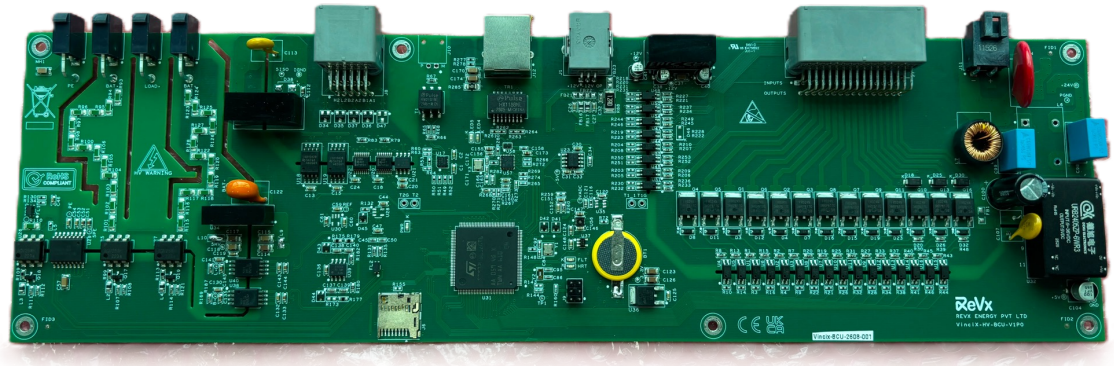
ReVx Energy

VinciX-BCU

Battery Control Unit



FEATURES

- Scalable and Modular **High Voltage** architecture for **BESS**
- Multiple Protocol Interfaces **CANFD, RS485, BLE, Wi-Fi, 100Mbps HSE**
- On Board **HV Sensing** and **Insulation Monitoring** Circuit
- **Four slave versions:** 18S LMU, 54S BMU, 108S BMU & 108S LMU
- **ISO 26262** Compatible Architecture and **SIL 2** Capable System with BMUs
- Real-time Pack **SOC**, **SOH** and **SOE** Computation with High Accuracy
- Field Upgradable Firmware: **OTA** Supported
- Compatible with **TuringX** for Live Tracking, Monitoring, Configuring and Logging

APPLICATIONS

- Electric Bus
- Electric Truck
- HV Energy Storage

KEY SPECIFICATION

Parameters	Specifications
Input Voltage	9V - 75V [Configured Based on requirement]
Number of Slaves Supported	22 Slaves through isoSPI / 30 BMU through CANFD
Compatible Slaves	18S LMU, 36S BMU, 54S BMU, 108S LMU, 108S BMU
Data Storage	On Board SD Card
Number of CAN Channel	2 Isolated Channel CAN FD
Number of RS485 Channel	2 Isolated Channel RS485
Number of UART Channel	1 Isolated Channel for Wi-Fi BLE Module, GSM Module
Number of Ethernet Channel	10/100 Mbps High Speed Ethernet
High Voltage Measurement Channel	2 Channel
High Voltage Measurement Range	0V - 1800V
High Voltage Measurement Accuracy	±0.5%
Insulation Monitoring	Insulation Monitoring on Battery Terminals and PE
Insulation Monitoring Accuracy	±2%
Number of Current Measurement Channel	1 up to ±1000A
Current Sensing Accuracy	±0.5%
Current Measurement Interface	Hall Effect Current Sensor Supports both Unipolar and Bipolar Power Supply up to 600mA for Sensor Supports both Open Loop and Closed Loop Current Sensing
High Current Outputs	15 Low Side Channel for Contactor and other Outputs
General Purpose Input	15 Low Side and 1 High Side Channel for Sensing Inputs
Temperature & Humidity Sensor	2 Thermistor Channels for External Temperature sensing On-Board Humidity and Temperature Channel
MCU Features	250MHz Arm Cortex M33 Trust Zone with Tamper Detection and Cryptographic peripherals
Safety Features	HVIL, Contactor weld detection and Insulation Monitoring
Protections	Cell and Pack Under voltage, Over voltage, Discharge and Charge Over Current, Discharge and Charge Over Temperature, Under Temperature, Short circuit, and Regen protection
Compliance Compatible	IEC 62933-2, IS 17387:2020, IEC 61000-4 All Parts, AIS 004 Part 3
Operating Temperature	-20 °C to +85 °C
Dimension	350 * 100 * 20 mm [L*W*H]

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