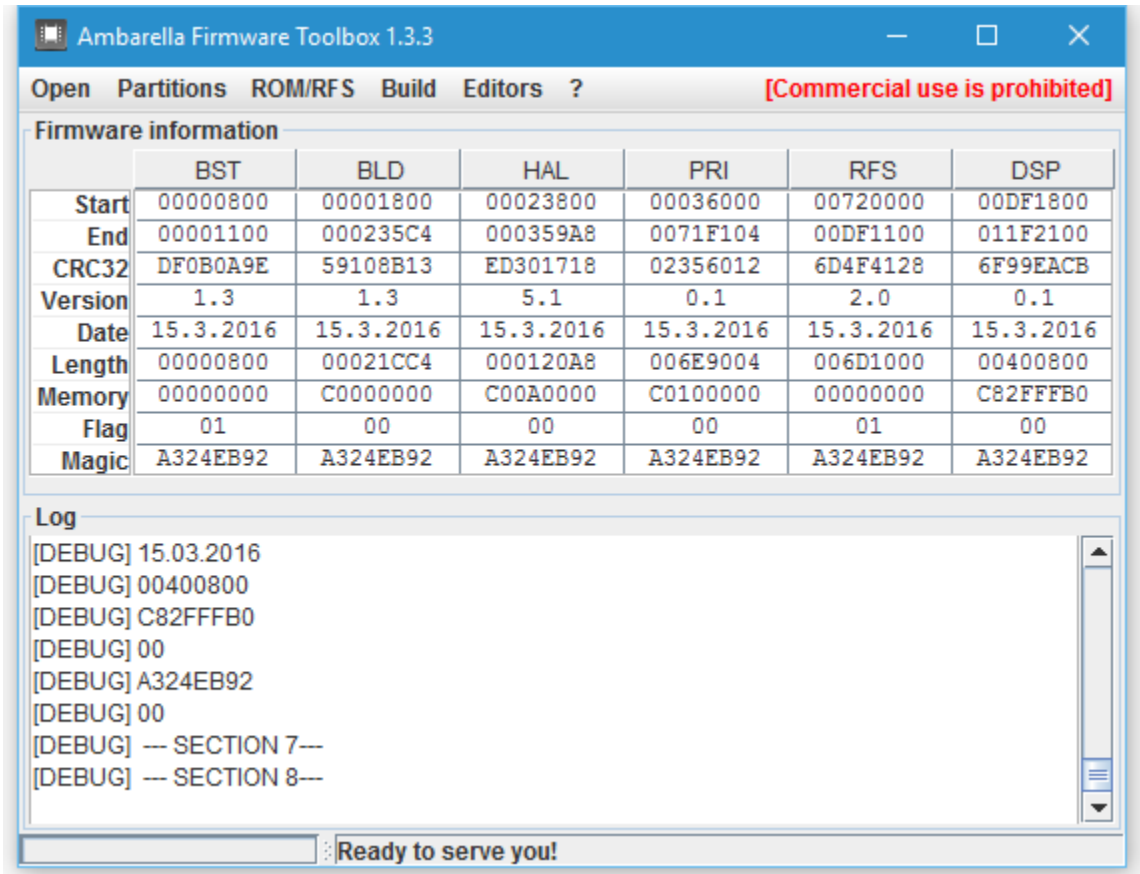
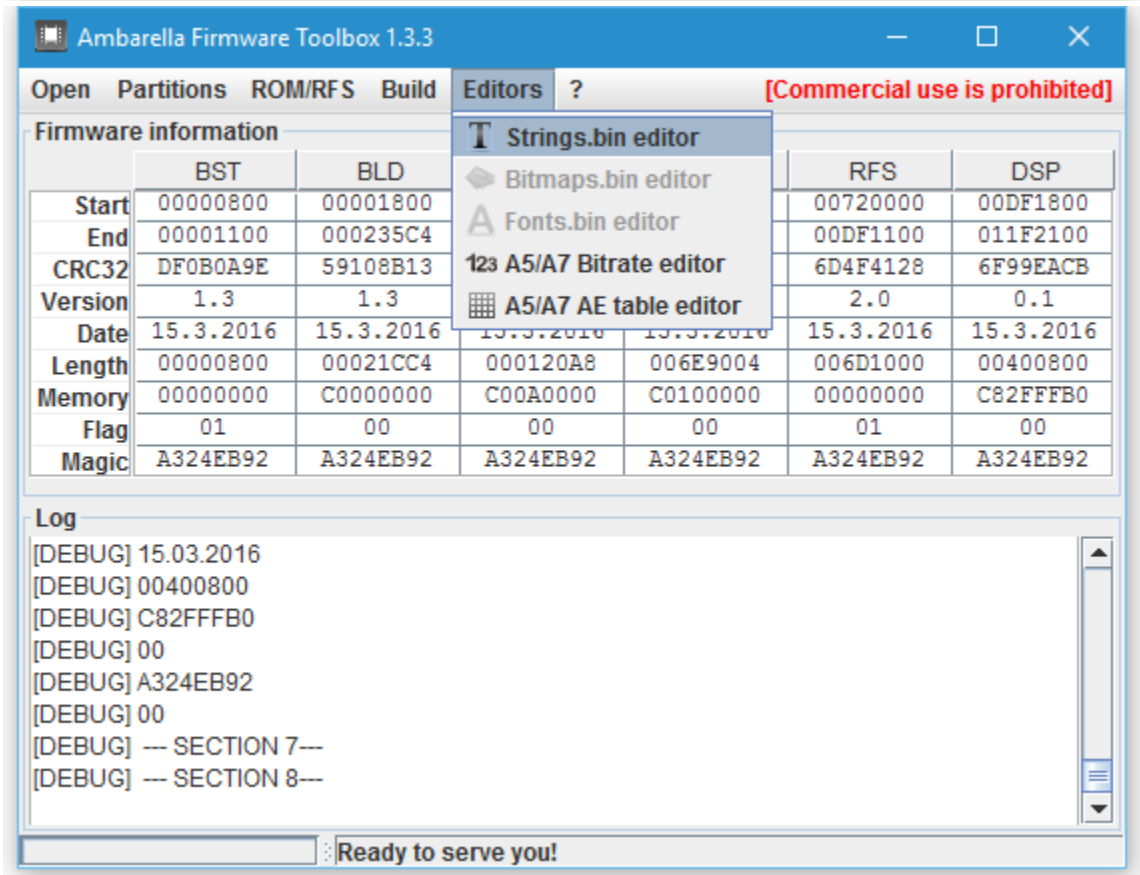
Editing Ambarella Firmware Tools

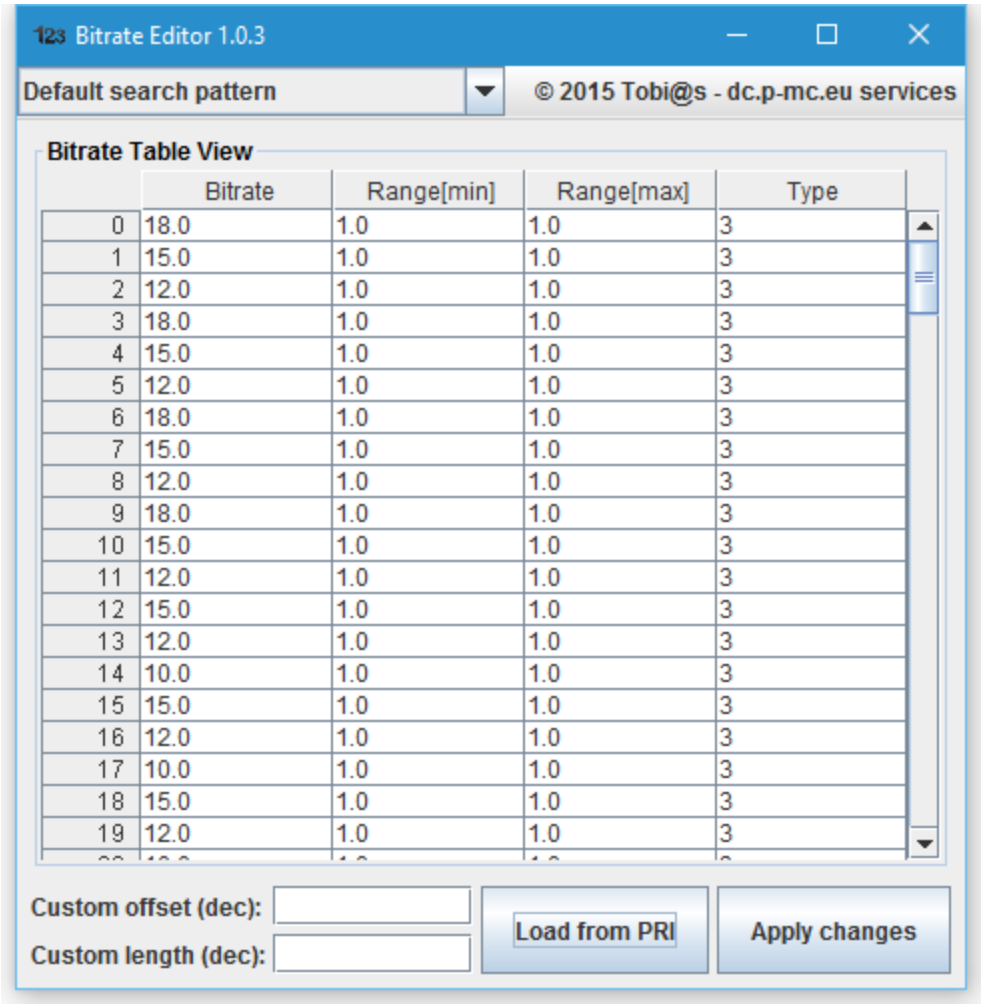
Tools

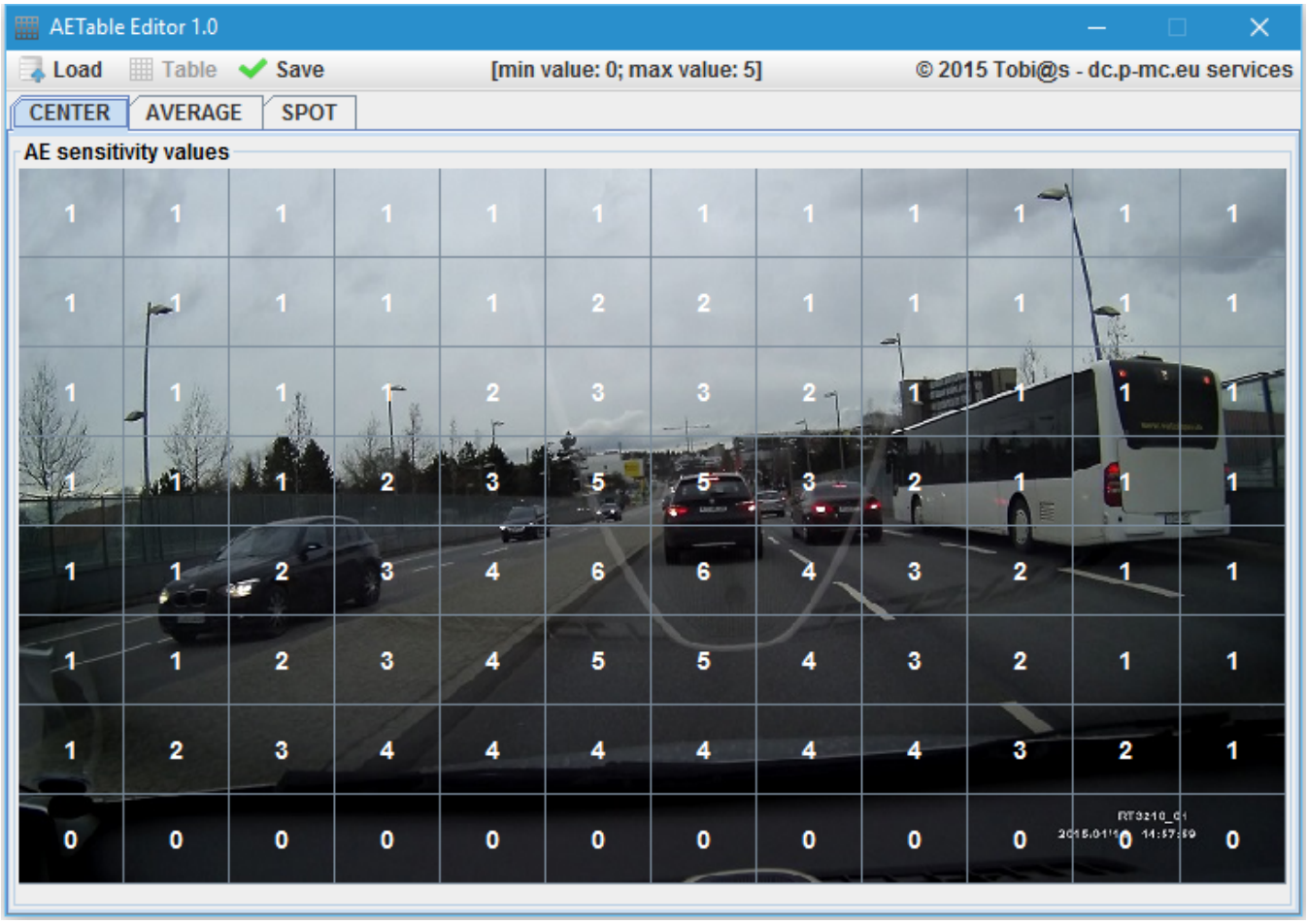
name	description	URL	
AFT	Firmware editor. Allow to change bitrates, exposure map, translations, resources (logo, sound).	http://dc.p-mc.eu/tools/a7tool	AFT133.jar
DirectUSB	Firmware backup/restore software that allow to flash .elf firmware (restore bricked devices)	http://dc.p-mc.eu/tools/directusb/download	
FWVD	Firmware version detector	http://dc.p-mc.eu/tools/fwvd	FWVD.jar
AE	Amba Extractor. AFT like software.	http://videoregforum.ru/threads/amba-extractor-redaktor-proshivok-ambarella.1601 https://yadi.sk/d/N_HFuUKyqCbgt	AE.exe
bitmap editor			amba_bitmaps.exe

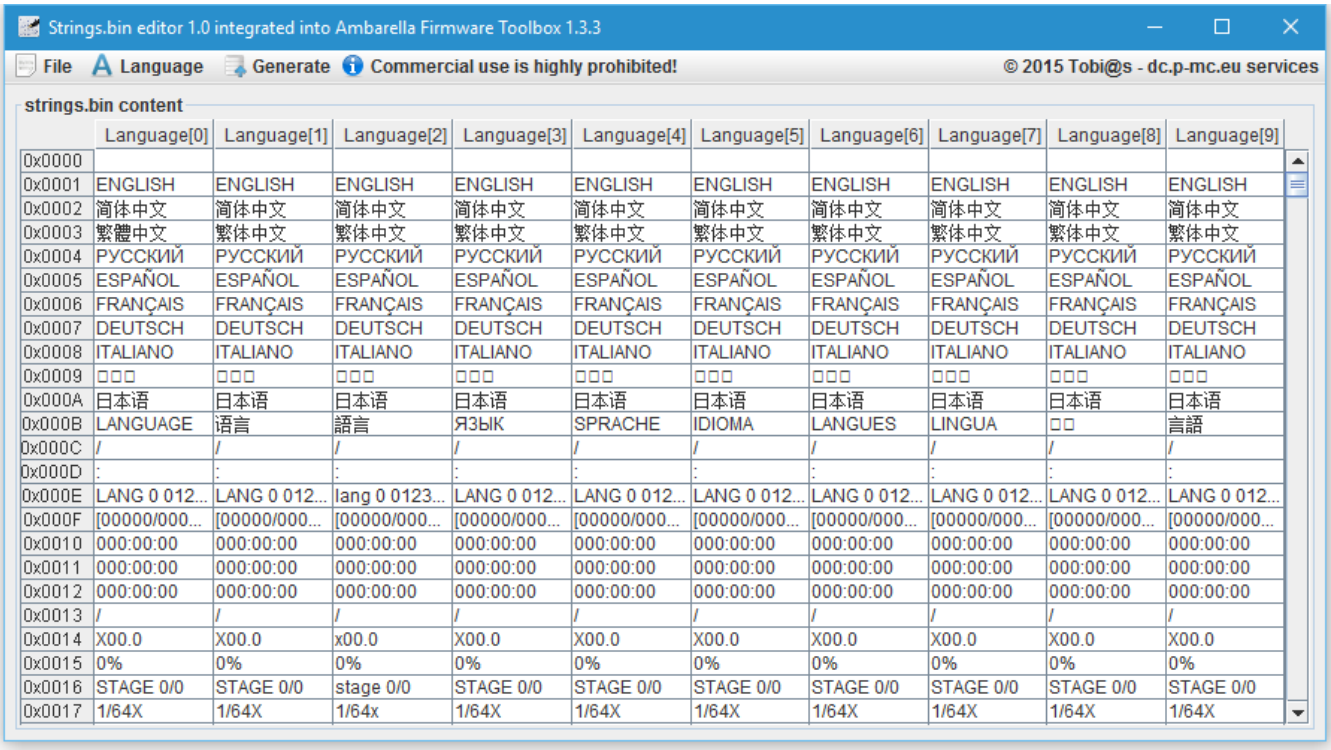
AFT


Ambarella Firmware Toolbox 1.3.3
Open
Partitions
ROM/RFS
Build
Editors
?
[Commercial use is prohibited]
Firmware information
BST BLD HAL PRI RFS DSP
Start 00000800 00001800 00023800 00036000 00720000 00DF1800
End 00001100 000235C4 000359A8 0071F104 00DF1100 011F2100
CRC32 DF0B0A9E 59108B13 ED301718 02356012 6D4F4128 6F99EACB
Version 1.3 1.3 5.1 0.1 2.0 0.1
Date 15.3.2016 15.3.2016 15.3.2016 15.3.2016 15.3.2016 15.3.2016
Length 00000800 00021CC4 000120A8 006E9004 006D1000 00400800
Memory 00000000 C0000000 C00A0000 C0100000 00000000 C82FFFB0
Flag 01 00 00 00 01 00
Magic A324EB92 A324EB92 A324EB92 A324EB92 A324EB92 A324EB92
Log
[DEBUG] 15.03.2016
[DEBUG] 00400800
[DEBUG] C82FFFB0
[DEBUG] 00
[DEBUG] A324EB92
[DEBUG] 00
[DEBUG] --- SECTION 7---
[DEBUG] --- SECTION 8---
Ready to serve you!


Ambarella Firmware Toolbox 1.3.3
Open
Partitions
ROM/RFS
Build
Editors
?
[Commercial use is prohibited]
Strings.bin editor
Bitmaps.bin editor
Fonts.bin editor
A5/A7 Bitrate editor
A5/A7 AE table editor
Firmware information
BST BLD RFS DSP
Start 00000800 00001800 00720000 00DF1800
End 00001100 000235C4 00DF1100 011F2100
CRC32 DF0B0A9E 59108B13 6D4F4128 6F99EACB
Version 1.3 1.3 2.0 0.1
Date 15.3.2016 15.3.2016 15.3.2016 15.3.2016
Length 00000800 00021CC4 000120A8 006E9004 006D1000 00400800
Memory 00000000 C0000000 C00A0000 C0100000 00000000 C82FFFB0
Flag 01 00 00 00 01 00
Magic A324EB92 A324EB92 A324EB92 A324EB92 A324EB92 A324EB92
Log
[DEBUG] 15.03.2016
[DEBUG] 00400800
[DEBUG] C82FFFB0
[DEBUG] 00
[DEBUG] A324EB92
[DEBUG] 00
[DEBUG] --- SECTION 7---
[DEBUG] --- SECTION 8---
Ready to serve you!


123 Bitrate Editor 1.0.3
Default search pattern
© 2015 Tobi@s - dc.p-mc.eu services
Bitrate Table View
Bitrate
Range[min]
Range[max]
Type
0 18.0 1.0 1.0 3
1 15.0 1.0 1.0 3
2 12.0 1.0 1.0 3
3 18.0 1.0 1.0 3
4 15.0 1.0 1.0 3
5 12.0 1.0 1.0 3
6 18.0 1.0 1.0 3
7 15.0 1.0 1.0 3
8 12.0 1.0 1.0 3
9 18.0 1.0 1.0 3
10 15.0 1.0 1.0 3
11 12.0 1.0 1.0 3
12 15.0 1.0 1.0 3
13 12.0 1.0 1.0 3
14 10.0 1.0 1.0 3
15 15.0 1.0 1.0 3
16 12.0 1.0 1.0 3
17 10.0 1.0 1.0 3
18 15.0 1.0 1.0 3
19 12.0 1.0 1.0 3
Custom offset (dec):
Custom length (dec):
Load from PRI
Apply changes





	Language[0]	Language[1]	Language[2]	Language[3]	Language[4]	Language[5]	Language[6]	Language[7]	Language[8]	Language[9]
0x0000										
0x0001	ENGLISH	ENGLISH	ENGLISH	ENGLISH	ENGLISH	ENGLISH	ENGLISH	ENGLISH	ENGLISH	ENGLISH
0x0002	简体中文	简体中文	简体中文	简体中文	简体中文	简体中文	简体中文	简体中文	简体中文	简体中文
0x0003	繁體中文	繁体中文	繁体中文	繁体中文	繁体中文	繁体中文	繁体中文	繁体中文	繁体中文	繁体中文
0x0004	РУССКИЙ	РУССКИЙ	РУССКИЙ	РУССКИЙ	РУССКИЙ	РУССКИЙ	РУССКИЙ	РУССКИЙ	РУССКИЙ	РУССКИЙ
0x0005	ESPAÑOL	ESPAÑOL	ESPAÑOL	ESPAÑOL	ESPAÑOL	ESPAÑOL	ESPAÑOL	ESPAÑOL	ESPAÑOL	ESPAÑOL
0x0006	FRANÇAIS	FRANÇAIS	FRANÇAIS	FRANÇAIS	FRANÇAIS	FRANÇAIS	FRANÇAIS	FRANÇAIS	FRANÇAIS	FRANÇAIS
0x0007	DEUTSCH	DEUTSCH	DEUTSCH	DEUTSCH	DEUTSCH	DEUTSCH	DEUTSCH	DEUTSCH	DEUTSCH	DEUTSCH
0x0008	ITALIANO	ITALIANO	ITALIANO	ITALIANO	ITALIANO	ITALIANO	ITALIANO	ITALIANO	ITALIANO	ITALIANO
0x0009	□□□	□□□	□□□	□□□	□□□	□□□	□□□	□□□	□□□	□□□
0x000A	日本语	日本语	日本语	日本语	日本语	日本语	日本语	日本语	日本语	日本语
0x000B	LANGUAGE	语言	語言	ЯЗЫК	SPRACHE	IDIOMA	LANGUES	LINGUA	□□	言語
0x000C	/	/	/	/	/	/	/	/	/	/
0x000D	:	:	:	:	:	:	:	:	:	:
0x000E	LANG 0 012...	LANG 0 012...	lang 0 0123...	LANG 0 012...	LANG 0 012...	LANG 0 012...	LANG 0 012...	LANG 0 012...	LANG 0 012...	LANG 0 012...
0x000F	[00000/000...	[00000/000...	[00000/000...	[00000/000...	[00000/000...	[00000/000...	[00000/000...	[00000/000...	[00000/000...	[00000/000...
0x0010	000:00:00	000:00:00	000:00:00	000:00:00	000:00:00	000:00:00	000:00:00	000:00:00	000:00:00	000:00:00
0x0011	000:00:00	000:00:00	000:00:00	000:00:00	000:00:00	000:00:00	000:00:00	000:00:00	000:00:00	000:00:00
0x0012	000:00:00	000:00:00	000:00:00	000:00:00	000:00:00	000:00:00	000:00:00	000:00:00	000:00:00	000:00:00
0x0013	/	/	/	/	/	/	/	/	/	/
0x0014	X00.0	X00.0	x00.0	X00.0	X00.0	X00.0	X00.0	X00.0	X00.0	X00.0
0x0015	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
0x0016	STAGE 0/0	STAGE 0/0	stage 0/0	STAGE 0/0	STAGE 0/0	STAGE 0/0	STAGE 0/0	STAGE 0/0	STAGE 0/0	STAGE 0/0
0x0017	1/64X	1/64X	1/64x	1/64X	1/64X	1/64X	1/64X	1/64X	1/64X	1/64X

AE

AE (ver. 3.0.2.0)

Firmware Editor Tools Settings Help

Sections FW info

Name / Sections	Bst	Bld	Hal	Pri	Rom	Dsp
Start Address	0x00000800	0x00001800	0x00023800	0x00036000	0x00720000	0x00DF1800
End Address	0x00001100	0x000235C4	0x000359A8	0x0071F104	0x00DF1100	0x011F2100
Crc32	0xDF0B0A9E	0x59108B13	0xED301718	0x02356012	0x6D4F4128	0x6F99EACB
Version	1.3	1.3	5.1	0.1	2.0	0.1
Date	15.3.2016	15.3.2016	15.3.2016	15.3.2016	15.3.2016	15.3.2016
Length	0x00000800	0x00021CC4	0x000120A8	0x006E9004	0x006D1000	0x00400800
Memory Address	0x00000000	0xC0000000	0xC00A0000	0xC0100000	0x00000000	0xC82FFFB0
Flag	0x00000001	0x00000000	0x00000000	0x00000000	0x00000001	0x00000000
Magic Constant	0xA324EB92	0xA324EB92	0xA324EB92	0xA324EB92	0xA324EB92	0xA324EB92
Verify Crc32	Ok !	Ok !	Ok !	Ok !	Ok !	Ok !
Compression	no	no	no	no	no	no

Found 6 sections

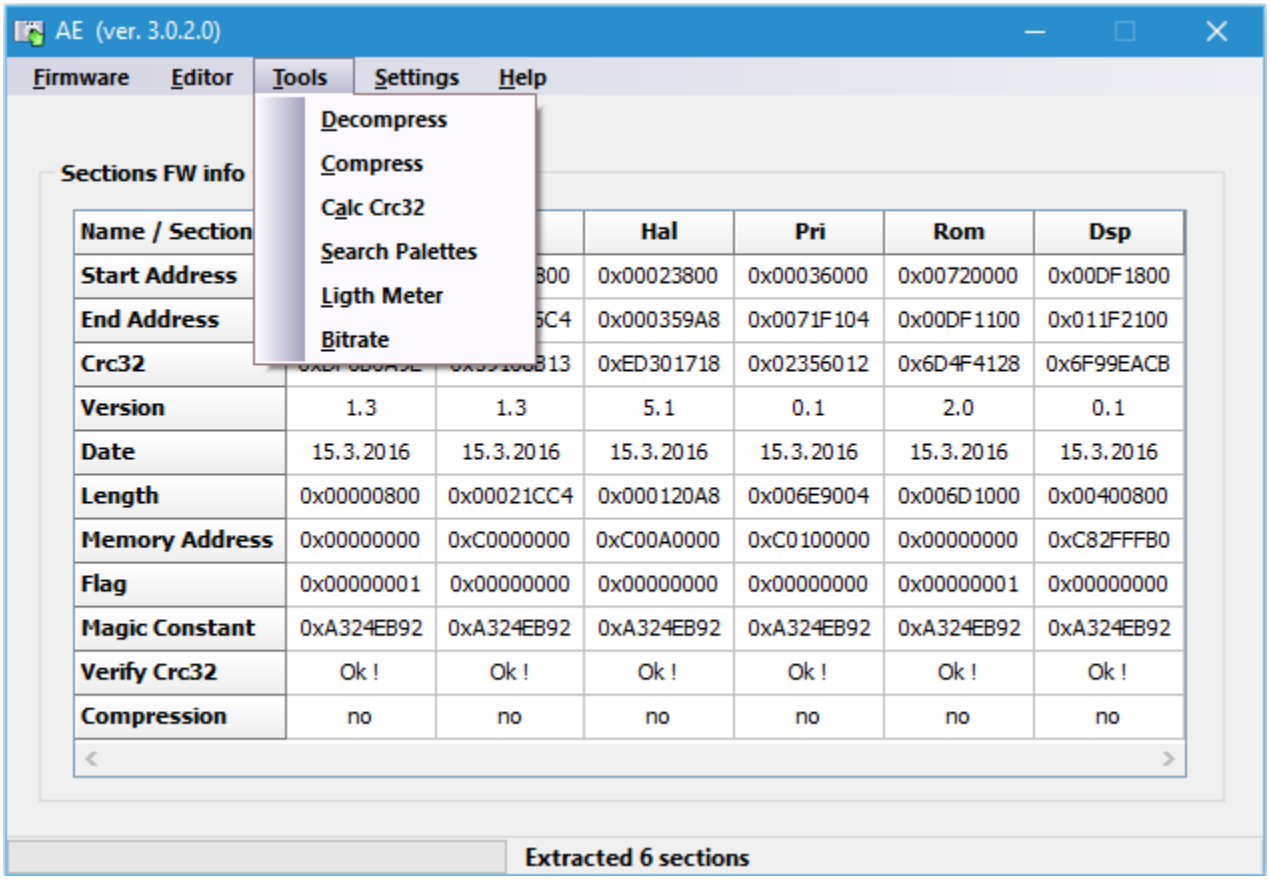
Rom.bin Editor (ver. 2.0)

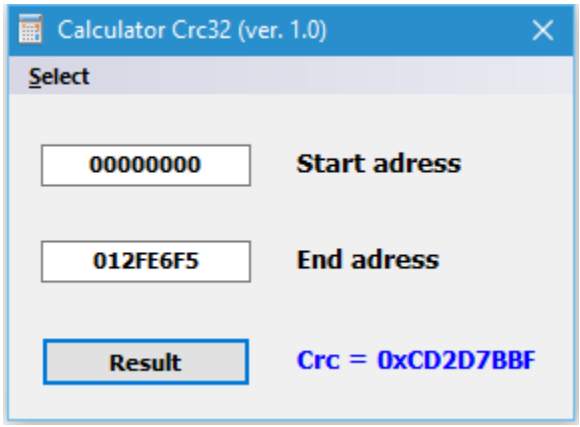
File Exit

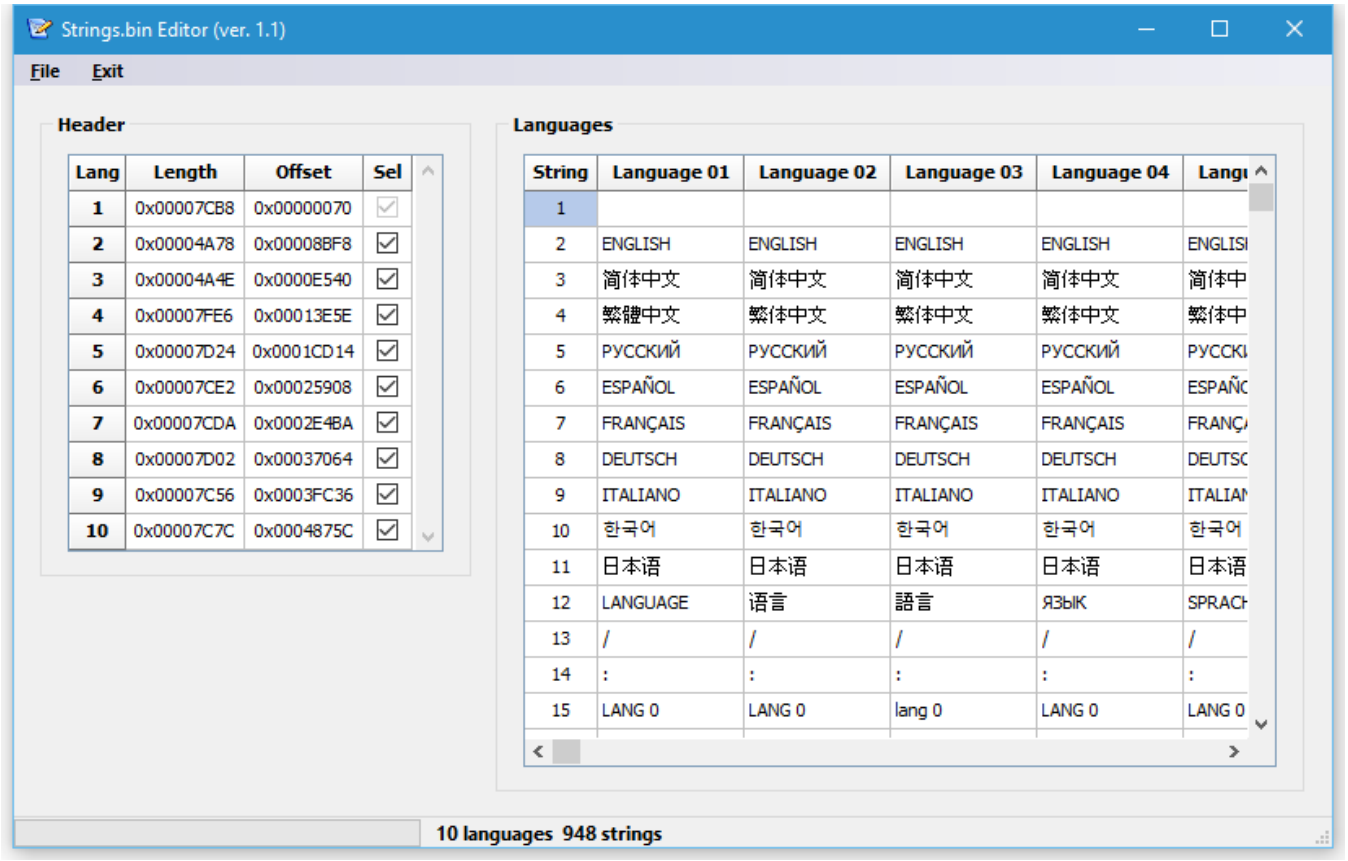
Section files

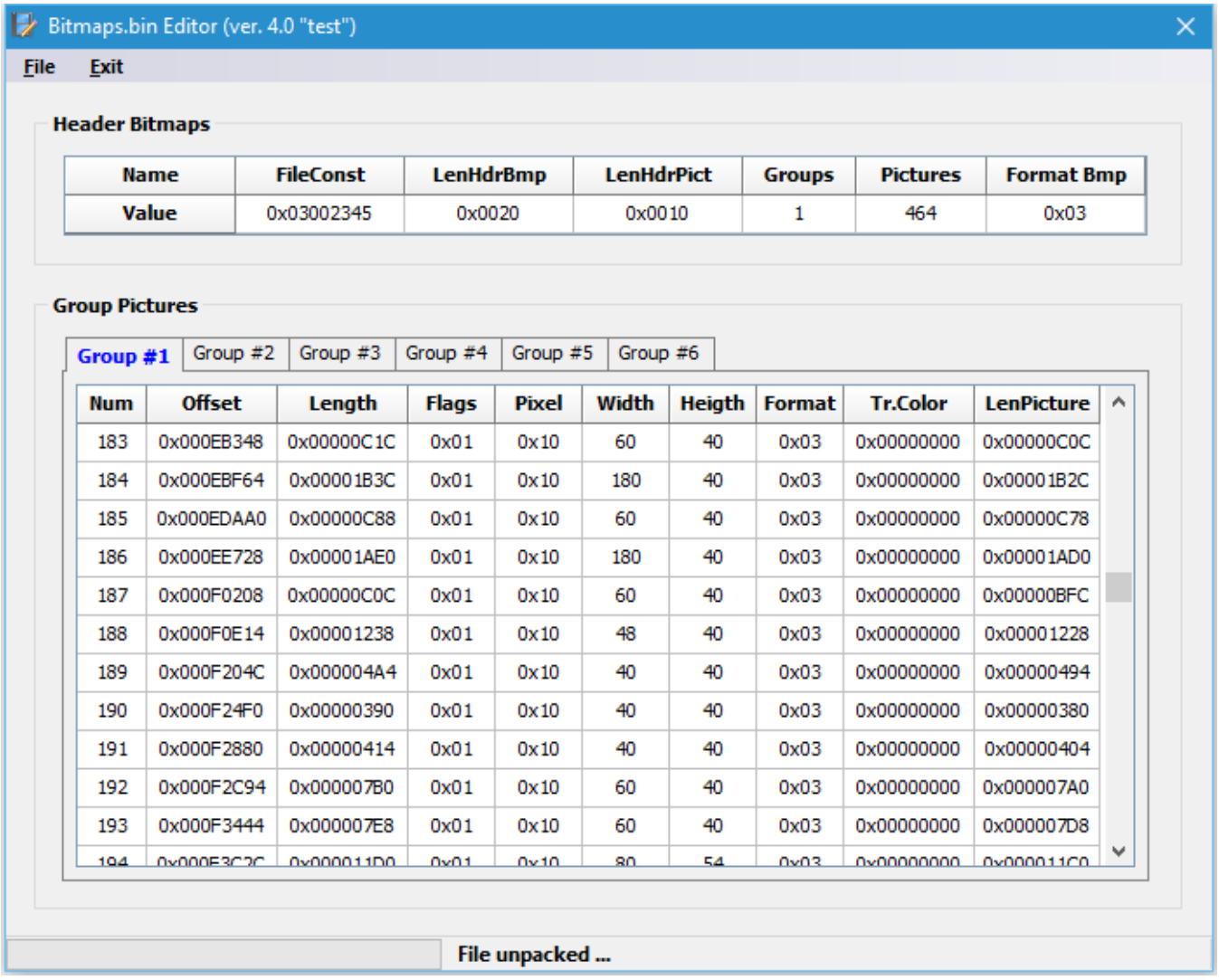
Num	File Name	Offset	Length	Sel
1	dec_cc_3D	0x00004800	0x00004000	☑
2	dec_cc_in	0x00009000	0x00000900	☑
3	icn_logo.a	0x0000A000	0x00001C00	☑
4	icn_logo.Y	0x0000C000	0x00001C00	☑
5	icn_logo.UV	0x0000E000	0x00001C00	☑
6	bitmaps.bin	0x00010000	0x0023F424	☑
7	strings.bin	0x0024F800	0x000514D8	☑
8	gpsdb.txt	0x002A1000	0x0003C550	☑
9	invalid.jpg	0x002DD800	0x000037C9	☑
10	plist_effect_cut.jpg	0x002E1000	0x00000A40	☑
11	plist_effect_fade_black.jpg	0x002E2000	0x00000656	☑
12	plist_effect_fade_gray.jpg	0x002E2800	0x00000659	☑

Found 114 files


AE (ver. 3.0.2.0)
Firmware
Editor
Tools
Settings
Help
Decompress
Compress
Calc Crc32
Search Palettes
Ligth Meter
Bitrate
Sections FW info
Name / Section
Hal
Pri
Rom
Dsp
Start Address
0x00023800
0x00036000
0x00720000
0x00DF1800
End Address
0x000359A8
0x0071F104
0x00DF1100
0x011F2100
Crc32
0xED301718
0x02356012
0x6D4F4128
0x6F99EACB
Version
1.3
1.3
5.1
0.1
2.0
0.1
Date
15.3.2016
15.3.2016
15.3.2016
15.3.2016
15.3.2016
15.3.2016
Length
0x00000800
0x00021CC4
0x000120A8
0x006E9004
0x006D1000
0x00400800
Memory Address
0x00000000
0xC0000000
0xC00A0000
0xC0100000
0x00000000
0xC82FFFB0
Flag
0x00000001
0x00000000
0x00000000
0x00000000
0x00000001
0x00000000
Magic Constant
0xA324EB92
0xA324EB92
0xA324EB92
0xA324EB92
0xA324EB92
0xA324EB92
Verify Crc32
Ok !
Ok !
Ok !
Ok !
Ok !
Ok !
Compression
no
no
no
no
no
no
Extracted 6 sections

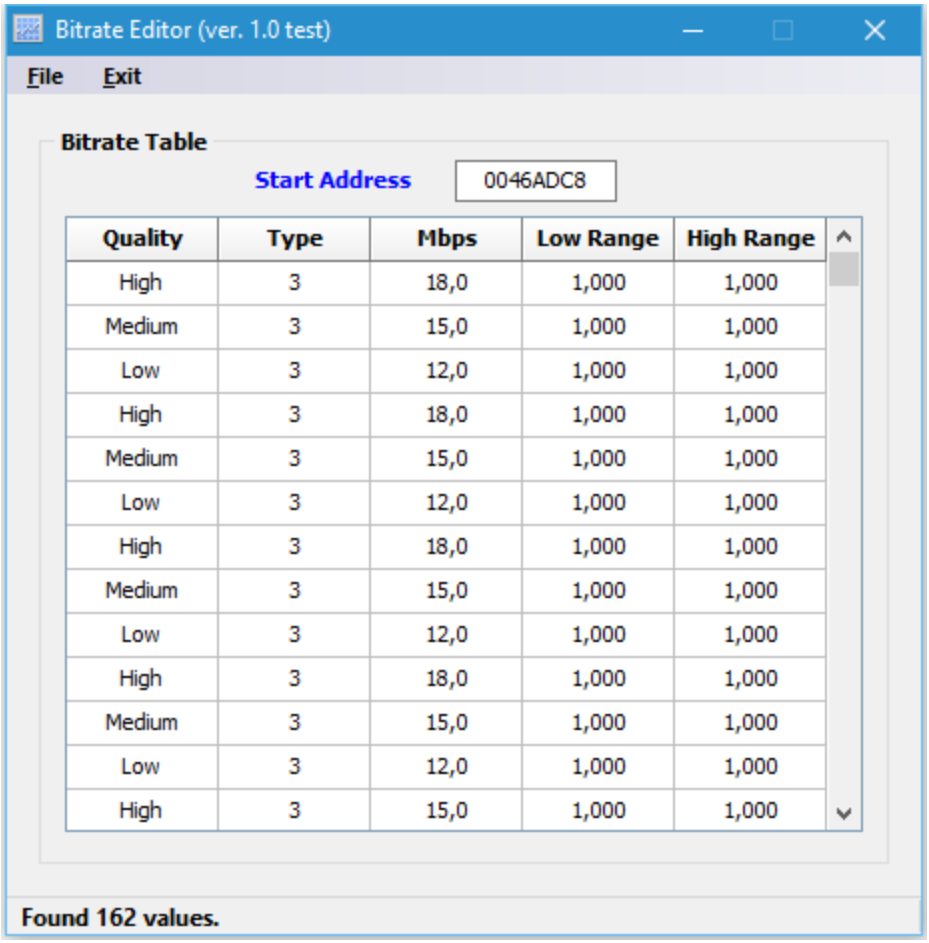

Calculator Crc32 (ver. 1.0)
Select
00000000
Start adress
012FE6F5
End adress
Result
Crc = 0xCD2D7BBF

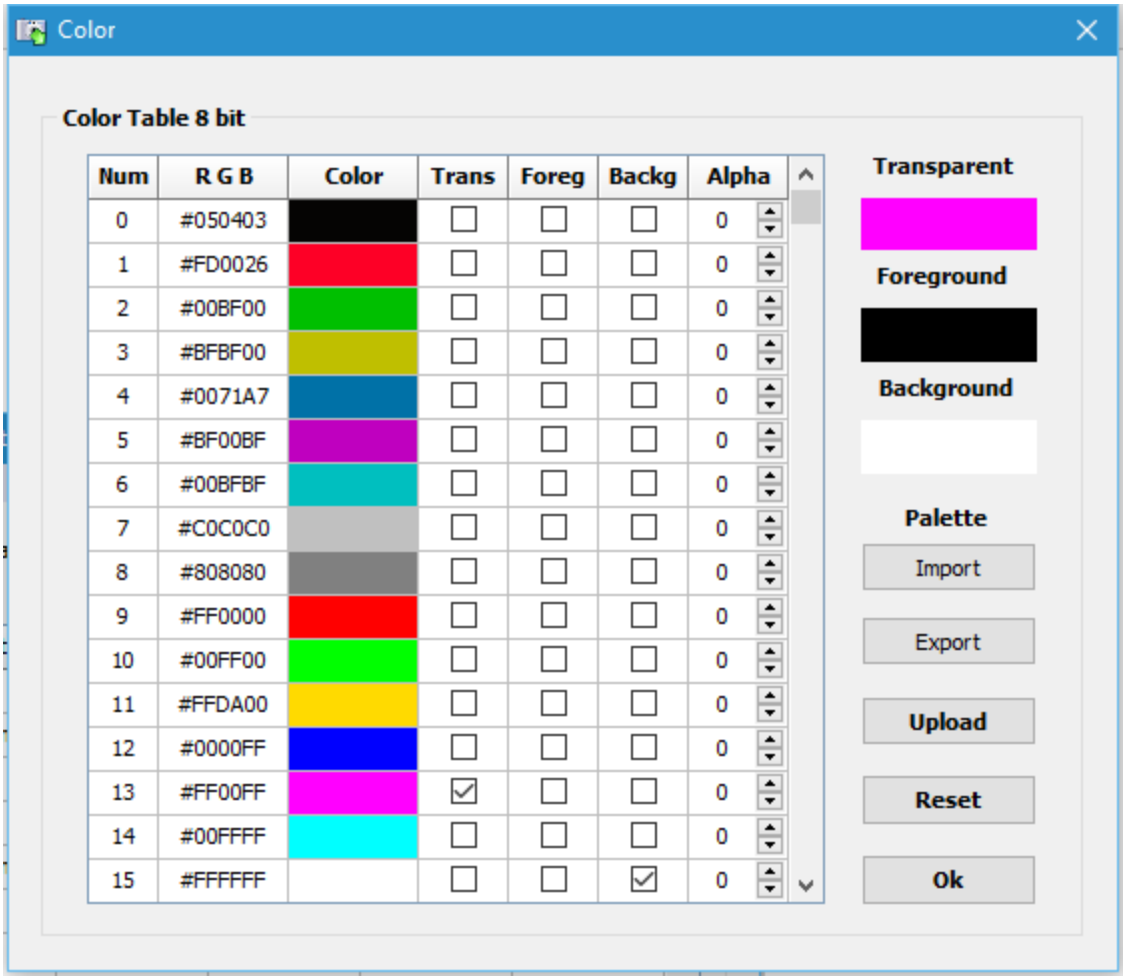

Strings.bin Editor (ver. 1.1)
File
Exit
Header
Lang
Length
Offset
Sel
1 0x00007CB8 0x00000070
2 0x00004A78 0x00008BF8
3 0x00004A4E 0x0000E540
4 0x00007FE6 0x00013E5E
5 0x00007D24 0x0001CD14
6 0x00007CE2 0x00025908
7 0x00007CDA 0x0002E4BA
8 0x00007D02 0x00037064
9 0x00007C56 0x0003FC36
10 0x00007C7C 0x0004875C
Languages
String
Language 01
Language 02
Language 03
Language 04
2 ENGLISH ENGLISH ENGLISH ENGLISH
3 简体中文 简体中文 简体中文 简体中文
4 繁體中文 繁体中文 繁体中文 繁体中文
5 РУССКИЙ РУССКИЙ РУССКИЙ РУССКИЙ
6 ESPAÑOL ESPAÑOL ESPAÑOL ESPAÑOL
7 FRANÇAIS FRANÇAIS FRANÇAIS FRANÇAIS
8 DEUTSCH DEUTSCH DEUTSCH DEUTSCH
9 ITALIANO ITALIANO ITALIANO ITALIANO
10 한국어 한국어 한국어 한국어
11 日本语 日本语 日本语 日本语
12 LANGUAGE 语言 語言 ЯЗЫК
13 / / / /
14 : : : :
15 LANG 0 LANG 0 lang 0 LANG 0
10 languages 948 strings


Bitmaps.bin Editor (ver. 4.0 "test")
File
Exit
Header Bitmaps
Name
FileConst
LenHdrBmp
LenHdrPict
Groups
Pictures
Format Bmp
Value
0x03002345
0x0020
0x0010
1
464
0x03
Group Pictures
Group #1
Group #2
Group #3
Group #4
Group #5
Group #6
Num
Offset
Length
Flags
Pixel
Width
Heigth
Format
Tr.Color
LenPicture
183 0x000EB348 0x00000C1C 0x01 0x10 60 40 0x03 0x00000000 0x00000C0C
184 0x000EBF64 0x00001B3C 0x01 0x10 180 40 0x03 0x00000000 0x00001B2C
185 0x000EDAA0 0x00000C88 0x01 0x10 60 40 0x03 0x00000000 0x00000C78
186 0x000EE728 0x00001AE0 0x01 0x10 180 40 0x03 0x00000000 0x00001AD0
187 0x000F0208 0x00000C0C 0x01 0x10 60 40 0x03 0x00000000 0x00000BFC
188 0x000F0E14 0x00001238 0x01 0x10 48 40 0x03 0x00000000 0x00001228
189 0x000F204C 0x000004A4 0x01 0x10 40 40 0x03 0x00000000 0x00000494
190 0x000F24F0 0x00000390 0x01 0x10 40 40 0x03 0x00000000 0x00000380
191 0x000F2880 0x00000414 0x01 0x10 40 40 0x03 0x00000000 0x00000404
192 0x000F2C94 0x000007B0 0x01 0x10 60 40 0x03 0x00000000 0x000007A0
193 0x000F3444 0x000007E8 0x01 0x10 60 40 0x03 0x00000000 0x000007D8
File unpacked ...

AE › Bitmaps › BMP › Group #1




Bitrate Editor (ver. 1.0 test)
File
Exit
Bitrate Table
Start Address
0046ADC8
Quality
Type
Mbps
Low Range
High Range
High 3 18,0 1,000 1,000
Medium 3 15,0 1,000 1,000
Low 3 12,0 1,000 1,000
High 3 18,0 1,000 1,000
Medium 3 15,0 1,000 1,000
Low 3 12,0 1,000 1,000
High 3 18,0 1,000 1,000
Medium 3 15,0 1,000 1,000
Low 3 12,0 1,000 1,000
High 3 18,0 1,000 1,000
Medium 3 15,0 1,000 1,000
Low 3 12,0 1,000 1,000
High 3 15,0 1,000 1,000
Found 162 values.


Color
Color Table 8 bit
Num
R G B
Color
Trans
Foreg
Backg
Alpha
0 #050403 0
1 #FD0026 0
2 #00BF00 0
3 #BFBF00 0
4 #0071A7 0
5 #BF00BF 0
6 #00BFBF 0
7 #C0C0C0 0
8 #808080 0
9 #FF0000 0
10 #00FF00 0
11 #FFDA00 0
12 #0000FF 0
13 #FF00FF 0
14 #00FFFF 0
15 #FFFFFF 0
Transparent
Foreground
Background
Palette
Import
Export
Upload
Reset
Ok