

使用手册

Users' Manual



4 通道高清视频切换台 4-CH HD SWITCHER

语言 LANGUAGES

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安全须知

如果忽视这些注意事项，可能导致人员伤害或死亡，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。

- 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。
- 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.
- 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.

由于产品功能的不断更新，您手中的用户手册可能会与实际应用有所出入，最新用户手册请从 Devicewell 官方网站 www.devicewell.com 下载，此用户手册更新日期为 2024 年 6 月 15 日。

Due to the continuous update of product functions, the user manual in your hand may differ from the actual application(www.devicewell.com). Please download the user manual from the official website of Devicewell recently. The update date of this user manual is Jun. 15, 2024.

注意：不同型号对应不同的产品功能，请根据您所购买型号按用户手册内型号对照表匹配所购买型号的参数，本说明书以 HDS345 的功能参数为例展开说明。

Note: Different models correspond to different product functions. Please match the parameters of the purchased model according to the model comparison table in the user manual according to the model you purchased. This manual takes the function parameters of HDS345 as an example to expand the description.

未来如有技术变动，恕不另行通知。

In the future, there will be technical changes without notice.

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1.概述

1.1 产品介绍

中帝威(DeviceWell)高清视频切换台 HDS8101/HDS8301/HDS8345, 采用便携式一体化设计, 金属外壳, 体积小重量轻, HDS8101/HDS8301/HDS8345 标准尺寸: 192mm*124mm*33mm, 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。

设备支持 4 路 HDMI 输入, 其中 HDS8345 支持 2 路 SDI、2 路 HDMI 信号输入, 共计 4 路视频信号。1 路多画面输出, 可连接显示器预览当前画面, 可同步输出外部预览信号, 方便用户扩展。设备支持 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。4 通道切换台适用于现场演出、课程录制与棚内导播等, 该切换台具备多种功能, 如多种格式视频输入且输入分辨率自适应, 模拟音频输入输出, 音频加嵌解嵌, 混音, 抠像, 画面开窗, TF 卡录制, RJ45 网口推流, 具备远程升级能力。

2.功能特性

中帝威 4 通道高清视频切换台是一款多功能切换台, 无需专业知识, 只需要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。

- 支持画面冻结功能
 - 支持 PIP 开窗功能
 - 支持抠像功能(亮度键或色度键)
 - 支持 PC 远程控制及 DCB 控制
 - 支持外扩 Tally 系统
 - 支持中帝威无线 TALLY 灯
 - 支持 CUT 硬切和 AUTO 特效切换
 - 内置机箱温度检测及风扇
 - 智能控制系统
 - 支持 FTB 及彩条输出
 - 支持软件在线升级
 - 单独的 PATTERN KEY, 可设置各种异形图案, 图像的位置、大小、数量可调整
 - 圆形、菱形、扇形、梅花、百叶窗等上百种特效划像
- 便携式一体化设计, 金属机身, 强度高, 重量轻
 - 支持 PGM 输出及 MultiView 输出
 - 最多支持 4 路 HDMI 输入
 - 支持 2 路 MIC 输入, 1 路 LINE IN 输入
 - 支持 1 路 LINE OUT 输出
 - 支持网络推流(RTMP)
 - 支持 USB3.0 UVC 输出
 - 支持音频跟随、混音功能
 - 支持 HDMI 音频解嵌
 - 支持 MIX /FADE 等特效切换
 - 支持 4K 信号输入
 - 支持图文, 台标叠加功能

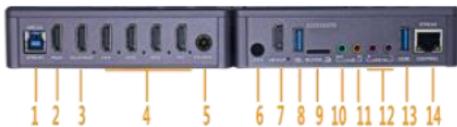


2.1 HDS8 系列 MINI 高清视频广播切换台型号功能对照表

类别	功能介绍	HDS8101	HDS8301	HDS8345
产品接口	输入通道	4*FHD	4*FHD	2*FHD+2*SDI
	PGM 输出	HD*1	HD*1	HD*1
	多画面预览	自带液晶监看	自带液晶监看	自带液晶监看
	HDMI 预览输出	HD*1	HD*1	HD*1
	DCB 控制	√	X	X
	DCB2 控制	X	√	√
	TF 卡录制	X	√	√
	外接 U 盘录制	X	√	√
	外接 U 硬盘录制	X	√	√
	网口(RTMP 推流)	X	√	√
	网口(控制/升级)	√	√	√
	USB3.0(UVC)	√	√	√
	控制方式	按键	按键	按键
	液晶屏尺寸	5 寸	5 寸	5 寸
	尺寸(mm)	192 x 124 x 33		
	2 路 MIC 输入	√	√	√
	1 路 LINE IN 输入	√	√	√
	1 路 LINE OUT 输出	√	√	√
	T-bar 一键切换	√	√	√
	2 组音频控制推子	√	√	√
特效处理	色度键 Chroma Key	√	√	√
	亮度键 Luma Key	√	√	√
	彩条信号输出	√	√	√
	FTB 应急黑场	√	√	√
	色域	RGB	RGB	RGB
	音频跟随	√	√	√
	音频混音	√	√	√
	一键画面冻结	√	√	√
	智能温控	√	√	√
	PC 软件控制(网口)	√	√	√
	MIX /FADE 特效切换	√	√	√
	圆形、菱形、扇形、梅花、百叶窗等上百种特效别像	√	√	√
	3 种转场速率调节	√	√	√
	画中画(PIP)	√	√	√
	最高分辨率	1080P	1080P	1080P
	输入分辨率自适应	√	√	√
	输出分辨率可调	√	√	√
扩展功能	无线 TALL 灯	√	√	√
	脚踏板	√	√	√
	设备级联	√	√	√
	同步控制	√	√	√
	外置键盘	√	√	√

2.2 设备尺寸

设备尺寸请参考导播切换台型号功能对照表的尺寸。



3.接口规格说明

3.1 接口介绍

序号	接口定义	说明	序号	接口定义	说明
1	STREAM	USB3.0 接口、UVC 输出	1	STREAM	USB3.0 接口、UVC 输出
2	PGM OUT	1*PGM 直播输出	2	PGM OUT	1*PGM 直播输出
3	MultiView	HDMI 多画面输出	3	MultiView	HDMI 多画面输出
4	HD IN	4 路 HDMI 信号输入	4	HD IN	2 路 HDMI 信号输入
5	Power	DC 12V 电源	5	SDI IN	2 路 SDI 信号输入
6	Key	开关机及锁屏控制	6	Power	DC 12V 电源
7	HD OUT	HDMI PGM OUT	7	Key	开关机及锁屏控制
8	EXT HDD	外接硬盘 (需外接专用转换板)	8	HD OUT	HDMI PGM OUT
9	TF Card	TF 卡存储	9	EXT HDD	外接硬盘 (需外接专用转换板)
10	LINE OUT	立体声音频输出	10	TF Card	TF 卡存储
11	LINE IN	立体声音频输入	11	LINE OUT	立体声音频输出
12	MIC IN	2 路 MIC 输入	12	LINE IN	立体声音频输入
13	DCB/DCB 2	DCB 控制(设备级联/无线 TALLY/外接键盘)	13	MIC IN	2 路 MIC 输入
14	RJ45	网络推流/网络升级/远程控制	14	DCB/DCB 2	DCB 控制(设备级联/无线 TALLY/外接键盘)
			15	RJ45	网络推流/网络升级/远程控制

3.2 技术参数

产品名称	便携式4路HDMI4通道切换台	
产品型号	HDS8101/HDS8301/HDS8345	
视频信号输入	输入信号	HDMI/SDI视频信号
	码率	270Mbps~3Gbps
	连接器	标准
	信号幅度	800mV±10%(HDMI/SDI)
	阻抗	100Ω (HDMI) 75 Ω (SDI)
	均衡	自适应
	DVD输入HD支持	480i/576i,480p/576p,720p,1080i,1080p,2160p
视频信号输出	输出信号	HDMI-compatible 视频信号
	码率	270Mbps~3Gbps
	连接器	标准
	信号幅度	800mV±10%(HDMI)
	阻抗	100Ω
控制参数	时钟恢复	可选
	控制协议	CAN 总线
	网络控制	RJ45,100M
常规参数	电源	DC 12V
	功率	> 20W
	控制面板	支持现场制作,集成多种按键
	工作温度	0°C~50°C无冷凝
	存储温度	-20°C~75°C
	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 HDS8101/HDS8301/HDS8345 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,中帝威高清切换台对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	F3 是 PATTERN KEY, F4 是 LOGO, REC、PAUSE、MUTE
2	音频控制区	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	FTB、PIP、RESO 和 STILL 等功能
5	菜单控制区	使用旋钮进入菜单设置导播台功能
6	PGM 与 PVW 选择区	直播与预览通道选择
7	转场控制区	控制转场切换
8	状态显示区	实时显示各操作的视频与数据

4.1.2 按键说明

4.1.2.1 自定义功能

- F1 开启推流功能
- F2 开启 POP 功能
- REC 为录制功能

按下按键面板的 REC 可以对视频进行录制。

- PAUSE 暂停功能

按下 PAUSE 按键可以对正在录制的视频暂停和继续。

- MUTE 静音模式

按下 MUTE 按键可以切换到静音模式。

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。

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



- 混音指派模式的使用方法

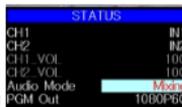
1. 按下操作面板的 MIX 按键，按键此时会亮绿色灯，对应画面的菜单也会显示当前音频状态，菜单里面 Audio Mode 显示 Mixing，表示音频处于混音模式。

2. 混音指派的通道有 IN1、IN2、IN3、IN4，PHONE_IN、MIC_IN1、MIC_IN2，

可

通过按键 CH1 和 CH2 来选择所需音频通道。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 3.5 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。

- 音频音量调整



1.按下黑色旋钮 菜单中会看到 CH1_VOL 光条亮起,表示现在是在操作通道1的音量;再按一次黑色旋钮时,光条会跳到 CH2_VOL,此时是操作通道2的音量。逆时针旋转是减小音量,顺时针旋转是增加音频音量。

2.当音频模式为跟随模式时,调整 CH1_VOL 的音量即可。

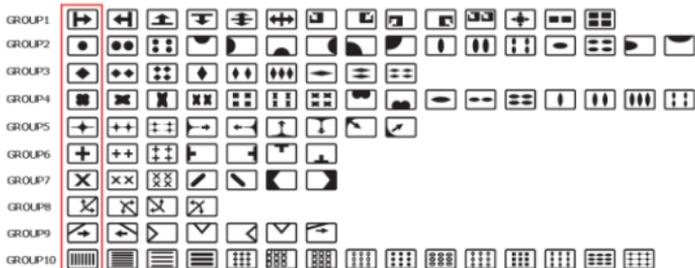
4.1.2.3 转场特效控制区

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。

创意转场多达100+,任您选择!



特效样式选择,通过旋钮旋转选择特效样式,按下按钮确认或者闪烁2秒自动确认



特效切换按键开始键,任意切换屏幕中特效菜单的特效模式切换信号源时,“CUT”按钮可即时执行硬切操作。您可以使用T型推杆手动控制视频特效转场,也可以按AUTO按钮执行自动转场。

4.1.2.4 综合控制区

•FTB 应急黑场

FTB 按键定义为应急黑场画面输出,按下按钮红灯闪烁,开启 FTB 应急黑场输出功能;按下按钮红灯熄灭,FTB 应急黑场功能关闭。



•PIP 画中画特效

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

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



•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。

•POP 画中画特效

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

画中画特效：按下控制面板的 F2，然后点击 AUTO 或 CUT 便可以进行切换。效果图右图



•画中画大小与位置

可以使用旋钮对 POP 画中画的参数进行设置，情况如下

画面选择设置：可以选择 1/2 两个画面。

水平位置设置：从最左上端到最右上端的值是 0-960，每旋转旋钮一格数值增加/减少 10。

垂直位置设置：从最左上端到最左下端的值是 0-540，每旋转旋钮一格数值增加/减少 10。

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，每旋转旋钮一格数值增加/减少 1。

边框颜色设置：可以选择白/红/蓝/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，效果图如右图所示。

4.1.2.5 PGM 与 PVW 的选择

•多画面输出窗口介绍

其中 Preview 和 Program 分别为预览和直播输出。如下图所示

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览信号源分别是 1 (PGM) 和 2 (PVW)，信号源分别是 HDMI IN1 和 HDMI IN2。效果图如图

如果想让多画面中的直播与预览信号源切换（直播=预览）假设想要多画面中的直播信号源 1 (PGM) 和预览信号源 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 可以和预览 PVW 信号源任意切换。

按下按键面板中的 BAR 按键后屏幕将输出彩条。



4.1.2.6 Luma KEY 亮度键与 Chroma KEY 色度键

•Luma KEY 亮度键

开启本功能会抠去键源的黑色部分。然后与背景图像重叠从而达到抠像和叠加背景的目的，此功能一般用于虚拟演播室叠加字幕等。

把黑色背景的白色字体视频或者图片切换到 PVW 预览窗口，开启 KEY1 亮度键功能，此时液晶会出现一个亮度键参数设置界面，然后用 CUT/AUTO/T-Bar 切换都可以把字符合加到 PGM，抠像色域设置：

按下 KEY 键，显示菜单会显示当前色度键抠像 Luma KEY 信息，如下图。



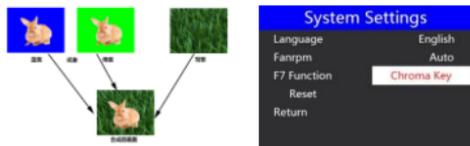
•Chroma KEY 色度键

色度键抠像支持动态视频源像与静态源抠像，切换机会抠去键源的蓝色或绿色部分，保留其它颜色，然后与

背景图像重叠从而达到抠像和叠加背景的目的，此功能一般用于虚拟演播室叠加字幕等。

把蓝色背景或者绿色背景切换到 PVW 预览窗口，再开启 Chroma KEY 色度键功能。此时液晶屏会出现一个色度键的参数设置界面，通过旋钮选择你抠像的背景，选择完后可以通过 CUT/AUTO/推杆实现抠像，此时你要叠加的图像出现在 PGM 直播画面中。

当按下 KEY 键时，显示菜单会显示当前色度键抠像 Chroma Key 信息，如下图。



5.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，佳耐美。

(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 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网口相对应；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浊的环境中。用户没有自己处理的部件，所有服务和维修事项请联系本公司或者其它授权的分销商。

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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. 对经过改装或和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。

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1. Overview

1.1 Introduction

DeviceWell HD video switcher HDS8101/HDS8301/HDS8345 adopts portable integrated design, metal shell, small size and light weight, standard size of HDS8101/HDS8301/HDS8345: 192mm*124mm*34mm, suitable for small outdoor scenes video effects switching requirements. The device integrates multiview processor, special effect generator, audio processor, control keyboard and other common switcher components.

The device supports 4-CH HDMI input, of which HDS8345 supports 2-CH SDI and 2-CH HDMI-compatible signal input, a total of 4-CH video signals. 1 channel of Multiview output, which can be connected to the monitor to pre monitor the current screen, external preview signals can be output synchronously, which is convenient for users to expand. The device supports HDMI embedded audio + external analog audio. After mixing, it can be embedded into the output HDMI signal or output from the analog port. The resolution of all input signals is automatically adapted, and the resolution of output signals can be selected according to requirements, which is quite flexible. The 4-channel switcher is suitable for live performances, course recording and studio broadcasting, etc. The switcher has a variety of functions, such as video input in multiple formats and input resolution adaptive, analog audio input and output, audio embedding and de-embedding, audio mixing, Luma/Chroma key, PIP, TF card recording, RJ45 network port push Stream, with remote upgrade capability.

2. Functional characteristics

DeviceWell 4-CH HD video switcher is a multi-functional switcher that requires no professional knowledge, and can perform video switching and audio mixing with simple operations. This unit can be used in broadcasting, live broadcasting and various event venues.

- ◆ Portable all-in-one design, metal body, high strength and light weight
- ◆ Support PGM output and MultiView output
- ◆ Support up to 2SDI+2HD inputs
- ◆ Support 2 MIC input, 1 LINE IN input
- ◆ Support 1 channel LINE OUT output
- ◆ Support network push stream (RTMP)
- ◆ Support audio follow, mix function
- ◆ Support HDMI audio de-embedding
- ◆ Support special effects switching, such as MIX/FADE
- ◆ Support FTB and color bar output
- ◆ Support screen freeze function
- ◆ Support PIP windowing function
- ◆ Support keying function (Luma or Chroma key)
- ◆ Support PC remote control and DCB control
- ◆ Support external expansion Tally system
- ◆ Support DeviceWell wireless tally light
- ◆ Support CUT and AUTO special effect switching
- ◆ Built-in chassis temperature detection and fan
- ◆ Intelligent control system
- ◆ Support software online upgrade
- ◆ Support 4K signal input
- ◆ Support USB3.0 UVC OUT
- ◆ Hundreds of special effect wipes such as circle, rhombus, fan, plum blossom, shutter, etc.
- ◆ A separate PATTERN KEY can be used to set various anomalies Patterns, the position, size, and quantity of images can be adjusted



2.1 HDS8 series MINI HD video switcher comparison

No.	Function	HDS8101	HDS8301	HDS8345
Product interfaces	Input channel	4*FHD	4*FHD	2*FHD+2*SDI
	PGM output	FHD*1	FHD*1	FHD*1
	Multiview	LCD monitor	LCD monitor	LCD monitor
	HD multiview out	HD*1	HD*1	HD*1
	DCB control	√	X	X
	DCB2 control	X	√	√
	TF card record	X	√	√
	External USB record	X	√	√
	Ext. SSD record	X	√	√
	Network RTMP stream	X	√	√
	Ethernet port (control/upgrade)	√	√	√
	USB3.0 (UVC)	√	√	√
	Control method	Button	Button	Button
	LCD size	5"	5"	5"
	Device size (mm)	192 x 124 x 33		
	2-CH MIC input	√	√	√
	1 -CH LINE IN	√	√	√
	1-CH LINE OUT	√	√	√
T-bar	√	√	√	
2 groups audio control faders	√	√	√	
Special effects processing	Chroma Key	√	√	√
	Luma Key	√	√	√
	Color bar output	√	√	√
	FTB	√	√	√
	Color gamut	RGB	RGB	RGB
	Audio follow	√	√	√
	Audio mix	√	√	√
	Hundreds of special effect wipes	√	√	√
	STILL	√	√	√
	Fan intelligent	√	√	√
	PC software control (network)	√	√	√
	MIX /FADE special effect	√	√	√
	3 Transition Rate Adjustments	√	√	√
	PIP	√	√	√
	Highest resolution	1080P	1080P	1080P
	Input Resolution Adaptive	√	√	√
	Adjustable output resolution	√	√	√
	Extensions	Wireless TALLY	√	√
Synchronous control		√	√	√
External keyboard		√	√	√

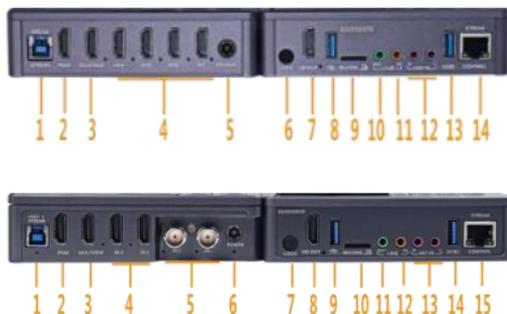
2.2 Device Size

Device size please refers to the size of the picture above.



3. Interfaces

3.1 Interface Introduction



No.	Definition	Description	No	Definition	Description
1	STREAM	USB3.0 Interface, UVC Output	1	STREAM OUT	USB3.0 Interface, UVC Output
2	MultiView	HDMI MultiView Output		2	MultiView
3	PGM OUT	1*PGM Live Output	3	PGM OUT	1*PGM Live Output
4	HDMI IN	4-CH HDMI Input	4	HD IN	2-CH HDMI Input
5	Power	DC 12V Power Supply	5	SDI IN	2-CH SDI Input
6	Key	Switch and lock screen control	6	Power	DC 12V Power Supply
7	HD OUT	HDMI PGM OUT	7	Key	Switch and lock screen
8	EXT HDD	External Hard Drive Disk	8	HD OUT	HDMI PGM OUT
9	TF Card Slot	TF Card Storage	9	EXT HDD	External Hard Drive Disk
10	LINE OUT	Stereo Audio Output	10	TF Card	TF Card Storage
11	LINE IN	Stereo Audio Input	11	LINE OUT	Stereo Audio Output
12	MIC IN	2-CH MIC Input	12	LINE IN	Stereo Audio Input
13	DCB/DCB2	DCB control	13	MIC IN	2-CH MIC Input
14	RJ45	Network push/ network upgrade/ remote control	14	DCB/DCB2	DCB control
			15	RJ45	Network push/ network upgrade/ remote control

3.2 Technical Parameter

Product	Portable 4-CH Video Switcher	
Model	HDS8101/HDS8301/HDS8345	
Video Signal Input	Input signal	SDI/HDMI video signal
	Rate	270Mbps~3Gbps
	Connector	Standard
	Signal	800mV±10%(SDI/HDMI)
	Impedance	100Ω (HDMI) 75 Ω (SDI)
	Balance	Adaptive
	DVD input	480i/576i,480p/576p,720p,1080i,1080p,2160p
	Computer	3840x2160,1920x1080,1680x1050,1600x900,1440x1050,1366x768,
Video Signal Output	Output	HDMI video signal
	Rate	270Mbps~3Gbps
	Connector	Standard
	Signal	800mV±10%(HDMI)
	Impedance	100Ω (HDMI)
	Clock	Optional
Control Parameter	Control	CAN bus
	Network	RJ45,100M
Common Parameters	Power	DC 12V
	Power	<20W
	Control	Support live production, integrate a variety of buttons
	Operating	0°C~50°C No condensation
	Storage	-20°C~75°C
	Working	20%~70%RH
Storage	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	F3 is PATTERN KEY , F4 is LOGO, REC, PAUSE, MUTE
2	Audio control	Mainly set the audio follow, audio mix and control the audio volume
3	Transition effect	Select transition effects
4	Comprehensive	FTB, PIP、 RESO and STILL , etc. function
5	Menu control area	Set menu information
6	PVW& PGM select	Live and preview options
7	Transition control area	Control transition switching
8	Status display area	Real-time display of video and data of each operation

4.1.2 Button Description

4.1.2.1 Function Area

- F1 enables stream
- F2 enables POP function
- REC is the record function

The video can be recorded by pressing REC on the button panel.

- PAUSE pause function

Press the PAUSE button to pause and resume the video being recorded.

- MUTE silent mode

Press the MUTE button to switch to silent mode.

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 up green at this time, the menu corresponding to the multi-screen will also display the current audio status, and the Audio Mode in the menu will display Follow, indicating that the audio is in follow mode.

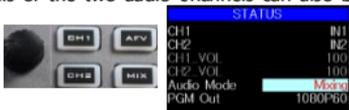
2. The channels in audio follow mode include IN1, IN2, IN3, IN4, and the corresponding buttons on the operation panel (at this time, 2 of PGM in the button panel lights up, indicating that the IN2 signal source is being operated) as shown in the figure below



- How to use the mix assignment mode

1. Press the MIX button on the operation panel, the button will light up green at this time, and the menu corresponding to the multi-screen will also display the current audio status. The Audio Mode in the menu displays Mixing, indicating that the audio is in the mixing mode.

2. The channels assigned for mixing include IN1, IN2, IN3, IN4, PHONE_IN, MIC_IN1, MIC_IN2. You can select the desired audio channel by pressing the buttons CH1 and CH2. In the mixing assignment mode, there are two more audio embedding functions; PHONE_IN represents a 3.5 audio interface, and MIC_IN represents a 3.5 microphone audio interface; the PGM live output can arbitrarily mix two audio channels at the same time, and the volume levels of the two audio channels can also be adjusted separately.



•Audio volume adjustment

1. Press the black knob, and the light bar of CH1_VOL will light up in the menu, indicating that the volume of channel 1 is being operated; when you press the black knob again, the light bar will jump to CH2_VOL, which is the volume of channel 2. . Turning it counterclockwise decreases the volume, and turning it clockwise increases the audio volume.

2. When the audio mode is follow mode, adjust the volume of CH1_VOL.

4.1.2.3 Transition effect control area

There are three transition modes:

MIX transitions, FADE transitions, wipe transitions



The wipe transitions include: up, down, left and right wipe transitions.

Transition Pattern up to 100+



Special effect style selection, select the special effect style by rotating the knob, press the button to confirm or flash 2 second automatic confirmation.

Start button for special effects switching, allowing you to switch the special effects mode of the special effects menu on the screen at will.



When switching signal sources, the "CUT" button can immediately perform hard switching operations. You can manually control the video special effects transition using a T-shaped push rod, or press the AUTO button to perform automatic transition.

4.1.2.4 Comprehensive control area

•FTB Field to black

The FTB button is defined as the output of the emergency black scene. Press the button, the red light flashes, and the FTB emergency black scene output function is turned on; when the button is pressed, the red light goes out, and the FTB emergency black scene function is turned off.

•PIP

Picture-in-picture effect: press on the control panel (green light is displayed after pressing), then click AUTO or CUT to switch.

At this time, the information on the LCD screen will be switched to the PIP picture-in-picture setting,

and you can set it according to your needs after pressing the menu button. As shown

•PIP Size and Position

Use the menu button to set the parameters of PIP, the situation is as follows (the horizontal position/vertical position size is based on the smallest display image as an example).

Horizontal: 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 button is pressed.

Vertical: 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 button is pressed.

Display Size: Small/Medium/Large settings can be selected.

Border switch: On/Off settings can be selected.

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

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

•POP

POP Picture-Out-Picture Special Effect: press F2 on the control panel (green light is displayed after pressing), then click AUTO or CUT to switch.

At this time, the information on the LCD screen will be switched to the PIP picture-in-picture setting, and you can set it according to your needs after pressing the menu button. As shown on the right

•POP Size and Position

You can use the knob to set the parameters of the POP picture outside picture, the situation is as follows

Picture selection setting: You can choose 1/2 pictures.

Horizontal position setting: the value from the upper left end to the upper right end is 0-960, and the value increases/decreases by 10 every time you turn the key.

Vertical position setting: The value from the upper left end to the lower left end is 0-540, and the value increases/decreases by 10 every time you turn the key.

Border switch setting: You can choose the on/off setting.

Border width setting: The border width can be selected from 2-7 thickness borders, and the value will increase/decrease by 1 every time you turn the knob.

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

•STILL screen freeze effect

Screen freeze effect: Press \square on the control panel (the green light will be displayed after pressing), and the output PGM video animation will enter the freezing phenomenon. Press the button again to unfreeze the screen.

4.1.2.5 PGM and PVW selection

•Multiview Introduction

Preview and Program are PVW and PGM respectively.

As shown on the right

There are 4 windows below corresponding to the input source, corresponds to buttons 1-4 on the control panel of the switcher.



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



POP	
Window	1
H Position	0
V Position	270
Size	Small
Border Enable	On
Border Width	2
Border Color	White
Exit	





•PGM and PVW output signal

After the device is connected to the video signal source, press 1 (PGM) and 2 (PVW) in the key panel, the live and preview signal sources in the output multiview are 1 (PGM) and 2 (PVW) respectively, the signal sources are HDMI IN1 and HDMI IN2 respectively. The effect diagram is as follows

•PGM and PVW source switching

If you want to switch between live and preview sources in multiview (PGM \rightleftharpoons PVW)

Suppose you want to convert the live signal source 1 (PGM) and the preview signal source 2 (PVW) into 2 (PGM) and 1 (PVW) in the multi-screen, just click the PGM and PVW in the small window, and then click AUTO or CUT switch. The live PGM signal sources 1-4 can be switched arbitrarily with the preview PVW signal source.

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

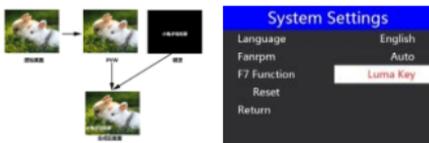
4.1.2.6 Luma KEY and Chroma KEY

•Luma KEY

Turning on this function will deduct the black part of the key source. Then it overlaps with the background image to achieve the purpose of keying and overlaying the background. This function is generally used for superimposing subtitles in virtual studios.

Switch the white font video or picture with a black background to the PVW preview window, and enable the brightness key function of KEY1. At this time, a brightness key parameter setting interface will appear on the LCD, and then use CUT/AUTO/T-Bar to switch to superimpose the characters on the screen. PGM, keying color gamut settings:

After pressing KEY, the display menu will display the current Luma KEY information, as shown

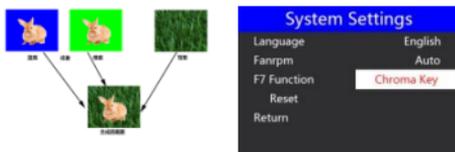


•Chroma KEY

Chroma key keying supports dynamic video source image and static source keying. The switch will cut out the blue or green part of the key source, keep other colors, and then overlap with the background image to achieve the purpose of keying and overlaying the background. This function It is generally used for superimposing subtitles in virtual studios, etc.

Switch the blue background or green background to the PVW window, and then enable the Chroma KEY function. At this point, a Chroma key parameter setting interface will appear on the LCD screen. Use the knob to select the background of your keying. After selecting, you can use CUT/AUTO/T-bar to achieve keying. At this time, the image you want to superimpose will appear on the PGM on the screen.

When pressing the KEY, the display menu will display the current Chroma Key information, as shown



5. 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 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.

•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.

•Maintenance

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.

6. More switcher options

No.	Model	Description	No.	Model	Description
1	UHS7105	Simple 4K switcher (4 UHD +1DP)	17	HDS8102	Touch screen switcher (2* FHD)
2	UHS7108	Simple 4K switcher (4 UHD +4DP)	18	HDS8101	Touch screen switcher (4* FHD)
3	UHS6610	All-in-one 4K switcher(10-CH)	19	HDS8107	Touch screen switcher (4*HDMI)
4	UHS6508	All-in-one 4K switcher(8-CH)	20	HDS8301	Touch screen switcher (4* FHD)
5	UHS6610R	All-in-one 4K switcher(10-CH)	21	HDS8307	Touch screen switcher (4* FHD)
6	UHS6508R	All-in-one 4K switcher(8-CH)	22	HDS8325	Touch screen switcher (2* FHD)
7	UHS9610	Portable 4K switcher (4UHD+4DP+2SDI)	23	HDS8345	Touch screen switcher (4* FHD)
8	UHS9508	Portable 4K switcher (2UHD+2DP+4SDI)	24	HDS8347	Touch screen switcher (4* FHD)
9	UHS9610R	Portable 4K switcher (4UHD+4DP+2SDI)	25	HDS7105S	Simple switcher (4 FHD +1DP)
10	UHS9508R	Portable 4K switcher (2UHD+2DP+4SDI)	26	HDS7105	Simple switcher (4 FHD +1DP)
11	HDS9125	Portable switcher (4 FHD +1DP)	27	HDS7105P	HDS7105 with T-Bar
12	HDS9135	Portable switcher (4 FHD +1DP)	28	HDS7305	Simple switcher (4 FHD +1DP)
13	HDS9325	Portable switcher (4 FHD +1DP)	29	HDS7306	Simple switcher (4SDI+2 FHD)
14	HDS9335	Portable switcher (4 FHD +1DP)	30	HDS7308	Simple switcher (4Type C+4 FHD)
15	HDS9336	Portable switcher (4SDI+2 FHD)	31	HDS6105P	Simple switcher (4SDI)
16	HDS9106	Simple switcher (4SDI+2 FHD)	32	HDS6305	Simple switcher (4SDI)

产 品 保 修 卡

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 alterd;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(Mode)：_____ 产品编号(Item No.)：_____

型号选择:

Model Selection:



□ HDS8101



□ HDS8301



□ HDS8345

产 品 合 格 证

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 certify 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.) : _____



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