. 从 **<曝光>** 将 **<背光>** 设为 **<背光补偿>**。
2. 从 **<区域>** 选择 **<背光补偿>**，然后使用拖放方法指定预览屏幕中的一个区域。
3. 添加区域对话框出现，您可在其中为区域输入名称，然后单击 **[确认 ()]**。
4. 要删除所选区域，请单击 **[删除 ()]**。
 - 只能指定一个区域。
5. 要显示指定的背光区域，请选择用于显示背光区域的 **<开>**。
即使将该选项设为 **<关>**，实际区域仍将被正常设定。



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. 根据您的喜好调整音频 I/O 级别。
 - 音频输入：设置音频输入值。
 - 音频输出：设置音频输出值。
4. 完成后，请单击 [应用 (✔)]。



PTZ 设置

可以更改镜头的方向并激活变焦。

1. 从设置菜单，选择 <音频 & 视频 (🔊)> 选项卡。
2. 单击 <PTZ 设置>。
3. 单击 [方向调整 (📏)]。
 - [将方向更改为 (⬅️)/(➡️)/(⬆️)/(⬇️)]: 更改摄像机镜头的方向。
 - [移动速度控制 (6)]: 数字越大，移动速度越快。



设置屏幕

4. 设置变焦和聚焦控制按钮。
 - [放大 (🔍)]: 放大屏幕。
 - [缩小 (🔍)]: 缩小屏幕。
 - [调焦 (📐 / 📐)]: 调整屏幕中的焦点。
5. 设置预设。

添加预设

1. 选择要添加的预设编号。
2. 设置预设的名称。
3. 按下 [+] 按钮。

删除预设

1. 选择要删除的预设编号。
2. 按下 [🗑] 按钮。

移动预置

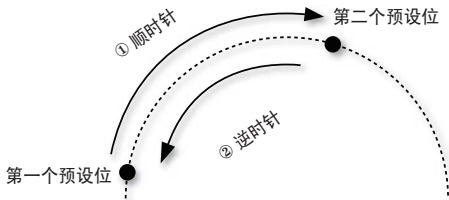
1. 选择想要移动的预置编号。
2. 按下 [↺] 按钮。



回转

回转是在两个预置点之间移动并让您可以跟踪移动的监控功能。

- 如果回转处于活动状态，则摄像机会顺时针从第一个预置位置到第二个预置位置。然后它会逆时针从第二个预置位置移至第一个预置位置。



如果第一个预置位置与第二个预置位置相同，则摄像机会就地顺时针自转 360°，然后逆时针转回 360°。

您可以指定 1°/秒和 180°/秒之间的速度。

配置回转设置

回转是在两个预置点之间移动并让您可以跟踪移动的监控功能。

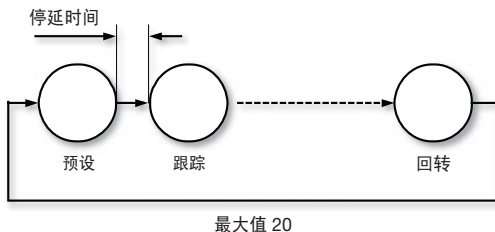
- 将 <顺序设置> 中的 <模式> 设置为 <摆动>。
菜单屏幕将切换到回转设置屏幕。
- 设置 <首次预设> 和 <第二次预设> 以指定回转范围。
- 指定移动的速度。
- 按下 [] 按钮。
第一个预置、第二个预置、速度和停留时间将保存在设置模式中。
- 按下 [] 按钮。
这将执行存储在回转数字中的命令。
- 按下 [] 按钮。
这将停止当前正在运行的回转。



设置屏幕

组

组功能让您可以为多种预设分组,然后可以按顺序调用它们。
您最多可以创建 8 个组,每个组最多包含 20 个操作。



设置组

1. 将〈顺序设置〉中的〈模式〉设置为〈组〉。
菜单屏幕将切换到组设置屏幕。
2. 选择组编号。
3. 在 1 和 20 之间选择索引编号。
4. 从预设、回转和跟踪中选择一个操作。
5. 指定 00:04 和 04:00 之间的停延时间。
6. 如果您对操作选择预设,请指定移动速度;如果选择回转或跟踪,请指定重复计数。
7. 按下 [添加 (■+)] 按钮。您的设置将输入右边的列表中。
8. 重复上面的步骤 3 到 7 以完成组列表。
9. 指定了所有组之后,按下 [保存 (■)]。新创建的组便会保存在摄像机中。



跟踪

跟踪功能会记住使用操纵杆针对特定时间指示的移动跟踪，并在以后重现它以供您参考。您最多可以使用 4 个跟踪，在每个跟踪中，您最多可以保存 1000 条通信命令。

设置跟踪功能

1. 将 <顺序设置> 中的 <模式> 设置为 <跟踪和自动运行>。
屏幕菜单将切换到 PTZ 跟踪和自动操作菜单屏幕。
2. 选择跟踪编号。
3. 按下 [] 按钮。
将显示下面的屏幕。
4. 使用操纵杆创建移动路径。
可用存储空间的容量将显示在进度栏中。
5. 完成路径之后，按下 [停止录制 ()]。



激活跟踪功能

1. 选择跟踪编号。
2. 按下 [] 按钮。



设置屏幕

自动运行

如果某个时间没有进行控制器操作,这将执行您指定的顺序操作。

保存自动运行

1. 将〈顺序设置〉中的〈模式〉设置为〈跟踪和自动运行〉。
2. 选择自动运行模式。
 - 始位: 自动执行到返回位置的操作。
 - 预设: 自动执行到预置编号的操作。
 - 摆动: 自动在回转模式下执行操作。
 - 组: 自动在组模式下执行操作。
 - 跟踪: 自动在跟踪模式下执行操作。
3. 指定 5 秒和 4 小时之间的等待时间。
4. 按下 [] 按钮。



网络设置

接口

1. 从设置菜单，选择 <网络 (🌐)> 选项卡。
2. 单击 <接口>。
3. 根据需要设置 <接口> 和 <IPv6 设置>。
 - IP 类型：选择 IP 连接类型。
 - 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。
 - IPv6 使用：指定使用 IPv6。
 - IPv6 地址：获取访问 IPv6 网络的 IPv6 地址。
4. 完成后，请单击 [应用 (✔)]。



设置屏幕

端口

1. 从设置菜单，选择 <网络 ()> 选项卡。
2. 单击 <端口>。
3. 在端口菜单的每个项目中键入所需信息。
 - 0 至 1023 之间的端口范围和端口 3702 都不可用。
 - HTTP 端口：用于通过 Web 浏览器访问摄像机的 HTTP 端口。默认值是 80(TCP)。
 - VNP 端口：设置用于根据 Samsung 协议传输视频信号的端口。
 - RTSP 端口：用于以 RTSP 模式传输视频，默认值为 554。
 - 查看器端口：用于将视频传输到 Web 查看器，默认值为 4520。
 - 查看器的端口范围应为 4502 与 4532 之间。如果 VNP 端口设置在此有效范围内，则应将查看器端口指定为与 VNP 端口相同。
4. 完成后，请单击 [应用 ()]。



DDNS

DDNS 是动态域名服务的缩写,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。

1. 从设置菜单,选择 <网络 ()> 选项卡。
2. 单击 <DDNS>。
3. 选择 <DDNS>。
4. 根据所选类型键入 DDNS 项目。
 - Samsung DDNS: 如果使用 Samsung Techwin 提供的 DDNS 服务器,请选择此项。
 - 公共 DDNS: 使用公共 DDNS 服务器时,可从所提供的公共 DDNS 服务器中选择一个。
 - 主机名: 输入向 DDNS 服务器注册的主机的名称 (即 DynDNS 的主机名)。
 - 用户名: 输入 DDNS 服务的用户名。(即向 DynDNS 注册的用户 ID)
 - 密码: 输入 DDNS 服务的密码。(即向 DynDNS 注册的密码)
5. 完成后,请单击 [应用 ()]。



设置屏幕

注册 DDNS

向 Samsung DDNS 注册您的产品

1. 访问 iPOLiS 网站
(www.samsungipolis.com) 并用已注册的帐户登录。



2. 从顶部的菜单栏，选择 **<DDNS SERVICE>** - **<MY DDNS>**。



3. 单击 **[PRODUCT REGISTRATION]**。
4. 进入产品领域。
 - 对您进入的领域，必须执行重复检查。



5. 选择 **<CLASSIFICATION>** 并指定 **<MODEL NUMBER>**。
6. 指定产品位置及说明（如有必要）。
7. 单击 **[REGISTRATION]**。
产品将添加至产品列表，您可以对其进行检查。



在摄像机设置中连接至 Samsung DDNS

1. 从 DDNS 设置页面，将 <DDNS> 设置为 <Samsung DDNS>。
2. 提供向 DDNS 网站注册产品域时指定的 <主机名>。
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. 打开 DDNS 设置页面并为 <DDNS> 选择 <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. 完成配置后，请单击 [应用 ()] 按钮。

设置屏幕

IP 过滤

可以创建想要授予或拒绝访问权限的 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，将限制从添加至过滤列表的那些 IP 进行的访问。
 - 允许：如果选择此项，将只接受从添加至过滤列表的那些 IP 进行的访问。
4. 提供想要授予或拒绝访问权限的 IP。对于 IPv4，默认 IP 地址是 0.0.0.0，默认前缀是 32。
5. 从输入的 IP 地址中选择要批准或拒绝的所需 IP 地址。仅会过滤出所选 IP。
6. 完成后，请单击 [应用 (✔)]。



SSL

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 <SSL>。
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。
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，<HTTP（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. 选择要安装的证书文件及证书密钥，然后单击 [安装 ()] 按钮。

删除证书

1. 单击 [删除 ()] 按钮。

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 (使用 EAP-TLS 的 EAPOL)>。
 - 启用 IEEE 802.1x：指定使用 802.1x 协议。
 - EAPOL 版本：选择版本 1 或 2。
 - EAPOL ID：输入 EAPOL ID。
 - EAPOL 密码：输入 EAPOL 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。

安装/删除与 802.1x 相关的证书

1. 按每个项目的 [浏览 ()] 按钮并选择要安装的证书。
2. 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。
3. 按 [安装 ()] 按钮以开始安装，并在项目旁边显示消息“已安装”。
4. 按 [删除 ()] 按钮以删除证书。

设置屏幕

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摄像机中存储的图像传输到您的 PC。

1. 从设置菜单,选择 <事件 (🔔)> 选项卡。

2. 单击 <FTP / 电子邮件>。

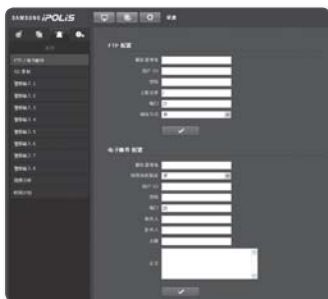
3. 选择 <FTP 配置> 或 <电子邮件 配置> 并输入/选择所需的值。

• FTP 配置

- 服务器地址: 输入您将警报图像传输到的 FTP 服务器的 IP 地址。
- 用户 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>。

• 电子邮件 配置

- 服务器地址: 输入进行电子邮件传输到的电子邮件服务器的 IP 地址。
示例) SMTP. hotmail. com
- 使用身份验证: 选择是否使用身份验证。
- 用户 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。将警报图像附加至准备的电子邮件。

4. 完成后，请单击 **[应用 ()]**。

SD 录制

可以为 SD 存储卡设置录制条件或录制的使用、检查存储的数据的大小或格式化 SD 存储卡本身。

1. 从设置菜单，选择 **<事件 ()>** 选项卡。
2. 单击 **<SD 录制>**。



在 SD 存储卡上进行录制

1. 检查 **<总大小>** 和 **<可用大小>**。
2. 如果 SD 存储卡具有足够的可用空间，请将 **<录制>** 设置为 **<开>**。
否则，检查存储的数据，如果发现它们不重要，请单击 **<格式化>** 以格式化 SD 存储卡。
 - 如果您的 SD 存储卡写入缓慢，则每秒将只存储一帧。
 - 对于大容量的 SD 存储卡，格式化将相应变慢。
 - 如果数据大小随着时间增长，即使您将录制质量设置为全部帧，也只能存储 1 fps。

设置屏幕

3. 指定录制条件。
 - 强行录制 1 fps：每秒将只录制一帧，而不管现有的录制配置文件。
 - 覆盖：如果 SD 存储卡已满，这将删除旧数据并存储新数据代替。
 - 预先警报持续时间：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。
 - 延迟警报持续时间：指定警报发出之后的时间点；将传输图像到指定的时间点为止。最多可以指定警报发出之后 120 秒。
4. 完成后，请单击 [应用 ()]。

警报输入 1~8

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 ()> 选项卡。
2. 单击 <警报输入>。
3. 指定输入设备。
 - 类型
 - 常开触点：它通常是打开的，但是如果关闭，将触发警报。
 - 常闭触点：它通常是关闭的，但是如果打开，将触发警报。
4. 指定 <激活时间>。
 - 始终：当警报发出时，请始终检查。当警报发出时，它将在运行的模式下激活。
 - 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。



5. 指定警报发出时将执行的操作。

- 输出持续时间 1~4: 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。
- 电子邮件 发送: 在警报输入设置中指定电子邮件传输的使用。
- 录制: 在警报输入设置中指定录制的使用。
- 转至预设位: 在设置警报输入时, 移动至指定的预设位置。

6. 完成后, 请单击 [应用 ()]。

视频分析

1. 从设置菜单, 选择 <事件 ()> 选项卡。
2. 单击 <视频分析>。
3. 指定智能视频分析的使用。
4. 设置检测物体的分辨率值和灵敏度水平。

分辨率值	物体大小
1	8x8 像素中的 32 个
2	8x8 像素中的 24 个
3	8x8 像素中的 16 个
4	8x8 像素中的 8 个
5	8x8 像素中的 1 个

- 如果将分辨率值设置得较高, 摄像机可以检测到物体的详细移动。



5. 设置移动探测类型。

设置以探测和跟踪移动物体。

- 跟踪: 探测移动物体并执行附加功能。
- 检测: 探测移动的物体。

6. 设置是否使用其他移动功能。

探测物体的任何移动, 显示具有任何变化的视频, 并跟踪移动路径。

- 如果选择 <移动/固定>, 可以选择物体从屏幕中消失或物体在屏幕中出现并保留指定时间段的相应区域。

设置屏幕

7. 设置是否使用移动显示功能。
 8. 指定激活时间和条件。
 - 有关如何设置〈激活时间〉和〈动作〉, 请参阅**警报输入 1-8**。(第 80 页)
 9. 在将〈开〉设置为〈情报功能〉后, 请设置〈遮挡区域〉。

您最多可以指定 4 个遮挡区域。单击屏幕并将它拖到所需的点。这将设置遮挡区域。在设置的遮挡区域中, 不会激活移动探测。要删除设置的区域, 请单击 [删除] 按钮。
-  ■ 在设置遮挡区域之后, 不要更改〈视频设置〉下面的〈翻转模式〉。
如果您在设置遮挡区域之后更改〈翻转模式〉设置, 则会删除所有现有的遮挡区域, 然后再次设置遮挡区域。

时间计划

可以配置以便让事件发生在计划的时间, 而不管事件的实际发生时间。

1. 从设置菜单, 选择〈事件 ()〉选项卡。
2. 单击〈时间计划〉。

设置定时器事件

1. 将〈定时器事件设置〉设置为〈启用〉。
2. 指定〈激活时间〉。
 - 始终: 始终在设置的时间间隔内以运行的模式激活。
 - 仅预约时间: 在指定的时间和日期定期以运行的模式激活。
3. 指定〈传输时间间隔〉。
4. 指定激活条件。
 - FTP 发送: 指定事件发生时 FTP 传输的使用。
 - 录制: 指定事件发生时录制的使用。
5. 完成后, 请单击 [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。
 - 设备名称：如果您要在现场屏幕中显示设备名称，请从 **<视频设置>** 中提供设备名称并设置为在 **<OSD>** 中显示 **<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地理解。
 - 语言：选择要在 Web 查看器中显示的语言。
4. 完成后，请单击 **[应用 (✔)]**。



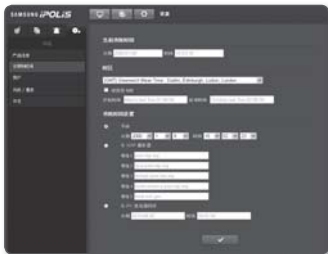
- 产品相关信息只允许输入英文。



设置屏幕

日期和时间

1. 从设置菜单，选择 **<系统 (🔧)>** 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：指定本地基于 GMT 的时区。
 - 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：手动指定时间。
 - 与 NTP 服务器：与指定的服务器地址的时间同步。
 - 与 PC 查看器同步：与连接的计算机的时间同步。
4. 完成后，请单击 **[应用 (✔)]**。



- 如果选择 **<与 PC 查看器同步>**，应将标准时区设置为与 PC 中的当前时区相同。

用户

1. 从设置菜单，选择 <系统 ()> 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：更改管理的当前密码。
 - 访客设置：如果允许 <访客访问>，则任何客户可以访问 Web 查看器屏幕，但只能查看 Live Viewer 屏幕。
 - 当前用户：可以为设置为 <启用> 的用户更改用户信息和调整权限级别。
 - 视频：可以在 Live Viewer 屏幕中选择视频配置文件。
 - 音频输入：在 Live Viewer 屏幕中，将激活音频输入选项。
 - 控制：可控制摄像机菜单、PTZ、麦克风和警报按钮。
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：将系统重置为出厂默认值。
 - 网络参数之外：重置接口/端口 /DDNS/IP 过滤设置以外的其他设置。
 - 全部：重置包括摄像机设置在内的所有设置。（但是，将不重置日志信息）
 - 如果重置所有设置，IP 地址将默认为 192.168.1.100。
 - 配置备份文件：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。



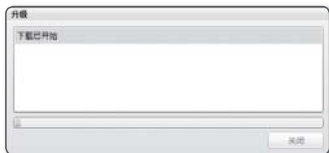
设置屏幕

执行升级

1. 单击 [升级]。
2. 单击 [浏览] 并指定要升级的文件。
3. 单击 [发送]。
4. “升级”对话框出现，其底部将显示进度。

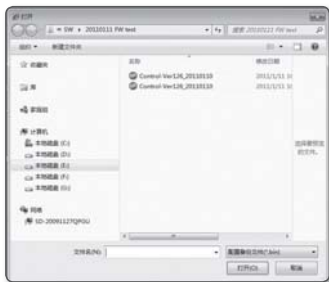


■ 如果强行终止升级流程，升级将无法正确完成。



保存当前设置和恢复备份设置

1. 单击 [备份]。
另存为对话框将出现。
2. 指定备份路径及正确的文件名，然后单击 [Save]。
备份文件将以 “.bin” 格式保存到指定的路径。
3. 要恢复备份设置，请单击 [恢复]。
4. 选择备份文件，然后单击 [Open]。



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>。

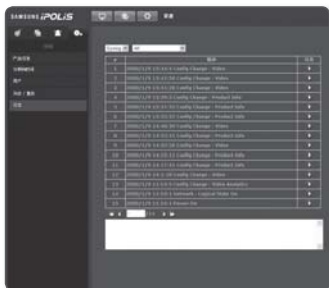
3. 选择日志类型。

- Syslog: 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。
- Evtlog: 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。



- 如果要查看日志的详细信息，请单击日志右列中的 [信息 ()]；日志信息将显示在底部窗格中。
- 每页显示 15 个日志，最新的日志显示在顶部。
- 事件/系统日志列表最多可包含 1000 个日志；之后，每当创建新日志时，将删除最旧的现有日志。

附录

规格

项目		说明
视频	成像设备	1/4 英寸 Ex-view HAD PS CCD
	总像素数	NTSC : 811(水平) x 508(垂直), PAL : 795(水平) x 596(垂直)
	有效像素数	NTSC : 768(水平) x 494(垂直), PAL : 752(水平) x 582(垂直)
	扫描系统	逐行扫描(数字逐行扫描打开) (如果宽动态打开,则为隔行扫描)
	同步	仅限内部
	频率	NTSC : 水平 : 15.734KHz / 垂直 : 59.94Hz, PAL : 水平 : 15.625KHz / 垂直 : 50Hz
	水平分辨率	彩色 : 600 电视行
	最低照度	彩色 : 0.7 勒克司 (F1.6, 50IRE), 0.001 勒克司 (感光度 512X, 50IRE) 黑白 : 0.07 勒克司 (F1.6, 50IRE), 0.0001 勒克司 (感光度 512X, 50IRE)
	S/N 比率	52dB
	视频输出	CVBS : 1.0 Vp-p / 75Ω 复合
镜头	焦距(变焦比率)	3.2~138.5 毫米 (43X)
	最大孔径比	F1.6(广角) / F3.7(望远)
	视野角度	水平 : 61.2°(广角) ~ 1.47°(望远) / V : 47.2°(广角) ~ 1.1°(望远)
	最短物距	1m (3.28ft)
	聚焦控制	自动 / 一次聚焦 / 手动
	变焦移动速度	最大 3.2 秒(广角 → 望远)
	镜头类型	直流自动光圈
	安装类型	内置板类型

项目		说明
平移/倾斜	平移范围	360° 循环
	平移速度	预置：360°/秒，手动：0.05°/秒 ~ 200°/秒
	倾斜范围	180°(0° ~ 180°)
	倾斜速度	预置：360°/秒，手动：0.05°/秒 ~ 200°/秒
	预设	255 个
操作	屏幕显示	英语、网页屏上显示：英语、法语、德语、西班牙语、意大利语、中文、韩文、俄语、日语、瑞典语、丹麦语、葡萄牙语
	摄像机标题	关 / 开(最多显示 32 个字符)
	日夜	自动 (ICR) / 彩色 / 黑白
	背光补偿	关 / 背光补偿
	宽动态	NTSC : 128X / PAL : 160X
	对比度增强功能	XDR (暗区补偿) (关/低/中/高)
	数字降噪	移动自适应 2D+3D 噪音过滤 (关/低/中/高)
	数字图像稳定器	关 / 开
	移动探测	是
	隐私遮挡	关 / 开(12 个多边形可编程区域)
	感光度(帧合成)	关 / 自动 (2X ~ 512X)

附录

	项目	说明
操作	增益控制	关 / 低 / 中 / 高 / 手动
	白平衡	自动跟踪(内) / 自动跟踪(外) / 自动控制白平衡 / 手动
	电子快门速度	NTSC : 关 / 防闪烁 / 手动 (1/120 ~ 1/10K 秒) PAL : 关 / 防闪烁 / 手动 (1/100 ~ 1/10K 秒)
	数字变焦	16X
	翻转	关 / 开
	配置文件	-
	数字逐行扫描	关 / 开
	智能视频分析	移动 / 固定
	画中画	关 / 开
	时间表	日期/时间计划
	警报 I/O	输入 8 个/输出 4 个(继电器)
	遥控器接口	RS-485
	RS-485 协议	Samsung-E, Samsung-T, Pelco-D, Pelco-P, Panasonic, GE(Kalatel), AD, Vicon, Honeywell(DK6), Bosch(Philips), Honeywell(VCLTP)
网络	以太网	RJ-45 (10/100BASE-T)
	视频压缩格式	H.264、MPEG-4、MJPEG
	分辨率	NTSC : 704x480, 640x480, 352x240 PAL : 704x576, 640x480, 352x288
	最大帧速率	NTSC : 30fps / PAL : 25fps

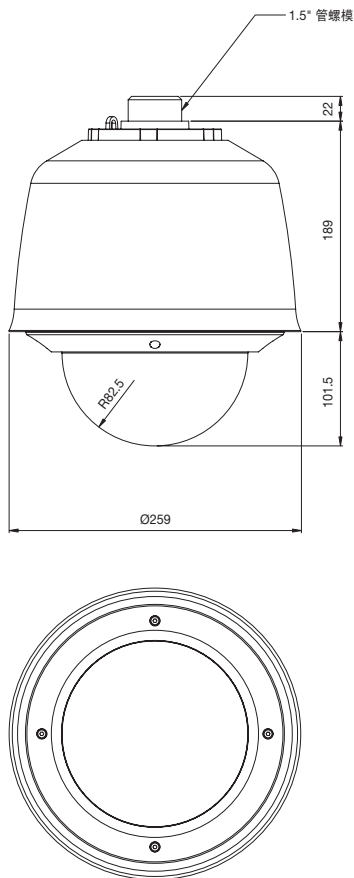
项目	说明
视频质量调整	H.264/MPEG-4 : 压缩级别、目标比特率级别控制 MJPEG : 质量级别控制
比特率控制方法	H.264/MPEG-4 : CBR 或 VBR MJPEG : VBR
流能力	多流 (最多 10 个配置文件)
音频 I/O	线性输入 / 线性输出
音频压缩格式	G.711 μ -law
音频通信	双向
IP	IPv4、IPv6
协议	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTSP, NTP, HTTP, HTTPS, SSL, DHCP, PPPoE, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS
安全	HTTPS(SSL) 登录验证 分类登录验证 IP 地址过滤 用户访问日志 802.1X 身份验证方法
流方法	单播 / 多播
最大用户访问量	单播模式下 10 个用户
内存插槽	SD/SDHC 内存插槽
ONVIF 一致	是
Web 查看器	支持的操作系统 : Windows XP / VISTA / 7, MAC OS 支持的浏览器 : Internet Explorer 6.0 或更高版本、Firefox、Chrome、Safari
中央管理软件	NET-i viewer

网络

附录

项目		说明
环境	工作温度/湿度	-50°C ~ +50°C (-58°F ~ +122°F) /相对湿度 20% ~ 80%
	进入保护	IP66 (防水)
电气	输入电压/电流	类别 2 24V~50/60Hz, PoE+ 44~57V
	功耗	最大 20W(加热器关), 最大 50W(加热器开), PoE+ 24W
机械	颜色/材料	象牙色/铝(防损)/塑料遮阳装置
	尺寸 (直径 x 高)	直径 259 x 高 290.5 毫米
	重量	4.5 公斤

产品视图



附录

故障排除

故障	解决方法
无法使用网络浏览器访问摄像头。	• 检查摄像头的网络设置 是否正确。 • 检查网络缆线是否正确 连接。 • 若使用 DHCP 连接, 检查摄像头是否能够 无故障地获得动态 IP 地址。 • 若使用 DDNS URL, 确认 MAC 地址输入是否正确。 • 若摄像头与宽带路由器连接, 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头或网络配置发生更改时会断开。 • 检查所有的网络连接。 • 若摄像头通过 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。
无法使用 IE 7.0 的选项卡浏览器连接系统。	• 在尝试使用选项卡浏览器连接系统时, 使用的 cookie 信息相同, 这导致了连接时出错。因此, 打开新的浏览器窗口, 而非使用选项卡浏览器来连接系统。
IP 安装程序未检测到连接至网络的摄像头。	• 关闭 PC 上的防火墙设置, 再次搜索摄像头。
图像重叠。	• 检查是否将多个摄像头应当设置的不同地址设为了同一多播地址。多个摄像头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, 请检查摄像头所连接的 LAN 中是否有路由器支持多播。

故障	解决方法
无法录制到 SD 存储卡。	• 检查存储卡是否有缺陷。 • 检查存储卡的写保护标签是否设置为“LOCK”。
插入了 SD 存储卡,但摄像机操作不正常。	• 检查是否以正确的方向插入存储卡。不能保证本摄像机装置能正常使用由其他设备格式化的存储卡。 • 在 <设置> → <事件> → <SD 录制> 菜单中,再次格式化存储卡。
无法格式化 SD 存储卡。	• 检查存储卡的写保护标签是否设置为“LOCK”。

OPEN SOURCE ANNOUNCEMENT

Some software components of this product incorporate source code covered under the BSD license as follows.

Component Name	License	License URL
lighttpd 1.4.25	BSD 2.0	http://www.opensource.org/licenses/bsd-license.html
librtsp 1.20	BSD 1.0	

lighttpd is a secure, fast, compliant, and very flexible web-server that has been optimized for high-performance environments. It has a very low memory footprint compared to other web servers and takes care of cpu-load. Its advanced feature-set (FastCGI, CGI, Auth, Output-Compression, URL-Rewriting and many more) make lighttpd the perfect webserver-software for every server that suffers load problems.

For more additional information, send email to help.cctv@samsung.com.

Copyright (C) 2004, Kneschke, incremental

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met :

- Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- Neither the name of the 'incremental' nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Copyright (c) 1998-2001 University College London

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, is permitted provided that the following conditions are met :

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
3. All advertising materials mentioning features or use of this software must display the following acknowledgement: This product includes software developed by the Computer Science Department at University College London.
4. Neither the name of the University nor of the Department may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE AUTHORS AND CONTRIBUTORS "AS IS" AND ANY EXPRESSED OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHORS OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

GPL/LGPL SOFTWARE LICENSE

The software included in this product contains copyrighted software that is licensed under the GPL/LGPL. You may obtain the complete Corresponding Source code from us for a period of three years after our last shipment of this product by sending email to help.cctv@samsung.com

If you want to obtain the complete Corresponding Source code in the physical medium such as CD-ROM, the cost of physically performing source distribution might be charged.

- GPL S/W
 - Base Kernel, Busybox, Sysvinit, dosfstools
 - LGPL S/W
 - glibc, inetutils
-

GNU GENERAL PUBLIC LICENSE

Version 2, June 1991

Copyright (C)1989, 1991 Free Software Foundation, Inc.

51 Franklin Street, Fifth Floor, Boston, MA 02110-1301, USA

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change free software-- to make sure the software is free for all its users.

This General Public License applies to most of the Free Software Foundation's software and to any other program whose authors commit to using it. (Some other Free Software Foundation software is covered by the GNU Lesser General Public License instead.) You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price.

Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and

charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs ; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must give the recipients all the rights that you have.

You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

We protect your rights with two steps :

(1)copyright the software, and (2)offer you this license which gives you legal permission to copy, distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the

original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

Version 2, June 1991 Copyright (C) 1989, 1991 Free Software Foundation, Inc. 51 Franklin S

0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License.

The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law : that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered by this License ; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as

you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty ; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions :
- a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.
 - b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.
 - c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work

based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you ; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program. In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following :

- a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange ; or,
- b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically

performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange ; or,

- c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License.

However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.
6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.
7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you,

then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

- If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances. It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice. This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.
8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.
 9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies

a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation ; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "ASIS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.
12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED

TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty ; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

one line to give the program's name and an idea of what it does.

Copyright (C)yyy name of author

This program is free software ; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation ; either version 2 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY

WARRANTY ; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program ; if not, write to the Free Software Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301, USA.

Also add information on how to contact you by electronic and paper mail. If the program is interactive, make it output a short notice like this when it starts in an interactive mode :

Gnomovision version 69,

Copyright (C) year name of author

Gnomovision comes with ABSOLUTELY NO

WARRANTY ; for details type 'show w'. This is free software, and you are welcome to redistribute it under certain conditions ; type 'show c' for details.

The hypothetical commands 'show w' and 'show c' should show the appropriate parts of the General Public License. Of course, the commands you use may be called something other than 'show w' and 'show c' ; they could even be mouse-clicks or menu items-- whatever suits your program.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the program, if necessary. Here is a sample ; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the program 'Gnomovision' (which makes passes at compilers) written by James Hacker.

signature of Ty Coon, 1 April 1989 Ty Coon, President of Vice This General Public License does not permit incorporating your program into proprietary programs. If your

program is a subroutine library, you may consider it more useful to permit linking proprietary applications with the library. If this is what you want to do, use the **GNU Lesser General Public License** instead of this License.

GNU GENERAL PUBLIC LICENSE

Version 3, 29 June 2007

Copyright © 2007 Free Software Foundation, Inc. <<http://fsf.org/>>

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

Preamble

The GNU General Public License is a free, copyleft

license for software and other kinds of works. The licenses for most software and other practical works are designed to take away your freedom to share and change the works. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change all versions of a program--to make sure it remains free software for all its users. We, the Free Software Foundation, use the GNU General Public License for most of our software; it applies also to any other work released this way by its authors. You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for them if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs, and that you know you can do these things.

To protect your rights, we need to prevent others from denying you these rights

or asking you to surrender the rights. Therefore, you have certain responsibilities if you distribute copies of the software, or if you modify it: responsibilities to respect the freedom of others.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must pass on to the recipients the same freedoms that you received. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

Developers that use the GNU GPL protect your rights with two steps: (1) assert copyright on the software, and (2) offer you this License giving you legal permission to copy, distribute and/or modify it.

For the developers' and authors' protection, the GPL clearly explains that there is no warranty for this free software. For both users' and authors' sake, the GPL requires that modified versions be marked as changed, so that their problems will not be attributed erroneously to authors of previous versions.

Some devices are designed to deny users access to install or run modified versions of the software inside them, although the manufacturer can do so. This is fundamentally incompatible with the aim of protecting users' freedom to change the software. The systematic pattern of such abuse occurs in the area of products for individuals to use, which is precisely where it is most unacceptable. Therefore, we have designed this version of the GPL to prohibit the practice for those products. If such problems arise substantially in other domains, we stand ready to extend this provision to those domains in future versions of the GPL, as needed to protect the freedom of users.

Finally, every program is threatened constantly by software patents. States should not allow patents to restrict

development and use of software on general-purpose computers, but in those that do, we wish to avoid the special danger that patents applied to a free program could make it effectively proprietary. To prevent this, the GPL assures that patents cannot be used to render the program non-free.

The precise terms and conditions for copying, distribution and modification follow.

TERMS AND CONDITIONS

0. Definitions.

"This License" refers to version 3 of the GNU General Public License.

"Copyright" also means copyright-like laws that apply to other kinds of works, such as semiconductor masks.

"The Program" refers to any copyrightable work licensed under this License. Each licensee is addressed as "you". "Licensees" and "recipients" may be individuals or organizations.

To "modify" a work means to copy from or adapt all or part of the work in a fashion requiring copyright permission, other than the making of an exact copy. The resulting work is called a "modified version" of the earlier work or a work "based on" the earlier work.

A "covered work" means either the unmodified Program or a work based on the Program.

To "propagate" a work means to do anything with it that, without permission, would make you directly or secondarily liable for infringement under applicable copyright law, except executing it on a computer or modifying a private copy. Propagation includes copying, distribution (with or without modification), making available to the public, and in some countries other activities as well.

To "convey" a work means any kind of propagation that enables other parties to make or receive copies. Mere interaction with a user through a computer network, with no transfer of a copy, is not conveying.

An interactive user interface displays "Appropriate Legal Notices" to the extent that it includes a convenient and prominently visible feature that (1) displays an appropriate copyright notice, and (2) tells the user that there is no warranty for the work (except to the extent that warranties are provided), that licensees may convey the work under this License, and how to view a copy of this License. If the interface presents a list of user commands or options, such as a menu, a prominent item in the list meets this criterion.

1. Source Code.

The "source code" for a work means the preferred form of the work for making modifications to it. "Object code" means any non-source form of a work.

A "Standard Interface" means an interface that either is an official standard defined by a recognized standards body, or, in the case of interfaces specified for a particular programming language, one that is widely used among developers working in that language.

The "System Libraries" of an executable work include anything, other than the work as a whole, that (a) is included in the normal form of packaging a Major Component, but which is not part of that Major Component, and (b) serves only to enable use of the work with that Major Component, or to implement a Standard Interface for which an implementation is available to the public in source code form. A "Major Component", in this context, means a major essential component (kernel, window system, and so on) of the specific operating system (if any) on which the executable work runs, or a compiler used to produce the work, or an object code interpreter used to run it.

The "Corresponding Source" for a work in object code form means all the source code needed to generate, install, and (for an executable work) run the object code and to modify the work, including scripts to control those activities. However, it does not include the work's System Libraries, or general-purpose tools or generally available free programs which are used unmodified in

performing those activities but which are not part of the work. For example, Corresponding Source includes interface definition files associated with source files for the work, and the source code for shared libraries and dynamically linked subprograms that the work is specifically designed to require, such as by intimate data communication or control flow between those subprograms and other parts of the work.

The Corresponding Source need not include anything that users can regenerate automatically from other parts of the Corresponding Source.

The Corresponding Source for a work in source code form is that same work.

2. Basic Permissions.

All rights granted under this License are granted for the term of copyright on the Program, and are irrevocable provided the stated conditions are met. This License explicitly affirms your unlimited permission to run the unmodified Program. The output from running a covered work is covered by this License only if the output, given its content, constitutes a covered work. This License acknowledges your rights of fair use or other equivalent, as provided by copyright law.

You may make, run and propagate covered works that you do not convey, without conditions so long as your license otherwise remains in force. You may convey covered works to others for the sole purpose of having them make modifications exclusively for you, or provide you with facilities for running those works, provided that you comply with the terms of this License in conveying all material for which you do not control copyright. Those thus making or running the covered works for you must do so exclusively on your behalf, under your direction and control, on terms that prohibit them from making any copies of your copyrighted material outside their relationship with you.

Conveying under any other circumstances is permitted solely under the conditions stated below. Sublicensing is not allowed; section 10 makes it unnecessary.

3. Protecting Users' Legal Rights From Anti-Circumvention Law.

No covered work shall be deemed part of an effective technological measure under any applicable law fulfilling obligations under article 11 of the WIPO copyright treaty adopted on 20 December 1996, or similar laws prohibiting or restricting circumvention of such measures.

When you convey a covered work, you waive any legal power to forbid circumvention of technological measures to the extent such circumvention is effected by exercising rights under this License with respect to the covered work, and you disclaim any intention to limit operation or modification of the work as a means of enforcing, against the work's users, your or third parties' legal rights to forbid circumvention of technological measures.

4. Conveying Verbatim Copies.

You may convey verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice; keep intact all notices stating that this License and any non-permissive terms added in accord with section 7 apply to the code; keep intact all notices of the absence of any warranty; and give all recipients a copy of this License along with the Program.

You may charge any price or no price for each copy that you convey, and you may offer support or warranty protection for a fee.

5. Conveying Modified Source Versions.

You may convey a work based on the Program, or the modifications to produce it from the Program, in the form of source code under the terms of section 4, provided that you also meet all of these conditions:

- a) The work must carry prominent notices stating that you modified it, and giving a relevant date.
- b) The work must carry prominent notices stating that it is released under this License and any conditions added under section 7. This requirement modifies the requirement in section 4 to "keep intact all notices".

c) You must license the entire work, as a whole, under this License to anyone who comes into possession of a copy. This License will therefore apply, along with any applicable section 7 additional terms, to the whole of the work, and all its parts, regardless of how they are packaged. This License gives no permission to license the work in any other way, but it does not invalidate such permission if you have separately received it.

d) If the work has interactive user interfaces, each must display Appropriate Legal Notices; however, if the Program has interactive interfaces that do not display Appropriate Legal Notices, your work need not make them do so.

A compilation of a covered work with other separate and independent works, which are not by their nature extensions of the covered work, and which are not combined with it such as to form a larger program, in or on a volume of a storage or distribution medium, is called an "aggregate" if the compilation and its resulting copyright are not used to limit the access or legal rights of the compilation's users beyond what the individual works permit. Inclusion of a covered work in an aggregate does not cause this License to apply to the other parts of the aggregate.

6. Conveying Non-Source Forms.

You may convey a covered work in object code form under the terms of sections 4 and 5, provided that you also convey the machine-readable Corresponding Source under the terms of this License, in one of these ways:

- a) Convey the object code in, or embodied in, a physical product (including a physical distribution medium), accompanied by the Corresponding Source fixed on a durable physical medium customarily used for software interchange.
- b) Convey the object code in, or embodied in, a physical product (including a physical distribution medium), accompanied by a written offer, valid for at least three years and valid for as long as you offer spare parts or customer support for that product

model, to give anyone who possesses the object code either (1) a copy of the Corresponding Source for all the software in the product that is covered by this License, on a durable physical medium customarily used for software interchange, for a price no more than your reasonable cost of physically performing this conveying of source, or (2) access to copy the Corresponding Source from a network server at no charge.

- c) Convey individual copies of the object code with a copy of the written offer to provide the corresponding Source. This alternative is allowed only occasionally and noncommercially, and only if you received the object code with such an offer, in accord with subsection 6b.
- d) Convey the object code by offering access from a designated place (gratis or for a charge), and offer equivalent access to the Corresponding Source in the same way through the same place at no further charge. You need not require recipients to copy the Corresponding Source along with the object code. If the place to copy the object code is a network server, the Corresponding Source may be on a different server (operated by you or a third party) that supports equivalent copying facilities, provided you maintain clear directions next to the object code saying where to find the Corresponding Source. Regardless of what server hosts the Corresponding Source, you remain obligated to ensure that it is available for as long as needed to satisfy these requirements.
- e) Convey the object code using peer-to-peer transmission, provided you inform other peers where the object code and Corresponding Source of the work are being offered to the general public at no charge under subsection 6d.

A separable portion of the object code, whose source code is excluded from the Corresponding Source as a System Library, need not be included in conveying the object code work.

A “User Product” is either (1) a “consumer product”, which means any tangible personal property which is normally used for personal, family, or household purposes, or (2) anything designed or sold for incorporation into a dwelling. In determining whether a product is a consumer product, doubtful cases shall be resolved in favor of coverage. For a particular product received by a particular user, “normally used” refers to a typical or common use of that class of product, regardless of the status of the particular user or of the way in which the particular user actually uses, or expects or is expected to use, the product. A product is a consumer product regardless of whether the product has substantial commercial, industrial or non-consumer uses, unless such uses represent the only significant mode of use of the product.

“Installation Information” for a User Product means any methods, procedures, authorization keys, or other information required to install and execute modified versions of a covered work in that User Product from a modified version of its Corresponding Source. The information must suffice to ensure that the continued functioning of the modified object code is in no case prevented or interfered with solely because modification has been made.

If you convey an object code work under this section in, or with, or specifically for use in, a User Product, and the conveying occurs as part of a transaction in which the right of possession and use of the User Product is transferred to the recipient in perpetuity or for a fixed term (regardless of how the transaction is characterized), the Corresponding Source conveyed under this section must be accompanied by the Installation Information. But this requirement does not apply if neither you nor any third party retains the ability to install modified object code on the User Product (for example, the work has been installed in ROM).

The requirement to provide Installation Information does not include a requirement to continue to provide support service, warranty, or updates for a work that has been modified

or installed by the recipient, or for the User Product in which it has been modified or installed. Access to a network may be denied when the modification itself materially and adversely affects the operation of the network or violates the rules and protocols for communication across the network.

Corresponding Source conveyed, and Installation Information provided, in accord with this section must be in a format that is publicly documented (and with an implementation available to the public in source code form), and must require no special password or key for unpacking, reading or copying.

7. Additional Terms.

“Additional permissions” are terms that supplement the terms of this License by making exceptions from one or more of its conditions. Additional permissions that are applicable to the entire Program shall be treated as though they were included in this License, to the extent that they are valid under applicable law. If additional permissions apply only to part of the Program, that part may be used separately under those permissions, but the entire Program remains governed by this License without regard to the additional permissions.

When you convey a copy of a covered work, you may at your option remove any additional permissions from that copy, or from any part of it. (Additional permissions may be written to require their own removal in certain cases when you modify the work.) You may place additional permissions on material, added by you to a covered work, for which you have or can give appropriate copyright permission.

Notwithstanding any other provision of this License, for material you add to a covered work, you may (if authorized by the copyright holders of that material) supplement the terms of this License with terms:

- a) Disclaiming warranty or limiting liability differently from the terms of sections 15 and 16 of this License; or
- b) Requiring preservation of specified reasonable legal notices or author attributions in that material or in the Appropriate Legal Notices displayed by

works containing it; or

- c) Prohibiting misrepresentation of the origin of that material, or requiring that modified versions of such material be marked in reasonable ways as different from the original version; or
- d) Limiting the use for publicity purposes of names of licensors or authors of the material; or
- e) Declining to grant rights under trademark law for use of some trade names, trademarks, or service marks; or
- f) Requiring indemnification of licensors and authors of that material by anyone who conveys the material (or modified versions of it) with contractual assumptions of liability to the recipient, for any liability that these contractual assumptions directly impose on those licensors and authors.

All other non-permissive additional terms are considered “further restrictions” within the meaning of section 10. If the Program as you received it, or any part of it, contains a notice stating that it is governed by this License along with a term that is a further restriction, you may remove that term. If a license document contains a further restriction but permits relicensing or conveying under this License, you may add to a covered work material governed by the terms of that license document, provided that the further restriction does not survive such relicensing or conveying.

If you add terms to a covered work in accord with this section, you must place, in the relevant source files, a statement of the additional terms that apply to those files, or a notice indicating where to find the applicable terms.

Additional terms, permissive or non-permissive, may be stated in the form of a separately written license, or stated as exceptions; the above requirements apply either way.

8. Termination.

You may not propagate or modify a covered work except as expressly provided under this License. Any attempt otherwise to propagate

or modify it is void, and will automatically terminate your rights under this License (including any patent licenses granted under the third paragraph of section 11).

However, if you cease all violation of this License, then your license from a particular copyright holder is reinstated (a) provisionally, unless and until the copyright holder explicitly and finally terminates your license, and (b) permanently, if the copyright holder fails to notify you of the violation by some reasonable means prior to 60 days after the cessation.

Moreover, your license from a particular copyright holder is reinstated permanently if the copyright holder notifies you of the violation by some reasonable means, this is the first time you have received notice of violation of this License (for any work) from that copyright holder, and you cure the violation prior to 30 days after your receipt of the notice.

Termination of your rights under this section does not terminate the licenses of parties who have received copies or rights from you under this License. If your rights have been terminated and not permanently reinstated, you do not qualify to receive new licenses for the same material under section 10.

9. Acceptance Not Required for Having Copies.

You are not required to accept this License in order to receive or run a copy of the Program. Ancillary propagation of a covered work occurring solely as a consequence of using peer-to-peer transmission to receive a copy likewise does not require acceptance. However, nothing other than this License grants you permission to propagate or modify any covered work. These actions infringe copyright if you do not accept this License. Therefore, by modifying or propagating a covered work, you indicate your acceptance of this License to do so.

10. Automatic Licensing of Downstream Recipients.

Each time you convey a covered work, the recipient automatically receives a license

from the original licensors, to run, modify and propagate that work, subject to this License. You are not responsible for enforcing compliance by third parties with this License.

An “entity transaction” is a transaction transferring control of an organization, or substantially all assets of one, or subdividing an organization, or merging organizations. If propagation of a covered work results from an entity transaction, each party to that transaction who receives a copy of the work also receives whatever licenses to the work the party's predecessor in interest had or could give under the previous paragraph, plus a right to possession of the Corresponding Source of the work from the predecessor in interest, if the predecessor has it or can get it with reasonable efforts.

You may not impose any further restrictions on the exercise of the rights granted or affirmed under this License. For example, you may not impose a license fee, royalty, or other charge for exercise of rights granted under this License, and you may not initiate litigation (including a cross-claim or counterclaim in a lawsuit) alleging that any patent claim is infringed by making, using, selling, offering for sale, or importing the Program or any portion of it.

11. Patents.

A “contributor” is a copyright holder who authorizes use under this License of the Program or a work on which the Program is based. The work thus licensed is called the contributor's “contributor version”.

A contributor's “essential patent claims” are all patent claims owned or controlled by the contributor, whether already acquired or hereafter acquired, that would be infringed by some manner, permitted by this License, of making, using, or selling its contributor version, but do not include claims that would be infringed only as a consequence of further modification of the contributor version. For purposes of this definition, “control” includes the right to grant patent sublicenses in a manner consistent with the requirements of this License.

Each contributor grants you a non-exclusive, worldwide, royalty-free patent license under the contributor's essential patent claims, to make, use, sell, offer for sale, import and otherwise run, modify and propagate the contents of its contributor version.

In the following three paragraphs, a "patent license" is any express agreement or commitment, however denominated, not to enforce a patent (such as an express permission to practice a patent or covenant not to sue for patent infringement). To "grant" such a patent license to a party means to make such an agreement or commitment not to enforce a patent against the party.

If you convey a covered work, knowingly relying on a patent license, and the Corresponding Source of the work is not available for anyone to copy, free of charge and under the terms of this License, through a publicly available network server or other readily accessible means, then you must either (1) cause the Corresponding Source to be so available, or (2) arrange to deprive yourself of the benefit of the patent license for this particular work, or (3) arrange, in a manner consistent with the requirements of this License, to extend the patent license to downstream recipients. "Knowingly relying" means you have actual knowledge that, but for the patent license, your conveying the covered work in a country, or your recipient's use of the covered work in a country, would infringe one or more identifiable patents in that country that you have reason to believe are valid.

If, pursuant to or in connection with a single transaction or arrangement, you convey, or propagate by procuring conveyance of, a covered work, and grant a patent license to some of the parties receiving the covered work authorizing them to use, propagate, modify or convey a specific copy of the covered work, then the patent license you grant is automatically extended to all recipients of the covered work and works based on it.

A patent license is "discriminatory" if it does not include within the scope of its coverage,

prohibits the exercise of, or is conditioned on the non-exercise of one or more of the rights that are specifically granted under this License. You may not convey a covered work if you are a party to an arrangement with a third party that is in the business of distributing software, under which you make payment to the third party based on the extent of your activity of conveying the work, and under which the third party grants, to any of the parties who would receive the covered work from you, a discriminatory patent license

- (a) in connection with copies of the covered work conveyed by you (or copies made from those copies), or
- (b) primarily for and in connection with specific products or compilations that contain the covered work, unless you entered into that arrangement, or that patent license was granted, prior to 28 March 2007.

Nothing in this License shall be construed as excluding or limiting any implied license or other defenses to infringement that may otherwise be available to you under applicable patent law.

12. No Surrender of Others' Freedom.

If conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot convey a covered work so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not convey it at all. For example, if you agree to terms that obligate you to collect a royalty for further conveying from those to whom you convey the Program, the only way you could satisfy both those terms and this License would be to refrain entirely from conveying the Program.

13. Use with the GNU Affero General Public License.

Notwithstanding any other provision of this License, you have permission to link or combine any covered work with a work licensed under version 3 of the GNU Affero General Public License into a single combined

work, and to convey the resulting work. The terms of this License will continue to apply to the part which is the covered work, but the special requirements of the GNU Affero General Public License, section 13, concerning interaction through a network will apply to the combination as such.

14. Revised Versions of this License.

The Free Software Foundation may publish revised and/ or new versions of the GNU General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies that a certain numbered version of the GNU General Public License "or any later version" applies to it, you have the option of following the terms and conditions either of that numbered version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of the GNU General Public License, you may choose any version ever published by the Free Software Foundation.

If the Program specifies that a proxy can decide which future versions of the GNU General Public License can be used, that proxy's public statement of acceptance of a version permanently authorizes you to choose that version for the Program.

Later license versions may give you additional or different permissions. However, no additional obligations are imposed on any author or copyright holder as a result of your choosing to follow a later version.

15. Disclaimer of Warranty.

THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED

TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

16. Limitation of Liability.

IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MODIFIES AND/OR CONVEYS THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

17. Interpretation of Sections 15 and 16.

If the disclaimer of warranty and limitation of liability provided above cannot be given local legal effect according to their terms, reviewing courts shall apply local law that most closely approximates an absolute waiver of all civil liability in connection with the Program, unless a warranty or assumption of liability accompanies a copy of the Program in return for a fee.

END OF TERMS AND CONDITIONS

GNU LESSER GENERAL PUBLIC LICENSE

Version 2.1, February 1999

Copyright (C) 1991, 1999 Free Software Foundation, Inc. 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301

USA Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

[This is the first released version of the Lesser GPL. It also counts as the successor of the GNU Library Public License, version 2, hence the version number 2.1.]

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public Licenses are intended to guarantee your freedom to share and change free software to make sure the software is free for all its users.

This license, the Lesser General Public License, applies to some specially designated software packages—typically libraries—of the Free Software Foundation and other authors who decide to use it. You can use it too, but we suggest you first think carefully about whether this license or the ordinary General Public License is the better strategy to use in any particular case, based on the explanations below.

When we speak of free software, we are referring to freedom of use, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish); that you receive source code or can get it if you want it; that you can change the software and use pieces of it in new free programs; and that you are informed that you can do these things.

To protect your rights, we need to make restrictions that forbid distributors to deny you these rights or to ask you to surrender these rights. These restrictions translate to certain responsibilities for you if you distribute copies of the library or if you modify it.

For example, if you distribute copies of the library, whether gratis or for a fee, you must give the recipients all the rights that

we gave you. You must make sure that they, too, receive or can get the source code. If you link other code with the library, you must provide complete object files to the recipients, so that they can relink them with the library after making changes to the library and recompiling it. And you must show them these terms so they know their rights.

We protect your rights with a two-step method: (1) we copyright the library, and (2) we offer you this license, which gives you legal permission to copy, distribute and/or modify the library.

To protect each distributor, we want to make it very clear that there is no warranty for the free library. Also, if the library is modified by someone else and passed on, the recipients should know that what they have is not the original version, so that the original author's reputation will not be affected by problems that might be introduced by others.

Finally, software patents pose a constant threat to the existence of any free program. We wish to make sure that a company cannot effectively restrict the users of a free program by obtaining a restrictive license from a patent holder. Therefore, we insist that any patent license obtained for a version of the library must be consistent with the full freedom of use specified in this license.

Most GNU software, including some libraries, is covered by the ordinary GNU General Public License. This license, the GNU Lesser General Public License, applies to certain designated libraries, and is quite different from the ordinary General Public License. We use this license for certain libraries in order to permit linking those libraries into non-free programs.

When a program is linked with a library, whether statically or using a shared library, the combination of the two is legally speaking a combined work, a derivative of the original library. The ordinary General

Public License therefore permits such linking only if the entire combination fits its criteria of freedom. The Lesser General Public License permits more lax criteria for linking other code with the library.

We call this license the “Lesser” General Public License because it does Less to protect the user’s freedom than the ordinary General Public License. It also provides other free software developers Less of an advantage over competing non-free programs. These disadvantages are the reason we use the ordinary General Public License for many libraries. However, the Lesser license provides advantages in certain special circumstances.

For example, on rare occasions, there may be a special need to encourage the widest possible use of a certain library, so that it becomes a de-facto standard. To achieve this, non-free programs must be allowed to use the library. A more frequent case is that a free library does the same job as widely used non-free libraries. In this case, there is little to gain by limiting the free library to free software only, so we use the Lesser General Public License.

In other cases, permission to use a particular library in non-free programs enables a greater number of people to use a large body of free software. For example, permission to use the GNU C Library in non-free programs enables many more people to use the whole GNU operating system, as well as its variant, the GNU/Linux operating system.

Although the Lesser General Public License is Less protective of the users’ freedom, it does ensure that the user of a program that is linked with the Library has the freedom and the wherewithal to run that program using a modified version of the Library.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a “work based on the library” and

a “work that uses the library”. The former contains code derived from the library, whereas the latter must be combined with the library in order to run.

TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License Agreement applies to any software library or other program which contains a notice placed by the copyright holder or other authorized party saying it may be distributed under the terms of this Lesser General Public License (also called “this License”). Each licensee is addressed as “you”.

A “library” means a collection of software functions and/ or data prepared so as to be conveniently linked with application programs (which use some of those functions and data) to form executables.

The “Library”, below, refers to any such software library or work which has been distributed under these terms. A “work based on the Library” means either the Library or any derivative work under copyright law: that is to say, a work containing the Library or a portion of it, either verbatim or with modifications and/or translated straightforwardly into another language. (Hereinafter, translation is included without limitation in the term “modification”).

“Source code” for a work means the preferred form of the work for making modifications to it. For a library, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the library.

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running a program using the Library is not restricted, and output from such a program

is covered only if its contents constitute a work based on the Library (independent of the use of the Library in a tool for writing it). Whether that is true depends on what the Library does and what the program that uses the Library does.

1. You may copy and distribute verbatim copies of the Library's complete source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and distribute a copy of this License along with the Library.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Library or any portion of it, thus forming a work based on the Library, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) The modified work must itself be a software library. b) You must cause the files modified to carry prominent notices stating that you changed the files and the date of any change. c) You must cause the whole of the work to be licensed at no charge to all third parties under the terms of this License. d) If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful. (For example, a function in a library to compute square roots has a purpose that is entirely

well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.) These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Library, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Library, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Library.

In addition, mere aggregation of another work not based on the Library with the Library (or with a work based on the Library) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may opt to apply the terms of the ordinary GNU General Public License instead of this License to a given copy of the Library. To do this, you must alter all the notices that refer to this License, so that they refer to the ordinary GNU General Public License, version 2, instead of to this License. (If a newer version than version 2 of the ordinary GNU General Public License has appeared, then you can specify that version instead if you wish.) Do not make any other change in these notices.

Once this change is made in a given copy,

it is irreversible for that copy, so the ordinary GNU General Public License applies to all subsequent copies and derivative works made from that copy.

This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

4. You may copy and distribute the Library (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange.

If distribution of object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place satisfies the requirement to distribute the source code, even though third parties are not compelled to copy the source along with the object code.

5. A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a “work that uses the Library”. Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this License.

However, linking a “work that uses the Library” with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a “work that uses the library”. The executable is therefore covered by this License. Section 6 states terms for distribution of such executables.

When a “work that uses the Library” uses material from a header file that is part of the Library, the object code for the work may be a derivative work of the Library even

though the source code is not. Whether this is true is especially significant if the work can be linked without the Library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

6. As an exception to the Sections above, you may also combine or link a “work that uses the Library” with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer’s own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things:

- a) Accompany the work with the complete corresponding machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections

1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine readable “work that uses the Library”, as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)

b) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that

(1) uses at run time a copy of the library already present on the user's computer system, rather than copying library functions into the executable, and (2) will operate properly with a modified version of the library, if the user installs one, as long as the modified version is interface-compatible with the version that the work was made with.

c) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.

d) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.

e) Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

For an executable, the required form of the “work that uses the Library” must include any data and utility programs needed for reproducing the executable from it. However, as a special exception, the materials to be distributed need not include anything that is normally distributed (in

either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

It may happen that this requirement contradicts the license restrictions of other proprietary libraries that do not normally accompany the operating system. Such a contradiction means you cannot use both them and the Library together in an executable that you distribute.

7. You may place library facilities that are a work based on the Library side-by-side in a single library together with other library facilities not covered by this License, and distribute such a combined library, provided that the separate distribution of the work based on the Library and of the other library facilities is otherwise permitted, and provided that you do these two things:

a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities. This must be distributed under the terms of the Sections above.

b) Give prominent notice with the combined library of the fact that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.

8. You may not copy, modify, sublicense, link with, or distribute the Library except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense, link with, or distribute the Library is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

9. You are not required to accept this License, since you have not signed

it. However, nothing else grants you permission to modify or distribute the Library or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Library (or any work based on the Library), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Library or works based on it.

10. Each time you redistribute the Library (or any work based on the Library), the recipient automatically receives a license from the original licensor to copy, distribute, link with or modify the Library subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties with this License.
11. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Library at all. For example, if a patent license would not permit royalty free redistribution of the Library by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Library.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section

is intended to apply, and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

12. If the distribution and/or use of the Library is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Library under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.
13. The Free Software Foundation may publish revised and/or new versions of the Lesser General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Library specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any

later version published by the Free Software Foundation. If the Library does not specify a license version number, you may choose any version ever published by the Free Software Foundation.

14. If you wish to incorporate parts of the Library into other free programs whose distribution conditions are incompatible with these, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

15. BECAUSE THE LIBRARY IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE LIBRARY, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE LIBRARY "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE LIBRARY IS WITH YOU. SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.
16. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE LIBRARY AS

PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE LIBRARY (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE LIBRARY TO OPERATE WITH ANY OTHER SOFTWARE), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Libraries

If you develop a new library, and you want it to be of the greatest possible use to the public, we recommend making it free software that everyone can redistribute and change. You can do so by permitting redistribution under these terms (or, alternatively, under the terms of the ordinary General Public License).

To apply these terms, attach the following notices to the library. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found. one line to give the library's name and an idea of what it does.

Copyright (C) year name of author

This library is free software; you can redistribute it and/ or modify it under the terms of the GNU Lesser General Public License as published by the Free Software Foundation; either version 2.1 of the License, or (at your option) any later version.

This library is distributed in the hope that it will be useful, but WITHOUT ANY

WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU Lesser General Public License for more details.

You should have received a copy of the GNU Lesser General Public License along with this library; if not, write to the Free Software Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA Also add information on how to contact you by electronic and paper mail.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the library, if necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the library 'Frob' (a library for tweaking knobs) written by James Random Hacker.

signature of Ty Coon, 1 April 1990 Ty Coon, President of Vice.

OpenSSL LICENSE

Copyright (c) 1998-2006 The OpenSSL Project. All rights reserved. Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
3. All advertising materials mentioning features or use of this software must display the following acknowledgment: "This product includes software developed by the OpenSSL Project for

use in the OpenSSL Toolkit. (<http://www.openssl.org/>)"

4. The names "OpenSSL Toolkit" and "OpenSSL Project" must not be used to endorse or promote products derived from this software without prior written permission. For written permission, please contact openssl-core@openssl.org.
5. Products derived from this software may not be called "OpenSSL" nor may "OpenSSL" appear in their names without prior written permission of the OpenSSL Project.
6. Redistributions of any form whatsoever must retain the following acknowledgment: "This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (<http://www.openssl.org/>)"

THIS SOFTWARE IS PROVIDED BY THE OpenSSL PROJECT "AS IS" AND ANY EXPRESSED OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE OpenSSL PROJECT OR ITS CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE. This product includes cryptographic software written by Eric Young (eyay@cryptsoft.com). This product includes software written by Tim Hudson(tjh@cryptsoft.com).

Original SSLeay License

Copyright (C) 1995-1998 Eric Young (eay@cryptsoft.com) All rights reserved. This package is an SSL implementation written by Eric Young (eay@cryptsoft.com).

The implementation was written so as to conform with Netscapes SSL. This library is free for commercial and non-commercial use as long as the following conditions are aheared to. The following conditions apply to all code found in this distribution, be it the RC4, RSA, lhash, DES, etc., code; not just the SSL code. The SSL documentation included with this distribution is covered by the same copyright terms except that the holder is Tim Hudson (tjh@cryptsoft.com).

Copyright remains Eric Young's, and as such any Copyright notices in the code are not to be removed. If this package is used in a product, Eric Young should be given attribution as the author of the parts of the library used. This can be in the form of a textual message at program startup or in documentation (online or textual) provided with the package. Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
3. All advertising materials mentioning features or use of this software must display the following acknowledgement: "This product includes cryptographic software written by Eric Young (eay@cryptsoft.com)" The word 'cryptographic' can be left out if the rouines from the library being used are not cryptographic related :-).

4. If you include any Windows specific code (or a derivative thereof) from the apps directory (application code) you must include an acknowledgement: "This product includes software written by Tim Hudson (tjh@cryptsoft.com)"

THIS SOFTWARE IS PROVIDED BY ERIC YOUNG "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

The licence and distribution terms for any publically available version or derivative of this code cannot be changed. i.e. this code cannot simply be copied and put under another distribution licence [including the GNU Public Licence].



Samsung Techwin 在产品制造的各个环节都十分关注环境,并且采取措施以保证向客户提供更加环保的产品。

Eco 标志表明 Samsung Techwin 致力于生产环保型产品,同时也表示该产品符合欧盟 RoHS 标准。



制造商

SAMSUNG TECHWIN CO., LTD.

Samsungtechwin R&D Center, 701, Sampyeong-dong, Bundang-gu, Seongnam-si, Gyeonggi-do, Korea, 463-400
TEL : +82-70-7147-8740~60 FAX : +82-31-8018-3745

天津三星泰科光电子有限公司 广州分公司（营业总部）
广州市天河区体育东路108号创展中心西塔1001室,
510620

Room 1001, West Tower, Chanzen Center, No.108 Tiyu
E.RD., Tianhe District, Guangzhou, 510620, China
联系电话: 020 38080038

天津三星泰科光电子有限公司

中国天津市西青区津港公路微电子工业区微六路
11号, 300385

No.11 wei 6 Road Micro-Electronics Industrial Park Xiqing
District, Tianjin, 300385, China
联系电话(免费客服热线): 800 818 1212