

The best
technological
platform for R&D and
autonomous system
testing



BARO CAV-P *AUTONOMOUS PLATFORM*



HUMAN - MACHINE
INTERFACE



SPECIAL
NETWORKING



ADVANCED
FRAMEWORK

ABOUT

Baro CAV-P is the most **advanced framework** in the market specifically designed to develop autonomous vehicles and robots. This platform is a great option to whom develops software for next-generation cars and to be used as the main structure of low-speed autonomous vehicles.

A complete chassis, with the **ultimate engineering** ready to install stand-alone software, includes a new human-machine interface with a **joystick** connected to an artificial brain for manual driving and a **tablet** that provides a visual interface integrated with the system.

GENERAL SPECIFICATIONS

PROCESSOR

BARO Brain Main Computer (NVIDIA Module)

NETWORKING

- CAN-FD with encryption 5 mbits and compatible CANBUS with 1 Mbit/s
- BUS Ethernet Gigabit

PERCEPTION

- 3 Cameras FLIR with SONY sensor
- 2 Radar operating at 68-71 gigahertz in front and rear connected by CAN-FD
- Optional LiDar 16/32 Beams with 360-degree coverage
- GPS Ublox and IMU

HMI (HUMAN MACHINE INTERFACE)

- Joystick connected with CANBUS
- Tablet 12" with graphical software to show how the car is receiving the information.

MECHATRONIC

- BARO Drive-by-wire system with CAN-FD interface and steering angle sensor
- Digital Pedals to control the accelerator and brake with CAN-FD Interface and speed sensor
- Lights controller with CAN-FD Interface

POWER SUPPLY / DRIVE TRAIN

- Motor: Permanent magnet axial flux DC
- Output rating: 8.6 kW
- Batteries: Lithium-Ion pack with BMS
- Transaxle: Oerlikon Graziano - Two step reduction



MECHANICAL PLATFORM

- Steering: Rack and pinion with the electric motor. Drive by wire system
- Front suspension: Double wishbone suspension, with automotive parts and coil overs
- Rear suspension: Rear axle mounted with trailing links, Panhard bar and automotive shock absorbers/coil springs
- Service Brake: Regenerative braking system
- Parking Brake: Automatic Electro-Magnetic & Brake Drums

Other OEM Products

DRIVE-BY-WIRE SYSTEM

The drive by wire system has no connection to the steering wheel, it is a special development for use in cars without steering wheels. The digital mechatronic system includes an exclusive CAN-FD communication system to control the vehicle direction and sensors to receive the most accurate position of the wheels.

DIGITAL PEDALS

The electronic board connects directly to the main motor controller, sending the CAN-FD signals required to accelerate and brake, and this product offers the connection to the electromechanical brake system. It is also possible to obtain the speed of the vehicle because it has a tachometer to know if the vehicle reaches the required speed.

BARO BRAIN MAIN COMPUTER

NVIDIA Module, which can be updated to 4 NVIDIA Modules if it is necessary to improve the software to have more COREs, to process the AI algorithms. This BRAIN has a CAN-FD connection to control the mechatronic system and the Gigabit Ethernet connection to receive the information from the cameras.