TECHNICAL DATASHEET

# Chip tuning Mercedes ML 420 CDI 306 hp

VEHICLE APPLICATION

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| MAKE<br>Mercedes | MODEL<br>ML |
| ENGINE<br>420 CDI | ORIGINAL POWER<br>306 hp |

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| DOCUMENT CODE | DBM-VEH-DBM1096 |
| REVISION | 01 |
| ISSUE DATE | 24/11/2026 |

PRECISION. PERFORMANCE. CONTROL.

## Description

DrakeBox Monza auxiliary control unit for Mercedes ML 420 CDI 306 hp, based on a programmable microcontroller with dedicated firmware and 14 selectable engine management maps. The system optimizes fuel-delivery and combustion parameters, adjusting engine management to improve power and torque delivery, with particular attention to fuel efficiency and the vehicle’s overall performance.

## VEHICLE IDENTIFICATION

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| Make | Mercedes |
| Model | ML |
| Version / engine | 420 CDI |
| Original power | 306 hp |
| Original torque | 600 Nm |

## APPLICATION / COMPATIBILITY

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| Application reference | DBM1096 |
| Production year | All |
| Transmission type | Manual and automatic transmissions: torque converter (AT), dual clutch (DCT / DSG), continuously variable (CVT), automated manual |
| Other compatibility | Particulate filter (FAP / DPF) and Start & Stop system. |
| Wiring harness | Vehicle-specific wiring harness for Mercedes ML 420 CDI 306 hp |
| Connectors | Vehicle-specific Plug & Play connectors for Mercedes ML 420 CDI 306 hp |
| Hardware revision | HW Rev. 1096-26 |
| Firmware revision | Dedicated firmware calibrated for Mercedes ML 420 CDI 306 hp |
| Verification method | Compatibility verified through internal testing and validation procedures. |
| Limitations | Calibrated intervention in accordance with the manufacturer's technical specifications and operating limits. |

## ARCHITETTURA E PRODUZIONE

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| Hardware architecture | Auxiliary control unit with an electronic architecture based on a programmable microcontroller. |
| Design | Designed in Italy. |
| Manufacturing | Manufactured and assembled in Italy. |
| Quality control | Functional testing performed on 100% of units produced. |

## PRODUCT – TECHNICAL SPECIFICATIONS

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| Product code | DRAKEBOX-MONZA |
| Product link | https://www.drakebox.co.uk/chip-tuning-mercedes-ml/chip-tuning-mercedes-ml-420-cdi-306-hp-1096.html |
| IDENTIFICATION, DIMENSIONS AND ELECTRICAL CHARACTERISTICS | |
| Total weight | 300 g |
| Wiring length | 110 cm |
| Supply voltage | 5 V |
| Current consumption | 20 mA |
| Power consumption | 100 mW |
| ELECTRONIC ARCHITECTURE | |
| Printed circuit board | PCB assembled with SMD and PTH components |
| Electronic encapsulation | Protective encapsulation of electronic components in epoxy resin against moisture and dust. |
| Microcontroller | Digital processing unit based on a programmable microcontroller, dedicated to signal processing and execution of the application firmware. Model and identifying specifications are confidential |
| Clock frequency | 50 MHz |
| Operating temperature | −40 °C / +125 °C |
| FIRMWARE AND FUNCTIONS | |
| Programming | Dedicated firmware specifically calibrated for each vehicle application |
| Selectable maps | 14 user-selectable maps |
| SYSTEMS AND INTERVENTION MODES | |
| Systems involved | Common Rail injection and turbocharging (turbocharger) |
| Intervention method | Optimization of engine fuel-delivery and combustion parameters. |
| INDICATION AND PROTECTION | |
| LED indicator | LED indicator for correct installation checks |
| Incorrect-connection protection | Built-in protection in the event of incorrect installation or connection |
| ENCLOSURE AND CONNECTIONS | |
| Enclosure | Durable plastic enclosure with carbon-effect finish |
| Wiring harness | 0.50 mm² wires protected by corrugated conduit |
| Connectors | Vehicle-specific Plug & Play connectors with rubber seals for water protection |
| ACCESSORIES | |
| Available accessories | Switch, remote control, DrakeBox Connect |

## DECLARED PERFORMANCE DATA

| | Before | DrakeBox Monza |
|---|---|---|
| Power | 306 hp | 415 hp |
| Torque | 600 Nm | 813 Nm |
| Consumption | standard | -20% |
| Speed | standard | +10% |

Results may vary depending on vehicle condition, test conditions, maintenance and configuration. Values must be interpreted according to the stated source and method.
Performance data source: Declared values.

## INSTALLATION

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| Estimated time | Approximately 10–20 minutes. The time may vary depending on the vehicle model and the accessibility of the connection points. |
| Required skill | Can be installed by a private user by carefully following the supplied instructions and the vehicle-specific wiring diagram. |
| Tools | Common hand tools and tools required to remove any engine-compartment covers. |
| Installation location | Connection at the original engine management system connectors, according to the vehicle application and its specific wiring diagram. |
| Connectors | Vehicle-specific Plug & Play connectors with rubber seals for water protection. |
| Cable routing | 110 cm wiring harness with 0.50 mm² wires protected by corrugated conduit. Route and secure the harness along the path intended for the vehicle, avoiding moving parts and heat sources. |
| Checks before start | Before connection, check the wiring harness and connectors for damage and confirm that the connectors match the vehicle application. Follow the vehicle-specific diagram and instructions. |
| Checks after installation | After connection, check the status LED specified for confirming correct installation. If an abnormal indication appears or the connection is uncertain, stop the procedure and contact technical support. |

The time, skill and equipment indications apply to most compatible vehicles. Variations may be necessary depending on the vehicle model and configuration. Always refer to the application-specific instructions.

# SAFETY, WARRANTY AND SUPPORT

- Verify that the vehicle is in proper mechanical and maintenance condition before installation.
- Follow the vehicle-specific instructions and applicable laws in the country of use.
- Do not use the product to disable or alter emissions-control systems or safety devices.
- If warning lights, diagnostic faults or abnormal operation occur, stop using the product and contact a qualified technician.

## Warranty

The DrakeBox Monza product is covered by a 24-month warranty from the date of purchase for manufacturing defects and defects covered by the applicable warranty.

The warranty does not apply in cases of improper use, installation contrary to the instructions, tampering, or work carried out by persons not authorized by Extremengineering S.r.l.

### Warranty assistance procedure

To submit a warranty assistance request, the customer must contact the service centre by email or registered mail, providing the following information:

- Code and description of the defective product.
- Detailed description of the defect found.
- Copy of the invoice or other proof of purchase.
- Full name, telephone number and email address so that the service centre can contact the customer.

After receiving instructions from the service centre, the product must be suitably packed and sent to Extremengineering S.r.l. in accordance with the instructions provided by the service team.

### Product shipment and handling

The customer is advised to use suitable packaging and a tracked shipping service, keeping proof of delivery.

### Exclusions and transport damage

The warranty does not cover damage resulting from improper use, tampering, incorrect installation or unauthorized work. Any visible damage or issues attributable to transport must be reported promptly to Extremengineering S.r.l., preferably within 48 hours of receipt and in all cases before installation, together with photographs of the packaging and product.

The customer’s rights under applicable law remain unaffected.

# CONTACT INFORMATION

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| Technical support | info@drakebox.com |
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| Official website | www.drakebox.com |

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