

## Development boards for broadcast applications

The Altera® HD Quality Initiative (HDQI) addresses high-definition (HD) video hotspots throughout the broadcast infrastructure. Together with our partners, we enable affordable broadcast systems that demonstrate the best in video quality. To support this effort, Altera brings you a suite of productivity tools including development boards ideal for broadcast applications. Development boards from Altera and our partners are an easy, out-of-the-box solution to cut time to market, allowing you to focus on your core competencies so that you can win the competitive race. Our development kits come with a variety of reference designs to help you get started.

### Development kits

Vendor	Device	Development kit	Features
Altera	Stratix® II EP2SGX90N	Audio Video Development Kit, Stratix II GX Edition	<p>Targets the development of the most advanced audio and video applications and includes the following features:</p> <ul style="list-style-type: none"> <li>• Digital video interface (DVI) inputs/outputs</li> <li>• Triple-rate serial digital interface (SDI) inputs/outputs</li> <li>• Asynchronous Serial Interface (ASI) inputs/outputs</li> <li>• AES3 and S/PDIF audio interfaces</li> <li>• DDR2 DIMM interfaces</li> <li>• High-speed mezzanine connectors (HSMC) expansion port</li> <li>• 10/100/1000 Ethernet PHY</li> <li>• USB media access control (MAC)/PHY</li> </ul>
Altera	Arria™ GX EP1AGX60	Arria GX Development Kit	<p>Delivers a complete environment for the development and testing of designs, implementing high-speed serial interfaces in a PCI Express (PCIe) form-factor card. It supports:</p> <ul style="list-style-type: none"> <li>• PCI Express</li> <li>• Triple-speed Ethernet</li> <li>• Serial RapidIO® (SRIO) protocols</li> <li>• HSMC expansion connector</li> </ul>
Altera	Cyclone® III EP3C120	Cyclone III Development Kit 3C120	<p>Provides the flexibility you need to develop complex, cost-effective video and image processing applications with:</p> <ul style="list-style-type: none"> <li>• USB 2.0</li> <li>• 2 HSMC connectors</li> <li>• Triple-speed Ethernet</li> <li>• 256 Mbyte of dual channel DDR2 SDRAM</li> </ul>
Microtronix	Cyclone III EP3C120	ViClaro III HD Panel Display Interface – Video IP Development Kit	<p>Targets video applications requiring a high number of LVDS channels (typically display applications). It supports:</p> <ul style="list-style-type: none"> <li>• LVDS input: 720p, 1080p – 50/60 Hz; output: 720p, 1080p – 50/60/100/120 Hz (reference design)</li> <li>• Low-voltage panel interfaces including LVDS, mini-LVDS, reduced swing differential signaling (RSDS), and PPDS</li> <li>• 256-Mbytes DDR2 memory supporting: x16, x32, x48, and x64-bit operation</li> <li>• USB 2.0 PHY (device)</li> <li>• High-definition multimedia interface (HDMI) transmitter and receiver</li> <li>• 2 HSMC expansion connectors</li> </ul>

## Development kits (continued)

Vendor	Device	Development kit	Features
Altera	Stratix III 3SL150F1152	Stratix III development kit	Provides the performance and low power you need to implement advanced broadcast applications. It includes: <ul style="list-style-type: none"> <li>• DDR2 x72 DIMM</li> <li>• USB</li> <li>• Triple-speed Ethernet</li> <li>• 2 HSMC expansion connectors</li> </ul>
GiDEL	Stratix III FPGA	PCIe broadcast kit	<ul style="list-style-type: none"> <li>• PCIe x8</li> <li>• SDI and DVI daughtercards available</li> <li>• x72 DDR2 memory</li> <li>• Stratix III EP3S340 device</li> </ul>
EBV	Cyclone II EP2C35	BDK2C35 Broadcast Development Kit	All the hardware and software components necessary to build a fully featured, market-ready broadcast system on an FPGA platform. It is based on the Altera Nios® II Development Kit, Cyclone II Edition (DK-NIOS-2C35N) and includes three daughtercards: <ul style="list-style-type: none"> <li>• ASI + SDI I/O (DBASI)</li> <li>• GigE-PHY (DBGIG1)</li> <li>• Analog video I/O (DBAVIO)</li> </ul>
Altera	Cyclone II EP2C70	Video Development Kit, Cyclone II Edition	A complete development environment for digital video and image processing. It supports: <ul style="list-style-type: none"> <li>• Composite video input channels (NTSC/PAL)</li> <li>• 10-bit BT.656 output, 2 x 2 14-bit</li> <li>• 125 MSPS A/D and 2 x 14-bit, 165 MSPS D/A</li> <li>• Stereo audio CODEC (96 KHz)</li> <li>• EMIF connector</li> </ul>
Bitec	Daughtercard	EP3C – DVI	Generic video with DVI in and DVI out through HSMC
Bitec	Daughtercard	EP3C – Video processing	Quad video in and DVI out
Bitec	Daughtercard	EP3C - ASI modulation	Broadcast card with ASI I/O and modulation out
Altera	Daughtercard	Video Input Daughter Card DC- VIDEO-TVP5146	Two composite video input channels using TI ADC, support for NTSC/PAL, 10-bit BT.656 output included with Video Development Kit, Cyclone II Edition; Santa Cruz connector
Altera	Daughtercard	SDI Smart SerDes	2 SDI out and 1 SDI in for non-transceiver FPGA triple-rate SDI application

Many other development kits are available from Altera and our partners, featuring PCI Express, Nios II embedded processors, digital signal processing, and more. For more information, visit [www.altera.com](http://www.altera.com).

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