KESSv2 Slave

Instruction manual and User's guide

This user manual has been specially designed to guide you through the functions and features of KESSv2, the ECU serial programming tool via onboard OBDII connector.

Version 1.0

Warnings

Please note: The registration and subsequent use of the Product constitutes acceptance by the user of the license and warranty terms contained in the section Hardware Warranty and Software License (page 38 and following).

Important notices about the use of the KESSv2 tool

To avoid electrical shock, do not open the case when the tool is connected. Refer any required servicing of product to Alientech Srl only.

- The product and its accessories are suitable for professional use only.
- This product is intended only for the tuning of vehicles for competitions or to be used on closed circuit not open to public.
- The product allows having access to operating engine management parameters: the subsequent modification of these parameters may make the vehicle not in line with the requirements and standards of your Country about power, speed and emissions. It may also cause a different or greater wear and tear of mechanical and electrical components of the vehicle and could void the warranty provided by the manufacturer/sellers of the vehicle.

Alientech Srl, its subsidiaries and affiliates make no warranties of any kind about any extra wear or deterioration of the engine or other electrical or mechanical parts of the vehicle or as to the compliance with exhaust emission standards and regulations required by your Country.

- The tool and its accessories shall be used only after a thorough reading of this guide and the Operating Manuals dedicated to the several protocols, and only in compliance with guidelines and suggestions.
- The product may enable modifying the operation of the vehicle; therefore, the vehicle may have different reactions when compared to standard conditions specified by the manufacturer. The greatest attention must be paid when driving a vehicle which has its engine parameters modified.
- The use of the KESSv2 and the K-Suite software must always happen with the car parked stationary and engine off. In the event that the software expressly asks for ignition of the engine, make sure that the handbrake is engaged and the transmission is in neutral position.

Important notices about the contents in this guide

- Alientech Srl owns and administers some or all the rights to the images and other copyrighted content in this manual. Use of the images and other copyrighted content (including copying, reproducing, modifying, uploading on a network, displaying, transmitting, distributing, licensing, selling and publishing) except as used herein, is prohibited to the extend allowed by law.
- This guide and the screen images representing K-Suite software and Alientech Data Bank used throughout this guide are subject to change without notice.

CE - FC Regulatory Information

- The marks are located on the rear side of the tool.
- The product meets the essential requirements of the Directive 2004/108/EC and therefore carries the CE mark.
- The tool has been tested in accordance with harmonized standards EN 55022:2006+A1:2007 and EN 55024:1998+A1:2001+A2:2003.
- The product complies with Part 15 of the FCC Rules (47 CFR).
- The product is in conformity with EC and FCC standards only if used with cables and accessories supplied and according to what specified in the instructions for use.

Glossary

Before you begin, you should become familiar with some technical terms used in this guide

Term	Explanation
Infineon Tricore Module	Device that allows programming on bench in Boot mode ECU equipped with microprocessor Infineon Tricore (sold separately)**.**
Board Adapter for positioning frame	Adapter to place on the ECU when using the positioning frame and the Infineon Tricore module (sold separately).
Positioning frame	Metal support on which to place the ECU when it must be programmed on bench in Boot mode (sold separately).
Backup	Backup copy of the data stored in the engine control unit, made to prevent an accidental total loss of these data.
Recovery	Procedure that allows writing a file on the engine control unit in case the standard writing procedure is not successful.
Checksum	Operation that serves to verify the integrity of data in the engine control unit. The checksum correction is performed on each modified file before loading it into the engine control unit, to ensure its functioning.
Clone	Duplicate of the engine control unit. Operation only possible if the hardware of the two engine control units is identical.
ECU	*Electronic Control Unit*. It is usually a synonymous for engine control unit.
EEPROM	*Electrically Erasable and Programmable Read Only Memory.* Reprogrammable memory. Writing, erasing and rewriting take place electrically, even in-circuit.
Flash	Reprogrammable memory, with operation similar to the EEPROM but in Flash technology.
Micro	Electronic processing and control device integrated on a single integrated circuit (short for *Microcontroller*).
DTC	*Diagnostic Trouble Codes.* Standard codes detected by the engine control unit via the OBD interface; useful, for example, to quickly identify and resolve vehicle malfunctions.

Term	Explanation
LOG file	File to which the tool records chronologically all reading and programming activities during the communication with the engine control unit.
Original file	File containing data (including maps) for engine management, stocked in the engine control unit.
Modified file	Files created from the original file by making variations on engine management data; to be rewritten to the engine control unit.
Firmware	Program embedded in the tool that allows its working.
ID	Procedure to obtain the identification data of the engine control unit (short for *Identification)*. If the ECU does not support the reading, the file containing the ID data is encoded.
CAN Line	Double-wires serial communication standard for connecting electronic control units of the vehicle.
K-Line	Single-wire serial communication standard for connecting electronic control units of the vehicle.
Operating Manuals	Manuals embedded in the K-Suite software, automatically displayed each time a Family of communication is selected. They provide indications about cables needed, connection instructions, and warnings and cautions that must be followed to correctly carry out the programming of the engine control unit.
Master (tool)	To read and write files (not encoded) of the ECU.
Slave (tool)	To read encoded files from the ECU, and to write only encoder files received from a Master.
Master (single user)	• It reads the original file (not encoded) stocked in the ECU. • It modifies the file using a tuning software. • It writes the modified file (not encoded) to the ECU**.**
Master (user associated to one or more Slave user)	• It receives the encoded file from his Slave. • It decodes the file through the appropriate procedure in the Alientech Data Bank. • It modifies the file using a tuning software. • It encodes the file through the appropriate procedure in the Alientech Data Bank. • It sends the encoded file to his Slave.
Slave (user)	• It reads the encoded file stocked in the ECU. • It sends the file read to his Master. • It receives the encoded modified file from his Master. • It writes the file to the ECU. **Note**: Even when the Slave user wants to overwrite the original file or restore the backup file, it must ask his Master for the validation of these files.

Term	Explanation
OBDII diagnostic connector	Standardized hardware interface connector that provides access to the state of health information for various vehicle sub-systems to perform *On-Board Diagnostics.*
ECU programming	The tuning of engine management parameters stocked in an ECU. It can be carried out in serial communication or in Boot mode, and it substantially consists in three operations: • Reading the original file stocked in the ECU. • Modifying the original file using a tuning software. • Writing the modified file to the ECU.
Serial communication	Communication mode with the electronic control unit through the diagnostic connector of the vehicle (often called *OBDII connector*). It can be done: • Via diagnostic connector: with the ECU mounted on the vehicle, simply by connecting to the diagnostic connector typically located in the cockpit. • On bench: by disconnecting all wiring and removing the ECU from the vehicle to connect to its external connector, with no need to open the ECU. **Note:** Not all ECU can be reprogrammed on bench in serial communication.
Boot mode communication	Communication mode with the electronic control unit in which the ECU system is started in a particular operating mode; this allows performing operations normally not possible in serial communication (for ex. reading of the original file, reading/writing of the EEPROM memory, etc.). It is usually carried out on bench, with the ECU unplugged from all wiring and open, as it is necessary to feed some pins of the ECU circuit with a suitable voltage (often by soldering some wires on the circuit). It can be done using: • The Infineon Tricore module. • The K4 cable.
Communications protocol	Language of communication between the tool and the electronic control unit.
Family	Name given by Alientech Srl to a set of communication protocols used by KESSv2 to dialog with engine control units communicating in a similar manner.
Plug-in	Additional software component that allows using the KESSv2 also on ECU that cannot be programmed via the OBDII diagnostic connector.
Pull Up Resistor	Interface resistor, it varies some electrical communicating parameters on the K-line between the tool and the engine control unit.
Setup	Item of the programming menu of the K-Suite software that allows changing some communication settings of the tool.

Table of Contents

Precautions

Before using this product, carefully read this manual and retain it for future reference.

Safety

This product has been designed with the highest concern for safety. However, any electrical device, if used improperly, has the potential for causing fire, electrical shock or personal injury. To help ensure accident-free operation, follow these guidelines:

- Observe all warnings, precautions and instructions.
- Stop use, unplug the USB cable from the computer and disconnect any other cables immediately if the device functions in an abnormal manner, produces unusual sounds or smells or becomes too hot to touch.
- Never disassemble the product or accessories provided. Use the KESSv2 and accessories according to the instructions in this guide and following the connection instructions provided in the Operating Manuals dedicated to the various protocols, available within the K-Suite software. No authorization for the analysis or modification of the product, or the analysis or modification of the K-Suite software, or of its circuit configurations, is provided. Disassembling will void the system warranty and it may be dangerous.

Use and handling

- Keep the product and all accessories out of the reach of small children or animals. Small parts may cause choking or serious injury if swallowed (for ex. board adapters or interchangeable connectors of the connecting cables).
- Do not use the tool near water.
- Use only cables/accessories provided by Alientech Srl, its subsidiaries and affiliates or an authorized dealer.
- Do not expose the products or accessories to high temperatures, high humidity, or direct sunlight.
- Do not leave the product or accessories in a car with the windows closed (particularly in summer).
- Do not expose the product or accessories to dust, smoke or steam.
- Do not allow liquid or small particles to get into the product or accessories.
- Do not place the product on surfaces that are tilted, unstable or subject to vibration.
- Do not drop the product or accessories, and do not subject the device to strong physical shock.
- Do not put heavy objects on the product or accessories.
- Do not touch or insert foreign objects into the connectors of the product or accessories.

WEEE Directive

This symbol on the product or its packaging indicates that this product shall not be treated as household waste. In line with EU Directive 2002/96/EC for waste of electrical and electronic equipment (WEEE), this product must not be disposed of as unsorted municipal waste. Please dispose of this product by returning it to the point of sale or to your local municipal collection point for recycling.

Risks associated with operations to Read or Reprogram data

When reading or programming data via KESSv2, if the communication between the tool and the electronic control unit were to be interrupted problems may occur, also of serious entity and which may extend to the complete failure of the ECU itself, with consequent need for its replacement.
Therefore, during these operations:

- **DO NOT** disconnect the communication cable between the tool and the vehicle.
- **DO NOT** unplug the USB cable between the tool and the computer.
- **DO NOT** turn off your computer.
- **DO NOT** use the tool in a location that is exposed to static electricity or electrical interference.

If, for any reason, a damage to the ECU or a data loss or corruption (even partial) occurs and it is not possible to make a recovery, Alientech Srl, its subsidiaries and affiliates will not be will not be held liable for any damages, costs or expenses coming from this loss or corruption.

Cleaning

- **Cleaning the exterior surface:** Wipe gently with a soft cloth. Do not use solvents or other chemicals to clear the exterior surface of the KESSv2.
- **Cleaning the connectors:** Do not use the product if the connectors are not clean. Remove the dirt with a dry cloth.

Checking the package contents

The basic kit supplied with KESSv2 includes:

☐ KESSv2 tool in Master or Slave version

Slave version (left) and *Master* version (right)

☐ 1 OBDII Standard Cable 144300KCAN

☐ 1 Universal Cable 144300K201

☐ 1 K4 Cable 14P600KCK4

☐ 1 USB Cable

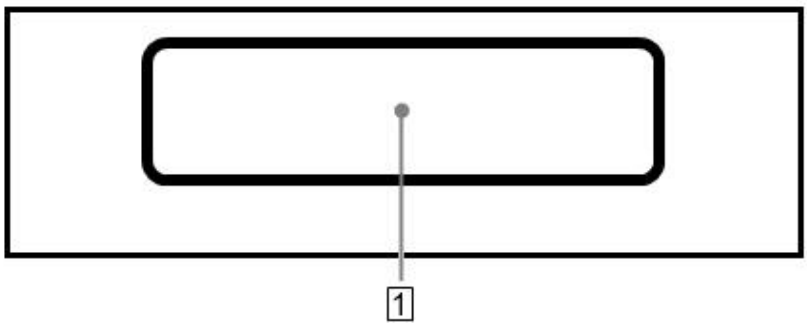
☐ 1 KESSv2 Suitcase

If any items are missing, please contact your Master dealer providing the Serial Number of the tool, or info@alientech.to providing your Customer Code and the Serial Number of the tool.

Always keep the original packaging. In case of repair, the tool must be returned in its suitcase, complete with all accessories.

Parts name and functions

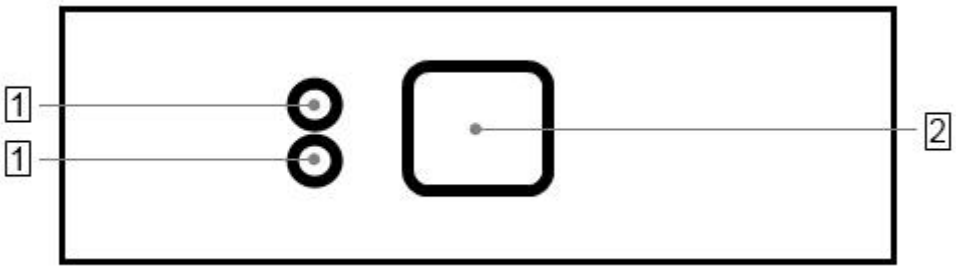
Right side of the tool



1 DB25 Connector

To connect the cables supplied with the tool. Refer to the Operating Manuals dedicated to the various protocols available in the K-Suite software to know which cable to connect to the type of ECU on which you want to work.

Left side of the tool



1 Status LEDs

The **red** LED (top) lights up when the tool is connected to the computer through the USB cable. The **green** LED (bottom) lights up when the tool is communicating with the ECU.

2 USB port

To connect the tool to the computer.

Basic operations

Installing the K-Suite software

1. Download the K-Suite software from the *Download* section of our website www.alientech.to and save the file Setup.exe on your computer.
2. Double-click the Setup.exe file to install the K-Suite software.
3. Follow the on-screen instructions. The K-suite software installs also the drivers of KESSv2.
4. When the security warning saying it is not possible to verify the authenticity of the software or drivers is displayed, confirm the installation and continue.

> **Note:** When installing K-Suite, you may be required to install additional software, such as Microsoft Visual C + +. In the event that this request appears, follow the on-screen instructions to install any additional software.

5. Select the language to use the software, and download any proposed updates.
6. When installation is complete, close the K-Suite software.

Installing the KESSv2

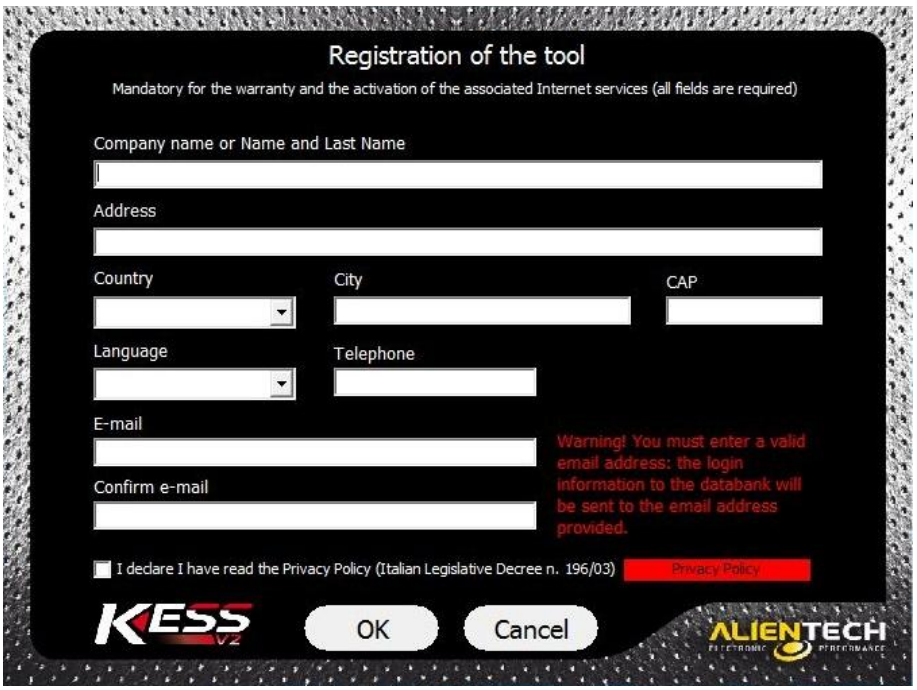
1. Connect the KESSv2 to your computer using the USB cable supplied.
2. Wait until it is displayed the message confirming that the new device has been properly recognized by the operating system. Usually this message is displayed at the bottom right of the screen.
3. Run the K-Suite software, without pressing SKIP on the loading screen to complete the proper installation of the tool.

K-Suite loading screen

Tool registration

From the first run of K-Suite software and until the form is not fulfilled, the registration of the product is required to activate the warranty.

An active e-mail address is required to validate the registration. All fields are required.



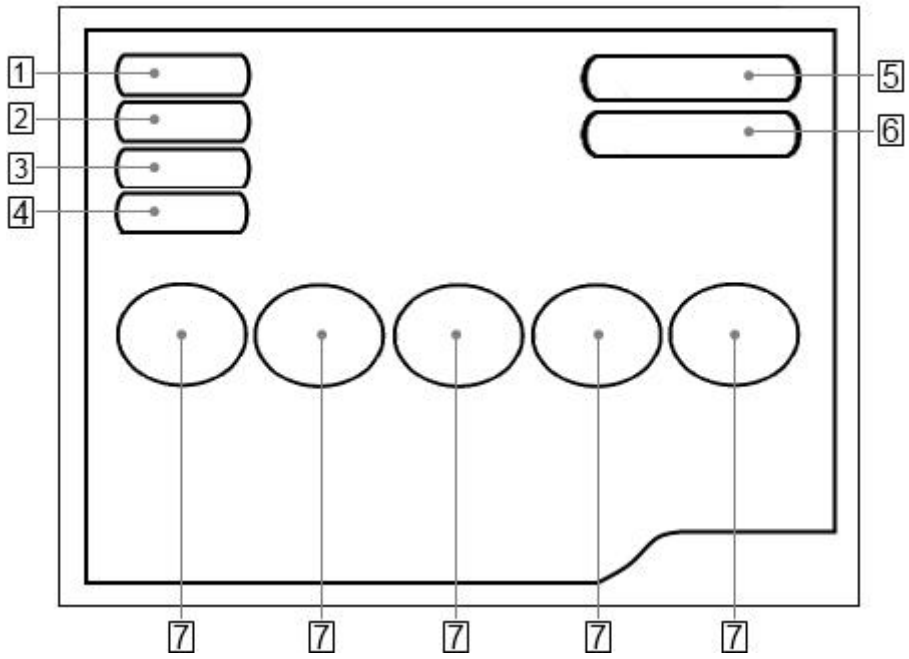
Tool registration screen

After registering, a validation e-mail with the password to access the Alientech Data Bank https://databank.alientech.to/ is sent to the address provided. At first login you will be prompted to set a new password.

The registration of the tool is required to activate the warranty.

In case of changing the email address or phone number provided, it is possible to replace these data by accessing the section *Your Profile* of the Alientech Data Bank.

K-Suite software main screen



1 Info Button

To view information about the tool and its owner, and download the LOG file with the last activities performed by the tool.

2 Options Button

To set the window size and the language of K-Suite software, and display the vehicle list.

3 Utility Button

To split / join files of specific types of vehicles. For instructions on this button, refer to the Operating Manuals dedicated to families requiring the use of this option.

4 Help Button

To download the Operating Manuals dedicated to the various protocols.

5 EXTRAS Button

To view and select the protocol list partitioned by set.

6 K-TAG Button

Brochure on the microcontroller interface programmer K-TAG.

7 Vehicles buttons

To view and select the vehicle to work on.

Info, EXTRAS, and **Vehicles** buttons are only active when the tool is connected to the computer.

Configuring KESSv2 for the use

To properly configure the tool, we remind you that KESSv2 must be connected to the computer via the supplied USB cable and your computer must be connected to the Internet.

How to set the screen resolution

1. Click on the **Options** button in the main window of the K-Suite software.
2. In the *Size of the vehicle selection windows* pane, select the window size that best suits your computer screen.

When possible, we recommend using 1024x768 resolution, to see better the pictures of connection instruction in the Operating Manuals.

It is possible to change the window size of the K-Suite software at any time, even if the tool is not connected to your computer and / or the computer does have an active Internet connection.

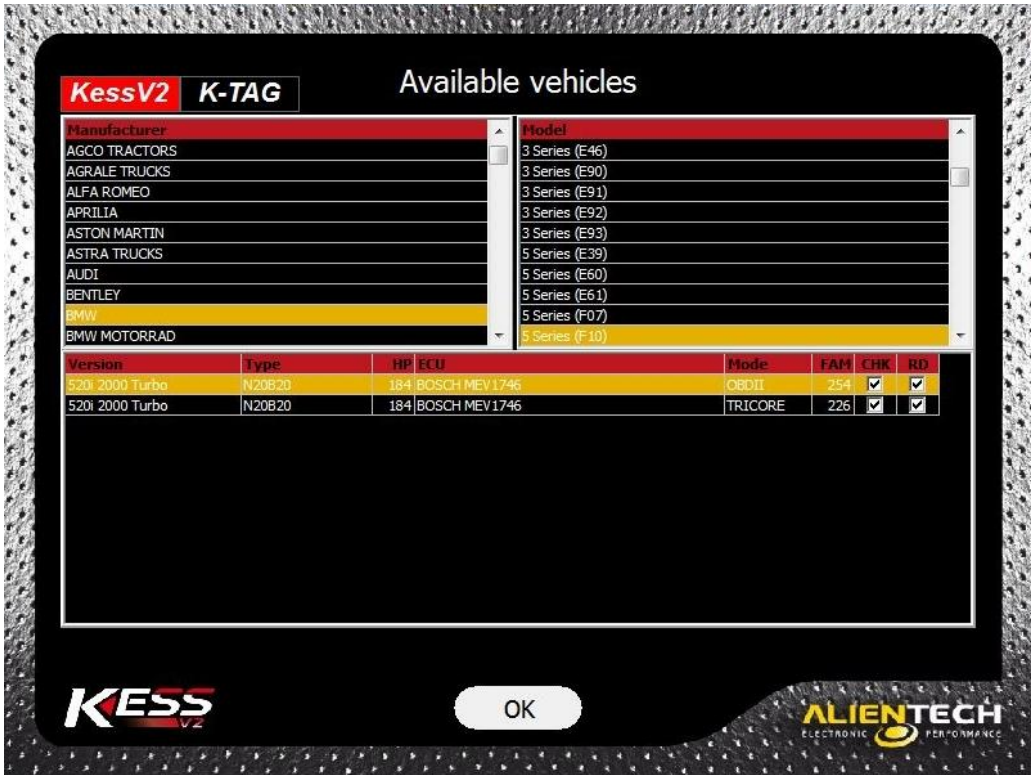
How to set the language of the software

1. Click on the **Options** button in the main window of the K-Suite software.
2. In the *Language* pane, click **Select.**
3. Select the language you want to use the K-Suite software.

It is possible to change the language of the K-Suite software at any time, even if the tool is not connected to your computer and / or the computer does have an active Internet connection.

How to view the list of vehicles supported by KESSv2

1. Click on the **Options** button in the main window of the K-Suite software.
2. In the *Available vehicles* pane, click **View**.
3. Select the Brand of the vehicle.
4. Select the Model of the vehicle.



At the bottom of the window, a list of all versions of the selected vehicle is then displayed. For each version is detailed:

- **Type**: The type of engine installed.
- **HP**: The engine power.
- **ECU:** The type of ECU installed on the vehicle.
- **Mode:** The connection mode to the vehicle and / or the ECU, that is:
  OBDII for connections to be made via the diagnostic connector of the vehicle.
  TRICORE for connections to be made in boot mode on engine control units equipped with Infineon Tricore microprocessor.
  BOOT ST for connections to be made in boot mode on engine control units equipped with ST microprocessor.
  BOOT for connections to be made on bench in boot mode on engine control units equipped with TEMIC engine.

To make connections in boot mode with KESSv2 on engine control units equipped with microprocessor Infineon Tricore, you must use the Infineon Tricore Module, sold separately.

- **FAM**: The number of the Family to use to communicate with the vehicle.
- **CHK**: The check mark indicates that the Checksum control is available. Checksum control is available for all OBDII and Tricore Families of KESSv2. For ST10Fxxx Families, the Checksum is available if the writing is performed via OBDII; if, instead, the programming is done on bench you should check the Checksum in another way.
- **RD**: The check mark indicates whether the ECU supports the reading. If the box is white (empty) it is not possible to read the ECU through the diagnostic connector of the vehicle. Refer to the section **File Management (page 28)** for more details.

Writing is always available for all families, so there is no dedicated column in the vehicle list.

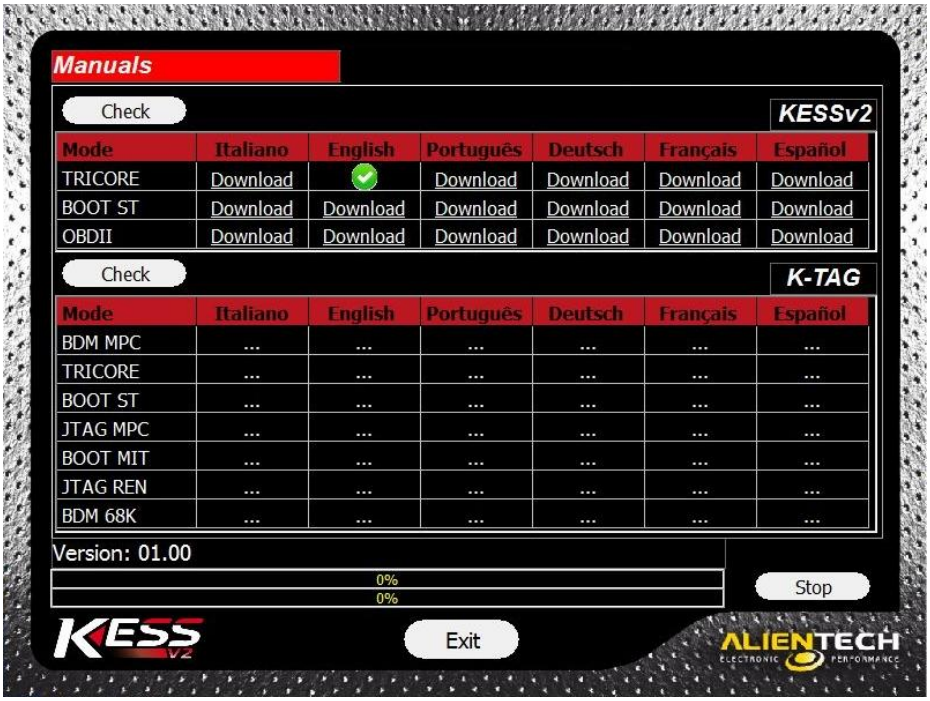
It is possible to consult the list of vehicles supported by KESSv2 at any time, even if the tool is not connected to your computer and / or the computer does have an active Internet connection.

How to download the Operating Manuals

It is required to download Operating Manuals to work with KESSv2, as they provide information on which cables to use for the vehicle to program and how to connect them, and provide any special instructions to follow to perform correctly reading /writing procedures.

1. Click on the **Help** button in the main window of the K-Suite software.
2. Click on **Check** and wait until the tool connects to the Alientech Data Bank.
3. Click on **Download** to download the Operating Manuals in the desired language and depending on the package purchased.

If the green check mark is displayed, the download has been successful, otherwise click again on **Download**.

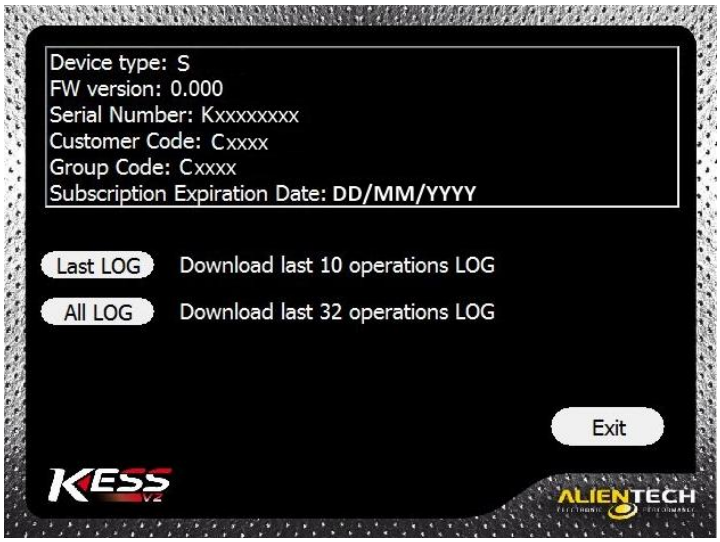


It is possible to download the Operating Manuals even if the tool is not connected to your computer, as long as your computer has an active Internet connection.

How to display the information about your tool

By clicking on the **Info** button in the main window of the K-Suite software, you can view information about your instrument.

- **Device type**: It indicates whether the tool is in Master (M) or Slave (S) version.
- **FW version**: It indicates the version of the Firmware installed on the tool.
- **Serial Number**: It indicates the serial number of the tool, to report in any request to the Technical Support Service.
- **Customer Code**: It indicates your Customer Code, to access to the Alientech Data Bank and report to any request to the Technical Support Service.
- **Group Code**: It indicates the Code of the Master user associated to your Slave tool.
- **Subscription Expiration Date**: It indicates the expiration date of your subscription, if active.
- **Last LOG**: To save on your computer the LOG file containing the last 10 activities performed by the tool.
- **All LOG**: To save on your computer the LOG file containing the last 32 activities performed by the tool.



To view this information the tool must be connected to your computer.

Operating procedures

Choosing a Family of communication

To be able to program a vehicle, it is necessary to choose the correct Family, i.e. the communication protocol. It is possible to choose a Family in two different ways:

a) Using the **Vehicles** buttons in the main window of the K-Suite software.
b) Using the **EXTRAS** button in the main window of the K-Suite software (recommended for advanced users).

How to choose a Family using the Vehicles buttons

Vehicles buttons

1. Select the button corresponding to the kind of vehicle to program.
2. Select the Brand of the vehicle.
3. Select the Model of the vehicle.
4. Select the version of the vehicle according to the data displayed in the lower part of the window:

- **Type**: The type of engine installed.
- **HP**: The engine power.
- **ECU:** The type of ECU installed on the vehicle.
- **Mode:** The connection mode to the vehicle and / or the ECU, that is:
  OBDII for connections to be made via the diagnostic connector of the vehicle.
  TRICORE for connections to be made in boot mode on engine control units equipped with Infineon Tricore microprocessor.
  BOOT ST for connections to be made in boot mode on engine control units equipped with ST microprocessor.
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To make connections in boot mode with KESSv2 on engine control units equipped with microprocessor Infineon Tricore, you must use the Infineon Tricore Module, sold separately.

- **FAM**: The number of the Family to use to communicate with the vehicle.
- **CHK**: The check mark indicates that the Checksum control is available. Checksum control is available for all OBDII and Tricore Families of KESSv2. For ST10Fxxx Families, the Checksum is available if the writing is performed via OBDII; if, instead, the programming is done on bench you should check the Checksum in another way.

- **RD**: The check mark indicates whether the ECU supports the reading. If the box is white (empty) it is not possible to read the ECU through the diagnostic connector of the vehicle. Refer to the section **File Management (page 28)** for more details.

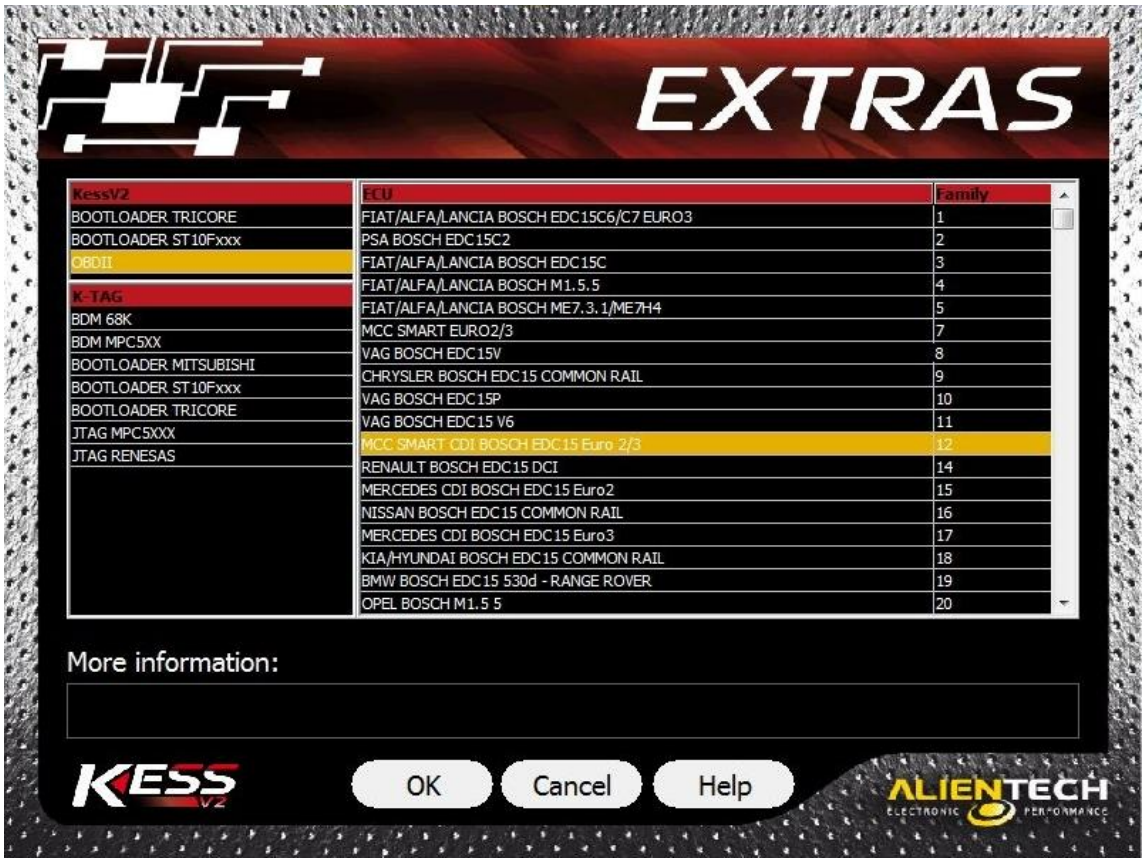
Writing is always available for all families, so there is no dedicated column.

For the OBDII mode, use the cable proposed in the Operating Manuals of the selected Family. For the Tricore Mode, you need to use the Infineon Tricore Module (sold separately), while for the ST mode you can use either the K4 cable or the Infineon Tricore Module.

How to choose a Family using the EXTRAS button

EXTRAS button

1 Select the communication mode in which you want to program (Bootloader Tricore, Bootloader ST10Fxxx, OBDII).
2 Select the type of ECU.

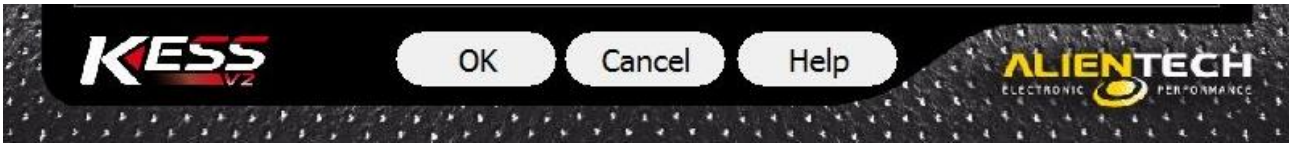


For the OBDII mode, use the cable proposed in the Operating Manuals of the selected Family. For the Tricore Mode, you need to use the Infineon Tricore Module (sold separately), while for the ST mode you can use either the K4 cable or the Infineon Tricore Module.

How to make Reading and Writing

After selecting the proper Family:

1. Click **Help** to display the list of possible cable to use.
2. Choose the appropriate cable and connect between the tool and the vehicle and / or between the tool and the ECU, following the connection instructions provided in the Operating Manual..
3. Once back to the previous window, click **OK** to display the programming menu.



In the event that there are warnings or special precautions to follow for the Family in use, K-Suite software automatically displays the Operating Manual.

> It is important to keep the Operating Manuals updated: periodically check for updates, particularly after each release of the K-Suite software (for more details refer to the section **Updating the Operating Manuals – page 30**).

Number and type of items in the programming menu depend on the Family of communication, or the type of ECU selected.

Menu items	Description
K-Line	To communicate with the ECU using the K-line.
CAN	To communicate with the ECU using the CAN bus line.
Master	To program the main ECU of the vehicle.
Slave	To program the secondary ECU of the vehicle.
ID	To identify the ECU and / or the vehicle on which you are working and save the identification data in a text file (.txt format) on your computer. **Note:** If the ECU does not support the reading, this file is encoded and you need to send it to your Master.
Reading	To read the file from the ECU and save it on your computer. **Note**: This option is not available for ECUs that do not support reading via diagnostic connector. Where not available, perform the ID procedure.
Writing	To write a file saved in your computer to the ECU.
Recovery	To write a file to the ECU when the normal writing procedure has not been successful.

Menu items	Description
Tool	To access a possible submenu of utilities.
Reading EEPROM	To read data from the EEPROM memory and save them in a file on your computer.
Writing EEPROM	To write data of the EEPROM memory. The file containing data to write must be saved in your computer.
Unlock ECU	To activate the programming via OBDII diagnostic connector on the ECU.
Backup Read	To make a full backup of the ECU and save the backup file on your computer.
Backup Write	To restore the ECU to its original state at any time, provided that you have the backup file of the ECU and that the file is saved on your computer.
Write Clone	To duplicate an ECU to another one with the same hardware, provided that you made a full backup of the original ECU and the backup file is saved on your computer.
ECU Data	In order to read data that enable programming in Boot mode.
OBDII Data	To acquire data that cannot be read in Boot mode.
Del. Errors	To erase any DTC errors.
Set Up	To access a possible submenu of settings.
Pull Up	To choose the most appropriate pull-up resistor of the tool to perform reading / writing operations on the K-line. Normally it is set to 'Default' and is not to be changed. If communication does not work, however, we recommend selecting a resistor value gradually lower and try again.
Speed	To select the speed of reading / writing operations on the K-line. Normally it is set to 'Maximum' and is not to be changed. If communication does not work, however, we recommend selecting "Minimum" and try again.
Verification	To compare the file read from the ECU with one saved on your computer.
Specials	To access the Counter submenu.
Counter	To display the programming counter of the ECU.

Follow the instructions in the K-Suite software, which will indicate when you need to turn on or off the dashboard of the vehicle.

In case of problems or if communication with the ECU is not carried out successfully, before requesting support refer to the section **Troubleshooting (page 31).**

It is possible to perform reading / writing operations even if your computer does not have an active Internet connection.

File management

ID files

Some engine control units do not support reading via OBDII diagnostic connector. If you want to reprogram these units, you must:

1. Perform the ID procedure and save the encoder file with the identification data of the ECU on your computer.
2. Send this file to your Master.

Modified files

As specified in the section **Glossary (page 4)**, a Slave tool allows you to read encoded files from the engine control unit and write only encoded files received from your Master.

Also to rewrite the original file or restore the backup file you need to ask your Master for the validation of these files.

In order to program a vehicle, it is necessary to perform the following steps:

1. Red the encoded file from the ECU. If the ECU does not support the reading, perform the ID procedure.
2. Send the file read to your Master.
3. Save on your computer the encoded modified file received from your Master.
4. Write the file to the ECU.

Technical Support

Updates

Notice

During a download/update:

- **DO NOT** unplug the Usb cable
- **DO NOT** turn off your computer

The time taken to download updates may vary depending on your Internet connection and traffic on the band of Alientech Data Bank.

Updating the K-Suite software and KESSv2

If your computer is connected to the Internet, when launched the K-Suite software automatically searches for available software updates. To update the K-Suite software and download any new protocols published:

1. Connect the KESSv2 to your computer using the supplied USB cable.
2. Start the K-Suite software and do not press **SKIP** on the loading screen of the software.
3. Follow any onscreen instructions.
4. Wait until the update is complete.

K-Suite software updates distributed by Alientech Srl can be downloaded free of charge from any owner of KESSv2.

Updates of protocols enabled at the purchase of the tool can be downloaded free of charge from any owner of KESSv2, while receiving new protocols developed and distributed by Alientech Srl is subject to a subscription.

Updating the Operating Manuals

It is important to periodically check if new Operating Manuals have been released and / or updated. To check the availability of new Operating Manuals and download them:

1. Launch the K-Suite software (it is not required that the KESSv2 is connected to your computer).
2. Click on the **Help** button in the main window of the K-Suite software.
3. Click on **Check**.

If the green check mark is displayed it means that the manuals are updated; if there is no green check mark, click on **Download** to download the latest manuals.

<u>Always</u> download the Operating Manuals after an update of the K-Suite software.

The Operating Manuals can be download free of charge by all the owners of KESSv2, even if there is no subscription active.

Troubleshooting

Before requesting services, read this section if you experience difficulty in operating the KESSv2 tool and follow the recommended procedures.

The K-Suite software does not recognize the tool	➢ If the red LED is not lit, check that the tool is correctly connected to your computer with the USB cable supplied. ➢ Make sure that the USB cable is not damaged, and if possible try again using another identical USB cable. **Always use only the USB cable supplied with the standard kit of the tool. NEVER use an extension cord or other USB cables.** **DO NOT use USB hub, but connect the USB cable directly to the USB port of your computer.** If the problem persists, contact the Technical Support Service.
How to check the serial number of your tool	➢ The serial number can be read on the label with the bar code located on the underside of the tool. ➢ As an alternative, connect the tool to your computer, start the K-Suite and click on **Info** in the main screen of the software.
How to get the LOG file	➢ Connect the tool to your computer, click on the **Info** button in the main screen of the K-Suite software and select **Last LOG** to get the file with the last 10 activities performed by the tool, or **All LOG** to get the file with the last 32 activities.
You forgot your Customer Code	➢ Connect the tool to your computer, start the K-Suite and click on the **Info** button in the main screen of the software.
You forgot your password to access to the Alientech Data Bank	➢ Alientech Srl does not know the password you set to access to Alientech Data Bank. In case you forgot your password, you can ask for a new one directly from the main page of the Alientech Data Bank by clicking on *» Forgot your password? Click here! «.* A new password will be sent by e-mail **at the address stored in the Data Bank**, provided during the registration of the tool.

The Operating Manuals are not displayed correctly	➢ Make sure that the K-Suite software is compatible with your operating system. ➢ Make sure that the Active-X controls of Internet Explorer browser are enabled and set correctly.
The Operating Manuals are not available from the Help button, nor are displayed automatically when launching the Communication Family	➢ Make sure you have downloaded all the Operating Manuals from the **Help** button in the main page of the K-Suite software.
The K-Suite software does not function properly	➢ Make sure you have downloaded the Windows®.NET Framework 3.5 update. ➢ Restart the K-Suite software installation (see section **Installing the K-Suite software – page 13**). If the problem persists, contact the Technical Support Service.
Some families are displayed with a gray background and are not enabled	➢ If you have a subscription, check that it has not expired and that the Family belongs to the package purchased. ➢ If you do not have a subscription, contact your dealer. If your subscription is active and the family is included in the package purchased, contact the Technical Support Service.

The tool cannot perform the reading and / or writing	➢ Make sure that the red LED on the left side of the tool is lit. If it is not lit, please contact the Technical Support Service to arrange the return of the tool for repair. ➢ Make sure of using the correct cable between KESSv2 and vehicle or ECU. ➢ Make sure that this cable is properly connected. ➢ Make sure that this cable is not damaged. ➢ Make sure you provided the power to the ECU. ➢ Make sure you have selected the correct Family for the vehicle or the ECU to be programmed. ➢ Make sure that the green LED on the left side of the tool is lit while attempting to communicate with the vehicle and / or the ECU. If the problem persists, contact the Technical Support Service providing the error code displayed and a detailed description of the operations performed.
Error messages: "Checksum error" or "Correction Checksum Error "	➢ Reinstall the K-Suite software, making sure to confirm the installation of Microsoft Visual C + + (see section **Installing the software K-Suite - page 13**) If the problem persists, send the file read from the vehicle and the LOG file to the Technical Support Service.
Error message: "Micro protection type not supported. It's impossible to work on this ECU"	➢ You are trying to communicate with An ECU equipped with a protected microprocessor. Use one of the Families dedicated to these types of ECUs, identifiable by the initials “TPROT” in the name.
Error message: "ECU not identified"	➢ Send the file read from the vehicle and the LOG file to the Technical Support Service to have them check the original file and possibly enable the recognition of the ECU.

Contacts

Technical Support Service

If you need support, contact your Master by providing:

- Your Customer Code
- Detailed description of the operations performed
- Any error code displayed on the screen
- If possible, a screenshot of the error

The Technical Support Service is available:

By e-mail	support@alientech.to assistenza@alientech.to drivers@alientech.to
By phone	(+39) 0161 801025

Additional information

Optional accessories

Not all vehicles are equipped with OBDII standard connector. For this reason Alientech Srl provides special wiring depending on the vehicle to be programmed.

Never use cables or accessories manufactured by companies other than Alientech Srl.

❖ Plug-in Tricore

To program on bench BOSCH EDC17/MED17 ECUs equipped with Infineon Tricore microprocessors.

14P600BTLR	Infineon Tricore Module
14P600KT02	Tricore cable
14P600KT03	Flat cable for board adapter 14P600KT04
14P600KT04	Board adapter for positioning frame
14P800ADBO	Positioning frame

❖ Car cables

Cables for cars not equipped with standard diagnostic connectors.

144300K202	20 pin Diagnostic Connector Cable - BMW
144300K203	38 pin Diagnostic Connector Cable - Mercedes
144300K204	38 pin Diagnostic ECU Connector Cable for BOSCH ECU (ME7.3.1/ME3.1/ME2.1/ME7.3H4) Fiat – Alfa – Lancia
144300K205	OBD Connector Cable for BOSCH ECU (ME5.2.2) - Porsche
144300K206	ECU Connector Cable for BOSCH ECU (EDC15) Audi – Seat – Skoda – VW
144300K239	Double Diagnostic Connector Cable - Mitsubishi
144300K240	Diagnostic Connector Cable and Jumpers - Subaru
144300K250	OBDII Cable for Lotus

❖ Bike cables

Cables for motorbikes not equipped with standard diagnostic connectors.

144300K241	OBD Connector Cable for Marelli ECU - Ducati – Aprilia – Gilera – MV Augusta
144300K243	OBD Connector Cable for BOSCH BMSK ECU - BMW Motorcycles
144300K244	OBD Connector Cable for ECU Siemens VDO and Melco Mitsubishi

❖ Truck cables

Cables for trucks not equipped with standard diagnostic connectors.

144300K207	16 pin Diagnostic Connector Cable - DAF
144300K208	38 pin Diagnostic Connector Cable - DAF – MAN – Scania
144300K209	30 pin Diagnostic Connector Cable - Iveco
144300K210	38 pin Diagnostic Connector Cable - Iveco LCV
144300K212	14 pin Diagnostic Connector Cable - Mercedes LCV
144300K213	Boot-mode Connector Cable for TEMIC ECU - Mercedes
144300K214	12 pin Adaptor Cable - Renault – Volvo
144300K215	16 pin Diagnostic Connector Cable - Scania
144300K216	ECU Connector Cable for LUCAS ECU - Volvo
144300K217	OBDII Diagnostic Connector Cable for TRW - Volvo – Renault
144300K234	37 pin Diagnostic Connector Cable for BOSCH ECU (MS6.4) MAN
144300K235	9 pin Diagnostic Connector Cable for BOSCH ECU (EC7C1/C2) VW Truck
144300K236	16 pin Diagnostic Connector Cable for CUMMINS ECU (CM850) VW Truck
144300K237	12 pin Diagnostic Connector Cable - MAN
144300K238	16 pin Diagnostic Connector Cable – Volvo
144300K245	9 pin Round Diagnostic Connector Cable CAT J1939 Data link
144300K246	9 pin Round Diagnostic Connector Cable CAT / Perkins J1939 STD
144300K249	9 pin Round Diagnostic Connector and OBDII Standard Cable - Temic MB Actros

❖ Agriculture Cables

Cables for tractors not equipped with standard diagnostic connectors.

144300K226	9 pin Diagnostic Connector Cable for BOSCH ECU (MS6.4) Case – New Holland – John Deere
144300K227	9 pin Diagnostic Connector Cable - John Deere Premium
144300K228	8 pin Diagnostic Connector Cable - Valtra
144300K229	16 pin Diagnostic Connector Cable - Valtra
144300K230	16 pin Diagnostic Connector Cable - Massey Ferguson
144300K231	4 pin Diagnostic Connector Cable - Fendt
144300K232	14 pin Diagnostic Connector Cable - Duetz – Same
144300K233	12 pin Diagnostic Connector Cable - Fendt

❖ Marine Cables

Cables for boats not equipped with standard diagnostic connectors.

144300K217	OBDII Diagnostic Connector Cable for TRW systems - Volvo Penta

Specifications

Inferface	DB25 connector
	USB 2.0 connector
Minimum System Requirements	Windows Vista 32bit and 64bit, Windows 7 32bit and 64bit
	256 Mb RAM
	USB port
	Active Internet connection for installation and subsequent updates of the software (communication with the ECU or the vehicle is available also offline)
External dimensions	Approx. 18 x 10.8 x 3.5 cm / 7.08 x 4.25 x 1.37 in (width × depth × height)
Weight	Approx. 300 g / 10.6 oz

Hardware Warranty and Software License

Product warranty

Thank you for purchasing our Product. From here on, the term "Product" shall mean the tool KESSv2. This warranty does not cover the K-Suite software provided with the Product.

Alientech Srl warrants to the original purchaser that the hardware of the Product shall be free from defects in assembly, or defect that can be otherwise attributable to Alientech Srl, for a period of **two (2) years from the date of purchase**, provided that the hardware is used in accordance with the instructions provided in this guide and the Operating Manuals integrated into the K-Suite software.

To enable the warranty, you must register the tool.

You shall report to Alientech Srl, on pain of forfeiture of the Product warranty, any hardware defects covered under warranty within 15 (fifteen) days from their discovery, by registered mail with acknowledgment of receipt or by certified e-mail, stating the reasons of your complaint.

You may ask Alientech Srl, at your own choice, the repair or replacement of the Product purchased, unless the solution you propose is impossible or too onerous.

Alientech Srl shall repair or replace the Product within a reasonable time and without causing you significant inconvenience.

If repair or replacement are impossible or too onerous, or Alientech Srl has failed to accomplish the repair or replacement within a reasonable time, or has caused you significant inconvenience, you can ask for an adequate price reduction or rescission of the purchase contract and refund of your money.

Under no circumstances will the amount reimbursed be higher than that paid for the purchase of the product.

A minor defect shall not give you, under any circumstances, right to cancel the purchase contract.

In case of repair or replacement of the Product, the Warranty Period shall not be extended.

Without derogating from the foregoing, Alientech Srl, its subsidiaries and affiliates shall under no circumstances be liable to the user for any loss, damage, claim or cost of any kind, including any special, indirect, incidental or consequential damages or loss of profits or earnings, resulting from the interruption of your business, personal injury or breach of duty of care, or third-party claims, even if a representative of Alientech Srl has been advised of the possibility of such loss, damage, claim or cost.

The foregoing limitations and exclusions apply to the fullest extent permitted by law in your jurisdiction.

This warranty does not apply to a Product that, upon inspection, Alientech Srl determines it is defective, damaged or non-conforming due to external causes, including – but not limited to – accident, abuse, misuse, alteration, negligence, improper installation, problems with electrical power, interference with other hardware or software, usage not in accordance with the information and precautions described in the user's guide and / or documentation provided by Alientech.

Product repair or replacement with an RMA

In the event of malfunction, damage or breakage of the Product, **always** contact the Technical Support Service for authorization to return the tool. Alientech Srl will send by e-mail an RMA form (Return Merchandise Authorization).

The RMA form must be filled in all its parts by the user and shall always be included in the package with the tool. In addition, the tool must be returned in his suitcase, complete with all its accessories.

Alientech Srl reserves the right not to inspect and / or repair tools that are not accompanied by the RMA form filled out in all its parts.

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The K-Suite software is licensed non-exclusively and non-transferable, but not sold.

You shall use the K-Suite software in accordance with the purpose for which it has been manufactured and marketed, and in respect of the recommendations for use and technical specifications provided by Alientech Srl, and to the extent set forth in this License.

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Alientech do not warrant and make no representation 1) that the functions included in the K-Suite software will meet your requirements, 2) that the operation of the K-Suite software will be correct, 3) that the K-Suite software will perform uninterrupted or error-free 4) that the K-Suite software will not damage any other software or hardware you use 5) regarding the use or the results of the use of the K-Suite software in terms of its correctness, accuracy, reliability, or otherwise.