

迪恒
股份

SH-DU655ST

LASER PROJECTOR

火星系列激光工程投影机



Product parameters

产品参数

火星系列SH-DU655ST工程激光投影机

Mars series SH-DU655ST Laser Engineering Projector

型号(Model): SH-DU655ST	显示芯片(Display chip): 0.48" DMD
投影技术(Projection technology): DLP	投射比(Projection Ratio): 0.81-0.89
分辨率(Resolution ratio): 1920*1200 (16:10)	画面尺寸(Screen size): 60"~200"
光源(Light source): MCL激光光源(laser source)	噪音(Noise): 39decibel
光源寿命(Light source lifespan): 20000 hour	对比度(Contrast ratio): 5000000:1
亮度(Brightness): 6550 ISO流明(lumen)	扬声器(Speaker): 10W*2
融合步长(Fusion step size): 可调节(adjustable)	电压(Voltage): AC 100-240V~50/60 Hz
整机功率(Power): 435W	融合宽度(Fusion width): 0%~100%
重量(Weight): 7.1 (kg)	尺寸(Size): 330 (W)x405 (L)x 143 (H)mm
镜头位移(Lens displacement): 手动(hand movement) V: ±50%, H: ±23%	
画面旋转(Contrast ratio): 正常(normal)、90°、180°、270°、 水平/垂直镜像(Horizontal/Vertical Mirror)	
几何校正(contrast ratio): 水平垂直梯形矫正, 四角校正, 单点、整行、整列、整面 Horizontal and vertical trapezoidal correction, four corner correction, single point, whole row, whole column, whole surface	
校正点(Correction point): 2*2 / 3*3 / 5*5 / 9*9 / 17*17 / 20*20	
网格密度(Mesh Density): 可调节(adjustable)	
暗场校正(Dark field correction): 支持(support)	
色差调节(Color adjustment): 支持(support)	
3D: 支持主动3D且带3D SYNC同步接口 (Supports active 3D with 3D SYNC synchronization interface)	
接口 (Interface): D-sub in x 1, D-sub out x 1, HDMI x 2, LAN x 2, RS232x 1, USB-A x 2, Audio in x 1, Audio out x 1, 3D VESA in x 1, 3D VESA out x 1, DC 12V OUT x 1	

系统(System): Android 9.0	CPU: AMLOGIC A311D AI
内存(Memory): 16Gb DDR4	储存(storage): 32G EMMC
输出分辨率(Output Resolution): 4K@60hz(3840*2160@60hz), WUXGA (默认), 1080P, WXGA...	
支持格式(support format): MP4,MOV,AVI,MKV,WMV,MPEG,RM	
调试方式(debug mode): 手机APP调试 (Mobile app debugging)	
片源控制(Source control): 安卓/iOS APP	
开窗功能(Window opening function): 跨屏开窗/漫游/精准定义窗口位置&大小 Cross screen window opening/roaming/precise definition of window position and size	
遮罩功能(Masking function): 跨屏遮罩、遮边功能 Cross screen masking and edge masking functions	

Excellent color performance

卓越的色彩表现



支持BrilliantColor™功能，色彩和亮度更鲜艳，以10%的高红光占比领先竞品。在色彩表现上更加卓越优秀，白平衡选择更符合亚洲人审美的白色，更加取悦您的眼睛，同时支持六色HSG独立色彩调节功能，以满足不同需求群体的针对色彩的不同显示需求。

Supports BrilliantColor™ function, with brighter colors and brightness, leading competitors with a 10% high red light ratio. More outstanding and excellent in color expression. The white balance selection is more in line with Asian aesthetics, which is more pleasing to your eyes. At the same time, it supports six color HSG independent color adjustment function to meet the different display needs of different color groups.

采用远心光学架构 Adopting telecentric optical architecture

采用远心光学架构设计，相比非远心光学架构拥有更出色的色彩均匀度，亮度均匀度表现，更利于大屏融合的一致性表现。



色彩均匀度
Color Uniformity



亮度均匀度 $\geq 90\%$
Luminance uniformity

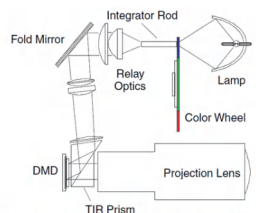


Figure 2. Generic Telecentric Optical System Components Using a TIR Prism

Adopting a telecentric optical architecture design, compared to non telecentric optical architectures, it has better color uniformity and brightness uniformity performance, which is more conducive to the consistency performance of large screen fusion.

支持4角拉伸、自动梯形校正 Supports 4-angle stretching and automatic trapezoidal correction



设备不仅支持自动梯形校正，也支持四角拉伸。四角拉伸功能在调节画面时操作更简单、操作效果更高。相比梯形校正更为灵活。

Not only does it support automatic trapezoidal correction, but it also supports corner stretching. The four corner stretching function is easier to operate and has a higher operating effect when adjusting the screen. Compared to trapezoidal correction, it is more flexible.

配备防尘袋 Equipped with dust bags

机器配备迪恒设计的投影防尘袋，可有效保护机器在调试前受现场安装环境灰尘的影响，简单易用，更贴心。

The machine is equipped with a projection dust bag designed by Diheng, which can effectively protect the machine from the influence of on-site installation environment dust before debugging. It is simple, easy to use, and more considerate.

DLP LINK主动3D、3D SYNC 同步接口

自带DLP LINK 主动3D 无需额外的信号同步发射器,降低成本,且同步信号不易被遮挡

同时也支持3D SYNC接口进行同步的方式。



DLP Link active 3D and 3D SYNC synchronization interface

The built-in DLP LINK active 3D does not require an additional signal synchronization transmitter, reducing costs, and the synchronization signal is not easily blocked. At the same time, it also supports the 3D SYNC interface for synchronization.



2*360度均可以灵活投影 2 * 360 degrees can be flexibly projected

出色的散热功能确保其可以支持2*360度任意角度安装,以满足不同投影环境的安装需求。
The excellent heat dissipation function ensures that it can support installation at any angle of 2 * 360 degrees to meet the installation needs of different projection environments.



双HDMI备份设计 Dual HDMI backup design

搭载2个HDMI接口。在项目使用中若1个HDMI接口烧毁,可以采用另外一个HDMI接口紧急备份,无缝切换使用,对项目的影响可以降低到最小的程度。

Equipped with 2 HDMI interfaces. If one HDMI interface burns out during project use, another HDMI interface can be used for emergency backup, seamless switching, and minimizing the impact on the project.



7*24小时不间断稳定运行 7 * 24-hour uninterrupted stable operation

机器支持7*24小时不间断稳定运行,无灯泡光源的炸灯风险。

The machine supports uninterrupted and stable operation for 7 * 24 hours, without light bulbs The risk of exploding lights at the source.



多种投影控制方式 Multiple projection control methods

可通过智能手机或平板电脑控制投影机运行状态、支持AMX、PJLINK、LAN网络控制、支持红外控制、支持RS232串口控制。

It can control the operation status of the projector through a smartphone or tablet, support AMX, PJlink, LAN network control, support infrared control, and support RS232 serial port control.



短焦镜头,支持镜头位移,不同空间均能应用 Short focus lens, supporting lens displacement

设备搭配原装0.81-.89短变焦镜头同时配有低光损0.5及0.7镜头可换,搭配V:±50%, H:±23%的镜头位移功能,可灵活应用于不同的空间场景。

The equipment is equipped with original 0.81-0.89 short zoom lenses and interchangeable lenses with low light loss of 0.5 and 0.7. It is also equipped with lens displacement functions of V: ± 50% and H: ± 23%, which can be flexibly applied to different spatial scenes.

Brain in Cloud 智能云脑

通过云端服务器“大脑”与各个投影机节点连接，在大脑中实现片源商城购买、画面分割、故障信息分析与处理、远程控制等。采用OpenGL打造的图像算法，采用先进的分布式架构，兼具融合、开窗、横幅、娱乐等众多功能

Brain in Cloudn

By connecting to various projector nodes through the cloud server "brain", it can achieve film source shopping image segmentation, fault information analysis and processing, remote control, etc. in the brain. The image algorithm created using OpenGL adopts advanced distributed architecture, which combines many functions such as fusion, windowing, banners, entertainment, etc

遥控以及OSD菜单功能映射

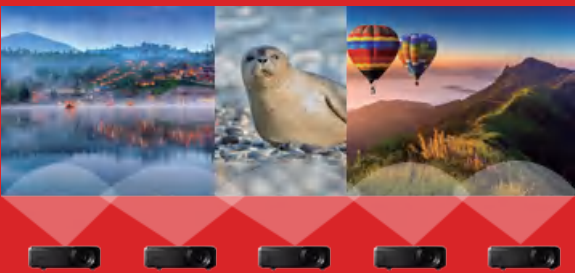
Remote control and OSD menu function mapping

APP内嵌虚拟遥控器，手机即是遥控器，常规按键一键触达，同时投影机的菜单也被映射在APP中。通过更加人性化的方式呈现在用户面前。用户在单机用多机融合使用场景里，不用在投影遥控器、融合调试软件之间频繁切换，通过一个APP即可简单实现所有的操作，进而有更快的调试时效。

The app is embedded with a virtual remote control, and the phone is the remote control. One click access to regular buttons. At the same time, the menu of the projector is also mapped in the app. Present to users in a more humane way. In the scenario of single machine and multi machine fusion, users do not need to frequently switch between projection remote control and fusion debugging software. All operations can be easily achieved through a single app, resulting in faster debugging efficiency.

投影分组功能, 自定义命名分组

Projection grouping function, custom named grouping



APP控制 (control)

同一场地，不同区域投影可进行分组独立管理，一个APP独立操控展区所有机器，

Within the same venue, projections from different areas can be grouped and managed independently. A single app can independently control all machines in the exhibition area,

内置边缘融合功能 Built in edge fusion function

内置优秀的融合处理算法，同时支持上下左右四个方向超0%~100%的融合带处理，设定好数值即可完成融合处理，融合数据可云端存储和下载。

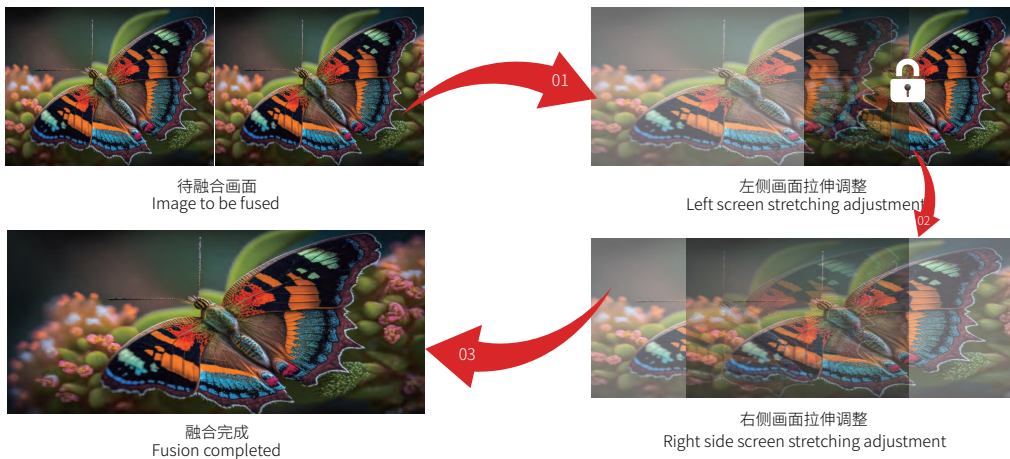
Equipped with excellent fusion processing algorithms, it also supports fusion band processing in four directions of up, down, left, right, and over 0%~100%. Once the values are set, the fusion processing can be completed. The fusion data can be stored and downloaded in the cloud.



融合前 (Before fusion)



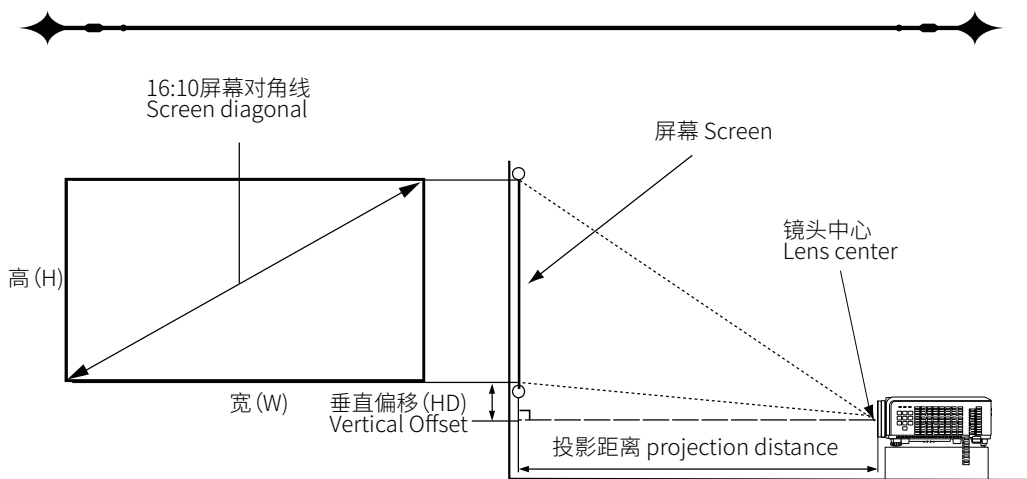
融合后 (After fusion)



画面切割功能 Screen cutting function

采用云计算图像切割, 不受输入分辨率限制, 可实现超高分辨率多点输入输出方案, 图像不压缩。实现更清晰的大屏融合显示, 最多支持252台投影融合同步。

Using cloud computing for image segmentation, it is not limited by input resolution and can achieve ultra-high resolution point multi-point input and output solutions without compressing images. Realize clearer large screen fusion display. Supports up to 252 projection fusion synchronization devices.



投影距离表 Projection distance table

16:10画面对 角线尺寸 Diagonal size of the screen (inch)	屏幕尺寸screen size W*H				投影距离 projection distance				垂直偏移 Vertical Offset		水平偏移 Horizontal Offset	
	m		inch		m		foot		m	foot	m	foot
	w	H	w	H	广角 wideangle	远角 wideangle	广角 wideangle	远角 wideangle	典型值 Typical value	典型值 Typical value	典型值 Typical value	典型值 Typical value
60	1.29	0.81	50.88	31.80	1.75	2.80	5.75	9.20	0.40	1.32	0.30	0.98
70	1.51	0.94	59.36	37.10	2.04	3.27	6.70	10.73	0.47	1.55	0.35	1.14
80	1.72	1.08	67.84	42.40	2.34	3.74	7.66	12.26	0.54	1.77	0.40	1.30
90	1.94	1.21	76.32	47.70	2.63	4.20	8.62	13.79	0.61	1.99	0.45	1.46
100	2.15	1.35	84.80	53.00	2.92	4.67	9.58	15.33	0.67	2.21	0.50	1.63
110	2.37	1.48	93.28	58.30	3.21	5.14	10.54	16.86	0.74	2.43	0.54	1.79
120	2.58	1.62	101.76	63.60	3.50	5.61	11.49	18.39	0.81	2.65	0.59	1.95
130	2.80	1.75	110.24	68.90	3.80	6.07	12.45	19.92	0.88	2.87	0.64	2.11
140	3.02	1.88	118.72	74.20	4.09	6.54	13.41	21.46	0.94	3.09	0.69	2.28
150	3.23	2.02	127.20	79.50	4.38	7.01	14.37	22.99	1.01	3.31	0.74	2.44
160	3.45	2.15	135.68	84.80	4.67	7.47	15.33	24.52	1.08	3.53	0.79	2.60
170	3.66	2.29	144.16	90.10	4.96	7.94	16.28	26.05	1.14	3.75	0.84	2.76
180	3.88	2.42	152.64	95.40	5.26	8.41	17.24	27.59	1.21	3.97	0.89	2.93
190	4.09	2.56	161.12	100.70	5.55	8.88	18.20	29.12	1.28	4.20	0.94	3.09
200	4.31	2.69	169.6	106.00	5.84	9.34	19.16	30.65	1.35	4.42	0.99	3.25

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