

DragonSN

User Guide/2.5.9

Document history

Versio	Date	Author	Content
1.0	2015-04-24		create
1.1	2015-09-10		add bin format support
2.2	2016-11-17	Yorick	support secure/private key burn
2.5.1	2017-03-19	liwuzhang	Add chechsum key value support
2.5.2	2018-4-11	Yorick	Add circle write support
2.5.3	2018-6-20	Yorick	Reconstruction,support keymaster,scode
2.5.3	2018-7-6	Yorick	Add erase checkbox for private mode
2.5.6	2018-10-19	Zhubin	Add factory MES interface AND Key related
2.5.9	2018-12-17	zhubin	Add support Mixed key

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1. Overview

DragonSN is a PC end software for write device specific information serial number (hereinafter referred to as "Key") when producing line production, which supports custom Key data according to the requirements of the program. Conventional tools can be used to write SN (Serial Number), MAC address, Google keymaster, rotpk and so on. If you need to customize the write data, please refer to the 《DragonSN Configuration Tool User Guide.Pdf》

1.1. Preparation

Before using tools for Key writing, ensure that all of the following prerequisites are satisfied:

1.If you want to use this tool, you must confirm that the file "sys_config.fex" in firmware must have the following configuration:

```
[target]
burn_key = 1 ;1: detect usb when booting, 0: not detect
```

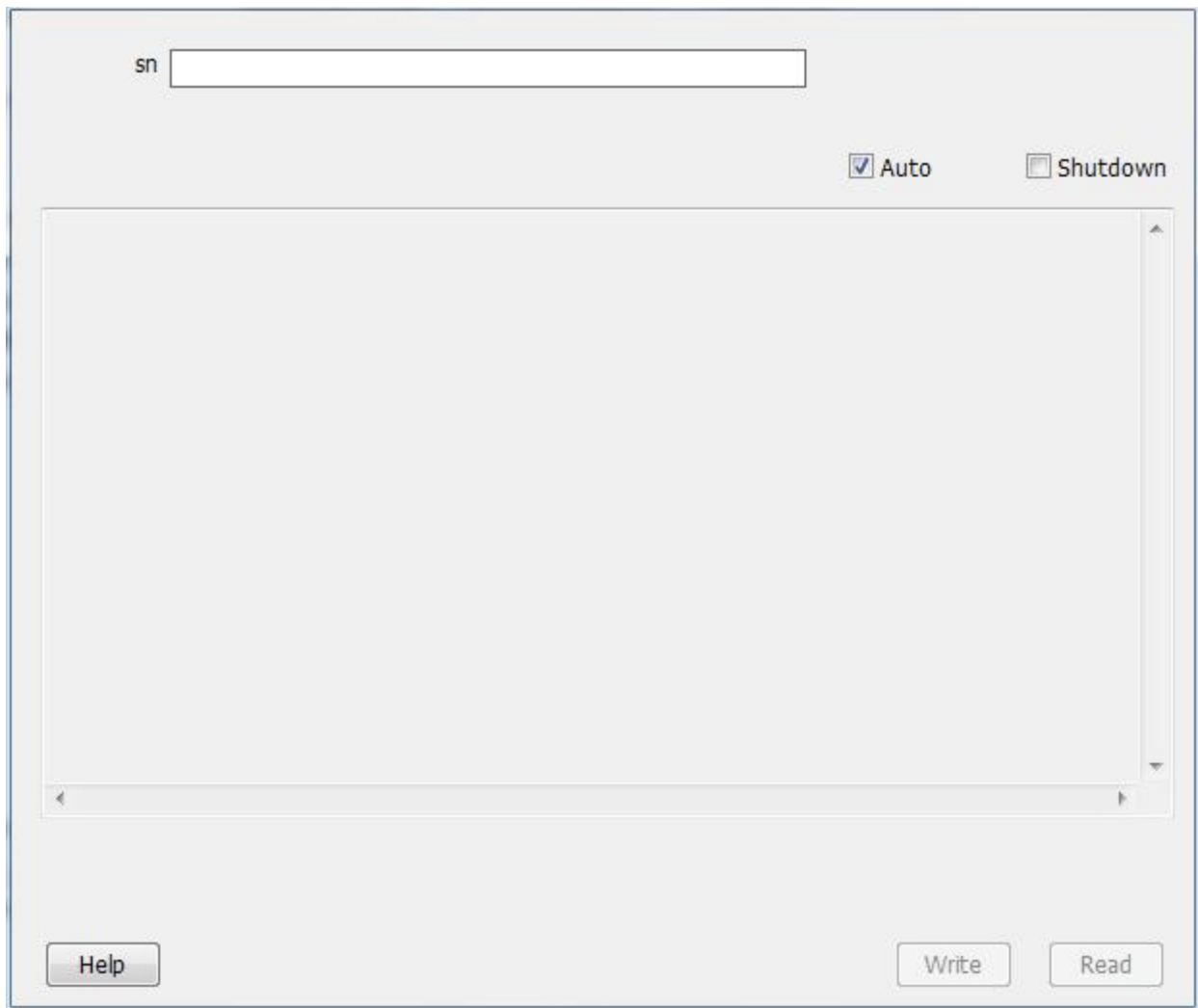
2.Confirm that PC has been installed with Allwinner USB driver

3.Verify that your product options such as SN, KEY and so on are write to secure storage or private partition, and configured correctly using the DragonSN configuration tool.**please refer to the 《DragonSN Configuration Tool User Guide.Pdf》**。

4.Verify that the ready configuration of the tool meets production needs. If it is unable to meet, the DragonSN configuration tool can be visualized according to the project requirements, **please refer to the 《DragonSN Configuration Tool User Guide.Pdf》**。

After confirming the above steps, you can try to execute the tool, then insert the device directly into the computer USB port on the full shutdown state to turn on the machine. In the normal case, the tool will print the "Device online" information in 3 seconds, that is, the tool can be used normally, such as the tool can not be used normally. Please open the DebugView.exe and the device serial port to grab the log to consult technical support.

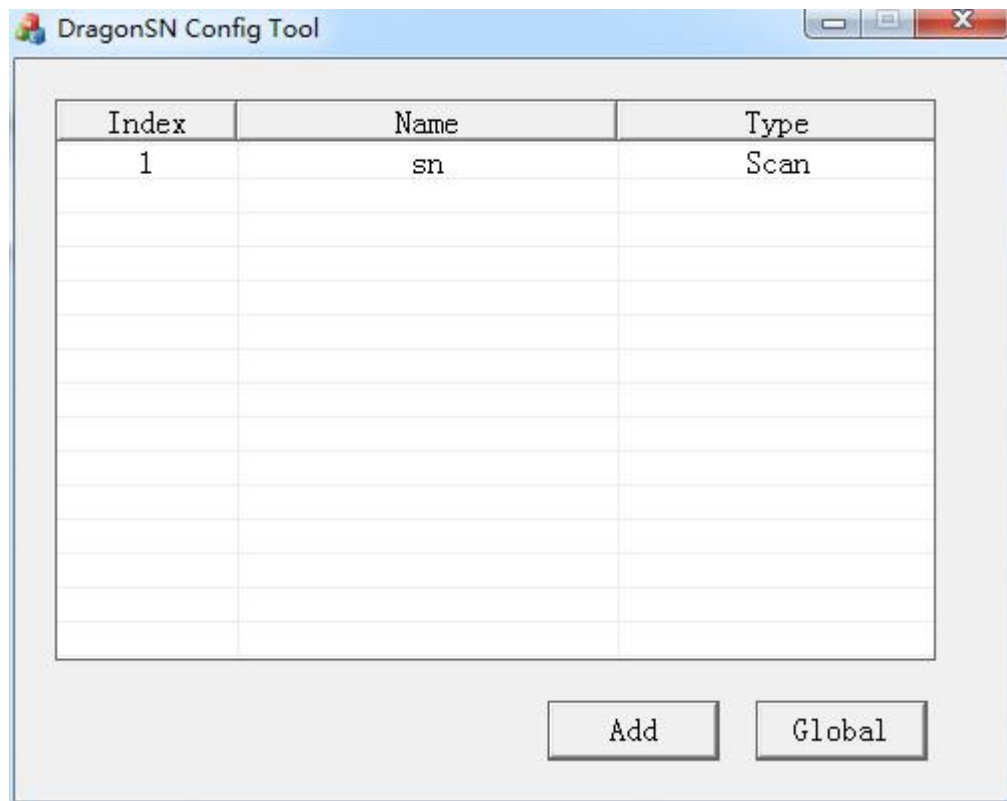
The main interface of the DragonSN running after configuration is shown in the following figure:



1.2. Configuration

The tool configures the scanning SN writting item by default. In most cases, it needs to be configured according to your product plan to meet production needs.

Tools support rich configuration by visual tools, run with configuration tools `DragonSNConfig.exe`



Several common configuration items are described below, if specific configuration is required please refer to the 《DragonSN Configuration Tool User Guide.Pdf》。

1. Add MAC address of the scan input

Click "add" -> type selection" scan " -> input display name (self - defined appellation) -> key name input" mac " -> click "Add", effect:

The image shows a software configuration window with a light gray background. At the top left, there are two input fields: one labeled 'sn' and one labeled 'MAC'. To the right of these fields are two checkboxes: 'Auto' (which is checked) and 'Shutdown' (which is unchecked). Below these elements is a large, empty rectangular area with a thin border and a vertical scrollbar on the right side. At the bottom of the window, there are three buttons: 'Help' on the left, and 'Write' and 'Read' on the right.

2. add the MAC address from the database according to SN

Click "global" -> configure database parameters in production environment -> click "OK" back to the main configuration interface -> click "add" -> type selection "database" -> input display name (MAC field name in database) -> key name entered "mac" -> the associated primary key input "Sn" -> click "OK", effect

The image shows a software interface window with a light gray background. At the top left, there are two input fields: one labeled 'sn' and another labeled 'MAC'. To the right of these fields are two checkboxes: 'Auto' (which is checked) and 'Shutdown' (which is unchecked). Below these elements is a large, empty rectangular area with a thin border and a vertical scrollbar on the right side. At the bottom of the window, there are three buttons: 'Help' on the left, and 'Write' and 'Read' on the right.

3. Add Google Keymaster

Click "add" -> type selection" keymaster "-> input display name (self - defined appellation) -> if you need to limit the number of times you can use the number of times to fill the limit value -> click "OK", effect:

sn

keymaster

☒ Auto ☐ Shutdown

2. Operation

After the tool configuration is completed, the following can be handed over to the production line operators

The interface can be configured instantaneously, including "Auto ", "Shutdown" and "Erase Before Write".

Auto:The tool detects that the device has been inserted and all the key information has been entered. At this time, press the return key or scan last input item, that is, the tool automatically initiates the writing.

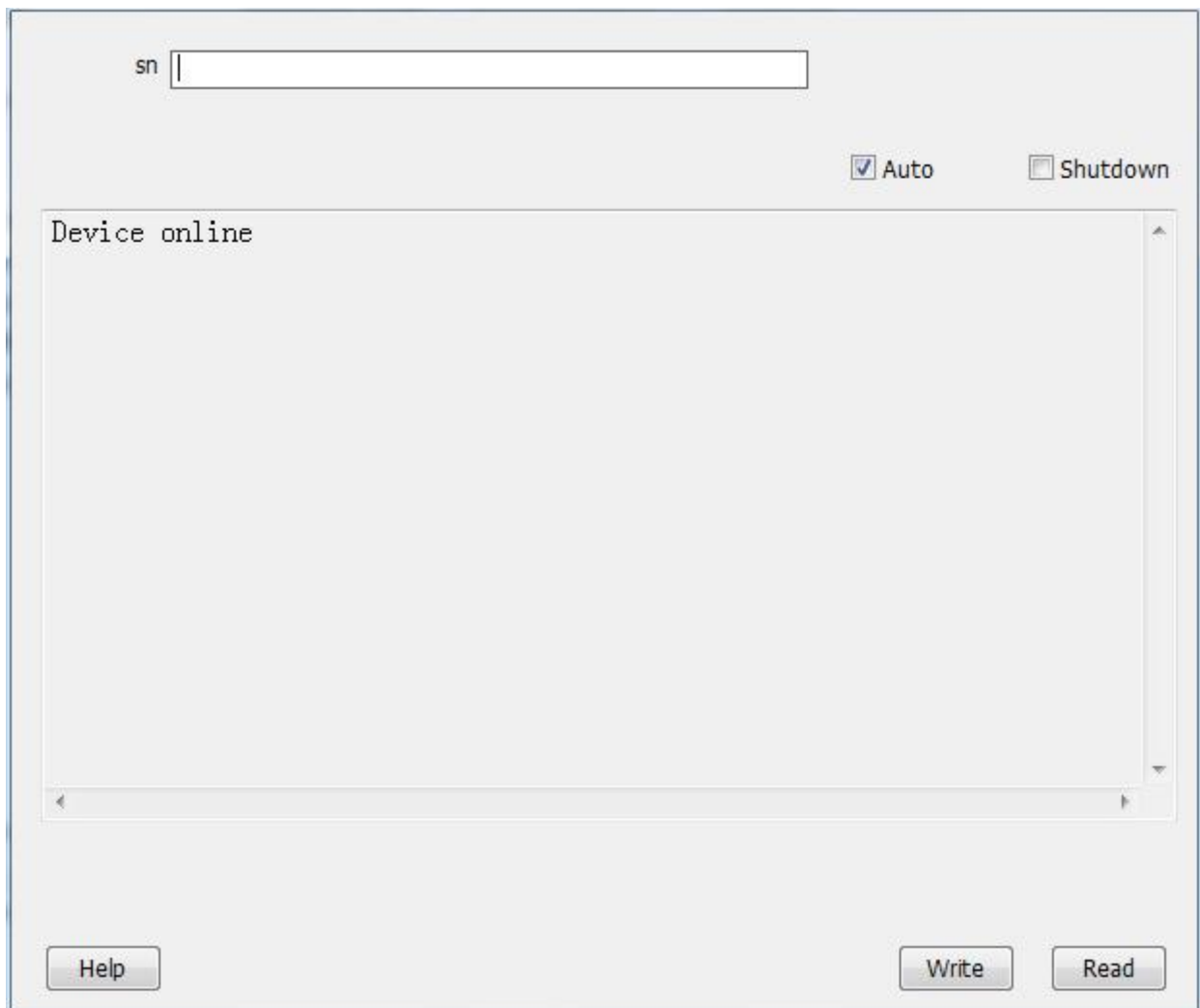
Shutdown:Whether to control the equipment shutdown after the writing is completed.If this option is checked, the device can be plugged out after the tool prompts "device offline",To prevent the device from suddenly dropping power, the buffer data is not written back to flash.

Erase Before Write: .erase all key in device before writting new key if this option is checked.Only valid in private key mode.

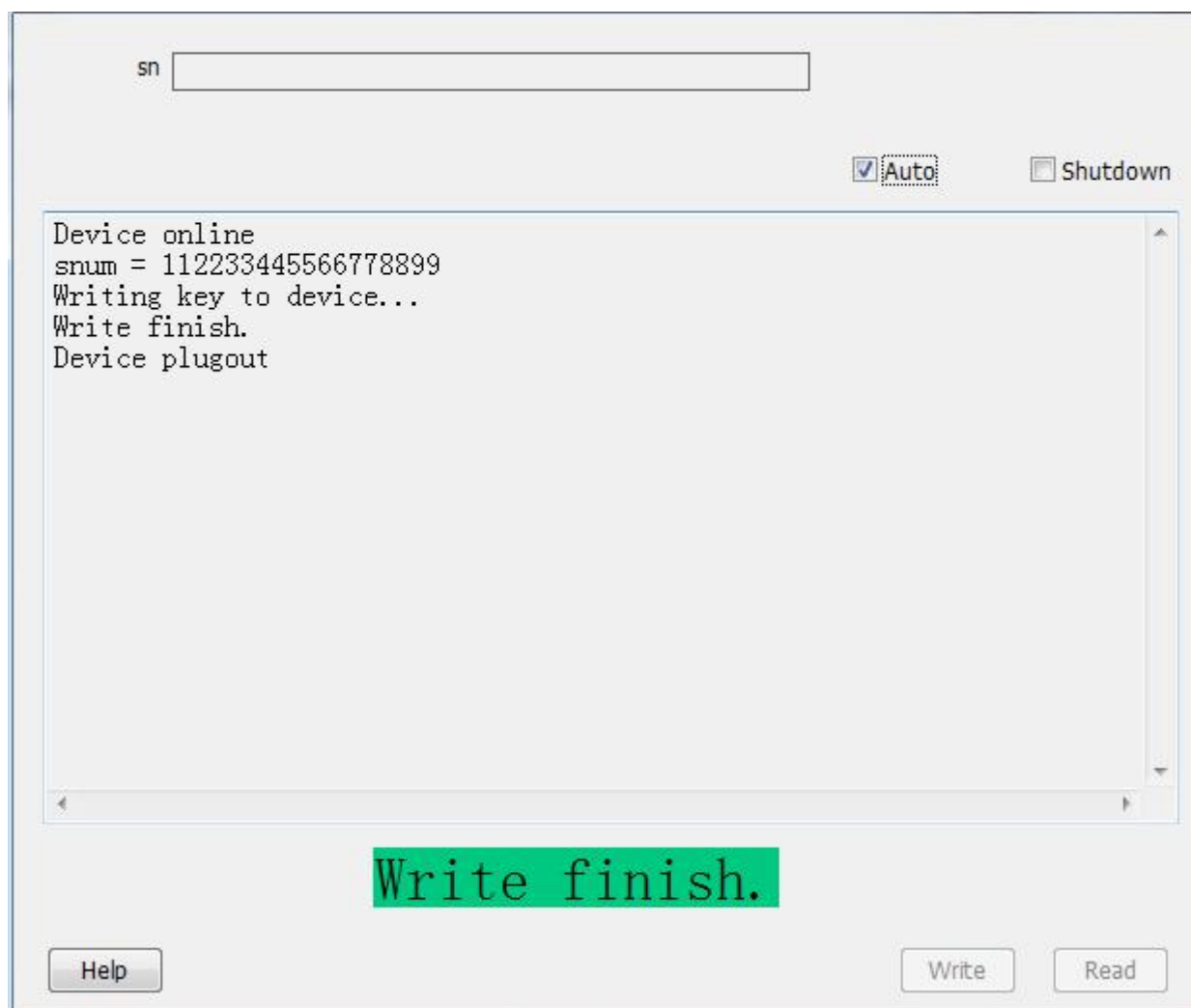
1.Run

The screenshot shows a software window with a light gray background. At the top left, there is a label 'sn' followed by a text input field. In the top right corner, there are two checkboxes: 'Auto' (checked) and 'Shutdown' (unchecked). The center of the window is occupied by a large, empty rectangular area with a thin border and a vertical scrollbar on the right side. At the bottom left, there is a 'Help' button. At the bottom right, there are two buttons: 'Write' and 'Read'.

2.Insert Device (Tool show info “device online”)



3.Scan the SN on device(Tool will auto execute writting)



4.Wait for the tooltip to burn successfully. If your program is completed by writting, it will automatically turn off. Please wait for tip "Device offline" before pulled out.

5.Repeat the 2-4 operation until the production task is completed.

6.Upload and check the key to the server, config. INI file under the keyupload folder in the configuration tool directory, configure excute executable program, excute executable program is upload, check the key to the server exe file. Parameter: [-b] [-c] Among them, -b: upload is 0, check is 1, -c is key configuration information tool will be automatically generated. For example, san_sfc.exe 0 key_info.txt.

3. Q&A

This chapter is updated irregularly for questions and solutions based on customer feedback for inspection

Note: most of the problems can be solved by the visual configuration tool DragonSNConfig.exe. please refer to the 《DragonSN Configuration Tool User Guide.Pdf》 when you encounter problems.

1. How to use a database for writting key?

A:

1.Install the database server environment and enable the TCP/IP management function to support sqlserver, MySQL

2.**refer to the 《DragonSN Configuration Tool User Guide.Pdf》 for database setting.**

2. The format of the MAC address for production imports is "AA1C11223344", and it needs to be converted into a standard MAC address format for "AA:1C:11:22:33:44"?

A: Double click configuration tools require the key edit dialog, entering "fix_mac" in the "regular expression" column, and reopen DragonSN

3. How to get the information after each writting number?

A: Once the tool is successfully writed key, it will generate a time named XML file in the RecordAlone directory and record relevant information.

4. Why is it possible to re insert the device into the USB port after firing the tool once?

A: In the development verification phase, you need confirm "set flag" in global config is set to 0, in order to repeat the writting. Once you writed key with config "set flag" 1, the device detect USB not more. You must contract FAE for support to reopen to detect channel.

5. The tool has problems. How to get support?

A: Please give priority to refer to the tool specification and configuration tool validation instructions to solve the problem. Otherwise, follow these steps:

1. run debugview.exe under tool directory

2. log device boot UART log

3. run DragonSN for reappearance.

4. export log in debugview.exe、export UART log, Tool interface screenshot for the reappearance of a screenshot problem, pack all and send to FAE for support.

