

OVERVIEW OF THE AUTOMOTIVE SYSTEM

EVOLUTION OF THE ELECTRONICS IN THE AUTOMOBILE SYSTEMS:

Product	timeline	Inventor
mobile radio	1904	American inventor and self-described "Father of Radio" Lee de Forest
factory installations were vacuum tube car radios , starting in the	early 1930s`	
	after World War II greatly expanded the use of electronics in automobiles	
	1970s. range of automotive applications economically feasible in the	
	1971 <ul style="list-style-type: none">• Fairchild Semiconductor and RCA Laboratories proposed the use of MOS large-scale integration (LSI) chips for a wide range of automotive electronic applications like• transmission control unit(TCU),• adaptive cruise control (ACC),• Alternators etc	
digital engine control system	1968 Rolls-Royce and Elliott Automation , in conjunction with the National Gas Turbine Establishment , For Rolls-Royce Olympus was the world's second two- spool axial-flow turbojet aircraft engine design	

The first system, EEC I,	1973 designed and built by Ford Motor Company. used processors and components developed by Toshiba . It began production in 1974, and went into mass production in 1975.	
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Study reference:

1. <https://www.embitel.com/blog/embedded-blog/automotive-control-units-development-innovations-mechanical-to-electronics#:~:text=The%20era%20of%20electronics%20started.as%20they%20say%20is%20history.>
2. https://en.wikipedia.org/wiki/Automotive_electronics

EEC:

https://en.wikipedia.org/wiki/Engine_control_unit

Sl.no	Vehicle Domain	ECU acronym	Abbreviations
1.	Powertrain (Convention)	ECM TCM DTCM PCM (ECM + TCM)	Engine control module Transmission control module Drivetrain control module Powertrain control module
2.	Powertrain (Electric)	MCU BPCM CM	Motor control unit Battery pack control module Charging module
3.	Chassis	ESCM ABSM/ESC TCS	Electronic steering column module Anti lock braking module/electronic stability control
4.	Infotainment	IPU IHU TCU HVAC	Instrument panel cluster Infotainment head unit Telematics control unit Heating ventilation air-condition unit
5.	Safety	ACU ADAS TPMS	Airbag control unit Advanced driver assist system Tire pressure monitoring system
6.	Body	BCM	Body control module

		PDM/DDM/DCU RTGM KVM/RFM	passenger/ driver door module/door control unit Rear tailgate module keyless vehicle module
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