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**General Description**

HDMI (High Definition Multimedia Interface) is the first industry-supported, superior, uncompressed, all-digital audio/video interface. It provides an interface between any audio/video source, such as a set-top box or a DVD player, and an audio and/or video monitor, such as a digital television (DTV) or A/V receiver. Its simple, user-friendly connector replaces the maze of cabling behind the entertainment center.

This transmitter provides a very time-to-market and cost effective solution for multimedia controller vendor to implement the HDMI operation. It handles high speed parallel-to-serial conversion up to maximum 165 MHz pixel clock for each channel. The output buffers output the stream data according to the characteristics defined in the HDMI/DVI specification.

HDMI transmitter supports 24-bit mode with 1-pixel/clock input for true color (16.7 million) support. In 24-bit mode, the transmitter supports single or dual edge clocking. It supports Receiver Hot Plug Detection.

HDMI transmitter is fully backward-compatible with DVI, and compliant with HDMI 0.9(1.0), DVI1.0, EIA/CEA-861B, HDCP 1.0.

**Features**

- Support high-definition video with scaleable bandwidth: 25 - 165 Mega-pixels/ sec
- Transmit all ATSC HDTV resolutions
- Support 8-channel digital audio with scaleable bandwidth
- Support Industry-standard S/PDIF for digital audio and other data (DTS, AC3, MPEG Audio)
- Capable of carrying InfoFrame including AVI, SPD, Audio, MS InfoFrames.
- Integrated High-bandwidth Content protection (HDCP)
- Graphics Controller Interface: 24-bit at programmable clock edge
- Serial Bus Slave Programming interface
- Receiver Detection: Supports Hot Plug Detection
- Power-down modes
- Process technology available: 0.18

**Applications**

Entertainment Center: DVD Player, DTV, Camcorder, Computer Display Devices, especially LCD Panels/monitor

**Block Diagram**

