

# RA Ecosystem Partner Solution

## Chakra Vehicle Control Unit Solution



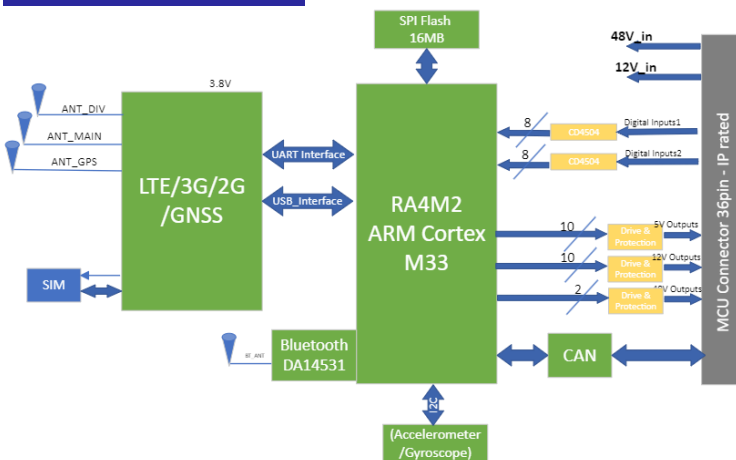
### Solution Summary

Chakra Vehicle Control Unit is low-cost, high performance, customizable industrial grade solution for two-wheel e-mobility applications. The unit can also be used for telematic applications. ODM support can be provided to end customers. Out-of-box support is now available for the [Renesas RA4M2](#).

### Features/Benefits

- Provides most efficient IoT solution to monitor the live location, battery state of charge (SOC) and alert notification for theft & accidents
  - Integrated with made in India LTE Cat 1 module
  - Supports GNSS and BLE 5.0
  - Free RTOS with OTA options
- Monitors and controls EV I/Os for headlight, indicators, engine modes, battery, display, break status and sensors
  - 25 Digital I/Os and Isolated CAN 2.0 with various protections
  - Operating range of 5V to 15V
- Robust protection for over voltage, short circuit, over current, reverse voltage, over temperature and tamper proof

### Diagrams/Graphics



### Target Markets and Applications

- Two wheelers
- Telematics

CHAKRA is an electronic products company. Chakra Design, develop and Manufacture core electronic components industrialized for reliability, local regulations, and sustainability.

Chakra is working with leading semiconductor companies to bring latest Semiconductor innovation for the EV Market

Chakra EV/Mobility product portfolio includes Vehicle Control Units, Smart Clusters, Software driven Smart BMS, Smart Drives, Chargers & Charging stations. Chakra bring expertise in AI and cloud support for Autonomous vehicle information, Last mile connectivity and vehicle to cloud solutions..



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**30 years**

Industrial Experience



**INDIA**



[www.chakraelectronic.com](http://www.chakraelectronic.com)



**2+**

Global Clients

Chakra is also building variants of VCU and other EV products, which will cater to both high- and low-end two-wheeler segments.

Chakra also has supporting software for VCU including cloud connect and android app. The app and Cloud connect works on HTTP/MQTT protocol while android app has option to connect to VCU using GSM(LTE) with SMS and Bluetooth pairing.

Chakra's next generation VCU will have a provision drive to a Display Cluster. The VCU will be high reliable IP67 compliant with automotive standards.

Chakra is also working on other EV/Mobility products which includes IP67 compliant wide range battery input supported 30V-90V DC-DC converter which has capabilities to load up to 10A. Also building Industry leading battery management system which supports both Active and passive cell balancing with options for different battery chemistry and voltages, BMS has a wide input range and can drive up to 180A. Chakra is also working on fast charger of 1KW

[Contact – Chakra Electronics](#)