Developers

(/)

ARTIK 0 ARTIK 5/7/10

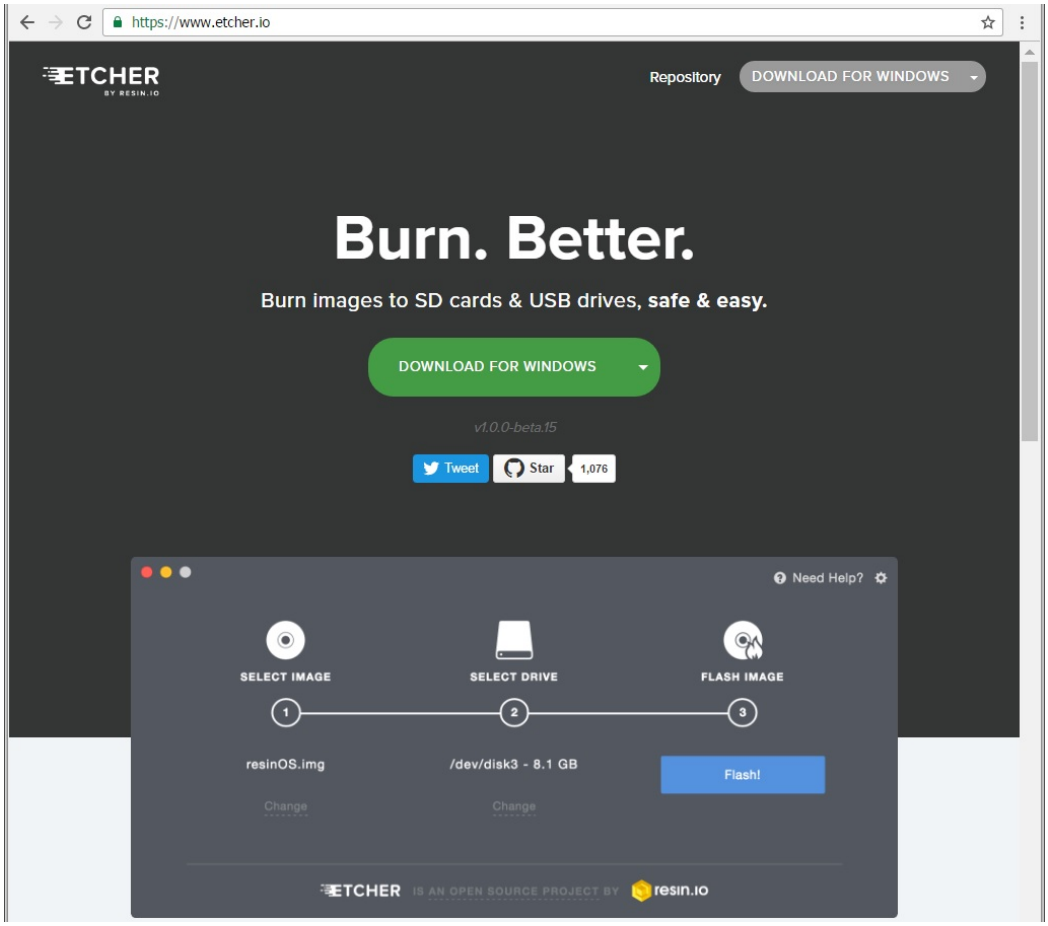
Full ARTIK Image Update

This procedure makes use of a microSD card and the boot switches to put the ARTIK module in a mode where it can update the module image.

Prepare for Update

Not sure whether you have the latest image? Enter:
`cat /etc/artik_release`
to check the release date of the image currently installed on your ARTIK board.

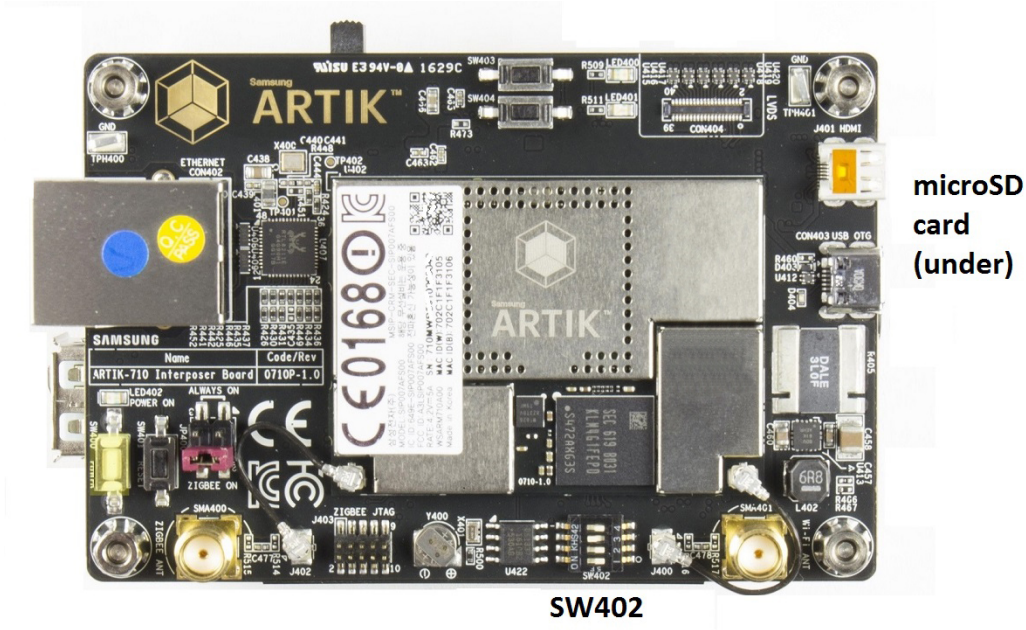
1. Look through the archive of ARTIK image (https://developer.artik.io/documentation/downloads.html#firmware) files for your platform, and download the latest if it's newer than yours.
2. Locate a microSD card writer/reader. Your PC may have a built-in reader, but you will likely need a microSD adapter that plugs into the USB slot in order to both read from and also write to the microSD card.
3. Go to Etcher (https://www.etcher.io/) to download the appropriate image writing program for your OS. Install it per their instructions.



4. Locate the boot load source switches on your board.

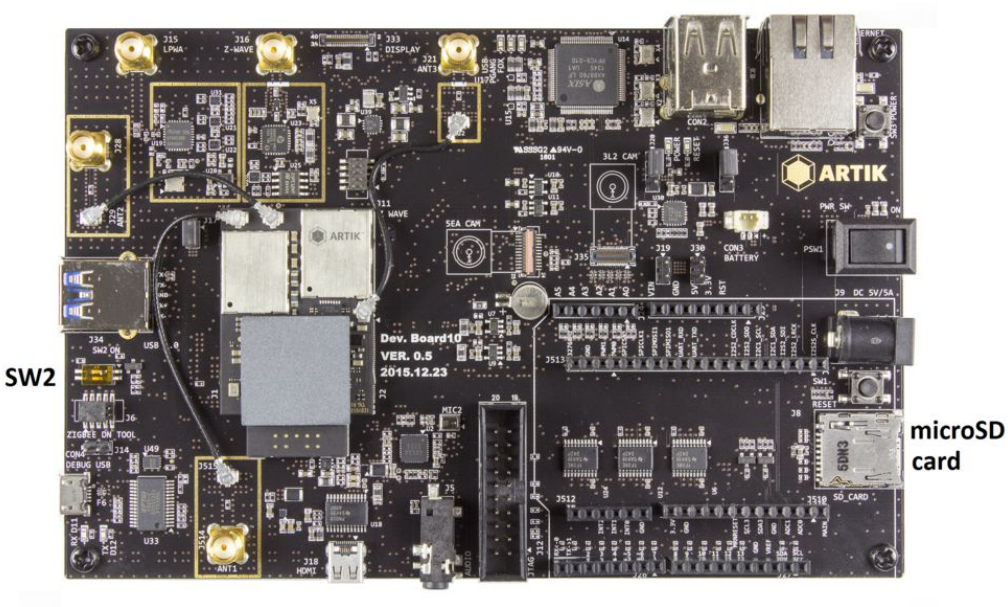
ARTIK 530/710

- **SW402-4** switch must be OFF for normal boot and ON for booting from the SD card. Other switches remain OFF. (Exception: For early board ver 0.5 as shown here, leave SW402-3 ON at all times.)



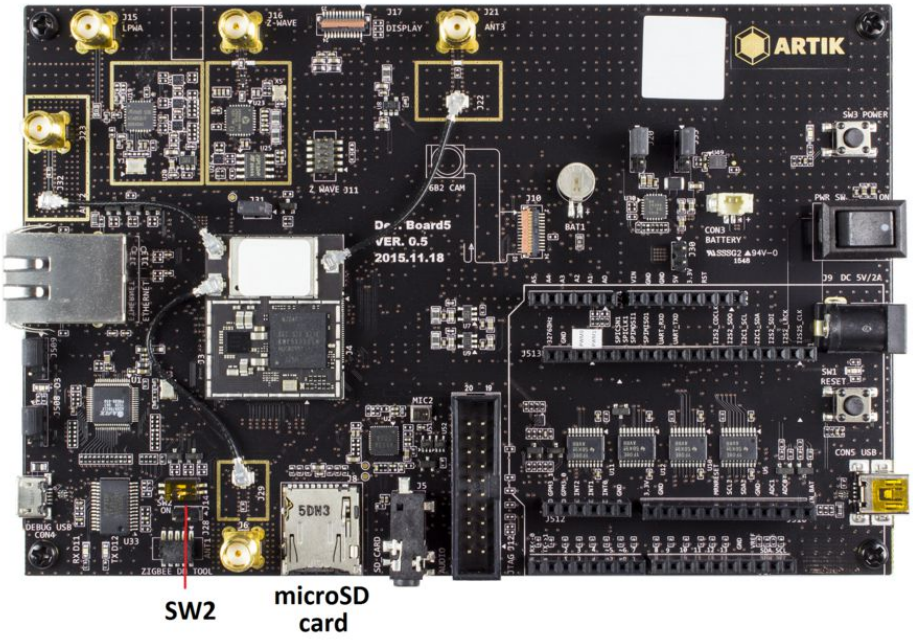
ARTIK 520 rev. 0.5

- **SW2** switches (both) must be OFF for normal boot ("eMMC") and ON for booting from the SD card. (For early boards ver 3.x not shown here, ignore the board markings for ON; refer only to the marking on the switch itself.)



ARTIK 1020 rev. 0.5

- **SW2** switches work the same as for ARTIK 520 (above).

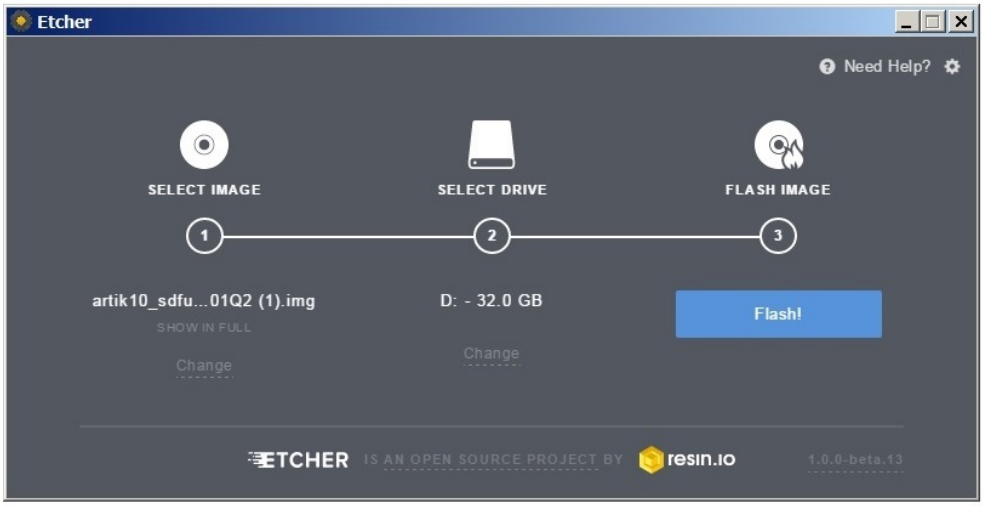


Windows® or OS X® using Etcher®

1. Insert a microSD card into the SD card writer, and plug the writer into your PC.

2. Run Etcher to write the image to the microSD card.

   - Select the drive in which the microSD card is inserted.
   - Choose ARTIK image to be downloaded.
   - Write the image to the microSD card.



3. Boot ARTIK from the microSD card.

   a. Start with the ARTIK board powered off. 2.
   b. Remove the microSD card from the writer and insert it into the ARTIK developer board microSD slot.
   c. Set the boot selector switches for **microSD** boot as noted above:
      - SW2-1 and SW2-2 **ON** for the production ARTIK 520 and ARTIK 1020 boards
      - SW402-4 **ON** for the ARTIK 530/710 board.
   d. [Power on the board (/documentation/artik/getting-started/powering-up.html)](/documentation/artik/getting-started/powering-up.html) and press the power button for 1 second. If the board boots from microSD card, you should see the message

```
Checking Boot Mode ... SDMMC
```

```
U-Boot 2012.07-g5a5dd69-dirty (Jul 04 2015 - 23:52:16) for SHIRI

CPU: Exynos3250 [Samsung SOC on SMP Platform Base on ARM CortexA9]
APLL = 700MHz, MPLL = 800MHz

Board: ESPRESSO3250
DRAM:  511 MiB
WARNING: Caches not enabled

TrustZone Enabled BSP
BL1 version: 20140203

Checking Boot Mode ... SDMMC
MMC:   S5P_MSHC2: 0, S5P_MSHC0: 1
MMC Device 0: 14.6 GiB
MMC Device 1: 3.6 GiB
MMC Device 2: MMC Device 2 not found
*** Warning - bad CRC, using default environment

In:    serial
Out:   serial
Err:   serial
rst_stat : 0x10000
Net:   No ethernet found.
Hit any key to stop autoboot:  0
eMMC OPEN Success.!!
```

e. When the board completes update, a message suggests rebooting from eMMC.

```
[    1.610794] [c6] ion_cma ion_sectbl: Alread isolated!
[    1.615834] [c6] ion_cma ion_mfc_fw: Alread isolated!
[    1.620843] [c6] ion_cma ion_mfc_nfw: Alread isolated!
Loading, please wait...
Do recovery
[    1.822656] [c0] dwmmc_exynos 12220000.dwmmc2: data CRC error READ
Please wait until the fusing has been finished
 304MiB 0:00:28 [10.5MiB/s] [================================>] 100%
Fusing is done.
Please turn off the board and convert to eMMC boot mode


BusyBox v1.24.0 (2015-11-03 11:04:55 KST) built-in shell (ash)

sh: can't access tty; job control turned off
#
```

4. Reboot ARTIK from persistent memory.

   a. Turn off the board and **remove** the microSD card.

   b. Set the boot select switches for **normal** boot as discussed above (turn **OFF** the switches you set ON above).

   c. [Power on the board (/documentation/artik/getting-started/powering-up.html)](/documentation/artik/getting-started/powering-up.html) and press the power button for 1 second. You should see normal boot messages followed by a login prompt.

   d. Check the `/etc/artik_release` file to verify the correct update revision.

OS X using Terminal App

1. Download the [ARTIK image (https://developer.artik.io/documentation/downloads.html#firmware)](https://developer.artik.io/documentation/downloads.html#firmware) you plan to use.

2. Insert a microSD card into the SD card writer, and plug the writer into your PC.

3. Open the Terminal app.

4. Use this command and make a note of the disk number of the SD card, for example, "disk2".

```
diskutil list
```

5. You will additionally need to use the following command, but only if you have not used this SD card for ARTIK images before.

```
diskutil unmountDisk /dev/disk2
```

6. Using the disk number you noted above, enter the command:

```
sudo dd if=[image file name] of=/dev/rdisk[your disk] bs=1m
```

Note that it is "rdisk", not "disk".

Example: `sudo dd if=artik10_sdfuse.img of=/dev/rdisk2 bs=1m`

WARNING Be sure to specify the correct disk number. Accidentally specifying your boot disk can overwrite your operating system.

Continue from **Step 3** of the Etcher procedure.

Last updated on: Aug 28 2017, 2:42 PM