



## SPIDER™

1: 5 HDMI Distribution Amplifier (OHD15)



## *User's Manual*

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## Unpacking

Each **SPIDER™** HDMI Distributor package includes the following items;

**OHD15 SPIDER™ HDMI Distribution Amplifier Unit**  
**One (1) 5V, 2A Power Supply Adapter**  
**User manual**

## Troubleshooting

<b>Problem</b>	<b>Remedy Actions</b>
Distribution Amplifier not operating	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	<ol style="list-style-type: none"><li>1. If you are using copper based HDMI cable, overall length of the cables (length of the cable 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 HDM/DVI extension cables such as Opticis Models, M1-1000, M1-2000, and M1-1P0 cables.</li><li>2. Use high quality HDMI cables.</li><li>3. 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.</li><li>4. Make sure all HDMI connectors are tightly secured to all HDMI ports. Loose plugging on the HDMI connectors will result in no or poor picture.</li><li>5. Turn off all equipments (video source, switch and HDTV) and restart all equipments.</li></ol>
Incorrectly sized picture / resolution or No picture	Reset the product by power off and on so that it retries DDC and HDCP communication.

## Warranty Information

### 1 (One) Year Warranty

Opticis warrants **SPIDER™** OHD15, HDMI Distribution Amplifiers 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 or its authorized resellers.

If a product does not work as warranted during the applicable warranty period, Opticis 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.

Replacement products may be new or reconditioned.

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

Opticis 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 for repair under warranty or not.

### Warranty Limitation and Exclusion

Opticis 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 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.

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## Description, General Specification

. **SPIDER™** OHD15, HDMI Distribution Amplifier, allows one (1) digital video source to be spilt into Five (5) digital displays. The built-in amplification function enables HDMI signal distribution without signal loss. The product guarantees to support full channels HDMI/HDCP compliance, which means NEVER displaying HDCP certified sources in not-HDCP certified TVs.

ITEM	DESCRIPTION
Model Name	OHD15
Input Signal	HDMI Single Link
Output Signal	HDMI Single Link , 5ports
HDMI Compliance	HDMI 1.2 specification
Resolution	VGA / SVGA / XGA /SXGA /WSXGA for PC 480i/p , 720i/p , 1080i/p for HDTV
Receptacle	DC Power Jack for +5V power in the rear panel
Power Consumption	DC +5V , 6.5W Max
Dimension	435 X 108 X 34 mm

## Technical Specification

Frequency bandwidth: 1.65 Gbps (Single Link)  
Supporting Graphic Resolution: SXGA (1280 X 1024 at up to 60Hz)  
1080i/p (1920 X 1080 at up to 60Hz)

Inputs: HDMI-D Female ports

Output: HDMI-D Female port.

Power supply: one (1) DC 5V, 2A or 3A power adapter included.

### Connector Pin Assignment

HDMI-D 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	

## Mechanical Specification

[Dimensions]



OHD15: 435 X 108 X 34 mm

**POWER: Toggle DC +5V Input on/off**

**DC power jack: inner pole; +5V, outer tube; GND**

**HDMI IN: HDMI Input Signal**

**HDMI OUT CH1~5: HDMI Output Signals**

**LED Indicators**

**Power: Power On**

**HDCP: HDCP Certified**

**HDMI/DVI: HDMI On/ DVI Off**

## Environmental and Reliability Specifications

### 1 Operating Conditions

Temperature : 0? ~ 50?

Humidity : 10% ~ 80%, non-condensing

Altitude : maximum 3,000m

### 2 Transportation Conditions

Temperature : -20? ~ 60?

Humidity : 5% ~ 95%, non-condensing

Altitude : maximum 15,000m

### 3 Storage Conditions

Temperature : -20? ~ 60?

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

### Complete HDMI/HDCP compliance for all individual 5 channels

**SPIDER™** OHD15 HDMI Distribution Amplifiers NEVER allows transmitting HDCP certified sources to not-HDCP-certified displays. Otherwise, it flexibly makes pictures adapted to the connected displays.

### High Quality Picture - No Signal Loss and Digital Noise Free

**SPIDER™** OHD15 HDMI Distribution Amplifiers are 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 distribution amplifiers, 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.

Our 5V power adapter supplies adequate power to amplify the video signals from the video source. This is necessary as the overall length from the video source to the displays is longer when using the distribution amplifiers (distance from the video source to the distribution amplifier + distance from the distribution amplifier 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) With this amplification feature, your video display can be extended up to 2300ft using our fiber optical HDM/DVI cables, M1-1000, M1-2000, and M1-1P0.

## Video Connection

1. Connect your video source's HDMI output port to the OHD15's HDMI input port using standard HDMI cables (not included). Make sure all your HDMI source and the displays are turned off before connecting the cables.
2. Connect your HDMI display's HDMI input port to OHD15's HDMI output port. Make sure your HDMI display is turned off before connecting the cables.
3. Plug the 5V power supply into the distributor's power input port.
4. Plug the 5V wall mount power supply into the wall outlet.
5. Turn on your displays.
6. Turn on your video source.