

Innovative and scalable solutions from Altera

Next-generation automotive infotainment

Altera pushes the boundaries in rear-seat infotainment by delivering programmable solutions that speed time-to-market for your next-generation systems.

Dual video displays. Digital video broadcasts. Wireless game consoles. Internet connectivity. Consumers are demanding increasingly sophisticated rear-seat entertainment (RSE) systems. You've probably already adopted programmable logic devices (PLDs) to deliver some of this functionality to your customers. Altera FPGAs go the extra mile, giving you the flexibility to develop high-end next-generation systems while scaling sufficiently to create mid- and low-end systems for more price-sensitive consumers. The net result: you quickly and cost-effectively deliver new infotainment functionality to customers across a broad range of product price points.

Fulfilling next-generation demands

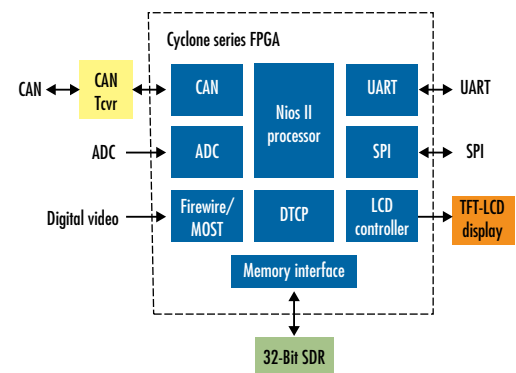
Consumer demand for innovation continues to drive the rapid evolution of video and audio processing applications in back-seat infotainment systems. Whether consumers want to view movies, watch television, play video games, or operate the latest electronic gadgets, we deliver the platform that makes it possible for you to provide them with the capabilities they desire.

Our Cyclone® FPGA series is built on a highly efficient device architecture that meets the performance and price requirements of even the most cost-sensitive applications. By supporting advanced features such as dual-video output and digital video broadcasts, our innovative programmable systems allow you to easily differentiate your products from the competition in terms of both functionality and price.

The Cyclone FPGA series:

- Supports Altera's Nios® II embedded processor that outperforms all competitive soft processors while providing unequalled utility and cost-efficiency. Since they are completely reconfigurable, Nios II processors are more flexible and scalable than standalone microprocessors.
- Delivers unparalleled functionality and pricing that is competitive with ASICs.
- Effortlessly integrates on-board RSE with other communications systems, giving you the flexibility to lower overall system costs while adding functionality as needed.
- Supports functions such as CAN and the media-oriented system transport (MOST) Media LB interface, the optical-based interface that is being widely adopted for next-generation infotainment and communication systems.
- Enables dual video-in implementations that facilitate both single- and dual-screen outputs for a wide range of RSE devices.

Next-generation RSE implementation



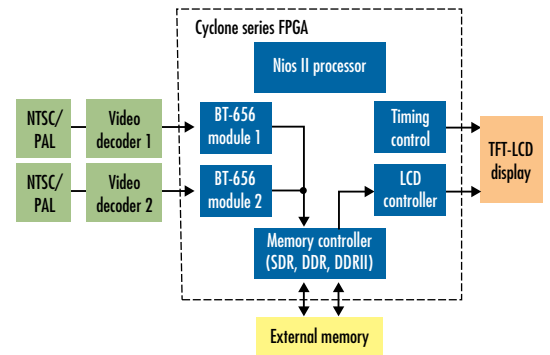
Programmable and powerful

Whether building basic video and audio systems or more sophisticated dual video, digital video broadcasting, or gaming platforms, your designers require powerful graphics processing capabilities. Altera's Cyclone series and suite of complementary products and solutions provide them with unequalled functionality as well as pricing that is highly competitive with ASICs and ASSPs.

Our programmable solutions:

- Provide you with the ability to create innovative and scalable designs that can be used in a broad range of infotainment products, from low- to high-end systems.
- Deliver unequalled performance through extremely efficient high-speed data routing that processes data in parallel within the FPGA's digital domain, rather than moving it to an external microprocessor for serial operation.
- Cut costs and development time by offering interfacing IP cores such as media-oriented system transport (MOST) and controller area network (CAN) as well as digital signal processing (DSP) functions such as filtering and digital transmission control protocol (DTCP).

Dual video-in implementation



Unmatched scalability

Next-generation RSE systems require considerable graphics processing power. Altera provides flexible and scalable solutions that meet your most rigorous demands for lower cost and greater flexibility. By integrating ASSP functionality onto our Cyclone FPGAs, you can scale your systems to deliver high-end, mid-end, and low-end RSE functionality at a wide range of price points.

Want to dig deeper?

Visit us at www.altera.com/automotive for more information on:

- Graphics processing
- Reference designs
- IP cores
- Devices
- Embedded processors
- Development kits

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