

Flexible open microcontroller for faster infotainment system development

PARIS platform, an Altera automotive infotainment solution

With navigation systems, driver assistance capabilities, and rich multimedia resources, a car is no longer about getting from point A to point B. It's also about a helpful and rewarding driver and passenger experience. Time and cost pressures, however, mean that getting sophisticated and unique new systems on the road calls for flexible, easy-to-use technology.

TRS-STAR's Platform ASSP Replacement Infotainment System (PARIS) platform—featuring an Altera® Stratix® II FPGA—answers the call. The automotive industry's first scalable solution for next-generation car infotainment and telematics systems, the PARIS platform is based on an open microcontroller system, where processor cores, periphery interfaces, and special function blocks are integrated on a single integrated circuit. The platform supports CAN, MOST, USB, Ethernet, and SDHC interfaces, and features:

- **A scalable automotive graphics system with multiple video-in and video-out functionalities**
- **An audio processing module**
- **An application processor**

On the road in half the time and cost

With the PARIS platform, you can save up to 50 percent of your development time and costs for automotive infotainment systems. Having a single platform means that you no longer need to address the conflicts arising from different microcontrollers with different hardware and software frameworks in your system platform. The platform supports coprocessor and system-on-a-chip architectures.

Meeting stringent automotive industry requirements

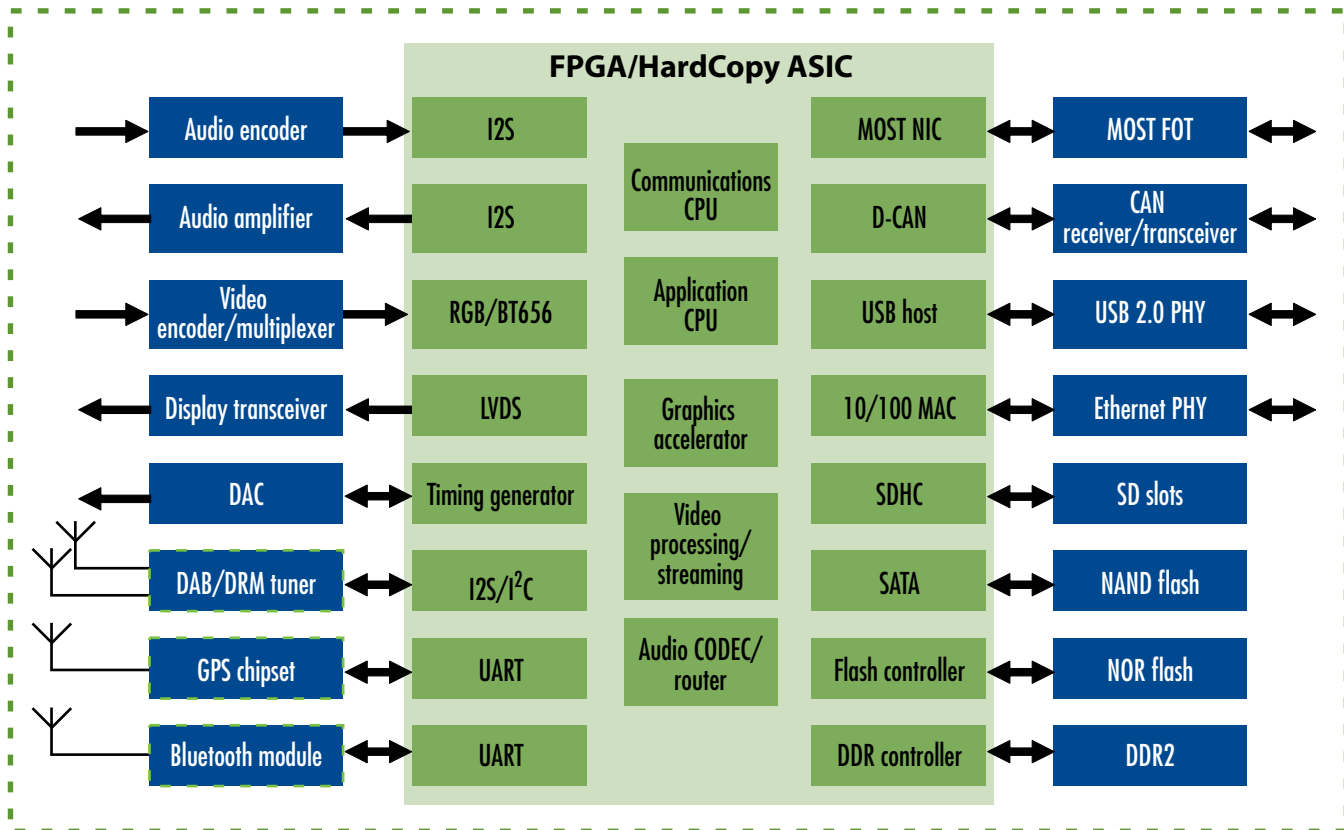
Altera custom logic devices are designed to meet the unique requirements of the automotive market. We collaborate closely with our long-time manufacturing partner, Taiwan Semiconductor Manufacturing Company (TSMC), with a shared commitment toward highly reliable, high-quality, on-time silicon. We also:

- Belong to the Automotive Electronics Council (AEC), and comply with AEC-Q100 specifications
- Maintain more than 70 Production Part Approval Process (PPAP) submissions to detail our manufacturing quality processes
- Offer automotive-grade temperature support (junction temperature range of -40°C to +125°C) for many of our devices

Altera collaborated with more than 12 hardware and software IP providers to develop this comprehensive kit. With this platform, you'll be able to easily integrate future IP cores, and to create infotainment applications quickly and efficiently.



Sample PARIS application



Key platform advantages include:

- Close integration of logic, memory, and CPU functions
- Hardware acceleration
- Hardware and software partitioning
- Parallel processing

Want to dig deeper?

To learn more about the PARIS development platform, contact your local Altera sales representative or FAE, or visit www.altera.com/automotive or <http://www.trs-star.com/trsstar/prod/altera.html>.

The FPGA serves as a flexible prototyping vehicle. Map synthesized functions on real hardware, and then test them in the target systems. When all of the required functions are finalized, create the final microcontroller on the production device at a cost of only a fraction of the FPGA by using Altera's HardCopy® ASICs.

HardCopy ASICs support a cost-reduction path toward volume production. With HardCopy ASICs, you're protected from system obsolescence as well as system copying. If your system requires fewer features, you can migrate your design to Altera's low-cost, low-power Cyclone® III FPGAs.

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