

FEATURES

APIX² transmitter with HDCP

- High-bandwidth Digital Content Protection (HDCP) 1.4 support with internal preprogrammed HDCP keys
- Dual-channel encryption engine supports simple daisy-chain implementation for remote displays
- Independent encryption of video and audio
- Up to 3000 Mbps sustained downstream link bandwidth
- Up to 187.5 Mbps upstream link bandwidth
- Media independent interface (MII), serial port interface (SPI), I²C, GPI and GPO interfaces for sideband communication
- High-Definition Multimedia Interface (HDMI[®]) receiver
- Supports all HDMI video resolutions up to the maximum APIX[®] video link bandwidth of 2.57 Gbps
- All mandatory and additional 3D video formats supported
- HDCP 1.4 decryption support

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

5 V detect and Hot Plug[™] assert

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

Advanced audio muting feature

Supports time division multiplexed (TDM) I²S audio I/O

On-chip SRC for synchronization to external master clocks

General

Dual interrupt controller with APIX link status reporting

Internal EDID RAM

Any-to-any 3 × 3 color space conversion (CSC) matrix

64-lead LFCSP, 9 mm × 9 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 **ADV7680**, including the complete data sheet, contact your local Analog Devices, Inc., sales office at www.analog.com/sales.

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Advanced Television Solutions
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Rev. SpB

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SIMPLIFIED FUNCTIONAL BLOCK DIAGRAM

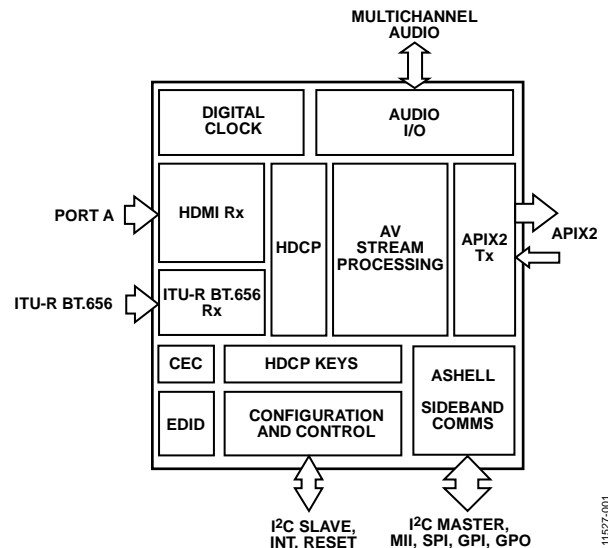


Figure 1.

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NOTES

APIX® is a registered mark of INOVA Semiconductors GmbH.

I²C refers to a communications protocol originally developed by Philips Semiconductors (now NXP Semiconductors).