

Instructions for Setting Up and Using the Program

TLFReader GEN2

Thank you for purchasing our program. We hope it will enhance your chip-tuning capabilities and attract new clients. Please note that we have a private Telegram group for TLFReader users and a technical support bot.

This program is designed for reading the flash memory of processors from the 76F0196/198/199/219 family installed in Toyota/Lexus GEN2 ECUs. It allows you to read both factory files and files that have been edited by others. The reading process relies on accessing the processor using a known password. Typically, we have already collected passwords for most software, so the reading time will be within 10-20 minutes, depending on the size of the flash memory and your computer. However, if your software's password is not in our database, you can extract it yourself using our program. In this case, the reading time may extend up to 3 hours.

To enhance the program's security and receive updates, an internet connection is required during the initial launch. Once the program is successfully started, you can disconnect from the internet. Main operations for reading flash memory are performed via a special USB-CAN adapter (included in the package). The program has been tested on over a hundred different ECUs and on Windows 7, Windows 10, and Windows 11 operating systems.

Package Contents:

- 1. Guardant Key
- 2. USB-CAN Adapter
- 3. USB-microUSB Cable
- 4. QR Code for Group Invitation

You will also need a J2534 adapter (it is recommended to use the Scanmatik 2).

Preparation for Operation.

To begin, you need to download the drivers and the program itself from our website:

The next step is to ensure that the USB-CAN adapter and Guardant key are recognized correctly. Since the adapter uses the commonly used CP2102 chip, the drivers are likely already installed, as is the driver for the Guardant key. Connect the USB-CAN adapter and access the Device Manager:



If the device is not recognized, it means that the appropriate driver is not installed on your system:

📇 Device Manager	_	×
File Action View Help		
V 📇 DESKTOP-IDO6M8R		
> 👖 Audio inputs and outputs		
> 🔊 Batteries		
> 💻 Computer		
> 👝 Disk drives		
> 🏣 Display adapters		
> 💼 Guardant dongles		
> 🦏 IDE ATA/ATAPI controllers		
> 🔤 Keyboards		
> 🕕 Mice and other pointing devices		
> 🛄 Monitors		
> 🚽 Network adapters		
✓ ↓ ② Other devices		
🙀 CP2102 USB to UART Bridge Controller		
> 🚍 Print queues		
> Processors		
> P Security devices		
> Software devices		
Sound, video and game controllers		
> 🍇 Storage controllers		
> 🚛 System devices		
> 🌵 Universal Serial Bus controllers		
> 🚽 Vehicle Interface Module		

Unpack the CP2102 drivers and run the installer according to your OS architecture:

File Home Share View Apple	Manage CP210x_Univer	sal_Windows_Driver					-	- 🗆	× ^ ?
Pin to Quick access Copy Paste Cilipbard	Move Copy to to to Croanize	e New folder	ies Open V ies History	Select all Select none Invert selection Select					
← → ✓ ↑	dows Driver				× č	Search CP210	x Universal Windows Driver		Q
> OneDrive	^	Name	Date	modified	Туре	Size			
This PC This PC This Dobjects Desktop Decomposite		arm arm64 x64 x86	8/7/2 8/7/2 8/7/2 8/7/2	024 12:34 PM 024 12:34 PM 024 12:34 PM 024 12:34 PM 024 12:34 PM	File folder File folder File folder File folder	24.10			
Documents		CP210x_Universal_Windows_Driver	r_Relea 6/24/ 5/7/2	2019 1:01 PM 018 5:05 PM	Application	24 KB 1 026 KB			
 > Journal of State > Journal of State > Implementation (C.) > Implementation (Logical Content of State > Implementation (C.) > Implementation (Logical Content of State > Implementation (C.) > Implementation (C.) 		GP210xCPInstaller_x86 dpinst ilabser ilabser SLAB_License_Agreement_VCP_Wit	5/7/2 5/7/2 5/7/2 6/24/ 6/24/	018 5:05 PM 018 4:46 PM 2019 9:21 AM 2019 9:21 AM 2019 1:37 PM	Application Microsoft Edge H Security Catalog Setup Information Text Document	903 KB 12 KB 13 KB 11 KB 9 KB			
> 🕳 USB Drive (E:) > 💣 Network	,								
11 items 1 item selected 1.00 MB									

After installation, the device should appear as follows:

📇 Device Manager	_	×
File Action View Help		
V 🗄 DESKTOP-IDO6M8R		
> 👖 Audio inputs and outputs		
> 🍃 Batteries		
> 💻 Computer		
> 👝 Disk drives		
> 🙀 Display adapters		
> 🧾 Guardant dongles		
> 📷 IDE ATA/ATAPI controllers		
> 🔤 Keyboards		
> 📗 Mice and other pointing devices		
> 💻 Monitors		
> 🚽 Network adapters		
> Portable Devices		
V 🛱 Ports (COM & LPT)		
🗍 Silicon Labs CP210x USB to UART Bridge (COM5)		
> 🖻 Print queues		
> Processors		
> If Security devices		
> Software devices		
> 👖 Sound, video and game controllers		
> Storage controllers		
> E System devices		
> Universal Serial Bus controllers		
> 🚽 Vehicle Interface Module		

Insert the Guardant USB key and check that it is correctly recognized by the system:

🗂 Device Manager	_	×
<u>F</u> ile <u>A</u> ction <u>V</u> iew <u>H</u> elp		
V 🗄 DESKTOP-IDO6M8R		
> 👖 Audio inputs and outputs		
> 📓 Batteries		
> 🛄 Computer		
> 👝 Disk drives		
> 🔙 Display adapters		
🗸 🛄 Guardant dongles		
🧾 Guardant Code		
💼 Guardant SP		
> 🦷 IDE ATA/ATAPI controllers		
> 🥅 Keyboards		
> 📗 Mice and other pointing devices		
> 🛄 Monitors		
> 🚽 Network adapters		
> 📃 Portable Devices		
> 🛱 Ports (COM & LPT)		
> 🚍 Print queues		
> Processors		
> 🔐 Security devices		
> 📱 Software devices		
> 🗃 Sound, video and game controllers		
> 🍇 Storage controllers		
> 🏣 System devices		
> 🏺 Universal Serial Bus controllers		
> 🚽 Vehicle Interface Module		

If the USB key is not recognized, install the drivers from the official website, the link to which can be found in the Downloads section.

NB! In case that after connecting the USB-CAN adapter, it is correctly recognized in the Device Manager, but the COM port assigned by the system does not appear in the **TLFReader** program:



You need to uninstall this device along with its driver and then install the driver downloaded from our website. To do this, double-click on the device:

🛔 Device Manager	_	Х
File Action View Help		
V 🗄 DESKTOP-IDO6M8R		
> 👖 Audio inputs and outputs		
> 🗃 Batteries		
> 💻 Computer		
> 👝 Disk drives		
> 🏣 Display adapters		
> 💼 Guardant dongles		
> 📷 IDE ATA/ATAPI controllers		
> 🔤 Keyboards		
> 🕕 Mice and other pointing devices		
> 🛄 Monitors		
> 🚽 Network adapters		
> 📃 Portable Devices		
V 📮 Ports (COM & LPT)		
🛱 Silicon Labs CP210x USB to UART Bridge (COM5)		
> 🖻 Print queues		
> Processors		
> In Security devices		
> Software devices		
> 👖 Sound, video and game controllers		
> Storage controllers		
> E System devices		
> Universal Serial Bus controllers		
> 🕎 Vehicle Interface Module		

Then click Uninstall Device::

Silicon La	bs CP210x US	B to UA	RT Bridg	e (COM	i) Properties		Х
General	Port Settings	Driver	Details	Events	Power Man	agement	
	Silicon Labs (CP210x (JSB to U/	ART Bridg	ge (COM5)		
	Driver Provide	er: Si	licon Lab	oratories	nc.		
	Driver Date:	6/	20/2019				
	Driver Versior	n: 10).1.8.246	6			
	Digital Signer	: Mi Pu	icrosoft V ublisher	/indows	Hardware Con	npatibility	
Drįv	ver Details	View	details al	bout the i	nstalled driver	rfiles.	
Upd	late Driver	Upda	ate the dri	iver for thi	is device.		
<u>R</u> oll I	Back Driver	lf the back	device f to the pr	ails after u eviously i	updating the d nstalled driver	driver, roll r.	
<u>D</u> isa	ble Device	Disat	ble the de	vice.			
<u>U</u> nin:	stall Device		e d	evice fror	n the system	(Advanced).	
					ОК	Cancel	

Check the box "Delete the driver software for this device":

Uninstal	ll Device	×
	Silicon Labs CP210x USB to UART Bridge (COM5)	
Warning	: You are about to uninstall this device from your system.	
✓ Delet	te the driver software for this device.	
	Uninstall Cancel	

After that, reconnect the USB-CAN adapter and install the driver.

Connecting the ECU on the bench.

Since the **boot pin** is used for reading, it is only possible to read the ECU outside the vehicle.

The ECU can be connected in various ways: using a **PowerBox**, various adapter boards, or simply directly from the OBD port of the adapter. We recommend the method with automatic power management and **boot pin** (e.g., **PowerBox**). Below are the different connection methods:

PowerBox



Connect the USB-CAN adapter to the 26-pin connector as shown in the photo:



The gray boot wire must be connected to the **boot pin** of the unit. You can use a wire with a "female" connector at the end:



Ensure all switches are set to the upper position.

CHIPSOFT OBD2 Breakout box



You can connect the module using "female-to-female" **Dupont** wires. Connect +12V, GND, CAN-Hi, and CAN-Low to the corresponding labels on the **CHIPSOFT** board. The **boot pin** can be connected either directly to ground or through a button (manual control of the **boot pin** is supported in this configuration).

For the USB-CAN adapter, connect the wires as follows: the white wire to CAN-Hi, the green wire to CAN-Low, and the black wire to GND.



The Auto power button must be released.

During **boot pin** identification, the **boot pin** should be in the open state. Before reading, the **boot pin** needs to be shorted either by using a button or by connecting it to the GND contact. After this, press the **"Read Flash"** button. When the message **"Disable boot pin"** appears, be prepared:

Interface: SM2 USB		▼ Port: COM9 ▼
	FAD F	<u>■ </u>
ToyotaFlasher	uru sup	port@toyotaflasher.ru
ToyotaFlasher.c	<u>oom</u>	Telegram bot
Identification	Help	ECU Pinout
Read Password	Read Flash	Reboot & Save

Then, when the next message "Start reading" appears, release the boot pin:

Тоус	ta Lexus <mark>Gl</mark>	
RE	AD EC	<i>.</i>
ToyotaFlasher.ru	sup	port@toyotaflasher.ru
ToyotaFlasher.cor	<u>n</u>	Telegram bot
Identification	Help	ECU Pinout
Read Password	Read Flash	Reboot & Save

If reading does not begin, repeat the procedure starting with pressing the "Read Flash" button.

Example of Using the Common Button:



Universal Adapter for Scanmatik 2



You need to connect the CAN-Hi (CAN-Low) from the **Scanmatik**, from the ECU, and from the USB-CAN adapter by any means. In this case, a "male-to-male" twisted wire was used. The ground connection is not required. For connecting the **boot pin**, you can use a wire with a "female" connector.

Using the Program:

t i
toyotaflasher.ru
egram bot
ECU Pinout
Reboot & Save

Upon the first launch, you need to select the J2534 adapter (1) and the COM port with the connected USB-CAN adapter (2). Then, press the "Identification" button (3). If the module is connected correctly, a calibration number will appear at the bottom along with one of the following messages:

Header TLF Denso Gen II Reader		
Interface: SM2 USB		▼ Port COM9 ▼
Тоус	ta Lexus <mark>G</mark>	EN II
RE	AD EL	CU
ToyotaFlasher.ru	su	pport@toyotaflasher.ru
ToyotaFlasher.com	n	Telegram bot
Identification	Help	ECU Pinout
Read Password	Read Flash	Reboot & Save
Calibration: 89663-48P12, p	assword loaded, c	lick "Read Flash"

Either:

Toyot	a Lexus <mark>GE</mark>	
RE	AD EC	<i>.</i>
ToyotaFlasher.ru	sup	port@toyotaflasher.ru
ToyotaFlasher.com		Telegram bot
Identification	Help	ECU Pinout
Read Password	Read Flash	Reboot & Save

In the first case, our database contains the password for this software. In the second case, if the password is unknown, you need to use the "**Read Password**" function (see below).

If the password is available, it will be automatically saved to memory and will be automatically loaded for any subsequent operations until it is replaced by another password. In this case, as well as if you know the password and did not press the "**Identification**" button (**3**), you need to press the "**Read Flash**" button. A window will appear showing the current password, which you can change manually.

Toy	ota Lexus	GEN II
ToyotaFlasher ToyotaFlasher.q	Enter password	prt@toyotaflasher.ru Telegram bot
Identification	AF314F7D OK Cance	ECU Pinout
Read Password		Reboot & Save

If you are using a **PowerBox** or a similar device with automatic control, the reading process will start 3 seconds after you press the "OK" button.

If you have manual control of the **boot pin**, when you see the "**Start reading**" message, you need to ground the **boot pin**.

Interface: SM2 USB		▼ Port: COM9 ▼
тоуо D С	ta Lexus <mark>GE</mark> ' A D E C	
ToyotaFlasher ru		port@tovotaflasher.ru
ToyotaFlasher.com		Telegram bot
Identification	Help	ECU Pinout
Read Password	Read Flash	Reboot & Save

If reading has not started, short the **boot pin** and click "Read Flash" again.

Toy	ota Lexus <mark>GE</mark>	IN II
RE	EAD EC	CU
ToyotaFlasher.ru	<u>u sup</u>	port@toyotaflasher.ru
ToyotaFlasher.com		Telegram bot
Identification	Help	ECU Pinout
Read Password	Read Flash	Reboot & Save
Read Password	Read Flash	Reboot & Save

After a successful read, a "Reading complete" message will appear:

Тоус	ota Lexus <mark>GE</mark>	N II	
RE	AD EC	CU	
loyota-lasher.ru		support@toyotaflasher.ru	
l oyota-lasher.com	<u>m</u>	l elegram bot	
Identification	Help	ECU Pinout	
Read Password	Read Flash	Reboot & Save	

The "**Reboot & Save**" button will become active. To correctly complete the flash memory reading process, do not disconnect the power from the ECU; instead, click this button. If you are manually controlling the **boot pin**, it should be grounded. After a successful reboot of the ECU, a file explorer window will open for you to save the firmware file.

After saving the file, it is recommended to perform re-identification to check the functionality of the ECU. When manually controlling, the **boot pin** should be disconnected.

If the password for this software is unknown, you will need to use the "**Read Password**" button (4). A warning window will appear indicating the duration of this process. If you are manually controlling the **boot pin**, it must be grounded before clicking "OK.":



After successfully reading the password, a message with the current password will appear in the status bar, and the password will also be saved to memory. You only need to press "**Read Flash**" afterwards. However, we recommend saving the password for potential future operations.

🙀 TLF Denso Gen II Reader		
Interface: SM2 USB		▼ Port COM9 ▼
Toyot	ta Lexus (GEN II
RE	AD E	GU
ToyotaFlasher.ru s		Telegrom het
ToyotaFlasher.com		Telegram Dou
Identification	Help	ECU Pinout
Read Password	Read Flash	Reboot & Save
Password successfully read: AF314	F7D, click the butto	on "Read Flash"

Possible Issues When Using the Program:

1. Error Window Appears Upon Startup or the Program Window Appears Briefly and Disappears:

- Add TLFReader.exe to the firewall exceptions.
- There might be server maintenance; contact technical support for more information.

2. Nothing Happens When Launching the Program:

• Occasionally, Kaspersky Antivirus may block tlfreade.exe and wad.exe, mistakenly identifying them as trojans. Add these files to the antivirus exceptions.

3. After the "Start Reading" Message, Nothing Happens:

- The USB-CAN adapter may be incorrectly connected (CAL-Hi, CAN-Low).
- The **boot pin** might be incorrectly connected (either always grounded or disconnected).
- The wrong COM port might be selected in the program.

4. The ECU Does Not Respond After Reading:

- If the "**Reboot & Save**" button is active, connect the **boot pin** to ground and press the button again.
- Use any flasher (e.g., PCMFlasher) to write the read firmware with the **boot pin** connected.
- Contact technical support for assistance.