Technical Article

If Seeing Is Believing… Surround Viewing Is Experiencing!

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Advanced Driver Assist Systems (ADAS) continue to expand across many types of automotive applications with various levels of functionality, and TI continues to provide scalable solutions to address them. A key ADAS application is surround view, which provides the driver and occupants with a 360 degree view of the vehicle's surroundings. This surround view generates a real time view of the vehicle's exterior such that the environment around it can be more easily observed, assessed, understood and acted upon (Fig 1).

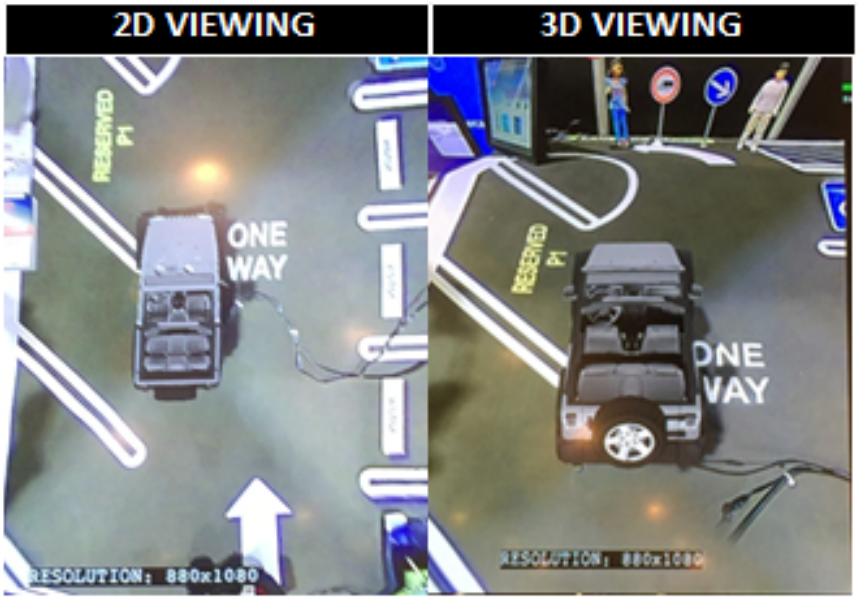

Fig. 1 - Surround View Examples

The examples above illustrate two-dimensional (2D) and three-dimensional (3D) surround views that can be readily implemented using the processing capabilities of TI's TDA2Eco offering. Building upon a strong history and expertise in digital signal and vision processing, the TDA2Eco extends TI's broad portfolio of devices targeted for Advanced Driver Assist Systems (ADAS) by providing another strong set of options for customers to choose from when considering their automotive ADAS line up. The TDA2Eco devices add compelling, cost effective price-performance points to TI's already extensive TDA product offering, which scales across a wide range of ADAS applications and enables customers to incrementally build out their ADAS offering based on an industry-leading heterogeneous architecture.

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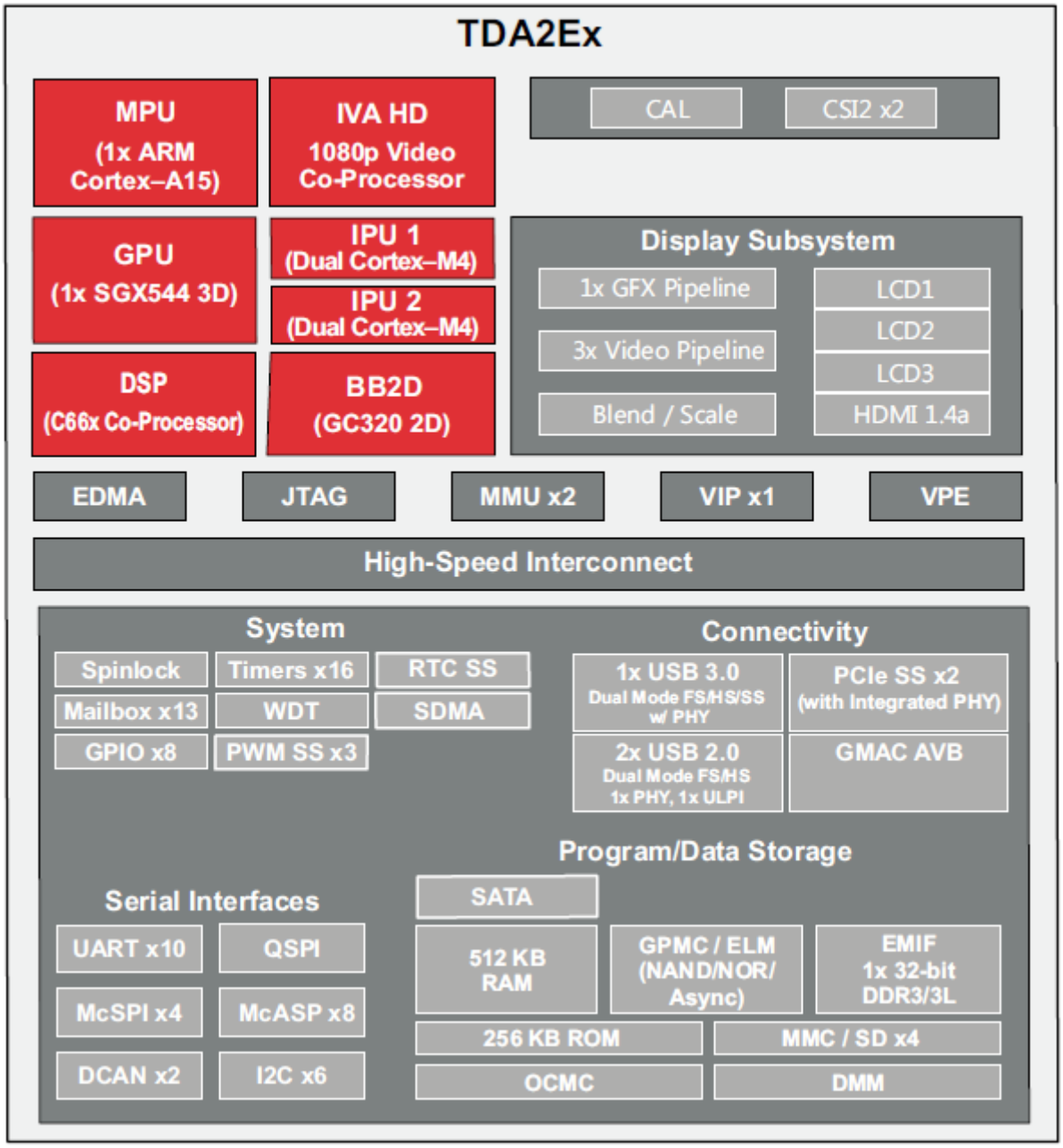

Developed with a well-balanced set of processing cores, this popular architecture enables the required visual processing to achieve both 2D & 3D surround views plus image storage for black box/recording applications and provisions for basic object detection and low-level autonomous functions. In addition to this solid heterogeneous processing architecture, the TDA2Eco provides a strong set of peripheral functions that apply to not only surround view applications, but other applications being staged for market release in the near-term and future as well. When coupled with TI's Vision Software Development Kit (SDK) and TI's broad catalog of automotive devices, a customer can successfully design, develop and deploy a very compelling surround view system and other Automotive ADAS solutions for many model years to come.

For additional insight into Texas Instruments' ADAS technology, please read the below information…

- Paving the way to self-driving cars with advanced driver assistance systems
- Advanced Driver Assistance (ADAS) Solutions Guide
- Empowering automotive vision with TI's Vision AccelerationPac
- TI Gives Sight to Vision-Enabled Automotive Technologies
- Making cars safer through technology innovation

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