## HDS-12i

# Intelligent HDMI 1x2 Splitter Installation Manual



Table of Contents/ Contact Us
Introduction3
Safety
Package Contents
Feature Set
Specifications
Connections
Functions
Warranty9

This HDMI Splitter will meet all specifications for the HDMI 1.4a standard. It will scale resolutions and manage EDID for each of 2 connected HDMI displays. MOST FAILURES OR INCONSISTENT PERFORMANCE ARE THE RESULT OF INFERIOR WIRE OR IMPROPER TERMINATIONS. The first step in diagnosing problems with this product should center on the connection and choice of the wire used.

With ever-evolving HDMI features and the many possible configurations of the HDS-12i, this manual includes only *examples* of applications. There are undoubtedly additional applications for which this product is ideally suited, and those for which it is not.

Please follow the instructions and diagrams shown in this Manual. Any questions should be directed to your Dealer, Distributor, or to our Technical Department.

Our Contact information is:

Transformative Engineering, Inc.

194 Vanderbilt Ave.

Norwood, MA 02062-5000

Telephone: 781-769-6410 / Fax: 781-255-0975

Email: info@transformativeengineering.com

#### INTRODUCTION

Thank you for purchasing Transformative Engineering's HDS-12i Intelligent HDMI splitter. This product incorporates many, advanced technologies to accomplish full-function, 1.4a HDMI compliant distribution of the High Definition Multimedia Interface protocol from one source to multiple displays.

Among these is Clock Stretch technology to ensure compatibility with older HDMI devices. In addition, the HDS-12i recognizes independent EDID for each connected display, including selectable signal 'Scaling' and 'AVR' modes.

The HDS-12i also incorporates a 'Trigger' connection for use with Transformative Engineering's CCA-1 contact closure adapter to provide feedback to advanced control systems.

As with all Transformative Engineering's HDMI products, the HDS-12i is firmware upgradable via a USB-Mini connector. For firmware update information, please contact us directly.

Proper connection and attention to limitations of this (or any other) product will result in secure, reliable, and predictable operation.

#### **SAFETY INFORMATION**

- Do not expose this device to water, moisture, or liquids. Possible electric shock may result as well as failure of the unit to operate.
- Do not modify or disassemble the enclosed Power Supply. Doing so will void the warranty and potentially expose the user to dangerous voltages resulting in an electrical shock.
- Do not substitute or use any other Power Supply other than the enclosed unit, or a Transformative Engineering approved Replacement Part. Doing so will void the warranty and potentially expose the user to dangerous voltages resulting in an electrical shock.
- Do not disassemble this device for any reason.
   There are no user serviceable parts inside. Doing so will void the manufacturer's warranty. Also, our unique case is an integral part of the design of this unit and is responsible for cooling and circuitry shielding. Any modifications to this case could potentially cause malfunction and product failure.

#### **Package Contents**

- (1) HDMI intelligent splitter (HDS-12i)
- (1) 5V, 1200mA Power Supply
- (2) Nylon "Tie-Wrap" Mounting Terminals
- (1) Installation Manual

#### **FEATURE SET**

- HDMI 1.4a Splitter
- Full HDCP Security
- EDID Protocol Integrity
- Ethernet Over HDMI (HEC) & Audio Return Channel (ARC) on output 2
- 1/8" mini jack 'Trigger' with optional CCA-1 (contact closure adapter
- USB Mini connection for firmware upgrades
- 4Kx2K 30Hz compatible
- Pass-Thru, AVR, and Scaling Modes
- Scaling between 1080p and 4Kx2K in Scaling Mode
- 5V 1200mA Power Supply for Reliable Performance
- Nylon "tie-wrap" mounting terminals

### **SPECIFICATIONS**

Input Signal:	HDMI Version 1.0 thru 1.4a
Video Formats Supported:	480i/576i/480p/576p/720p/1080i/1080p/ 4Kx2K 30Hz
Audio Formats Supported:	All HDMI Supported Formats, including: DTS-HD Dolby-HD, DVD-A, Dolby TrueHD, 8-CH LPCM
Output Signal:	HDMI Version 1.0 thru 1.4a
Power Supply (included):	5V, 1200mA
Dimensions:	6"W x 1.2" H x 2.5" D
Weight:	< 1 lb.

#### **Connections**

[6] [7] [8] [9] [10] [11]

[5] [4] [3] [2] [1]

- [1] Scaler Up/Down Button
- [2] Output 2 Scaler indicator (Up/Down)
- [3] Output 2 Mode Indictor (Scaling, P.Thru, AVR [2D])
- [4] HDCP (output 1 & 2) and Power Indicators
- [5] Output 2 Mode Selection Button
- [6] USB Mini, Firmware Port
- [7] Power Input (required)
- [8] Trigger Output (for use with optional CCA-1)
- **[9]** HDMI Output 1
- [10] HDMI Output 2 (w/ ARC + HEC)
- [11] HDMI Input (w/ ARC + HEC)

#### **Functions**

The HDS-12i offers 3 operating modes - see pg. 7

- 1) AVR
- 2) P.Thru
- 3) Scaling

Choose desired operation using Output 2 Mode selector [5]

#### In AVR Mode

```
Output-1 = HDMI In
Output-2 = HD Audio output only / 720p handshake
```

AVR mode may be used when AVR doesn't support 3D. With the HDS-12i: HDMI In connects to the 3D source, Output-1 connects directly to the 3D display, and Output-2 provides Dolby TrueHD or 8-CH LPCM Audio to the AVR.

#### In P.Thru Mode

```
Output-1 = Output-2 = HDMI In
```

P.Thru mode is a straight pass thru mode for the HDMI input to 2 displays.

#### In Scaling Mode

Scaling functions are enable when HDMI In = 1080p 24/25/30Hz or 4Kx2K 30Hz

Select proper Scaling with Scaling Up/Down Button [1]

```
HDMI In = 1080p 24/25/30Hz from source
Output-1 = HDMI In
```

- 1) Output-2 = 4Kx2K when UP is selected [1]
- 2) Output-2 = 1080p 24/25/30Hz when DOWN is selected

HDMI In = 4Kx2K 30Hz from source Output-1 = HDMI In

- 1) Output-2 =  $1080p \ 25/25/30$ Hz when DOWN is selected [1]
- 2) Output-2 = 4Kx2K when UP is selected

Please Note: Output-2 supports ARC + HEC only when ARC + HEC enabled source is provided for HDMI In

#### **WARRANTY**

#### A. Limited Warranty

Transformative Engineering, Inc. warranties this product for period of (3) Three Years for both Parts and Labor (under normal use) for Materials and Workmanship. We warrant that this product will perform as designed ONLY for all functions and features described at the time of sale. This warranty period shall be defined as from date of sale to the end user and must be documented with a proof-of-purchase. Transformative Engineering reserves the right, after inspection, to determine if misuse or abuse has occurred, which voids the warranty. Transformative Engineering reserves the right to repair or exchange any unit(s) which fail under the terms of the warranty.

#### B. Liability

Transformative Engineering, Inc., its Distributors and Dealers can not be held liable for any damages (including but not limited to) special, incidental, consequential, direct or indirect, of personal or business injury resulting from the use of or inability to use this product. Such damages including, but not limited to Personal Injury, Loss of Business (and profits), or any ancillary liability brought by third-party action against Suppliers, Distributors, Dealers, or End-Users shall be limited to the actual cost paid by you for this product.

Any modification, improper application, or installation outside of our recommended guidelines shall result in no liability whatsoever and shall result in no remedy. Any use of this product to circumvent the applicable laws of The United States legal codes regarding Digital Content Copyright, and Intellectual Property Rights and their infringement are made solely at the risk of the user. Transformative Engineering, Inc., its Distributors and Dealers can not be held liable for any illegal use of this product.



Transformative Engineering, Inc. 194 Vanderbilt Ave Norwood, MA 02062-5000

Telephone: 781-769-6410 / Fax: 781-255-0975 Email: info@transformativeengineering.com