



GSV2005

1 In to 4 Out HDMI2.0 Splitter

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PRODUCT SPECIFICATION

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1 General Information

1.1 General Information

The GSV2005 is HDMI1.4/2.0 compatible, HDCP 1.4/2.2 supported, configurable 1-in-4-out splitter device. All 4 outputs are identical on transmitter capability.

The HDMI input and output maximum processing pixel clock frequency is 600MHz which means the video resolution can support up to 4kx2k@60Hz 4:4:4 8-bit. The maximum processing audio sample frequency is 192K Hz for non-compression timing. GSV2005 supports HDR10 and Dolby Vision HDR as input and output. With powerful HDMI Rx equalizer and Tx pre-emphasis capability, GSV2005 can cascade itself (or GSV2000 series chips) with at least 7 stages for all HDMI 1.3/1.4/2.0 timings.

1.2 Features

1.2.1 HDMI Video Input and Output

- Compliant with HDMI2.0b, HDMI1.4b
- Compliant with HDCP2.2/2.3 and HDCP1.4
- Data rate up to 18Gbps
- Programmable HDMI Tx output swing, slew-rate, pre-emphasis
- Adaptive receiver equalization
- AC-coupling capable
- HDR supported (HDR10/HDR12/Dolby Vision/HLG)
- 5V tolerance on DDC/HPD/CEC

1.3 Chip Application Modes

GSV2005 has 1 HDMI input ports and 4 HDMI output ports. All of the ports are HDCP 1.4 and HDCP 2.2 capable. Generally, the block diagram is shown below.

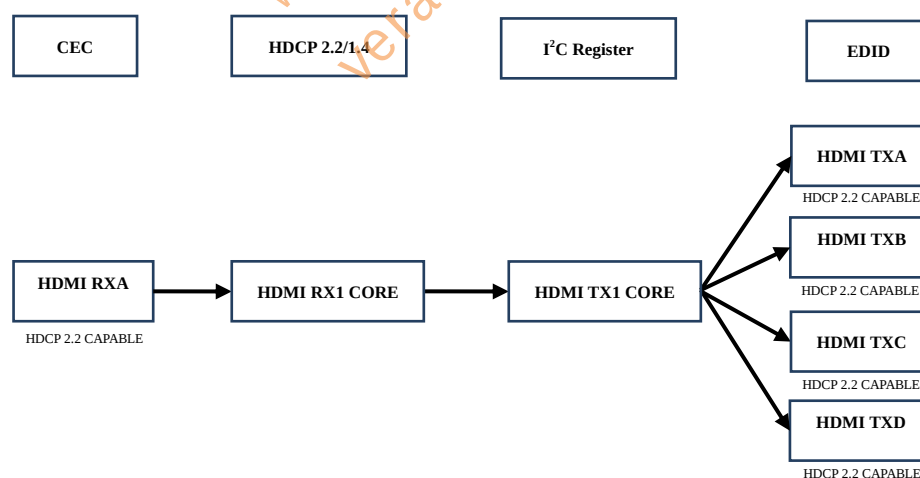


Figure 1. GSV2005 video splitter diagram

2 Pin Description

2.1 Pin Diagram

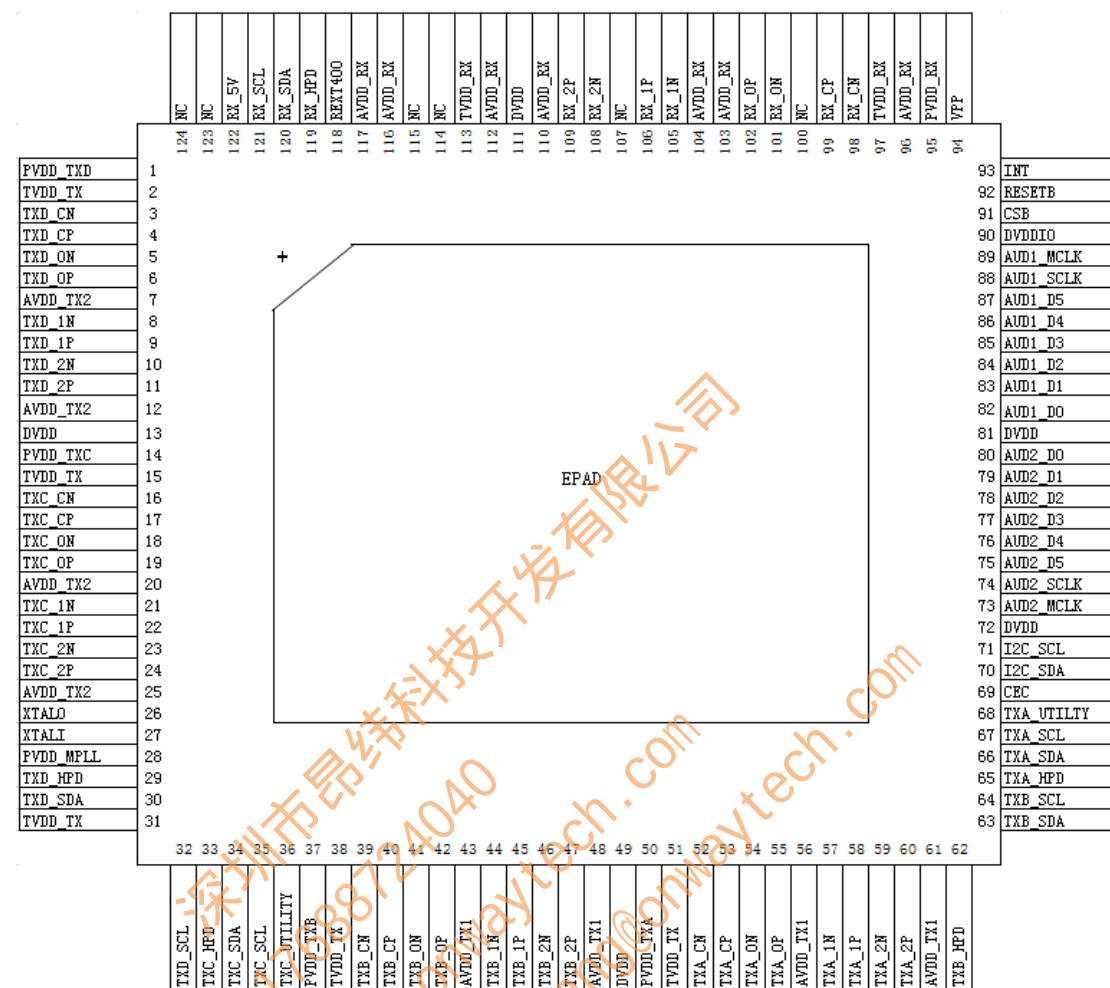


Figure 2. Pin Mapping

2.2 Pin Description

Table 1. Pin Description

Pin Name	Direction	Pin No.	Description
5V Tolerance Pins			
CEC	I/O	69	5V tolerance CEC PAD
RX_5V	Power	122	RX 5V POWER
RX_HPD	I/O	119	RX 5V tolerance HPD PAD
RX_SDA	I/O	120	RX 5V tolerance DDC SDA PAD
RX_SCL	I	121	RX 5V tolerance DDC SCL PAD
TXA_HPD	I	65	TXA 5V tolerance HPD PAD
TXA_SDA	I/O	66	TXA 5V tolerance DDC SDA PAD
TXA_SCL	I/O	67	TXA 5V tolerance DDC SCL PAD
TXA_UTILITY	I	68	TXA 5V tolerance UTILITY PAD/TXA Audio Return Channel True Input
TXB_HPD	I	62	TXB 5V tolerance HPD PAD
TXB_SDA	I/O	63	TXB 5V tolerance DDC SDA PAD
TXB_SCL	I/O	64	TXB 5V tolerance DDC SCL PAD
TXC_HPD	I	33	TXC 5V tolerance HPD PAD
TXC_SDA	I/O	34	TXC 5V tolerance DDC SDA PAD

4 Package Information

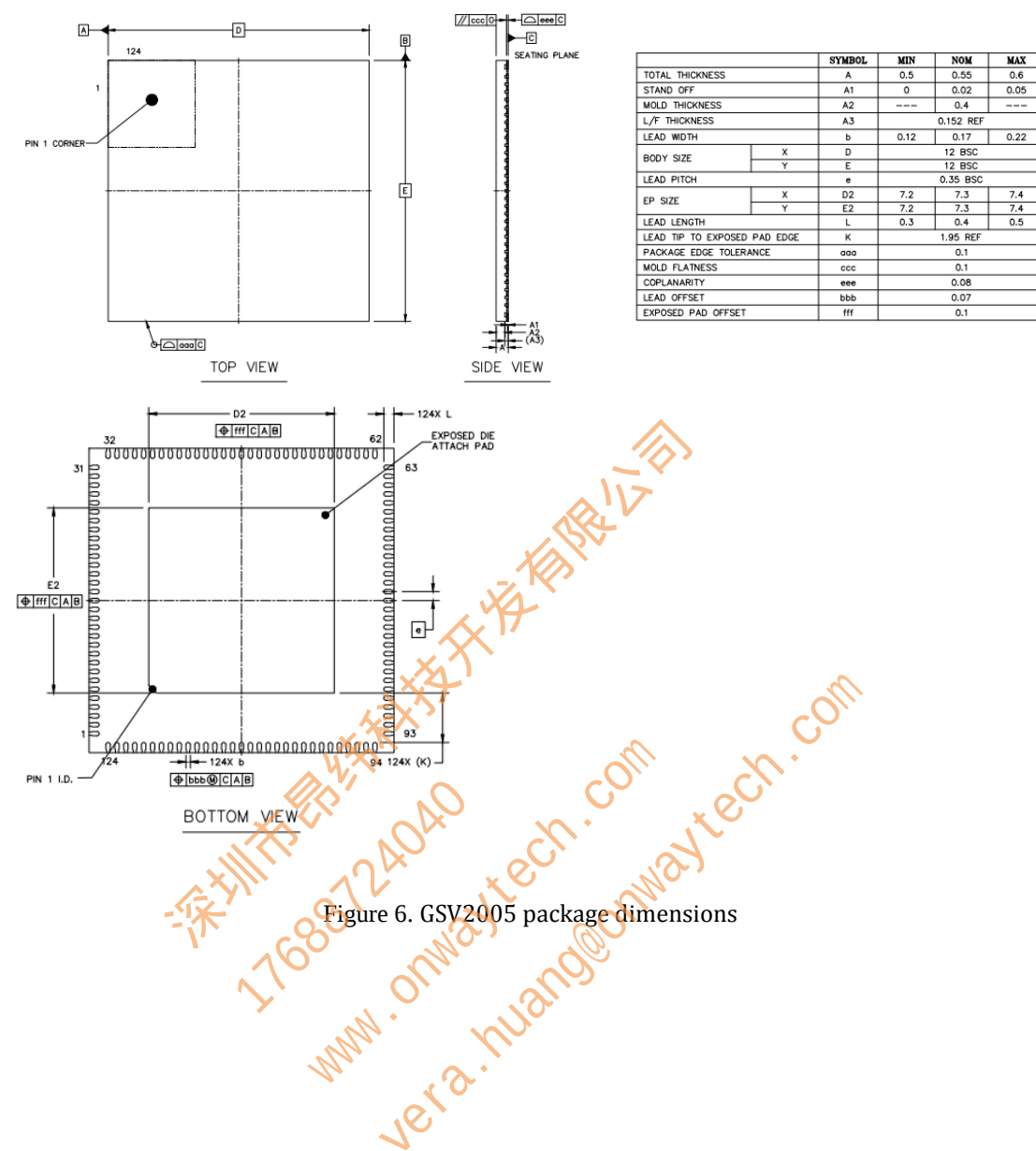


Figure 6. GSV2005 package dimensions

5 Ordering Guide

Table 3. Ordering Information

Part Number.	Temperature Range	Package Description	Packing Type
GSV2005	−20 °C to +85 °C	QFN124, 0.35 mm pitch, 12 mm x 12 mm outline	Tray

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