VIDEO
PRODUCTS
INCORPORATED

1275 Danner Drive Aurora,Ohio 44202
Tel: 330-562-2622 Fax: 330-562-1999
www.vpi.us

MONTEST-HD4K-PTBLC

Mini 4K 60Hz HDMI Video Test Pattern Generator/Analyzer/Emulator

TRADEMARK

The VPI logo is a registered trademark of Video Products Inc in the U.S. and other countries. All other brand names and trademarks or registered trademarks are the property of their respective owners.

COPYRIGHT

Copyright © 2023 by Video Products Inc. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written consent of Video Products Inc, 1275 Danner Drive, Aurora, Ohio 44202.

CHANGES

The material in this guide is for information only and is subject to change without notice. Video Products Inc reserves the right to make changes in the product design without reservation and without notification to its users.

Introduction

The MONTEST-HD4K-PTBLC Mini 4K Ultra-HD Video Test Pattern Generator/Analyzer/Emulator generates video test patterns for evaluating and testing HDMI displays and components up to 4Kx2K @60Hz (4:4:4). HDMI signal status (TMDS/5V) and HDCP analysis are supported, along with EDID emulation.

Features

- Two modes of operation – HDMI signal generator or display emulator (signal analyzer)
  - Generates four test patterns and features four built-in resolutions.
    - Resolutions supported: 3840x2160 @60Hz 4:4:4; 3840x2160 @60Hz 4:2:0; 3840x2160 @30Hz 4:4:4; 1920x1080p @60Hz
  - Emulation mode provides EDID to the HDMI source device from the emulator's internal memory.
    - Supports headless operation – no monitor attached to source.
    - Use to analyze the HDCP version and signal status (TMDS, 5V) of the video input.
    - Supports resolutions up to 4Kx2K (4096×2160 and 3840x2160) @60Hz 4:4:4.
- HDCP v1.4 and v2.2 analysis.
- 4-pin DIP switch for setting video resolution and HDCP version.
- LED indicators provide TMDS/5V signal and HDCP status information.
- Portable, compact design.
- Ideal for many applications, including: installer/integrator diagnostic test tool; HDMI source and sink testing; third-party equipment setup; HDCP compliance verification; production testing; R&D design and testing; and remote desktop access to a headless computer.

Materials Included:

- 1x MONTEST-HD4K-PTBLC Mini 4k Ultra-HD Test Pattern Generator
- 1x USB Power Cable
- 1x Brown Cloth Bag
- 1x URL slip with path to this manual

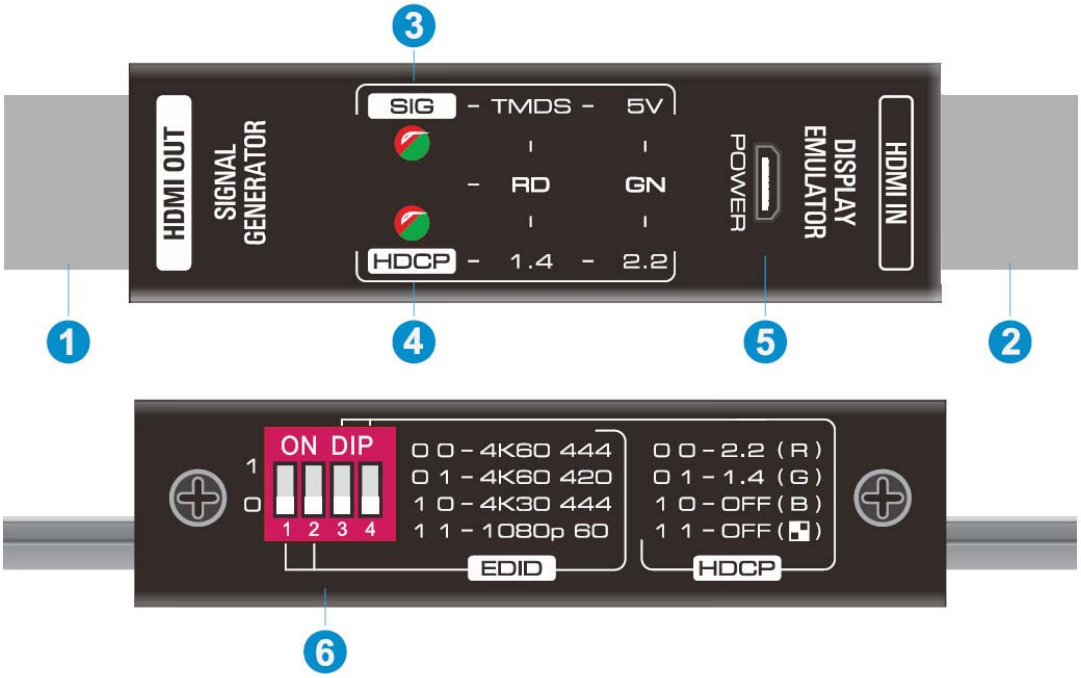
Materials *NOT* supplied but available:

HDMI-FF -- HDMI Gender Changer, Female-to-Female

HD4K-5-MF -- 4K 18Gbps HDMI Extension Cable

Cables can be purchased from Video Products Inc by calling ***(800) 626-7801*** *in the US and Canada or* ***(330) 562-2622*** *(worldwide).*

Features



1. HDMI OUT: Connects to HDMI display device. The MONTEST is used as a HDMI signal generator to output HDMI signal.

2. HDMI IN: Connects to HDMI source device. The MONTEST is used as a display emulator to detect the HDCP content and signal status (5V, TMDS) of HDMI source.

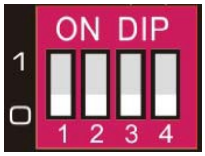
3. SIG LED: When the MONTEST is used as an HDMI signal generator the LED turns red when there is HDMI signal output. When the MONTEST is used as a display emulator, the LED turns green when only 5V signal is detected, or turns red when 5V and TMDS signals are detected simultaneously, or OFF when there is no HDMI signal input.

4. HDCP LED: When the MONTEST is used as an HDMI signal generator, the HDCP content can be selected using the 4-pin DIP switch. The LED turns green when HDCP2.2 is selected, red when HDCP1.4 is selected, and OFF when there is no HDCP.

When the MONTEST is used as a display emulator, the LED turns green when the HDCP content of the HDMI sources is HDCP2.2 compliant, or red when it is HDCP1.4 compliant, or OFF when not HDCP compliant.

5. POWER: Micro USB port for power cord connection. The MONTEST must be powered ON when it is used as a signal generator. When the MONTEST is used as a display emulator, it can be powered by HDMI source, so the power cord connection is not required. If the HDMI source does not have enough power, both the SIG LED and HDCP LED will blink.

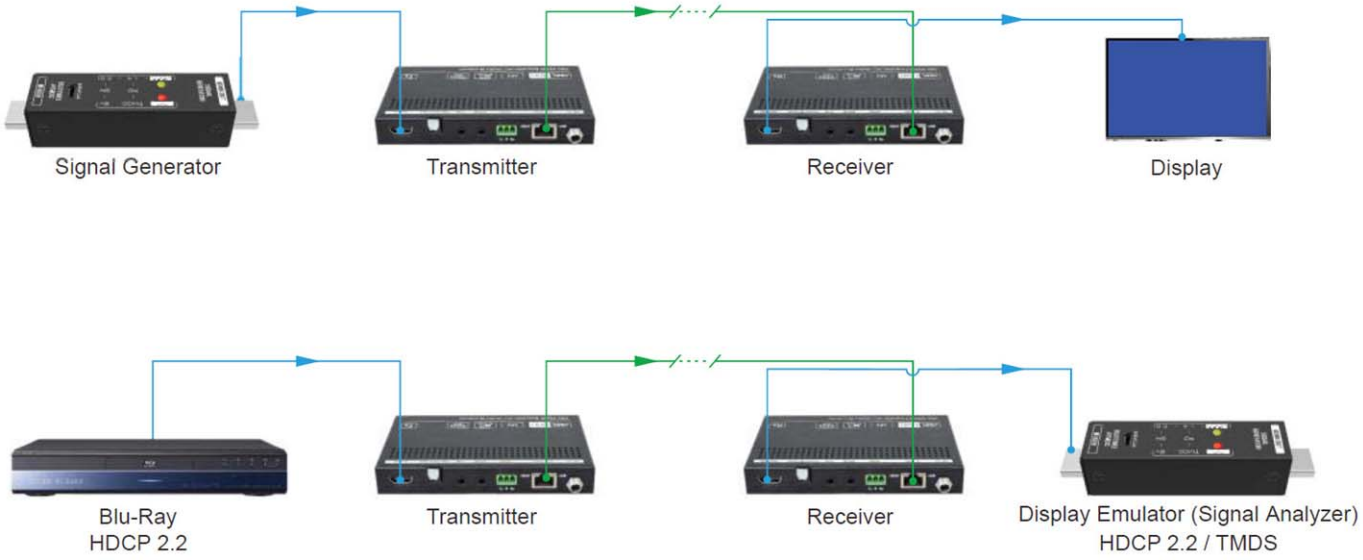
6. DIP SWITCH: When the MONTEST is used as a HDMI signal generator, switches 1 & 2 are used for built-in EDID (video) selection, and switches 3 & 4 are used for HDCP content selection.



There are four DIP switches (1~4). The switch represents "0" when in the lower position, and it represents "1" while the switch in the upper position.

Switch Status (1 & 2)	EDID	
00	4K@60Hz 4:4:4, 2CH PCM	
01	4K@60Hz 4:2:0, 2CH PCM	
10	4K@30Hz 4:4:4, 2CH PCM	
11	1080p@60Hz/3D,2CH PCM	
Switch Status (3 & 4)	**HDCP**	**Test Pattern**
00	HDCP 2.2	Red Screen
01	HDCP 1.4	Green Screen
10	HDCP OFF	Blue Screen
11	HDCP OFF	White/Black Checkered

Application Examples



Specifications

Video/Audio

- Male HDMI connectors for input and output.
- HDMI 2.0 (up to 4K@60Hz 4:4:4) compliant.
- HDCP 1.4 and 2.2 compliant.
- Resolutions supported:
  - Signal generator mode: 3840x2160 @60Hz 4:4:4; 3840x2160 @60Hz 4:2:0; 3840x2160 @30Hz 4:4:4; 1920x1080p @60Hz
  - Emulation mode: 4Kx2K resolutions up to 4096×2160 and 3840x2160 @60Hz 4:4:4, HDTV resolutions to 1080p @60Hz, and up to 1920x1200 @60Hz (WUXGA).
- Video bandwidth: 600MHz (18 Gbps)
- Supports embedded digital audio.

Power

- Signal generator mode: USB powered using micro USB port (5V/1A).
  - 3.4-ft USB Type A to USB Micro-B male-to-male cable included.
- Display emulation mode: Powered by HDMI source.

Environmental

- Operating temperature: 23 to 131°F (-5 to 55°C).
- Storage temperature: -13 to 158°F (-25 to 70°C).
- Operating and storage relative humidity: 10 to 90% non-condensing RH.

Dimensions

WxDxH (in): 2.95x0.87x0.75 (75x22x19 mm)

Regulatory Approvals

CE, FCC, RoHS

Warranty

The warranty period on this product (parts and labor) is two (2) years from the date of purchase. Please contact Video Products Inc at **(330) 562-2622** or visit our website at http://www.vpi.us for information regarding repairs and/or returns. A return authorization number is required for all repairs/returns.