

How to use JMS578 Firmware updater under HC1/HC2

Revision history of Firmware

#	DATE	F/W Base	Release F/W version	The F/W release note	Issues
0	-	-	vo.1.0.5	Initial release for Hardkernel	1. Can not control the HDD spin-down time
1	2017.11.1	-	-	-	2. The issue number 1 fixed by released jms578fwupdater utility 3. SAT(SCSI ATA Translation) not supported
2	2017.12.5	JMS578 Standard F/W	v173.01.00.01	Support SAT command	4. The issue number 3 update to support SAT command (#fstrim command support as well) 5. Not support TRIM command with some SDD
3	2019.3.7	v173.01.00.01	v173.01.00.02	1. Fix TRIM command 2. Support ATA command set - 4(ACS-4) Specification	

Revision history of update tool(JMS578FwUpdate)

#	DATE	Reference	Release number	Description
1	-	-	1.00	Initial release.
2	2018.3.30		2.00	Add update device with enable/disable SATA hot plug function.

Parameter definition

- b - Backup file
- d - Device path
- f - Firmware file
- nNV - Update without NVRAM. This parameter priority over than "-t"
- t - Auto spin-down timer. (Unit: minute)
- v - Show the software version or the bridge version
- u - Enable/Disable SATA Hot-swap function. (Applied Release number 2.00 of JMS578FwUpdate tool)

How to use

Download JMS578 F/W updater and upload it to your HC1, HC2 and USB3.0 to SATA Bridge Board Plus.

jms578fwupdater.tgz

```
root@odroid:~# ls
jms578fwupdater.tgz
root@odroid:~# tar xzf jms578fwupdater.tgz
root@odroid:~# ls -l
total 308
drwxr-xr-x 2 root root 4096 Nov 1 05:34 jms578fwupdater
-rw-r--r-- 1 root root 309402 Nov 1 05:35 jms578fwupdater.tgz
root@odroid:~# cd jms578fwupdater
root@odroid:~/jms578fwupdater# ls -l
total 4700
-rwxr-xr-x 1 root root 4130828 Apr 19 2018 JMS578FwUpdate
-rwxr-xr-x 1 root root 519032 Nov 1 2017 JMS578FwUpdate.v1.00
-rwxr-xr-x 1 root root 50688 Mar 7 09:33 JMS578-Hardkernel-Release-
v173.01.00.02-20190306.bin
-rw-r--r-- 1 root root 50688 Dec 5 2017
JMS578_Hardkernel_v173.01.00.01.bin
-rwxr-xr-x 1 root root 50688 Nov 1 2017 JMS578-v0.1.0.5.bin
root@odroid:~/jms578fwupdater#
```

Note: Please make sure that the device path is correct.

- * **Cold-boot (Power cycling HC1/HC2) is required after firmware/parameter changes.**
- * **No Processing without HDD or SSD under HC1/HC2.**

Example 1. shows version information of software

```
root@odroid:~# ./JMS578FwUpdate -v
JMicron Firmware Update Tool v0.0.0.2
Copyright (C) 2018 JMicron Corp.

root@odroid:~#
```

Example 2. Update device

If the device is updated from internal code, the tool does not backup the old firmware and a CAUTION statement is displayed.

There's no way updated from internal code in this case.

Note: This step needs root permission.

```
root@odroid:~# ./JMS578FwUpdate -d /dev/sda -f ./JMS578-Hardkenel-Release-
v173.01.00.02-20190306.bin -b ./backup.bin
Update Firmware file name: ./JMS578-Hardkenel-Release-
v173.01.00.02-20190306.bin
Backup Firmware file name: ./backup.bin
Backup the ROM code sucessfully.
Programming & Compare Success!!

root@odroid:~#
```

Example 3. Update device without NVRAM

Note: This step needs root permission.

```
root@odroid:~# ./JMS578FwUpdate -d /dev/sda -f ./JMS578-Hardkenel-Release-
v173.01.00.02-20190306.bin -b ./backup.bin -nNV
Update Firmware file name: ./JMS578-Hardkenel-Release-
v173.01.00.02-20190306.bin
Backup Firmware file name: ./backup.bin
CAUTION: Update firmware without NVRAM.
Backup the ROM code successfully.
Programming & Compare Success!!

root@odroid:~#
```

Example 4 - Update device with setting spin-down timer

Please note that the parameter "-t" can't work with "-nNV".

Spin-down timer is disabled when the parameter "-t" is set to 0 (zero).

Note: This step needs root permission.

Auto Spin-Down time parameter 1 and 2
(1 and 2 minute) is not working.
The minimum is default time 3 (3
minute)

```
root@odroid:~# ./JMS578FwUpdate -d /dev/sda -f ./JMS578-Hardkenel-Release-
v173.01.00.02-20190306.bin -b ./backup.bin -t 5
Update Firmware file name: ./JMS578-Hardkenel-Release-
v173.01.00.02-20190306.bin
Backup Firmware file name: ./backup.bin
Auto spin-down timer: 5 min.
```

```
Backup the ROM code successfully.  
Programming & Compare Success!!
```

```
root@odroid:~#
```

Example 5 - Update device with enable/disable SATA hot plug function

Please note that the parameter “-u” can't work with “-nNV”.

Enable SATA hot plug enable when the parameter “-u” is set to 0(zero), disabled when it is set to 1.

Note: This step needs root permission.

```
root@odroid:~# ./JMS578FwUpdate -d /dev/sda -f ./JMS578-Hardkernel-Release-  
v173.01.00.02-20190306.bin -b ./backup.bin -u  
Update Firmware file name: ./JMS578-Hardkernel-Release-  
v173.01.00.02-20190306.bin  
Backup Firmware file name: ./backup.bin  
Disable USB attachment first.  
Backup the ROM code successfully.  
Programming & Compare Success!!
```

```
root@odroid:~#
```

If you want to remove your HDD using hot-swap feature, We recommend trying the command before you do that.

```
root@odroid:~# hdpram -y /dev/sda  
root@odroid:~# echo 1 > /sys/class/block/sda/device/delete
```

Example 6 - Show version information of bridge chip firmware

Note: This step needs root permission.

```
root@odroid:~# ./JMS578FwUpdate -d /dev/sda -v  
Bridge Firmware Version: v173.1.0.2
```

```
root@odroid:~#
```

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