M250 OpenECU

The M250 module is a compact electronics module that is suited to computationally intensive applications requiring a chassis mounted, sealed metal housing with IP67 environmental protection.

Based on the same Freescale MPC5534 32-bit microcontroller as the M460, the M250 features 2 CAN interfaces, precision analogue 12-bit inputs and configurable high current switching outputs. A group of inputs and outputs are particularly suited emissions control applications with appropriate sensor signal conditioning and drive

BUILD OPTIONS

At additional cost it is possible to build options that will modify the hardware specification within certain limits.

CUSTOM VARIATIONS

Pi Innovo engineering services can rapidly develop custom ECUs based on the resusable block designs within OpenECU.

OPTIONAL CAPABILITIES

- Daughter card slot

Provision for:

- 128K EEPROM
- Wakeup from CAN interrupt
- Secondary microprocessor

TYPICAL APPLICATIONS

- Diesel exhaust after-treatment control
- Chassis control
- Computationally intensive ancillary controls
- Control with high current switching capability
- Diesel engine management when coupled with the S070 slave fuel injection driver
- Transmission control

DEVELOPMENT TOOLS

- Simulink™/RTW based development platform
- Simulink™ RTW-Embedded Coder blockset, as well as a C API function library to support C-language implementation of code (or TargetLink™)
- Reprogramming via CAN using CCP
- Calibration: ATI Vision™ or ETAS INCA™
- Processor JTAG port accessible internally

M250 OpenECU

Hardware Specification

Status	Released
Processor	MPC5534
Clock Rate	80MHz
Code Space	512KB
RAM Space	64KB
Calibration Space	256KB
I/O Summary	VM = Voltage Monitor
Actuator Supplies	1x 20A
Sensor Supplies	2x 5v@250mA (VM)
Input Pins	20
Output Pins	11
Communications	2x CAN 2.0
Analogue Inputs	
Single-Ended	6x 12-bit unsigned (+ 6x selectable from #)
RTD Sensor	7x 12-bit unsigned
Digital Inputs	
Ignition Sense	1
Digital, Frequency, PWM	6x 0V to Vpwr (#)
Digital Outputs	GP = General Purpose; SM = State Monitor; VM = Voltage Monitor; CM = Current Monitor; CTM = Current-Trip Monitor
H-Bridge or 2x High/Low Side (SM, VM, CM, CTM)	2x 8A
Low Side GP, PWM (SM, VM, CM, CTM)	1x 10A 1x 2A (= 3x 5A selectable from $)
Low Side GP, PWM (SM, VM)	1x 500mA
Low Side GP, Injector (SM, VM, CM)	3x 5A peak/2A hold ($)
Internal Features	
	Daughter Board slot
Optional Features (hardware provision only)	
	128K EEPROM Watchdog processor CAN Wakeup
Physical	
Dimensions (mm)	186 x 116 x 42
Material	Aluminum
Weight	0.72 Kg
Connectors	1x 46
Vibration	TBC
Environmental Protection	IP67
Application	
Location	Under-hood/Chassis
Supply Voltage (normal operation)	6.5 - 36V

Summary indicative information only - please refer to Technical Specification documents for precise details