Zero Power HDMI® Transmitter
A CoolHD™ family product

Features

- HDMI 1.3 compatible transmitter
- Optional HDCP 1.2 function with internal keys
- Supports Link rates up to 165Mpixels/sec
- Zero power HDMI transmitter technology
- Flexible video pixel input interface
  - Supports DVD and HD MPEG decoders
  - 24-bit RGB/YCbCr 4:4:4
  - 16/20/24-bit YCbCr 4:2:2
  - 8/10/12-bit YC Mux (ITU.601 and 656)
  - YCbCr-to-RGB color space conversion
  - 4:2:2 to 4:4:4 up-sample
  - Backward compatible with DVI 1.1
- Advanced digital audio interface
  - 8-channel I2S support Dolby Digital, and DVD-Audio
  - S/PDIF supports PCM, Dolby Digital, DTS digital audio transmission
  - IEC 60958 or IEC 61937 compatible
  - Up to 6 channels 1-bit super audio support
  - Programmable I2S channel mapping
  - 2:1 and 4:1 down-sampling to handle 96 KHz and 192 KHz audio stream
- Software-controlled power management
- Programmable output swing

Packages offered:
- 48 pins QFN
- 80 pins LQFP
- 81 balls BGA

ANX7150, a CoolHD™ family product, is a revolutionary breakthrough technology that makes a zero power HDMI transmitter a reality. CoolHD™ technology solves the problem by recovering power from the HDMI link that is normally wasted as heat and using it to power the HDMI transmitter. This technology is transforming the mobile and handheld markets.

ANX7150 can be ordered with an optional HDCP 1.2 function (including internal keys) to support content protection.

Built-in video pattern generator and audio tone generator are included for system self-test.

Power requirement is 1.8V and 3.3V.

For package and HDCP options, refer to the parts ordering information.

---

**Figure 1: ANX7150 Block Diagram**
## Parts Ordering Information

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANX7150F</td>
<td>No HDCP function</td>
<td>Now</td>
</tr>
<tr>
<td></td>
<td>48 pin, 6 x 6 mm, QFN package</td>
<td></td>
</tr>
<tr>
<td>ANX7150FH</td>
<td>HDCP function enabled</td>
<td>Now</td>
</tr>
<tr>
<td></td>
<td>48 pin, 6 x 6 mm, QFN package</td>
<td></td>
</tr>
<tr>
<td>ANX7150L</td>
<td>No HDCP function</td>
<td>Now</td>
</tr>
<tr>
<td></td>
<td>80 pin, 10 x 10mm, LQFP package</td>
<td></td>
</tr>
<tr>
<td>ANX7150LH</td>
<td>HDCP function enabled</td>
<td>Now</td>
</tr>
<tr>
<td></td>
<td>80 pin, 10 x 10mm, LQFP package</td>
<td></td>
</tr>
<tr>
<td>ANX7150B</td>
<td>No HDCP function</td>
<td>TBD</td>
</tr>
<tr>
<td></td>
<td>81 ball, 4.2 x 4.2mm, BGA package</td>
<td></td>
</tr>
<tr>
<td>ANX7150BH</td>
<td>HDCP function enabled</td>
<td>TBD</td>
</tr>
<tr>
<td></td>
<td>81 ball, 4.2 x 4.2mm, BGA package</td>
<td></td>
</tr>
</tbody>
</table>

---

Copyright ©2008 Analogix Semiconductor, Inc.  
3211 Scott Blvd., Suite 102  
Santa Clara, CA 95054, USA  
(+1) 408-988-8848  
http://www.analogix.com