Dual-View Video Processor

P/N: AV-GM0903-S1

Safety and Notice

The **AV-GM0903-S1** Dual-View Video Processor has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipments, the **AV-GM0903-S1** should be used with care. Please read and follow the safety instructions to protect yourself from possible injury and to minimize the risk of damage to the unit.

- Follow all instructions and warnings marked on this unit.
- Do not attempt to service this unit yourself, except where explained in this manual.
- Provide proper ventilation and air circulation and do not use near water.
- Keep objects that might damage the device and assure that the placement of this unit is on a stable surface.
- Use only the power adapter and power cords and connection cables designed for this unit.
- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.

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INTRODUCTION

The AV-GM0903-S1 Dual-View Video Processor provides the most flexible and cost effective solution in the market to route high definition video source from any of the two HDMI sources to the remote display at the same time. This solution is well suited for use in home theater, conference room presentation systems or other similar setting or application.

FEATURES

- 2 x Dual DVI inputs and 2 x Dual DVI outputs
- Input resolutions support from 640x480 to 1920x1200, interlaced or progressive
- Output resolutions support from 640x480 to 1920x1200, progressive
- Adjustable size & position through software
- The layouts are individual on the different output
- Firmware upgradable for support of new features and technology enhancements.
- Titles, borders and colored backgrounds
- Resize, position, zoom& pan and blend output video
- Perfectly as a video screen splitter, a video converter and a video switcher
- Software control through RS-232 and Ethernet
- Each dual output has an independently controllable area.
- Supports input rotation.
- 1U size

PACKAGE CONTENTS

- 1x AV-GM0903-S1
- 1x DC 12V 5A
- 1x Installation software CD
- 1x User Manual
- 1x IR Remote control (28 keys)

SPECIFICATIONS

Model Name		AV-GM0903-S1
Technical		
Role of usage		Multiplexer / video processor
Background video input		No
HDCP compliance		HDCP 1.1
Video bandwidth		DVI [Single-link 4.95Gbps] HDMI [2.25G to 6.75Gbps]
Video support		480i / 480p / 720p / 1080i / 1080p60 /1920x1200@60 / 1600x1200@60
Video Format Support		DVI/HDMI
Audio support		No
Control		RS-232/ IP Control
Embedded video mixer		Yes
Input TMDS signal		1.2 Volts [peak to peak]
ESD protection		Human body model — ±15kV [air-gap discharge] & ±8kV [contact discharge]
Input		2x DVI/HDMI + 2xRS-232 + 1x RJ-45(Ethernet)
Output		2x DVI
DVI connector		DVI-D [female, 29-pin]
RS-232 connector		DE-9 [9-pin D-sub female]
RJ-45 connector		WE/SS 8P8C
Mechanical		
Housing		Metal enclosure
Dimensions (L x W x H)	Model	290 x 211 x 43mm [11.4”x8.3”x1.7”]
	Package	325 x 196 x 92mm [12.7”x7.7”x3.6”]
	Carton	490 x 426 x 352mm [1’6”x1’4”x1’2”]
Weight	Model	2.9kg [6.4 lbs]
	Package	5kg [11.1 lbs]
Fixedness		1RU rack-mount with ears

Power supply	12V 5A DC
Power Consumption	5.75 Watts [max]
Operation temperature	0~40°C [32~104°F]
Storage temperature	-20~60°C [-4~140°F]
Relative humidity	20~90% RH [no condensation]

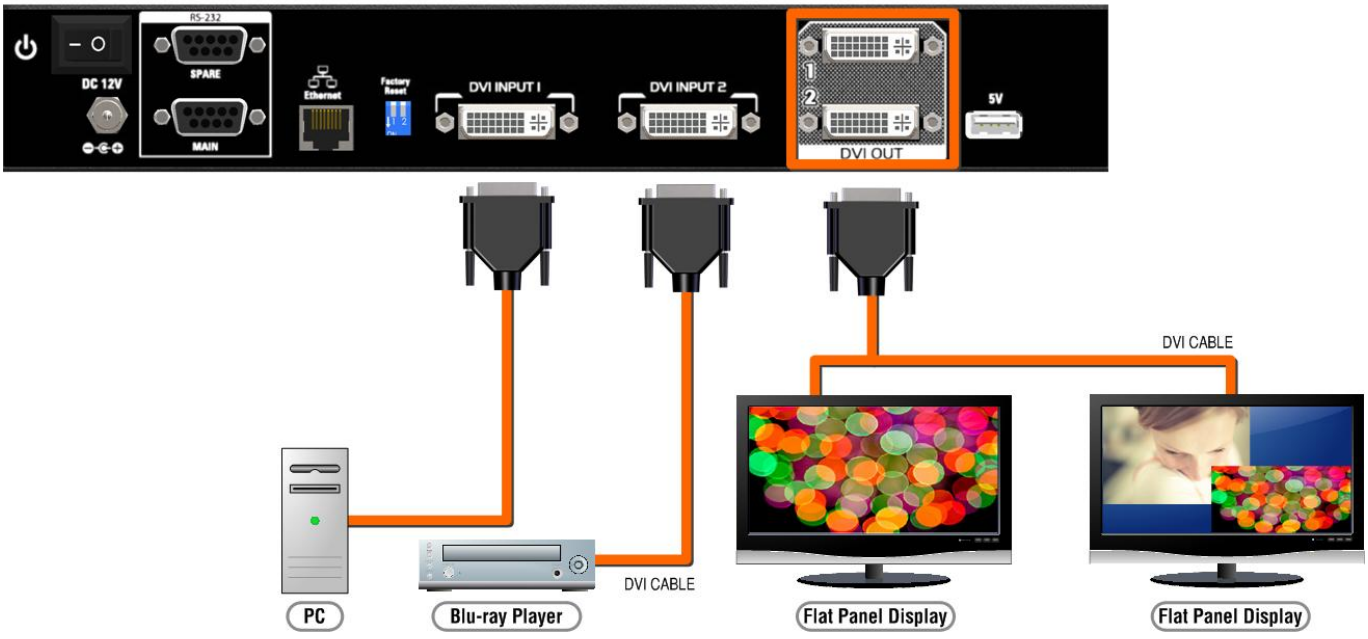
HARDWARE INSTALLATION

AV-GM0903-S1 as master

1. Connect all sources to DVI/HDMI Inputs on the AV-GM0903-S1.
2. Connect all display to DVI/HDMI Outputs on the AV-GM0903-S1.
3. Connect the +12V 5A DC power supply to the AV-GM0903-S1.

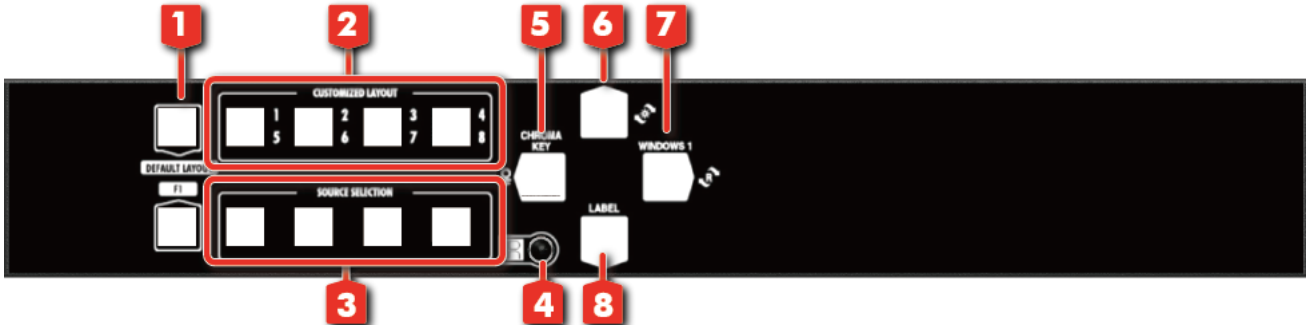
CONNECTION DIAGRAM

DVI



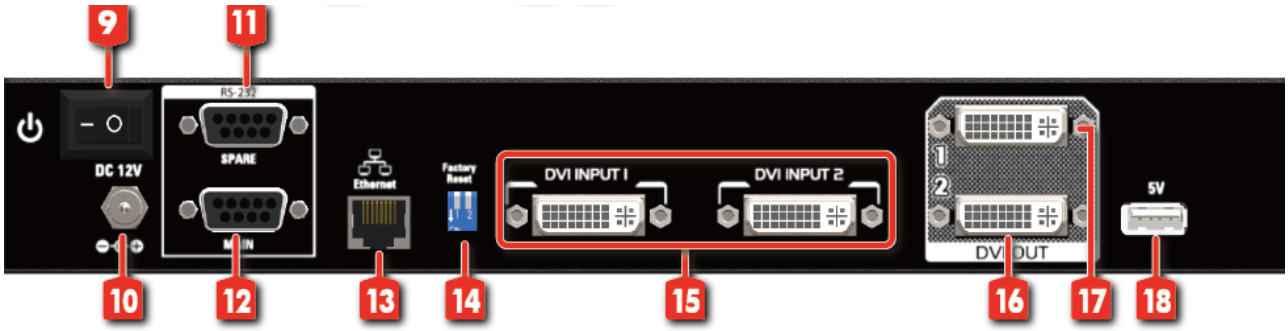
PANEL DESCRIPTIONS

Front Panel



1. **Default Layout PAP:** Default layout horizontal PAP/ vertical PAP
   Horizontal PAP: The light of button 6 is off.
   Vertical PAP: The light of button 6 is always shine.
2. **Custom Layout 1-8**
   Custom layout 1-4: The light of button 6 is off.
   Custom layout 5-8: The light of button 6 is always shine.
3. **Source Selection Button:** window in full screen or source selection window
   Window in full screen mode: The light of button 6 is off.
   Source selection: The light of button 6 is always shine.
4. **IR Sensor:** IR sensor for receiving the IR commands from IR remote
5. **Chroma key:** Chroma key function on/off
6. **Function Selection**
7. **Rotation:** Rotate function on/off
8. **OSD:** All Windows OSD on/off

Rear Panel

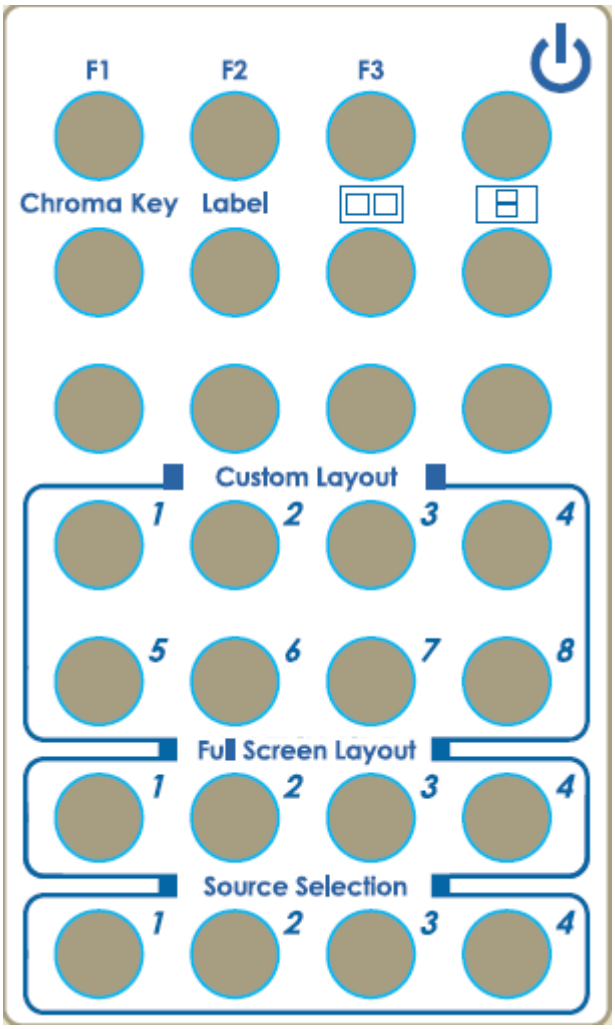


9. **Power Switch:** Power on/off
10. **+12V DC:** 12V DC power jack
11. **RS-232:** RS-232 control port
12. **RS-232:** RS-232 control port for F/W update
13. **Ethernet:** Ethernet control port
14. **Dip Switch:** Switch factory reset mode [ON↓]

15. **Input 1-2:** DVI inputs
16. **Output:** DVI output 2
17. **Output:** DVI output 1
18. **USB 5V**

OPERATION APPROACH

Method A: IR Remote Control



Button	Function
F1	Reserved
F2	Reserved
F3	Reserved
⏻	Power on/off the device
Chroma key	Chroma key function on/off
Label	Window label on/off
▭▭	Default layout 1
▭ ▭	Default layout 2
Custom layout 1	Custom layout 1
Custom layout 2	Custom layout 2
Custom layout 3	Custom layout 3
Custom layout 4	Custom layout 4
Custom layout 5	Custom layout 5
Custom layout 6	Custom layout 6
Custom layout 7	Custom layout 7
Custom layout 8	Custom layout 8
Full screen layout 1	Window 1 in full screen
Full screen layout 2	Window 2 in full screen
Full screen layout 3	Window 3 in full screen
Full screen layout 4	Window 4 in full screen
Source selection 1	Window 1 source selection
Source selection 2	Window 2 source selection
Source selection 3	Window 3 source selection
Source selection 4	Window 4 source selection

Method B: Software Control through RS-232 port / Ethernet port

System Requirement and Precautions

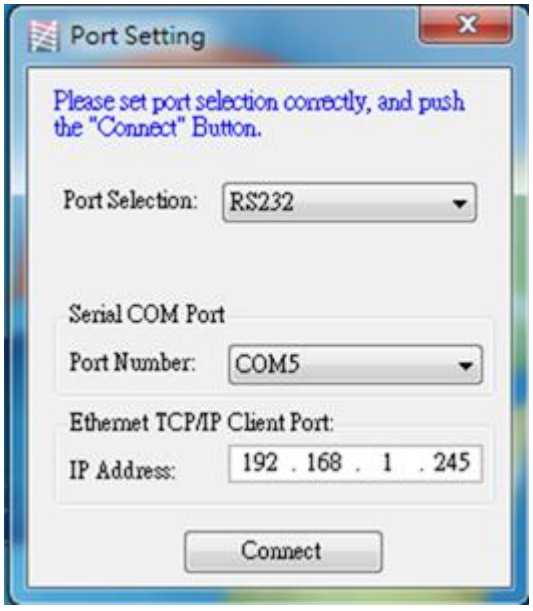
1. Whenever power off AV-GM0903-S1, please stay unpowered at least 5 to 10 seconds to allow power capacitors to discharge.
2. The AV-GM0903-S1 provides software control program which runs under Microsoft Windows 98, 2000, XP, 7, 8 through the interface of RS-232 serial control.
3. Before you click on the icon of the software, make sure you have secured the connection between your computer COM port and the AV-GM0903-S1.

Start the software control program

When clicking on the executable file, the following dialog will pop-up. It has two ways to control the AV-GM0903-S1 device (under Microsoft Windows 7, please run as administrator).

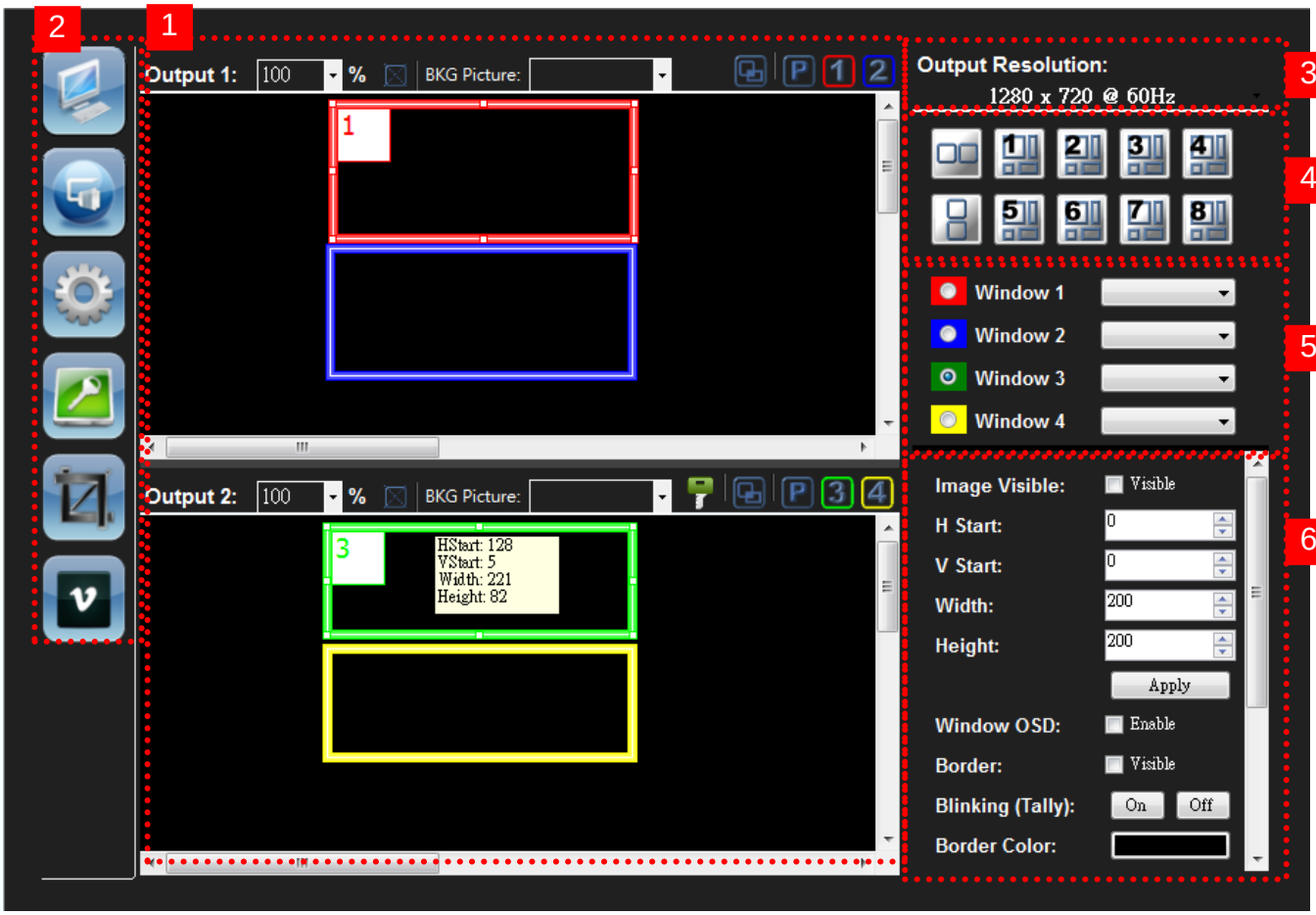
RS-232 serial Mode: Use RS-232 to connect the port on device and computer. Select correct COM port and click the connect button.

TCP/IP Mode: Enter the device IP address and click the connect button.



After the software control setting is accomplished, it will enter directly to control interface.

Control Interface



1. PAP Panel

   Display and adjust the window size, position.

   In this part, it has the different control tool for PAP panel setting.

   - Control percent: 10~100% to set the PAP Panel display/control size.
   - Stretch: Fix the size ratio when the window is resizing.
   - Background picture: To set up the background picture of window.
   - Window priority
   - PAP mode
   - Window 1 in full screen
   - Window 2 in full screen

   In addition, you can change the output layout by clicking the mouse left button. It has four different layouts (Dual Horizontal Output, Dual Vertical Output, Single Output 1, and Single

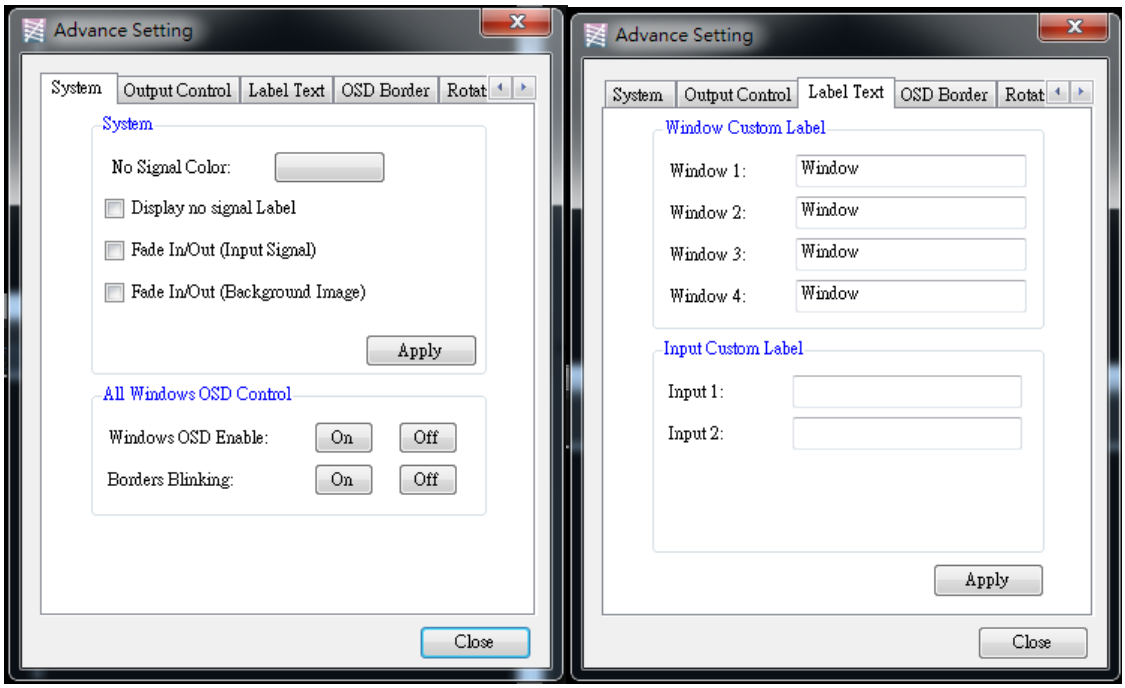
Output 2).

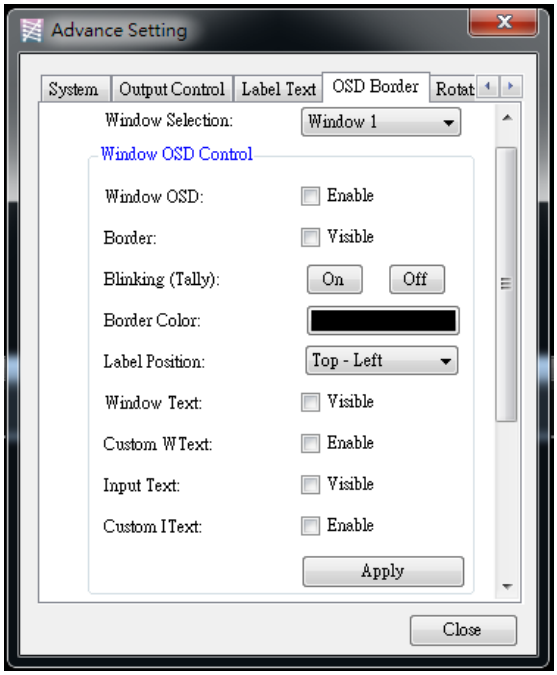
2. Tool Bar list:

(1) Status: Get all information of the device and update this software state.

(2) Port Setting: Pop-up the “Port Setting” dialog, user can change the connecting way.

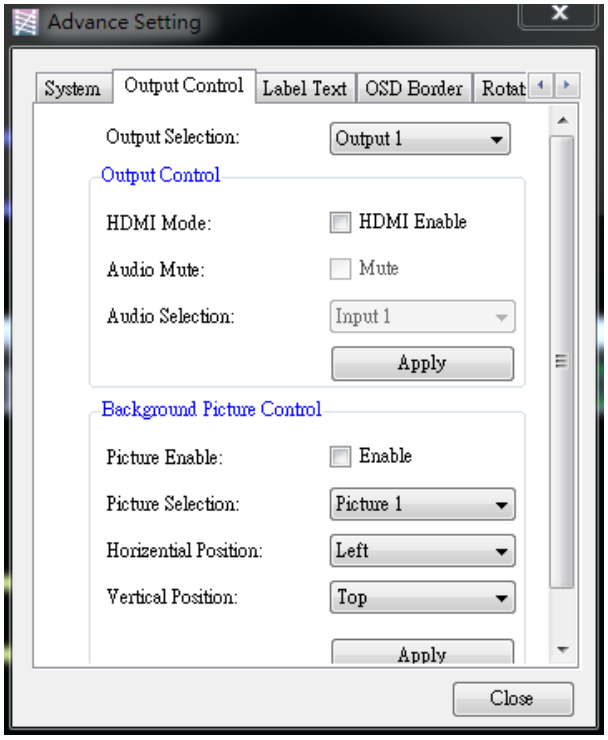
(3) Advance Setting: In this function, user can set the no signal color, fade in/out effect, output control, background picture, window text, input text, OSD border, rotation, EDID and factory reset.





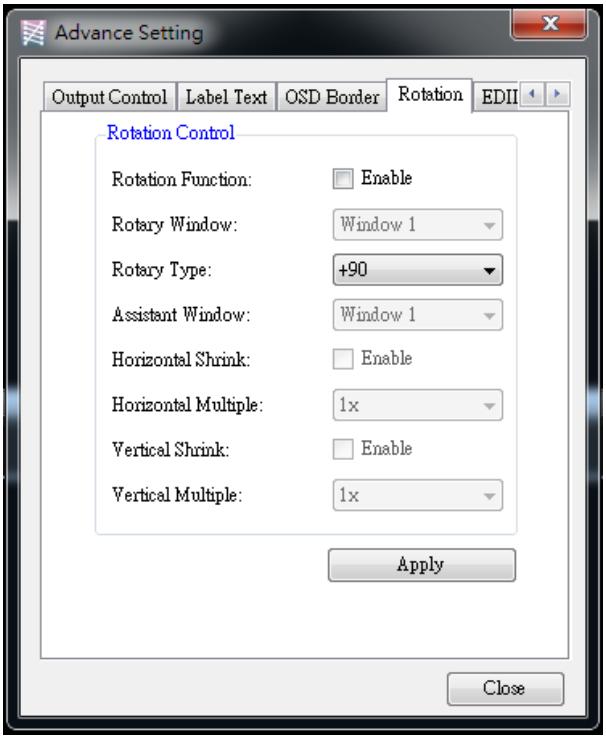
- Output Control Setting:

  In this function, user can determine to turn on or off the HDMI mode and audio, and also can select the configuration of background picture.



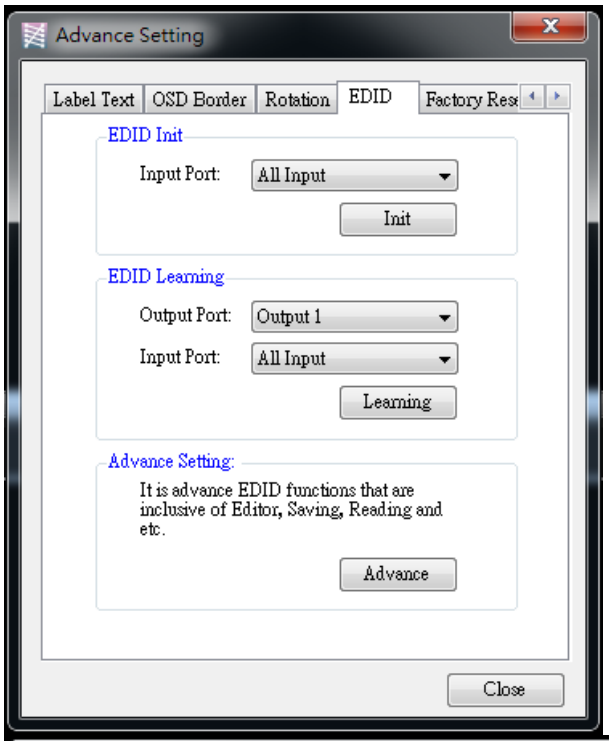
- Rotation:

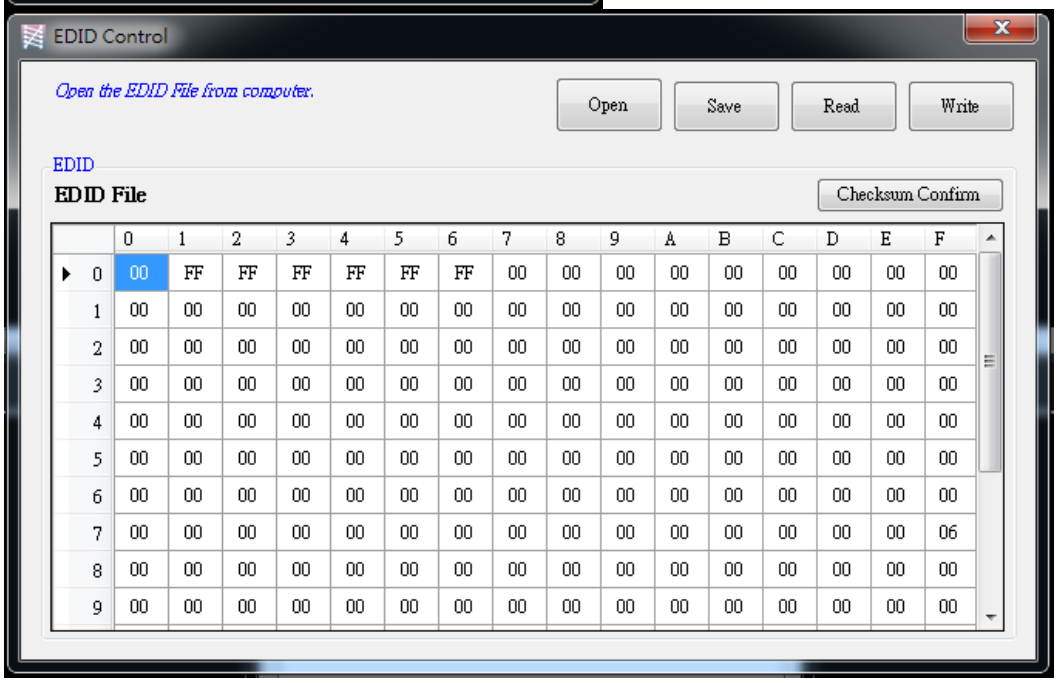
  For Rotation function, only window 1 can be applied.


Advance Setting
Output Control
Label Text
OSD Border
Rotation
EDII
Rotation Control
Rotation Function:
Enable
Rotary Window:
Window 1
Rotary Type:
+90
Assistant Window:
Window 1
Horizontal Shrink:
Enable
Horizontal Multiple:
1x
Vertical Shrink:
Enable
Vertical Multiple:
1x
Apply
Close

➢ EDID:

User can learn EDID from default or display. In addition, it also provides advance EDID function for user to edit, save and read.



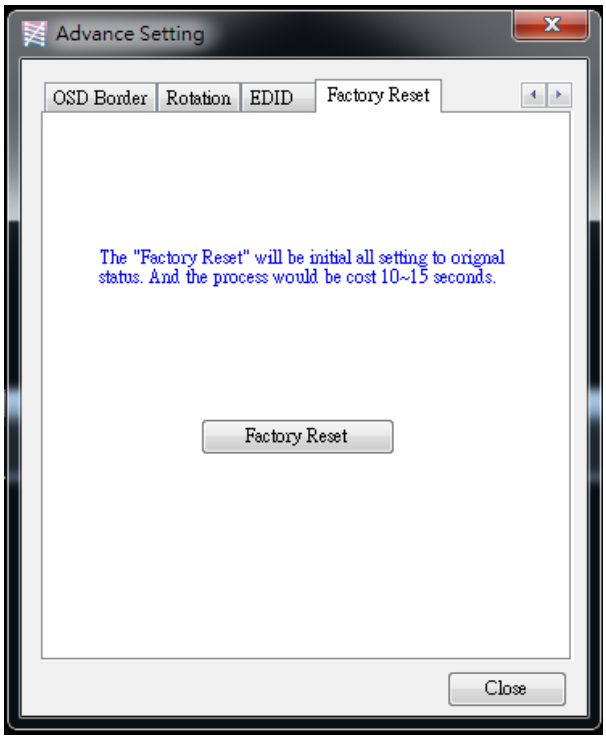


	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	00	FF	FF	FF	FF	FF	FF	00	00	00	00	00	00	00	00	00
1	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
2	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
3	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
4	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
5	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
6	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
7	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	06
8	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
9	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00

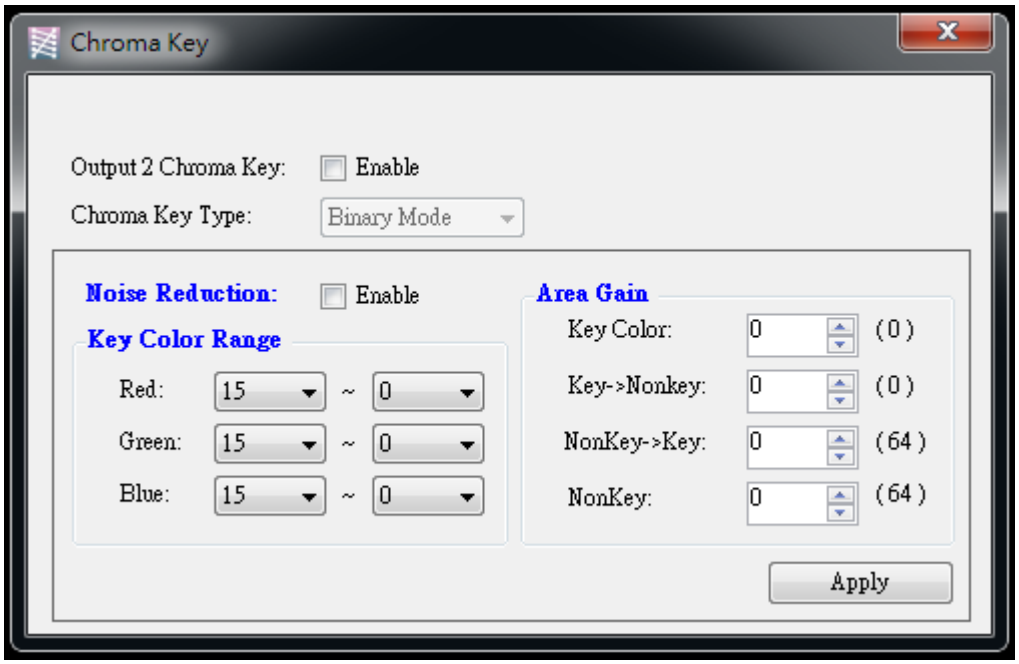
- Factory Reset:

  Click the

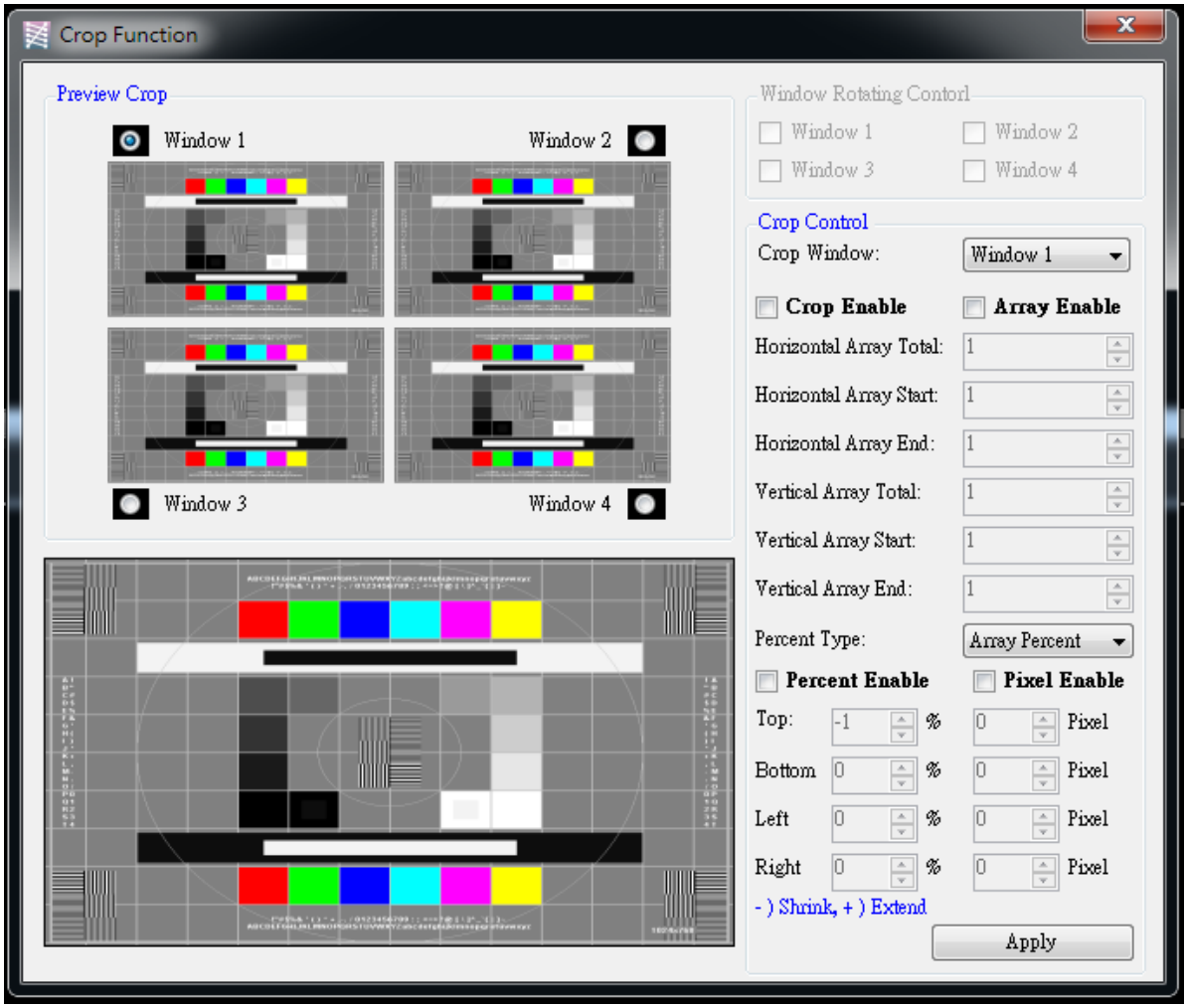
button to do factory default reset. This default reset process will take about 10~15 seconds and it will be initialized all setting to original system state.



(4) Chroma Key: It can turn on/off the Chroma key function and adjust the parameters of Chroma key.



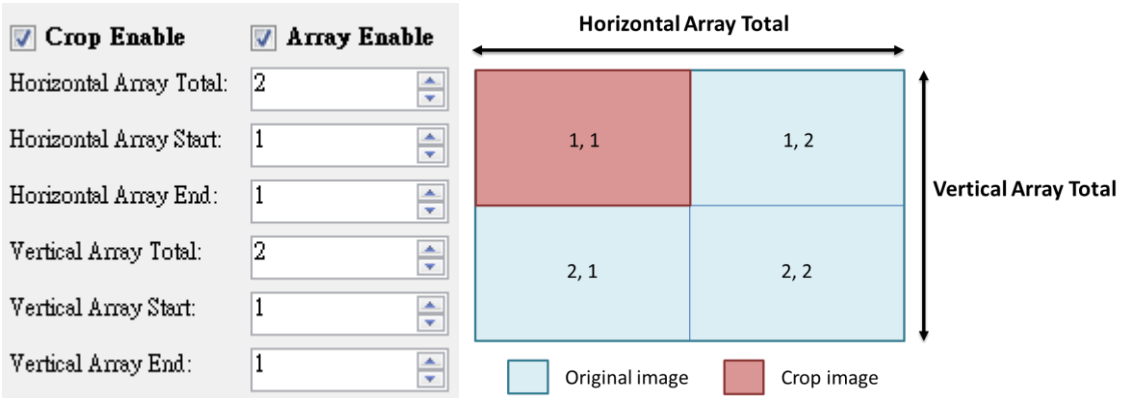
(5) Crop function: This function is used to crop or clip an image.



In the Preview Crop, it can preview the range and effect of video crop with the adjustment.

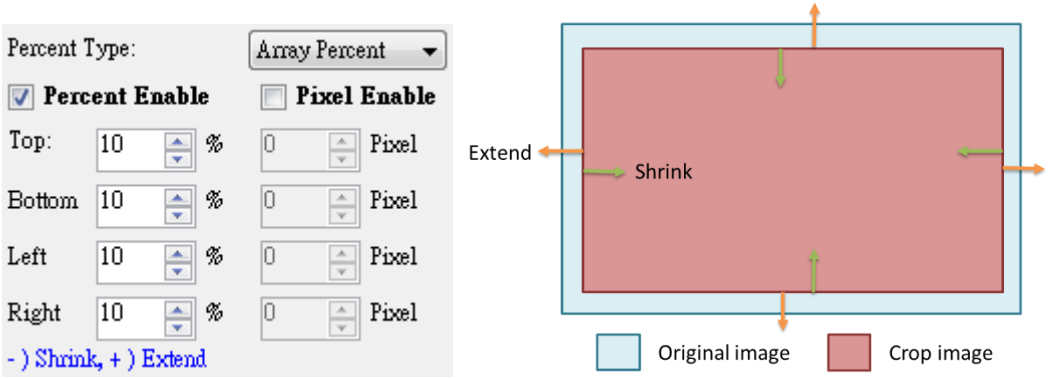
- Crop Enable: Enable crop function
- Array Enable: Enable array parameter

The setup diagram is shown as below.



- Percent Enable: Allows user to adjust video layout size by percentage concept.

  The setup diagram is shown as below.



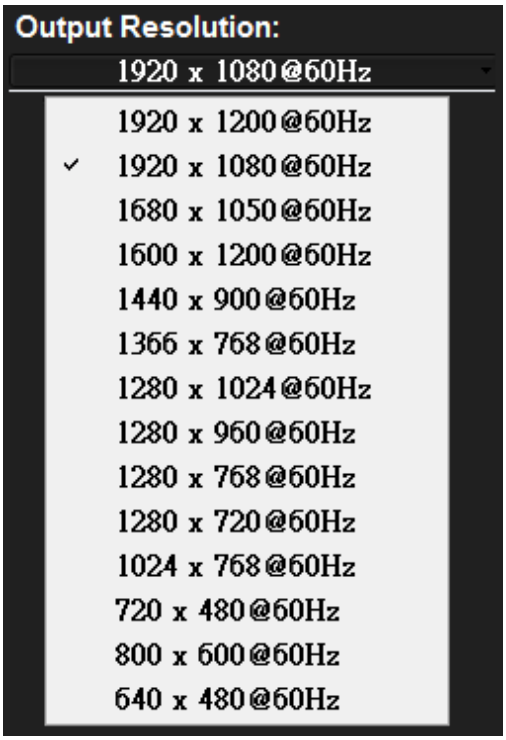
- Pixel Enable: Allow user to adjust video layout size by pixels.

  The video crop by pixel and percent are almost same. The differences come from the adjustment ratio.

(6) Version: Read the software and firmware version.

3. Output Resolution:

   Set the output resolution. When setting the different resolutions, the parameters of PAP and custom layout (position and size) will accordingly change.



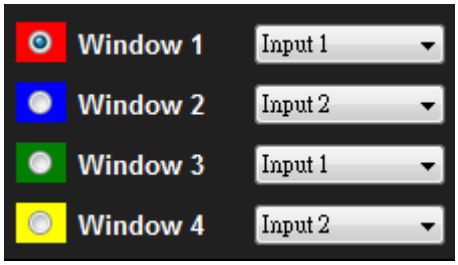
4. Default layout and Custom layout:

   - Default layout: Use factory preloaded video layouts.
   - Custom layout: Use custom pre-saved video layouts

     In this part, you can adjust the size and position of output screen. If you want to save the layout, please click the right button of mouse to save this layout into device.

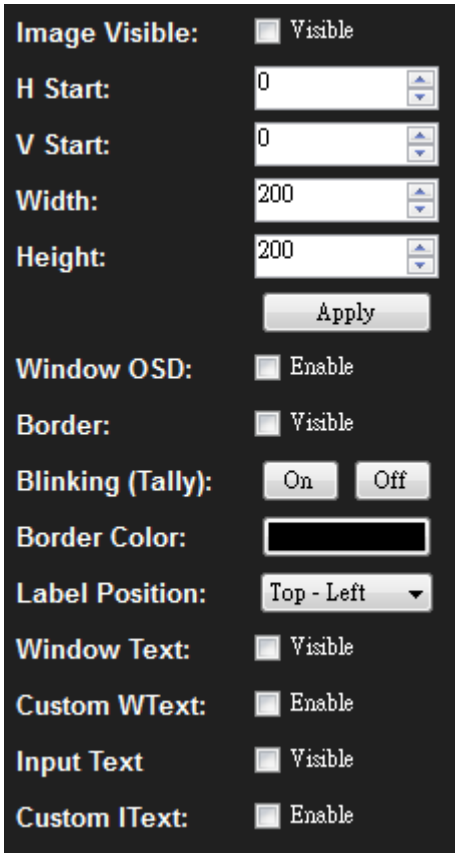
5. Window selection and input mapping

   For each display window, user can assign arbitrary video input here.



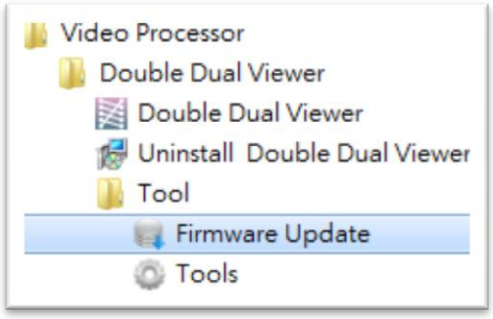
6. Window setting

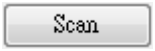
   In here, you can adjust the size, position or other settings of the specified window.



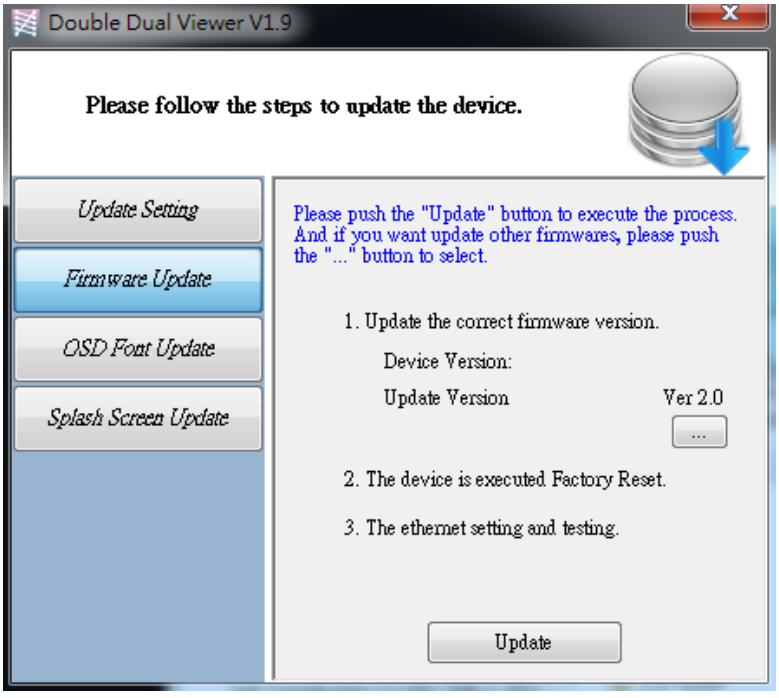
Method C: Firmware Update

1. Unfold the Video Processor folder and choose the firmware update executable file. The firmware update window shows up as below.

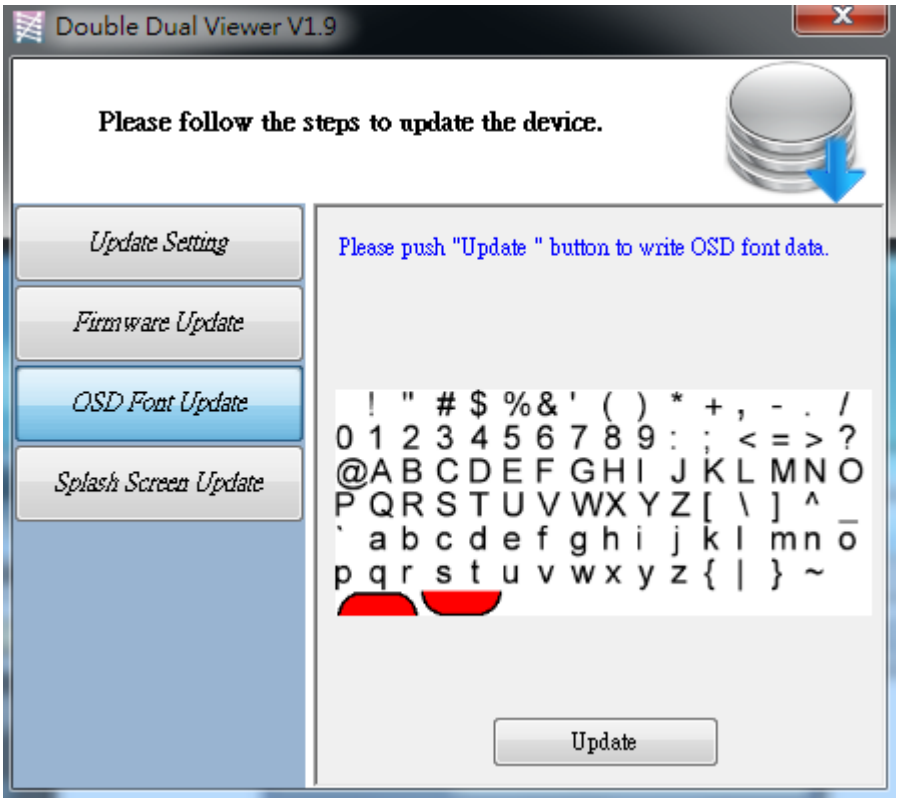


2. Please select the correct COM port or click  button to connect the device.

3. Click button to do firmware update.



4. If you want to change OSD (window label) font, please click “OSD Font Update” window and click Update button to change OSD font.



5. If you want to change the boot screen, please click “Splash Screen Update” window and click the ... button to select the graph which you want to write into the device.

WARRANTY

The SELLER warrants the **AV-GM0903-S1** Dual-View Video Processor free from defects in the material and workmanship for 3 years from the date of purchase from the SELLER or an authorized dealer. Should this product fail to be in good working order within 3 years warranty period, The SELLER, at its option, repair or replace the unit, provided that the unit has not been subjected to accident, disaster, abuse or any unauthorized modifications including static discharge and power surge. This warranty is offered by the SELLER for its BUYER with direct transaction only. This warranty is void if the warranty seal on the metal housing is broken.

Unit that fails under conditions other than those covered will be repaired at the current price of parts and labor in effect at the time of repair. Such repairs are warranted for 90 days from the day of reshipment to the BUYER. If the unit is delivered by mail, customers agree to insure the unit or assume the risk of loss or damage in transit. Under no circumstances will a unit be accepted without a return authorization number.

The warranty is in lieu of all other warranties expressed or implied, including without limitations, any other implied warranty or fitness or merchantability for any particular purpose, all of which are expressly disclaimed.

Proof of sale may be required in order to claim warranty. Customers outside Taiwan are responsible for shipping charges to and from the SELLER. Cables and power adapters are limited to a 30 day warranty and must be free from any markings, scratches, and neatly coiled.

The content of this manual has been carefully checked and is believed to be accurate. However, The SELLER assumes no responsibility for any inaccuracies that may be contained in this manual. The SELLER will NOT be liable for direct, indirect, incidental, special, or consequential damages resulting from any defect or omission in this manual, even if advised of the possibility of such damages. **Also, the technical information contained herein regarding the AV-GM0903-S1 features and specifications is subject to change without further notice.**

Support
For more info or tech support
http://www.siig.com/support

April, 2018