

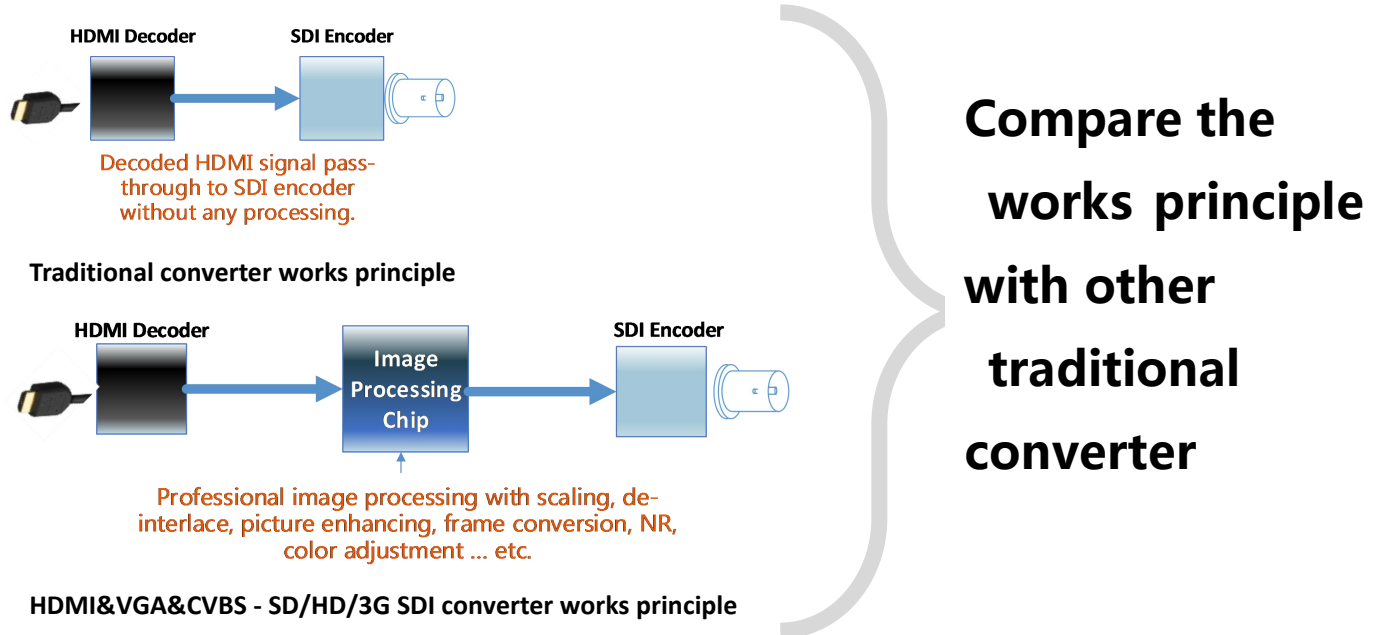
HDMI&VGA&CVBS TO SD/HD/3G SDI

Multifunction Video converter

User Manual (V1.1)

Thanks for purchasing our converters.

HDMI & VGA & CVBS-SD/HD/3G SDI video converter is a high-quality, high-performance video signal conversion products, product support HDMI 1.3, HDCP 1.1 standards, support HDMI, VGA and CVBS signal input and output compatible with SD / HD / 3G-SDI digital video / audio signals. Our converter with professional design and compliance with the SMPTE standard, quality as broadcast grade signals, support the transmission distance up to 200 m HD-SDI, 3G-SDI signals up to 120 meters [Note: Meets Belden 1694A cable standards, SDI standard signal indicators]. **Unlike** the traditional converter products in current market ,our HDMI & VGA & CVBS to SD/HD/3G SDI converter **which built in a professional image conversion processing chip**, and with HDMI / VGA / CVBS video image enhancement, noise reduction, de-interlacing (optional) function, support the user-adjustable to set the **saturation / brightness / contrast** , and through automatic scaling and frame rate conversion, any input format video signal can be converted to a standard SD/HD/3G-SDI , **compatible with all common HDMI, VGA and CVBS signals.**



HDMI&VGA&CVBS to SD/HD/3G SDI Video converter features:

- support the HD-SDI transmission distance up to 200 m , 3G-SDI signals up to 120 meters (pass the TEKTRONIX/PHABRIX professional test and verify).
- Compatible with HDMI 1.3, HDCP 1.1 , and various VESA standard signal and up to 1920x1080@60Hz VGA signal, support PAL/NTSC CVBS signal.
- With image enhancement, noise reduction, de-interlacing (optional) function, automatic scaling and

frame rate conversion, compatible with various signal format.

- Support HDMI DDC and VGA DDC.
- Optional SDI output (support to or not support 3G-SDI)
- Support lock SDI output signal, insure the signal no black screen and splash screen when switching.
- Dual SDI signal output simultaneously.
- Output blue/black screen warning when video lost.
- Input/output signal format OSD display.
- Remote control operator, Chinese/English menu interface.

—、 Device installation and connection guide



Please read the user manual clearly before install the converter, to avoid any incorrect connection to damage the converter, even threaten the body safety!

Open the box, please check the product and accessory are completely before install:

- 1) HDMI&VGA&CVBS- SD/HD/3G SDI video converter 1 set
- 2) AC 110-220V input、 DC 12V/1A output power supply 1 set
- 3) Remote control 1 set
- 4) User manual/product certification/warranty card 1 set

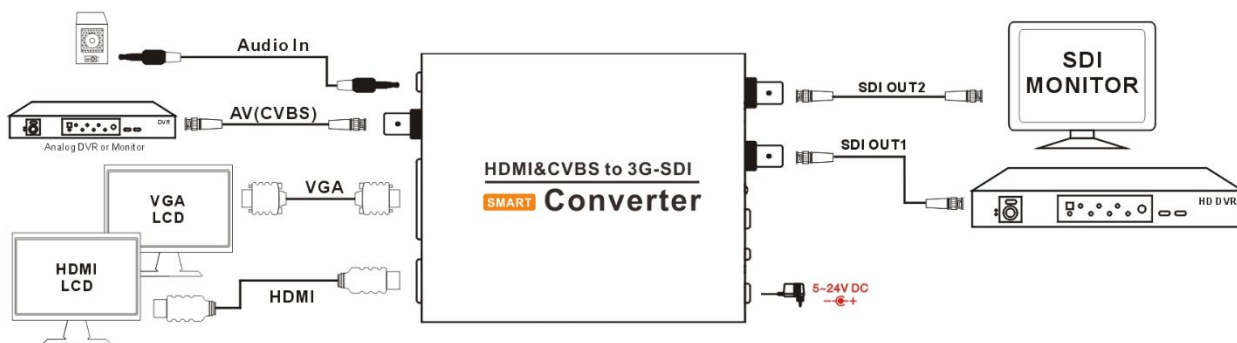
Before installing HDMI&VGA&CVBS- SD/HD/3G SDI video converter, you need to prepare the below :

- 1) The coax(75Ω) to connect SDI signal. As standard SYV-75-5-1C coax. **The quality of poor coax will affect the SDI signal transmission distance directly.**
- 2) The cable to connect HDMI signal.
- 3) The bracket and wire gong etc. for fixing HDMI&VGA&CVBS- SD/HD/3G SDI video converter.

Install and connect HDMI&VGA&CVBS- SD/HD/3G SDI Video notes:

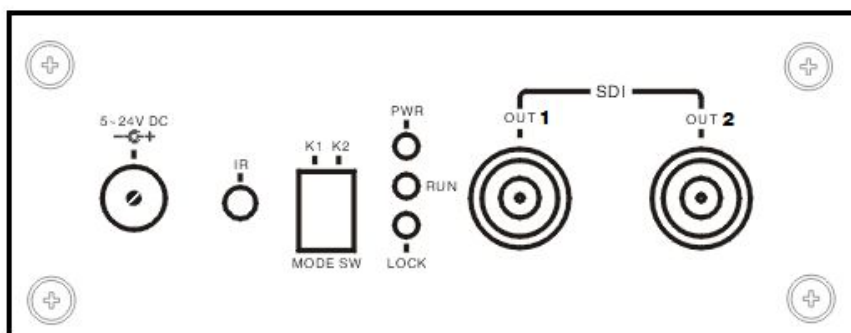
- 1) strongly recommend you connect SDI and HDMI / VGA / CVBS (AV) cable at first, then connect the power supply.
- 2) SDI signal output can be connected to **any one of two output ports**, or can be connected two output ports (both SDI monitor drive), If only one output port be connected, strongly recommended to **connect a 75 Ω termination resistor** to another vacated one, which can enhance the quality and drive capability of the output signal!
- 3) HDMI / VGA / CVBS not recommend regular hot-plug. Hot-plug HDMI / VGA / CVBS cable, easy to static electricity shocks and other issue to cause the converter fault.

Device installation and connection diagram :



After installing and connecting the device, then the device will work.

二、 Device works instructions



HDMI&VGA&CVBS- SD/HD/3G SDI Converter instruction panel

There is a work light at one end of the panel output signal of HDMI & VGA & CVBS-SD/HD/3G SDI video converter, after power on, and the PWR indicator light of device should steady, which means that the device is working.

The description of indicator light as below :

Indicator light	Status	Description
PWR	off	device is not connect the power supply, or device can not start normally
	flashing	device is not work
	steady	device is connect the power supply and work
LOCK	off	HDMI/VGA/CVBS no input signal
	flashing	on detecting the input HDMI/VGA/CVBS signal
	steady	input signal is normal
RUN	off	device is not work
	flashing/ steady	device is on working

三、 Video/Audio conversion rule

Our video converter support all HDMI standard high definition resolution, VGA standard VESA resolution and 1280x720@60Hz/75Hz、1920x1080@60Hz etc special VGA resolution. We suggestion input and output the same signal format in normal cause.

By default, when converting the video signal source is HDMI, the audio from the HDMI, when converting video signal source is VGA or CVBS (AV) input, the audio from Line-in analog input. Audio source can be selected via remote control menu.

In the below various special cause, the output of converter need to be special adjustment:

- 1) Since the SDI does not support 640x480, 800x600, etc. VESA resolution, the converter will automatically scale the VGA format and the VESA signals transmitted by HDMI signal, then output the nearest SDI resolution format (Note: Due to the aspect ratio of VESA and the aspect of SDI ratio is different, maybe will be slightly distorted proportions, If you want to keep the ratio of the output image, the ratio can be set via the remote control menu).
- 2) User can lock the SDI output fixed format via remote control, then the converter will convert all the input format to fixed format.
- 3) If there is no signal input, or input signal is not correct, the last output image will stay 10 seconds, the output will be blue screen/black screen after 10 seconds (note: new version is black screen, old version is blue screen). The last image and the size & time can be set by remote control.
- 4) When the frame rate high than 60Hz, then the frame rate will reduce to be 60Hz.

四、Remote control operation

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Please check the battery are properly installed when using in first time.
Please place the remote's IR transmitter on to the receiver of converter when using the remoter control.

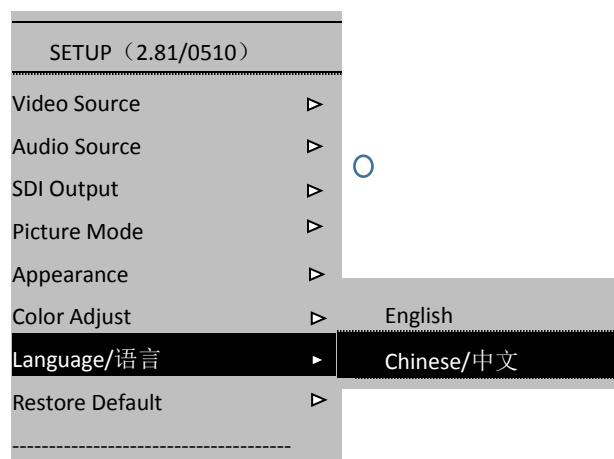
Basic operations of remote control button:

- **MENU** display/hide converter control menu
- **▲ ▼** select the menu option for up/down
- **▶** select menu item
- **◀** return to the previous menu
- **POWER** restore the device factory set
- **PICTURE** display current input/output video format
- **HDMI** select converter input video port to HDMI
- **VGA** select converter input video port to VGA
- **AV** select converter input video port to CVBS (AV)

Note: other remote control have not effect on the converter , but applicable to company' s other converter model.

The pop-up remote control menu as shown on the right:

(Note: The menu contents maybe difference as the converter software version upgrades, please note that the content contained in this manual does not represent a true icon situation.)



五、Converter settings

1) Select video signal (video input interface)

Converter input options include HDMI, VGA, CVBS (AV) ,under default situation, the converter will automatically detect which interface is connected signals, and the HDMI →VGA →CVBS (AV) priority automatically selects the signal interface as input.

Select the remote control menu "video source" item in the pop-up menu, you can manually select the converter input interface.

When you select the video source in the setup menu "By the K1 & K2 SW", select K1, K2 combination rules decide the video source:

K1	K2	Video source	K1	K2	Video source
OFF	OFF	CVBS	ON	OFF	HDMI
OFF	ON	VGA	ON	ON	Automatically detect

2) Audio signal source settings

Select the remote control menu "**Audio Source**", select the audio source in the pop-up menu.

When you select "**Auto selection**" (the default situation), when the video input is HDMI, then the audio source is HDMI; other audio source is Line In.

3) SDI output format settings

Select the remote control menu "**SDI Output**", you can set whether to support 3G SDI output, and select the output resolution. In the menu, select "**Support 3G**", SDI will be based on the video source, automatically decide the SDI output is SD, HD or 3G format; If you select "**Support HD / SD**", when the video signal is 1080p50/1080p60, SDI output will automatically convert to be 1080p25/1080p30. (Selecting the Support HD / SD can enhance the signal distance).

SDI output format selection "**Fit input mode**" (default setting of device), then start automatic conversion mode, the conversion rules as described in section III;

If you select a specific resolution, SDI will be locked the resolution of output no matter what input signal format.

When you select the menu "**By the K1 & K2 SW**", select K1, K2 combination decide the output format:

K1	K2	Output format	K1	K2	Output format
OFF	OFF	Automatically adapt to input	ON	OFF	1080p30
OFF	ON	720p60	ON	ON	1080p60

(Note: there is a adjustable resolution table on the back of converter)

4) Picture ratio adjustment

Converter defaults to "**Stretch**" mode conversion output. It is applicable to normal situation. However, the video ratio after stretching will be distorted if the input video signal is 576i 4:3 or 3:2 mode 480i signal to convert and output to 720p/1080p 16:9 wide screen. Meanwhile, the video converter output 16:9 to 4:3 / 3:2 format is the same problems. In this case, you can select "**Picture mode**" → "**Fit**" option by remote control menu, or "**Stretch**" mode to adjust. In the maintaining ratio mode, the video vertically or horizontally may add black padding border.

"**Padding**" and "**Center**" model for advanced screen ratio adjustment mode, suitable for special occasions.

"**Padding**" mode indicates the input video screen zoom to the most appropriate screen size, but if the ratio of the input video is inconsistent with the ratio of the output video, while maintaining the aspect ratio of normal premise, the out of range part will be cut off. As shown below:



"**Center**" mode is not scaling and processing the input video, and directly output the original video to the middle position. If the input resolution is less than the output video resolution, then the picture is centered and around fill black-edged; if the input resolution is larger than output video resolution, then cut off the video and output to the middle position.

5) Turn on / off OSD video format information

Converter has the video input/output format of OSD (on same screen OSD) information. If you want to turn off this prompt, select the remote control menu "**Appearance**" option, then select "**No tip info**". Otherwise, select "**Enable tip**".

6) Set the HDMI&VGA&CVBS (AV) screen freeze time when signal lost

The screen freeze of converter will stay last picture and last for 10 seconds when the signal lost. It will output blue screen or a black screen after 10 seconds. The freeze time can be adjusted, select the remote control menu "**Appearance**", and select the time of maintenance screen, or turn off the maintenance function.

7) Select the menu language

Please select the menu language by remote control menu "**Language / 语言**", supports Chinese and English.

8) Restore factory settings

The remote control menu "**Restore default**" is to restore the factory set, meanwhile all of the options before the user settings will be lost.

When the output of conversion comes out problems, the output interface does not display properly, you also can use the remote control on to the converter's IR receiver, press the remote control's "**POWER**" button, wait about one second after pressing the "**POWER**" key again to restore the factory settings.

六、Frequently questions&answers

(1) The PWR indicator light is off

Please check the power supply whether is worked, or if the power supply meets the device of the standard (DC 12V/1A).

(2) The PWR indicator light is flashing

Device fault. Need to contact the vendor for repairing.

(3) LOCK indicator light flashing, display output blue screen/black screen

Converter is under detecting the HDMI & VGA & CVBS (AV) input signal automatically. Describes that no signal in these 3 interface.

(4) RUN indicator light is off

Please check whether the signal is connected correctly. If confirm the connection is correct, then the device fault.

(5) RUN indicator light is on/flashing, no any display output

Try reset the video input interface (HDMI or VGA or CVBS). If the problem persists, press the POWER button on the remote control, wait for about one second, press the POWER button (restore factory settings) once again.

(6) SDI output video format and HDMI & VGA & CVBS input video format is inconsistent

See conversion rules describe in section III, our converter is not a simple converter, which built-in the professional graphic processing chip, which support video scaling & de-interlace & frame rate & format conversion & color enhancement to satisfy the request of user. The various of output format can option by remote control to suit in different application place.

If you want to set fixed SDI output format, you can try to set the SDI output format by remote controller. However, this may cause the receiving of the device does not support the SDI format and can not display images. When the converter comes out the irregularities, press the POWER button on the remote control, wait about 1 second, press the POWER button again to restore factory settings.

(7) SDI no signal

Under normal situations, the converter will output an SDI signal anyway! Even if there is no input signal, and

will output a blue/black screen signal. If no SDI signal and nothing displayed on the monitor situation, please check your connection of cables, cable's quality.

(8) SDI Output no sound

Please check the HDMI signal whether with audio source; or check the remote control menu settings, whether is selecting the correct audio signal source. If you select the audio signal source is derived from Line-In, make sure that the audio Line-In line is connected properly.

(9) HDMI input, audio with noise

Please check the HDMI cable's quality at first. Most users have such problems, because of the quality problems of HDMI cable.

(10) HDMI input, audio is intermittent or not normal

Audio of SDI signal standard requirement 48KHz sample, two-channel audio. Although the DDC to HDMI of converter data constraints, but part of the HDMI signal output (such as a video player, DVD player, etc) does not strictly follow the HDMI DDC specification, then output non-48KHz sampling audio. Try set up your HDMI signal source (if allow) and if this is not resolved, try to connect the Line In analog audio to the converter interface, and via the remote control menu to select the audio signal is Line In.

(11) Images has grainy/highlight/black line

Please check the HDMI & VGA & CVBS connection cables, if necessary, replace the excellent quality cable.

(12) SDI signal transmission distance is not achieve the standard

SDI signal transmission distance is affected by many limitations: (a) the quality of original SDI signal (the eye pattern&litude& timing jitter&alignment Jitter of SDI signal can be analysed via the signal analyzer, detect the signal whether follow the standard), (b) the quality of transmission coax; (c) the ability of SDI receiver in signal equalization, clock recovery, and so on. SDI output interface of our converter has professionally design and testing, using SYV-75-5-1C cables meet the national standard testing , 1.485G HD-SDI signals can be transmitted 200 meters, 2.97/3G-SDI signal can transmit 100 meters. However, the actual transmission distance will be a little difference due to the signal , coax, environment is difference.

(13) "JUST A DEMO PRODUCT ONLY!" on the output screen

This product has encryption protection. The converter will appear above tips when encryption chip is damaged or the software is illegally copied. Please ensure that your product is purchased through formal channels, or have not unpick up the product. Please contact the manufacturer or authorized dealer.