

OSSC ADD ON BOARD
OPEN SOURCE SCAN CONVERTER

Quick Start Guide



OSSC ADD-ON BOARD

Convert composite and s-video signals into component and SCART signals, with smoothing and linedoubler options. It can not only be used with the OSSC or it can be used as a standalone converter product on older TVs.



OPEN SOURCE SCAN CONVERTER QUICK START GUIDE (REV2)

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IMPORTANT SAFETY INFORMATION

Please observe the following safety precautions when using your OSSC add-on board.

Use the correct power supply:

The OSSC add-on board is powered by a regular 5-volt Micro USB port and the DC 5V jack socket, the USB that can be powered by a normal power supply or powered by a device that has a USB port. Please make sure that the power supply you are using meets any of the above requirements. Never use a power supply that is not regulated to prevent damage to the equipment.

Turn off the power before connecting/disconnecting the device:

To prevent damage to the device ICs, always turn off the power before connecting the monitor or device.

Turn on the power:

If you assemble it with the OSSC together, please turn on the OSSC add-on board first, then turn on the OSSC.

Do not expose to moisture Droplets of moisture:

Never submerge the unit water and keep away from any liquids.

Keep away from fire or high heat sources:

OSSC add-on board is not flammable but high temperatures, such as those from a fire or electric heater may melt the plastic casing.

Please supervise children:

Retro is not a toy and is not designed for use by children. Please supervise children if they use the Retro..

Scart male to male cable:

When connecting OSSC and OSSC add-on board with this cable, please tie the cable tightly to prevent the interface from becoming loose and affecting the lifespan of device.

BRIEF FEATURES

- 1) **Inputs:** Composite, S-video
- 2) **Outputs:** SCART, Component
- 3) **Linedouble and Smoothing mode**
- 4) **Support:** 240p, 288p, 480i, 576i, 480p, 576p
- 5) **Support most of the retro game consoles and some other low-resolution video products**
- 6) **Auto detect the NTSC, NTSC-443, PAL, PAL-60, SECAM**
- 7) **Simple operation, two buttons only**
- 8) **USB firmware upgradable**



PACKAGE INCLUDES

- 1) OSSC add-on board
- 2) SCART male to male cable
- 3) DC Splitter Cable (Support DC 5v power plug)
- 4) 3.5mm stereo male head to lotus female head cable

BUTTONS, CONNECTORS AND EXTERNAL CONTROLS

S-video Input:

Connect a S-video (4 pins connector) source to this input, other sources are not supported.

AV Input:

Standard composite (RCA) connector. You can connect sources such as the Nintendo Super Famicom, Nintendo, GameCube, N64 etc.

SCART Output:

Only output the RGBS signal and audio signal, does not output the component and the composite signal. Can be directly connected to the OSSC AV1 in (the OSSC SCART interface).

Component Video Out:

Output the Ypbpr signal, with the audio output interface, can be directly connected to the TVs or the OSSC.

Audio Out:

Direct access audio.

Input Mode:

Switch the input Composite & S-video.

DC Jack Socket Power Input:

Any decent quality Micro USB charger can be used to power the OSSC add-on board, as it's a very efficient device. Also you can use the DC 5.5*2.1mm Power Jack Socket.

****Please note that you can only connect to DC 5V.**

Power Switch:

Toggles power off and on.

BTN0 (MENU ITEM SELECT):

The input button is mainly to select the menu items displayed on the LCD.

BTN2 (OPTIONS SELECT):

Switch each function corresponding to the menu item.

2x/1x Mode:

The 2x ON is the standard "LINEDOUBLE" mode that outputs 480p/576p. This is the mode that's the system defaults to when powered on. The 1x ON simply outputs whatever the input signal is without changing the resolution.

Smoothing ON/OFF mode:

This mode adds a filtering option to minimize image aliasing for the 480p/576p output.

****Please note that the smoothing function only trigger in 2X mode.**

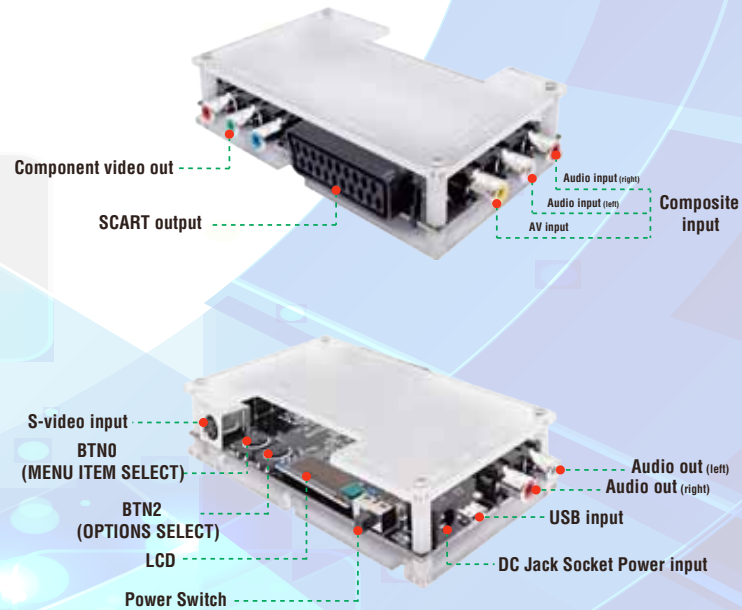
Output mode:

This mode switches the output port of the video. ****When the OSSC add-on board was used together with OSSC, OSSC may will not receive the signal in time, resulting in state of no signal or black screen. At this point, just restart OSSC.**

USB Input:

You can use this USB interface to upgrade your firmware, also you can use this to power the OSSC add-on board.

ADD-ON BOARD.



SUPPORTED CONSOLES

Supported but not limited to:

- Vic20
- N64
- PIAYSATION2
- SEGA MD2
- Atari2600
- SFC
- PIAYSTION1
- SEGA MD1
- Msx
- SNES
- XBOX
- SEGA Dreamcast
- NES
- Super Famicom
- SEGA Saturn
- SNK NEOGEO

CONNECTING YOUR OSSC ADD-ON BOARD

- 1) Connect a corresponding source to the composite or S-video input interface.
- 2) Connect to the display or OSSC via SCART or Component output interface.
- 3) Ensure that the USB power or DC power had been connected. Then switch on your OSSC add-on board.
- 4) Select the appropriate video mode through button according to your needs to play the games.

PRODUCT FEATURES

Signals / Resolutions:

The OSSC add-on can accept 240p/480i/288p/576i NTSC/PAL sources to converter to 480p/576p SCART or Component output (480p for NTSC, 576p for PAL). For example, 240p signals are supported properly, allowing for a completely progressive linedouble to 480p. 480i signals are deinterlaced and doubled also to 480p. Keep in mind that the output resolution of this device only up to 480p/576p.

Zero Lag:

The OSSC add-on board is a zero-lag device, proven using multiple measurements and different devices.

Region Compatibility:

Both NTSC and PAL signals are supported, but they can not be converted to each other. That means you can plug in whatever signal your target device is compatible with, but NTSC signals might not work on PAL devices and vice versa.

Smoothing Modes:

The smoothing mode is completely preference-based, because the average retro-gamer prefers the smoothing mode off for 2D games (SNES, Genesis, etc) and on for 3D games (N64, Saturn, etc). But, the smoothing mode might help reduce flicker with some 480i-only games.

Compatibility:

Another great feature of the OSSC add-on board is that it outputs a true 480p/60hz or 576p/50hz signal, making it compatible with every device I tested it with! Compatibility is a big issue for retro-gamers, as modern displays aren't used to the resolution or refresh rate of these older consoles. This device is an excellent help for streamers who want the highest chance of compatibility.

The Pass-through Mode:

By putting the OSSC add-on board into pass-through mode (1x mode), incoming composite or s-video signals are simply and convert to into the RBGS/YBPBR (output through the SCART/Component interface). This makes the unit a perfect transcoder to go with 15 kHz displays like PVMs, or of course, the OSSC.

THE USING OF OSSC ADD-ON BOARD WITH OSSC

You can simply use the two devices in tandem, supports both composite video and s-video and advanced features of the ossc. Piggybacking the OSSC add-on board to the OSSC is very easy. All you need is a SCART male to male or a component male to male cable. Then, you will have access to the OSSCs famous scanline engine and line multiplication modes with all your composite video and S-Video sources.

According to the accessories provided in our package, there are two ways to connect the OSSC and the OSSC add-on board.

(The component cable in the Fig.4 are for illustrative purposes only, and are not included in the package.)

The using of OSSC add-on board with OSSC:

METHOD 1

(Fig 1)

Connect a corresponding signal cable to the composite or S-video input interface of the OSSC add-on board. DC splitter cable needs to plug into the power port of the OSSC and the OSSC add-on board.



(Fig 2)

The scart male to male cable can be used to connect the scart output port of the OSSC add-on board and the scart input port of the OSSC.



METHOD 2

(Fig 3)

Connect a corresponding signal cable to the composite or S-video input interface of the OSSC add-on board. DC splitter cable needs to plug into the power port of the OSSC and the OSSC add-on board.



(Fig 4)

(4.1) As shown as the picture, the 3.5mm stereo male head to lotus female head cable can be connected to the audio output port of the OSSC add-on board and the audio in port of the OSSC.

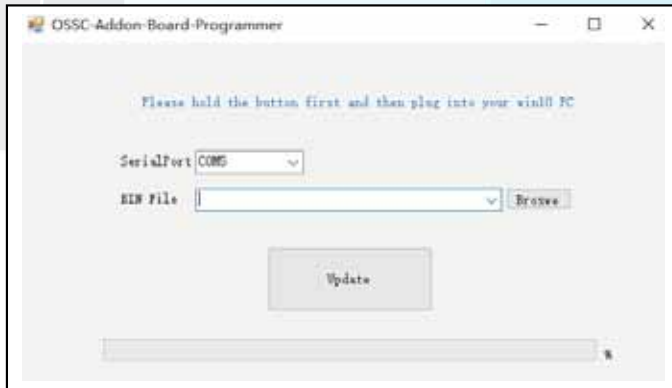
(4.2) The component cable should be used to connect the component video out port of the OSSC add-on board and the component video input port of the OSSC



HOW TO UPDATE THE FIRMWARE ?

NOTES

1. Download the firmware programmer from our website link: www.bitfunx.com/product/OSSC-add-on-board
2. Press and keep hold the BTN0 button on the OSSC add-on board then connect the micro USB cable from OSSC add-on board's USB port to your WINDOWS 10 PC.
3. The OSSC add-on board Programmer will auto detect the device, and display the Serial Port like "COM**".
4. Choose the OSSC add-on board firmware bin file, and then Click the "Update" button.





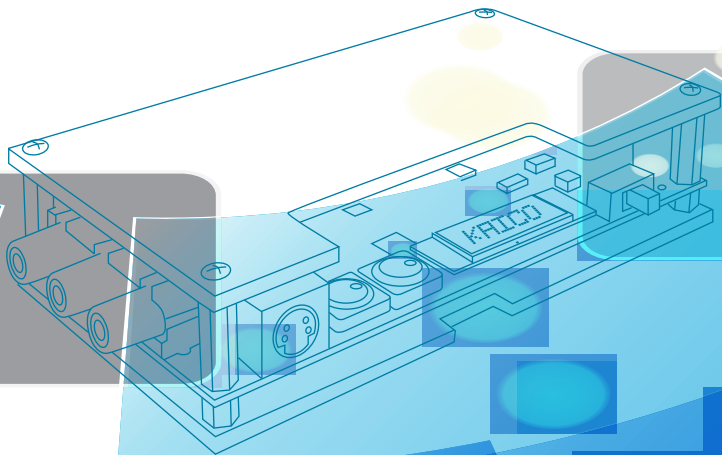


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