

## APIX2 Transmitter with Dual Port HDMI and HDCP Support

Data Sheet ADV7682

#### **FEATURES**

#### APIX®2 transmitter with HDCP

High-bandwidth Digital Content Protection (HDCP) 1.4 support with internal preprogrammed HDCP keys

Dual channel encryption engine supports simple daisychain implementation for remote displays

Independent encryption of video and audio

Support for two independent video streams and two synchronous audio streams

Up to 3000 Mbps sustained downstream link bandwidth
Up to 187.5 Mbps upstream link bandwidth

Media independent interface (MII), serial port interface (SPI), I<sup>2</sup>C, and GPIO interfaces for sideband communication

Dual High-Definition Multimedia Interface (HDMI®) receiver Supports all HDMI video resolutions up to the maximum

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APIX video link bandwidth of 2.57 Gbps

All mandatory and additional 3D video formats supported HDCP 1.4 decryption support on each port

Hardware controller for automated HDCP repeater

functions across APIX and HDMI HDCP blocks

HDCP repeater support, up to 24 KSVs supported

Integrated CEC controller, CEC 1.4 compatible

**Adaptive TMDS equalizer** 

#### ITU-R BT.656 support

8-bit ITU-R BT.656 interface with embedded timing

720p supported at 148.5 MHz clock rate

#### **Audio support**

**HDMI** audio extraction support

Supports multiplexed (TDM) I<sup>2</sup>S audio I/O

On-chip SRC for synchronization to external master clocks and to synchronize two independent audio streams

#### General

Dual interrupt controller with APIX link status reporting

**Internal EDID RAM** 

100-lead LQFP\_EP, 14 mm × 14 mm package

**Qualified for automotive applications** 

#### **APPLICATIONS**

**Automotive infotainment** 

Infotainment head units

Rear seat entertainment systems

**Automotive media port applications** 

**HDMI** repeaters and video switches

For more information about the ADV7682, including the complete data sheet, contact your local Analog Devices, Inc., sales office at www.analog.com/sales.

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#### SIMPLIFIED FUNCTIONAL BLOCK DIAGRAM

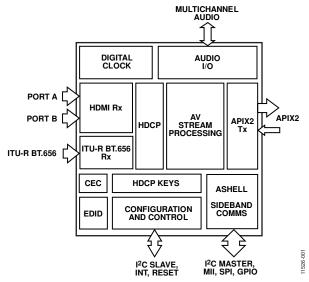


Figure 1.

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### **NOTES**

 $APIX^{\circledast} \ is \ a \ registered \ mark \ of \ INOVA \ Semiconductors \ GMbH.$ 

 $I^2 C\ refers\ to\ a\ communications\ protocol\ originally\ developed\ by\ Philips\ Semiconductors\ (now\ NXP\ Semiconductors).$ 

