KESENS

整车控制单元
Vehicle Control Unit



产品介绍 Product Description

凯晟整车控制器（VCU）是针对新能源商用车及专用车设计的高集成度控制核心，它具备强大的热管理能力，支持多路温度模拟（AD）采集、水泵与风扇PWM调速及空调控制；同时涵盖扭矩与驾驶模式管理、高压互锁安全检测，以及商用车特有的上装控制（如取力器PTO、电磁阀低边驱动）。其硬件接口丰富，集成了高/低边驱动、模拟量与PWM信号采集，并支持CAN/CAN FD与LIN总线通信，全面满足整车复杂的控制与通信需求。

The KESENS VCU controller is a highly integrated control core designed for new energy commercial vehicles and special-purpose vehicles. It features robust thermal management capabilities, supporting multi-channel analog (AD) temperature acquisition, PWM speed control for water pumps and fans, as well as AC control. It also covers torque and driving mode management, high-voltage interlock (HVIL) safety detection, and upfit controls specific to commercial vehicles (such as Power Take-Off (PTO) and low-side drive for solenoid valves). With its rich array of hardware interfaces, it integrates high/low-side drivers, analog and PWM signal acquisition, and supports CAN/CAN FD and LIN bus communications, comprehensively meeting the complex control and communication demands of the entire vehicle.

产品功能 Product Function

- 车身动力控制
  Body power control
- 扭矩综合解析管理
  Integrated torque analysis and management
- 混动发电系统控制
  Hybrid power generation system control
- 热管理系统控制
  Thermal management system control
- 4路CAN通讯接口
  4 CAN channels
- 1路Lin通讯接口
  1 LIN interface
- 防护等级为IP67
  Protection grade: IP67
- 尺寸 214×150×45 mm
  Size 214×150×45 mm
- 工作电压电压 9~16 V
  Operating voltage 9~16 V
- 工作温度 -40℃~125℃
  Operating temperature -40℃~125℃

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产品优势 Product Advantages

- 充足信号输入检测通道
  Sufficient signal input detection channels
- 可切换的工作模式
  Switchable operating modes
- 客户定制的系统解决方案
  Customized system solution
- 热管理与能量管理集成
  Integrated thermal and energy management
- 模块化的开发确保交付品质与速度
  Modular development to ensure delivery quality and efficiency
- 成熟可靠的软件架构
  Mature and reliable software architecture

产品特性 Product Features

- 32位高性能主控芯片
  32 bits high performance MCU
- 提供客户化的SW-Sharing接口层，API和变量
  Provides a customized SW-Sharing interface layer, APIs, and variables
- 底层软件及软件集成环境满足AUTOSAR4.2以上要求
  Basic software (BSW) and software integration environment comply with AUTOSAR 4.2 or higher
- 支持XCP/ETK协议
  Supports XCP/ETK protocols
- 提供CPU负荷监控
  Provides CPU load monitoring
- 供电模块功能安全等级满足ASIL C
  The functional safety level of the power supply module meets ASIL C
- 支持报告故障诊断和UDS协议
  Supports fault diagnostic reporting and UDS protocol

可根据客户需求定制产品，如有需求请联系我们。
Customized products available upon request. Contact us for details.

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