Firmware Update Application Guide

SONiX

June 17, 2020

v1.0.6.3

Use Files Introduction

- Fw_update : BurnAP Tool
- Device_Config.ini : Tool settings
- SerialNumber.txt : Mask parameter
- XXXXX.bin : FW binary file

Device_Config.ini

- **OpenSpecDev**
  - 1：Restricted burning by PID / VID (default)
  - 0：Unrestricted
- **Rework**
  - 1： Depend on SerialNumberAndReworkAddress (default)
  - 0： Disable
- **WriteSeiralNumber**
  - 1：Enable Write SN which is from SerailNumber.txt
  - 0：Disable (default)
- **SerialNumberAndReworkAddress**
  - 1：write to iSerialNumber (default)
  - 0：write to iManufacturer

Device_Config.ini

- **SensorInitialTime(ms): 2000**
  - fine tune sensor initial time (Adjusted by engineering)
- **EraseDelayTime(ms): 1500**
  - fine erase delay time (Adjusted by engineering)
- **DeviceFileName: XXXXXX.bin**
  - F/W Binary file name. (User fill in)

- **ReserveCalibrationData: 0**
  - 1：Enable Write Calibration from Calibration.ini for special sensor. (HM1091)
  - 0：Disable (default)
- **CalibrationSectorSize: 3000**
  - Read the specified calibration size.

FW Update Command

- **root@:/home/XX/Desktop# ./fw_update Para1**
  - Para1 field
    - -1 is 64kB FW update
    - -2 is 128kB FW update
    - -3 is 256kB FW update
- **Example**
  - ./fw_update -3
    - Update 1256KB Firmware and Keep the serial number information.
  - ./fw_update --getbcd
    - Get Device BCD version.
  - ./fw_update -h
    - Provide operational information

Use Terminal Window

Method

1. Open a terminal in Linux
2. Go to the Firmware Update folder
3. Change "fw_update" file permissions

```
root@sa3-HP-ProBook-6455b:/home/sa3/Desktop/Chromebook_Linux_PCam_V1.0.6.3_SN9C2
808S# ls
Device_Config.ini  fw_update  SerialNumber.txt  SN9C2820S_Firmware.bin
root@sa3-HP-ProBook-6455b:/home/sa3/Desktop/Chromebook_Linux_PCam_V1.0.6.3_SN9C2
808S# chmod u+x fw_update
root@sa3-HP-ProBook-6455b:/home/sa3/Desktop/Chromebook_Linux_PCam_V1.0.6.3_SN9C2
808S# ls
Device_Config.ini  fw_update  SerialNumber.txt  SN9C2820S_Firmware.bin
root@sa3-HP-ProBook-6455b:/home/sa3/Desktop/Chromebook_Linux_PCam_V1.0.6.3_SN9C2
808S#
```

4. Switch user account permissions

```
sa3@sa3-HP-ProBook-6455b:~/Desktop/Chromebook_Linux_PCam_V1.0.6.3_SN9C2808S$ sud
o su
[sudo] password for sa3:
root@sa3-HP-ProBook-6455b:/home/sa3/Desktop/Chromebook_Linux_PCam_V1.0.6.3_SN9C2
808S#
```

FW Update Result

```
Program : SONiX F/W Update Tool on Linux
Version : v1.0.6.3
Date    : 2020-6-17 2:55:32
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Prepare : enumerate webcam ...
Prepare : select webcam #0 ...
[Progress] Cam_Select OK!

---------Device Info---------
VendorID:0x0c45
ProductID:0x672f
bcdDevice:0x601
---------End Of Device Info---------

[Progress] Setup FW file OK!

Source : 256K from FILE                    - SN9C2808S_OV5693_MIPI_All_
0601.bin
[Progress] Sensor Initial Time = 3000 (ms)
[Progress] Burn to FLASH
Start the burning process ...
Step 0 : INIT ---------------> Pass!
[Progress] Run Set_Serial_Number_Rework
[Progress] Erase Delay Time = 1500 (ms)
Step 1 : ERASE --------------> Pass!
Step 2 : CHECK --------------> Pass!
Step 3 : PROGRAM ------------> Pass!
Step 4 : VERIFY -------------> Pass!
Step 5 : END PROCESS --------> Pass!
[Progress] Burn to Flash Success!
Exit program!
```

```
==============Help Description==============

COMMAND: ./fw_update [options1]
     or: ./fw_update [options2] [argv1] [argv2]

NAME:    SONiX F/W Update Tool on Linux.

DESCRIPTION:
    Setting device info in Device_Config.ini first and using the follo
wing command to process the device.

OPTIONS1:
    -1                Burn 64k single file.
    -2                Burn 128k single file.
    -3                Burn 256k single file.
    -h, --help        print help information
    -v                print application version
    --getbcd          Get device information.(bcdDevice, iManufacturer
, iSerialNumber)
    --getver          Get device firmware version.
    --usb-info        print all devices information

OPTIONS2:
    --getAddr=<str>   Get device value from address.
    --setAddr=<str>   Change device's address value.
    --dump=<str>      Save F/W data from device to file.

Arg1:    Device address(Hex value) or flash size of burn file
Arg2:    File name
```