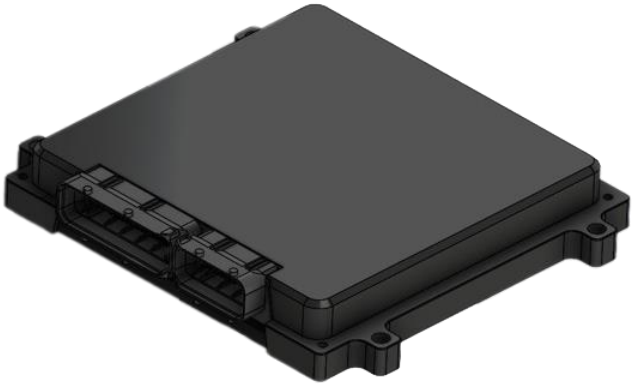
ENVCU121-4C055I035O

Vehicle Control Unit – VCU with CCS



Product information:

The vehicle controller is successfully used in electric or hybrid vehicles. The controller is responsible for passenger safety and comfort. Advanced control algorithms and a parametric vehicle model allow for configuration of various parameters, including vehicle dynamics, speed limits, and regenerative braking. Additionally, the controller features an embedded microcontroller tasked with overseeing vehicle operations to enhance safety. It also includes a built-in charge controller with support for the CCS2 standard (ISO15118, DIN 70121, Type2), reducing the number of devices required in the vehicle.

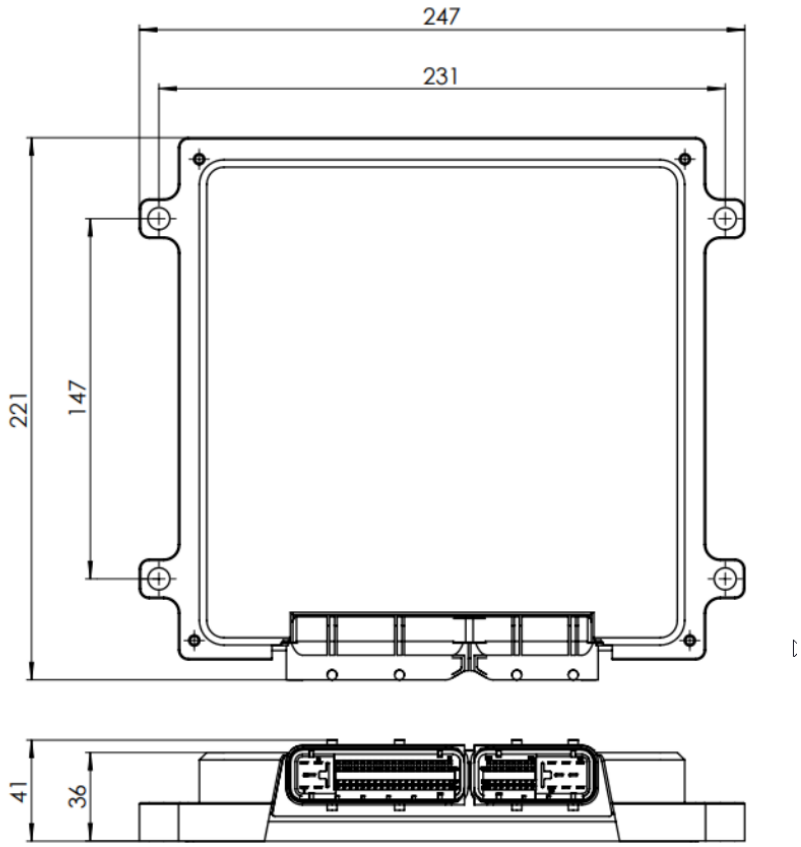
Functionality:

- Fast microcontroller
- 60 input/output pins
- 30 analogue inputs
- Supervisory microcontroller
- TE 121 pin connector
- CAN wake-up call
- Reverse polarity protection
- Current measurement of all outputs
- Parametric vehicle model
- Compact design
- Power supply over a wide voltage range (9-32V)
- Support for 4 CAN buses (2xCAN FD/CAN HS, 2xCAN HS)
- Communication with AC and DC charging stations (CCS2)

Technical specifications:

Parameter	Value
Main controller	STM32H7, Flash 2MB, RAM 1 MB, 400 MHz
Supervising controller	STM32F4, Flash 1MB, SRAM 192 kB, 168 MHz
Programming	Bootloader, CAN update
Waking up the controller	2xHSDIN, 1xLSID, CAN1, CAN2, CCS2
Input voltage range	9 – 32 VDC

CAN Buses	CAN1 FD/HS waking up by any frame, CAN2 FD/HS waking up by particular frame, CAN3 HS, CAN4 HS
Charging service	CP, PP, PE, PLC communication, AC or DC charging
Number of 5V power outputs	2x possibility of turning on and off
Analog inputs	30x16 bits 0 – 32 V
Digital inputs (0 – 32 V)	15xLSDIN, 5xHSDIN
Digital inputs PWM (0 – 32 V)	5xLSDIN
Digital outputs (0 – 32 V)	10xHSDOT 3A, 15xLSDOT 2,2A
Digital outputs PWM (0 – 32 V)	10xLSDOT 0,7A
H bridges	4x2,5A
Level of protection	IP67
Ambient temperature	-40 ~ +75
Storage temperature	-40 ~ +70
Humidity	≤95, RH, without condensation
Cooling	Passive
Dimensions	221 x 247 x 41



* the manufacturer reserves the right to make changes to the parameters and appearance of the product