SlimPort® to HDMI® (Ultra-HD, 4K) Converter

The ANX7738 is a SlimPort to HDMI (up to Ultra-HD, 4K in Turbo mode) converter, which includes 3D display delivery capability. Also, it is designed to interoperate with any other MyDP or DisplayPort™ enabled transmitter, with a maximum resolution of Full-HD including 3D display, in smartphones, tablets, Ultrabooks, sports cameras, camcorders, and set top boxes. ANX7738 works in conjunction with MyDP/DisplayPort transmitters, such as the ANX7812, ANX7814, ANX7816, and more. ANX7738 transforms the MyDP/DisplayPort or SlimPort (Turbo mode) output of a source device to HDMI or DVI output so that the device can connect to any high-definition TV, monitor, or projector.

**Features**

- **Standard compliance**
  - DisplayPort, MyDP, HDMI, HDCP
- **HDMI transmitter**
  - Connects to any HDMI receiver
  - Max TMDS link rate up to 300Mpixels/sec
  - Up to 36bpp color depth support at Full-HD
  - 3D video output support
  - Remote control support through Consumer Electronics Control (CEC)
- **HDCP content protection**
- **SlimPort/MyDP/DisplayPort receiver**
  - SlimPort (Turbo mode) DisplayPort or MyDP input
  - Configurable 1-lane input supports: Turbo mode, HBR2, HBR, and RBR data rates
  - Advanced WideEye™ SerDes technology capable of receiving data over long and low quality cables
  - Spread Spectrum Clocking (SSC) support
- **System operation**
  - Integrated On-chip Microcontroller (OCM) for software free operation
  - Slave I²C device control interface
  - Built-in video test pattern generator
- **Power requirements**
  - 1.0V and 1.8V
  - 3.3V input requirement eliminated by an integrated boost regulator
  - Standby power: <20mW, while monitoring cable detection
- **Package offered:** 64-pin QFN, 8mm x 8mm, 0.4mm pin-pitch
- **RoHS compliant and Halogen free package**

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**System operation**

- DisplayPort or SlimPort Receiver
- Data Decoder
- Video & Audio Process
- HDMI Tx Data Encoder
- HDMI Tx

**I²C Interface**

- DP AUX Link
- DP AUX PHY

**HDCP Content Protection**

- Device Configuration and Status Registers
- CEC
- Hot Plug
- DDC i/f
## Related Products

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<tr>
<th>Part Number</th>
<th>Description</th>
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<tbody>
<tr>
<td>ANX7802</td>
<td>SlimPort Transmitter (HD, 1080p30) with HDMI input</td>
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<tr>
<td>ANX7805</td>
<td>SlimPort Transmitter (Full-HD, 1080p60) with RGB-24, MIPI-DSI, SPDIF, I^2S and SLIMbus inputs</td>
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<tr>
<td>ANX7812</td>
<td>SlimPort Transmitter (Full-HD, 1080p60) with HDMI input</td>
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<tr>
<td>ANX7814</td>
<td>SlimPort Transmitter (Full-HD, 1080p60) with HDMI input</td>
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<td>ANX7816</td>
<td>SlimPort Transmitter (Ultra-HD, 4Kp60) with HDMI input</td>
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<tr>
<td>ANX7730</td>
<td>SlimPort to HDMI (Full-HD, 1080p60 and 3D) converter</td>
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<tr>
<td>ANX7732</td>
<td>SlimPort to VGA (WUXGA, 1920x1080p60) converter</td>
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<tr>
<td>ANX7748</td>
<td>SlimPort to DisplayPort (WUXGA, 1920x1080p60) active lane converter</td>
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