

ASP-S123V

Presentation Scaler Switcher



SAFETY INSTRUCTIONS

Please review the following safety precautions. If this is the first time using this model, then read this manual before installing or using the product. If the product is not functioning properly, please contact your local dealer or Aurora for further instructions.



The lightning symbol in the triangle is used to alert you to the presence of dangerous voltage inside the product that may be sufficient to constitute a risk of electric shock to anyone opening the case. It is also used to indicate improper installation or handling of the product that could damage the electrical system in the product or in other equipment attached to the product.



The exclamation point in the triangle is used to alert you to important operating and maintenance instructions. Failure to follow these instructions could result in injury to you or damage to the product.



Be careful with electricity:

- **Power outlet:** To prevent electric shock, be sure the electrical plug used on the product power cord matches the electrical outlet used to supply power to the Aurora product. Use only the power adapter and power connection cables designed for this unit.
- **Power cord:** Be sure the power cord is routed so that it will not be stepped on or pinched by heavy items.
- **Lightning:** For protection from lightning or when the product is left unattended for a long period, disconnect it from the power source.



Also follow these precautions:

- **Ventilation:** Do not block the ventilation slots if applicable on the product or place any heavy object on top of it.
Blocking the air flow could cause damage. Arrange components so that air can flow freely. Ensure that there is adequate ventilation if the product is placed in a stand or cabinet. Put the product in a properly ventilated area, away from direct sunlight or any source of heat.
- **Overheating:** Avoid stacking the Aurora product on top of a hot component such as a power amplifier.
- **Risk of Fire:** Do not place unit on top of any easily combustible material, such as carpet or fabric.
- **Proper Connections:** Be sure all cables and equipment are connected to the unit as described in this manual.
- **Object Entry:** To avoid electric shock, never stick anything in the slots on the case or remove the cover.
- **Water Exposure:** To reduce the risk of fire or electric shock, do not expose to rain or moisture.
- **Cleaning:** Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.
- **ESD:** Handle this unit with proper ESD care. Failure to do so can result in failure.

FCC

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference.
- (2) This device must accept any interferences received, including interference that may cause undesired operation.

Trademarks

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PACKAGE CONTENTS

Please make sure the following items are included within your package. Contact your dealer if any items are missing or damaged.

- ◆ ASP-S123V Presentation Scaler x 1
- ◆ Power Cord x 1
- ◆ DXE-CAT-RX1 HDBaseT CAT Receiver x 1 (Not included in –NC model)

Note: Go to www.auroramultimedia.com for latest manual and firmware

INTRODUCTION

About

The ASP-S123V is a presentation scaler switcher designed for multi-signal processing of Composite Video, S-Video, Component Video (YPbPr), VGA (Computer Graphics), and HDMI inputs which can be scaled to 1080p in VGA/HDMI format. In addition, the built in HDMI CAT extension, microphone input, and 20 Watt amplifier makes the ASP-S123V a complete cost effective solution for education, commercial, and digital signage.

Features

- ◆ 4 HDMI Inputs
- ◆ 4 VGA Inputs with 3.5mm TRS Audio
- ◆ 1 YPbPr Input
- ◆ 1 Composite / S-Video Input with L/R Stereo Audio
- ◆ 1 Microphone Input
- ◆ 1 HDMI Output
- ◆ 1 VGA Output with L/R Stereo Audio
- ◆ 1 HDMI CAT Extender Port (Not included in –NC Model)
- ◆ Scales input up to 1080p
- ◆ 2 x 10 Watt Amplifier
- ◆ Volume Control
- ◆ Front Panel Button Control with IR receiver
- ◆ RS-232 Control
- ◆ 10/100 LAN (Optional)
- ◆ USB for Firmware Updating

Note: Must use shielded CAT 5e/6/7 cable for extender port. CAT Extender port transmits HDMI only.

Front Panel



- ①. Power indicating LED. It is illuminated red when the unit is on.
- ②. IR sensor window for remote
- ③. Input selection LEDs.
- ④. Input source selection buttons. Select video/audio source type HDMI, VGA, and Video.
- ⑤. Signal channel selection buttons. Selects the input specific to the selected Input source.
- ⑥. Resolution selection buttons. Rotates through 1024×768, 1280×720p, 1280×800, 1360×768, 1920×1080p.
- ⑦. MIC volume control buttons. “MUTE” for mute MIC volume, “Δ”for MIC volume up, and “▽”for MIC volume down.
- ⑧. Line volume control buttons. “MUTE” for mute line volume, “Δ”for line volume up, and “▽”for line volume down.

Rear Panel



- ①. Two RCA connectors for stereo audio output, one VGA output, one HDMI output with embedded audio, one HDBaseT for HDMI extending (Not available on –NC model).
- ②. Four VGA connectors for VGA inputs.
- ③. Four HDMI connectors for HDMI inputs.
- ④. Four 3.5mm audio connectors for VGA audio inputs.
- ⑤. One Component video input: Y/Pb/Pr, two composite video inputs, one S-Video input, and two pairs L/R for analog audio input.
- ⑥. One RS232 port for serial control (2=Rx, 3=Tx, 5=Gnd), one USB port for firmware update.
- ⑦. Two MIC connectors: MIC with pre-amplification, LINE for audio direct input. One TCP/IP port for network controlling.
- ⑧. Amplifier with 2x10W@8Ω output.
- ⑨. Connector for POWER.
- ⑩. Grounding lug.

HDBaseT CAT Receiver

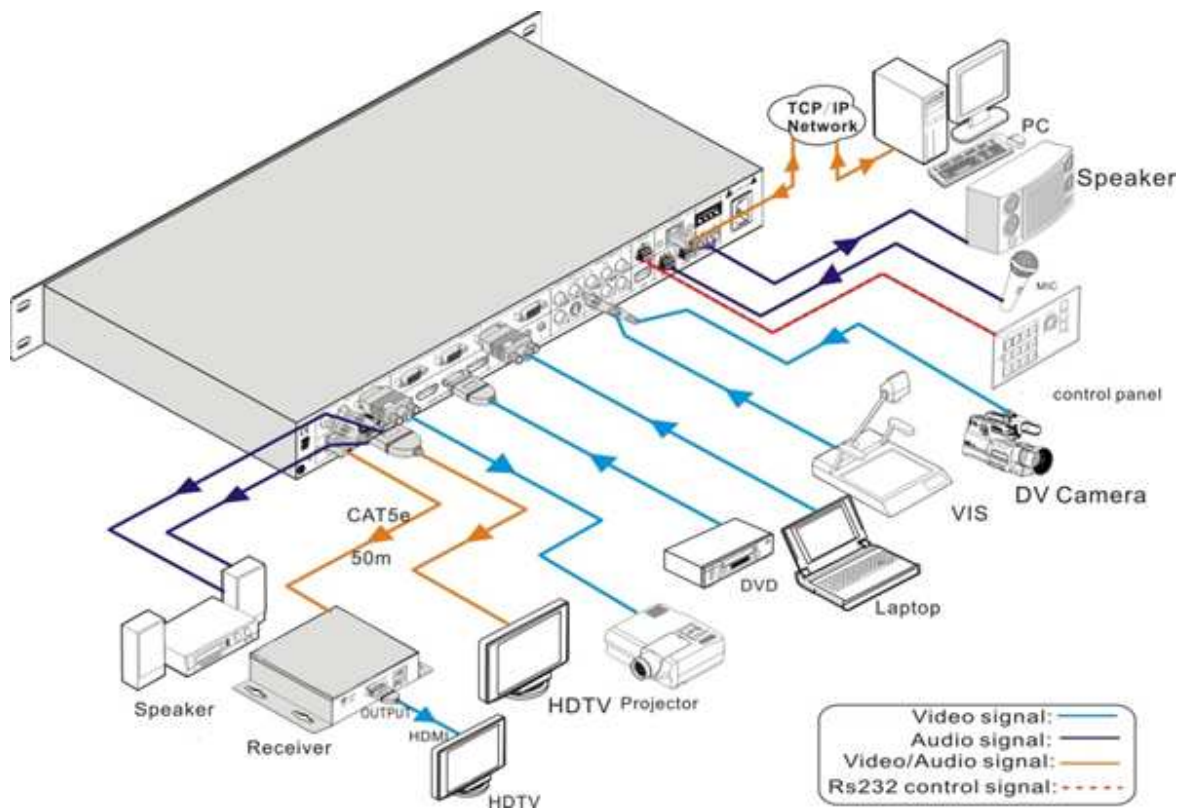
Note: The DXE-CAT-RX1 CAT Receiver unit is not included in –NC model. Also, only the HDMI output is active when in use with the ASP-S123V. The RS-232 and IR are not active. Total distance from ASP-S123V is 230ft (70m) using CAT 5e/6 shielded cable.



QUICK START

Hardware

- Unpack the ASP-S123V from its carton making certain everything is included.
- If rack mounted find suitable space and mount using standard rack screws.
- Connect all audio and video inputs and outputs accordingly.
- Connect power cord.
- System is ready to use.



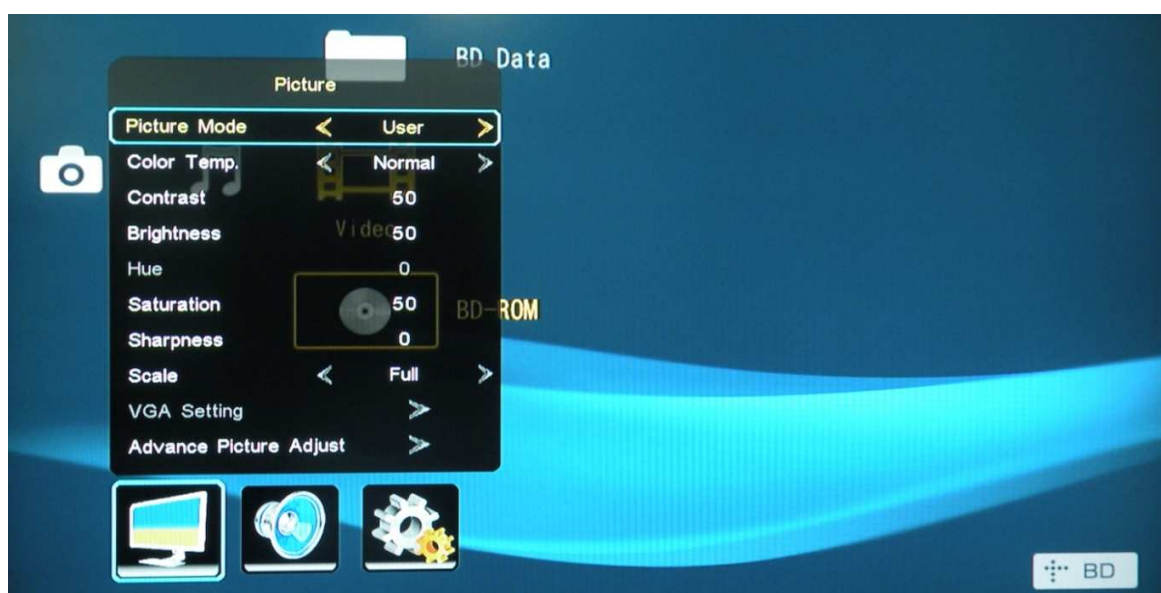
OSD OPERATION

Picture Settings

The first icon from left of OSD menu is to set the picture parameter. It includes the picture mode preset, color temperature, contrast, brightness, hue, saturation, sharpness, scale, VGA setting and Advance picture adjust.

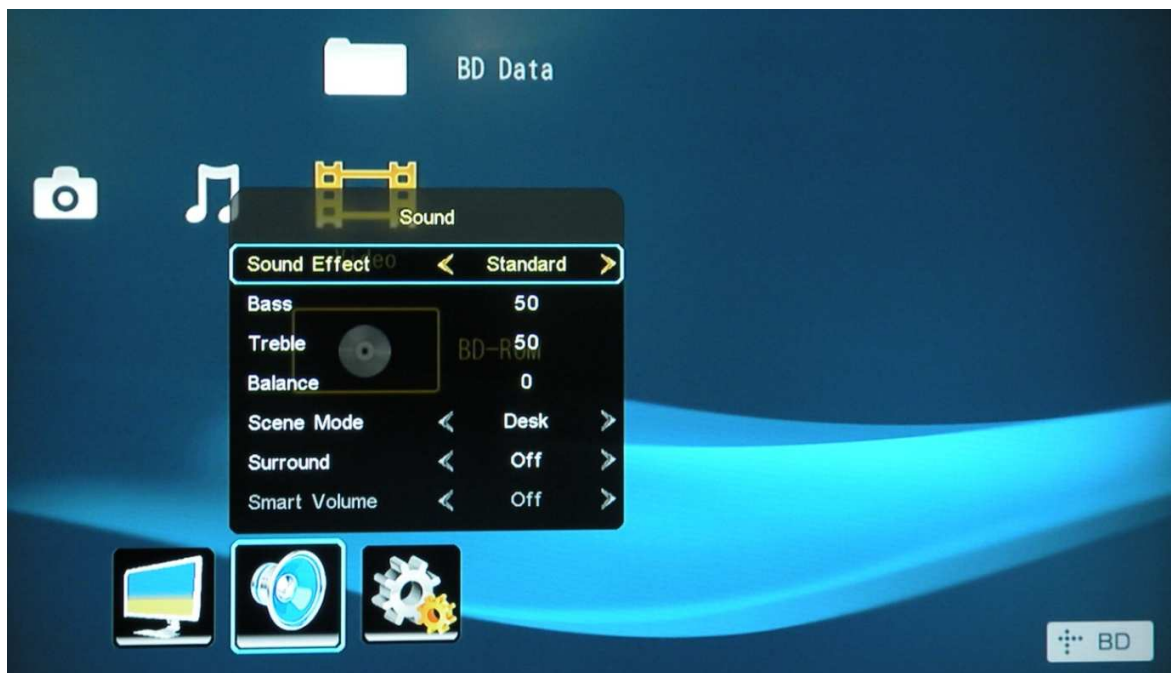
Some parameters are available specific to the input type. For example: VGA setting can be set only with VGA input.

The Advance Picture Adjust can set the Digital Noise Reduction (DNR), dynamic color, skin tone and Adaptive Luma adjustment function on or off. DNR is suggested to be on as it can make the output image clear and smooth.



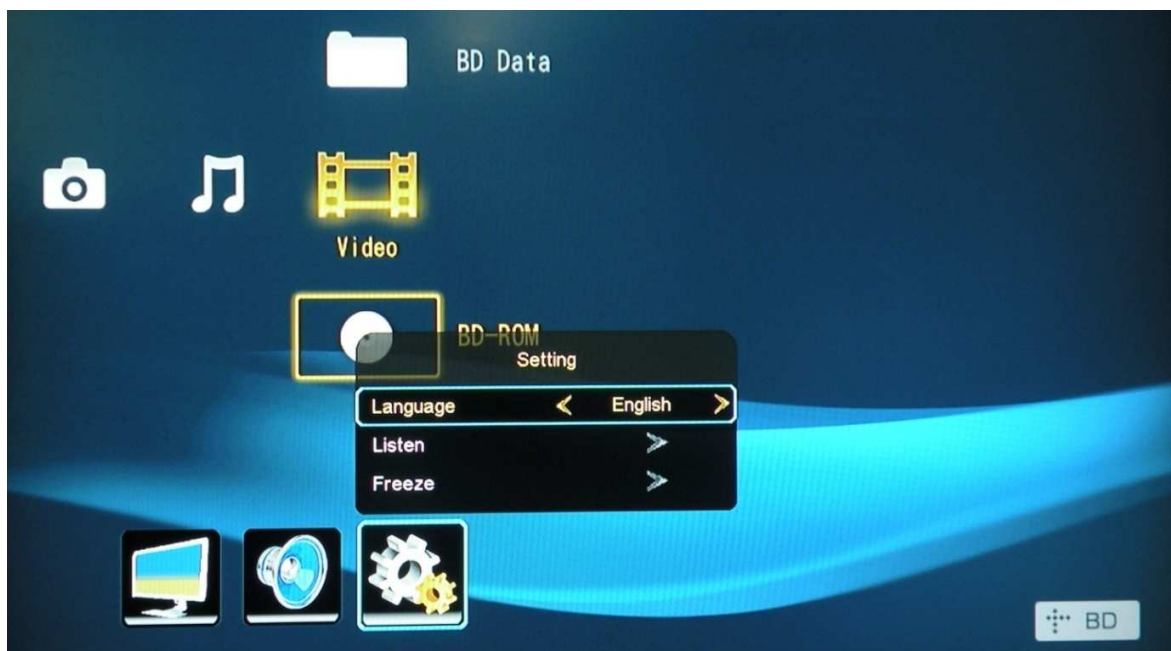
Audio Settings

The second icon from left of the OSD menu is to set the audio/sound parameter. It includes the sound effect presets, bass, treble, balance, scene mode, surround and smart volume setting. Some parameters are available depending on the selected input.

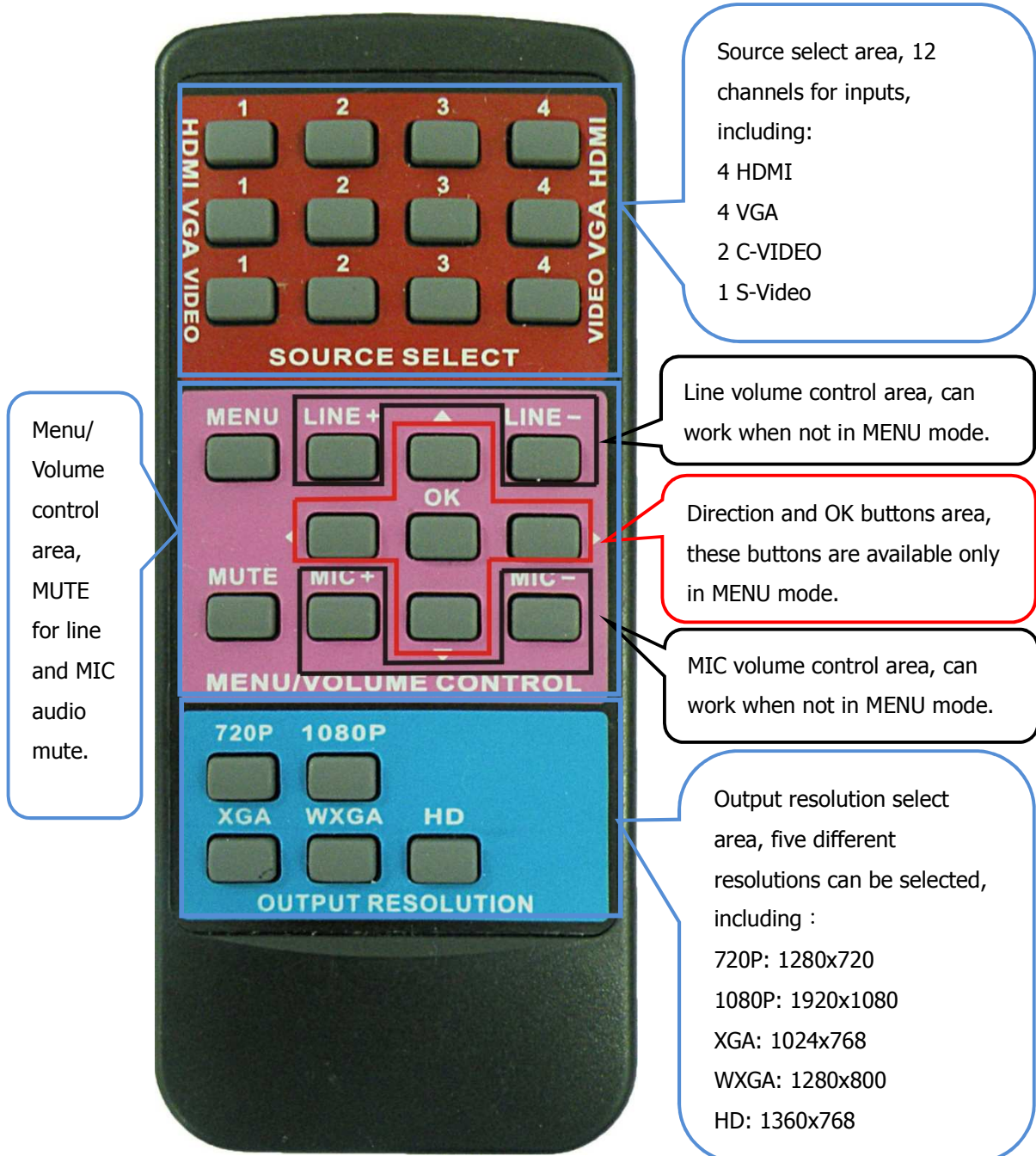


System Settings

The third icon from left of OSD menu is the system setting. It includes the OSD language setting, audio listen, and freeze.



IR REMOTE



FIRMWARE UPDATING

The ASP-S123V supports firmware field-updating, by USB flash disk. The Operation is as follows:

1. Copy the file to a USB flash disk.
2. Plug the USB flash disk to the USB port on ASP-S123V.
3. Pressing the button "HDMI" on the front panel for 6 seconds or send the RS232 command 0698% for update mode, then press the button "OK" on the remote or send RS232 command 0609% to confirm update. The ASP-S123V will load the new firmware from USB flash disk.
4. After updating finish, reboot and send the command "**0617%**" to reset to factory settings.
5. After reset, reboot again.

APPENDIX 1 Troubleshooting

Problem	Solution
1. Front Panel does not work.	a. Check that the power plug is properly inserted into a functioning power outlet.
2. RS-232 does not have control	a. Check baud rate settings for the port b. Try swapping RX and TX. c. Make certain protocol used is correct.
3. VGA has no output	a. If HDMI is selected and HDMI is HDCP protected the VGA will turn off by design for licensing reasons. b. Make certain output resolution is set correctly to match display. c. If OSD is present on screen then check to see if source selected has a signal.
4. Remote control does not operate.	a. Make sure batteries are inserted correctly. Or if the batteries are worn out, replace with new batteries. b. Use the remote control within a distance of about 20 feet line of site.
5. CAT Extender is Intermittent or does not operate	a. Make certain you are using shielded CAT cable and/or the distance is under 230ft.

APPENDIX 2 Communication Protocol

RS-232 Control

Communication protocol:

Baud rate: 9600

Data bit: 8

Stop bit: 1

Parity bit: none

Pinout: 2=Rx, 3=Tx, 5=Gnd

Command (ASCII)	Function Description	Feedback (example) (ASCII)
0600%	MUTE Line	LINE Mute On
0601%	UnMute Line	LINE Mute Off
0602%	Audio turn up	LINE Volume: XX
0603%	Audio turn down	LINE Volume: XX
0604%	Lock the front panel button	Panel Locked
0605%	Unlock the front panel button	Panel UnLocked
01XX%	Preset the volume. The XX is ranging from 00 to 99	Volume: XX
02XX%	Preset the brightness. The XX is ranging from 00 to 99	Brightness: XX
03XX%	Preset the contrast. The XX is ranging from 00 to 99	Contrast: XX
04XX%	Preset the saturation. The XX is ranging from 00 to 99	Saturation: XX
05XX%	Preset the sharpness. The XX is ranging from 00 to 07	Sharpness: XX
0606%	Auto-adjust the input parameter(VGA only)	Adjustment
0607%	Auto-adjust the color temperature	Color Temp: XX
0608%	ZOOM the image, set the aspect ratio	Aspect Ratio: XX
0609%	OK, for OSD selection	OK
0610%	Left of OSD	Left
0611%	Right of OSD	Right
0612%	Up of OSD	Up
0613%	Down of OSD	Down
0614%	set the picture mode	Picture Mode : XX
0615%	SM Mode	Sound Mode: XX
0616%	MENU of OSD	MENU
0617%	Command to reset to factory defaults	Factory reset
0618%	Change the resolution to 1360X768 HD	Resolution: HD 1360X768
0626%	Change the resolution to 1024X768 XGA	Resolution: XGA 1024X768
0627%	Change the resolution to 1280X720 720P	Resolution: 720P 1280X720
0628%	Change the resolution to 1280X800 WXGA	Resolution: WXGA 1280X800
0629%	Change the resolution to 1920X1080 1080P	Resolution: 1080P 1920X1080
0630%	Check the volume level	LINE Volume: XX/MIC Volume: XX
0631%	Check the input source	Source: XXXXXX
0632%	Check the output resolution	Resolution:

		XXXXXXXX
0633%	Check the image mode	Picture Mode : XX
0634%	Check the audio mode	Sound Mode: XX
0635%	Check the image aspect ratio	Aspect Ratio: XX
0636%	Check the brightness	Brightness: XX
0637%	Check the contrast	Contrast: XX
0638%	Check the saturation	Saturation: XX
0639%	Check the sharpness	Sharpness: XX
0640%	Check the color temperature	Color Temp: XX
0644%	OSD CHANNEL display able	OSD Source: Display
0645%	Shield OSD CHANNEL	OSD Channel (Source): No Display
0646%	Volume Bar display able	Volume Bar: Display
0647%	Volume Bar display unable	Volume Bar: No Display
0648%	Digital audio (HDMI and SPDIF) output enable	HDMI Audio: Enable
0649%	Shield digital audio (HDMI and SPDIF) output	HDMI Audio: Disable
0650%	Check OSD CHANNEL display status	OSD Source: Display
0651%	Check Volume Bar display status	Volume Bar: Display
0652%	Check Digital audio output status	HDMI Audio: Enable
0655%	Freeze output image	Freeze: Enable
0656%	Cancel the freezing of output image	Freeze: Disable
0698%	Firmware update	
0701%	Switching to HDMI1 input	Source: HDMI 1
0702%	Switching to HDMI2 input	Source: HDMI 2
0703%	Switching to HDMI3 input	Source: HDMI 3
0704%	Switching to HDMI4 input	Source: HDMI 4
0705%	Switching to VGA1 input	Source: VGA1
0706%	Switching to VGA2 input	Source: VGA2
0707%	Switching to VGA3 input	Source: VGA3
0708%	Switching to VGA4 input	Source: VGA4
0709%	Switching to composite video AV1 input	Source: CVIDEO1
0710%	Switching to YPbPr input	Source: YPbPr
0711%	Switching to S-Video input	Source: SVIDEO
0712%	Switching to composite video AV2 input	Source: CVIDEO2
0720%	Mute Line and MIC	LINE/MIC Mute On
0721%	UnMute Line and MIC	LINE/MIC Mute Off
0722%	MUTE MIC	MIC Mute On
0723%	UnMute MIC	MIC Mute Off
0724%	MIC volume turn up	MIC Volume: XX
0725%	MIC volume turn down	MIC Volume: XX
08XX%	Preset MIC volume. The XX is ranging from 00 to 99	MIC Volume: XX

APPENDIX 3 Technical Specifications

Video Input		Video Output	
Input	4 HDMI 4 VGA 1 YPbPr 2 C-Video 1 S-Video	Output	1 HDMI 1 VGA
Input Connector	HDMI female connector VGA(15 pin HD), female connector RCA female connector 4 pin mini DIN connector	Output Connector	HDMI female connector VGA(15 pin HD), female connector
Video Signal	HDMI RGBHV, RGBs, RGsB, RsBsGs, NTSC 3.58, NTSC 4.42, PAL, SECAM	Video Signal	HDMI VGA
Video General			
Resolution Range	1080P,1920*1080 ; HD, 1360*768 720P, 1280*720; WXGA,1280*800 ; XGA, 1024*768.	Bandwidth	HDMI: 4.95Gbps(1.65Gbps per color) C-Video/S-Video: 150MHz YPbPr: 170MHz VGA: 375MHz
Maximum Pixel Clock	145MHz	Video Impedance	75Ω
Gain	0dB	Input / Output Level	0.5V~2.0Vp-p
HDCP management	Compliant with High-bandwidth Digital Content Protection(HDCP) with DVI & HDMI standards		
Audio Input		Audio Output	
Input	6 Stereo Audio for line audio 2 MIC audio	Output	Stereo audio for line audio 2x10W@8Ω amplifier
Input Connector	4 RCA female connector for YPbPr, C-Video & S-Video audio 4 3.5mm jack for VGA audio HDMI for HDMI embedded audio	Output Connector	RCA connector Amplifier connector
Audio Input Impedance	>10kΩ	Audio Output Impedance	50Ω
Audio General			
Stereo Channel Separation	>80dB @1KHz	CMRR	>90dB @20Hz to 20K Hz
Frequency Response	20Hz~20K Hz		
Control Ports			
Control/Remote	IR remote, Buttons & RS-232, TCP/IP (Optional)	Pin Configurations	2 = TX, 3 = RX, 5 = GND
Power, Mechanical, Environmental			
Temperature	-20 ~ +70℃	Humidity	10% ~ 90%
Power Supply	100VAC ~ 240VAC, 50/60Hz	Power Consumption	65W

Case Dimension	W483 x H44x D235mm	Product Weight	3.2Kg
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Specifications subject to change without notice.

Composite & S-Video

Supports PAL/SECAM/NTSC formats.

Selectable aspect ratio. (Full-screen, wide screen, 4:3)

Color RGB adjustable

YPbPr Input

Input Resolution	Display Parameter				
	Frame frequency		Frame frequency		Frame frequency
720x480I	2:1	525	15.75	60	4:3
720x480P	1:1	525	31.5	60	4:3
720x576I	2:1	625	15.625	50	4:3
720x576P	1:1	625	31.25	50	4:3
1280x720P	1;1	750	45	60	16:9
1280x720P	1:1	750	37.50	50	16:9
1920x1080I	2:1	1125	28.125	50	16:9
1920x1080I	2:1	1125	33.75	60	16:9
1920x1080I	2:1	1250	31.25	50	16:9
1920x1080P	1:1	1250	62.5	50	16:9
1920x1080P	1:1	1250	67.5	50	16:9
The bandwidth is up to 170MHz.					

Selectable aspect ratio. (Full-screen, wide screen, 4:3, auto-adjust)

VGA Input

The VGA resolution is VESA standard, supporting:

No.	Resolution	No.	Resolution
1	720×400@70 Hz	8	1024×768@70 Hz
2	640×480@60 Hz	9	1024×768@75 Hz
3	640×480@72 Hz	10	1280×768
4	800×600@60 Hz	11	1280×1024@75 Hz
5	800×600@72 Hz	12	1360×768@60Hz
6	800×600@75 Hz	13	1920×1080
7	1024×768@60 Hz		

The bandwidth is up to 375MHz.

Selectable aspect ratio. (Full-screen, 4:3)

HDMI Input

HDMI resolution support:

No.	Resolution	No.	Resolution
1	640×480@60 Hz	9	1024×768@70 Hz
2	640×480@72 Hz	10	1024×768@75 Hz
3	640×480@75 Hz	11	1280×1024@75 Hz
4	800×600@56 Hz	12	1280×720P
5	800×600@60 Hz	13	1360×768
6	800×600@72 Hz	14	1920×540
7	800×600@75 Hz	15	1920×1080I
8	1024×768@60 Hz	16	1920×1080P

Digital embedded audio decoding.

Selectable aspect ratio. (Full-screen, wide screen, 4:3, auto-adjust)

Supports HDCP1.3 and is compatible with DVI signal.

APPENDIX 4 Warranty

Limited 3 Year Warranty

Aurora Multimedia Corp. ("Manufacturer") warrants that this product is free of defects in both materials and workmanship for a period of 3 years as defined herein for parts and labor from date of purchase. This Limited Warranty covers products purchased in the year of 2009 and after. Motorized mechanical parts (Hard Drives, DVD, etc), mechanical parts (buttons, doors, etc), remotes and cables are covered for a period of 1 year. Touch screen displays are covered for 1 year; touch screen overlay components are covered for 90 days. Supplied batteries are not covered by this warranty. During the warranty period, and upon proof of purchase, the product will be repaired or replaced (with same or similar model) at our option without charge for parts or labor for the specified product lifetime warranty period.

This warranty shall not apply if any of the following:

- A. The product has been damaged by negligence, accident, lightning, water, act-of-God or mishandling; or,
- B. The product has not been operated in accordance with procedures specified in operating instructions: or,
- C. The product has been repaired and or altered by other than manufacturer or authorized service center; or,
- D. The product's original serial number has been modified or removed: or,
- E. External equipment other than supplied by manufacturer, in determination of manufacturer, shall have affected the performance, safety or reliability of the product.
- F. Part(s) are no longer available for product.

In the event that the product needs repair or replacement during the specified warranty period, product should be shipped back to Manufacturer at Purchaser's expense. Repaired or replaced product shall be returned to Purchaser by standard shipping methods at Manufacturer's discretion. Express shipping will be at the expense of the Purchaser. If Purchaser resides outside the contiguous US, return shipping shall be at Purchaser's expense.

No other warranty, express or implied other than Manufacturer's shall apply.

Manufacturer does not assume any responsibility for consequential damages, expenses or loss of revenue or property, inconvenience or interruption in operation experienced by the customer due to a malfunction of the purchased equipment. No warranty service performed on any product shall extend the applicable warranty period. This warranty does not cover damage to the equipment during shipping and Manufacturer assumes no responsibility for such damage.

This product warranty extends to the original purchaser only and will be null and void upon any assignment or transfer.

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