INOGENI SHARE 2

Thank you!

You have just acquired the finest and easiest to use tool for simultaneous capture of two streams of uncompressed video with audio for your computer.

Easy, No Drivers, No Setup !
Versatile !
Compatible with all Apps !

SHARE2U CONVERTER
P/N SHARE2

PRODUCT HIGHLIGHTS

- EASY ! No drivers required.
- Dual Uncompressed 1080p Video & Audio Capture.
- Predefined Picture in Picture (PIP) views.
- Ideal for Video streaming and Videoconferencing.
- Compatible to all motherboards and chipsets.
- Up to 1080p at 60 fps.
- Powered via external power supply.
- Scaler and Colorspace Conversion.
- Supports Windows, OSX and Linux.
- DirectShow, AVFoundation and V4L2 Compatible.
- Professional grade full-metal enclosure.

OVERVIEW

The **INOGENI SHARE2 Converter** is the most easy and reliable tool for simultaneous capture of two streams of uncompressed video into one single USB stream with audio from your HDMI/DVI/VGA/Component or CVBS sources for your PC for recording, videoconferencing, lecture capture and streaming applications. No driver installation is necessary and it will work on all motherboards and USB 3.0 chipsets. It features an HDMI, DVI and a NTSC/PAL input, a line level stereo analog input, a line level stereo analog output, an internal USB 3.0 hub with 2x USB 3.0 ports for expansion purposes and USB 3.0 connector for the host. It supports SD and HDTV video formats, up to 1080p60, and most computer graphic formats. Compact in size and rugged, the converter is a practical and an easy-to-use USB 3.0 capture solution. It is compatible with Windows, OSX and Linux operating systems, and is UVC-compliant, so it will work with all DirectShow/V4L2 and AVFoundation compatible software.

The converter supports 1080p resolutions up to 60 fps. All SD and HD resolution signals are converted to 4:2:2 8-bit color space over USB 3.0. The line level stereo analog audio input and output are two-channel LPCM.
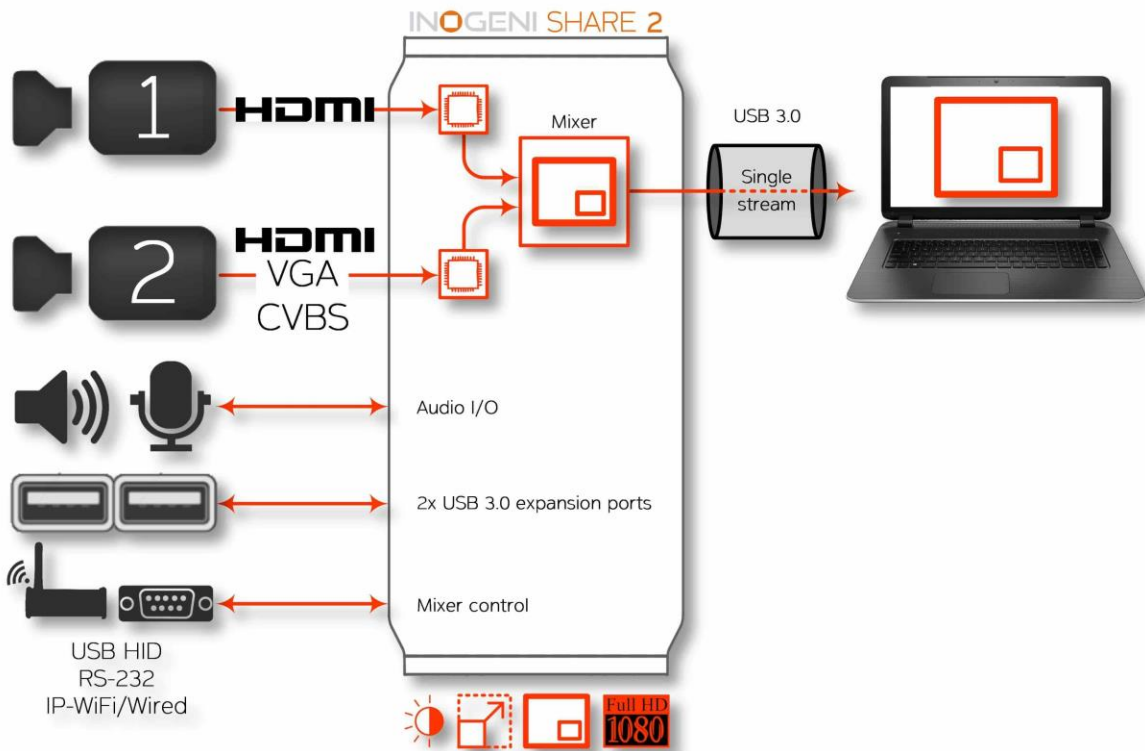
SHARE2 comes with a USB 3.0 cable, a DVI to VGA and DVI to HDMI adapters.

- Line level stereo audio support.
- Predefined Picture in Picture (PIP) views.
- Digital Fluid technology - Internal frame buffers maximize frame rate with any PC.
- Hardware-based color space and sampling conversion.
- Automatic scaling and frame rate conversion.
- Customizable video processing functions.
- Image controls: Brightness, contrast, saturation and hue settings.
- Supports multiple devices on the same PC.
- Compatible with Windows, macOS and Linux.

DEVICE CONNECTORS

CONNECTION DIAGRAM

SPECIFICATIONS

Video Input 1	
Connector	1x HDMI
Video Resolutions	1080p, 720p, 1080i, 480p, 576p, 1920x1200, 1280x1024, 1280x960, 1024x768, 800x600, 640x480

Video Input 2	
Connector	1x DVI-I – (Digital & Analog).
Video Resolutions	**DVI:** 1080p, 720p, 1080i, 480p, 576p, 1920x1200, 1280x1024, 1280x960, 1024x768, 800x600, 640x480 **VGA:** 1080p, 720p, 480p, 576p, 1920x1200, 1680x1050, 1400x1050, 1600x1200, 1280x1024, 1360x768, 1280x768, 1280x800, 1024x768, 800x600, 640x480 **Component:** 1080p, 1080i, 720p, 480p, 480i, 576p and 576i **CVBS:** 480i, 576i *[Available on green connection of a DVI to Component adapter]*
Frame Rates	Up to 60 Hz, all formats.
Color Space	RGB, YCbCr 4:4:4 and 4:2:2.
Sampling Rate	165 MHz
Analog input	Analog stereo, line level, 3.5mm jack.
Analog output	Analog stereo, line level, 3.5mm jack.
HDCP Copy protection	The device will not decrypt BD/DVD movies, satellite/cable receivers or other encrypted sources.
Mixer Control	The Mixer feature can be controlled by the following interfaces: HID RS-232 Keypad INOGENI REMOTE LAN

Output	
Connector	1x USB 3.0 to host.
Color Space	YCbCr (YUY2) 4:2:2 8-bit.
Video Scaler	Automatic hardware based.
Color Space Conversion	Automatic hardware based.
Sampling Conversion	Automatic hardware based.
Frame Rate Conversion	Automatic hardware based.
USB expansion	2x USB 3.0 ports for expansion purposes. The devices connected will appear to the host.

| Audio	
Audio input	2-channel LPCM 48kHz audio from Line input or embedded in HDMI.
Audio output	2-channel LPCM 48kHz audio Line level.

Compatibility	
Operating System	NO driver installation necessary. Windows 7 and above (32/64-bit) macOS 10.10 and above Linux (kernel v2.6.38 and above) Android
Host Requirements	USB 3.0 port Minimum 4GB RAM Intel Core i5 Graphic card with its own memory for on-screen rendering applications.
Motherboard	Compatible with all motherboards: Intel, Renesas, ASMedia, and Fresco Logic.
Cameras Supported	Cameras and camcorders with an HDMI/DVI, VGA or CVBS output.
Software Compatibility	UVC-compliant. Runs with all software compatible to DirectShow, V4L2, QuickTime and AVFoundation.

Adapters included	DVI to VGA and DVI to HDMI adapters.

Dimensions [W x L x H, cm]	18.5 x 11 x 3
Weight [g]	530
Power	12V, 500mA (adapter included)
UPC Code	040232461736
Origin	Canada
Harmonized Code	8517.62.000.900

TOP USER BUTTONS

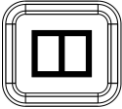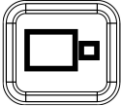These mixer buttons have the same function as INOGENI Control App software.
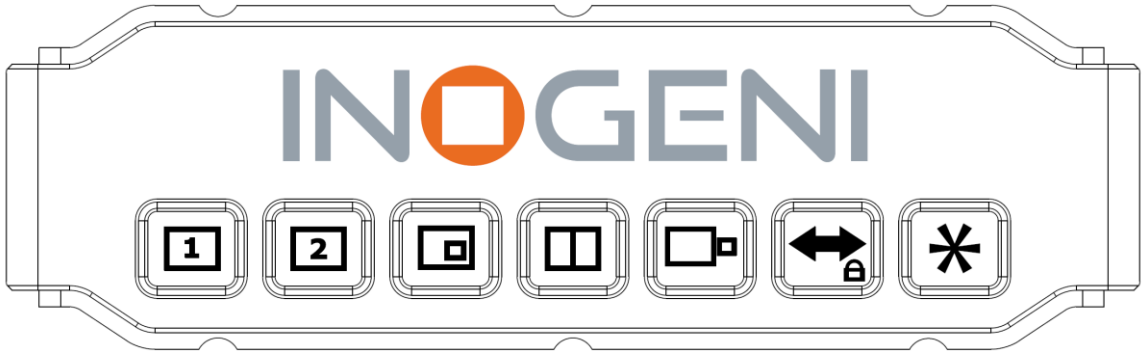
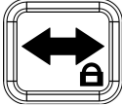|	
1	Input 1 to full screen.
2	Input 2 to full screen.
□	Picture in picture. Each press on this button change the small window position at each corner.
Ⅲ	Side by side.
▭▪	Big and small.
⟷🔒	Swap input 1 and input 2 for buttons: picture in picture, side by side and big and small. Each press on this button swap input 1 with input 2. To lock/unlock the keypad, press and hold this button for 2 seconds.
✳	Not used, reserved for customization.

SERIAL COMMUNICATION PROTOCOL

The device supports multiple baud rates. The baud rate is programmed using the HID interface.
- 9600 baud [default]
- 19200 baud
- 38400 baud

RJ45 cable pinout
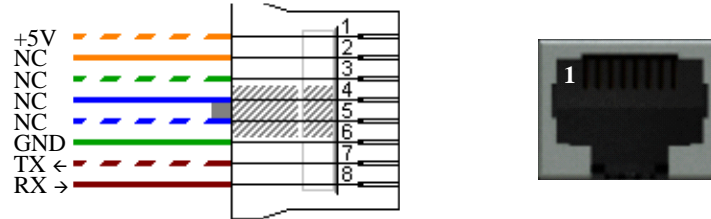
Commands

If the commands are recognized, the "**ACK**" string will be sent.

If the commands are NOT recognized, the "**NACK**" string will be sent.

Input 1 is the **HDMI** stream.
Input 2 is the **DVI** or **composite** stream.

Commands sent to the serial interface must have the '<' character at the beginning and '>' character at the end.

COMMAND	Command description
<S1>	Source 1, which comes from the HDMI connector
<S2>	Source 2, which comes from the DVI or RCA connector
<SS>	Side by Side View
<TB>	Top Bottom View
<BS>	Big and Small View
<PPTR>	Picture in Picture at top right corner
<PPTL>	Picture in Picture at top left corner
<PPBR>	Picture in Picture at bottom right corner
<PPBL>	Picture in Picture at bottom left corner
<SW>	Swap View
<SS1>	Side by Side View where Input 1 is at the left side
<SS2>	Side by Side View where Input 2 is at the left side
<TB1>	Top Bottom View where Input 1 is at the top
<TB2>	Top Bottom View where Input 2 is at the top
<BS1>	Big and Small View where Input 1 is at the left side
<BS2>	Big and Small View where Input 2 is at the left side
<PPTR1>	Picture in Picture at top right corner where Input 1 is the background
<PPTR2>	Picture in Picture at top right corner where Input 2 is the background
<PPTL1>	Picture in Picture at top left corner where Input 1 is the background
<PPTL2>	Picture in Picture at top left corner where Input 2 is the background
<PPBR1>	Picture in Picture at bottom right corner where Input 1 is the background
<PPBR2>	Picture in Picture at bottom right corner where Input 2 is the background
<PPBL1>	Picture in Picture at bottom left corner where Input 1 is the background
<PPBL2>	Picture in Picture at bottom left corner where Input 2 is the background
<SAVE>	Save the current configuration onboard for future use

\<RSTR\>	Erase the current configuration onboard and return to default values
\<BLK\>	Black video
\<SHW\>	Show video
\<RST\>	Reset the device
\<POLL\>	Returns the current view of the device. In case PPTL1 mode is active, you will receive: >> \<POLL\> PPTL1 BLACK [enabled/disabled] ACK
\<GET\>	Return the firmware versions and video resolutions of CAM and CONT inputs. Here is an example. >> \<GET\> FX3 => 1.8 FPGA => 1.9 EDID => 1 CAM => 1920x1080@60fps CONT => Not locked VIEW => PPTL1 BLACK [enabled/disabled] ACK

INOGENI REMOTE

The INOGENI Remote needs to be connected to the LAN port in order to operate. Apply wiring accordingly. This remote is sending serial commands to the SHARE2 device. Make sure to set the **DIP SW6** below the SHARE2 to ON in order to apply power to the remote before going further. See "DIP SWITCHES" section of this document for more details. Check the user manual of the INOGENI REMOTE for more details.

SHARE2 with INOGENI REMOTE.

SHARE2 - Back   REMOTE

Use a RJ45 cable between the INOGENI device and the REMOTE. Do not connect the cable to the SHARE2 LAN port but to the SHARE2 RS232 port.
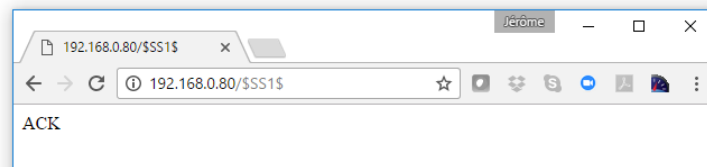

LAN INTERFACE

The device supports a LAN interface. The default IP address of the device is **192.168.0.80** and is ready to communicate. If your router is on the same subnet as this IP address, you will be ready to use the LAN interface of the device. If not, you must use an Ethernet switch that has the same subnet of the device in order to change the device IP address.

You can access the web server of the device by using any web browser and the SHARE2 Configuration webpage will appear.

You can use the commands by sending HTTP or TCP requests. For example, you can send an HTTP request by sending it using any browser to 192.168.0.80/COMMAND. If the command is recognized, you will receive the ACK string.

You can also use any telnet application in order to communicate with the device using TCP. Make sure to use the right IP address and **port 50000**.

Commands sent to the LAN interface must have the '$' character at the beginning and '$' character at the end.

COMMAND	Command description
$S1$	Source 1, which comes from the HDMI connector
$S2$	Source 2, which comes from the DVI or RCA connector
SS	Side by Side View
TB	Top Bottom View
BS	Big and Small View
$PPTR$	Picture in Picture at top right corner
$PPTL$	Picture in Picture at top left corner
$PPBR$	Picture in Picture at bottom right corner
$PPBL$	Picture in Picture at bottom left corner
SW	Swap View
$SS1$	Side by Side View where Input 1 is at the left side
$SS2$	Side by Side View where Input 2 is at the left side
$TB1$	Top Bottom View where Input 1 is at the top
$TB2$	Top Bottom View where Input 2 is at the top
$BS1$	Big and Small View where Input 1 is at the left side
$BS2$	Big and Small View where Input 2 is at the left side
$PPTR1$	Picture in Picture at top right corner where Input 1 is the background
$PPTR2$	Picture in Picture at top right corner where Input 2 is the background
$PPTL1$	Picture in Picture at top left corner where Input 1 is the background
$PPTL2$	Picture in Picture at top left corner where Input 2 is the background
$PPBR1$	Picture in Picture at bottom right corner where Input 1 is the background
$PPBR2$	Picture in Picture at bottom right corner where Input 2 is the background
$PPBL1$	Picture in Picture at bottom left corner where Input 1 is the background
$PPBL2$	Picture in Picture at bottom left corner where Input 2 is the background
$SAVE$	Save the current configuration onboard for future use
$RSTR$	Erase the current configuration onboard and return to default values
BLK	Black video
SHW	Show video
RST	Reset the device
$POLL$	Returns the current view of the device. In case PPTL1 mode is active, you will receive: PPTL1 BLACK [enabled/disabled] ACK
GET	Return the firmware versions and video resolutions of CAM and CONT inputs. Here is an example. FX3 => 1.8 FPGA => 1.9 EDID => 1 CAM => 1920x1080@60fps CONT => Not locked VIEW => PPTL1 BLACK [enabled/disabled] ACK

DIP SWITCHES

The device has DIP switches below the device in order to force settings. Here are the functions of the DIP switches.

SW1	**OFF**	USB resolution is 1080p only. This will force application to take high quality video.
	ON	Multiple USB resolutions available.
SW2		For future use
SW3	**OFF**	Frame buffer frequency is set to 60Hz. (default)
	ON	Frame buffer frequency is set to 50Hz.
SW4		Reserved
SW5		Reserved
SW6	**OFF**	Disable 5V on terminal block. (default)
	ON	Enable 5V on terminal block. This switch must be set in order to power up the connected remote.

AUDIO CONTROL

The device embeds an audio mixer. You have complete control over HDMI and analog inputs and output. You can also mute and adjust gain on I/Os. You can click "Apply" button in order to keep configuration at each bootup. You can also restore default configuration by clicking "Restore defaults" button.
There are three modes for the audio mixer:

Automatic audio selection:
This mode gives priority on the analog input. Otherwise, HDMI input will be selected if audio packets are detected in HDMI stream. If there are no audio packets on HDMI input, DVI input (HDMI stream) will be selected.
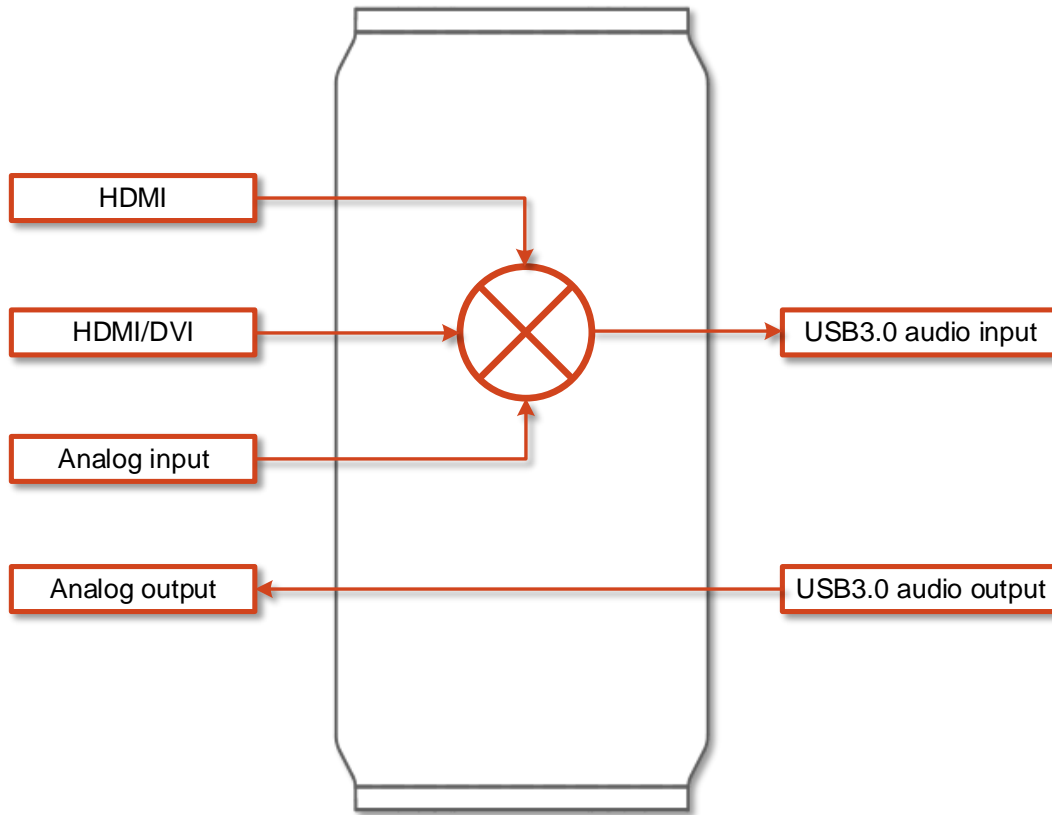
Follow input:
This mode gives priority on the analog input as soon. Otherwise, we select audio from the selected input. If video inputs are mixed, we also mix the audio inputs.

Mix audio:
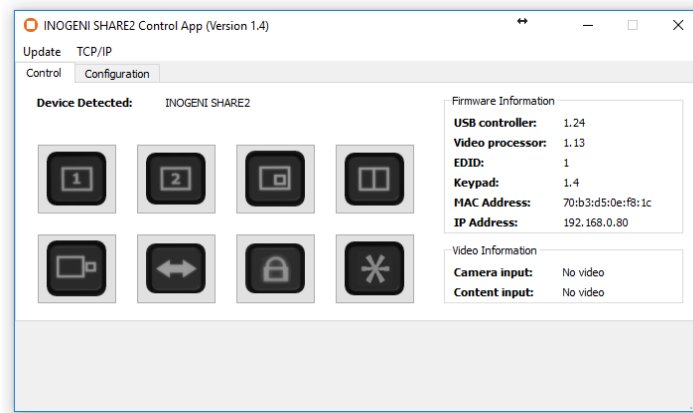This mode mixes audio from all HDMI and analog inputs.
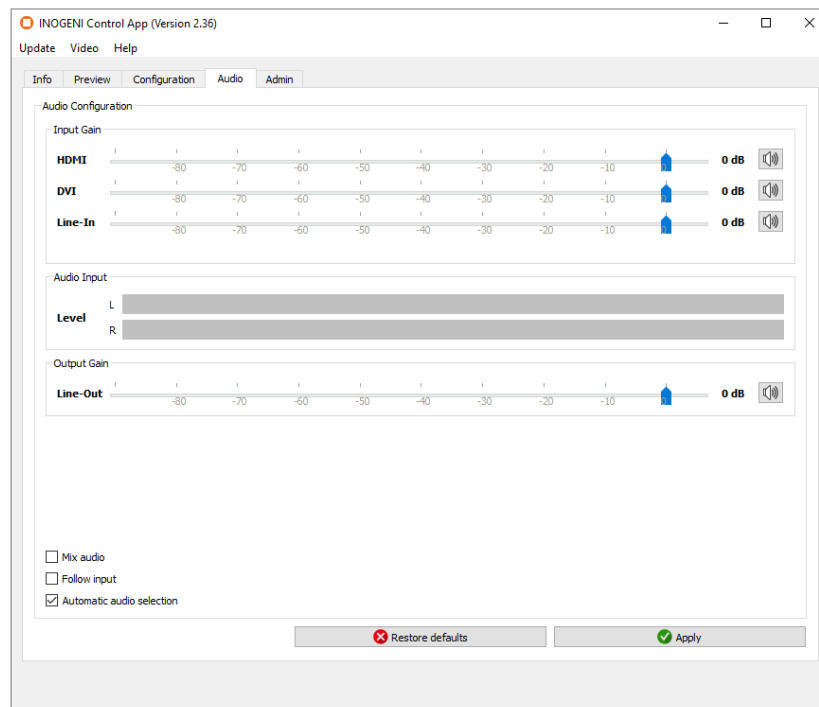
Here is a diagram of the audio mixer layout:

INOGENI CONTROL APP

The INOGENI Control App allows you to control and monitor video sources.

The device has its own application in order to control the Mixer configuration using the USB Human Input Device (HID) or the LAN interfaces.

You can also monitor the firmware versions installed on the device and the status of the USB and HDMI inputs.

You can update your device to the latest firmware using the Update menu. The C++ source code of this application is available on demand.

Visit the Software Update web page under Support -> Software Tools for more details.

CRESTON MODULES

You can use the Crestron modules in order to control the INOGENI SHARE2 device using the serial or the IP connections. These modules are available on our website under the section Software Update. Refer to the Help file on how to use the modules.

SUPPORT

Engineered by video professionals, for video professionals, it is your most compatible USB 3.0 device. INOGENI expertise at your fingertips:

- **Expert Technical Support team** at support@inogeni.com for immediate help or if you have any technical question about our products.

- Extensive **Knowledge Base** to learn from other customers experiences.

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