Application Notes

AmlKey Burning Configuration Format
Revision 0.3

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Content

Revision History

Version	Date	Author	Modification
0.1	Aug 6, 2015	Pei.pei	Draft
0.2	May 26, 2016	Pei.pei	
0.3	Oct 14, 2016	Pei.pei	Add detail description of every key

Instruction

This document describes the configuration of key burning tool to get burning key/how to get burning key file from local files with scanning gun as well as the format and configuration methods of key files. All key files are in license folder under tool category.

1. Usid，uuid，sn，deviceid Configuration

Usid.ini is the key file of used, uuid.ini is the key file of uuid, sn.ini is the key file of sn.ini, and deviceid.ini is the key file of deviceid, all those key files should be put under tool license category during burning.

The format is as following:

[Group1]

usid = ShiningStar<1>MBX<2>

param_1_format = %04x

param_1_start = 0000

param_1_end = FFFF

param_1_used = 0x0

param_1_total = 1000

param_2_format = %04x

param_2_start = 0000

param_2_end = FFFF

param_2_used = 0x0

param_2_total = 1000

[Size]

Size = 22

[fragment]

fragment =

usid = ShiningStar<1>MBX<2> is usid string, uuid = Amlogic<1>MBX<2> is uuid string, sn= Amlogic<1>MBX<2> is sn string, deviceid= Amlogic<1>MBX<2> is deviceid string. The key strings are divided in to fixed part and variable part, the fixed part is the given string, e.g. ShiningStar, MBX and the variable part is the changeable string with fixed length and can be configured with <1>,<2>,....

For variable part, param_*_format defines format and length, details are as following:

%04x，or %04X: the length of this string is 4, and the string is hexadecimal,

%04d，or %04D: the length of this string is 4, and the string is decimal,

Each variable key is param_*_start + param_*_used， use 0 to fill the empty number.

Add R to the end of param_*_format, means the key variable part is random number, chosen randomly in the range from param_*_start to param_*_end.

%04xR, or %04XR: the length of this string is 4, and the string is a hexadecimal random number,

%04dR, or %04DR: the length of this string is 4, and the string is a decimal random number,

param_*_start is the start number of variable keys, param_*_end is the end number of variable keys, param_*_used is used keys, will be set automatically during execution.

param_*_total is the total amount of variable keys, if you adopts random number keys, like %04xR, param_*_total must be set.

If configure file has multiple variable part, <1>,<2>,.... tool will start from <1>, and clear when get to the set end of <1>, and +1 to param_2_used in <2>;

Size = is the length of key string, must be set.

fragment = is the reused key during execution, i.e, key is generated but burning is failed, the tool will take this key as fragment for next time use automatically, the user needed not to set this parameter.

If user want to burn the 9999 usid key strings from Amlogic0001M200 to Amlogic9999M200, the key file should be set as following:

[Group1]

usid = Amlogic<1>M200

param_1_format = %04d

param_1_start = 0000

param_1_end = 9999

[Size]

Size = 15

Then the burning keys will be in order Amlogic0001M200, Amlogic0002M200..... Amlogic9999M200.

2. Mac， BlueTooth， Wifi Configuration

Mac_ether.ini is the configure file of mac, mac_bt.ini is the configure file of Bluetooth, mac_wifi.ini is the configure file of wifi, all the key configure files are put in license folder under tool category. They have same format, as following:

[Group1]

start=00:0f:a3:45:9b:12

end=00:0f:a3:45:a1:34

total=1570

used=2

current=0f:0f:a3:45:9b:14

[Group*] is a group of key, users can use [Group1], [Group2] with different format.

start= is the start point of mac,

end= is the end point of mac,

those two parameters must be set,

total is the total amount of mac, tool will calculate automatically, users need not to set this parameter;

Used is used mac number, default is 0;

Current is the current mac, if there is no mac, the tool will generate one automatically, users need not to set this value.

3. HDCP Configuration

HDCP_LIENCE.ini is the configure file of hdcp, tool will generate HDCP_LIENCE.ini on the first execution, users need not to set.

The format is as following:

[general]

current = 2

[fragment]

fragment = 0

[general] current is the sequence number of current key in use, will change with the execution,

fragment = is the reused key during execution, i.e, key is generated but burning is failed, the tool will take this key as fragment for next time use automatically, the user needed to set this parameter.

If you need start from the first one, you can skip HDCP_LIENCE.ini configuration, the tool will generate one.

4. Widevinekeybox Configuration

widevinekeybox.bin is the key file name of widevinekeybox, each key has 148 bytes, with a 4-byte head, the total length is 4+N*148, N is the key number. All files are put in license folder under tool category.

widevinekeybox.ini is the configure file of widevinekeybox, tool will generate widevinekeybox.ini on the first execution, users need not to set.

The format is as following:

[general]

current = 2

[fragment]

fragment = 0

[general] current is the sequence number of current key in use, will change with the execution,

fragment = is the reused key during execution, i.e, key is generated but burning is failed, the tool will take this key as fragment for next time use automatically, the user needed to set this parameter.

If you need start from the first one, you can skip widevinekeybox.iniconfiguration, the tool will generate one.

5. HDCP2， HDCP2_RX Configuration

HDCP2_LIENCE is the key file name of HDCP2, HDCP2_RX_LIENCE is the key file name of HDCP2_RX, each key has 902 bytes, with a 40-byte key head and N key data, the total length is 40+N*(key_size-40). HDCP2_LIENCE and HDCP2_RX_LIENCE are put in license folder under tool category.

HDCP2_LIENCE.ini is the configure file of hdcp 2, HDCP2_RX_LIENCE.ini is the configure file of hdcp2_RX, tool will generate HDCP2_LIENCE.ini and HDCP2_RX_LIENCE.ini on the first execution, users need not to set.

The format is as following:

[general]

current = 2

[fragment]

fragment = 0

[general] current is the sequence number of current key in use, will change with the execution,

fragment = is the reused key during execution, i.e, key is generated but burning is failed, the tool will take this key as fragment for next time use automatically, the user needed to set this parameter.

If you need start from the first one, you can skip HDCP2_LIENCE.ini and HDCP2_RX_LIENCE.ini configuration, the tool will generate one.

6. HDCP14_RX Configuration

aml_hdcp_key1.4.bin is the key file name of HDCP14_RX, the length of each key is 348, the total length is N*key_size, aml_hdcp_key1.4.bin.ini is the configure file of hdcp14_rx, file is put in license folder under tool category.

Format is as following:

[general]

current = 0

[fragment]

fragment =

[general] current is the sequence number of current key in use, will change with the execution,

fragment = is the reused key during execution, i.e, key is generated but burning is failed, the tool will take this key as fragment for next time use automatically, the user needed to set this parameter.

If you need start from the first one, you can skip aml_hdcp_key1.4.bin.ini configuration, the tool will generate one.

7. hdcp22_fw_private Configuration

hdcp22_fw_private.bin is the key file name of hdcp22_fw_private, Key is the contents of the document, chip M8 the length is 768, chip 905 and later the length is 32, file is put in license folder under tool category. No configure file is generated.

8. rxhdcp20 Configuration

RXHDCP20_LIENCE is the key file name of rxhdcp20, the length of each key is 368, with a 4-byte header, the total length is 4+N*368, N is the key number. RXHDCP20_LIENCE.ini is the configure file of rxhdcp20, file is put in license folder under tool category.

Format is as following:

[general]

current = 0

[fragment]

fragment =

[general] current is the sequence number of current key in use, will change with the execution,

fragment = is the reused key during execution, i.e, key is generated but burning is failed, the tool will take this key as fragment for next time use automatically, the user needed to set this parameter.

If you need start from the first one, you can skip RXHDCP20_LIENCE.ini configuration, the tool will generate one.

9. aml_hdcp_key2.2 Configuration

aml_hdcp_key2.2.bin is the key file name of aml_hdcp_key2.2, the length of each key is 3192, the total length is N*3192, N is the key number. File is put in license folder under tool category.

aml_hdcp_key2.2.bin.ini is the configure file of aml_hdcp_key2.2, tool will generate aml_hdcp_key2.2.bin.ini on the first execution, users need not to set.

Format is as following:

[general]

current = 2

[fragment]

fragment = 0

[general] current is the sequence number of current key in use, will change with the execution,

fragment = is the reused key during execution, i.e, key is generated but burning is failed, the tool will take this key as fragment for next time use automatically, the user needed to set this parameter.

If you need start from the first one, you can skip aml_hdcp_key2.2.bin.ini configuration, the tool will generate one.

10. dtcp Configuration

dtcp.bin is the key file name of dtcp, the length of each key is 584, with 4-byte head, the total length is 4+N*584, N is the key number. File is put in license folder under tool category.

dtcp.bin.ini is the configure file of dtcp, tool will generate dtcp.bin.ini on the first execution, users need not to set.

Format is as following:

[general]

current = 2

[fragment]

fragment = 0

[general] current is the sequence number of current key in use, will change with the execution,

fragment = is the reused key during execution, i.e, key is generated but burning is failed, the tool will take this key as fragment for next time use automatically, the user needed to set this parameter.

If you need start from the first one, you can skip dtcp.bin.ini configuration, the tool will generate one.

11. secure_boot_set Configuration

ECURE_BOOT_SET is the key file name of secure_boot_set, Key is the contents of the document, the length is defined by user, file is put in license folder under tool category. No configure file is generated.

12. secure_boot_ext Configuration

SECURE_BOOT_EXT.bin is the key file name of secure_boot_ext, Key is the contents of the document, the length is defined by user, file is put in license folder under tool category. No configure file is generated.

13. playreadykeybox Configuration

Playreadykeybox key is generated during execution, burning need license file and burning library, genDevCert.dll is the library of Playreadykeybox, bgroupcert.dat and zgpriv.dat are the license files, genDevCert.dll is put under tool category, license files are put in license folder under tool category.

14. Playreadykeybox2.5 Configuration

Playreadykeybox2.5 key is generated during execution, burning need license file and burning library, gendevcert25.dll is the library of Playreadykeybox 2.5, bgroupcert.dat, devcerttemplate.dat, zgpriv.dat and zgpriv_protected.dat are the license files, gendevcert25.dll is put under tool category, license files are put in license folder under tool category.

15. Playreadykeybox3.0 Configuration

Prpubkeybox and prprivkeybox are the key file names of Playreadykeybox 3.0, Key license files are bgroupcert.dat and zgpriv_protected.dat, key is the contents of the document, the length is defined by user; file is put in license folder under tool category. No configure file is generated.

16. telecomkeybox， usidonly， rsa_puk_e， rsa_puk_n， aes.key， bootstrap.key，amlogic_set Configuration

For keys with special names, key files are their file names, the length is the document contents length; files are put in license folder under tool category. No configure file is generated.

17. hwid Configuration

Hwid.ini is the key file of Hwid, this file should be put in license folder under tool category during burning.

This key has special configure files with a combination of fixed field byte and unfixed field byte, as following:

ODM = 1

RSV = 0

Start = 20150144

End = 20150317

Used = 2

ODM and RSV are fixed field byte, tool will combine these two according to some rule to generate a fixed character, Start and End are unfixed field, get unfixed byte in this range, combine with the fixed byte to generate a complete key.

18. SSL Configuration

ssl.ini is the key file of SSL, this file should be put in license folder under tool category during burning. SSL key number is defined with the first 4 bytes, and the length of each key is defined by the first 2 bytes of the key data.

19. acs Configuration

ACS_key.txt is the key file of acs, this file should be put in license folder under tool category during burning. acs_key.txt.ini is the key configuration file, format as following:

[ACS]

total = 19

current = 0

[fragment]

fragment =

Total is the asc total number, current is the current key order. Each line of this key file defines a key, during burning, tool will read a specific line in the file as the burning key.

If you need start from the first one, you can skip acs_key.txt.iniconfiguration, the tool will generate one.