

## Product Brief

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## Description

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Zoran's HDM-T1 is a silicon efficient, cost-effective intellectual property core for IC designs requiring the HDMI Transmit function (HDMI Tx). The HDM-T1 encodes high quality multichannel audio and high definition digital video formats (YcrCb or RGB) into the HDMI standard including High Definition Content Protection (HDCP) encryption.

HDM-T1 includes digital link, analog Phy and reference software to provide a complete solution for the HDMI Transmit function. HDM-T1 is proven in silicon; products using HDM-T1 have passed compliance testing by an Authorized Testing Center.

## Digital Link and Analog PHY Solution

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HDM-T1 is a complete solution including the digital link layer and analog Phy. Targeted to a TSMC 0.18 micron process, HDM-T1 can be ported to other popular processes.

## Features

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- HDMI version 1.1 compliant
- HDCP version 1.1 compliant
- Supports EIA/CEA 861b video formats including 480i, 480p, 576i, 576p, 720p, 1080i, and up to 1360 x 768
- Up to 8 channels uncompressed LPCM audio up to 192 kHz
- Pass through for compressed audio including Dolby Digital, MPEG-2, MP-3, etc.
- Support for up to nine downstream HDMI repeaters
- Color space conversion
- Audio mute
- Internal color bar & square wave generators
- Generic Host Bus Interface for core configuration and control
- Onboard debug and test support
- EDID parsing application software example
- System renewability application software example (revocation list)

## Reference Software

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The HDM-T1 IP Core includes reference software which facilitate the implementation, verification and validation of the core. It can also be used as an example for further software system development. Provided as source code, the reference software is highly portable and can easily be adapted to any specific system.

The reference software consists of three functions:

- Hardware configuration and system interface
- Authentication and system renewability
- EDID reading and parsing

## Integrated Circuit Applications

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- Digital TV
- Set-top box
- DVD player/recorder
- Digital Cameras
- A/V Receivers
- Any IC requiring the HDMI transmit function

## Deliverables

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### Digital Link

- Synthesizable RTL code (Verilog)
- Bit accurate C model
- Synopsis synthesis scripts
- Test bench with suite of test cases

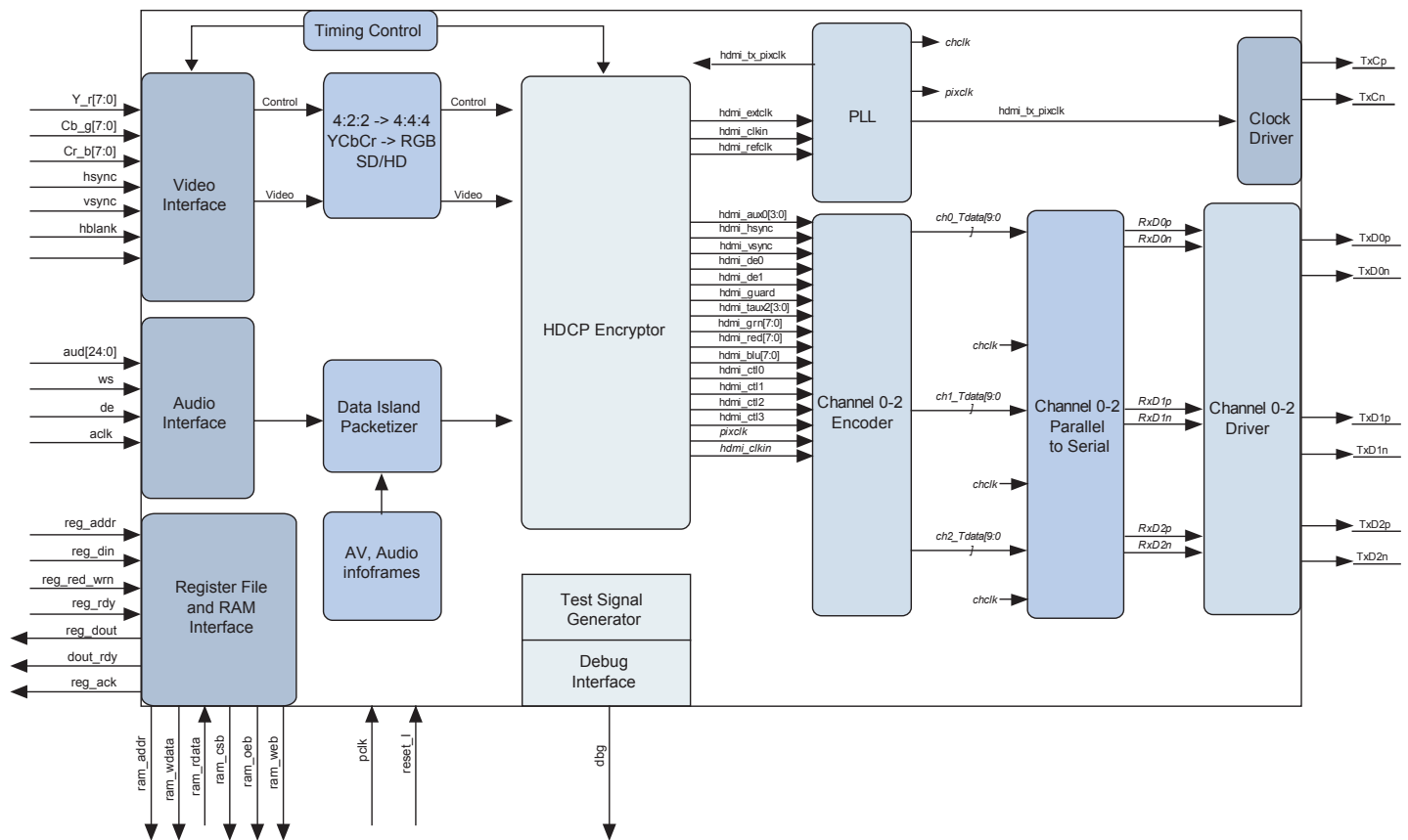
### Analog Phy

- GDS2
- CDL Netlist for LVS/DRC
- Verilog behavioural model (without timing)
- Synopsys .lib model
- Cadence .lef file (for integration and top level Place and Route).
- Cadence .tlf file (timing information for top level place and route)
- Layout recommendations/guidelines
- Package/PCB design recommendations

Product Brief



HDM-T1 Block Diagram



For more information, contact Zoran's Sunnyvale office or the office nearest you:

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