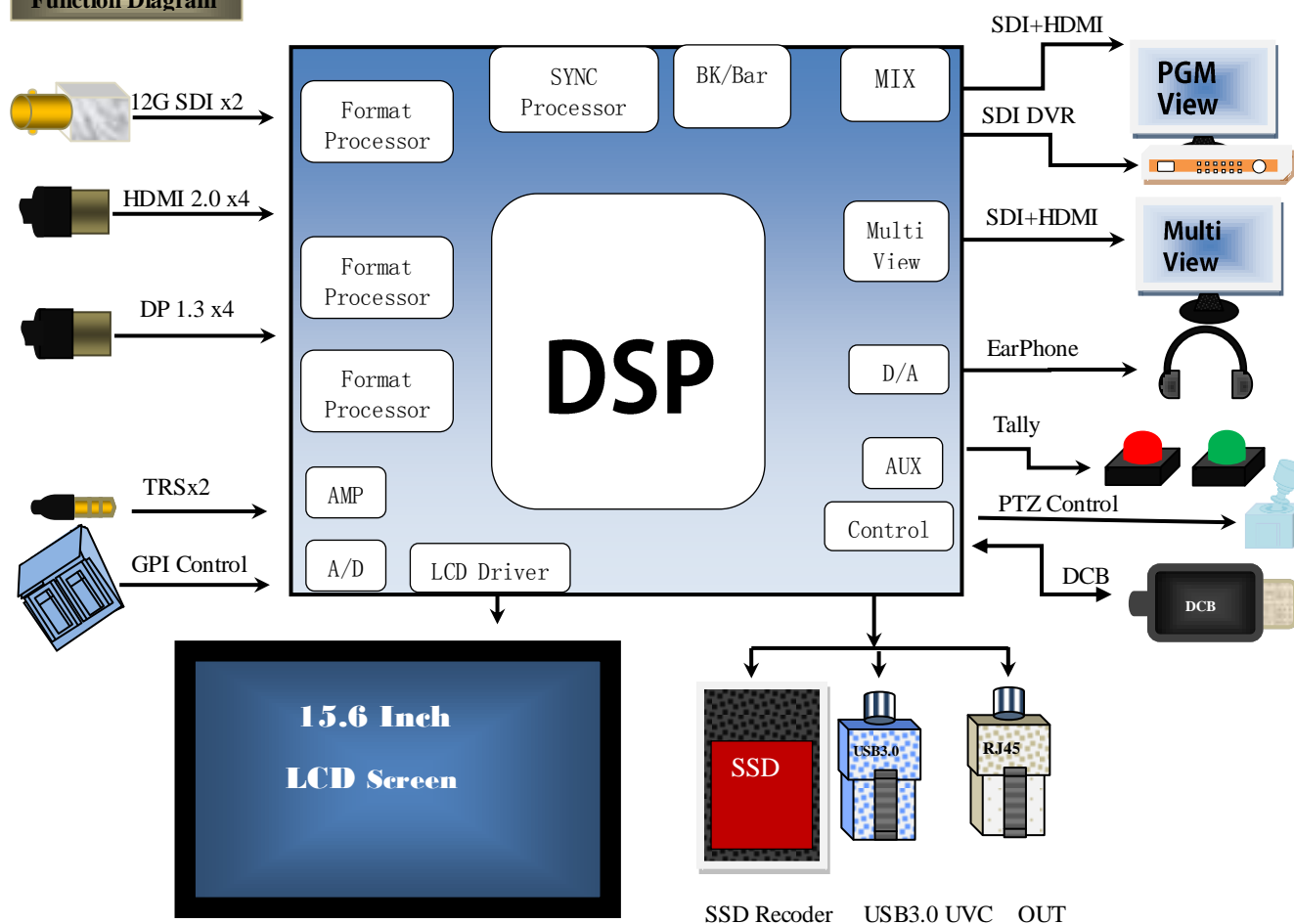




4K Switcher adopts SDI x 2+HDMI x 4+DP x 4 design, and support up to 10 channels of 4K60 UHD video signals. It can meet the needs of more OEM customers. The main framework is as follows :

#### Function Diagram



#### Introduction

It is a dedicated video switcher for broadcast & TV, supporting up to 10 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 2-CH SDI+4-CH HDMI+4-CH DP, a total of 10 video inputs, 2-CH SDI output + 6-CH HDMI output+1-CH UVC output, a total of 9 video signal outputs.

The audio signal interface supports 2 channels of TRS input, and 2 channel of TRS output.

Support DCB control system and tally output.

Optional H.26x encoding module, also capable of recording to built-in SSD or external USB drive.

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

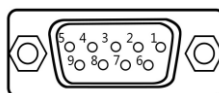
- ◆All-in-one design
- ◆Metal aluminum alloy material, high strength and light weight
- ◆A separate PATTERN KEY, which can set various special-shaped patterns.
- ◆The position, size and number of images can be adjusted.
- ◆Hundreds of special effect wipes such as circle, rhombus, fan, plum blossom, shutter, etc.
- ◆Industrial-grade mechanical keys
- ◆Hall sensor T-Bar
- ◆Comes with 15.6-inch LCD screen
- ◆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
- ◆4HDMI+4DP+2SDI input
- ◆MULTIVIEW output: 2-CH 4K60 HDMI
- ◆PGM output: 2-CH 4K60 HDMI+2-CH 12G SDI
- ◆1-CH 1080P HDMI PGM OUT
- ◆2-CH TRS input
- ◆2-CH TRS 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
- ◆Support CUT, AUTO and FTB
- ◆Support Luma key, Chroma key
- ◆RS422 interface to control the camera
- ◆FTB emergency blackout function
- ◆Support PC software remote upgrade
- ◆The device comes with color bar output
- ◆Support DC12V power input
- ◆Support functions such as image and text, logo overlay,

## Interfaces

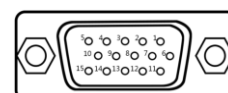


No.	Definition	Description
1	EXT HDD	HDD/SDD/4K Recorder
2	Audio IN	2-CH TRS IN
3	Audio out	2-CH TRS OUT
4	USB3.0	USB3.0 UVC OUT
5	HDMI OUT	1080P PGM OUT
6	HDMI IN	4-CH HDMI signal input
7	DP IN	4-CH DP signal input
8	SDI IN	2-CH SDI signal input
9	SDI OUT	2SDI PGM OUT
10	HDMI OUT	MultiView OUT
11	HDMI OUT	2HDMI PGM OUT
12	RJ45	Remote control
13	DC 12V	DC 12V power supply
14	Tally	Connected to the director TALLY system (DB-15)
15	DCB	DCB interface, support cascade equipment, support TALLY light module
16	GPI	GPI control
17	RS422	PTZ control
18	HDMI OUT	4K Player
19	USB3.0	External storage device
20	Type C	Remote upgrade
21	RJ45	Network upgrade
22	USB2.0	Mouse and keyboard

## TALLY Definition



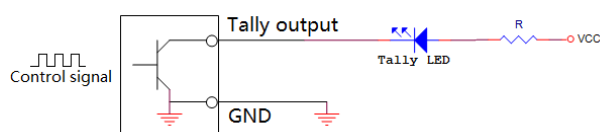
PIN	RS-422	RS-485
1	TX-	DATE-
2	TX+	DATE+
3	RX+	—
4	RX-	—
5	GND	GND
6	—	—
7	—	—
8	—	—
9	—	—



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: PIN1 PIN2 unused

## TALLY connection diagram:



Note: Tally LED: For an external display device

Tally output : Low level is active (Tally LED is on) high level is invalid  
(Tally out is off)

## Parameters

Product Name	4K UHD Switcher	
Model	UHS9610R	
Video Signal Input	Input Signal	HDMI/DP/SDI video signal
	Code Rate	1.5Gbps~12Gbps
	Connector	Standard
	Signal Amplitude	800mV ±10% (HDMI/SDI/DP)
	Impedance	100Ω (HDMI), 100 Ω (DP), 75 Ω (SDI)
	Balance	Adaptive
	DVD HDMI input	720p,1080i,1080p,2160p
	ComputerHDMI/DP input support	3840x2160,1920x1080,1680x1050,1600x900,1440x1050,1366x768,1360x768,1280x1024,1280x960,1280x800,1280x768,1280x720,1280x600,1152x864,1024x768,800x600
Video Signal Output	Output Signal	HDMI/SDI video signal
	Code Rate	6GMbps~12Gbps
	Connector	Standard
	Signal Amplitude	800mV ±10% (HDMI/SDI)
	Impedance	100Ω (HDMI), 75 Ω (SDI)
	Clock Recovery	Support
Common Parameters	Power Supply	12V/DC
	Power	≤70W
	Size/Weight	384*252*92mm/3.8Kg
	Control Panel	Support on-site production, integrate 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

## Application

