

使用手册

Users' Manual

VER 1.0



五通道高清视频切换台 5-CH HD SWITCHER

语言 LANGUAGES

中文.....01

English.....15

安全须知

如果忽视这些注意事项，可能导致人员伤害或伤亡，可能导致设备损坏、数据丢失、设备性能降低或不可预知的结果。

**电器安全特性**

- 为避免可能的电击造成严重损害，在搬动产品之前，请先将电源线暂时从产品电源接口处移除。
- 当您需要加入新的硬件到产品中或移除产品中现有硬件时，请务必先关闭产品电源。条件允许的情况下，建议将电源线暂时从产品接口处移除。
- 使用前应确认产品是否已接地，电源电压是否已调整到产品适用的范围内。否则将可能导致产品以外损坏、性能降低或不可预知的结果。
- 请勿使用松动或损坏的电源插座或在手潮湿的时候接触电源插座，否则将有触电和起火的危险。
- 若听到电源线和电源接口处有噪音，请立即拔下电源线，并向您的销售代表寻求帮助，否则将有起火或触电的危险。
- 若如有异物或液体进入产品或需要清洁产品时，请从产品上移开电源线以及其他的任何电缆线，否则将有触电、起火和损坏产品的危险。
- 若电源已损坏，请不要尝试自行修复。请联系专业技术服务人员或经销商来处理。

Preparation Before Installation

**Caution**

- During transportation, handling, and installation of switchboard equipment, avoid collisions between the switchgear equipment and doors, walls, shelves, etc.
- When the equipment is unpacked and transported, it is strictly forbidden to put it down and drag it gently to avoid damage to the switchboard equipment.
- Do not place the switcher equipment in a flammable, explosive atmosphere or smoke environment. Do not perform any operation in this environment.
- Operating equipment should be kept away from water and moisture. The water in the switchgear or moisture will cause damage to the circuit of the switchgear equipment.
- A certain amount of heat will be generated during the operation of the switcher. Ensure that the switchgear equipment is ventilated and the switcher device can operate normally.

**Danger**

- It is a fatal hazard that indirect contact with the power supply by wet objects is prohibited. Unregulated, incorrect high-voltage operation can cause accidents such as fire or electric shock.
- It is forbidden to install and remove the switchgear equipment and power cord. When the power cord is in contact with the conductor, an arc or spark may be generated, which may result in fire or electric shock.

目录

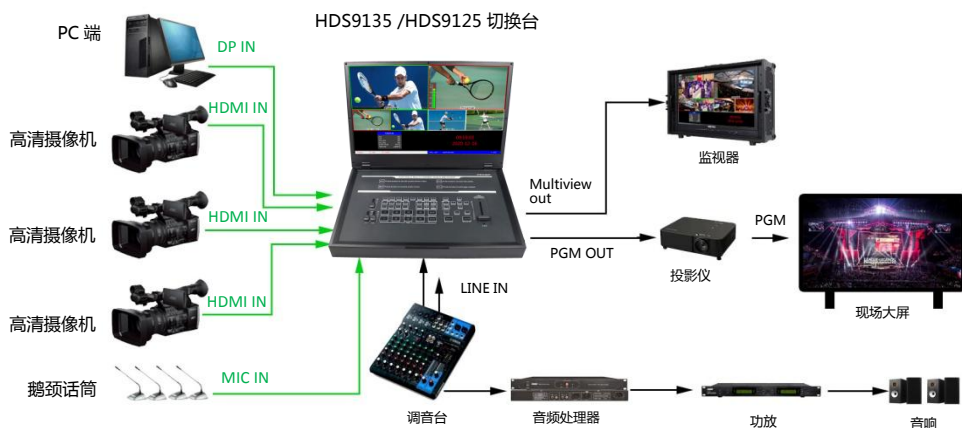
1.概述.....	02
1.1 产品介绍.....	02
2.功能特性.....	02
2.1 设备尺寸.....	03
3.接口规格说明.....	03
3.1 接口介绍.....	03
3.2 TALLY 接口.....	04
3.3 接口参数.....	04
4.控制面板及接口.....	05
4.1 控制面板.....	06
4.1.1 分区说明.....	06
4.1.2 按键说明.....	06
4.1.2.1 功能区.....	06
4.1.2.2 音频控制区.....	07
4.1.2.3 转场特效控制区.....	08
4.1.2.4 综合控制区.....	09
4.1.2.5 PGM 与 PVW 的选择.....	10
5. USB 接口对接 OBS 软件说明.....	11
6.系统菜单设置.....	12
7.故障及维修.....	14

1.概述

1.1 产品介绍

中帝威(DeviceWell) 高清视频切换台，采用便携式一体化设计，HDS9125 自带 11.6 寸高清监视屏，可以将多画面直接输出显示。标准尺寸：190mm*285mm*42.6mm；HDS9135 自带 15.6 寸高清监视屏，可以将多画面直接输出显示。标准尺寸：362mm*215mm*42.6mm，可适用于小型外出场景的视频特效切换需求。设备集成多画面预览处理器、特效发生器、音频处理器、控制键盘等切换台常用组件。

切换台支持 4 路 HDMI+1 路 DP 信号输入，共计 5 路视频信号。可同步输出外部预览信号。切换台支持 HDMI 内嵌音频+外部模拟音频，混合处理后，可嵌入到输出的 HDMI 信号中，也可从模拟端口输出。所有输入信号的分辨率自动适应，输出信号分辨率可按需求选择，相当灵活。对于广播电视、节目制作、访谈演讲现场制作、户外体育赛事、学校课件制作等视频切换需求，切换台的功能完全可以满足。



2.功能特性

中帝威 HDS9125/HDS9135 五通道高清视频切换台是一款多功能切换台，无需专业知识，只需通过简单操作即可进行视频切换和音频混合。本机可在广电、直播和各种活动场所中使用。

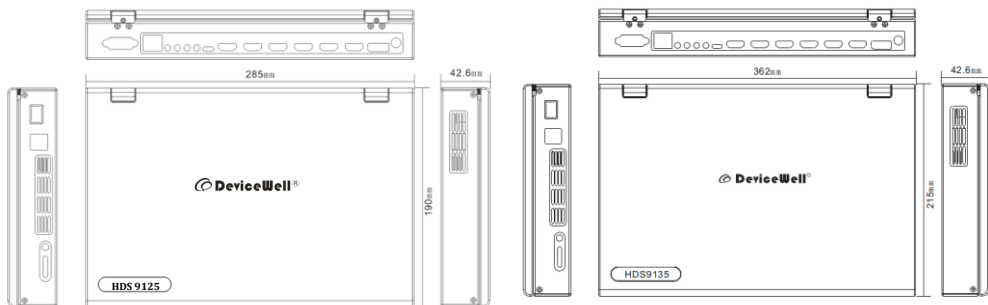


- ◆ 便携式一体式设计
- ◆ 支持 HDMI 音频解嵌
- ◆ 自带 11.6 寸/15.6 寸液晶显示屏
- ◆ 支持 Type-c 接口 UVC 输出
- ◆ 铝合金机身，强度高，重量轻
- ◆ PGM 输出：1 路 HDMI
- ◆ 集成控制键盘音频推杆和视频推杆
- ◆ 多画面输出：1 路 HDMI
- ◆ 最多支持 4 路 HDMI+1 路 DP 输入
- ◆ 支持 MIX /FADE/WIPE 等特效切换
- ◆ 2 路 MIC 输入
- ◆ 支持 CUT 硬切和 AUTO 特效切换
- ◆ 3.5mm 模拟音频输入输出
- ◆ 支持 Tally 接口接通话系统
- ◆ 1 路 3.5 耳机监听
- ◆ 支持音频跟随、混音功能

2.1 设备尺寸

HDS9125 尺寸：285mm*190mm*42.6mm

HDS9135 尺寸：362mm*215mm*42.6mm



3.接口规格说明

3.1 接口介绍

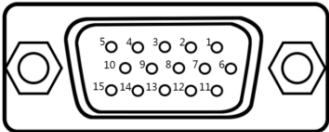


序号	接口定义	说明
1	VOL	监听音量调节
2	PHONES	3.5mm 音频监听
3	DCB	级联设备、配套 TALLY 灯模块
4	电源开关	电源开关
5	TALLY	接导播通话系统
6	RJ45	网络升级
7	LINE OUT	3.5mm 立体声音频输出
8	LINE IN	3.5mm 立体声音频输入
9	MIC IN	2 路 MIC 输入
10	STREAM OUT	Type_C 接口、UVC 输出
11	HDMI OUT	PGM 直播输出
12	MULTIVIEW	多画面输出
13	HDMI IN/DP IN	4 路 HDMI+1 路 DP 输入，第 1 路输入可以切换为 DP 输入
14	DC 12V	DC 12V 电源

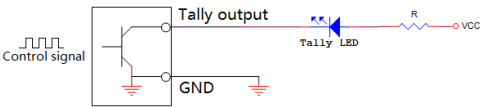
3.2 TALLY 接口

注：PIN1 PIN2 未使用

TALLY 联机示意图：



PIN	功能	PIN	功能
11	PGM-IN1	6	PVW-IN1
12	PGM-IN2	7	PVW-IN2
13	PGM-IN3	8	PVW-IN3
14	PGM-IN4	9	PVW-IN4
15	PGM-IN5	10	PVW-IN5
3	PGM-IN6	4	PVW-IN6
5	GND		



注：Tally LED：为外接显示设备

Tally output ：低电平有效（Tally LED 亮灯）

高电平无效（Tally out 熄灯）

3.3 技术参数

产品名称	便携式 4 路 HDMI+1 路 DP 切换台	
产品型号	HDS9125/HDS9135	
视频 信号 输入	输入信号	HDMI/DP 视频信号
	码率	270Mbps~3Gbps
	连接器	标准
	反射损耗	>15dB 5MHz~3GHz
	信号幅度	800mV±10% (HDMI)
	阻抗	100Ω (HDMI)
	均衡	自适应
	DVD 输入 HDMI 支持	480i/576i, 480p/576p, 720p, 1080i, 1080p
	电脑 HDMI 输入支持	1920x1080, 1680x1050, 1600x900, 1440x1050, 1366x768, 1360x768, 1280x1024, 1280x960, 1280x800, 1280x768, 1280x720, 1280x600, 1152x864, 1024x768, 800x600

视频 信号 输出	输出信号	HDMI 视频信号
	码率	270Mbps~3Gbps
	连接器	标准
	反射损耗	>15dB 5MHz~3GHz
	信号幅度	800mV±10%(HDMI)
	阻抗	100Ω (HDMI)
	直流偏移	0V±0.5V
	时钟恢复	支持
控制 参数	控制协议	CAN 总线
	连接端口	15 针 D 型口
	网络控制	RJ45, 100M
常规 参数	电源	DC 12V/ AC 110~240V
	功率	20W
	控制面板	支持现场制作, 集成多种按键
	工作温度	0℃~50℃无冷凝
	存储温度	-20℃~75℃
	工作湿度	20%~70%RH
	存储湿度	0%~90%RH, 不结露

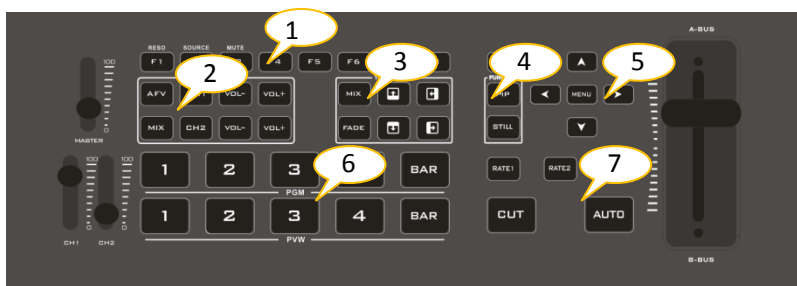
4.控制面板及接口

在使用中帝威高清切换台 HDS9125/HDS9135 设备前, 恳请您能花几分钟时间阅读本章节。本章节将为您详细介绍中帝威高清切换台的面板及接口, 以方便您后续的使用和操作。

中帝威高清切换台设备外壳使用新型金属材料制成, 新型金属外壳具备高强度特性提升了整机的抗摔、抗压、抗震能力, 有效保护了设备内部的元器件。超轻薄的特性使得设备在运输和维护过程中更加便捷, 无需借助其它设备; 同时也具有无可比拟的散热性能。

除了外壳的创新, 中帝威高清切换台接口连接器也做了全新的优化。采用全新 RoHS 标准的环保材料, 在耐用程度和环境保护上要求更为苛刻, 为您提供更稳定, 更环保, 性价比更高的产品。

4.1 控制面板



4.1.1 分区说明

序号	名称	说明
1	功能区	目前仅支持 F1、F2、F3 功能
2	音频控制区	主要是对音频跟随混音进行设置及音频音量控制
3	转场特效控制区	选择转场特效
4	综合控制区	PIP 和 STILL 特效
5	菜单控制区	使用按键设置菜单信息
6	PGM 与 PVW 选择区	直播与预监选择
7	转场控制区	控制转场切换和转场速率调整

4.1.2 按键说明

4.1.2.1 功能区

- **F1——分辨率控制**
按下按键面板的 F1 可以调整画面输出的分辨率，每按下一次调整一次输出分辨率，分辨有 1080P60Hz/1080P50Hz/1080P30Hz/1080P25Hz/1080P24Hz/1080I60Hz/1080I50Hz 可以选择。
- **F2——通道切换控制**
按下按键面板的 F2 可以对第一通道的输入源进行选择，当同时在 HDS9125/HDS9135 的背面接口接入 HDMI 和 DP 信号时，按下 F2 后可以在 IN1-HDMI1 和 IN1-DP1 中选择。
- **F3——MUTE**
按下 F3 按键对 PGM 直播输出一键静音。
- **F7——竖屏菜单显示**
这个功能主要配合 PM1005/PM1007 监视器才有用处，主要改变在这两款监视器上面的竖屏菜单显示方式。

4.1.2.2 音频控制区

● 音频跟随模式的使用方法：

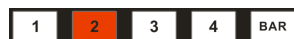
1、按下操作面板的 AFV 按键，按键此时会亮绿色灯，对应多画面的菜单也会显示当前音频状态，菜单里面 Audio Mode 显示 Follow，表示音频处于跟随模式；如右图所示

（注意：图片中显示的按键颜色与实际效果图片有所偏差，请见谅）



STATUS	
CH1	IN1
CH2	PHONE IN
CH1_VOL	44
CH2_VOL	100
Audio Mode	Follow
PGM Out	1080P30

2、音频跟随模式的通道有 IN1、IN2、IN3、IN4，对应的操作面板的按键（此时按键面板中 PGM 的 2 亮起，表示正在操作 IN2 信号源）如下图所示



3、音频跟随模式的音量大小调整，通过操作面板的按键来控制；按下跟随模式的 AFV 按键（显示绿灯），会默认跟随 PGM 直播通道的音频，此时需要增加或是减少音量，只需要按 AFV 旁边的 VOL+（增加音量）和 VOL-（减少音量）来调整。或者不断上下调整 CH1 的音频推子的位置，对应的菜单部分也可以显示当前音量大小。



● 混音指派模式的使用方法：

1、按下操作面板的 MIX 按键，按键此时会亮绿色灯，如右图所示

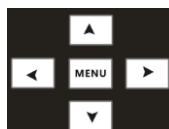
对应多画面的菜单也会显示当前音频状态，菜单里面 Audio Mode 显示 Mixing，表示音频处于混音指派模式，如右图所示



STATUS	
CH1	IN3
CH2	Phone_IN
CH1_VOL	44
CH2_VOL	100
Audio Mode	Mixing
PGM Out	1080P30

2、混音指派的通道有 IN1、IN2、IN3、IN4，PHONE_IN、MIC_IN1、MIC_IN2 在混音指派模式下，多了两种音频加嵌功能；PHONE_IN 表示 3.5 音频接口，MIC_IN 表示 3.5mm 麦克风音频接口；PGM 直播输出可以同时任意混音两路音频，两路音频的音量大小也可以分别调整。

3、混音指派的音频通道调整：是通过面板上面的按键来调整的，其中包括音频控制区和菜单控制区来调整的。如下图所示



按下按键面板中的 MIX（显示绿灯），再按下“MENU”按键，多画面的菜单会做出相应的变化，按下“MENU”进入第一路音频的通道选择，使用菜单中的“上下”按键进行通道选择，可以从 IN1、IN2、IN3、IN4、PHONE_IN、MIC_IN1、MIC_IN2 选择，确定选择后按下“MENU”退出；如右图所示第一通道的音频源从 IN1 变成了 IN4。

STATUS	
CH1	IN1
CH2	IN2
CH1_VOL	44
CH2_VOL	100
Audio Mode	Mixing
PGM Out	1080P30

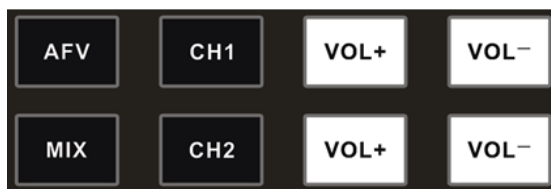
CH2 音频通道的选择跟 CH1 相同的操作方法；按下“MENU”按键后，调整第二路音频，再按下“MENU”按键进入第二路音频通道选择有 IN1、IN2、IN3、IN4、PHONE_IN、MIC_IN1、MIC_IN2，确定选择后按下“MENU”退出；如右图所示第二通道的音频源从 IN2 变成了 MIC_IN1。

STATUS	
CH1	IN4
CH2	MIC_IN1
CH1_VOL	44
CH2_VOL	100
Audio Mode	Mixing
PGM Out	1080P30

4、音频指派通道的音量调整：直接按下音频控制区 VOL+/VOL-键来

控制音量大小，或者不断上下调整 CH1 和 CH2 的音频推子的位置，对应的菜单部分也可以显示当前音量大小。音量值在 0-100 范围，如右图所示第一通道的音量从 44 增加到了 100。第二路混音音量大小调整的操作同第一路混音音量调整操作一致。

音量推子 MASTER:表示总音量推子，在混音跟随模式下都需要把此推子推到最顶上。



4.1.2.3 转场特效控制区

转场模式分为三种：

MIX 混合特效转场、FADE 淡入淡出转场、划像转场

其中划像转场包括：向上、向下、向左和向右划像转场方式。

● MIX 混合转场特效

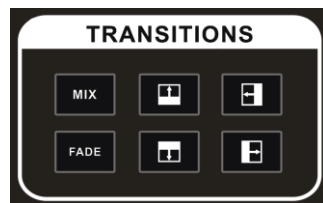
MIX 特效为混合转场特效，设置后转场在主输出会有原直播画面逐渐减淡，然后直到完全过渡到新的直播画面。

点击特效控制区的 MIX（按下后显示绿灯），然后点击 AUTO 或推杆或 CUT 便可以进行切换。效果图如下




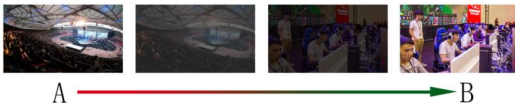
A —————> B

MIX 混合过渡特效，在 A 的画面中叠加逐渐叠加 B 画面，直至转场到最后，画面完全替换为 B 画面



● FADE 淡入淡出转场特效


点击特效控制区的 FADE  (按下后显示绿灯), 然后点击 AUTO 或推杆或 CUT 便可以进行切换。效果图如下



FADE 淡入淡出特效, A 逐渐画面变暗直至完全为黑色, 再逐渐由黑色变为 B 画面。

● 四种特效划像转场

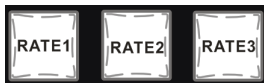
划像转场方式一共有四种转场方式, 分别是向上/向下/向左/向右四种转场方式。

向上转场: 点击特效控制区的  (按下后显示绿灯) 然后点击 AUTO 或推杆或 CUT 便可以进行切换。效果图如下, 其他三种转场操作相同。



向上划像转场特效, A 画面不变, B 画面通过向上方向逐渐划入, 直至画面完全变成 B 画面


● 转场速率调整



在操作转场特效控制区时, 还可以通过操作按键面板中的 RATE1、RATE2、RATE3 控制转场速率, (rate1: 640ms; rate2: 1280ms; rate3: 2560ms) 注: 只有使用 AUTO 转场时才有效果

4.1.2.4 综合控制区

● PIP 画中画特效

画中画特效: 按下控制面板的  (按下后显示绿灯), 然后点击 AUTO 或 CUT 便可以进行切换。效果图如下



此时的液晶屏上的信息会切换成 PIP 画中画设置, 按下菜单键后可根据需求设置。如右图所示

画中画大小与位置

可以使用菜单按键对 PIP 画中画的参数进行设置, 情况如下 (水平位置/垂直位置大小是以最小显示图像为例的)。

水平位置设置: 从最左上端到最右上端的值是 0-1440, 每按下按键一格数值增加/减少 10。

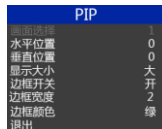
垂直位置设置: 从最左上端到最左下端的值是 0-810, 每按下按键一格数值增加/减少 10。

显示大小设置: 可以选择小/中/大设置。

边框开关设置: 可以选择开/关设置。

边框宽度设置: 边框宽度可以选择 2-7 厚度边框, 每按下按键一格数值增加/减少 1。

边框颜色设置: 可以选择白/红/绿/绿设置边框颜色。



● STILL 画面冻结特效

画面冻结特效：按下控制面板的 **STILL**（按下后显示绿灯），然后输出的 PGM 视频动画将会进入冻结现象，再次按键即可解冻画面，效果图如下。

STILL

4.1.2.5 PGM 与 PVW 的选择

● 多画面输出窗口介绍

其中 Preview 和 Program 分别为预监和直播输出。如下图所示



预监

直播

下方有 4 个窗口对应的是输入源监看，分别对应切换台控制面板上的 1-4 号按键



● PGM 和 PVW 输出信号

设备接入视频信号源后，按下按键面板中的 1（PGM）和 2（PVW），在输出的多画面监视器中的直播和预监信号源分别是 1（PGM）和 2（PVW），信号源分别是 HDMI IN1 和 HDMI IN2。效果图如下

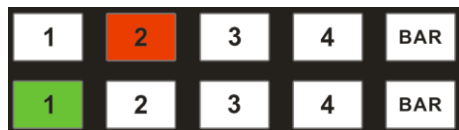


● PGM 和 PVW 源切换

如果想让多画面中的直播与预监信号源切换（直播≠预监）

假设想要多画面中的直播信号源 1（PGM）和预监信号源 2（PVW）变换成 2（PGM）和 1（PVW），只需要按下按键面板中的 2（PGM）和 1（PVW），再点击 AUTO 或 CUT 切换即可。直播 PGM 信号源 1-4 可以和预监 PVW 信号源任意切换。

效果图如下：



按下按键面板中的 BAR  按键后屏幕将输出彩条。

5. USB 接口对接 OBS 软件说明

步骤 1: 通过 USB 数据线将单板与 WIN7 相连, WIN7 端识别后, 设备列表会出现 HDS9125 Audio/HDS9135 Audio 和 HDS9125 Video/HDS9135 Video, 代表识别 ok.

如图 1 所示。图 1 设备管理器中 Audio 和 Video 节点。

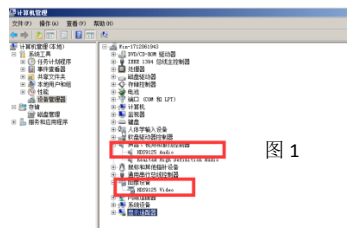


图 1

步骤 2: 添加视频捕获设备

打开 OBS 软件, 点击界面左下角的来源框的“+”然后点击“视频捕获设备”, 如图 2 所示。

点击“视频捕捉设备”后将出现一个可以修改名称的界面, 可以自定义名称。如图 3 所示。



图 2

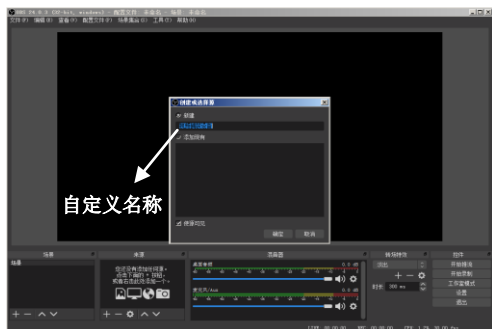


图 3

步骤 3：设置视频捕获设备属性

① 设置视频属性。

设备选择：HDS9125 Video /HDS9135 Video；

分辨率/帧率 类型选择：自定义；分辨率可以选择：1920*1080、1280*720、640*360 如图 4 所示。

②下拉设置音频属性。

音频输出模式选择：输出桌面音频（WaveOut）；勾选使用自定义的音频设备

音频设备选择：Capture Input terminal(HDS9125 Audio /HDS9135 Audio)，如图 5 所示。



说明：

图 4



图 5

- 1.最新 OBS 版本 25.0.1 可以在视频格式选择 H264，这样图像质量会有所提升。
- 2.每次使用前需要先将设备与电脑连接，再打开 OBS 软件，否则 OBS 软件无法识别 USB 设备。

6.系统菜单设置

● 菜单显示

在菜单栏中，您可以对设备进行 IP 设置、系统恢复出厂设置、更换语言等操作。

在开机默认状态下，按下“MENU”，进入主菜单。如下图所示

状态	
CH1 源	IN1
CH2 源	IN2
CH1 音量	44
CH2 音量	100
音频模式	混音
输出分辨率	1080P30

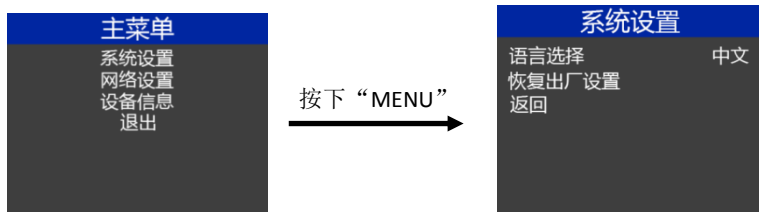
按下“MENU”

主菜单
系统设置
网络设置
设备信息
退出

在状态栏下操作 MENU，可对音频模式、输出分辨率进行设置；音频模式：菜单选择混音或者跟随；输出分辨率：菜单即可操作，可选择

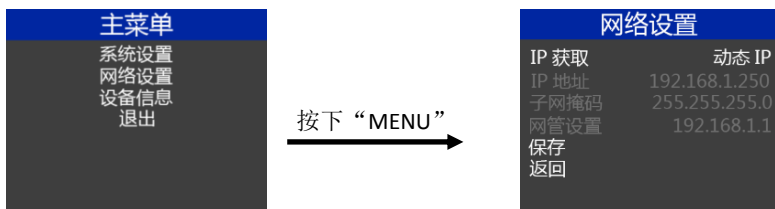
1080p60/1080p50/1080p30/1080p25/1080p24/1080i50/1080i60

● 系统设置



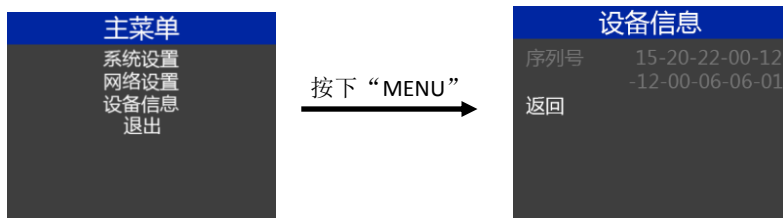
在系统设置菜单内，您可以在语言选择中：选择中文或英文两种不同语言；在使用过程中若遇到未知的错误，您可以选择恢复出厂设置，进行重置。

● 网络设置



在网络设置菜单内，您可以在 IP 获取中选择：动态 IP 或静态 IP，当选择了静态 IP 之后还可以对 IP 地址、子网掩码、网管设置进行相应的设置，之后保存返回即可。

● 设备信息



在设备信息菜单内，您可以看到设备的版本信息，此处不可以修改。

7. 故障及维修

- (1) 输出图像受干扰会闪烁，可能是使用的线材质量较差，线材的屏蔽层没有做好。当使用环境附近有强烈的无线电的时候，无线电波会干扰到信号的传输，导致信号闪烁不稳定。请使用正规厂家生产的线材，例如百通，住耐美。
- (2) 当拔插音视频接口时，如果感觉到有明显的静电，有可能设备电源线没有良好接地。请按正确方法接地，否则容易损坏主机，缩短主机寿命。
- (3) 当 RJ45(一般指：电脑网口)控制不了切换台时，检查控制软件所设定的通信口是否与所接设备的串口相对应；检查电脑的通信口是否良好。

● 维护

请用柔软、干燥的抹布来清洁本设备。禁止用酒精、油漆稀释剂或汽油来清洁。确保本设备保存和工作在远离液体和污渍的环境中。用户没有自己处理的部件，所有服务和维修事项请联络本公司或者其它授权的经销商。

● 保修说明

自购买之日起，DeviceWell 为本品提供 12 个月的保修服务。若本品在保修期内出现故障，DeviceWell 可为本品提供免费修理或更换零部件，在有必要的情况下可以进行更换缺陷产品的服务。为确保用户有权享受本保修条款中的服务，如遇产品出现故障请您务必在保修期内联系 DeviceWell 售后服务部，经确认后妥善安排保修事宜。缺陷产品，用户应将负责将产品包装并寄送到 DeviceWell 的指定服务中心进行维修，运费由用户承担并预先支付。若用户因任何原因退货，所有产生的运费、保险费、关税等各项税务以及其他费用均由用户自行承担。

● 保证限制和例外

在上述的有限保证之外，本保修条款不适用于任何因使用、维护不当或保养不周造成的缺陷、故障或损坏。如产品因滥用，错误使用，疏忽，意外，异常的物理压力或者电压、未被授权的修改，篡改，改变或者由于本公司或它授权的代理以外其他人提供的服务造成的损坏，本公司将不用承担额外的义务。平常使用或者在该产品适用的应用中正确使用产品而引起的故障除外。根据本保修服务，DeviceWell 保修期内保修服务范围不包括以下内容：

1. 对由非 DeviceWell 专门人员进行的安装、维修或保养所造成的损坏进行维修，
2. 对因使用不当或连接到不兼容设备所造成的损坏进行维修，
3. 对因使用了非 DeviceWell 生产或提供的零部件所导致的损坏或故障进行维修，
4. 对经过改装或其他产品进行组装的产品进行保养维修（产品经改装或组装后会增加保养维修所需时间或保养难度）。本保修条款由 DeviceWell 提供，它可取代所有其他明示或隐含的保修。DeviceWell 及其供应商对任何有关适销性及就特定用途的适用性等隐含保证不作任何担保。DeviceWell 负责为用户提供缺陷产品的维修或更换服务是完整和排他性补救措施，不论 DeviceWell 或其供应商是否事先获悉发生间接、特殊、偶然或必然损坏等损坏的可能性。若用户对本设备进行非法使用，DeviceWell 概不负责。对因使用本产品造成的一切损失，DeviceWell 概不负责。本产品的操作风险由用户自行承担。

以上所有内容，DeviceWell 保留一切权利，并拥有最终解释权。

Contents

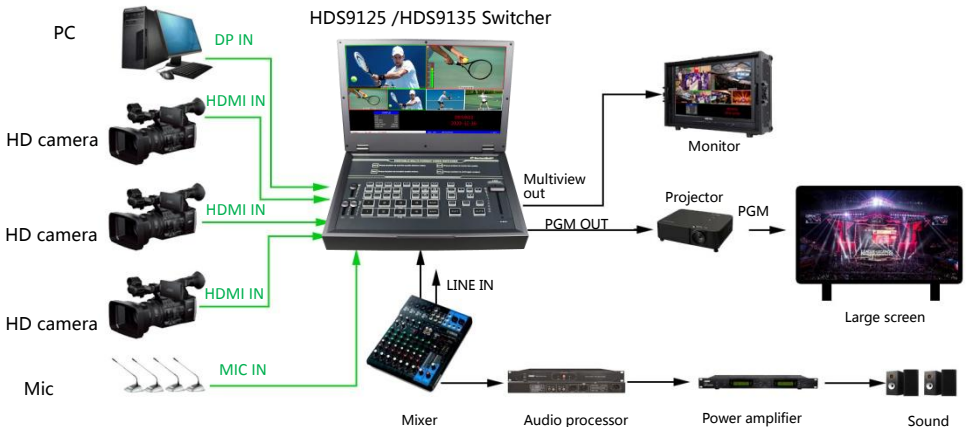
1. Overview.....	16
1.1 Introduction.....	16
2. Functional characteristics.....	16
2.1 Size.....	17
3. Interface Specification.....	17
3.1 Interface Introduction.....	17
3.2 TALLY Interface.....	18
3.3 Parameter.....	18
4. Control Panel and Interface.....	19
4.1 Control Panel.....	19
4.1.1 Area Description.....	20
4.1.2 Key Description.....	20
4.1.2.1 Function Area.....	20
4.1.2.2 Audio Control Area.....	20
4.1.2.3 Transition Effect Control Area.....	22
4.1.2.4 Integrated Control Area.....	24
4.1.2.5 PGM & PVW Selection.....	24
5. System menu settings.....	26
6. Instructions for USB interface to OBS software.....	27
7. Time synchronization instructions.....	28
8. Failure and Maintenance.....	28

1. Overview

1.1 Introduction

The DeviceWell HD Video Switcher HDS9125 adopts a portable integrated design and comes with an 11.6-inch HD monitor screen, which can directly multiview output. Standard size: 285mm*190mm*42.6mm, The DeviceWell HD Video Switcher HDS9135 adopts a portable integrated design and comes with an 15.6-inch HD monitor screen, which can directly multiview output. Standard size: 362mm*215mm*42.6mm suitable for video effects switching needs in small outdoor scenes. The equipment integrates common components of switcher such as multiview processor, special effect generator, audio processor, control keyboard and so on.

HDS9125/HDS9135 supports 4 HDMI + 1 DP signal input, a total of 5 video signals. The external preview signal can be output synchronously. HDS9125/HDS9135 supports HDMI embedded audio + external analog audio. After mixing, it can be embedded in the output HDMI signal or output from the analog port. The resolution of all input signals is automatically adapted, and the output signal resolution can be selected as required, which is quite flexible. For broadcast and television, program production, on-site interview and speech production, outdoor sports events, school courseware production and other video switching needs, the functions of HDS9125/HDS9135 can fully meet.



2. Functional characteristics

DeviceWell HDS9125/HDS9135 5-CH HD video switcher is a multi-functional switcher, no professional knowledge is required, and video switching and audio mixing can be performed by simple operations. This machine can be used in broadcasting, live broadcast and various event venues.

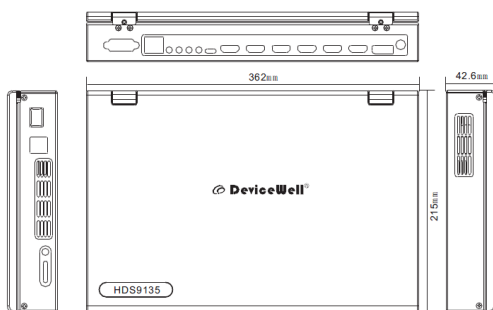
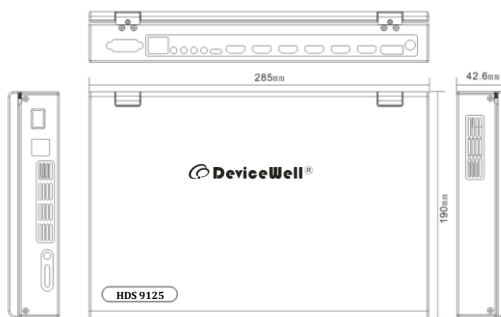


- ◆ Portable integrated design
- ◆ Comes with 11.6-inch/15.6-inch LCD display
- ◆ Aluminum alloy body, high strength and light weight
- ◆ Integrated control keyboard audio fader and video fader
- ◆ Support up to 4 HDMI+1 DP inputs
- ◆ 2 MIC inputs
- ◆ 3.5mm analog audio input and output
- ◆ 1 channel 3.5 headphone monitor
- ◆ Support audio following and mixing functions
- ◆ Support HDMI audio de-embedding
- ◆ Support Type-c interface UVC output
- ◆ PGM output: 1 HDMI
- ◆ Multiview output: 1 HDMI
- ◆ Support MIX /FADE/WIPE and other special effects switching
- ◆ Support CUT hard cut and AUTO special effect switch
- ◆ Support Tally interface to connect to the call system

2.1 Size

HDS9125 Size: 190mm*285mm*42.6mm

HDS9135 Size: 362mm*215mm*42.6mm



3. Interface Specification

3.1 Interface Introduction

The Switcher interface is shown below.

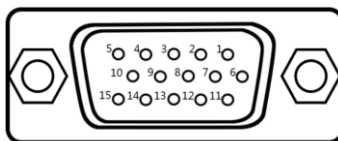


NO.	Definition	Description
1	TALLY	TALLY
2	RJ45	Network upgrade
3	LINE OUT	Stereo audio output
4	LINE IN	Stereo audio input
5	MIC IN	2 MIC inputs
6	Type-C	UVC output
7	HDMI OUT	PGM Live output
8	MULTIVIEW	Multiview output
9	HDMI IN/DP IN	4 HDMI + 1 DP inputs, The first input can be switched to DP input
10	DC 12V	DC 12V Power Input
11	VOL	Listen volume adjustment
12	PHONES	3.5mm audio listen
13	DCB	Cascade equipment, supporting TALLY lamp module (reserved)
14	Switch	Power switch button

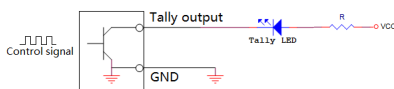
3.2 TALLY Interface

Note: PIN1 PIN2 not used.

TALLY Online schematic:



PIN	FUNCTION	PIN	FUNCTION
11	PGM-IN1	6	PVW-IN1
12	PGM-IN2	7	PVW-IN2
13	PGM-IN3	8	PVW-IN3
14	PGM-IN4	9	PVW-IN4
15	PGM-IN5	10	PVW-IN5
3	PGM-IN6	4	PVW-IN6
5	GND		



Note: Tally LED: for external display device

Tally output: Active low (Tally LED is lit)
High level is invalid (Tally out is off)

3.3 Parameters

Name	4*HDMI+1*DP Switcher	
Video Signal Input	Input signal	HDMI/DP video signal
	Rate	270Mbps~3Gbps
	Connector	Standard
	Reflection loss	>15dB 5MHz~3GHz
	Signal amplitude	800mV \pm 10% (HDMI)
	Impedance	100 Ω (HDMI)
	Balance	Adaptive
	DVD input HDMI support	480i/576i, 480p/576p, 720p, 1080i, 1080p,
	Computer HDMI input support	1920x1080, 1680x1050, 1600x900, 1440x1050, 1366x768, 1360x768, 1360x768, 1280x1024, 1280x960, 1280x800, 1280x768, 1280x720, 1280x600, 1152x864, 1024x768, 800x600,

Video Signal Output	output signal	HDMI video output
	Code rate	270Mbps~3Gbps
	Connector	Standard
	Return Loss	>15dB 5MHz~3GHz
	Signal amplitude	800mV±10%(HDMI)
	impedance	100Ω (HDMI)
	DC offset	0V±0.5V
	Clock recovery	Support
Control Parameter	Control	9600 baud, 8 bits, 1 stop bit, no parity
	Connection	15-pin D-port, 2-RX, 3-TX, 5-GND
	Network control	RJ45,100M
General Parameter	power supply	12V/DC
	Power rate	18w
	control panel	Support on-site production, integration of a variety of buttons.
	Operating temperature	0℃~50℃, No condensation
	Storage temperature	-20℃~75℃
	Working humidity	20%~70%RH
	Storage humidity	0%~90%RH, No condensation

4. Control Panel and Interface

Before using the HD Mini Switcher, please take a few minutes to read this section. This chapter will introduce you the panel and interface of the HD switcher to facilitate your subsequent use and operation.

The new high-strength characteristics of the new aluminum alloy with high-strength characteristics improve the anti-drop, anti-shock and shock-proof capabilities of the whole machine, and effectively protect the internal components of the equipment. Ultra-lightweight features make the unit easier to transport and maintain without the need for additional equipment; it also offers unparalleled thermal performance.

In addition to the innovation of the case, the HD switcher has also been completely optimized for the interface connector. Environmentally friendly materials with new RoHS standards are More demanding in terms of durability and environmental protection, to provide customers with more stable, more environmentally friendly, more cost-effective products

4.1 Control Panel



4.1.1 Area Description

No.	Name	Description
1	Function area	Currently supports F1/F2/F3 function
2	Audio control area	Mainly set the audio follow-up mix and audio volume control
3	Transition effect control area	Select transition effects
4	Integrated control area	PIP and STILL effects
5	Menu control area	Setting menu information with keys
6	PGM and PVW selection	Program and preview selection
7	Transition control area	Control transition switching and transition rate adjustment

4.1.2 Key Description

4.1.2.1 Function area

- **F1---Reso resolution control**
Press F1 on the keypad to adjust the screen output resolution. Each time you press the button, you can adjust the output resolution. The resolutions are 1080P60Hz / 1080P50Hz / 1080P30Hz / 1080P25Hz / 1080P24Hz / 1080I60Hz / 1080I50Hz.
- **F2--- Source channel switching control**
Press F2 on the keypad to select the input source of the fourth channel. When the HDMI and DP signals are connected to the back interface of the switcher at the same time, you can choose between IN1-HDMI and IN1-DP after pressing F2.
- **F3--- Mute one-key mute**
Press F3 on the key panel to switch to the mute function, turn off all the audio volume output
- **F7--- Portrait menu display**
This function is mainly useful with PM1005/PM1007 monitors, and mainly changes the display mode of the vertical menu on these two monitors.

4.1.2.2 Audio Control Area

- How to use the audio follow mode:

1. Press the AFV button on the operation panel, the button will light green at this time, and the corresponding multiview menu will also display the current audio status. The Audio Mode in the menu shows Follow, which indicates that the audio is in follow mode; as shown in the figure on the right

(Note: the color of the keys displayed in the picture is different from the actual effect picture.)



STATUS	
CH1	IN1
CH2	PHONE IN
CH1_VOL	44
CH2_VOL	100
Audio Mode	Follow
PGM Out	1080P30

2. The channels of the audio follow mode are IN1、IN2、IN3、IN4 , and the corresponding operation panel keys (the button panel 2 lights up at this time, indicating that Operate the IN2-HDMI2 signal source as shown below.)



3. The volume adjustment of the audio follow mode is controlled by the keys on the operation panel. Pressing the AFV button in the follow mode (green light is displayed) will follow the audio of the PGM live channel by default. At this time, you need to increase or decrease the volume. Next to VOL + (increase volume) and VOL- (decrease volume) to adjust.

Keep clicking the VOL + and VOL- buttons, the corresponding menu section can also display the current volume value.



- How to use mix assignment:

1、 Press the MIX button on the operation panel.

Lights up green as shown on the right

The menu corresponding to the multiview will also display the current audio status. The Audio Mode in the menu displays Mixing, which indicates that the audio is in the mixing assignment mode, as shown in the right figure.



2. The mixing assigned channels are IN1、IN2、IN3、IN4、PHONE_IN、MIC_IN1、MIC_IN2. Under the mixing assignment mode, there are two more audio embedding functions; PHONE_IN means 3.5mm stereo audio interface, MIC_IN means 3.5mm microphone audio interface; PGM live output can mix two audio channels at any time, and the volume of the two audio channels can also be adjusted separately.

3. Audio channel adjustment for mixing assignment: It is adjusted through the buttons on the panel, including audio control area and menu control area. As shown below.



You can also press MIX (showing green light) in the key panel, then press the "up and down" buttons of the menu button to enter the audio channel selection, press the "down" button to enter the CH1 channel, click "MENU" to enter the audio source selection, audio The source can be selected from IN1、IN2、IN3、IN4、PHONE_IN、MIC_IN1、MIC_IN, after confirming the selection, press "MENU" to exit; as shown in the right figure, the audio source of the first channel is from IN1-HDMI1 becomes IN4-HDMI4.

The second audio selection operation is the same. As shown in the right figure, the audio source of the second channel has changed from IN2-HDMI2 to MIC_IN1.

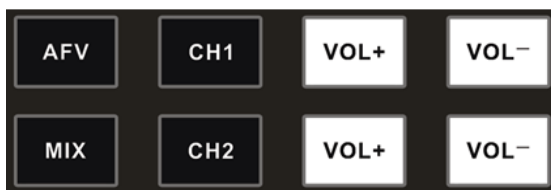
Note: When there is a white bar displayed in the menu, you can only exit by pressing the "up" button on the key panel, and you can only operate the operating system menu after exiting

STATUS	
CH1	IN1
CH2	IN2
CH1_VOL	44
CH2_VOL	100
Audio Mode	Mixing
PGM Out	1080P30

STATUS	
CH1	IN4
CH2	MIC_IN1
CH1_VOL	44
CH2_VOL	100
Audio Mode	Mixing
PGM Out	1080P30

4. Volume adjustment of the audio assigned channel: directly press the VOL+/VOL- button in the audio control area to control the volume, or adjust the position of the audio faders of CH1 and CH2 up and down, the corresponding menu part can also display the current volume. The volume value is in the range of 0-100. As shown in the figure on the right, the volume of the first channel has increased from 44 to 100. The operation of adjusting the volume of the second channel of mixing is the same as that of adjusting the volume of the first channel of mixing.

Volume fader MASTER: Represents the master volume fader, you need to push this fader to the top in the mix follow mode.



4.1.2.3 Transition Effect Control Area

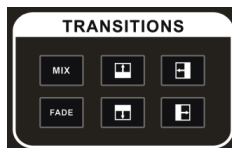
There are 3 transition modes:

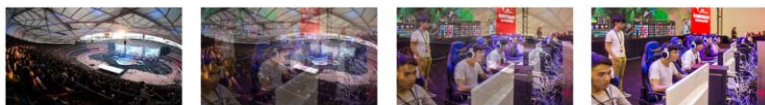
MIX transitions, FADE, and Wipes, where the Wipes include: up, down, left, and right.


● MIX Transition

MIX special effects are transition effects. After setting the transition, the main output will fade from the original live picture and then transition to the new live picture until it completely disappears.

Click **MIX** in the special effect control area (green light is displayed after pressing), and then click AUTO or CUT or T-bar to switch. The effect is shown below.







A  B

MIX transition effects, superimposed on the A picture and gradually superimposed the B picture, until the transition to the end, the picture is completely replaced by the B picture

● FADE Transition

Click  in the special effect control area (green light is displayed after pressing), and then click AUTO or CUT or T-bar to switch, the effect picture is below.




A  B


FADE in and fade out effects, A gradually darkens the picture until it is completely black, and then gradually changes from black to B picture.

● Four special effects wipe transitions

There are four types of transition modes in wipe, which are up / down / left / right.

Transition up: Click  in the special effect control area (green light is displayed after pressing), and then click AUTO or CUT or T-bar to switch. The other three transition operations are the same.

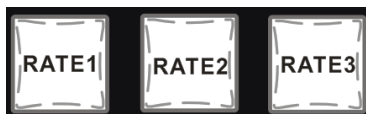


A  B

Wipe up the transition effect, the A picture is unchanged, and the B picture is gradually wiped in by the upward direction until the picture completely becomes B

● Transition rate adjustment

When operating the transition effect control area, you can also control the transition rate by operating the RATE1, RATE2, and RATE3 in the keypad (rate1: 640ms; rate2: 1280ms; rate3: 2560ms) Note: Only when using AUTO transition effective.



4.1.2.4 Integrated control area

- **PIP picture-in-picture special effects**

PIP special effects: Press **PIP** on the control panel (the green light is displayed after pressing), and then click AUTO or CUT to switch. The effect is shown below.

At this time, the information on the LCD screen will be switched to the PIP setting. The control menu key can be set according to requirements, as shown below.



PIP	
Window	1
H Position	0
V Position	0
Size	Large
Border Enable	On
Border Width	2
Border Color	Green
Exit	

PIP size and position

You can use the knob to set the parameters of PIP picture-in-picture, the situation is as follows (the horizontal / vertical position size is based on the smallest display image as an example)

Horizontal position setting: The value from the upper left end to the upper right end is 0-1440, and the value increases / decreases by 10 each time the knob is rotated.

Vertical position setting: The value from the upper left end to the lower left end is 0-810, and the value increases / decreases by 10 each time the knob is rotated.

Display size setting: You can choose small / medium / large settings.

Bezel switch settings: You can choose on / off settings.

Border width setting: The border width can be selected from 2-7 thickness borders, and the value increases / decreases by 1 each time the knob is turned.

Border color setting: You can choose white / red / green / green to set the border color.

- **STILL screen freeze effects**

Screen freeze special effect: Press **STILL** on the control panel (green light is displayed after pressing), and then the output PGM video animation will enter the freeze phenomenon. Press the button again to unfreeze the screen, the effect is shown below.

4.1.2.5 PGM and PVW selection

- **Multiview output window introduction**

Among them Preview and Program are preview and live broadcast output respectively, as shown below.





PVW

PGM

There are 4 windows below corresponding to the input source monitoring, which correspond to the No. 1 to No. 4 buttons on the switcher control panel.



● PGM and PVW output signals

After the device is connected to the video signal source, press 1 (PGM) and 2 (PVW) in the keypad. The live and preview signal sources in the output multiview monitor are 1 (PGM) and 2 (PVW), respectively. The signal sources are HDMI IN1 and HDMI IN2.

The effect diagram is as follows



● PGM and PVW source switching

If you want to switch between PGM and PVW video sources in multiview (PGM \rightleftharpoons PVW) Suppose you want to convert live signal source 1 (PGM) and preview signal source 2 (PVW) into 2 (PGM) and 1 (PVW) in a multiview. You only need to press 2 (PGM) and 1 (PVW), and then use the CUT or AUTO to switch. The live PGM signal sources 1-4 can be switched arbitrarily with the preview PVW signal source.

The effect diagram is as follows:



After pressing the BAR button in the button panel, the screen will output color bars

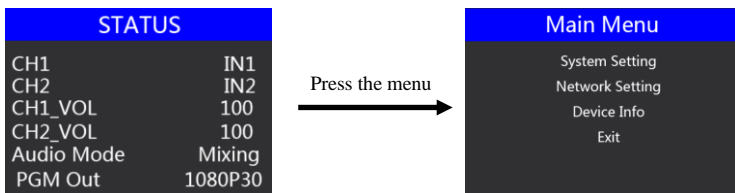


5. System menu settings

● Menu display

In the menu bar, you can perform IP settings on the device, restore the factory settings, and change the language.

In the default state of power on, press the menu to enter the main menu, as shown below.

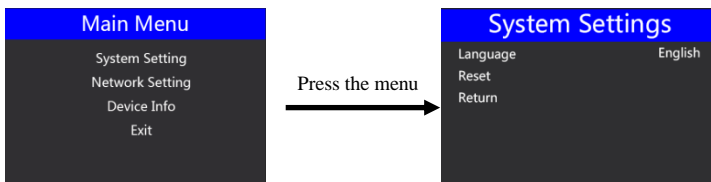


Press MENU under the status bar to set the audio mode and output resolution;

Audio mode; menu to select mix or follow;

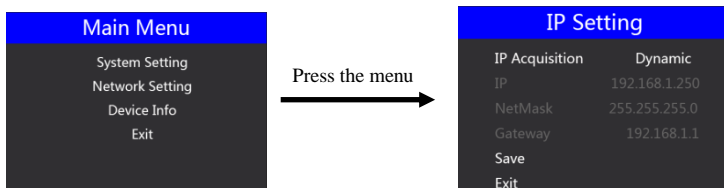
Output resolution: menu can be operated, you can choose 1080p60 / 1080p50 / 1080p30 / 1080p25 / 1080p24 / 1080i50 / 1080i60

● System settings



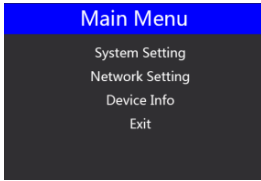
In the system setting menu, you can choose between two languages: Chinese or English; if you encounter an unknown error during use, you can choose to restore the factory Settings, reset.

● Network settings



In the network setting menu, you can choose in the IP acquisition: dynamic IP or static IP. After selecting the static IP, you can also set the IP address, subnet mask, and network management settings accordingly, and save and return.

● Device information



Press the menu

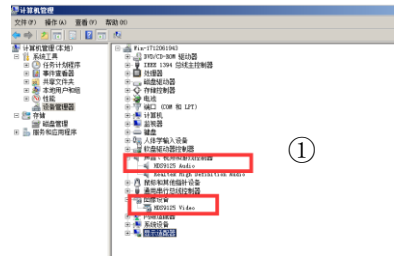


In the device information menu, you can read the serial number of the device. You cannot modify it here.

6. Instructions for UVC interface to OBS software

Step 1: Connect the board to WIN7 through the USB data cable. After the WIN7 end is identified, HDS9125 Audio/ HDS9135 Audio will appear in the device list. Interface and HDS9125 Video / HDS9135 Video represent ok.

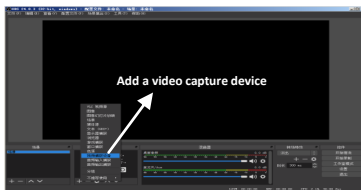
As shown in Figure ①. Figure ① Audio and Video nodes in the device manager.



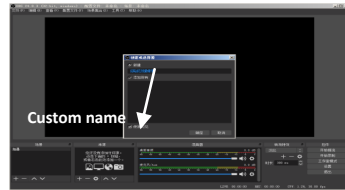
Step 2: Add a video capture device

Open the OBS software, click the "+" in the source box in the lower left corner of the interface, and then click "Video Capture Device", as shown in Figure ②.

After clicking "Video Capture Device", an interface for changing the name will appear, and you can customize the name. As shown in Figure ③



②



③

Step 3: Set video capture device properties

- Set the video attributes.

Device selection: HDS 9125 Video / HDS 9135 Video IN; Resolution / frame rate type can be customized; resolution can be selected: 1920 * 1080, 1280 * 720, 640 * 360, as shown in Figure ④.

- Pull down to set the audio properties.

Audio output mode selection: output desktop audio (WaveOut); tick Use custom audio device Audio equipment selection: Capture Input terminal (HDS9125 Audio/ HDS9135 Audio Interface), as shown in Figure ⑤



④



⑤

Description:

1. The resolution setting needs to be customized to display the video. If there is no image display after setting, you need to set the video format and modify it to MJPEG. (The latest OBS version 25.0.1 can choose H264 in the video format, so the image quality will be improved)
2. Before each use, you need to connect the device to the computer before opening the OBS software, otherwise the OBS software cannot recognize the USB device

7. Failure and Maintenance

● Common Faults and Solutions

(1) The output image may be flickered by interference. The quality of the wire used may be poor, and the shielding layer of the wire is not well prepared. When there is a strong radio near the use environment, radio waves may interfere with the transmission of the signal, resulting in unstable signal flicker. Please use the wire produced by regular manufacturers, such as Belden, Jia Nai Mei.

(2) When plugging in the audio and video interface, if there is obvious static electricity, the device power ground wire may not be good grounding, please ground in the correct way; otherwise it will easily damage the host and shorten the life of the mainframe.

(3) When RJ45 (generally: Computer network port) cannot control the Switcher, check whether the communication port set by the control software corresponds to the serial port of the connected device; check if the communication port of the computer is good.

● Maintenance

Use a soft, dry cloth to clean the device. Do not use alcohol, paint thinner or benzene to clean. Make sure that the device is stored and operated in an environment away from liquids and stains.

● Warranty information

The company guarantees that the process and materials of the product are not defective within 12 months after purchase from the company or its authorized distributors, under normal use and service support. We offer a one-year warranty after sale.

8. More switcher options

No.	Model	Description	No.	Model	Description
1	HDS9101	Portable switcher (4xSDI+2xHDMI)	14	HDS9106MINI	MINI Portable switcher (4SDI+2HDMI)
2	HDS9105	Portable switcher (4HDMI+1DP)	15	HDS9110	Portable switcher (8 SDI+2 HDMI)
3	HDS9105C	Portable switcher (4HDMI+1DP)	16	HDS9112	Portable switcher (12 SDI)
4	HDS9125	Portable switcher (4HDMI+1DP)	17	HDS6506	All-in-one switcher(6-CH)
5	HDS9135	Portable switcher (4HDMI+1DP)	18	HDS6110	All-in-one switcher (10-CH)
6	HDS9325	Portable switcher (4HDMI+1DP)	19	HDS6112	All-in-one switcher (12-CH)
7	HDS9335	Portable switcher (4HDMI+1DP)	20	HDS7105S	Simple switcher(4HDMI+1DP)
8	HDS9226	Portable switcher (4SDI+2HDMI)	21	HDS7105	Simple switcher(4HDMI+1DP)
9	HDS9236	Portable switcher (4SDI+2HDMI)	22	HDS7105P	HDS7105 with T-Bar
10	HDS9326	Portable switcher (4SDI+2HDMI)	23	HDS7205S	Simple switcher(4HDMI+1DP)
11	HDS9336	Portable switcher (4SDI+2HDMI)	24	HDS7205	Simple switcher(4HDMI+1DP)
12	HDS9108	Portable switcher (4HDMI+4SDI)	25	HDS7305	Simple switcher(4HDMI+1DP)
13	HDS9106	Portable switcher (4SDI+2HDMI)	26	HDS7106	Simple switcher(4SDI+2HDMI)

产品保修卡 WARRANTY

保修须知:

Warranty Notice:

一: 凡购买本公司的产品用户, 凭本保修卡享受保修期内维修服务。

1.Customer who buys the product will be offered repair service during the warranty validity period.

二: 本公司所有产品自出货之日起保修一年。保修服务仅限正常使用下有效。

2.The warranty period is one year form the date of shipment,Guarantee service is subject to normally using.

三: 本保修卡不补发, 保修期内请妥善保管, 用户要求维修服务时, 应出示保修卡和保修卡对应的机器。

3. This warranty card is not reissued. Please keep it properly during the warranty period. When the user requests repair services, the warranty card and the machine corresponding to the warranty card should be presented.

四: 因以下情况损坏和出现故障的产品不能享受保修服务:

4.Damage and failures due to following conditions are not covered:

1).一切人为损坏、自行拆机、拆封标、使用不当的维修保养、意外或自然灾害所致之故障或损坏;

1) All man-made damage, self-dismantling, unsealing labels, improper use of maintenance and storage, failure or damage caused by accidents or natural disasters;

2).产品无保修卡或保修卡被涂改、内容无法辨认或内容与实物不符;

2) No product warranty card,warranty card has been altered;content illegible or incompatible with the product.

3).产品超出保修期。

3) Validity period has expired.

保修单位(Warranty Party): _____ 地 址(Address): _____

联系电话(Tel): _____ 邮 编(Post Code): _____

产品型号(Model): _____ 产品编号(Item No.): _____

产品合格证 CERTIFICATE

本合格证证明客户购买的产品是本公司生产, 完全符合原厂服务要求。

This is to certificate that the product in the package is manufactured by the manufacture and in full complian with the specifications of the original service.

检验员(QC): _____ 出厂日期(Date): _____

产品型号(Model): _____ 产品编号(Item No.): _____





 DeviceWell®
中帝威科技

<http://www.devicewell.com>