

USER MANUAL

MODEL:

VS-211H2

Automatic HDMI Standby Switcher



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Introduction

Welcome to Kramer Electronics! Since 1981, Kramer Electronics has been providing a world of unique, creative, and affordable solutions to the vast range of problems that confront the video, audio, presentation, and broadcasting professional on a daily basis. In recent years, we have redesigned and upgraded most of our line, making the best even better!

Getting Started

We recommend that you:

- Unpack the equipment carefully and save the original box and packaging materials for possible future shipment.
- Review the contents of this user manual.



Go to www.kramerav.com/downloads/VS-211H2 to check for up-to-date user manuals, application programs, and to check if firmware upgrades are available (where appropriate).

Achieving Best Performance

- Use only good quality connection cables (we recommend Kramer high-performance, high-resolution cables) to avoid interference, deterioration in signal quality due to poor matching, and elevated noise levels (often associated with low quality cables).
- Do not secure the cables in tight bundles or roll the slack into tight coils.
- Avoid interference from neighboring electrical appliances that may adversely influence signal quality.
- Position your Kramer **VS-211H2** away from moisture, excessive sunlight and dust.



This equipment is to be used only inside a building. It may only be connected to other equipment that is installed inside a building.

Safety Instructions



Caution: There are no operator serviceable parts inside the unit.

Warning: Use only the Kramer Electronics power supply that is provided with the unit.

Warning: Disconnect the power and unplug the unit from the wall before installing.

Recycling Kramer Products

The Waste Electrical and Electronic Equipment (WEEE) Directive 2002/96/EC aims to reduce the amount of WEEE sent for disposal to landfill or incineration by requiring it to be collected and recycled. To comply with the WEEE Directive, Kramer Electronics has made arrangements with the European Advanced Recycling Network (EARN) and will cover any costs of treatment, recycling and recovery of waste Kramer Electronics branded equipment on arrival at the EARN facility. For details of Kramer's recycling arrangements in your particular country go to our recycling pages at www.kramerav.com/support/recycling.

Overview

Congratulations on purchasing your Kramer **VS-211H2 Automatic HDMI Standby Switcher**. This product, which incorporates HDMI™ technology, is ideal for Presentation systems in conference rooms, boardrooms, auditoriums, hotels and churches, production studios, rental and staging.

The **VS-211H2** is a high-performance automatic switcher for HDMI video signals. Offering priority and last-connected switching options, it automatically switches according to the selected switching scheme based on active video signal detection.

VS-211H2 features:

- Maximum data rate of 17.82Gbps (5.94Gbps per data channel).
- Maximum resolution 4K@60 UHD (4:4:4).
- HDTV compatible.
- HDR10 and HDCP 2.2 (does not support conversion to HDCP 1.4) compliant.
- 3D pass-through.
- Supports deep color, x.v.Color™, Lip Sync, up to 7.1 Uncompressed Audio Channels, CEC as specified in HDMI 2.0.
- Advanced auto switching based on video clock detection.
- Contact closure for remote manual switching that overrides auto switching.
- HDMI power on the output follows the input, (that is, there is no power on the output when there is no active input).
- EDID pass thru that passes EDID signals from display to source.
- DIP-switches for setting the switching mode.
- Compact DigiTOOLS® enclosure where 3 units can be rack mounted side-by-side in a 1U rack space with the optional adapter (see www.kramerav.com/product/VS-211H2).

Defining VS-211H2 Automatic HDMI Standby Switcher

This section defines VS-211H2.

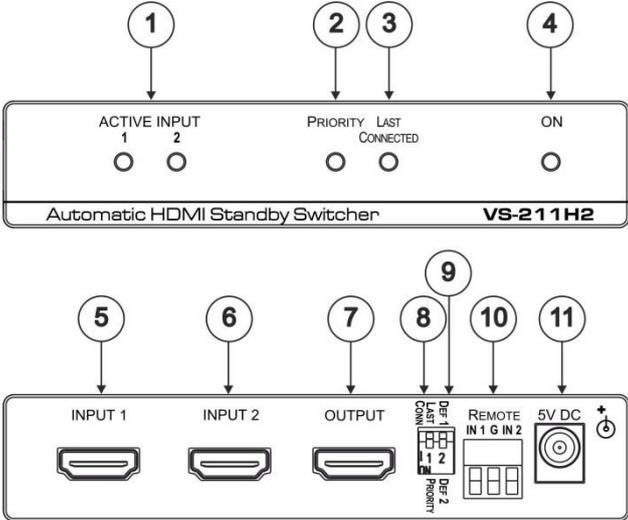


Figure 1: VS-211H2 Automatic HDMI Standby Switcher

#	Feature	Function
1	ACTIVE INPUT LEDs (1 & 2)	Each LED lights when each input is active, both LEDs flash when no input is active.
2	PRIORITY LED	Lights when DIP-switch 1 is set to PRIORITY.
3	LAST CONNECTED LED	Lights when DIP-switch 1 is set to LAST CONN.
4	ON LED	Light when power is supplied to the unit.
5	INPUT 1 Connector	Connects to HDMI source 1.
6	INPUT 2 Connector	Connects to HDMI source 2.
7	OUTPUT Connector	Connects to the HDMI acceptor.
8	LAST CONN/PRIORITY DIP- Switch 1	Set DIP 1 up (OFF) to select the Last Connected input. Set DIP 1 down (ON) to select the Priority input determined by DIP-switch 2.
9	DEF 1/DEF 2 DIP-switch 2	Set DIP 2 up (OFF) to make input 1 the default input. Set DIP 2 down (ON) to make input 2 the default input.
10	REMOTE Terminal Block	Connects to optional contact closure switches 1 & 2 for manual switching.
11	5V DC Connector	Connects to the 5V DC power supply to power the unit.

Connecting VS-211H2



Always switch off the power to each device before connecting it to your VS-211H2. After connecting your VS-211H2, connect its power and then switch on the power to each device.

To connect VS-211H2, as illustrated in the example in [Figure 2](#), do the following:

1. Connect the INPUT 1 connector to HDMI source 1 (for example, a Blu-ray player).
2. Connect the INPUT 2 connector to HDMI source 2 (for example, a laptop computer graphics source 4K@60 UHD).
3. Connect the OUTPUT connector to an HDMI acceptor (for example, a 4K@60 UHD projector).
4. If manual switching is needed, connect contact closure (pushbutton) switches to the REMOTE terminal block see [Connecting REMOTE Terminal Block Connector](#) on page 6.

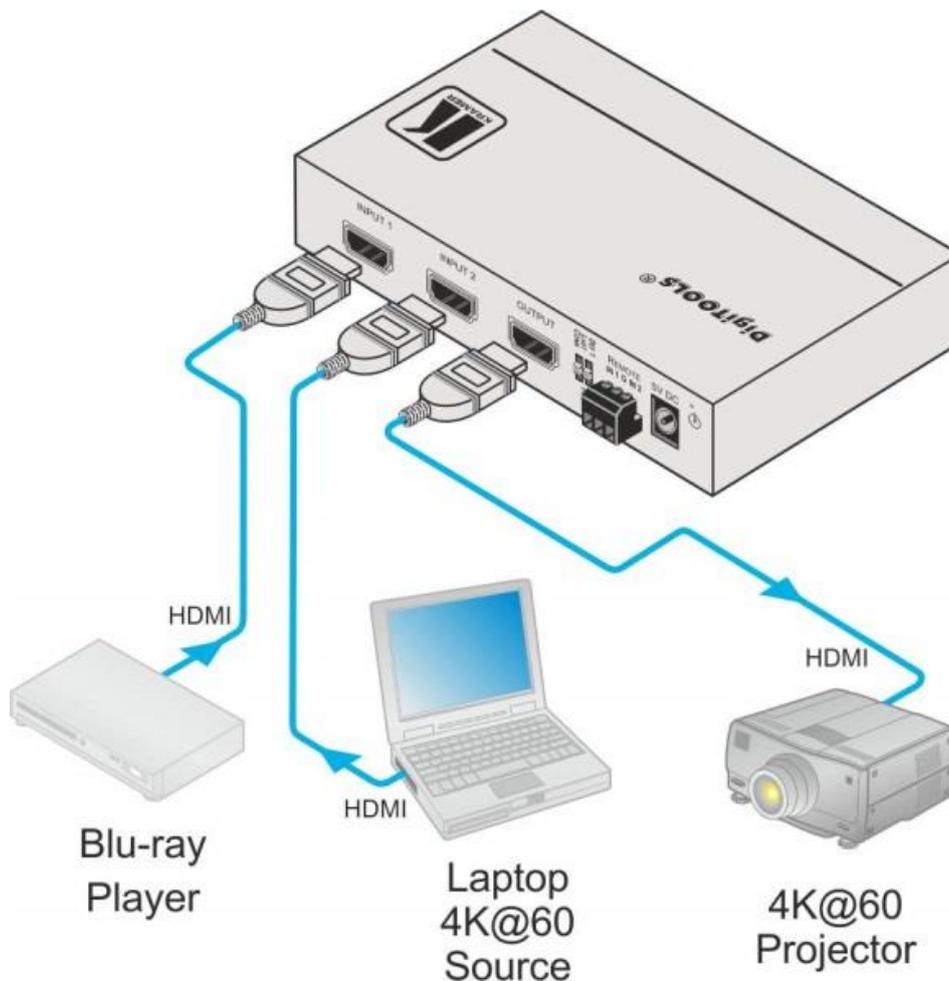


Figure 2: Connecting the VS-211H2 Automatic HDMI Standby Switcher

Connecting REMOTE Terminal Block Connector

Regardless of the default input switch setting, you can force the switching of the active input by remote control. To do this, connect the appropriate REMOTE input terminal block connector pins to a momentary contact closure switches (pushbuttons) (see [Figure 3](#)).

- To force input source 1: momentarily connect REMOTE IN1 to PIN G (ground).
- To force input source 2: momentarily connect REMOTE IN2 to PIN G (ground).



Do not connect both the REMOTE IN1 and the REMOTE IN2 to PIN G simultaneously.

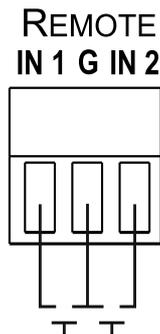


Figure 3: REMOTE Terminal Block Connector



The contact closure setting remains in effect until the selected source device is disconnected or VS-211H2 is powered off. All automatic switching is overridden.

Setting VS-211H2 DIP-Switches and Operation

When active input sources are connected to IN 1 and IN 2, **VS-211H2** switches in accordance with the DIP-switch settings on the rear of the unit.

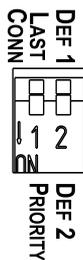


Figure 4: DIP Switches

The settings and switching behavior can be set in any of the following ways:

Priority Setting: DIP 1 is Set to ON (Down)

In this switching mode, if a source is present on the “priority input”, then this source is switched to the output.

DIP 2 defines the priority input:

- When set to OFF (up), INPUT 1 is the priority input.
- When set to ON (down), INPUT 2 is the priority input.



Reactivating or reconnecting the non-priority input has no effect on switching.

Last Connected Setting: DIP 1 is Set to OFF (Up)

In this switching mode, whenever a source is connected to an input which, until then, did not have a valid source connected to it, that input is switched to the output. (The reactivating or reconnecting of any source makes it the new “Last Connected” source).

DIP 2 has no effect in this switching mode.

Manual Override: Using REMOTE switches

Controlling via the remote contact closure pushbuttons (see [Figure 3](#)) overrides all DIP-switch settings and automatic switching until the manually selected source disconnects, becomes inactive or VS-211H2 is powered off.

Technical Specifications

Inputs	2 HDMI	On a female HDMI connector
Outputs	1 HDMI	On a female HDMI connector
Ports	2 Contact-Closure Switches	On a 3-pin terminal block connector for remote device operation
Video	Max. Data Rate	17.82GBPS (5.94Gbps per graphic channel)
	Max Resolution	4K@60 UHD (4:4:4)
	Compliance	HDR10, HDCP 2.2 (does not support conversion to HDCP 1.4)
	HDMI Support	Deep color, x.v.Color™, Lip Sync, up to 7.1 Uncompressed Audio Channels, CEC as specified in HDMI 2.0.
Controls	DIP-switches	Status/priority DIP-switches, contact closure remote control
Power	Consumption	5V DC, 560mA
	Source	5.2V DC/4A desktop
Environmental Conditions	Operating Temperature	0° to +40°C (32° to 104°F)
	Storage Temperature	-40° to +70°C (-40° to 158°F)
	Humidity	10% to 90%, RHL non-condensing
Regulatory Compliance	Safety	CE; FCC; UL
	Environmental	RoHs, WEEE
Enclosure	Size	DigiTools®
	Type	Aluminum
	Cooling	Convection ventilation
General	Net Dimensions (W, D, H)	12cm x 7.2cm x 2.4cm (4.7" x 2.8" x 1.0") W, D, H
	Shipping Dimensions (W, D, H)	23.2cm x 12cm x 8.9cm (9.1" x 4.7" x 3.5") W, D, H
	Net Weight	0.2kg (0.4lbs) approx.
	Shipping Weight	0.6kg (1.3lbs) approx.
Accessories	Included	Power adapter cord
Specifications are subject to change without notice at www.kramerav.com		

The terms HDMI, HDMI High-Definition Multimedia Interface, and the HDMI Logo are trademarks or registered trademarks of HDMI Licensing Administrator, Inc.

The warranty obligations of Kramer Electronics Inc. ("Kramer Electronics") for this product are limited to the terms set forth below:

What is Covered

This limited warranty covers defects in materials and workmanship in this product.

What is Not Covered

This limited warranty does not cover any damage, deterioration or malfunction resulting from any alteration, modification, improper or unreasonable use or maintenance, misuse, abuse, accident, neglect, exposure to excess moisture, fire, improper packing and shipping (such claims must be presented to the carrier), lightning, power surges, or other acts of nature. This limited warranty does not cover any damage, deterioration or malfunction resulting from the installation or removal of this product from any installation, any unauthorized tampering with this product, any repairs attempted by anyone unauthorized by Kramer Electronics to make such repairs, or any other cause which does not relate directly to a defect in materials and/or workmanship of this product. This limited warranty does not cover cartons, equipment enclosures, cables or accessories used in conjunction with this product. Without limiting any other exclusion herein, Kramer Electronics does not warrant that the product covered hereby, including, without limitation, the technology and/or integrated circuit(s) included in the product, will not become obsolete or that such items are or will remain compatible with any other product or technology with which the product may be used.

How Long this Coverage Lasts

The standard limited warranty for Kramer products is seven (7) years from the date of original purchase, with the following exceptions:

1. All Kramer VIA hardware products are covered by a standard three (3) year warranty for the VIA hardware and a standard three (3) year warranty for firmware and software updates; all Kramer VIA accessories, adapters, tags, and dongles are covered by a standard one (1) year warranty.
2. Kramer fiber optic cables, adapter-size fiber optic extenders, pluggable optical modules, active cables, cable retractors, ring mounted adapters, portable power chargers, Kramer speakers, and Kramer touch panels are all covered by a standard one (1) year warranty.
3. All Kramer Cobra products, all Kramer Calibre products, all Kramer Minicom digital signage products, all HighSecLabs products, all streaming, and all wireless products are covered by a standard three (3) year warranty.
4. All Sierra Video MultiViewers are covered by a standard five (5) year warranty.
5. Sierra switchers & control panels are covered by a standard seven (7) year warranty (excluding power supplies and fans that are covered for three (3) years).
6. K-Touch software is covered by a standard one (1) year warranty for software updates.
7. All Kramer passive cables are covered by a ten (10) year warranty.

Who is Covered

Only the original purchaser of this product is covered under this limited warranty. This limited warranty is not transferable to subsequent purchasers or owners of this product.

What Kramer Electronics Will Do

Kramer Electronics will, at its sole option, provide one of the following three remedies to whatever extent it shall deem necessary to satisfy a proper claim under this limited warranty:

1. Elect to repair or facilitate the repair of any defective parts within a reasonable period of time, free of any charge for the necessary parts and labor to complete the repair and restore this product to its proper operating condition. Kramer Electronics will also pay the shipping costs necessary to return this product once the repair is complete.
2. Replace this product with a direct replacement or with a similar product deemed by Kramer Electronics to perform substantially the same function as the original product. If a direct or similar replacement product is supplied, the original product's end warranty date remains unchanged and is transferred to the replacement product.
3. Issue a refund of the original purchase price less depreciation to be determined based on the age of the product at the time remedy is sought under this limited warranty.

What Kramer Electronics Will Not Do Under This Limited Warranty

If this product is returned to Kramer Electronics or the authorized dealer from which it was purchased or any other party authorized to repair Kramer Electronics products, this product must be insured during shipment, with the insurance and shipping charges prepaid by you. If this product is returned uninsured, you assume all risks of loss or damage during shipment. Kramer Electronics will not be responsible for any costs related to the removal or re-installation of this product from or into any installation. Kramer Electronics will not be responsible for any costs related to any setting up this product, any adjustment of user controls or any programming required for a specific installation of this product.

How to Obtain a Remedy Under This Limited Warranty

To obtain a remedy under this limited warranty, you must contact either the authorized Kramer Electronics reseller from whom you purchased this product or the Kramer Electronics office nearest you. For a list of authorized Kramer Electronics resellers and/or Kramer Electronics authorized service providers, visit our web site at www.kramerav.com or contact the Kramer Electronics office nearest you.

In order to pursue any remedy under this limited warranty, you must possess an original, dated receipt as proof of purchase from an authorized Kramer Electronics reseller. If this product is returned under this limited warranty, a return authorization number, obtained from Kramer Electronics, will be required (RMA number). You may also be directed to an authorized reseller or a person authorized by Kramer Electronics to repair the product.

If it is decided that this product should be returned directly to Kramer Electronics, this product should be properly packed, preferably in the original carton, for shipping. Cartons not bearing a return authorization number will be refused.

Limitation of Liability

THE MAXIMUM LIABILITY OF KRAMER ELECTRONICS UNDER THIS LIMITED WARRANTY SHALL NOT EXCEED THE ACTUAL PURCHASE PRICE PAID FOR THE PRODUCT. TO THE MAXIMUM EXTENT PERMITTED BY LAW, KRAMER ELECTRONICS IS NOT RESPONSIBLE FOR DIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM ANY BREACH OF WARRANTY OR CONDITION, OR UNDER ANY OTHER LEGAL THEORY. Some countries, districts or states do not allow the exclusion or limitation of relief, special, incidental, consequential or indirect damages, or the limitation of liability to specified amounts, so the above limitations or exclusions may not apply to you.

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Other Conditions

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This limited warranty is void if (i) the label bearing the serial number of this product has been removed or defaced, (ii) the product is not distributed by Kramer Electronics or (iii) this product is not purchased from an authorized Kramer Electronics reseller. If you are unsure whether a reseller is an authorized Kramer Electronics reseller, visit our web site at www.kramerav.com or contact a Kramer Electronics office from the list at the end of this document.

Your rights under this limited warranty are not diminished if you do not complete and return the product registration form or complete and submit the online product registration form. Kramer Electronics thanks you for purchasing a Kramer Electronics product. We hope it will give you years of satisfaction.



P/N: 2900-300581



Rev: 4



SAFETY WARNING

Disconnect the unit from the power supply before opening and servicing

For the latest information on our products and a list of Kramer distributors, visit our Web site where updates to this user manual may be found.

We welcome your questions, comments, and feedback.