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ECT-C12000

ENGINE CONTROL UNIT



SPECIFICATIONS

- Model-based design.
- J1939 compliant CAN-Bus communication.
- Light, Medium and Heavy Duty Commercial Vehicles.
- ISO 26262 ASIL-B compliant design.
- Calibration and Diagnosis Functions.

APPLICATION

- Torque and Quantity-Based Control Strategy.
- Engine Protection Functions.
- Injection Control.
- Turbocharger Boost Pressure Control.
- Rail Pressure Control.



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- Diesel engine management up to 2.000 kW
- Common Rail – Injection up to 12 Cylinders

- Applications: Locomotives, Ships, Main Battle Tanks, Offroad Vehicles
- Low cost – Control Unit

HIGHLIGHTS		I/O SUMMARY	
Processor	NXP MPC5554 32-Bit MCU	Sensor Supplies	5/12/24 VDC, 8 – 33 VDC
Clock Rate	132 MHz	Input/Output Pins	3 connectors with high pin density, 186 pins
RAM Space	64 KB on-chip static RAM		
Cache Space	32 KB	Communication	2 CAN interfaces

INPUTS		OUTPUTS	
Digital Inputs	16	Digital Output	8
Pressure Inputs	16	Current Output	4
Temperature Inputs	14	IO Injector Output	12
Speed Inputs	6	I/O Safety	All inputs and outputs are overvoltage proof, polarity protected and short circuit proof.
Lambda Input	1		
Airmass Input	1		
CAN-Bus	2 x ISO / DIS 11898		

INTERNAL FEATURES	
Programmable Injector, J1939 UDS Supported, CCP/XCP supported	

PHYSICAL			
Dimensions	285 x 218 x 43 mm	Humidity	RH 95%(+60°C)
Housing Material	Aluminium 6061	Housing Temperature	-30...85 °C
Weight	About 2,3 kg	Shock	40g, 11ms – half-sine
Connectors	AMP plastic connectors	MIL-STD 461F	Compliant
Vibration	2 g, < 200 Hz, engine mounting with vibration dampers	MIL-STD 1275E	Compliant
Protection Grade	IP 67	MIL-STD 810G	Compliant

ENGINE APPLICATION	
Supply Voltage	12/24 VDC, 8 – 33 VDC
Supported num. of Cylinders	12
Injector Type	Solenoid injectors
Control Strategy	Torque / Quantity based
Injector Timing	Pilot and main injections available
Calibration Tool Support	The Application Program is a Commissioning. Operation, Calibration and Diagnosis Tool. (ATI Vision support is available)