Table of contents

Frequently Asked Questions and answers (FAQ)

- q. What are the basic hardware and software requirements for successful operation of the program?

  a. To install the program, you need a 64-bit version of Windows with the framework installed.net 4.7.2 or higher. If the connected device is identified as USB_BULK, then it means that you need to install drivers to work with such equipment. For some models, there are drivers included in the installation package. You can open the menu section "Tools – EDL and ADB Drivers" through the program interface. For stable operation using the Sahara protocol, you must select the USB 2.0 port (the protocol is unstable with the USB 3.0 port). If the parallel port is automatically detected above 10, then you should manually reassign it to low 10. Cyrillic letters and spaces should be avoided when specifying the path to the programmer. With them, the protocol issues a path error.
- q. How is the rating of a file in a folder with programmers formed?

  a. Files with a rating of 0 are not executable files, and certificates are not searched in them. The ELF (ELF), BIN, MBN file has a rating of 1. These can be any firmware files (programmers, xbl, apps, etc.). 1 is added to the rating if the SWID (software identifier) starts with 3 (this is a sign of the loader for emergency mode – Firehose programmer), another +1 point to the rating if the identifiers of the phone model specified in the field match search, and in the programmer's certificate. Also, 1 is added to the rating if the manufacturer matches and another 1 if the processor. Matching the hash sum of the root certificate adds 5 points to the rating at once. The higher the rating of the file (programmer), the higher the probability that it will come to the phone, the parameters of which are entered for search. The maximum rating value is 10 points.
- q. Where can I get my device ID (HW_ID, OEM_ID, MODEL_ID, OEM_HASH)?

  a. Automatically, from the "Work with files" tab, by clicking the "Poll the device with a reboot into emergency mode" button; manually, by selecting the appropriate device on the "Reference book" tab with a double click; using other programs to access memory to request identifiers: - emmcdl with the command -info: - QLMCPUInfo; - QSaharaServer with teams -c 02(03.07).
- q. Why are some files in the report highlighted in red and have a hint "The file is not ELF!", "The file is encoded"?

  a. Most programmers have a code at the beginning of the file that determines the ownership of the file (magic_number). At the same time, programmers come across who, for various reasons, have a different set of bytes (mask) applied in the header, and such files are not identified by the system as a working programmer. Such files are highlighted with a color and a hint to inform the user about the impossibility of using them by this program (perhaps other software will be able to work with them).
- q. Where and to whom are the data from my device sent, and what exactly?

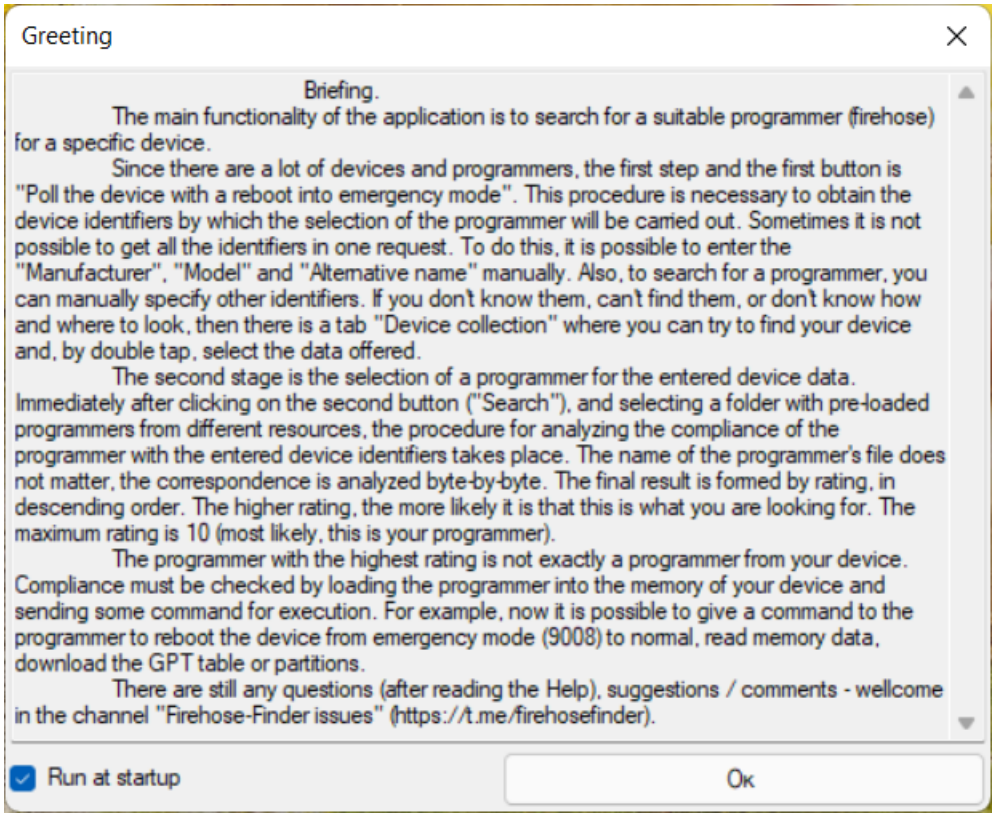
  a. The data is sent by the bot (program code) to the public telegram channel "Firehose - Finder issues". Information from this channel is processed to change/add/correct the program. All incoming information is publicly available, any Telegram user can subscribe to this channel and control the transmission of information. Device identifiers are sent – processor type, serial number, model, manufacturer, vendor. **No personal information capable of unambiguously linking device data to the user is transmitted.**
- q. I have a working programmer for my device. How do I share it or add it to the program database?

a. Through the program interface, you can only send a programmer who has successfully worked with a really connected device. A detailed description can be found in the section "Share the programmer".

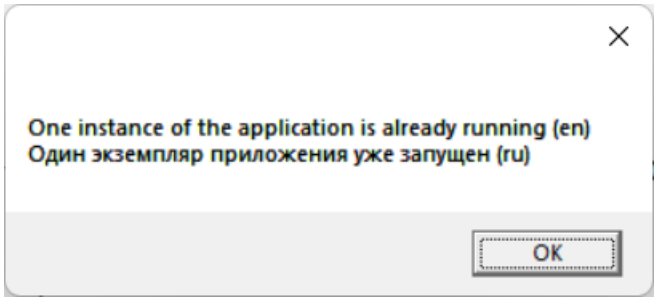
- q. Where can I view the source code? How can I change it or offer my own improvements?
  a. The source code of the FhF program is posted in a public repository on the GitHub platform (link for viewing). You can freely download the entire code or any part of it. To suggest your changes, you can use either the "Issues" section, or make a fork of the repository. These actions will require registration on GitHub.

Welcome window

When the program starts, the "Greeting" window opens. It saves the state of the "Run at startup" switch in the program, and if there is no need to constantly launch this window at the start of the program, then the check mark can be removed. If necessary, you can go back to this window in the "View" and open it from there.

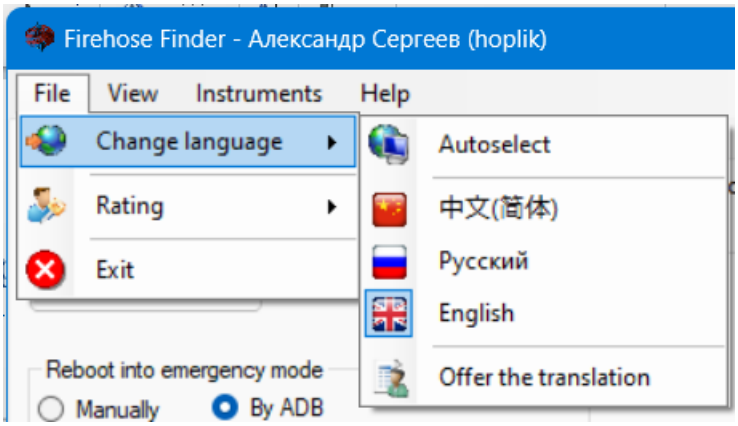


The program implements a mechanism for launching only one instance of the application. If you try to launch a second instance while the application is running, a warning will be displayed about the impossibility of performing such an operation.



Menu item «Change language»

For the convenience of working in the program, you can use the translation of text inscriptions into a familiar language.



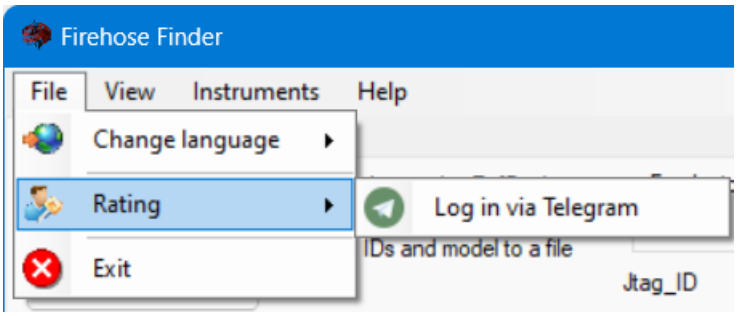
- «Autoselect» - it assumes automatic language selection in accordance with the regional settings of the operating system. By default, the application language is " Русский ".
- "Chinese (Simplified)" - regardless of the regional settings of the operating system, the application language is set as «Chinese».
- «Русский» - regardless of the regional settings of the operating system, the application language is set as «Русский».
- «English» - regardless of the regional settings of the operating system, the application language is set as «English».
- «Offer the translation» - go to the telegram channel "Chat for FhF" to voice your readiness to translate the application into your language. Since the project is non-commercial, the translation work is not paid and is a symbol of the author's goodwill.

When the application is restarted, the language settings are saved. Changing the language requires restarting the application without restarting the operating system.

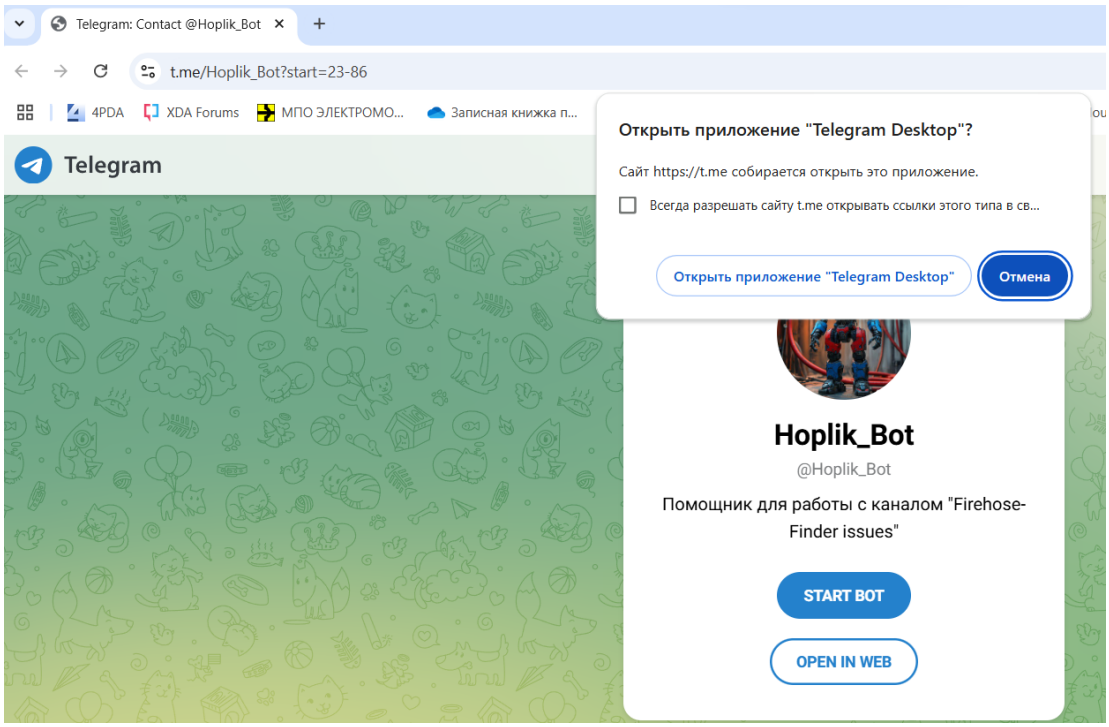
Menu item «Rating»

The rating is designed to display the personal contribution of any user registered in Telegram and authorized to the development of this project.

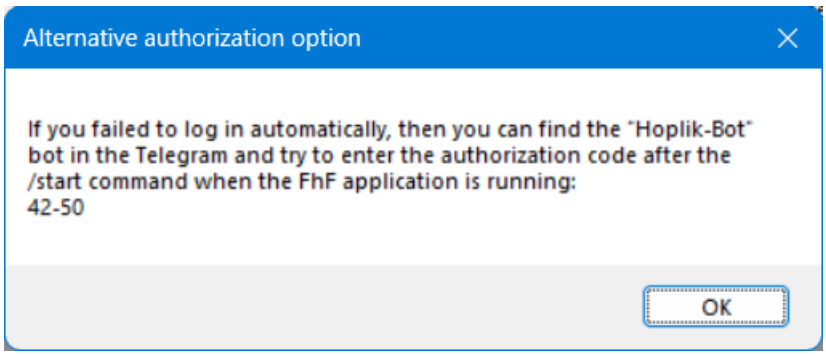
To participate in the rating, you must be authorized.



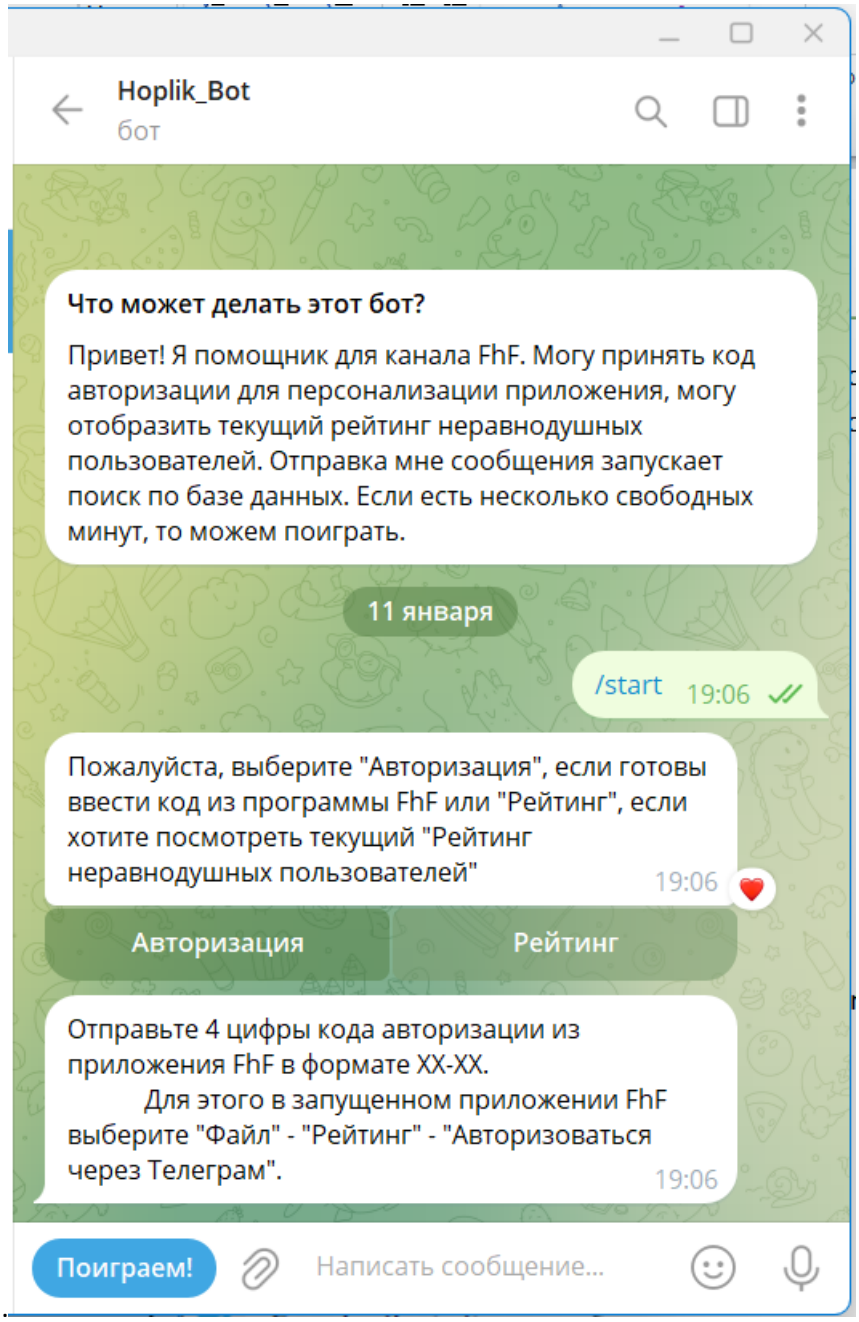
When the authorization procedure is started, **no access to the user's profile in Telegram is performed**. Only the personal binding of the program and the Telegram profile is checked by entering a similar random code.



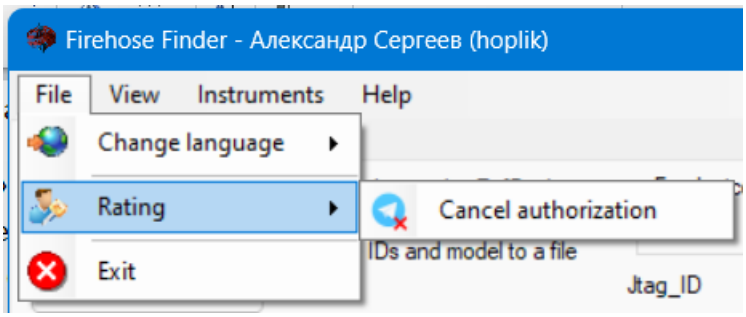
The /start command with the authorization code is automatically sent to the bot. The application is trying to get this code. If the procedure fails, the authorization will not be confirmed and a warning will pop up about the need to repeat the procedure.



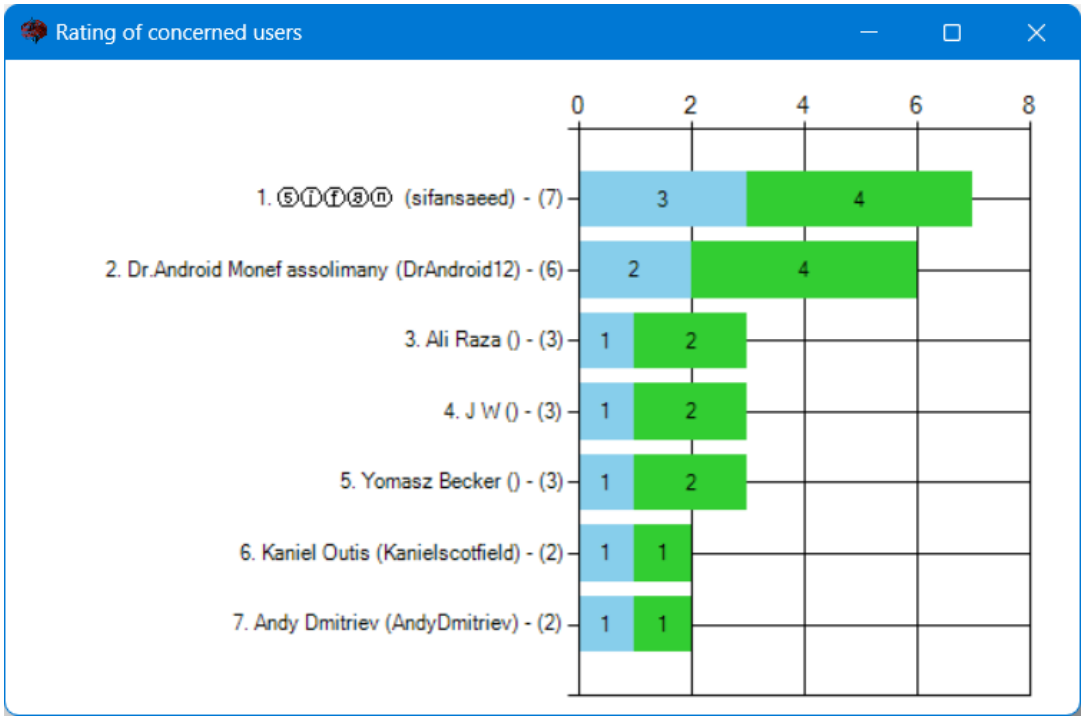
If the desktop version of Telegram is not installed on your computer, you can send the authorization code to the bot on your mobile device. You need to find the @Hoplik_Bot bot, send it the /start command, and select "Authorization" to send the authorization code in xx-xx format from the application (in this example, 42-50).



Upon successful authorization, the application will restart automatically and you will see your Telegram profile details in the application title. From now on, when sending data to the channel, a link to your profile will be added at the end of the message. If there is no desire to send information linked to the profile to the channel, the user can cancel authorization. The user is automatically eliminated from the rating after 6 months from the date of the last message sent to the channel linked to the profile.



By selecting the "Rating" menu item, a new window opens in which the "Rating of concerned users" is presented. An **authorized user is highlighted in red** when they get into the rating.



Principles of rating formation and payment of rewards to participants:

- Payment of remuneration is within the account balance. Replenishment of the rewards account comes from user donations.

- The minimum amount to receive remuneration is 0.03 ton (according to Telegram limits at the time of the Principles formation). Those who get less are not rewarded. Americans, Koreans and a number of other residents of "specialized" countries will not be able to use the funds. See Telegram restrictions by countries (https://walletru.helpscoutdocs.com/article/60-znakomstvo-s-wallet#----urscr).

- For each month, 50% of the balance is taken for distribution. If, after preparing the payments, the account balance turns out to be less than the minimum amount to be paid to the rating leader, then 100% of the funds in the account will be distributed for this month, not 50%.

- One point of the user's rating unit is considered to be a message with a link to his profile in the channel.

- Reactions (likes) of other users to this message are considered to increase the rating. One like = one point to the rating.

- The current payout amount is divided for each rating participant in its share of the total activity (messages + likes).

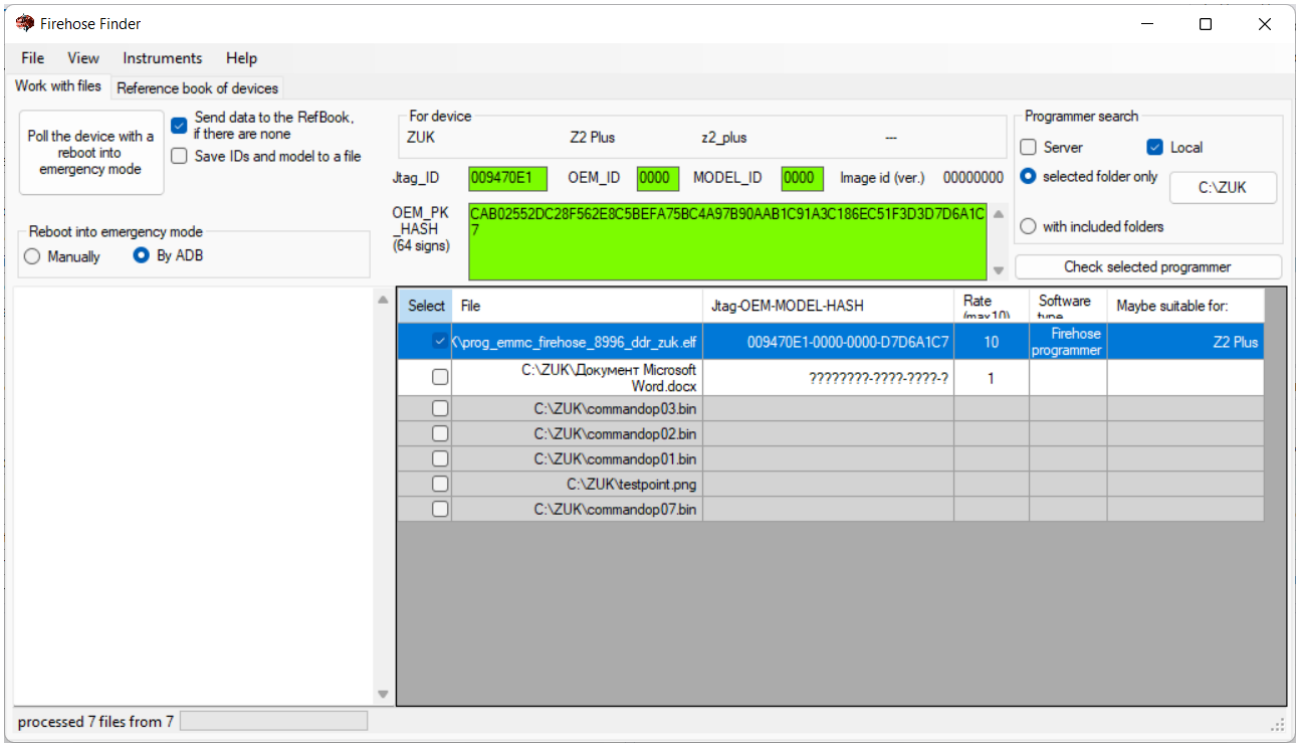
- Old messages (more than six months old) are not analyzed. Amounts for the user below the minimum are not paid or accumulated.

- According to Telegram rules, the recipient of the payment has the free will to explicitly accept the payment or explicitly refuse it. In case of inaction on the part of the recipient, after 14 days from the date of payment, the payment will be refunded to the sender automatically.

The "Work with files" tab (main)

The main tab for working with the program is "Work with files". She is always active. The basic functionality is to connect the device in normal mode (charging mode) and press the button "Poll the device with a reboot into emergency mode". With such work, ADB (Android Debug Bridge) requests device identifiers from the firmware (manufacturer, model, alternative name and serial number of the processor), the device is automatically overloaded into emergency mode, processor identifiers are requested (HW_ID, OEM_ID, MODEL_ID, OEM_PK_HASH), all received data is copied to the form.

By selecting the "Overload to emergency mode" items, you can set an automatic or manual reboot option (using ADB, it is not always possible to reboot into emergency mode, not all devices support this). You can also use the checkboxes to select saving data to a file and sending data to the RefBook. When saving data to a file, you will need to specify the folder to which the data will be copied.



After receiving the IDs, the device can be disconnected and restarted. Usually, the exit from the emergency mode is carried out by pressing the "Power" button for a long time (more than 10 seconds).

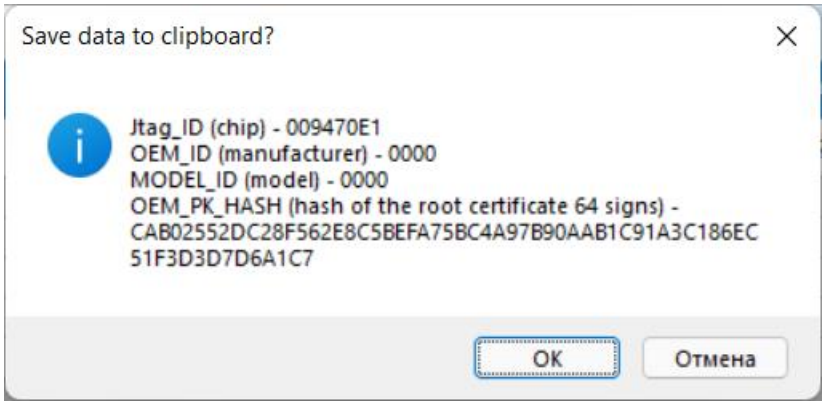
When the device data on the form is filled in (in automatic or manual mode), you can click the "Search" button in the "Programmer Search" group and select the path to the folder with the collection of programmers. You can use the radio button to select the search area:

- «Server»;

- «Local».

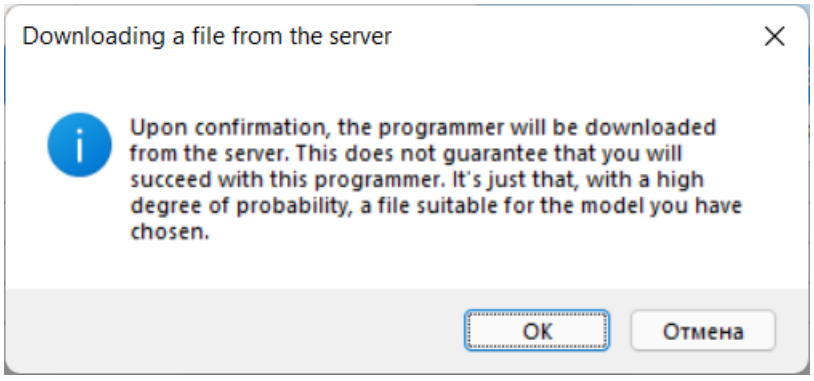
For the "Server" area, the completed form data is a kind of filter. Thus, leaving the identifier fields blank, you can get a complete list of programmers located on the server. Entering data into the identifier fields allows you to reduce the search results. Partial filling in of one or more fields is allowed.

For the "Local" area, either "selected folder only" or "including subfolders" is analyzed, depending on the selected switch position. All files located in folders are checked. The search for the programmer is carried out not by name, but by identifiers, respectively, the file name of the program for analysis is not important. Each verified file is assigned a rating. Sorting in the table is carried out by rating from higher to lower. The maximum is 10 (the probability that this is the right programmer is the highest). A double tap on the selected programmer allows you to copy to the clipboard information about the identifiers that this programmer will require when working.



The programmer can be checked whether it is suitable for the connected device. To do this, select the programmer from the analyzed list by putting a check mark at the beginning of the line. In this case, the "Check the selected programmer" button will become active.

If the programmer selected for testing is located on the server, it will be prompted to download it to a local folder.



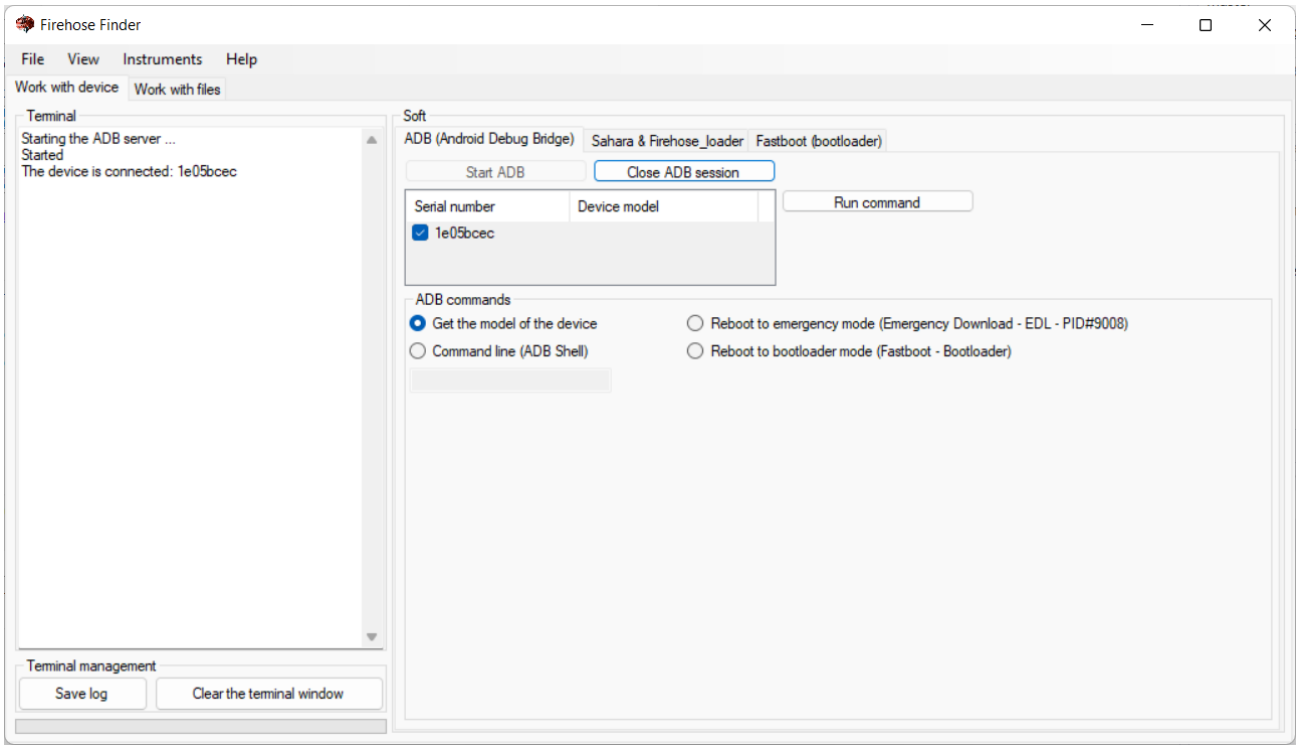
To check the programmers located locally, the device must be rebooted into emergency mode (9008) either manually or programmatically, from the "Work with device" tab. If the device was previously connected to receive identifiers, then it must be disconnected from the computer, rebooted and reconnected. This is due to the peculiarities of the "Sahara" protocol (the second time a greeting is not sent to work on the protocol).

The "Work with device" tab (hidden)

You can activate the tab from the "View" menu. Designed for deeper control of the connected device.

Chapter «ADB (Android Debug Bridge)»

The commands for ADB become active after launching ADB, you need to click the "Start ADB" button. Upon successful start, the serial numbers of the connected devices are marked in the log.



Currently there are four commands available for ADB in the list:

1. Get the model of the device. Device properties are requested from the firmware to fill out the form.
    - Manufacturer – analog of the command *$ adb shell getprop | grep ro.product.manufacturer*
    - Model – analog of the command *$ adb shell getprop | grep ro.product.model*
    - Alt name – analog of the command *$ adb shell getprop | grep ro.product.name*
    - Chip serial number – analog of the command *$ adb shell cat /sys/bus/soc/devices/soc0/serial_number*

The data is automatically copied to the "Work with files" tab.

2. Reboot to emergency mode. The device will be rebooted at 9008 by means of ADB. This is an analog of the command *$ adb reboot edl* Not all devices support this command.

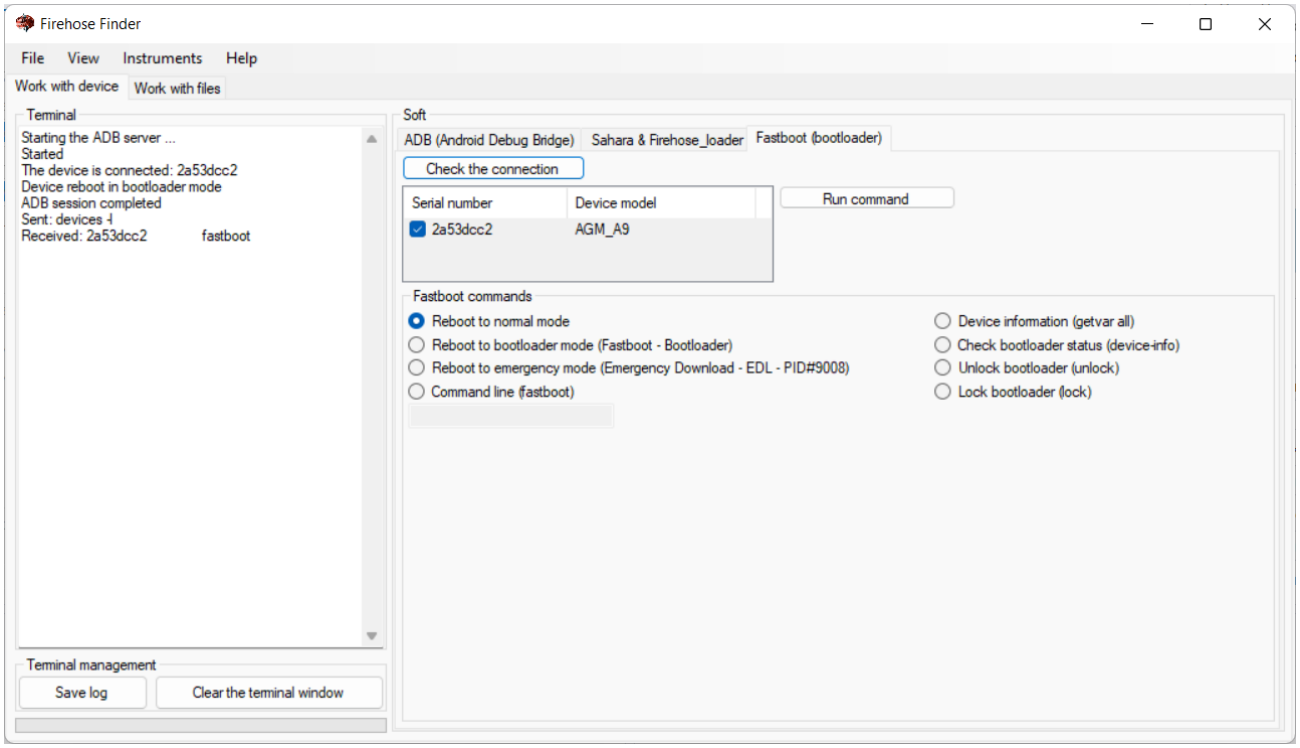
3. Command line (ADB Shell). When you select this item, a command entry window will become available. You can send a command by pressing the "Run command" button or by

pressing "Enter". Before the command **you do not need to enter adb shell,** only the command by itself. For example, to get a list of all commands supported by the device, it is enough to enter *ls -1 /system/bin* or *ls -1 /system/xbin*. If you need to read the ADB documentation, please go to: https://developer.android.com/tools/adb

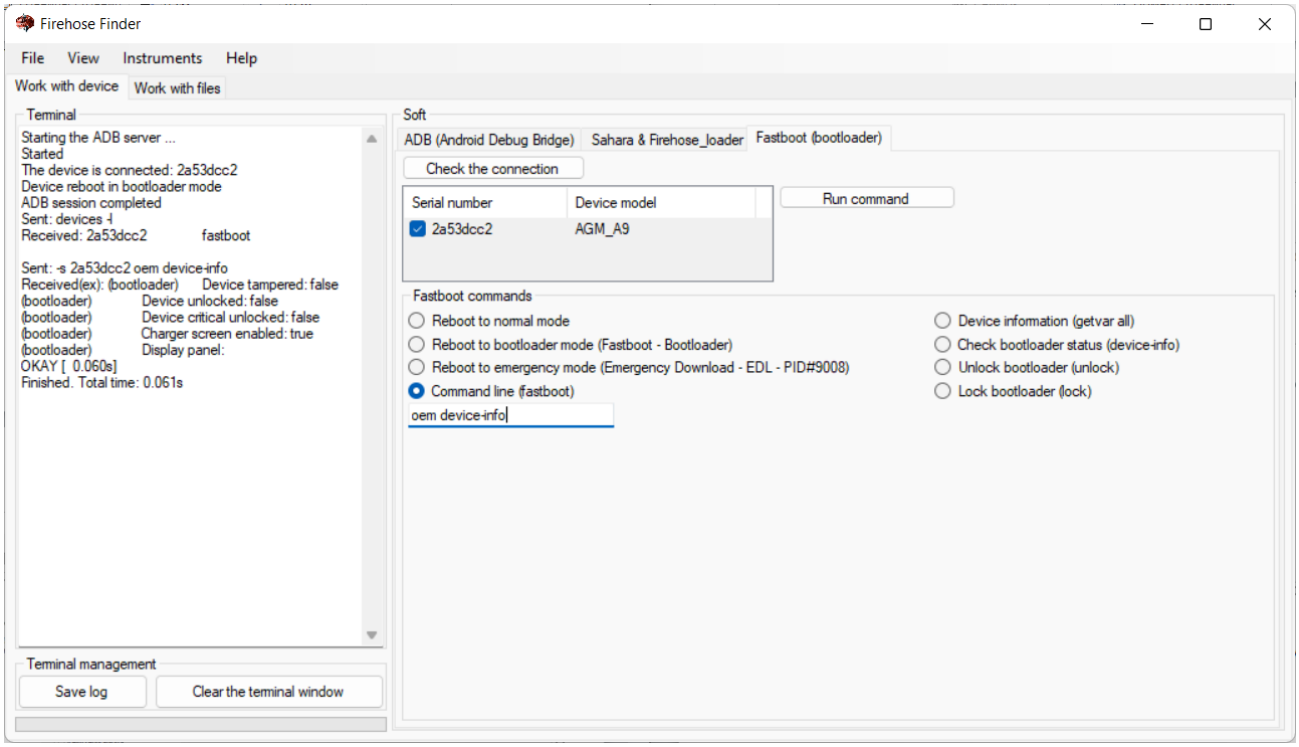
4. Reboot to bootloader mode. The ADB session ends, the tab opens «Fastboot (bootloader)», the device only accepts bootloader commands.

Chapter «Fastboot (bootloader)»

To determine the connected device, click the "Check the connection" button. If the device was previously connected via ADB, then its model will be pulled up along with the serial number of the device. It is allowed to connect several devices, the choice for the team is made by putting a check mark next to the required device.



Currently, there are eight loader commands available. Some of them may not be supported by the device loader, in which case it is suggested to use the command line. When you select the command line (fastboot), a command entry window will be available. You can send a command by pressing the "Run command" button or by pressing "Enter". **You do not need to enter fastboot before the command,** only the command by itself. For example, to get information about the device, you need to enter *oem device-info*

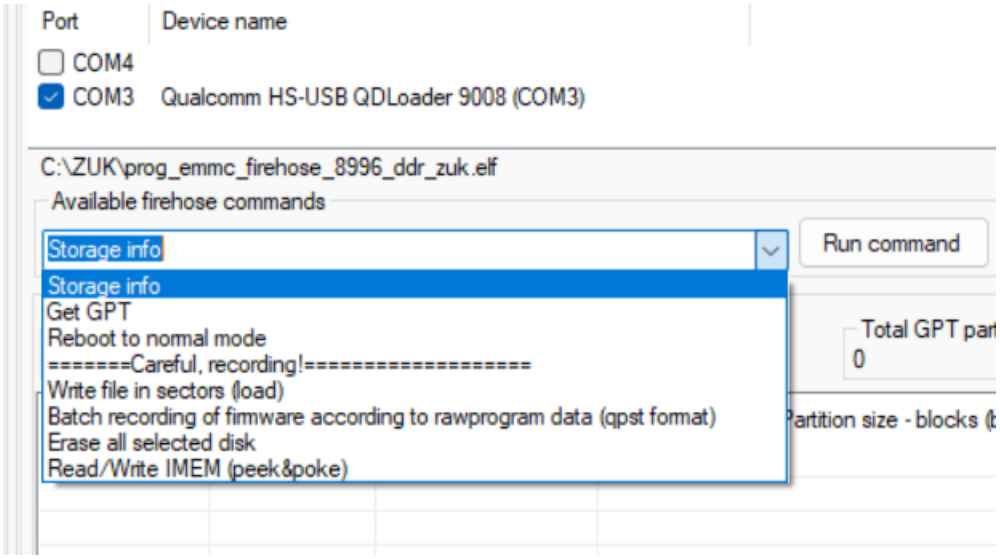


Chapter «Sahara & Firehose loader»

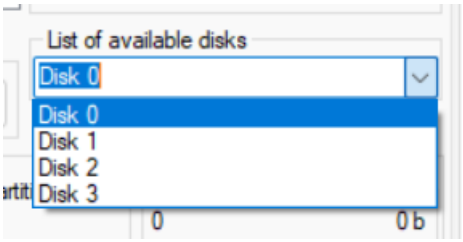
Commands for Sahara become active after the device is reset to emergency download mode (9008). The device port is determined automatically, but, if necessary, it can also be selected manually from the list of available com ports. The following commands are currently available:

- Get device IDs. The command is displayed on a separate button. The execution of the command is to fill in the identifiers on the "Work with files" tab. If it is necessary to execute several commands for the device, then the device must be restarted, because the program waits for the "greeting" data from the device via the protocol, and it is sent when the device is first connected in 9008 mode.

- To the left of the "Run command" button is a combo box with a selection of commands. The first command to execute is "Storage info".

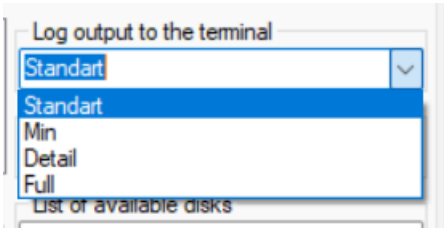


After its successful execution, other commands become available. The field with the selection "List of available disks" is filled with the numbers of physically available parts of the flash memory (in this example, there are four of them).

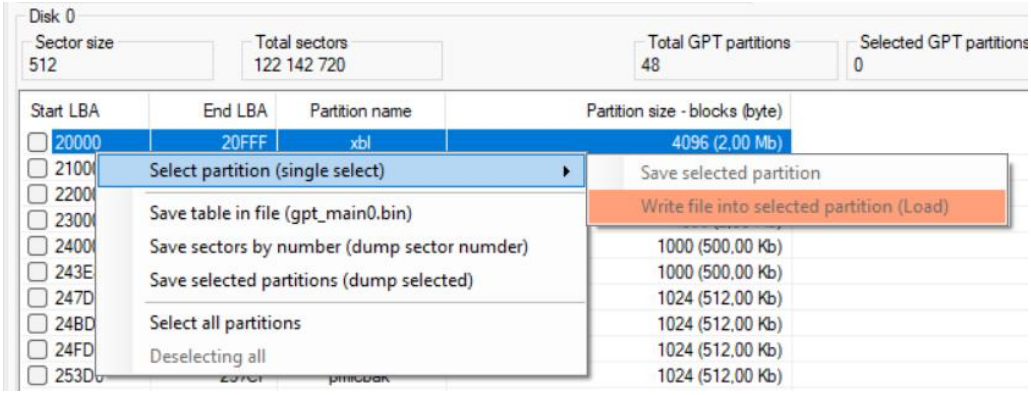


The memory type is automatically selected, but you can correct the selection manually if the memory was determined incorrectly.

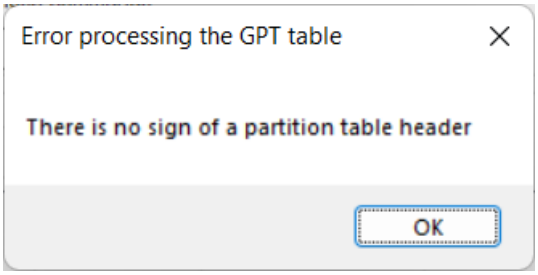
You can select four options for displaying the log. By default - "Standard"



- "Get GPT". Successful execution of the command will give a list of partitions with the addresses of the initial and last sectors and the calculated number of sectors occupied by the partitions with the volume in bytes. In this case, the context menu commands will become available.

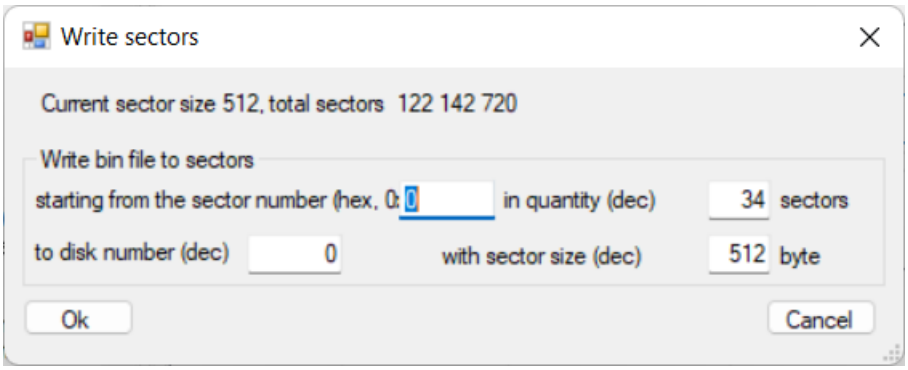


If there is no table on the disk, a warning will be displayed, while the ability to obtain sector-by-sector information remains, i.e., the presence of a partition table is not necessary to completely drain information from the disk.



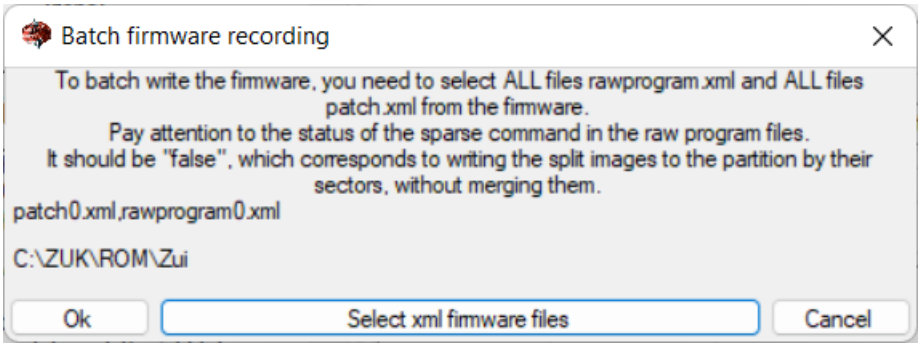
- "Reboot to normal mode". Selecting this command allows you to reboot the device from emergency to normal mode. The delay in executing the device reboot command to normal mode is 10 seconds.

- “Write file in sectors (load)”. The command is necessary for writing, for example, markup tables. **Perform very carefully!**



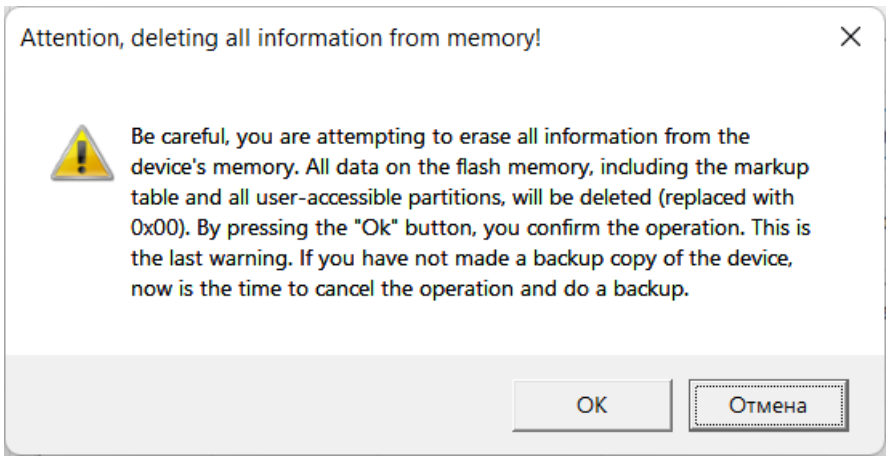
  After confirming the entered information, you will be prompted to select a bin file to copy it to the device's memory at the specified address.

- “Batch recording of firmware according to rawprogram data (qpst format)”. Batch firmware recording involves sending partition images to be written to memory according to file data rawprogram.xml and patch.xml . In the window that opens, click the "Select xml firmware files" button and select all files in the firmware folder rawprogram.xml and all files patch.xml using the ctrl or shift keys.

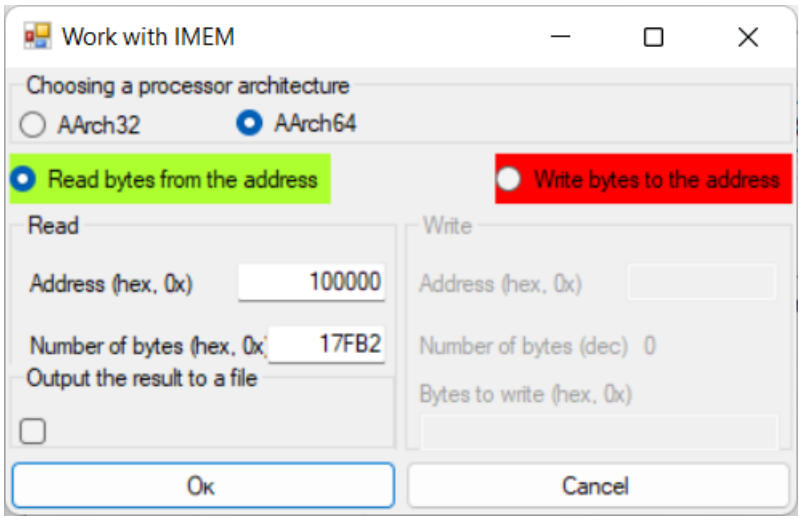


After selecting them, a list of these files and the path to the firmware where they lie will be added to the window. The "OK" button will also become active. After pressing it, the device firmware will start. With a write speed of 14-30 MBs, the 3-5 GB firmware time will take from 3-4 to 7-10 minutes.

- "Erase all". **Perform very carefully and with full confidence of understanding what is happening.** All information from the flash memory will be deleted.

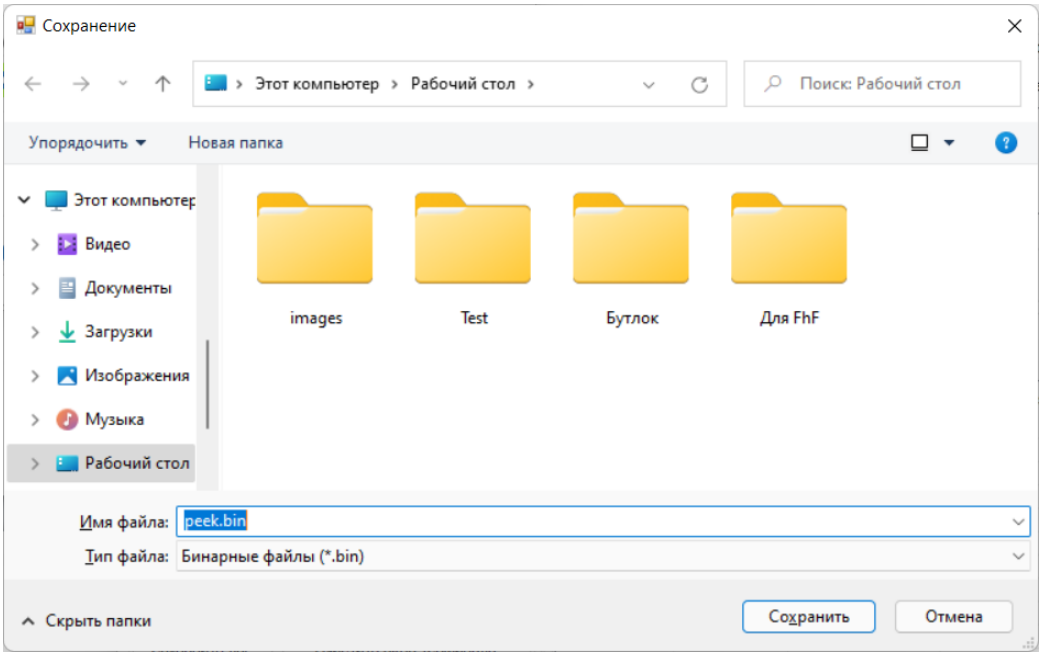


- "Read/Write IMEM (peek/poke)". The operation allows you to read the internal memory (IMEM) of the processor. Before reading or writing, you must first specify the address and the number of bytes to read/write for your processor. The addresses for the 32 and 64 byte architecture may differ. **Accessing some memory addresses may cause the processor to reboot or malfunction.**



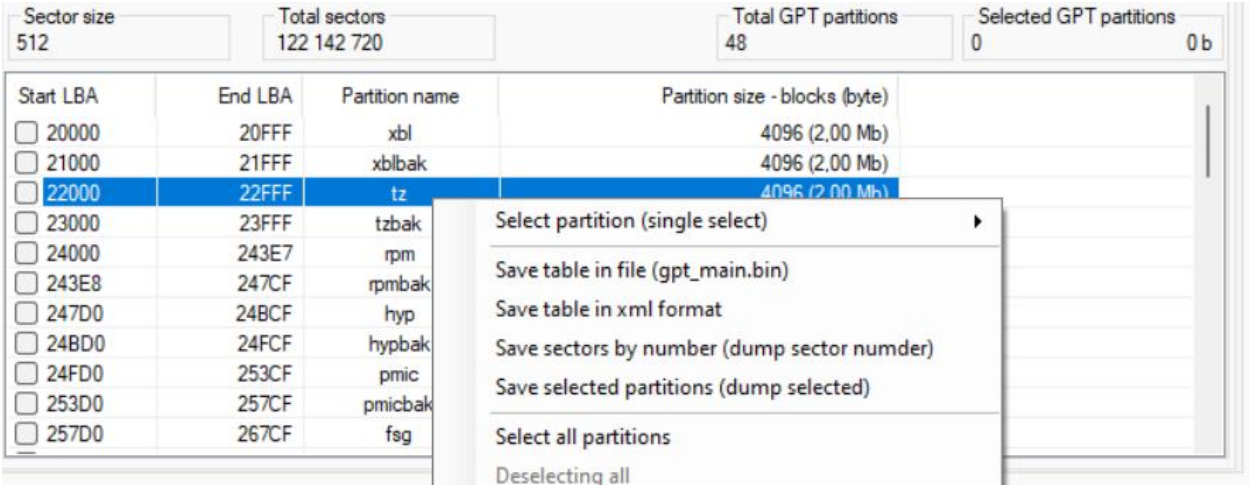
The processor architecture is selected automatically, depending on the programmer used. At the same time, if necessary, this parameter can be changed (for example, with the error "HANDLE_PEEK_FAILURE").

The result is output to the default log. If there is a need to save the result to a file, then it is necessary to mark the appropriate box. In this case, a window will open with the choice of the file saving path.



Context menu commands

Become available by right-clicking.



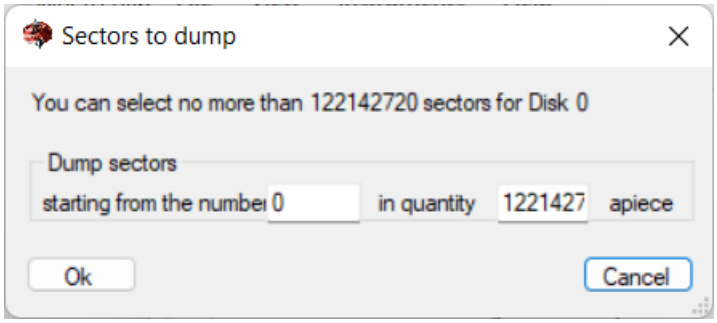
- «Select partition». When selected, all the checkboxes on the sections are reset, and only one remains – the current one. At the same time, the menu items for single work with the section become active. Multiple selection is not allowed.

  A single partition can be saved or a bin file can be written in its place. **The recording must be carried out with special care.** If it is necessary to simply erase a certain partition, it is allowed to form a bin file of the same size with the erasable partition and with a sequence of bytes 00 (or FF - depends on the specifics of memory). Then write this "null" file to the place of the partition intended for deletion. At the same time, the partition is not deleted from the partition table or from the location on the flash drive, just the information in such a section is overwritten with zeros.

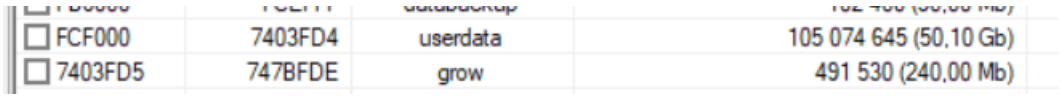
- «Save table in file (gpt_main0.bin)». This command allows you to save a copy of the markup table to the specified folder.

- «Save the table in xml format». Allows you to save the table in a universal format for further processing, for example, in excel.

- «Save sectors by number (dump sector number)». This command allows you to save a byte-by-byte backup copy of the specified sectors to the specified folder. You must specify the first sector to save and their number. By default, the following are substituted: the first sector is 0, the number is all sectors of the disk selected above.



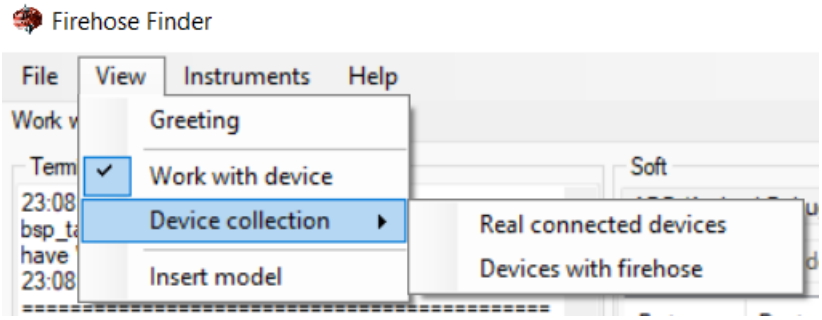
- «Save selected partitions (dump selected)». Multi-sector partition dump. You can select one, several, or all partitions to save. It is worth paying attention to the sufficiency of space on the local disk for the dump of the selected partitions. Usually, the **"userdata"** section carries the majority of user data, **is the largest and, when saving a backup, is not copied because of the size.**



- You can select all sections with one command and cancel the entire selection with one command.

Device collection tab (hidden)

You can activate the tab from the "View" menu. The "Device collection" contains the filter "fully verified devices" - this is a list of devices from which all identifiers were received automatically (without manual input).

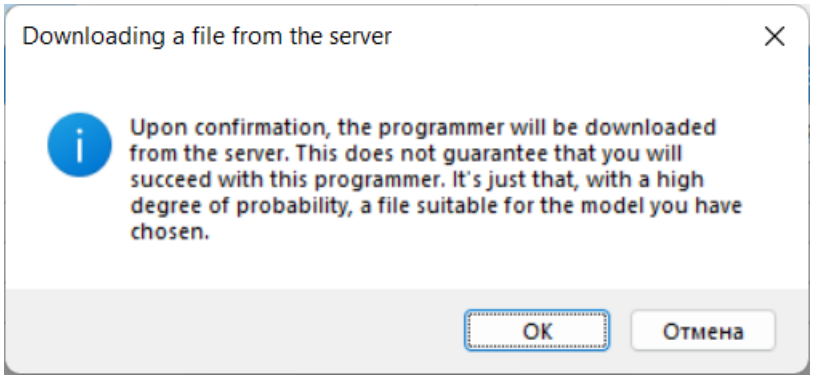


You can reset the filter and display all "Real connected devices" by selecting the appropriate menu item. All devices that, when connected, gave ids automatically and those for which the make/model had to be filled in manually will be displayed.

"Devices with firehose" will reduce this list by applying a filter to display devices for which programmers were found and stored on the server. The data was obtained from open sources from

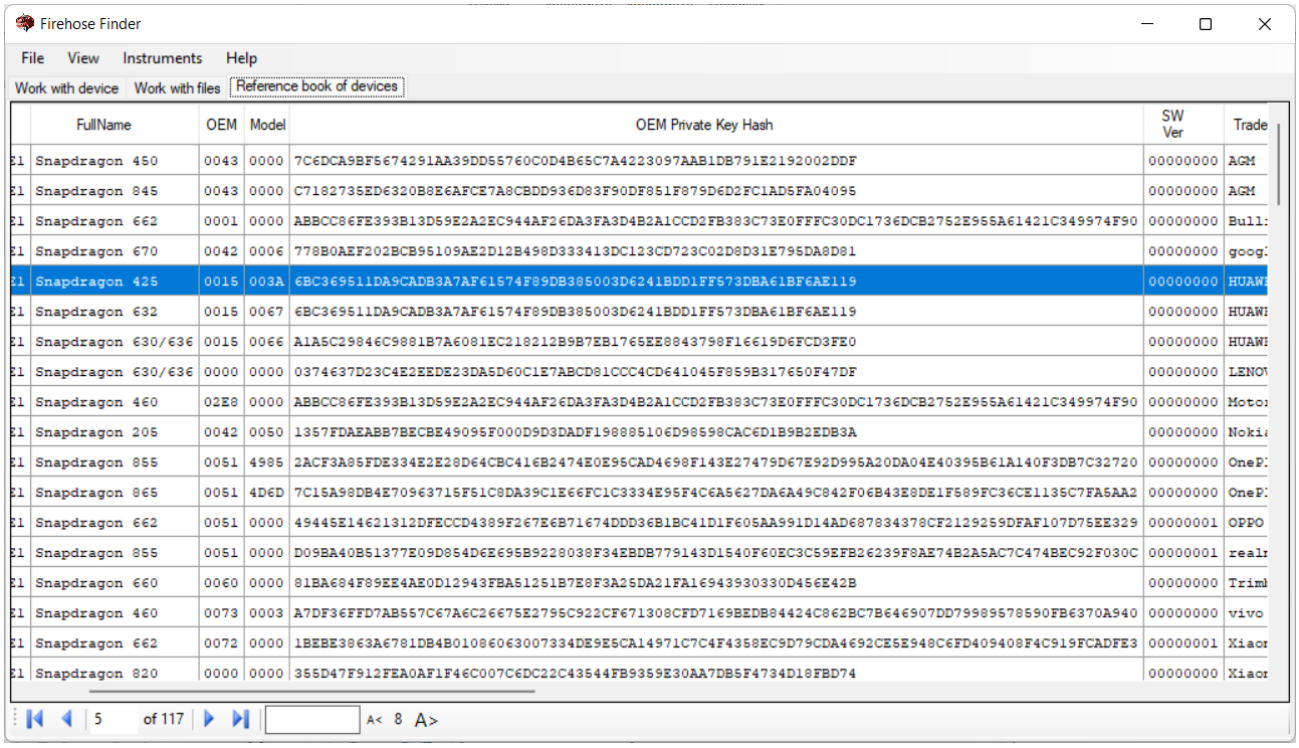
users who were able to successfully connect a certain programmer to their specific device. The device and the programmer became interconnected, the data about the device got into the Directory, and the programmer was saved on the server.

When you double-click on the line with the selected device, the data will be autofilled on the "Work with files" tab and you will be prompted to download the programmer from the server.



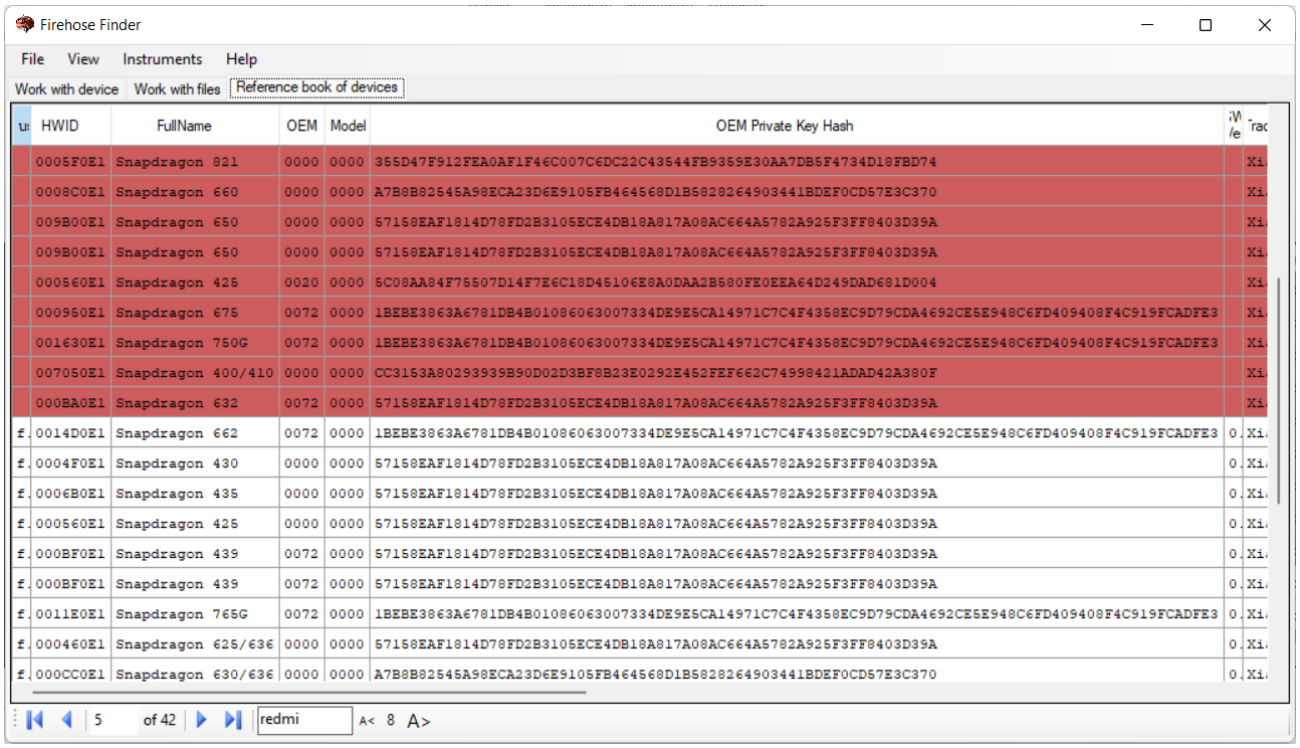
In the full list, the programmer's compliance with the device may not be at all. Incorrect or missing data in the "Device collection", with the consent of the user (check mark on the "Work with files" tab), are sent to the public telegram channel "Firehose-Finder issues" for verification and adjustments. Adding/changing data to the "Device collection" usually occurs with an automatic update of the release version (for versions older than 3.1.0.4).

There is a search field at the bottom of the Directory form. The search works in all the cells of the Directory, and applies a filter during the recruitment process. At the same time, the search goes not only on "Real connected devices", but in general on the entire database of devices that have ever been present in the Directory.



As a result of the search, all device models that contain the entered characters in any field (name, hash, processor, etc.) will be displayed. In this case, the list will contain actually connected devices without coloring, and unconfirmed data will be colored in shades of red.

There are two buttons behind the search field – decrease and increase the font size of the Directory. Changing the font size only affects the internal structure of the table.

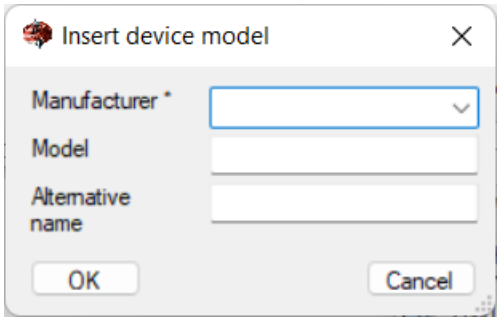


When erasing the characters in the search box, the results will be reset and the output will display the data according to the selection in the menu.

The window "Insert model"

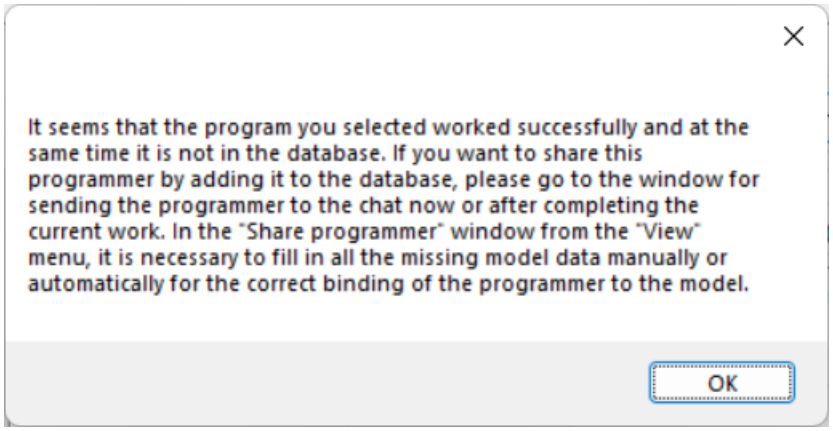
This window is intended for manual entry of information about the manufacturer of the device, its model and alternative name. According to this data, a "Device collection" will be formed. Since it is not always possible to get this data in automatic mode, you have to use manual input.

The "Manufacturer" field is required to be filled in, "Model" and "Alternative name" are not required to be filled in. You can select the device manufacturer from the drop-down list or enter your own if there is no such manufacturer in the list.



The window “Share the programmer” (disabled)

This window is designed to send the programmer to the general chat. Later, at the next update of the program, the programmer will be added to the database of the FhF program. You can only send a successful programmer with a really connected device.



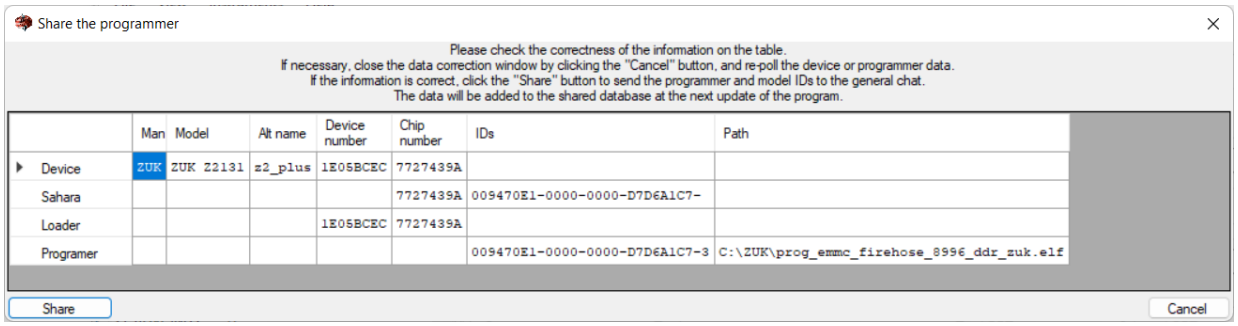
To correctly fill in the data for sending the programmer, you need to get:

1. Device data (manufacturer, model, name, serial number of the device and chip);

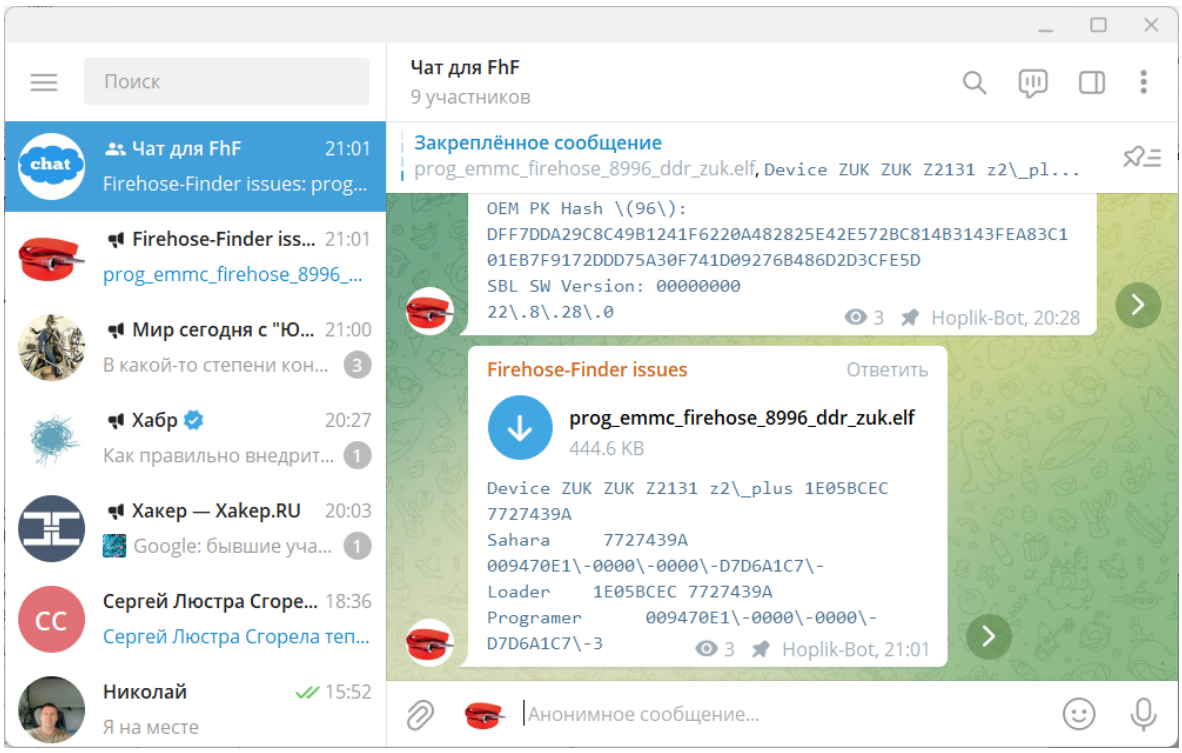
2. Device and programmer IDs (are pulled up automatically when checking the programmer).

The device data can be obtained both automatically and manually by opening the "Insert model" window. To automatically receive device data, you need to connect it in normal mode, enable USB debugging on the device, and click the "Poll the device" button. Another option: open the "View" tab - "Work with device". On the "ADB" tab, click the "Start ADB" button and select the command "Get the model of the device", then "Reboot to edl mode (9008)".

After receiving the device data, you can check the programmer. When it is successfully connected and the data table is filled in, the "Share" button will become available. If the device data is not fully filled in (there is no Manufacturer), then the window must be closed with the "Cancel" button and the procedure for obtaining device data described above must be carried out.



Information about the device and the verified programmer are sent to the general chat.



With the next update of the FhF program, this programmer will be added to the general database of the "Device collection" tab.

Menu item "Tools"

This menu contains tools that can help when unpacking the firmware and when searching for information in files saved from the device.

Section "Binary search"

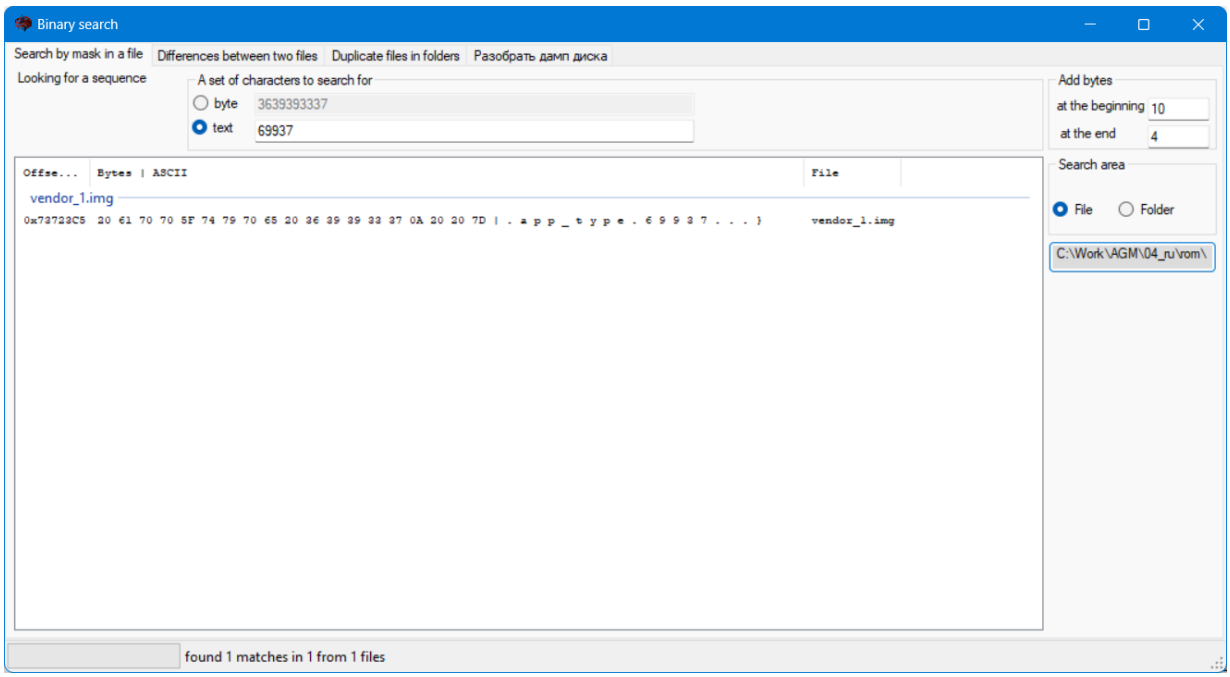
The “Binary search” section uses four tabs with different functionality.

Tab «Search by mask in a file»

The " Search by mask in a file " tool can be useful for searching for a certain sequence of bytes in files downloaded from the device. For example, to edit sound parameters, you need to find a sequence of text characters "69937". When typing in the "text" field, the characters will be automatically converted into a sequence of bytes for search. The search can be carried out either in a separate file or in several located in the same folder at once. If the file size is more than 1 GB, the search procedure may take a considerable time (depending on the power of the computer on which the program is running).

For the convenience of evaluating the usefulness of search results, it is possible to add several characters (by default, 10 bytes - 5 text characters at the beginning and 4 bytes - 2 text characters at the end) to the search string results. The search result is presented as a sequence of bytes and their transcoding into text characters (unreadable characters are replaced by a dot).

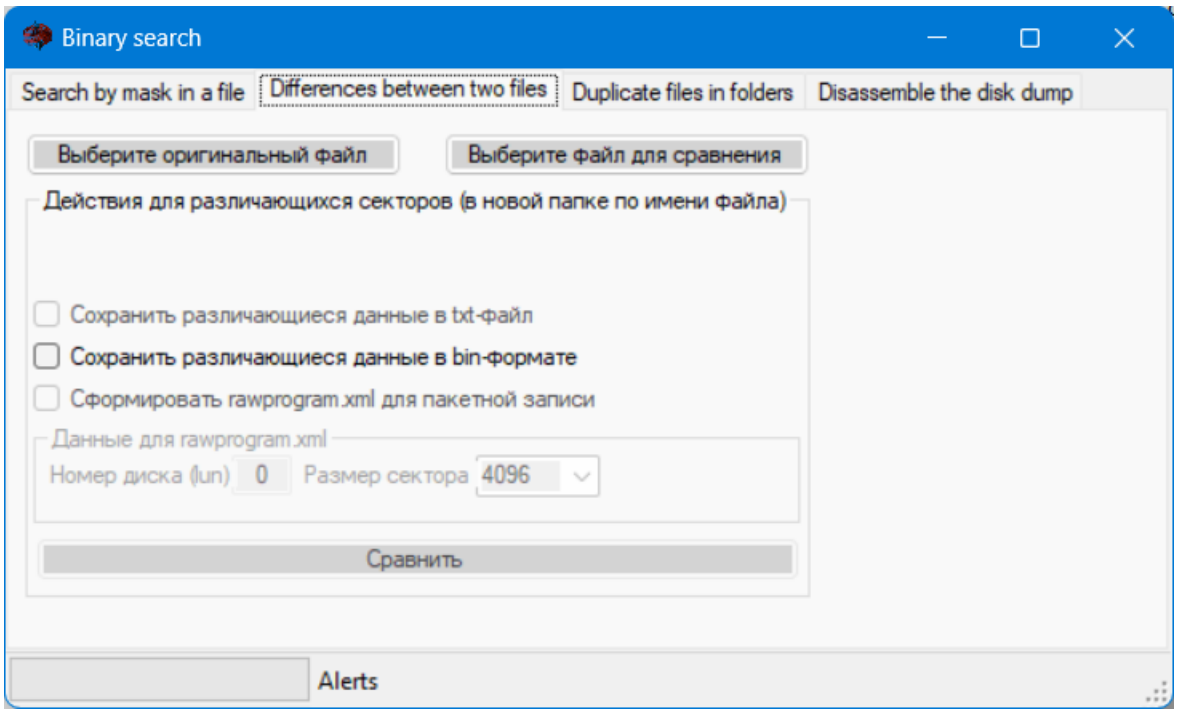
Double-clicking on the search results line allows you to save the address of the beginning of the byte sequence for the search to the clipboard. This can be used when opening a file in a hex editor and going to the address inserted from the clipboard to edit this file. The name of the file in which the required sequence is found is indicated at the end of the search results line. If there are several results, they are grouped by file name and sorted by address in ascending order.



Tab « Differences between two files» - development stopped due to lack of need.

The left button allows you to select the path to the original file for comparison. The right button indicates the file path for comparison. The information area indicates the path to the new folder, which is created using the file name for comparison. It stores information about the differences between the original file and the file for comparison.

Currently, when comparing files, an array of binary files is generated with differences in certain areas of the files. The file name indicates the logical disk number, the starting address, and the number of sectors that this file will occupy when writing to memory. Based on the file size, you can calculate the sector size. This information is enough to form a batch recording file. rawprogram.xml to overwrite not the entire duplicate file in place of the original file, but only the different parts. This significantly speeds up the process of making changes.

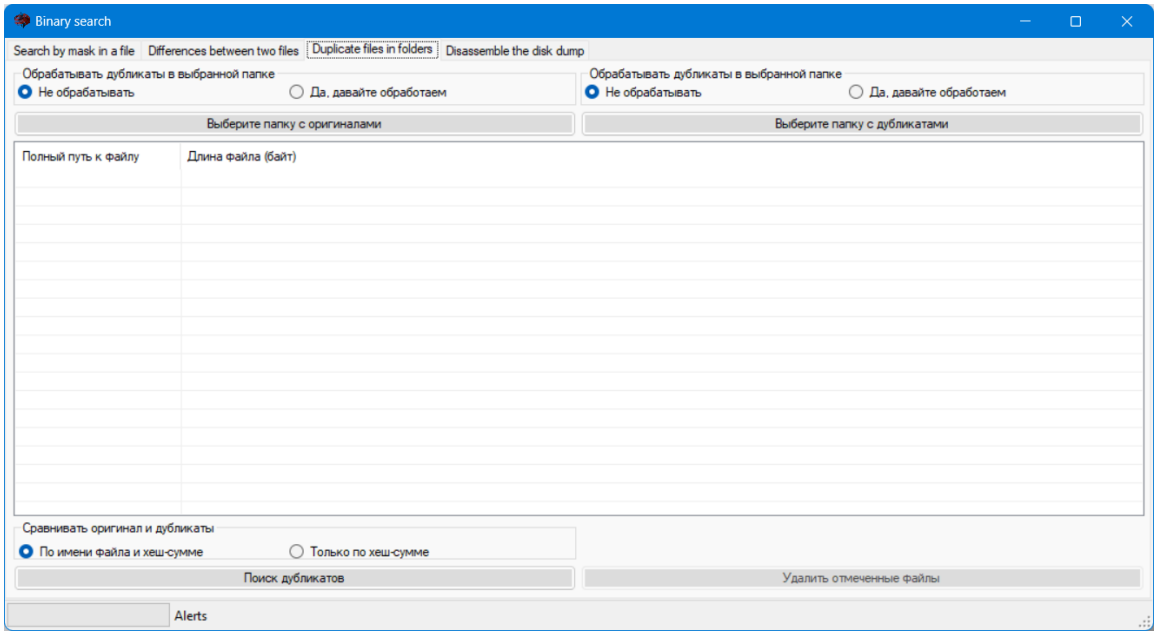


Tab « Duplicate files in folders»

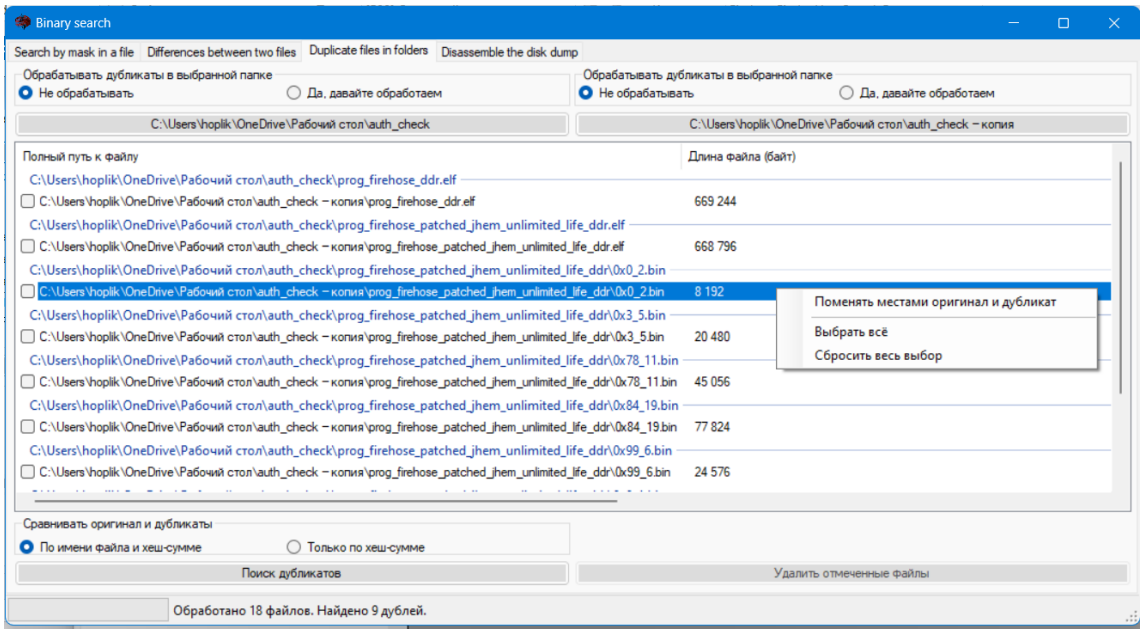
If it becomes necessary to massively check a folder, including subfolders, for duplicates, then it is enough to use only the left part of the window. The comparison is based on the hash sum (SHA256).

If you want to check for duplicate files in different folders, you can specify the original files in the left folder, and the files for comparison in the right folder. At the same time, it is possible not to process duplicates in these folders themselves.

You can compare files in different folders both by name and hash amount (if there are zero files in the folder), and only by hash (for files of size 0, the hash will be the same, even if they have different names).



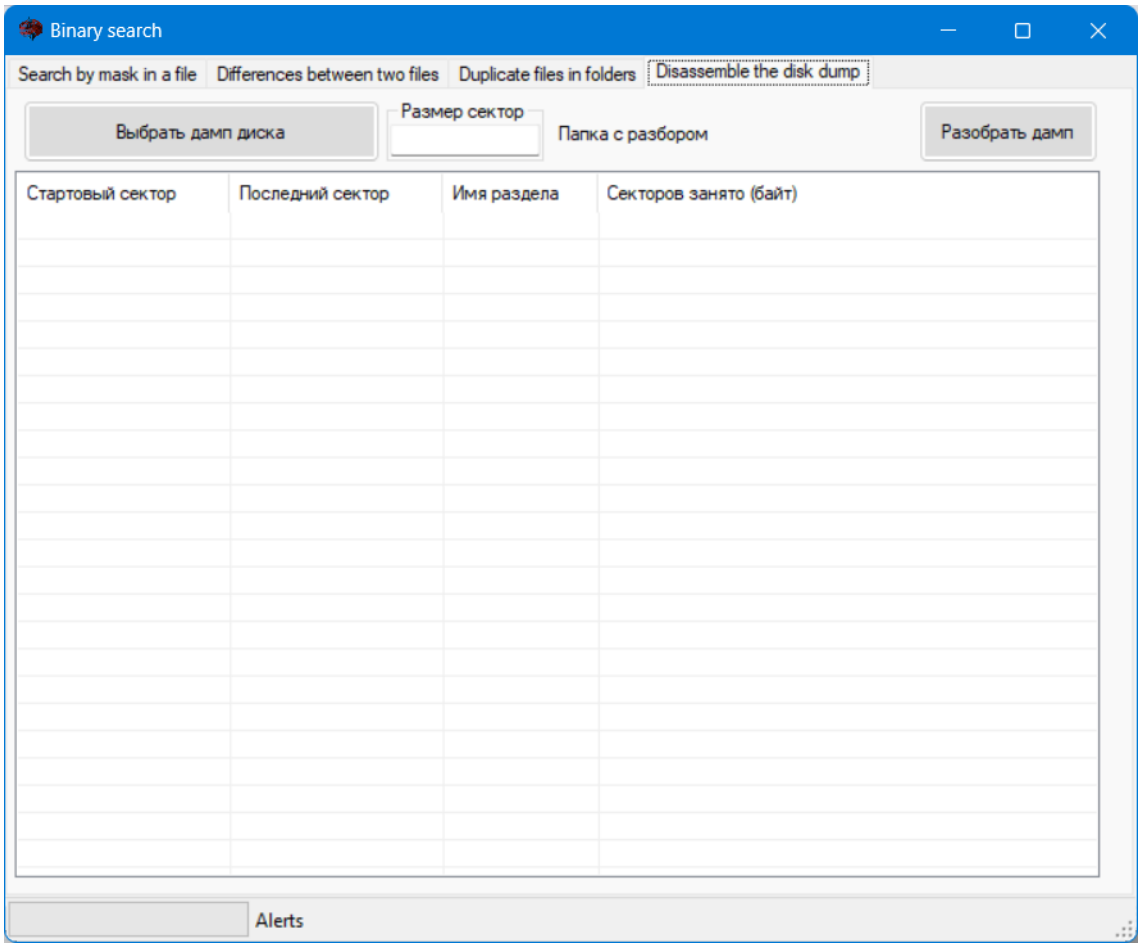
You can select duplicates to delete using the context menu by right-clicking on it. You can also swap the original file and the duplicate file there. After selecting the files to delete, the "Delete marked files" button will be active.



Tab « Disassemble the disk dump» - development stopped due to lack of need.

The work on this tab is related to the need to disassemble the full dump of the logical disk into separate partitions for later comparison with the original partitions, for example, from the firmware or another device.

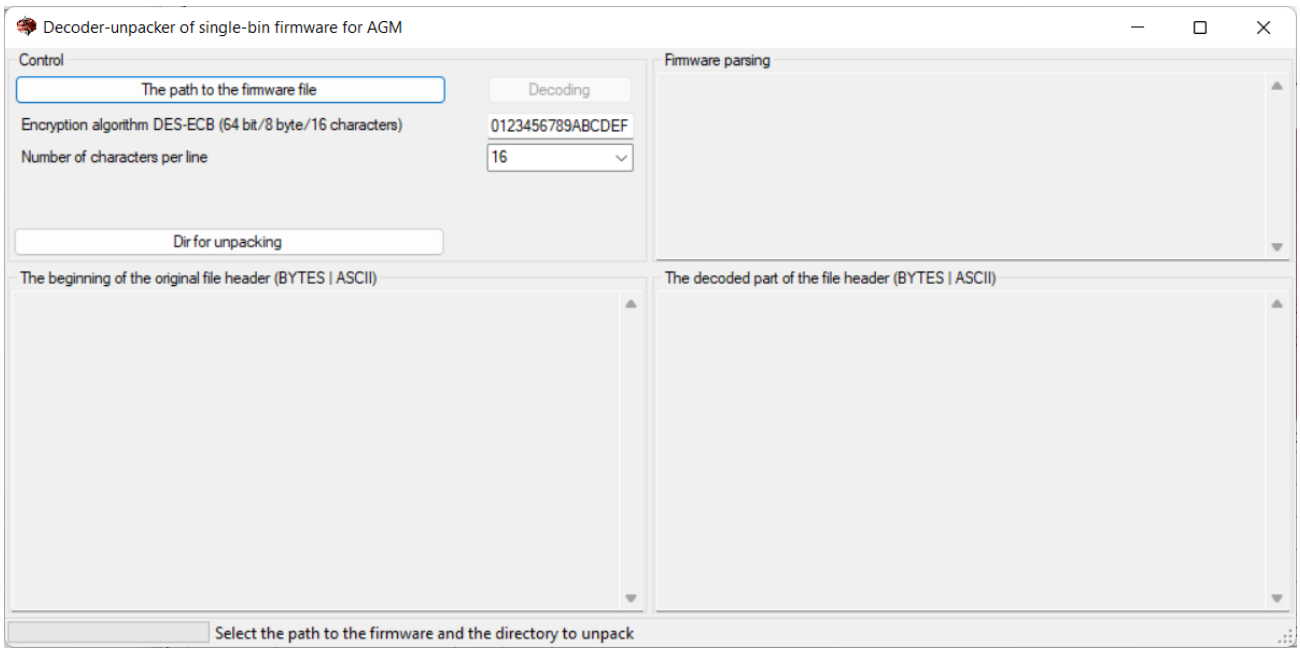
To get started, you need to specify the path to the full dump file and enter the sector size. Upon successful processing of the beginning of the file, the program can substitute the sector size automatically. To start the procedure, click the "Disassemble dump" button. In a separate window, specify the path to the folder with the files of the corresponding sections into which the full dump will be divided.



Section "Decode and repack ROM (AGM)"

The tool "Decoder-decompressor of single-bin firmware for AGM" is designed for decoding and unpacking files for AGM phones from single–file bin firmware (the signatory of the firmware is Hisense, packer version 2). The need to parse the firmware was caused by the search for a programmer, who, as a result, turned out to be part of the unpacked firmware.

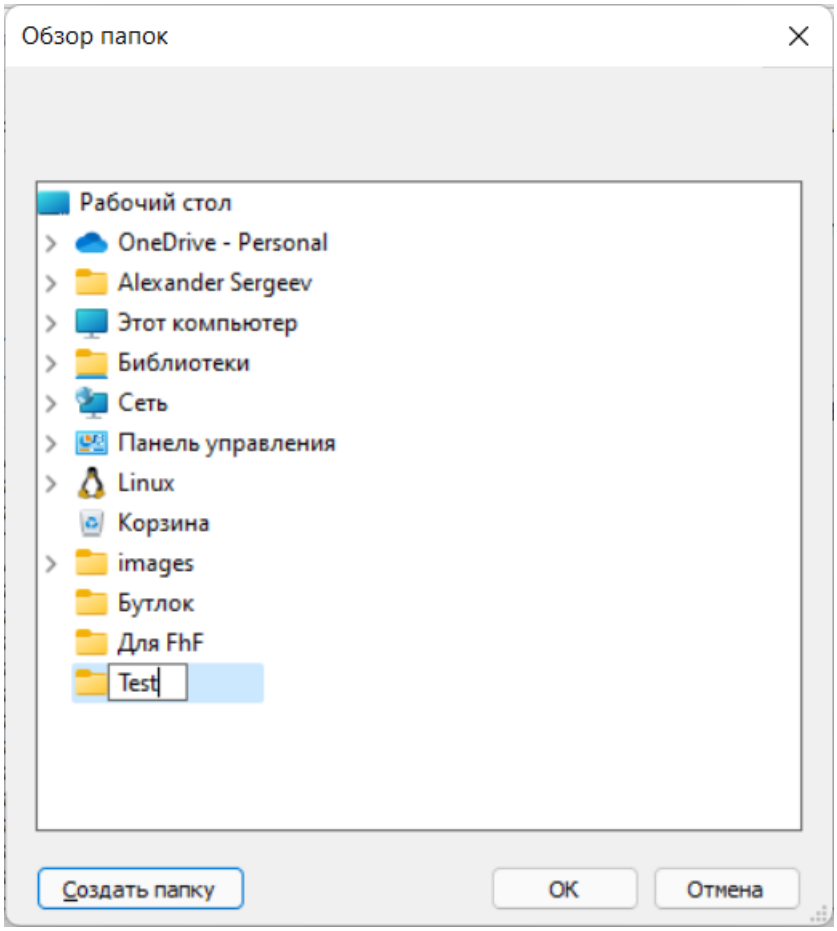
The initial project was implemented by Vladimir Sitnov (proger10) and published on github (https://github.com/proger10/agmx3-firmware-tools). Based on the information from this project, this "Decoder-Unpacker ..." was written and included in the Firehose Finder software package.



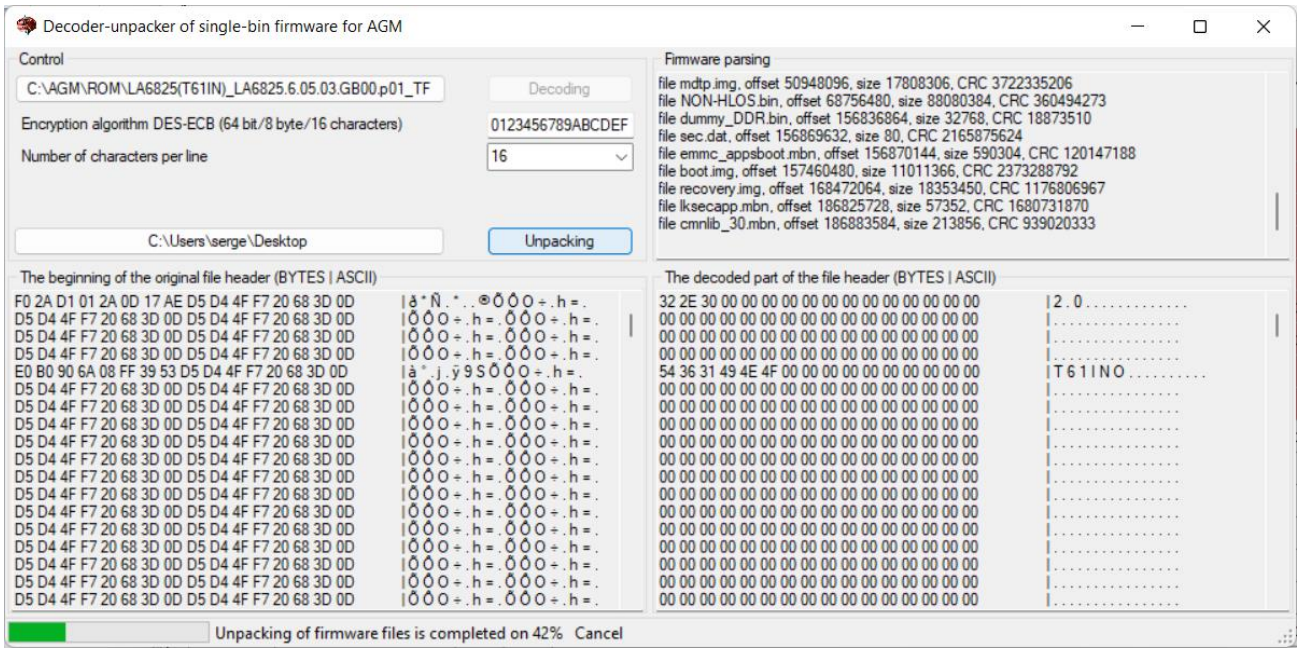
To decode the firmware, you must specify the path to the single-bit file by clicking the appropriate button. After specifying the file, its reading will begin immediately. Not the entire block of information of the firmware header is displayed on the form, but only a part, to optimize the speed of the program. The information is displayed in the original (encrypted) form.

After reading the firmware header, the "Decoding" button becomes active. To decode, you must specify the encoding code. By default, "0123456789ABCDEF" is set. You can also choose how many characters to display in a string for the convenience of evaluating the correctness of decoding. The same segment of information will be displayed on the bottom right of the form as on the left, but taking into account the decoding of the specified code. At the same time, the firmware header will be immediately disassembled, which will be reflected in the corresponding window at the top right on the form. To answer the questions: "Why was such a code chosen?" and "How to find it as part of the encoded firmware?" you can read the article in the wiki on Github (https://github.com/hoplik/AGM_Repacker_ROM/wiki/Finding-the-key).

After specifying the directory for unpacking and successfully decoding the header, the "Unpacking" button will become active. When you select the unpacking directory, you can create a new folder.



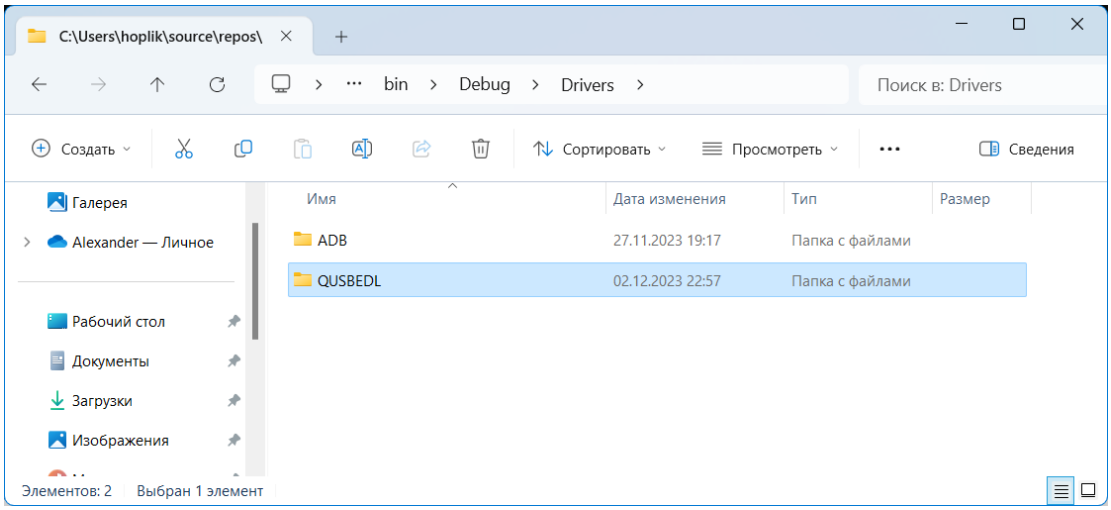
After clicking the "Unpacking" button, the process of unpacking the firmware begins. This may take a long time, depending on the power of the computer. To forcibly stop the unpacking process, you can click the "Cancel" button, which appears at the bottom of the form after completing at least 5% of the running task. In the process of unpacking, the process log is written in the upper right window.



After the unpacking process is successfully completed, the "Cancel" button will change the name to "Open in Explorer". When you click in Explorer, a folder with the extracted firmware will open.

Section "EDL and ADB drivers"

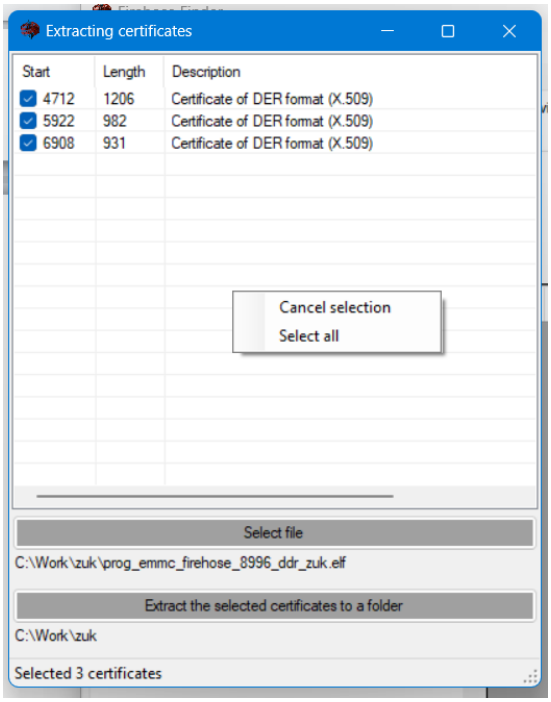
When you select this menu item, the folder will only open, which contains drivers for working with ADB and with a parallel port from Qualcomm in emergency mode (VID_05C6&PID_9008). From the folder header, you can copy the installation address for the command line.



The installation can be performed either from the Device Manager or from the command line as Administrator (command *pnputil /add-driver <full path to the *.inf file> /install*).

Section «Extract certificates»

Working with the certificate extraction tool consists in selecting a file for analysis, checking for certificates in it and extracting the selected certificates to the specified folder.



The context menu allows you to select all the certificates found in the file, as well as deselect all the marked certificates with one command. After clicking the "Extract selected certificates to a folder" button and confirming the selected folder, the selected certificates are copied to the specified folder and then opened in Explorer.

Menu item "Help"

Section "View help"

Opening this help file.

Section "About"

The name of the program, the current version, a brief description of the program, a link to the basic topic of discussion of the general principles of bootloader recovery, a link to a telegram channel for sending suggestions / comments, buttons for donations.

When you click on the logo, the address of the application installation folder will be displayed.

About Firehose Finder

Firehose Finder

Version 24.12.1.0

The program of selection of programmers (firehose) for devices based on processors from Qualcomm.

Do you have any questions, suggestions, comments? Write to the Telegram channel "Firehose - Finder

Topic 4PDA "Общие принципы восстановления загрузчиков на Qualcomm | HS - USB QDLoader 9008, HS - USB Diagnostics 9006, QHUSB_DLOAD и т.д."

Thanks:
8Mi_Yile - for translation into Chinese (Simplified) language;
@SashaSeriy - for ideas, comments and basic information;
@Always_Alone_R - for testing on a UFS device;
@krivedko - for tips for the firmware unpacker.

Did you have a desire to thank the author for the work done?
Please use the buttons to donate.

YMoney - thank`s

QiWi - many thank`s

OK