DANA OPEN ECU™ EMBEDDED CONTROL

CCU
OpenECU™ Charge Control Unit

Enabled by MATLAB® & SIMULINK® MathWorks

Key Features

- Standalone EVCC for integration with xEV hybrid and battery electric powertrains, including battery and plug-in hybrid electric
- Designed to meet ISO 26262 up to ASIL B functional safety requirements
- Developed according to ISO21434 with integrated HSM(I) to support latest cybersecurity requirements
- 36-pin connector with flexible I/O
- DC fast-charging PLC communication interface onboard
- OpenECU Simulink and C-code development environments available
- Enables custom application software written by customers

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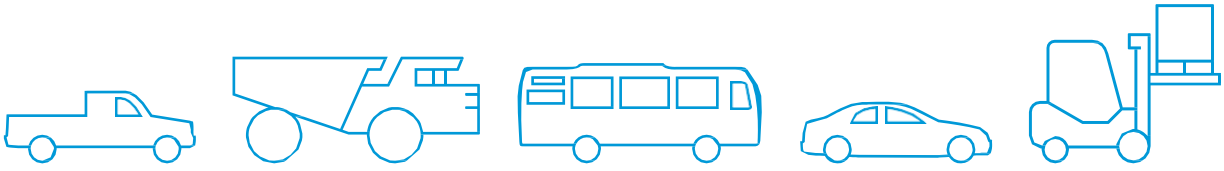
High Performance

- Powerful Infineon Aurix microcontroller
- 2x CAN-FD
- PLC communication onboard according to ISO 15118
- Power Inlet I/O: PP signaling; lock actuator h-bridge output; lock position feedback input; 3x PT1000 inputs
- 3x high-side LED outputs
- Comprehensive fault diagnosis supporting functional safety as well as OBD requirements

Ideal for light, commercial, and off-highway vehicles.



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Capable

- Designed for xEV charging control applications
- High-quality rugged hardware designed for EV chassis mount
- ISO 15118-2 CCS, ISO 15118-20, DIN 70121, SAE J1772
- Supports common calibration tools such as ATI Vision, and Vector CANape via CCP in addition to the in-house OpenECU Calibrator™ calibration tool
- Same proven hardware used for development can be used for volume production

Capabilities			
Highlights		**I/O Summary**	
Processor	TC387	**Sensor Supplies**	1x 5V @ 250mA
Clock Rate	300 MHz	**Input Pins**	9
Code Space	up to 3MB	**Output Pins**	21
RAM Space	up to 672kB	**External Communication**	2x CAN-FD
Calibration Space	up to 512kB		
Inputs		**Outputs**	
Digital Inputs (sampled)	Up to 3x	**H-Bridge (includes current feedback)**	1x 5A (PWM)
		Low-Side Drive Outputs	2x
Analog Inputs (12bit, 5V, Battery)	6x (3x PT1000)	**High-Side Drive Outputs**	5x 20mA
Internal Features		**Physical**	
Partial Networking	2x Wake on CAN	**Dimensions**	163x160x40mm (WxDxH)
Wake on ignition input	(dedicated pin for wakeup)	**Material**	Aluminum
Proximity and Command Pilot pins	(w/ PLC communication and wake-on-plugin)	**Weight**	570g
Application		**Connectors**	Molex 36-pin
Location	Chassis mount	**Vibration**	ISO 16750 chassis mount
Supply Voltage	9 - 32V	**Environmental Protection**	-40° to +80°C ambient; ambient; IP69K Sealed / Gore vent

Notes:

I. Full feature set of base software to allow vehicle manufacturers to satisfy UN R155 and R156. Base software compliant with ISO 21434. Offering Secure Boot, Code Signing, Enhanced Security Lifecycle, HSM Secure Firmware Update, Secure Keystore, Security Access, Secure Logging, etc.

II. The CCU is designed to support xEV applications worldwide, and provides an upgrade path for vehicles lacking modern charging interfaces in their existing systems. Engineering support and development available upon request to support from prototype to production.

III. Supports common calibration tools such as ATI Vision, and Vector CANape via CCP in addition to the in-house OpenECU Calibrator™ calibration tool

IV. Inputs are highly configurable. See pinout template and technical specifications for details. Output diagnostic signals can be used as inputs if output channels are not used.

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