

DESIGNCORE™ ADAS DEVELOPMENT KIT

Rugged Vision Platform (RVP) with Texas Instruments Automotive Processor

SPEED DEVELOPMENT OF VISION-BASED SYSTEMS

The DesignCore™ Advanced Driver Assistance Systems (ADAS) Development Kit shortens development time of vision-based systems for automotive, transportation, and materials handling applications.

The ADAS Development Kit is built on the DesignCore™ Rugged Vision Platform (RVP) family of reference design modules. The reference design modules contain advanced vision processors from Texas Instruments and run D3 Engineering’s advanced vision software frameworks.

READY TO USE

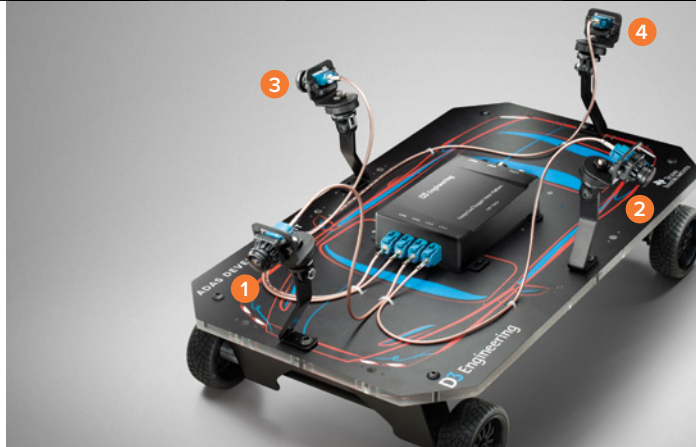
The ADAS Development Kit is ready to use right out of the box. It includes an RVP reference design module with TI processor (either TDA3x, TDA2Eco, or TDA2x), along with rugged camera modules, display, cables, software, and calibration tools.

Once verified on the wheeled test platform provided, the kit can be easily de-mounted and installed on your test vehicle.

FULL SUPPORT PACKAGE

The base support package includes optimized and verified hardware and software, providing a known-good launch point for design and development.

A single-use sublicense is included in the kit for all TI and D3 firmware and application libraries as well as frameworks that allow immediate development of ADAS applications. Software updates and access to releases are included for one year.



A fully functioning evaluation system speeds on-vehicle testing and development of multi-camera, real-time vision applications requiring intensive video analytics.

FEATURES

D3 Rugged Vision Platform (RVP) with TI Automotive Processor

Delivered running Surround View Application on wheeled test platform (can be easily de-mounted)

Four FPD-Link III camera modules

HD video display

FPD-Link, CAN, Isolated IO, Gigabit Ethernet, Serial/USB, uSD Card, and JTAG connectivity interfaces

Automotive 12VDC power

Compact, rugged packaging for on-vehicle testing

Ready for rapid development to your requirements

APPLICATIONS

Advanced Driver Assistance Systems (ADAS)

Front camera

Surround View

Surround View + car black box (CarBB)

Smart rear camera

Radar

Driver monitoring

Pedestrian detection

Traffic sign recognition

Traffic light detection

Lane detection

Camera monitoring systems (CMS)/mirror replacement

Automotive In-Vehicle Infotainment and Telematics

In-vehicle displays

3D navigation

High-definition multimedia

Autonomous Shipping and Transportation Systems

Materials Handling Systems

Video Analytics

Sparse/dense optical flow

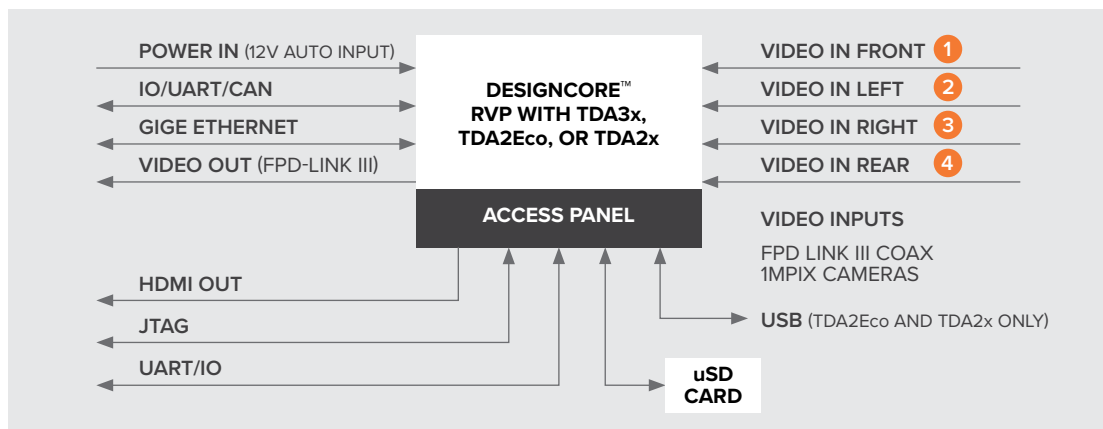
Edge detection

Structure from motion

Forward collision warning

Object classification

SURROUND VIEW USE CASE ON ADAS DEVELOPMENT KIT



SPECIFICATIONS

	Minimum	Nominal	Maximum	Units
SYSTEM INPUT CHARACTERISTICS				
Input Voltage	8	12	20	Volts DC
Input Voltage Protection		40	60 ¹	Volts DC
Input Reverse Voltage Protection			-20	Volts DC
Input Current (no cameras)	0.22	0.34		Amps
Input Current (cameras)		0.60		Amps

¹ Time limited, see component rating.

	TDA3x (2GB DDR3)	TDA2Eco or J6Eco (2GB DDR3)	TDA2x or J6 (4GB DDR3)
PROCESSOR			
Memory	512MB NOR, 512KB FRAM		8GB eMMC, 512MB NOR, 512KB FRAM
Camera Interface	4 × FPD Link III (CSI2)	4 × FPD Link III (CSI2)	8 × FPD Link III (Parallel)
Cameras	D3RCM line of Rugged Camera Modules. Other sensors integrated upon request.		
Connectivity	UART, CAN, ISO GPIO, Gbit Ethernet, uSD card, JTAG, QSPI, USB (J6/J6Eco), SATA (J6/J6Eco)		
Display	FPD Link III and HDMI		
Power	Automotive 12VDC		
Environment	Rugged enclosure with mount points Operating temperature -40C to 85C (105C option)		
Firmware	TI Vision SDK, TI Processor SDK, and D3 application framework		

For additional details please refer to the DesignCore™ RVP-TDA3x, RVP-TDA2Eco, RVP-TDA2x, and D3RCM data sheets.

ACCELERATE TIME-TO-MARKET

D3 Engineering will leverage our industry-proven DesignCore™ Platforms and Reference Designs to meet your unique product requirements, while minimizing technical- and schedule-risk for your development program.

ORDER A KIT: D3Engineering.com/store

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