

Building the bridge to autonomous vehicles

3120

# **DRIVE BY WIRE**

For driveless cars

## **ABOUT DRIVE BY WIRE**



The **BARO Drive by Wire** system provides an ARM Cortex M4F processor running at 120 MHz that offers a powerful speed to process all the commands received from the main computer to move the steering wheel. The system consists of 2 encoders working together to obtain the maximum accuracy of the wheel position. The software is compatible with Arduino (with an IDE modified for this specific processor), besides that you are able to modify the steering system parameters or rebuild the software completely. The technology used was considering the cybersecurity in the CANBUS backbone, offering encryption in the data transfer without compromising system speed. Lastly, the motor driver controller is powered by the VNH5019A-E driver offering a system to prevent over-voltage effectively.

#### Dimensions











## **DRIVE BY WIRE SYSTEM**



- Designed to program using a USB Connection
- The system knows the wheel position with high accuracy and in real-time
- Redundancy for the communication with 2 encrypted lines CAN-FD
- USB Port to program or debug- Arduino Compatible
- Fully Programmable

## MECHATRONIC

- Starting torque: 695 lb.in (8kg.m)
- Speed: 100 rpm
- Current: 6.65 Amps
- IP Motor: IP44•
- Steering box ratios allowed: Up to 4 turns (lock to lock)



If you have any questions, reach us out at:

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