



IDAPT - IDIADA CAV Platform Tool

IDAPT is a multi-purpose, flexible OBU development tool for connected and autonomous prototyping and development activities.

IDAPT integrates the NVIDIA Jetson platform, with a selection of modular connectivity and positioning technologies with standard and emerging automotive I/O inside one safe and reliable tool.

IDAPT provides the ability to "retro-fit" connected vehicle capabilities into an existing system for your prototyping / development needs. With its modular design, components can be removed / upgraded as required. IDAPT also provides the ability to startup without any user interaction using 3 different mechanisms: wake on CAN, wake on ignition and wake on rtc (configurable specified time).

IDAPT is an ideal development tool for:

- ✓ ADAS & CAV Field Operational Test (FOT)
- ✓ Connected vehicle projects
- ✓ V2X application development
- ✓ Cyber-security development
- ✓ Camera imaging and object detection
- ✓ Automotive IoT prototyping
- ✓ Sensor development (LiDAR, RADAR)
- ✓ Automated vehicle controls
- ✓ Machine learning algorithm development
- ✓ Prototype datalogging

Nominal vehicle supply (V _{BATT})	12V or 24V, full operation 9 – 32V
Operating temperature range	-40 to 80°C
Internal battery capacity	2600mAh
Operating time, internal battery (light / typical / heavy)	3 hours / 1 hour / 30 mins
Main processor CPU GPU	NVIDIA Jetson TX2: Dual Denver2/2 + Quad ARM® A57/2 NVIDIA Pascal™, 256 CUDA cores
Safety processor	Infineon Aurix TC234LP
GNSS module	NVS Technologies NV08C-RTK
IMU	Invensense IGM-20602 or optionally Analog Devices ADIS16460
V2X module	Unex VTX-201 (Autotalks DSRC) Support for C-V2X expected mid-2019
Cellular modem (4G)	Ublox Toby L210 (mini SIM)
Data storage	SD Card + (optional) M.2 internal Solid State Disk

IDAPT Software Features

- Ubuntu 16.04 (Linux development environment)
- ETSI G5 communications stack – V2X
- OpenCV
- RTK-corrected GNSS positioning
- ROS
- OpenCL
- NVIDIA CUDA, TensorRT
- Qt
- Caffe

Front Panel Connectivity



Vehicle communications	7 x CAN 2.0 (2 channels wake-on-CAN) 2 x BroadR-Reach
Vehicle I/O	Ignition key input Up to 8 analogue inputs Up to 8 digital inputs Up to 8 x 1A low-side outputs
Safety relay(s), driven by both processors	High-side output (2A) Low-side output (2A)
Computing connectivity	USB 2.0 + USB 3.0 Mini-HDMI video out Gigabit Ethernet Bluetooth WiFi 802.11ac Cellular 4G (LTE) RS-232
Camera inputs	6 x GMSL2
Real time clock	1 x Real time clock (configurable)

Contact information

 **Applus IDIADA UK** • Cecil TC Building, Cambridge Road, Milton, CB24 6AZ

 For further details, please contact:  idiada_UK@idiada.com  T +44 (0) 1223 441 434

Follow us on:



YouTube

www.idiada.com