

THCV261

eDP to V-by-One® HS Converter

1. Overview

The THCV261 is an Embedded DisplayPort™ (eDP) to V-by-One® HS converter IC for TV, Digital signage, Monitor.

The eDP receiver supports up to 4096x2160/60Hz resolution with configurable 1, 2 or 4 lanes configuration at 8.1 (HBR3), 5.4 (HBR2), 2.7 (HBR), and 1.62 (RBR) Gbps per lane.

The V-by-One® HS transmitter supports variable data rates up to 4Gbps per lane, with 8 lanes.

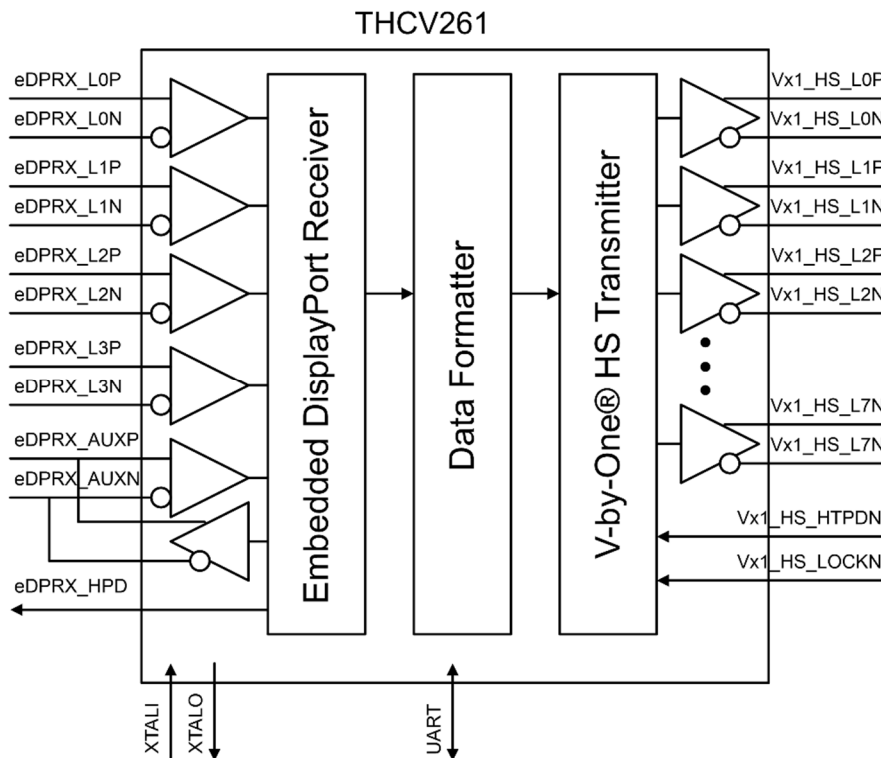
2. Application

- Interactive Flat Panel
- Digital Signage
- Monitor
- Projector

3. Features

- Core Power 1.1V, IO Power 3.3V
- eDP Receiver
 - Compliant with Embedded DisplayPort (eDP) Specification version 1.4
 - 8.1(HBR3) Gbps per lane
 - DPCD 1.4 data structure
 - Up to 4096x2160/60Hz resolution
- V-by-One® HS Transmitter
 - 8 lanes 600Mbps to 4Gbps per lane
 - Section 1/2/4/8 session
 - Up to 4096x2160p/60Hz resolution
- RGB / Up to 36bits color support
- Maximum pixel clock is 594MHz
- Operating ambient temperature: -40°C to 85°C
- 0.5mm pitch QFN72 10x10mm package

4. Block diagram



5. Notices and Requests

1. The product specifications described in this material are subject to change without prior notice.
2. The circuit diagrams described in this material are examples of the application which may not always apply to the customer's design. THine Electronics, Inc. ("THine") is not responsible for possible errors and omissions in this material. Please note even if errors or omissions should be found in this material, THine may not be able to correct them immediately.
3. This material contains THine's copyright, know-how or other intellectual property rights. Copying, reverse-engineer or disclosing to third parties the contents of this material without THine's prior written permission is prohibited.
4. Note that even if infringement of any third party's intellectual property rights should occur by using this product, THine will be exempted from the responsibility unless it directly relates to the production process or functions of the product.
5. This product is not designed for applications that require extremely high-reliability/safety such as aerospace device, nuclear power control device, or medical device related to critical care, excluding when this product is specified for automotive use by THine and used it for that purpose. THine accepts no liability whatsoever for any damages, claims or losses arising out of the uses set forth above.
6. Despite our utmost efforts to improve the quality and reliability of the product, faults will occur with a certain small probability, which is inevitable to a semi-conductor product. Therefore, you are encouraged to have sufficiently fail-safe design principles such as redundant or error preventive design applied to the use of the product so as not to have our product cause any social or public damage.
7. This product may be permanently damaged and suffer from performance degradation or loss of mechanical functionality if subjected to electrostatic charge exceeding capacity of the ESD (Electrostatic Discharge) protection circuitry. Safety earth ground must be provided to anything in contact with the product, including any operator, floor, tester and soldering iron.
8. Please note that this product is not designed to be radiation-proof.
9. Testing and other quality control techniques are used to this product to the extent THine deems necessary to support warranty for performance of this product. Except where mandated by applicable law or deemed necessary by THine based on the user's request, testing of all functions and performance of the product is not necessarily performed.
10. Customers are asked, if required, to judge by themselves if this product falls under the category of strategic goods under the Foreign Exchange and Foreign Trade Act in Japan and the Export Administration Regulations in the United States of America on export or transit of this product. This product is prohibited for the purpose of developing military modernization, including the development of weapons of mass destruction (WMD), and the purpose of violating human rights.
11. The product or peripheral parts may be damaged by a surge in voltage over the absolute maximum ratings or malfunction, if pins of the product are shorted by such as foreign substance. The damages may cause a smoking and ignition. Therefore, you are encouraged to implement safety measures by adding protection devices, such as fuses. THine accepts no liability whatsoever for any damage or loss caused to the user due to use under a condition exceeding the limiting values.
12. All patents or pending patent applications, trademarks, copyrights, layout-design exploitation rights or other intellectual property rights concerned with this product belong to THine or licensor(s) of THine. No license or right is granted to the user for any intellectual property right or other proprietary right now or in the future owned by THine or THine's licensor. The user must enter into a license agreement with THine or THine's licensor to be granted of such license or right.

THine Electronics, Inc.

<https://www.thine.co.jp>