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 daisy-chain 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), I²C, and GPIO interfaces for sideband communication

Dual 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 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) I²S 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

SIMPLIFIED FUNCTIONAL BLOCK DIAGRAM

Figure 1.

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

Advantiv®
Advanced Television Solutions
by Analog Devices

One Technology Way, P.O. Box 9106, Norwood, MA 02062-9106, U.S.A.
Tel: 781.329.4700   ©2013 Analog Devices, Inc. All rights reserved.
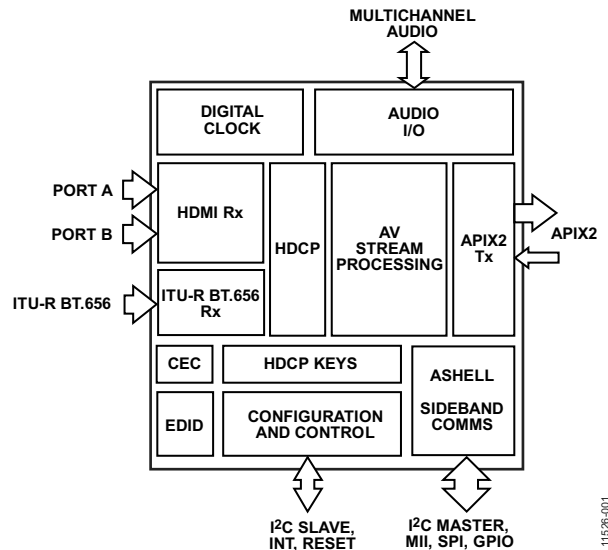**Technical Support**   **www.analog.com**

NOTES

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

**ANALOG
DEVICES**

w w w . a n a l o g . c o m