

CHIPSOFT J2534 Lite



Technical characteristics of the **CHIPSOFT J2534 Lite adapter**:

- modern powerful 32-bit ARM processor 72 MHz
- work under the rule of the real-time operational system (RTOS)
- support of the bus USB 2.0 Full-speed
- update of the adapter firmware via USB
- support of J2534 standard
- protection from polarity reversal, static stress
- dual power to provide safe work (+5V USB socket, +12V/+24V OBD2 socket)
- support of power 24V to work with trucks and buses
- indication of the operating mode via 3 LEDs
- Set programming voltage +5V to 12 pin of OBD2 socket (Honda reflash)
- OBD2 case
- Mini USB socket

Support of the following protocols:

- ISO 11898 (raw CAN) up to 1Mb/s
- ISO 15765-4 (CAN)
- ISO 14230-4 (Keyword Protocol 2000)
- ISO 9141-2
- GM_UART_PS

The adapter pinout:

- 4, 5 - ground
- 7 - K-Line
- 6 - CAN Hi
- 12 - Boot Pin for programming Honda ECU (only +5V can be set)
- 14 - CAN Lo

- 15 - L-Line (can also be short to the ground)
- 16 - +12V (in order to measure the voltage in the OBD socket and adapter power backup)

The adapter is a universal device able to work in various modes:

- J2534 compatible device
- K-Line adapter
- CANHacker

The adapter supports the protocol ISO22900 and works with Tech2Win.

Initially the device works as a J2534 compatible device.

You can change the device mode using the shortcuts located in Start- Programs - CHIPSOFT J2534 Lite:

- Make J2534
- Make K-Line
- Make CANHacker

For convenience you can set these shortcuts on your desktop.

Setup file

You can configure additional settings for each adapter with editing the configuration file *options.json* which is located in the Folder *C:\ProgramData\CHIPSOFT_J2534*.

In this file you can configure settings for all the adapters CHIPSOFT J2534 (Lite, Mid, Pro).

The settings for each adapter are located in the corresponding sections "Lite", "Mid", "Pro":

```
{
  "LogLevel": 10,
  "Lite": {
    "OpenPort2Mode": true
  },
  "Mid": {
    "OpenPort2Mode": true,
    "RemapAUXToPIN": 12
  },
  "Pro": {
    "OpenPort2Mode": true,
    "RemapAUXToPIN": 12
  }
}
```

The parameter "LogLevel" is common for all the adapters and is foreseen to carry out writing of its own log. By default this parameter is set as 10. The value more or equal to 10 turns off writing a log. Please pay your attention to the fact that writing a log slows down the adapter

work. To get additional information about writing a log it is necessary to apply to the Chipsoft technical support team per e-mail. The other settings are described in the section *Mode of J2534 compatible device*.

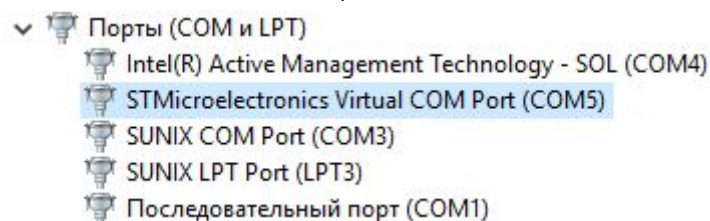
While re-installing the J2534 driver the installation program is not re-writing this setup file. That is why in order to configure settings by default it is necessary to delete the file options.json and re-install the J2534 drivers.

After changing the settings it is necessary to re-start the program which is working with CHIPSOFT J2534 Lite adapter.

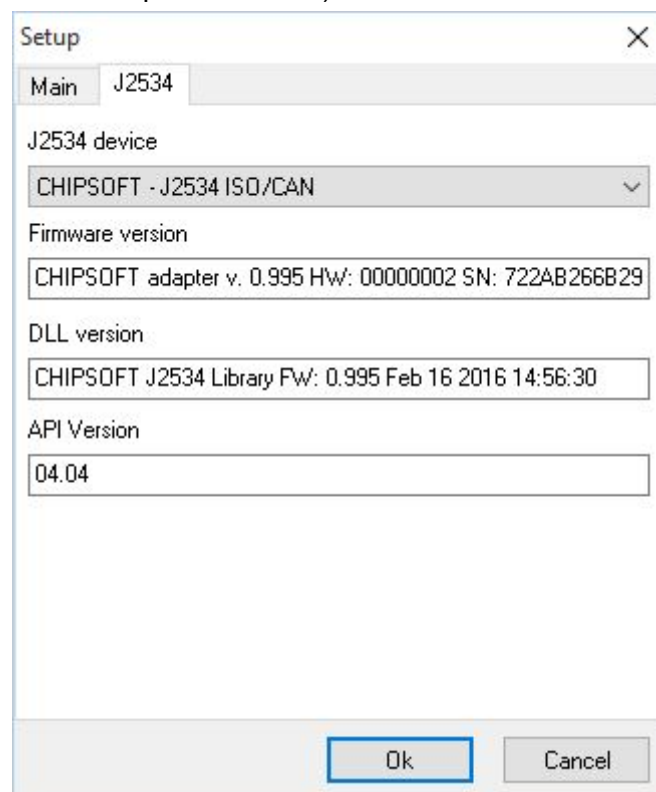
Mode of J2534 compatible device

In order to work in this mode you need to install 2 drivers types:

1. Device driver (after its installation the device will appear in the Device manager as an STMicroelectronics Virtual COM Port):



2. J2534 driver (after its installation the device will be determined with programs which work via the J2534 compatible device):



LEDs indication in this mode has the following meaning:

- Colour change by turn (three colours) - standby mode
- Red - data interchange via CAN
- Green - data interchange via K-Line
- Yellow - data interchange via USB

Driver settings

Taking into account that plenty of loaders are oriented to work with Tactrix Openport2 which has several errors as for correct work of the J2534 driver, we added Openport2 compatibility mode. There is a separate parameter "OpenPort2Mode" in the section "Lite" of the setup file created specially for this mode. By default this parameter is set as *true*.

```
"Lite": {
  "OpenPort2Mode": true
}
```

In order to turn off the Openport2 compatibility mode it is necessary to change this parameter to *false*. You should do this so that the adapter works correctly with the loader BitBox.

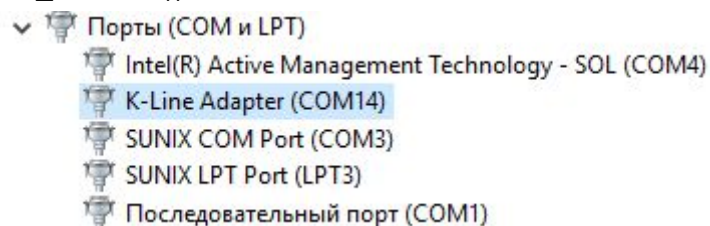
Please note that for ChipLoader and MDFlasher programs, changing this parameter does not affect the program's operation in any way. ChipLoader always uses Openport2 compatibility mode, MDFlasher does not use Openport2 compatibility mode regardless of this setting.

Mode of the K-Line adapter

LEDs indication in this mode has the following meaning:

- Playing yellow - standby mode
- Red - the voltage +12V and higher comes to the K-Line adapter
- Green- interchange via K-Line

After you install the J2534 device drivers you will see the folder "drivers" set on your computer. In order to work in the K-Line mode you need to install additionally the K-Line adapter driver ((kline_driver.inf)) which is located in the afore mentioned folder "drivers".

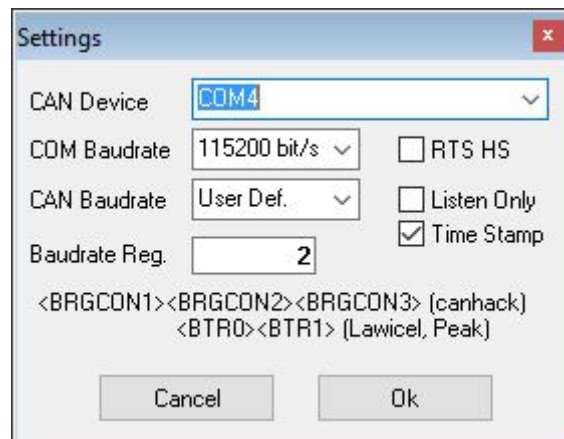


Please pay your attention to the fact that this driver is provided without the digital signature that is why Windows can show you the corresponding window about that. In order to install the driver on Windows 10 you need to disable the digital signature control of drivers.

Mode of CANHacker

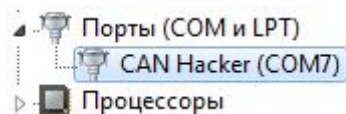
In this mode the device is compatible with the lawicel protocol which is used with the well-known program CANHacker (this program does not work on Windows 10!) as well as with some other programs.

The only difference is User Def speed setup. To set the speed you need to set the divisor value (in the denary system within the frames from 1 to 65535) in the "Baudrate Reg." line in order to get the necessary speed (the dividend takes the value 1000000). That is with the value 2 we will get the speed $1000000 / 2 = 500000$, correspondingly with the value 3 we will get the speed $1000000 / 3 = 333333,333$ and so on:



There is no LEDs indication in the CANHacker mode.

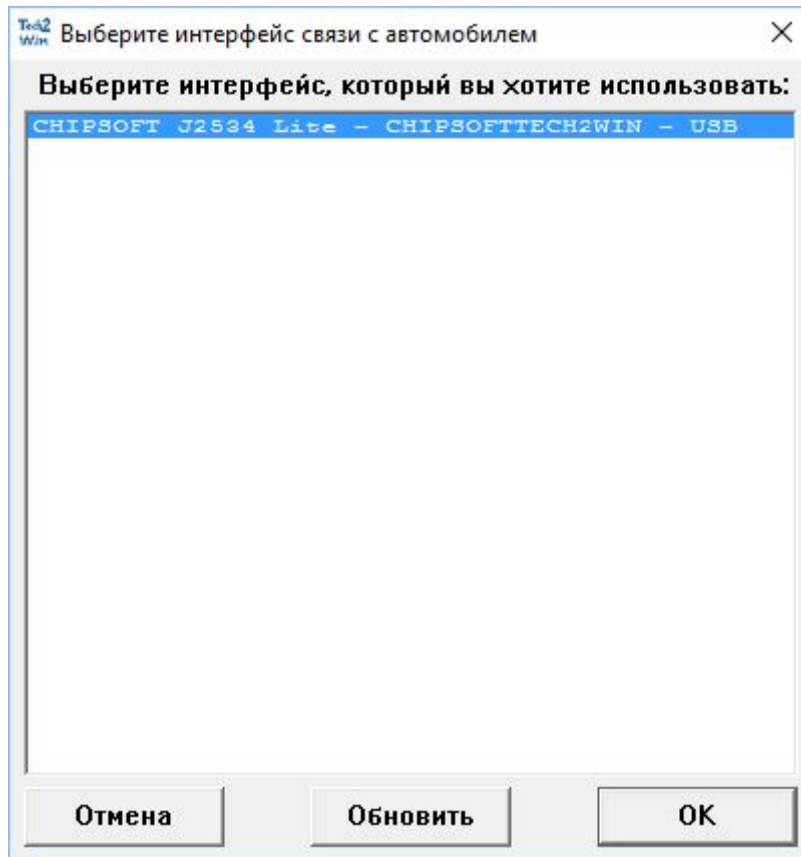
After you install the J2534 device drivers you will see the folder "drivers" set on your computer. In order to work in the CANHacker mode you need to install additionally the CANHacker adapter driver (canhacker_driver.inf) which is located in the afore mentioned folder "drivers".



Please pay your attention to the fact that this driver is provided without the digital signature that is why Windows can show you the corresponding window about that. In order to install the driver on Windows 10 you need to disable the digital signature control of drivers.

Tech2Win

In order to work with the program Tech2Win the adapter should be in the J2534 mode. All the Tech2Win drivers are installed automatically while installing the program. If you do everything correctly, then while starting the program Tech2Win with the connected device it will appear in the list to choose:



Taking into account that the CHIPSOFT J2534 Lite adapter does not have the integrated multiplexer to switch the K-Line pins automatically, work with all the ECUs is carried out on the main K-Line (7 pin of the OBDII socket). That is for ECU diagnostics which is using for example 12 pin of the OBDII socket, it is necessary to cross 12 pin of OBDII socket of the car to 7 pin of OBDII socket of the CHIPSOFT J2534 Lite adapter.

Taking into account that the CHIPSOFT J2534 Lite device does not have the second CAN bus on pins 3-11 and bus SW-CAN, diagnostics of ECUs which are using such CAN buses will not be possible. For diagnostics of such ECUs we recommend to use the CHIPSOFT J2534 Mid or Pro device.

Peculiarities in switching the adapter modes

Please pay your attention to the fact that in order to switch from one mode of the device to another you need to install all the necessary drivers correctly for each device type. Otherwise you will not be able to switch to another device mode.

While switching the device mode the adapter comes into the boot mode (a red LED starts blinking) where rewriting of the corresponding firmware depending on the adapter mode is carried out.

In case there is any failure while switching the adapter mode you can just start the process of switching again. In such a case there will be no adapter failure even if you turn the power off.

Please pay your attention to the fact that every time when you switch the adapter mode the part of the processor FLASH memory has been re-written. The processor producer guarantees not less than 10,000 times of such successful re-writings before the FLASH memory will fail.

WEB: <http://www.chipsoft.com.ua/>