

Data Sheet

APIX2 Transmitter with **HDMI and HDCP Support**

ADV7680

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 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, and GPIO 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 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.

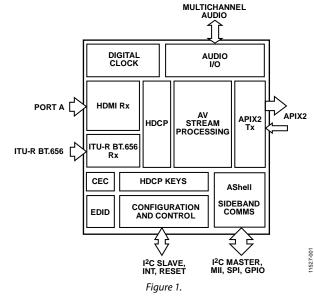
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SIMPLIFIED FUNCTIONAL BLOCK DIAGRAM



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NOTES

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

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