

Delphi MT80 Engine Control Module

The Delphi MT80 Engine Control Module (ECM) is an electronic device that assists the control of a vehicle's engine management system by instantaneously measuring multiple events enabling "real time" adjustments of fuel, air and spark to help the engine operate efficiently, reliably and economically. The MT80 ECM offers manufacturers a flexible, full-function solution for engine control, especially for those programs that must meet stringent emissions and On Board Diagnostics (OBD) standards, including:

- U.S. PZEV and SULEV
- Korean KULEV
- Euro 3, Euro 4, Euro 5 and Euro 6
- European On Board Diagnostics (EOBD)
- U.S. OBD-I and II

The Delphi MT80 ECM features an up-integrated design that reduces weight and wiring and its small package size enables passenger compartment mounting. The robust design of the module also enables under hood mounting. Its flash programming provides in-vehicle memory updates.



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► Benefits

- High featured, low cost controller includes 32-bit, 66 MHz RISC microprocessor with up to 1.5 MB flash memory that enables high-speed processing and in-vehicle memory updates, advanced valve train functions and compliance with new emissions and diagnostics standards around the world. Software and microprocessor can be configured to meet customer requirements.
- Small package size uses a standard FR4 circuit board enabling mounting flexibility and manufacturing alternatives. Waterproof design also allows packaging options.
- Dual connector offers optimized design.
- Electronic fuel control enables 4-cylinder sequential fuel injection applications.
- Electronic spark control enables 4-cylinder sequential spark applications, with or without high current coil drivers in the ECM, or waste spark ignition.
- Digital Signal Processing (DSP) provides knock control.
- Advanced valve train functions include: Linear Exhaust Gas Recirculation (LEGR), Charcoal Canister Purge (CCP), Dual Independent Cam Phasing (DICP) and Variable Geometric Intake Solenoid (VGIS).
- Includes capabilities for cruise control, model-based algorithms and flexible fuel programs.
- Engine and chassis connector separation with 133-way (73 + 60) connection system.
- Idle air control with stepper motor idle air control (IAC) or DC motor electronic throttle control (ETC).
- Serial communication flexibility with Controller Area Network (CAN), KW2000 or GMLAN.

► Typical Applications

The Delphi MT80 Engine Control Module is designed to support most 4-cylinder multi-port fuel injection gasoline engine programs. The controller is compatible with compressed natural gas (CNG) and ethanol-blended fuel programs.

▶ Performance Advantages

The Delphi MT80 Engine Control Module offers features that can help vehicle manufacturers meet demanding engine performance targets, high-level fuel economy requirements, and stringent emissions regulations. The Delphi MT80 ECM helps the engine management system increase fuel economy and reduce emissions, contributes to smooth vehicle acceleration, enables enhanced cold weather start-ups and helps extend engine life.

Delphi's unique understanding of the complete engine management system and its full range of major component development capabilities contribute to superior component design and cost-effective systems.

▶ The Delphi Advantage

Delphi offers the benefits of more than 30 years' experience in high volume engine control module design and manufacturing. Delphi can provide customized IC design, manufacturing and analysis. Delphi can provide an engine control module or a complete system with software, algorithms, calibration and other options.

As a global leader in engine management systems, Delphi can help manufacturers meet emissions requirements, improve fuel economy and enhance performance. Delphi is a source for high value solutions and our systems expertise is built into every product. Delphi's flexible engineering approach encourages collaboration. And, Delphi has a thorough understanding of automotive markets around the world.