

RA Ecosystem Partner Solution

Chakra Display Cluster



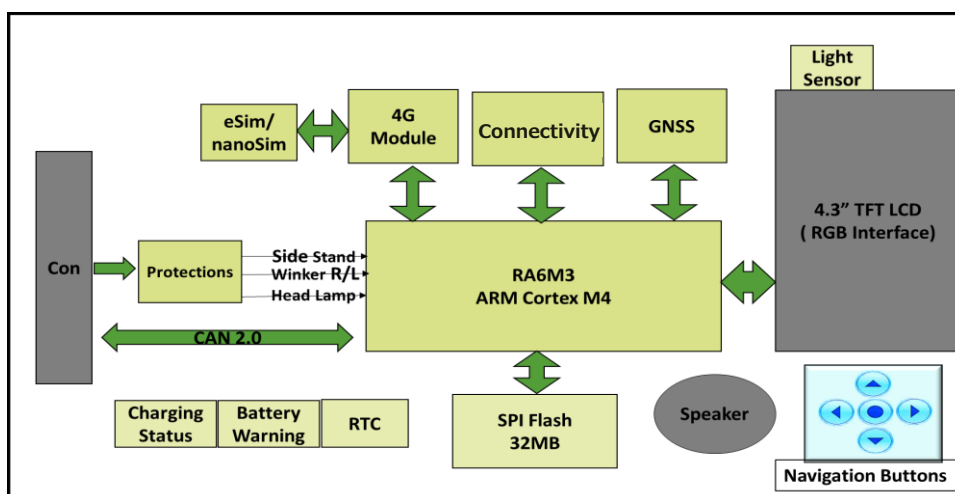
Solution Summary

Chakra Display Cluster helps users develop low-cost, high performance display unit designs on [Renesas RA6M3](#) for electric bikes and scooters. This 4.3" instrumentation cluster is a user dashboard displaying various parameters for riding status. Supports IoT interfaces with integrated wireless modules for Wi-Fi/Bluetooth/Bluetooth LE and 4G LTE with GNSS (Global Navigation Satellite System).

Features/Benefits

- Displays various parameters: Engine mode, battery status, motor speed, RPM, range, trip status, and warnings
- Robust protection features: Over voltage, short circuit, over current, reverse voltage, over temperature and tamper proof
- Various wireless interfaces
 - Integrated with Made in India LTE Cat 1 Module
 - Supports GNSS with Battery backup
 - Wi-Fi, Bluetooth LE and Bluetooth navigation and audio
- Free RTOS with CAN and FOTA

Diagrams/Graphics



Target Markets and Applications

- Electric bikes and scooters
- 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



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](#)