

4K Video Switcher for Broadcast & TV

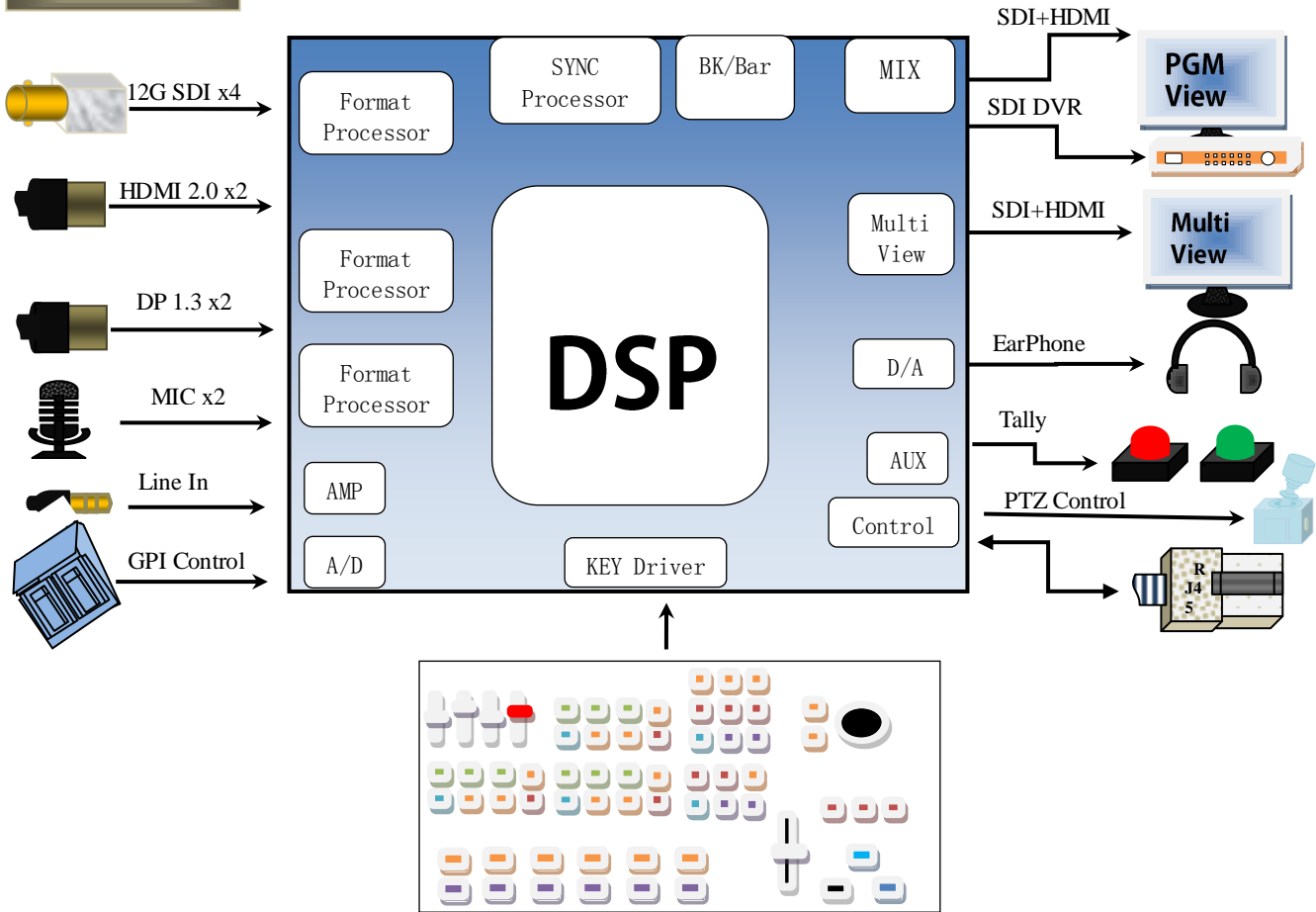
4K UHD Switcher (8-CH 4K60 Inputs)

Version : 1.0



4K Switcher adopts SDI x 4+HDMI x 2+DP x 2 design, and support up to 8 channels of 4K60 UHD video signals. It can meet the needs of more OEM customers. The main framework is as follows :

Function Diagram



For OEM/ODM projects, these input signals can be combined arbitrarily, such as:

No.		12G SDI Channels	HDMI 2.0 Channels	DP 1.3 Channels	
1	8-CH 4K Switcher	4	2	2	
2	8-CH 4K Switcher	0	4	4	
3	10-CH 4K Switcher	2	4	4	
4	12-CH 4K Switcher	0	6	6	
5	12-CH 4K Switcher	4	4	4	
6	6-CH 4K Switcher	0	6	0	
7	6-CH 4K Switcher	6	0	0	
...					

Introduction

It is a dedicated video switcher for broadcast & TV, supporting up to 8 channels of 4K60 signals. The device integrates SDI decoder, HDMI decoder, DP decoder, the highest resolution supports 4K60HZ, backward compatible with 3G SDI and other 1080P/720P high-definition video signals, built-in format converter, adaptive front-end different video signal input, built-in special effect generator, audio processor, video streaming processing and other common components of switcher.

The video signal interface supports 4-CH SDI+2-CH HDMI+2-CH DP, a total of 8 video inputs, 2-CH SDI output + 3-CH HDMI output, a total of 5 video signal outputs.

The audio signal interface supports 2 channels of microphone input, 1 channel of LINE input, a total of 3 channels of audio input, and 1 channel of Line output. Support DCB control system and tally output.

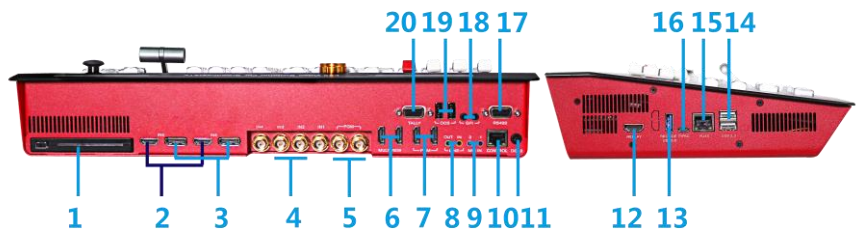
Optional H.26x encoding module can be recorded to internal EMMC, external SSD or TF card.

It adopts high-strength aluminum alloy shell, which is easy to carry. It can be applied to broadcast and TV station studios and the needs of switching video effects on location. For professional users, the control keyboard can be expanded through the DCB interface.

Features

- ◆ All-in-one design
- ◆ Metal aluminum alloy material, high strength and light weight
- ◆ Industrial-grade mechanical keys
- ◆ Hall sensor T-Bar
- ◆ Support RJ45 remote control
- ◆ DCB control
- ◆ Broadcast & TV standard Tally interface
- ◆ Support GPI control
- ◆ Support joystick, camera control
- ◆ Support pedal, control handle and other input
- ◆ Support 3840x2160p60/50/30/25/24, H.264 encoding
- ◆ Support CBR fixed code rate mode
- ◆ Support High profile encoding
- ◆ Recording file format MP4, support EDIUS non-linear editing software
- ◆ The storage device interface supports USB3.0 and SATA hard disk recording
- ◆ The USB interface can be connected to the mouse and keyboard for operating the internal recording system
- ◆ The HDMI interface outputs the operation interface of the internal recording system
- ◆ Support screen freeze function
- ◆ 2HDMI+2DP+4SDI input
- ◆ MULTIVIEW output: 2 channels HDMI
- ◆ PGM output: 2ch HDMI+2ch SDI
- ◆ 2-way MIC input
- ◆ 1 LINE IN input
- ◆ 1 LINE OUT output
- ◆ Support 4K HDR
- ◆ Support audio follow and mix function
- ◆ Support SDI audio de-embedding
- ◆ Support HDMI audio de-embedding
- ◆ Support PIP and POP function
- ◆ MIX/FADE/WIPE/INV transition effects;
- ◆ Support CUT, AUTO and FTB
- ◆ Support Luma key, Chroma key
- ◆ RS422 interface to control the camera
- ◆ Support PC software remote upgrade
- ◆ The device comes with color bar output
- ◆ Support DC12V power input

Interfaces



No.	Definition	Description
1	EXT HDD	HDD/SDD/4K Recorder
2	HDMI IN	2-CH HDMI signal input
3	DP IN	2-CH DP signal input
4	SDI IN	4-CH SDI signal input
5	SDI OUT	2SDI PGM OUT
6	HDMI OUT	MultiView OUT
7	HDMI OUT	2HDMI PGM OUT
8	LINE IN/OUT	Stereo audio input/output
9	MIC IN	2-CH MIC input
10	RJ45	Remote control
11	DC 12V	DC 12V power supply
12	HDMI OUT	4K Player
13	USB3.0	External storage device
14	USB2.0	Mouse and keyboard
15	RJ45	Network upgrade
16	TYPE-C	Remote upgrade
17	RS422	PTZ control
18	GPI	GPI control
19	DCB	DCB interface, support cascade equipment, support TALLY light module
20	Tally	Connected to the director TALLY system (DB-15)

Parameters

Product Name		4K UHD Switcher
Video Signal Input	Input Signal	HDMI/DP/SDI video signal
	Code Rate	270Mbps~12Gbps
	Connector	Standard
	Return Loss	>15dB 5MHz~3GHz
	Signal Amplitude	800mV ±10% (HDMI/SDI/DP)
	Impedance	100Ω (HDMI), 100 Ω (DP), 75 Ω (SDI)
	Balance	Adaptive
	DVD HDMI input	480i/576i,480p/576p,720p,1080i,1080p,2160p
	Computer HDMI/DP input support	3840x2160,1920x1080,1680x1050,1600x900,1440x1050,1366x768,1360x768,1280x1024,1280x960,1280x800,1280x768,1280x720,1280x600,1152x864,1024x768,800x
Video Signal Output	Output Signal	HDMI/SDI video signal
	Code Rate	6GMbps~12Gbps
	Connector	Standard
	Return Loss	>15dB 5MHz~3GHz
	Signal Amplitude	800mV ±10% (HDMI/SDI/DP)
	Impedance	100Ω (HDMI), 100 Ω (DP), 75 Ω (SDI)
	DC offset	0V ±0.5V
	Clock Recovery	Support
Common Parameters	Power Supply	12V/DC
	Power	≤70W
	Size	426*232*78 mm
	Control Panel	Support on-site production, integrate a variety of buttons
	Operating Temperature	0°C~50°C no condensation
	Storage Temperature	-20°C~75°C
	Working Humidity	20%~70% RH
	Storage Humidity	0%~90% RH, no condensation

Application

