SONY
帮助指南

Virtual Webcam Driver for Remote Camera

本帮助指南介绍 Virtual Webcam Driver for Remote Camera (VWD 1.2)（以下称为本"软件"）的操作步骤。

Virtual Webcam Driver for Remote Camera

概述

本软件是一款在计算机上安装和使用的应用程序。本软件允许您在计算机应用程序（例如Web会议工具）中使用从Sony网络摄像头接收的RTSP流媒体。

Virtual Webcam Driver for Remote Camera

操作环境

本主题介绍本软件支持的计算机和摄像头。

计算机

- 支持的操作系统

  - Windows 10/11（64位）
  - macOS 11/12/13

- CPU：第八代Intel Core (Coffee Lake)或更高版本（推荐）
- 内存：8 GB或更高（推荐）
- 用于接收RTSP流媒体的以太网端口
- 1366×768或更高分辨率的显示器
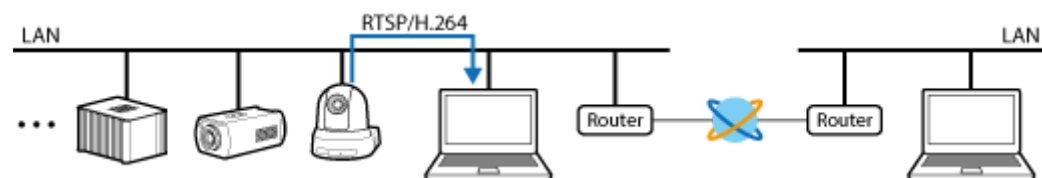
摄像头（包括Edge Analytics Appliance）

- BRC-X400/X401
- SRG-A40/A12/X400/X402/201M2/X120/HD1M2/XB25/XP1
- REA-C1000
- ILME-FR7

> **注意**
>
> - BRC-X401和SRG-X402/201M2/HD1M2是适用于中国境内的型号。

Virtual Webcam Driver for Remote Camera

准备就绪

1 配置摄像头设置。

有关详细信息，请参阅"配置摄像头设置"。

2 在计算机上安装本软件。

有关详细信息，请参阅"安装本软件"。

3 在本软件中注册摄像头。

有关详细信息，请参阅"注册摄像头"。

4 使用已注册的摄像头。

有关详细信息，请参阅"将已注册的摄像头与Web会议工具搭配使用"。

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Virtual Webcam Driver for Remote Camera

配置摄像头设置

本主题介绍要在本软件中使用摄像头需配置的设置。
可通过从Web浏览器访问摄像头并显示设置菜单来配置摄像头设置。

> **注意**
>
> - 有关如何操作摄像头的说明，请参阅摄像头手册。
>
> - 对于每个设置项目<n>，选择要在本软件中使用的编解码器编号。

适用于BRC-X400/X401或SRG-X400/X402/201M2/X120/HD1M2

> **注意**
>
> - BRC-X401和SRG-X402/201M2/HD1M2是适用于中国境内的型号。

所需设置

菜单	选项卡	项目	选项
实时查看器屏幕右上方的图标			打开电源
[串流]	[串流]	[串流模式]*1	[RTSP]*1
[视频]	[视频编解码器]	[影像<n>]> [编解码器<n>]	[H.264]
[安全]	[SSL]	[SSL] > [功能]	[禁用]或[启用（允许某些客户端HTTP连接）]*2

*1　对于运行v2.1及更低版本的摄像头，请勾选[RTSP设置] > [启用]
*2　仅BRC-X400和SRG-X400/X120

推荐的Web会议工具设置

菜单	选项卡	项目	选项
[视频]	[视频编解码器]	[影像<n>] > [尺寸<n>]	[1280×720]
[视频]	[视频编解码器]	[影像<n>] > [帧频<n>]	[30]
[音频]	[音频]	[发送] > [启用]	打开

适用于SRG-XB25/XP1

所需设置

菜单	选项卡	项目	选项
实时查看器屏幕右上方的图标			打开电源
[串流]	[串流]	[单播流] > [启用]	打开

菜单	选项卡	项目	选项
[视频]	[视频编解码器]	[影像<n>] > [影像编解码器<n>]*	[H.264]

*   选择[影像编解码器2]或[影像编解码器3]。

推荐的Web会议工具设置

菜单	选项卡	项目	选项
[视频]	[视频编解码器]	[影像<n>] > [尺寸<n>]	[1280×720]
[视频]	[视频编解码器]	[影像<n>] > [帧频<n>]	[29.97]
[音频]	[音频]	[发送] > [启用]	打开

适用于REA-C1000

所需设置

菜单	选项卡	项目	选项
运行应用程序。			
[流媒体]	[流媒体]	[流媒体服务]	[RTSP服务器]
[安全]	[SSL]	[SSL功能]	[禁用]或[启用（允许某些客户端HTTP连接）]

推荐的Web会议工具设置

菜单	选项卡	项目	选项
[流媒体]	[编解码器]	[流媒体输出<n>]	[HDMI OUT 1]或[HDMI OUT 2]*
[流媒体]	[编解码器]	[影像尺寸<n>]	[1280×720]
[流媒体]	[编解码器]	[帧频<n>]	[29.97p]
[音频]	–	[发送]	[已启用]

*   根据使用的应用程序进行选择。
    有关影像输出目标位置的详细信息，请参阅REA-C1000手册。

适用于SRG-A40/A12或ILME-FR7

所需设置

菜单	选项卡	项目	选项
实时查看器屏幕顶部的电源开关			打开电源
[流媒体]	[流媒体]	[流媒体设置] > [设置]	[RTSP]
[流媒体]	[视频流媒体]	[视频流媒体<n>]> [编解码器<n>]	[H.264]
SRG-A40/A12：[安全] ILME-FR7：[网络]	[SSL]	[SSL] > [功能]	[禁用]或[启用（允许某些客户端HTTP连接）]

推荐的Web会议工具设置

菜单	选项卡	项目	选项
[流媒体]	[视频流媒体]	[视频流媒体\<n>] > [Size \<n>]	[1280×720]
[流媒体]	[视频流媒体]	[视频流媒体\<n>] > [帧速率\<n>]	[30]
[流媒体]	[音频流媒体]	[音频流媒体] > [设置]	打开

Virtual Webcam Driver for Remote Camera

安装本软件

提供适用于Windows和macOS的安装程序。请根据您的操作环境下载相应安装程序。
启动已下载的安装程序，然后按照步骤安装本软件。

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Virtual Webcam Driver for Remote Camera

屏幕配置

主窗口
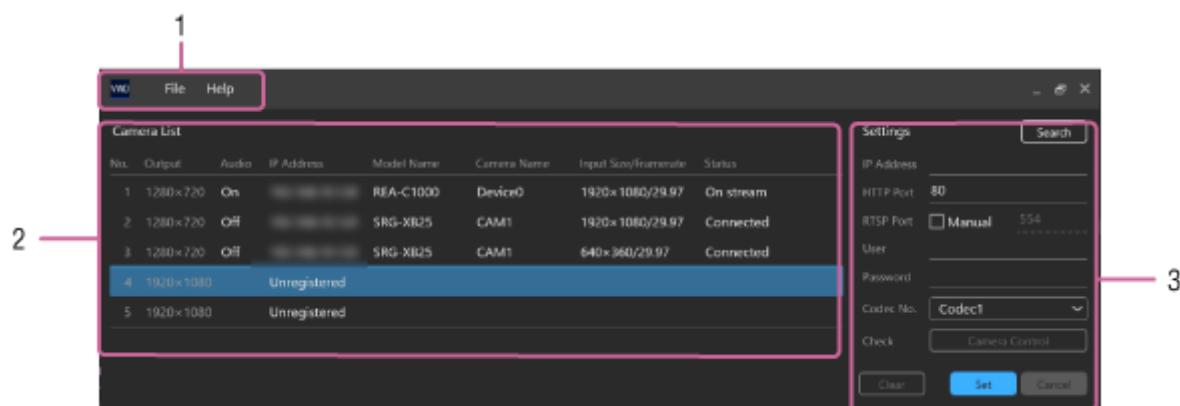
1.菜单栏

- **[File]**

  - **[Exit]**：退出本软件。
  - **[Delete All Settings]**：删除本软件保存的配置文件。

- **[Help]**

  - **[Help]**：在Web浏览器中打开本软件的帮助文件。
  - **[About]**：显示版本信息。

2.[Camera List]

显示有关本软件中注册的摄像头的信息。选择并双击一个摄像头，以在Web浏览器中打开该摄像头的设置屏幕。也可以右键单击摄像头，然后选择[Delete]以删除注册的摄像头。

- **[Output]**：显示输出影像尺寸。对于第1号至第3号，尺寸设置为1280×720（固定）；对于第4号和第5号，尺寸设置为1920×1080（固定）。
- **[Audio]**：显示摄像头音频输出状态([On]/[Off]/[Mute])。当使用macOS时，仅当其他用户在同一计算机上登录并使用此软件时显示[Mute]。
- **[IP Address]**：显示在注册摄像头时配置的IP地址。如果未设置地址，则会显示"Unregistered"。
- **[Model Name]**：显示从摄像头获取的型号名称。如果未设置IP地址或无法从摄像头获取型号名称，则此字段为空白。
- **[Camera Name]**：显示从摄像头获取的摄像头名称。您可以在Web浏览器中打开摄像头的设置菜单并更改设置。如果未设置IP地址或无法从摄像头获取摄像头名称，则此字段为空白。
- **[Input Size/Framerate]**：显示从摄像头获取的影像尺寸和帧频。如果未设置IP地址，则此字段为空白。
- **[Status]**：显示摄像头的连接状态。如果未设置IP地址，则此字段为空白。
 有关详细信息，请参阅"状态列表"。

3.[Settings]

这用于配置已在本软件中注册的摄像头。每一项将在[Camera List]中的选定行中显示摄像头的设置。

- **[Search]按钮**：打开[Search]窗口。
- **[IP Address]**：输入要注册的摄像头的IP地址。在[Search]窗口中选择摄像头时，将自动输入所选摄像头的IP地址。
- **[HTTP Port]**：输入用于连接摄像头的HTTP端口号。
- **[RTSP Port]**：输入用于连接摄像头的RTSP端口号。
  如果在[Manual]中勾选，请在输入字段中输入RTSP端口号。

如果未勾选[Manual]，则将在输入字段中显示从摄像头获取的RTSP服务器端口号。

- **[User]**：输入本软件中使用的用户名（预先在摄像头中注册的用户名）。
- **[Password]**：输入已在[User]中输入的摄像头用户名的密码。
- **[Codec No.]**：选择编解码器编号。如果为SRG-XB25/XP1摄像头选择了"Codec1"，则注册后它将自动更改为"Codec2"。如果为REA-C1000/SRG-A12/SRG-A40/ILME-FR7摄像头选择了"Codec3"，则注册后它将自动更改为"Codec1"。
- **[Check]**：按下[Camera Control]按钮将在Web浏览器中显示摄像头的设置屏幕。仅在已设置摄像头IP地址后才启用此功能。也可以在[Camera List]中选择并双击摄像头，以在Web浏览器中显示该摄像头的设置屏幕。
- **[Clear]按钮**：将[Settings]区域中的所有项目重置为默认值。如果要删除已注册的摄像头，请先将所有设置恢复为默认值，然后按下[Set]按钮并进行确认。您也可以在[Camera List]中选择并右键单击一个摄像头，然后选择[Delete]以删除该摄像头。
- **[Set]按钮**：注册在摄像头的[Settings]区域中配置的设置。
- **[Cancel]按钮**：取消在[Settings]区域中所做的更改，并恢复为当前值。

[Search]窗口
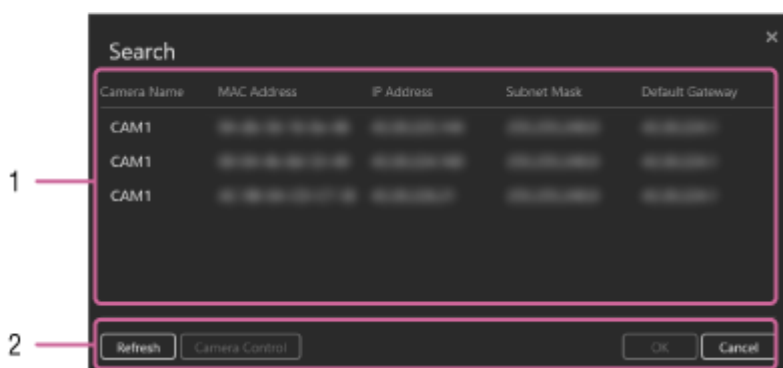
1.搜索结果显示区域

使用网络摄像头IP设置协议检测受本软件支持的摄像头，并显示每个摄像头的信息。
单击[Camera Name]以对列表显示内容进行升序或降序排序。
双击显示的摄像头可将摄像头IP地址复制到主窗口的[Settings]区域，然后关闭[Search]窗口。

2.按钮区域

- **[Refresh]按钮**：再次执行摄像头搜索，并更新搜索结果显示区域中的详细信息。
- **[Camera Control]按钮**：显示在Web浏览器的搜索结果显示区域中选定的摄像头的设置屏幕。
- **[OK]按钮**：将在搜索结果显示区域中选择的摄像头的IP地址复制到主窗口的[Settings]区域，然后关闭[Search]窗口。
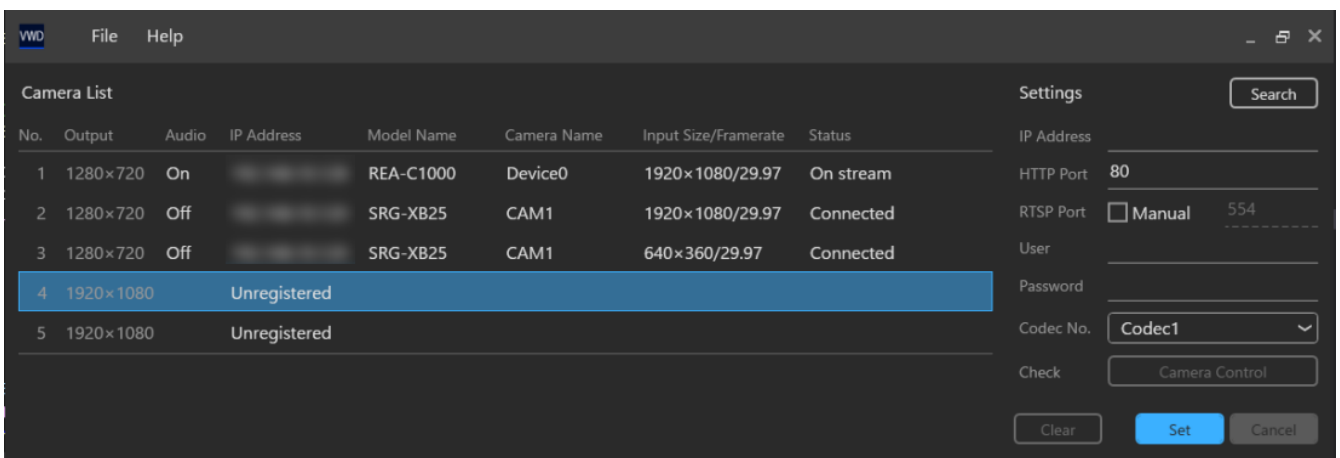- **[Cancel]按钮**：关闭[Search]窗口。

注册摄像头

请先安装本软件并配置摄像头设置。
在本软件中注册摄像头时，可以将Sony网络摄像头RTSP流媒体用作虚拟USB设备。
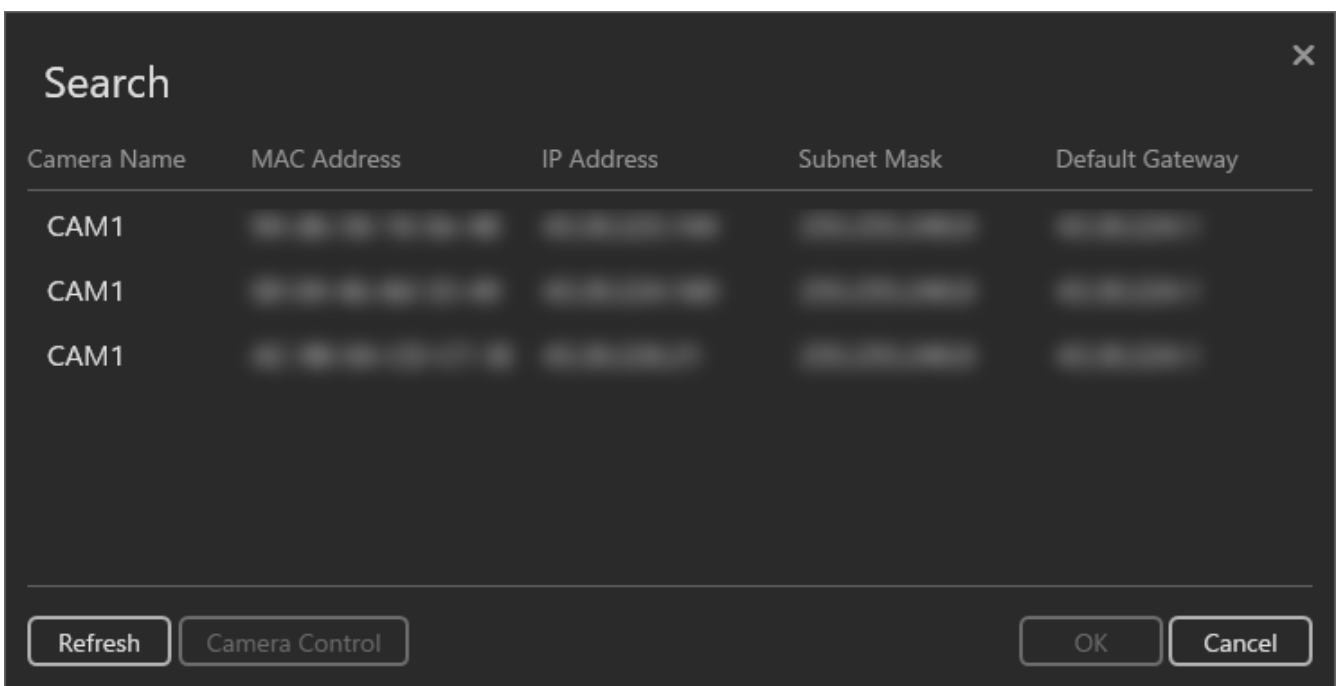
1 **双击"Virtual Webcam Driver for Remote Camera"。**

本软件将启动。

2 **在[Camera List]中选择要注册的摄像头。**

3 **在[Settings]区域中输入要注册的摄像头的信息。**

1. 要搜索摄像头并使用本软件自动设置IP地址，请单击[Search]按钮。

2. 出现[Search]窗口时，选择要注册的摄像头，然后单击[OK]。

4 **单击[Set]。**

将使用已配置的设置注册摄像头。
要注册多个摄像头，请对要注册的摄像头重复上述步骤。

5 **退出本软件。**

如果本软件和摄像头位于不同的网段中

如果安装本软件的计算机和要注册的摄像头连接到不同的网段，请使用NAPT（网络地址端口转换器）连接本软件和摄像头。

在这种情况下，必须勾选[RTSP Port]的[Manual]，并手动输入值。

在[IP Address]、[HTTP Port]和[RTSP Port]字段的每一个字段中，按照从运行本软件的计算机所连接的网络上查看到的内容设置值。

> **注意**
>
> ● 本软件无法自动获取通过使用NAPT转换的IP地址和端口号。因此，请勾选[Manual]，然后手动设置[RTSP Port]。如果在配置设置时未勾选[Manual]，则无法使用本软件获取来自摄像头的RTSP流媒体。

将已注册的摄像头与Web会议工具搭配使用

计算机已将本软件中注册的摄像头识别为虚拟USB设备"Sony Camera 1 (Virtual Webcam)"至"Sony Camera 5 (Virtual Webcam)"。在注册摄像头后，即可使用摄像头而无需再次注册。
名称1至5对应于本软件中[Camera List]的各行中注册的摄像头。
要使用这些摄像头之一，请从Web会议工具的"Sony Camera 1 (Virtual Webcam)"至"Sony Camera 5 (Virtual Webcam)"中选择一个摄像头。

Virtual Webcam Driver for Remote Camera
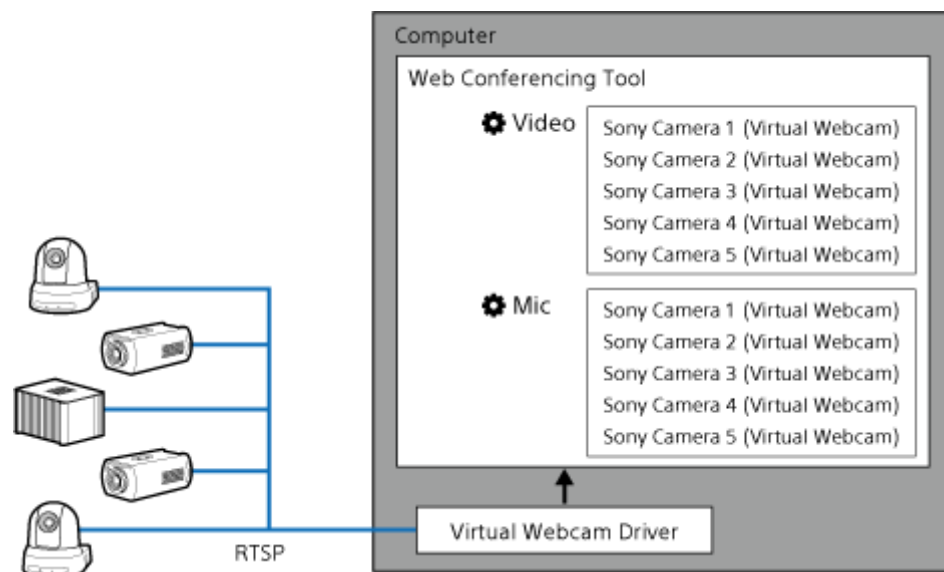
状态列表

本主题介绍[Camera List]的[Status]字段中显示的信息。

- **[Connected]**
可与摄像头通信，并且可从摄像头获取RTSP流媒体。

- **[On stream]**
正在接收摄像头RTSP流媒体，并且正在将影像输出到Web会议工具或其他应用程序。

- **[Not Confirmed]**
当您按下[Set]按钮且无法从摄像头接收RTSP流媒体时，将显示此消息。请参阅"常见问题"。

- **[Unknown camera]**
摄像头不受本软件支持。注册受本软件支持的摄像头。

- **[Camera standby]**
摄像头处于待机状态。从待机状态释放。

- **[Not running]**
应用程序未在REA-C1000上运行。

- **[Unsupported codec]**
摄像头影像编解码器未设置为H.264。将影像编解码器设置为H.264。

- **[RTSP setting disabled]**
摄像头的RTSP流媒体功能已关闭。打开RTSP流媒体功能。
当使用具有一般用户权限的REA-C1000时，关闭RTSP流媒体功能后不会显示此错误。

- **[Connection failed]**
摄像头未响应CGI命令。
检查摄像头连接状态和在本软件中注册的摄像头信息。

    - 没有为摄像头供电。
    - 摄像头未连接到网络。
    - 在本软件中设置的摄像头IP地址或HTTP端口不正确。

- **[Connection refused]**
摄像头拒绝连接。超过了摄像头的最大同时连接数量，或者可能更改了摄像头中注册的用户信息（用户名和密码）。

- **[Unknown error]**
由于未知原因，无法获取RTSP流媒体。请参阅"常见问题"。

错误消息

- **[It's already running.]**
  如果您尝试启动本软件的另一个实例，则会显示此消息。使用已经在运行的软件。

- **[Do you want to discard the changes?]**
  如果您在编辑摄像头信息时尝试退出软件，则会显示此消息。要退出软件，请单击[OK]按钮。要继续编辑，请单击[Cancel]按钮。

- **[Enter the IP Address in IPv4 format.]**
  如果[IP Address]字段中的IP地址不是IPv4地址格式，或者如果在注册摄像头信息时此项为空白，则会显示此消息。在[IP Address]字段中输入IPv4格式的IP地址。

- **[Enter a number between 0 and 65535 for HTTP Port.]**
  如果在注册摄像头信息时[HTTP Port]字段值不在0到65535之间，则会显示此消息。在[HTTP Port]字段中输入一个介于0到65535之间的值。

- **[Authentication error. RTSP Port query requires administrator privileges. Please configure the RTSP Port manually.]**
  当注册摄像头信息时由于身份验证错误而无法从摄像头自动获取RTSP端口值时，将显示此消息。勾选[Manual]，然后手动输入RTSP端口值。

- **[Unable to connect to the camera. Please check the following settings.**
  - IP Address
  - HTTP Port
  - User
  - Password
  Also, if your camera has an SSL communication function, make sure that it is set to allow non-SSL communication.]
  当由于除注册摄像头信息时所发生身份验证错误外的错误而无法从摄像头自动获取RTSP端口值时，将显示此消息。确认已为[IP Address]、[HTTP Port]、[User]和[Password]设置了适当的值。
  如果摄像头未启用SSL，请将设置更改为允许非SSL通信。

- **[Enter a number between 0 and 65535 for RTSP Port.]**
  如果在注册摄像头信息时[RTSP Port]字段值不在0到65535之间，则会显示此消息。在[RTSP Port]字段中输入一个介于0到65535之间的值。

- **[This camera is in use. Do you want to change the settings?]**
  在您尝试确认对摄像头注册信息所做的更改时，如果正在Web会议工具中使用摄像头，则会显示此消息。要确认更改，请单击[OK]按钮。要放弃更改并取消编辑，请单击[Cancel]按钮。

- **[This camera is already registered.]**
  如果您尝试注册已经注册的摄像头，则会显示此消息。使用已注册的摄像头或注册其他摄像头。

- **[Camera Standby. Check camera's settings.]**
  如果在注册摄像头信息时摄像头处于待机状态，则会显示此消息。将摄像头从待机状态释放出来，然后注册信息。

- **[Unsupported codec. Check camera's settings.]**
  注册摄像头信息时，如果摄像头的影像编解码器未设置为H.264，则会显示此消息。将摄像头的影像编解码器设置为H.264，然后注册信息。

- **[RTSP setting disabled. Check camera's settings.]**

如果在注册摄像头信息时关闭了摄像头的RTSP流媒体功能，则会显示此消息。打开RTSP流媒体功能，然后注册信息。

- **[Authentication failed. Check User/Password. Or, all the RTSP sessions of the camera are used.]**
如果在注册摄像头信息时RTSP流媒体接收测试失败，则会显示此消息。检查是否已为[User]和[Password]设置了适当的值。
如果设置了适当的值，则可能超出了摄像头支持的最大连接数。断开摄像头与其他设备的连接，然后注册信息。

- **[Unknown camera. Make sure that the camera you are connecting is a supported model.]**
如果您尝试注册不受本软件支持的摄像头，则会显示此消息。注册受本软件支持的摄像头。

- **[Connection failed. Check camera's condition.]**
如果在注册摄像头信息时无法与摄像头建立连接，则会显示此消息。请参阅"常见问题"。

- **[%d cameras (more than maximum number) are detected.]**
如果[Search]窗口中检测到113个或更多摄像头，则会显示此消息。

  * "%d"表示检测到的摄像头数量。

Virtual Webcam Driver for Remote Camera

常见问题

- **摄像头影像未显示在Web会议工具中。**

  - 确认已在摄像头上正确设置"配置摄像头设置"中所述的设置。
  - 确认同一计算机上的其他登录用户未在使用同一摄像头。
  - 同一摄像头不能在同一计算机上同时与多个Web会议工具搭配使用。要使用当前正由其他Web会议工具使用的摄像头，请首先在该其他Web会议工具中更改摄像头设置。
  - 如果正在从多台计算机访问摄像头，并且超过了最大同时连接数量，则将无法访问摄像头。
  - Web会议工具可能与本软件不兼容。如果Web会议工具具有专用的应用程序和Web浏览器版本，请尝试使用这两者。

- **摄像头影像不流畅，或者影像有延迟。**
  使用配有高性能CPU的计算机并检查其运行情况。
  减小摄像头上H.264流媒体的影像尺寸、帧频和比特率。
  如果同时使用多个摄像头影像，请减少所使用的摄像头数量。
  如果Web会议工具具有硬件加速设置，请尝试启用和禁用该设置。

- **摄像头没有音频输出。**
  当麦克风未连接到摄像头时，以及当摄像头设置中未启用音频发送时，不会输出音频。此外，当不使用Web会议工具中的视频时，也不会输出音频。

- **来自摄像头的图像会间歇地出现，且音频不稳定。**
  在摄像头设置中降低图像的比特率，然后重试。

- **即使摄像头未在本软件中注册，"Sony Camera 1 (Virtual Webcam)"至"Sony Camera 5 (Virtual Webcam)"也会显示在其他应用程序的摄像头列表中。**
  安装本软件后，即使摄像头未注册，"Sony Camera 1 (Virtual Webcam)"至"Sony Camera 5 (Virtual Webcam)"也始终显示为选择项。

- **访问摄像头时是否需要管理员权限？**
  如果您有权获取流媒体，即使您没有摄像头管理员权限，也可以在本软件中使用摄像头。但是，必须具有管理员权限才能更改本软件中使用的摄像头的设置。要更改摄像头的设置，请从Web浏览器访问摄像头。
  有关更改摄像头权限和设置的详细信息，请参阅摄像头的使用说明书。

- **是否可以使用本软件连接到第三方设备？**
  不支持第三方设备。本软件只能使用"操作环境"中列出的Sony摄像头。

- **为何在未连接摄像头的情况下，使用Web会议工具查看"Sony Camera 1 (Virtual Webcam)"至"Sony Camera 5 (Virtual Webcam)"的影像时这些影像会倒置？**
  这取决于Web会议工具的设置。本软件传输的影像不会倒置。

- **如何丢弃本软件中注册的摄像头的用户名和密码？**
  删除本软件保存的配置文件。如果已卸载本软件，则不会删除该文件。

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- This software is based in part on the work of the Independent JPEG Group.
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