

DESIGNCORE™ RVP-TDA2x DEVELOPMENT KIT



A rugged Development Kit in a finalized product form-factor lets you evaluate Advanced Driver Assistance System (ADAS) technology under realistic on-vehicle conditions.

Rugged Vision Platform (RVP) with TI TDA2x Automotive Processor

SPEED DEVELOPMENT OF AUTONOMOUS VISION-BASED NAVIGATION SYSTEMS

The DesignCore™ RVP-TDA2x Development Kit accelerates your development of autonomous vision-based navigation systems for automotive, transportation, and materials-handling applications.

The Development Kit is based on advanced vision processors from Texas Instruments and D3's advanced vision software framework. It enables synchronous acquisition of eight 1080p HD video streams with real-time vision processing and analytics.

Developed using a design-for-manufacture (DFM) process, the Development Kit has an optimized layout and BOM. With D3's design services, this Development Kit lets you concentrate on your value-add and get to market faster.

FEATURES

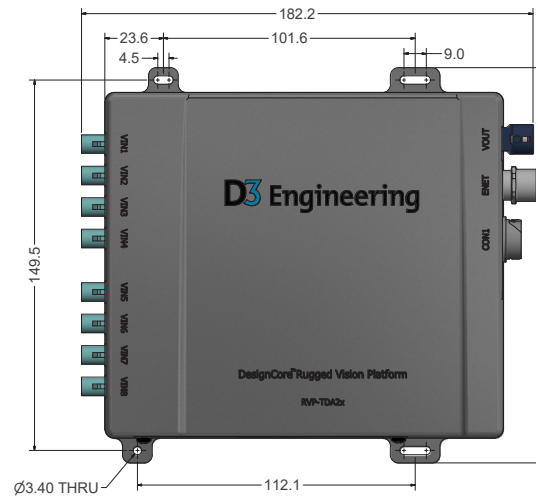
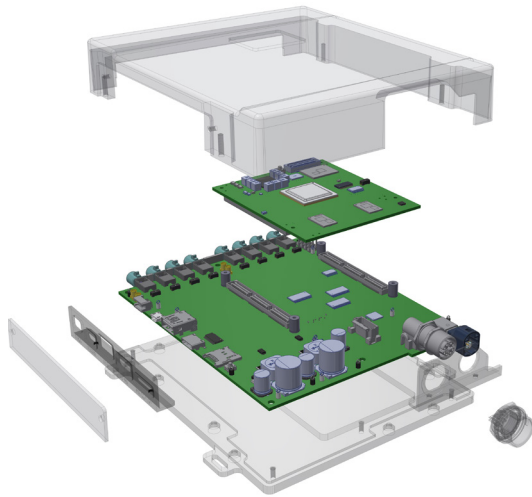
- Texas Instruments SoC Processor Options
- TDA2x SoC processor (default)
- DRA74x "Jacinto 6" processor (option)
- AM572x processor (option)
- Peripherals for Default SoC (may vary with SoC option)
- FPD-Link III video inputs (8)
- HDMI and FPD-Link III video display outputs
- Ethernet, CAN bus, USB3.0, and serial connectivity
- Compact, rugged packaging for on-vehicle testing

APPLICATIONS

- Advanced Driver Assistance Systems (ADAS)
- Front or rear camera
- 3D Surround View + car black box (CarBB)
- Radar
- Driver monitoring
- Camera monitoring systems (CMS)/mirror replacement
- In-vehicle Infotainment and Telematics
- In-vehicle displays
- 3D navigation
- High-definition multimedia
- Autonomous Shipping and Transportation Systems
- Autonomous Guided Vehicles (AGV)
- Collaborative Robotics
- Industrial Vehicle Systems

SPECIFICATIONS

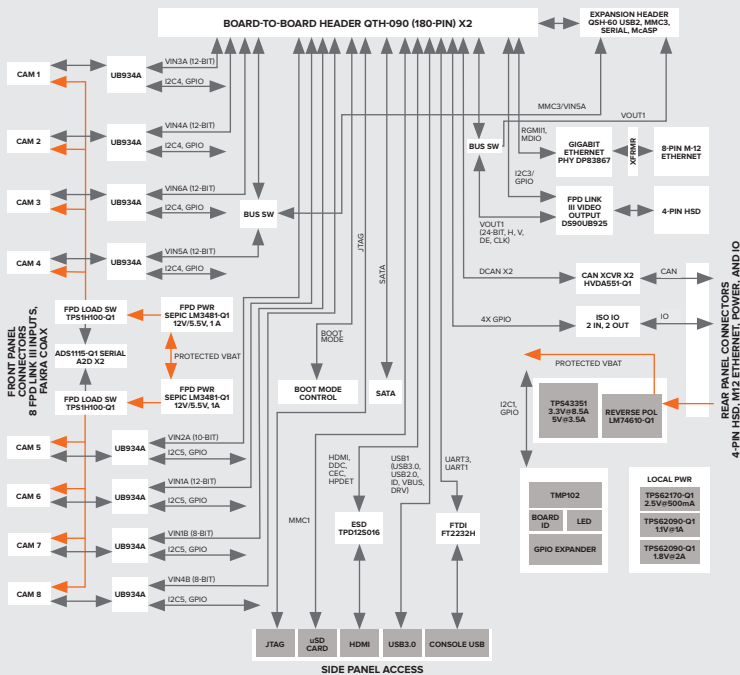
	TDA2x/J6 SoC	AM572x SoC
DDR	4GB + ECC	4GB + ECC
eMMC	8GB	8GB
QSPI	512Mbit	512Mbit
FRAM (EEPROM)	512Kbit	512Kbit
Ethernet Gbit (DP83867)	1	1
Video Ports Capture	8 parallel	8 parallel
Display	1 HDMI and 1 FPD Link (independent)	1 HDMI and 1 FPD Link (independent)
CAN	2	2
UART (USB to UART bridge)	1 USB bridge, 1 logic level	1 USB bridge, 1 logic level
uSD Card	1 external	1 external
Isolated IO	2 in and 2 out	2 in and 2 out
USB	1 USB3.0/2.0	1 USB3.0/2.0
SATA	1 internal	1 internal
A15 Core(s)	2	2
DSP Core(s)	2	2
IPU/M4 Core(s)	2 with 2 CPUs	2 with 2 CPUs
EVE Core(s)	2 with 2 CPUs	none
ISS Core(s)	none	2 with 2 CPUs
SGX 544 3D Accelerator(s)	2	2
GC320 2D Accelerator(s)	1	1
Ambient Temperature	-40C to 85C (enclosure)	-40C to 85C (enclosure)
Component Temperature	-40C to 85C (eMMC limited)	-40C to 85C (eMMC limited)
Power	9V to 40VDC with reverse bat	9V to 40VDC with reverse bat
BSP	D3 software frameworks/ Linux + TI BIOS Vision SDK	D3 software frameworks/ Linux + TI BIOS Processor SDK
Expansion	I2C, UART, SPI, 3X 8bit MMC, USB2.0, McASP, parallel camera	I2C, UART, SPI, 4X 8bit MMC, USB2.0, McASP, parallel camera
JTAG	60 pin and 14 pin with adapter	60 pin and 14 pin with adapter
Enclosure	Rugged aluminum	Rugged aluminum
Access Panel	14 pin JTAG, USB/UART, uSD card, HDMI, USB3.0/2.0	14 pin JTAG, USB/UART, uSD card, HDMI, USB3.0/2.0



Measurements in mm

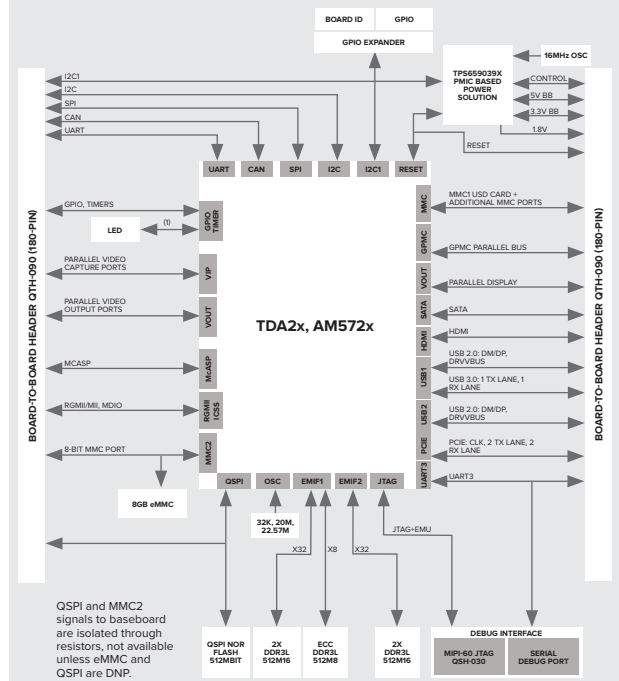
The RVP Development Kit features an optimized SOM board with advanced vision processor, firmware, and a customizable baseboard with IO, power, expansion interface, and more. We use the Development Kit to rapidly develop your Engineering Verification Test (EVT) unit.

TDA2x BASEBOARD



TDA2x SOM

Signals going to baseboard not necessarily connected to board-to-board connectors as shown. Processor breakout will dictate which peripherals are on which connector. Peripheral availability is subject to application's pin mux. All processor signals are brought to the board-to-board interface.



ACCELERATE TIME TO MARKET

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

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