

## H.264 HD Video Encoder IP Core

### Product Description

SOC provides High-performance H.264/AVC encoder IP cores for both Xilinx and Intel (Altera) FPGAs. SOC also configures the cores according to user specifications, including I/O formats.

SOC also supplies all-in-one hardware modules and ASIC Chipsets, based on the IP cores.

The SOC codec modules are System-on-Module (SoM) cards, based on SOC codec IP cores, that can be connected to user devices/PCBs using a standard DDR3 memory connector.

Users have the options of using the codec IP cores, chipsets, or modules.

Plug-and-play evaluation kits are available for the IP cores, modules, and chipsets.

SOC also offers product development boards, which allow users to develop products using the SOC codec IP core, chipsets, and modules.

### Key Features

- All-hardware Design (without embedded processors)
- High Speed (Low latency)
- Small Silicon Footprint
- Low Power
- High Reliability (due to hardware architecture)
- High-Precision – 10bits available
- High-Video Quality
- Low Output Bandwidth
- High-Output Bandwidth Version Available
- User Controllable API
- Option of IP Core or Module
- Video Transmission Cores available
- Development Board available

### Specifications

- Standard: H.264/AVC (ISO/IEC14496-10)
- Video Encoder Profiles: High, Main, Baseline
- Output Bit Rates: 1-100Mbps & above
- Video Resolutions: HD 1080p up to 120fps
- Chroma Formats: 4:2:2 or 4:2:0
- Precision: 8 bits or 10 bits
- Output Format: H.264 Elementary, or Transport Stream
- Video Input Format: YUV or RGB
- Audio Support: AAC or MPEG-2 Layer-II
- Latency: 0.25ms
- Power Consumption: 800mw (Core only)
- Target FPGAs: Xilinx or Intel (Altera)

### FPGA Resources

	Xilinx FPGAs	Altera FPGAs
Logic Resources:	110,000 LUTs	73,000 ALMs
Block RAMs:	10Mbits	6Mbits
DSPs:	235 DSPs	239 DSPs

### H.264 Video/Audio Encoder Chipset



### H.264 Video/Audio Encoder Module

Digital Video/Audio Data



Support multiple channels

H.264 Compressed Video/Audio Stream

