OPTICIS

SPIDER ™

3:1 HDMI Selector (OHS31)

User's Manual

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Description, General Specification

The HDMI Selector, model named as OHS31, allows Four (3) digital videos and digital audio sources to share one video display, and can be duplicated on the other HDTV display, which means to support two (2) HDTV connections. HDMI ports transmit digital TMDS video signals with encrypted audio.
For easy switching of digital video and digital audio sources, it offers remote control unit, or a manual switching button place on the unit itself.
The product is perfect for home theater systems. There are no more hassles of manually plugging in different HDMI connectors to view different video sources (e.g., DVD, Satellite receiver, computer, TiVo).

ITEM	DESCRIPTION
Model Name	OHS31
Input Signal	HDMI (TMDS) Single Link , 3 Ports
Output Signal	Digital A/V: HDMI (TMDS) Single Link, 1 Ports
Resolution	VGA / SVGA / XGA /UXGA /WUXGA for PC 480i/p, 576i , 720p , 1080i/p for HDTV
HDMI	HDMI 1.3 Ver
HDCP Support	Fully compliant (ver 1.1)
Dimension / Weight	200x123x40 mm / 1.1Kg
ROHS	ROHS adapted
Power Consumption	DC +5V , 3.4W Max

Environmental and Reliability Specifications

1 Operating Conditions
   Temperature : 0℃ ~ 50℃
   Humidity   : 10% ~ 80%, non-condensing
   Altitude   : maximum 3,000m

2 Transportation Conditions
   Temperature   : -25℃ ~ 60℃
   Humidity   : 5% ~ 95%, non-condensing
   Altitude   : maximum 15,000m

3 Storage Conditions
   Temperature   : -20℃ ~ 45℃
   Humidity   : 5% ~ 95%, non-condensing
   Altitude   : maximum 3,000m

4 Reliability Specifications
   MTBF: more than 50,000 hours at 90% confidence level
   Reliability specification and items: refer to "Specification of reliability
   test for LCD monitor"

Main Features

Switches easily between any three HDMI sources.

HDMI 1.3, HDCP 1.1 and DVI 1.0 compliant and adopt ROHS

High Quality Picture - No Signal Loss and Digital Noise Free
The product is built to deliver the highest quality picture preserving the native resolutions of the video sources without any signal loss. At the same time, the digital noises that may affect the picture quality will be eliminated. Due to the nature of the digital signals and passing through multiple stages of connection when using Selectors, it is important to eliminate the digital noises and boost the signal strength to preserve/enhance the video signal quality.

Signal Amplification for signal reliability and long length signal transmission. The 5V power adapter supplies adequate power to amplify the video signals from different video sources. This is necessary as the overall length from the video source to the displays is longer when using the selectors (distance from the video source to the selector + distance from the selector to the display). In most cases, the overall distance that the HDMI signal will need to travel is over 10ft. Due to the nature of HDMI signals, amplification is necessary to warrant the video quality and reliability. (Without amplification, there may be occasional blackouts or blinking effects)

Compact and Practical Design
The product has all of the HDMI ports, power supply jack in the back of the unit allowing it be mounted on any racks or with any other components.

Remote Control Unit with Discreet Channel selections
Remote Control Units with discreet channel selection feature is included. The channel buttons on the remote control unit will allow you to change video sources easily and quickly.

Video Connection

1. Connect your video source's HDMI output port to the HDMI Selector's HDMI input port using standard HDMI cables (not included). Make sure all your HDMI sources and the display is turned off before connecting the cables)

2. Connect your HDMI display's HDMI input port to HDMI Selector's HDMI output port. Make sure your HDMI display is turned off before connecting the cables)

3. Plug the 5V power supply into the Selector's power input port.

4. Plug the 5V wall mount power supply into the wall outlet.

5. Turn on your display.

6. Turn on your video sources.

7. Use your remote control unit to switch channels. Or use the select button on the front panel of the switch to change channels.

Technical Note: For further extension, you might use optical HDMI cables or modules instead of copper cables. You could apply Opticis Co., Ltd Optical HDMI/DVI Extension Cables or Modules.

1-5 Video Connection

Mechanical Specification

Dimensions

H x D x H / Weight	200mmx123mmx40mm /1.1kg
POWER	DC POWER 5V Input
HDMI IN CH1~3	HDMI Input Signals
HDMI OUT	HDMI Output Signals
LED CH1~3	Selected Channel Indication

1-6 Mechanical Specification

Technical Specification

Frequency bandwidth: 2.25 Gbps (Single Link)
Supporting Graphic Resolution: WUXGA (1920 X 1200 at up to 60Hz)
                                1080p (1920 X 1080 at up to 60Hz)
Inputs: HDMI Female (3 ports)
Output: HDMI Female (1 port)
Power supply: DC 5V, 2A Adapter included.
Infrared Remote Control Included
HDCP (High-bandwidth Digital Content Protection) Compliant.

Connector Pin Assignment

HDMI Input, Output

Part No.	Pin No.	Description	Remarks
HDMI 19pin	1	TMDS DATA 2P	
	2	TMDS DATA 2 Shield	
	3	TMDS DATA 2M	
	4	TMDS DATA 1P	
	5	TMDS DATA 1 Shield	
	6	TMDS DATA 1M	
	7	TMDS DATA 0P	
	8	TMDS DATA 0 Shield	
	9	TMDS DATA 0M	
	10	TMDS Clock P	
	11	TMDS Clock Shield	
	12	TMDS Clock M	
	13	CEC	
	14	RESERVED	
	15	DDC Clock	
	16	DDC DATA	
	17	GND	
	18	+5v	
	19	Hot Plug Detect	

Warranty Information

1 (One) Year Warranty

Opticis Co., Ltd warrants this OHS31 HDMI Selector to be free from defects in workmanship and materials, under normal use and service, for a period of one (1) year from the date of purchase from Opticis Co., Ltd or its authorized sellers.

If a product does not work as warranted during the applicable warranty period, Opticis Co., Ltd shall, at its option and expense, repair the defective product or part, deliver to customer an equivalent product or part to replace the defective item, or refund to customer the purchase price paid for the defective product.

All products that are replaced will become the property of Opticis Co., Ltd.

Replacement products may be new or reconditioned.

Any replaced or repaired product or part has a ninety (90) day warranty or the reminder of the initial warranty period, whichever is longer.

Opticis Co., Ltd shall not be responsible for any software, firmware, information, or memory data of customer contained in, stored on, or integrated with any products returned to Opticis Co., Ltd for repair under warranty or not.

Warranty Limitation and Exclusion

Opticis Co., Ltd shall have no further obligation under the foregoing limited warranty if the product has been damaged due to abuse, misuse, neglect, accident, unusual physical or electrical stress, unauthorized modifications, tampering, alterations, or service other than by Opticis Co., Ltd or its authorized agents, causes other than from ordinary use or failure to properly use the product in the application for which said product is intended.

Troubleshooting

Problem	Remedy actions
Selector will not operate	Make sure the 5V power is plugged in the back of the unit. Check to see if the power LED light is on.
No picture (or signal) or Poor picture	1. In case your video source is HDCP enabled, make sure your video display (HDTV) is HDCP compliant. 2. If you are using copper based HDMI cable, overall length of the cables (length of the cables from video source to switch and length of the cable from switch to display) should not exceed 20ft. Exceeding 20ft. with copper based cables will result in no or poor picture quality. To extend beyond 20ft, please use fiber optical HDMI extension cables such as Opticis OC cables. 3. Uses high quality HDMI cables. 4. If you are using computers, try other refresh rate settings. Most HDTVs have refresh rate of 48Hz and computer's video cards are usually set at higher refresh rate. Try lower refresh rates. 5. Makes sure all HDMI connectors are tightly secured to all HDMI ports. Loose screws on the HDMI connectors will results in no or poor picture. 6. Turns off all equipments (video source, switch and HDTV) and restart all equipments.
Remote control unit will not operate	Makes sure the included batteries are correctly installed. Makes sure the 5V power is plugged in the back of the unit. Checks to see if the power LED light is on. Tries rebooting the Selector by unplugging and re-plugging in the AC plug of the 5V power adapter.
Programming Universal Remote Control	Our remote control units use unique codes. To program your own universal remote control, make sure to use "Learn" feature of your universal remote control unit's user manual.

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For technical support, check with the with the Opticis web site www.opticis.com or contact techsupport@opticis.com