CHIPWRIGHTS

# IPTV Reference Design

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Fully-optimized IPTV reference designs provide a robust, multi-functional platform that offer several optimized video codecs that play a wide variety of videos.

These compact, low power designs are highly flexible through software programmability for both the control and video functionality.

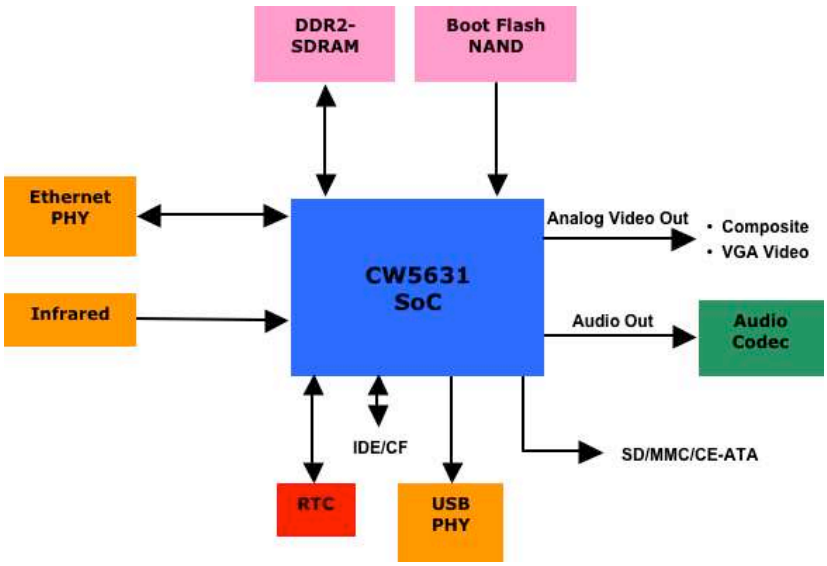
## Complete Development Platform

Our IPTV designs are ideal for developers who need a complete IPTV solution. Our IPTV designs combine the powerful CW5631 System on Chip and extensible Eclipse™ software development platform, providing a unified and flexible environment where developers can create, build, and debug software. Features include: support for DVR functions, flexible audio/video decoding, media browsing features, easy-to-use graphical user interface, multiple audio and video formats and storage mediums; plus IP capability.

- **Mini Design**: At a volume bill of materials cost of $30, this turnkey solution offers a fully optimized platform for designing advanced IPTV solutions. Utilize ChipWrights' powerful video processing capabilities and feature-rich peripheral set while cutting development time and manufacturing costs.
- **Deluxe Design**: This powerful platform extends the capabilities of the mini design by adding advanced IPTV features such as S-Video and HDMI video outputs, Compact Flash memory, and support for SATA hard drive.

## Facilitate First Time Success

The CW5631 SoC's multi-core architecture provides fast processing speed, programming flexibility, and industry-standard ARM® processor technology. The embedded Linux® operating system running on the ARM processor allows easy integration of value-added features. Quick development or porting of applications that run on Linux reduces time to market. Programming is easy using Eclipse-based tools, which support source-level compose-compile-link-debug on hardware or a chip-level simulator.



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Visual Signal Processors

# Reference Designs

ChipWrights' IPTV reference designs are suitable in stand-alone set top box products or for embedding into other video-centric products, such as televisions or media players. The CW5631 SoC supports all listed features.

| Reference Design Feature | Mini Design | Deluxe Design | CW5631 SoC Support |
|---|---|---|---|
| USB 2.0 OTG | ✓ | ✓ | ✓ |
| • SD/MMC/CE-ATA | ✓ | ✓ | ✓ |
| • Compact Flash | ✓ | ✓ | ✓ |
| • IDE | ✓ | | ✓ |
| • SATA | | ✓ | ✓ |
| • HDMI | | ✓ | ✓ |
| • VGA Video | ✓ | ✓ | ✓ |
| • Composite Video Output | ✓ | ✓ | ✓ |
| • S-Video Output | | ✓ | ✓ |
| • Component Video Output | | | ✓ |
| • Stereo Audio Output (5.1 Encoding) | ✓ | ✓ | ✓ |
| • Digital Video Input | ✓ | | ✓ |
| • TFT/LCD Interface | | | ✓ |
| • Real Time Clock | ✓ | ✓ | ✓ |
| • Ethernet 10/100 | ✓ | ✓ | ✓ |

# Reference Design Software

**Video decode**

- MPEG 1/2/4, H.264 (AVC)
- MJPEG
- WMV 7/8
- H263+
- FLV
- VC-1
- Optimized for MJPEG, MPEG4 decode @ 720P30; H264 decode @ 480P30

**Audio decode**

- MPEG1 Audio Layer 2/3
- AC-3, AAC
- Vorbis
- WMA V1/V2
- ADPCM

**Graphics**

- JPG
- GIF
- BMP

**Media Player**

- Fast-forward
- Rewind
- Pause
- Play
- Stop
- Streaming: RTSP/RTP/RTCP

**Media Browser**

- HTTP
- Javascript
- GUI-based with IR remote control
- Text Input
  - English
  - Chinese

**Network**

- Ethernet or Wi-Fi

**Operating System: Linux®**

- Kernel 2.6.29


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