

BMW F Series ECUs

Technical Documentation

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Introduction

This document provides a comprehensive list of all Electronic Control Units (ECUs) that can be accessed via E-Sys in BMW F series vehicles. Each entry includes the short name, full name, a brief description of the ECU, and examples of controlled components or functions.

Short Name	Full Name	Description	Examples of Controlled Components/Functions
CAS	Car Access System	Controls access to the vehicle, including keyless entry and start.	Key fob detection, push-button start, immobilizer.
DME	Digital Motor Electronics	Engine management control for petrol engines.	Fuel injection, ignition timing, throttle position.
DDE	Digital Diesel Electronics	Engine management control for diesel engines.	Turbocharger control, fuel injection, glow plugs.
EGS	Electronic Gearbox Control	Manages the operation of the automatic transmission.	Gear shifts, torque converter lock-up, shift points.
EPS	Electric Power Steering	Controls the electric power steering system.	Steering assist, variable steering ratio.
FEM	Front Electronic Module	Central gateway module that manages various vehicle functions including lighting and central locking.	Headlights, turn signals, central locking system.
BDC	Body Domain Controller	Integrates control of multiple body functions.	Windows, mirrors, sunroof, door locks.
FRM	Footwell Module	Controls lighting and windows, located in the footwell area.	Interior lights, power windows, footwell lights.
IHKA	Integrated Heating and Air Conditioning	Manages the heating, ventilation, and air conditioning system.	Climate control, fan speed, air distribution.

JBE	Junction Box Electronics	Distributes power and manages various electrical functions.	Fuse box management, power distribution.
KOMBI	Instrument Cluster	The instrument cluster that provides the driver with important vehicle information.	Speedometer, tachometer, warning lights.
REM	Rear Electronic Module	Controls rear vehicle functions like lighting and windows.	Rear lights, rear window defroster, power tailgate.
RDC/RDCi	Tire Pressure Control	Monitors and alerts the driver of tire pressure status.	Tire pressure sensors, warning alerts.
SMFA	Seat Module Driver Side	Controls driver seat adjustments and memory functions.	Seat position, lumbar support, seat heating.
SMFB	Seat Module Passenger Side	Controls passenger seat adjustments and memory functions.	Seat position, lumbar support, seat heating.
TCU	Telematics Control Unit	Manages telematics services such as emergency call and vehicle tracking.	SOS emergency call, BMW ConnectedDrive.
SZL	Steering Column Switch Cluster	Manages functions on the steering column such as wipers and turn signals.	Turn signal switch, wiper control, cruise control.
TCM	Telematics Control Module	Handles communications for telematics services.	GPS, vehicle data transmission.
TRSVC	Top Rear Side View Camera	Manages the top view and rear side cameras for parking assistance.	Rearview camera, surround view system.
ZBE	Central Control Element	The central control unit for the iDrive system.	iDrive controller, menu navigation.
ZGM	Central Gateway Module	Manages communication between different vehicle networks.	CAN bus communication, data routing.
LM	Light Module	Controls the vehicle's exterior lighting system.	Headlights, taillights, brake lights.
ACSM	Airbag Control System Module	Manages airbag deployment and related safety features.	Airbag sensors, seatbelt pretensioners.
PMA	Parking Maneuver Assistant	Assists with automated parking maneuvers.	Parking sensors, steering control during parking.
NBT	Next Big Thing	The next generation of iDrive system.	Navigation, multimedia, connectivity features.
NBT Evo	Next Big Thing Evolution	An advanced version of the NBT iDrive system.	Enhanced navigation, gesture control, advanced multimedia.
ICM	Integrated Chassis Management	Manages various chassis control systems.	Suspension settings, stability control.
HBA	High Beam Assistant	Automatically controls high beam headlights.	Automatic high beam activation and deactivation.

HUD	Head-Up Display	Projects important information onto the windshield.	Speed, navigation instructions, driver assistance info.
PDC	Park Distance Control	Assists with parking by using sensors to detect obstacles.	Parking sensors, visual and audio alerts.
RLS	Rain-Light Sensor	Detects rain and adjusts wiper speed; also controls automatic headlights.	Automatic wipers, automatic headlights.
SBSL	Satellite B-Pillar Left	Manages side impact sensors on the left side.	Side airbags, impact detection.
SBSR	Satellite B-Pillar Right	Manages side impact sensors on the right side.	Side airbags, impact detection.
SINE	Vehicle Alarm System	Vehicle alarm system.	Siren, motion sensors, tilt sensors.
TJA	Traffic Jam Assistant	Assists with driving in traffic jams by controlling acceleration, braking, and steering.	Adaptive cruise control, lane keeping assist.
VDC	Vehicle Dynamics Control	Manages vehicle dynamics for improved handling and stability.	Stability control, traction control, damping settings.
DKG	Dual-Clutch Gearbox Control	Manages dual-clutch transmission functions for seamless shifting.	Gear shifts, clutch engagement.
DCS	Dynamic Chassis Control	Manages the adaptive suspension system.	Adjustable shock absorbers, ride height control.
DSC	Dynamic Stability Control	Enhances vehicle stability by detecting and reducing loss of traction.	ABS, traction control, stability control.
HDC	Hill Descent Control	Controls the vehicle speed on steep descents.	Controlled braking on descents.
IBS	Intelligent Battery Sensor	Monitors the battery condition and manages charging.	Battery health monitoring, charge management.
ICV	Idle Control Valve	Controls engine idle speed.	Engine idle speed control.
MSA	Microphone System Amplifier	Manages audio inputs from microphones.	Hands-free calling, voice commands.
RSE	Rear Seat Entertainment	Manages the entertainment system for rear passengers.	Rear screens, audio control, media playback.
SAS	Suspension Active Stabilization	Controls active suspension systems.	Active roll stabilization, adaptive suspension.
TCB	Telematics Communication Box	Manages advanced telematics and connectivity functions.	Internet connectivity, remote services.
ATM	Antenna Tuner Module	Manages radio and other wireless communications.	Radio reception, satellite radio.
AMP	Amplifier	Manages audio amplification for the vehicle's sound system.	Sound system amplification, audio quality enhancement.
CIC	Car Information Computer	Previous generation iDrive system.	Navigation, multimedia, connectivity features.

DAB	Digital Audio Broadcasting	Manages digital radio reception.	Digital radio stations, enhanced audio quality.
FKA	Rear Climate Control	Manages climate control functions for the rear of the vehicle.	Rear temperature control, rear fan speed.
FZD	Roof Function Center	Controls sunroof, interior lights, and other roof functions.	Sunroof operation, dome lights, reading lights.

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