

Rockchip Config Files - Specs

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Hi - here comes the result of my research to understand the file format of the rockchip config files.

In case of questions don't hesitate to ask - you'll find me here:

<http://www.freaktab.com/showthread.php?12404-RockchipDumpSplit-Simplifies-the-creating-of-backups-from-rockchip-devices>

Common:

Each config files consists of a header followed by one or more partition-blocks.

The older Rockchip tools (eg. 'RKAndroidTool v1.37') use ASCII to store filenames while the new tool 'AndroidTool v2.1' now uses UTF16.

HEADER

Header ASCII:

Length=24 Bytes

123456789012345678901234
AAA#B#CCDEFGHI##J###KK##

Example HEX:

43 46 47 00 18 00 DE 07 04 0C 13 39 18 02 00 00 18 00 00 00 38 01 00 00
AA AA AA ## BB ## CC CC DD EE FF GG HH II ## ## JJ ## ## ## KK KK ## ##

Header UTF16:

Length=29 Bytes

12345678901234567890123456789
AAA#B#CCD###E#F#G#H#LLIJ###KK

Example HEX:

43 46 47 00 1D 00 DE 07 04 00 00 00 0D 00 0C 00 12 00 20 00 7A 02 01 1D 00 00 00 62 02
AA AA AA ## BB ## CC CC DD ## ## ## EE ## FF ## GG ## HH ## LL LL II JJ ## ## ## KK KK

Fields:

AAA = (ASCII)Indicator - is always 'CFG'
B = (BYTE) Header Length
CC = (WORD) Date - YEAR: 0xDE 0x07 > 07DE=2014
D = (BYTE) Date - MONTH: 0x04 > 04
E = (BYTE) Date - DAY: 0x0C > 12
F = (BYTE) Date - HOUR: 0x13 > 19
G = (BYTE) Date - MIN: 0x39 > 57
H = (BYTE) Date - SEC: 0x18 > 24
I = (BYTE) Nr. of partition-blocks
J = (BYTE) address of first partition-block
KK = (WORD) length of partition-block 0x38 0x01 >> 0x0138=312 Bytes
LL = (WORD) Date - MSEC: 0x7A 0x02 > 027A=634 mSec

= NULL

Additional information:

The 'Header Length' is always at the same address - it can be used to check if file is ASCII or UTF16.

PARTITION-BLOCK

Block ASCII:

Length=312 Bytes

Block UTF16:

Length=610 Bytes

Basic Block Structure:

1. length of partition block (WORD)
 1. 2 Bytes
2. name of partition (FIXED LENGTH STRING)
 1. ASCII: 40 Characters=40 Bytes
 2. UTF16: 40 Characters=80 Bytes
3. filename of partition-image (FIXED LENGTH STRING)
 1. ASCII: 262 Characters=262 Bytes
 2. UTF16: 260 Characters=520 Bytes
4. destination address on device (LONG)
 1. 4 Bytes
5. block enabled/disabled (BYTE)
 1. 1 Byte
6. 3 Byte NULL

Additional information:

1. character length of 'name of partition' and 'filename of partition-image' INCLUDE the null-terminator! So effectively there's 1 character less available!
2. Destination address is optional - the rockchip tools retrieve the correct destination-addresses from the parameter file.