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.

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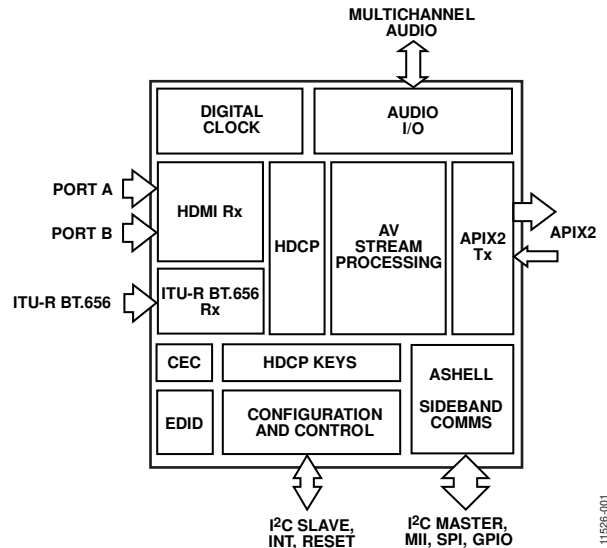
NOTES

APIX® is a registered mark of INOVA Semiconductors GMbH.

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

ANALOG DEVICES

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