

1、TIInit_11.8.32.bts 更新後

```
atmark@atde7:~/software/bluez550_install$ ls -l /lib/firmware/ti-connectivity/
total 4560
-rw-r--r-- 1 root root 75723 Jul 3 10:45 TIInit_11.8.32.bts
-rw-r--r-- 1 root root 73655 Jul 3 10:44 TIInit_11.8.32.bts.org
-rw-r--r-- 1 root root 48909 Jun 25 2019 TIInit_7.2.31.bts
-rw-r--r-- 1 root root 194180 Jun 25 2019 wl1251-fw.bin
-rw-r--r-- 1 root root 752 Jun 25 2019 wl1251-nvs.bin
lrwxrwxrwx 1 root root 14 Jun 25 2019 wl1271-nvs.bin -> wl127x-nvs.bin
-rw-r--r-- 1 root root 354600 Jun 25 2019 wl127x-fw-5-mr.bin
-rw-r--r-- 1 root root 352588 Jun 25 2019 wl127x-fw-5-plt.bin
-rw-r--r-- 1 root root 370996 Jun 25 2019 wl127x-fw-5-sr.bin
-rw-r--r-- 1 root root 912 Jun 25 2019 wl127x-nvs.bin
-rw-r--r-- 1 root root 359140 Jun 25 2019 wl128x-fw-5-mr.bin
-rw-r--r-- 1 root root 360452 Jun 25 2019 wl128x-fw-5-plt.bin
-rw-r--r-- 1 root root 378988 Jun 25 2019 wl128x-fw-5-sr.bin
-rw-r--r-- 1 root root 1113 Jun 25 2019 wl128x-nvs.bin
lrwxrwxrwx 1 root root 14 Jun 25 2019 wl12xx-nvs.bin -> wl127x-nvs.bin
-rw-r--r-- 1 root root 1221 Jun 25 2019 wl18xx-conf.bin
-rw-r--r-- 1 root root 639276 Jun 25 2019 wl18xx-fw-2.bin
-rw-r--r-- 1 root root 673328 Jun 25 2019 wl18xx-fw-3.bin
-rw-r--r-- 1 root root 745228 Jun 25 2019 wl18xx-fw-4.bin
atmark@atde7:~/software/bluez550_install$
```

2、カーネルビルド

```
OBJCOPY arch/arm/boot/Image
Kernel: arch/arm/boot/Image is ready
LDS arch/arm/boot/compressed/vmlinux.lds
AS arch/arm/boot/compressed/head.o
LZO arch/arm/boot/compressed/piggy_data
AS arch/arm/boot/compressed/piggy.o
CC arch/arm/boot/compressed/misc.o
CC arch/arm/boot/compressed/decompress.o
CC arch/arm/boot/compressed/string.o
SHIPPED arch/arm/boot/compressed/hyp-stub.S
AS arch/arm/boot/compressed/hyp-stub.o
SHIPPED arch/arm/boot/compressed/lib1funcs.S
AS arch/arm/boot/compressed/lib1funcs.o
SHIPPED arch/arm/boot/compressed/ashldi3.S
AS arch/arm/boot/compressed/ashldi3.o
SHIPPED arch/arm/boot/compressed/bswapsdi2.S
AS arch/arm/boot/compressed/bswapsdi2.o
LD arch/arm/boot/compressed/vmlinux
OBJCOPY arch/arm/boot/zImage
Kernel: arch/arm/boot/zImage is ready
```

3、dtb ファイル生成

```
DTC      arch/arm/boot/dts/armadillo_iotg_g3.dtb
DTC      arch/arm/boot/dts/armadillo_iotg_g3_m1.dtb
DTC      arch/arm/boot/dts/armadillo_iotg_g3_w2.dtb
DTC      arch/arm/boot/dts/armadillo_x1.dtb
DTC      arch/arm/boot/dts/armadillo_x1-fec1.dtb
DTC      arch/arm/boot/dts/armadillo_x1-usb0tg2.dtb
DTC      arch/arm/boot/dts/armadillo_x1-i2c1_lm75b.dtb
DTC      arch/arm/boot/dts/armadillo_x1-ecspi4_mcp3202.dtb
DTC      arch/arm/boot/dts/armadillo_iotg_g3l.dtb
DTC      arch/arm/boot/dts/armadillo_x1-extboard-eva01-usbhost.dtb
DTC      arch/arm/boot/dts/armadillo_x1-extboard-eva01-usbdevice.dtb
DTC      arch/arm/boot/dts/x1-minimal.dtb
```

4、uImage 生成

```
KSYM      .tmp_kallsyms2.o
LD         vmlinux
SORTTEXT  vmlinux
SYSMAP     System.map
OBJCOPY    arch/arm/boot/Image
Kernel:   arch/arm/boot/Image is ready
LZ0        arch/arm/boot/compressed/piggy_data
AS         arch/arm/boot/compressed/piggy.o
LD         arch/arm/boot/compressed/vmlinux
OBJCOPY    arch/arm/boot/zImage
Kernel:   arch/arm/boot/zImage is ready
UIMAGE     arch/arm/boot/uImage
Image Name: Linux-4.9.133-at15
Created:    Fri Jul  3 11:13:35 2020
Image Type: ARM Linux Kernel Image (uncompressed)
Data Size:  11768536 Bytes = 11492.71 kB = 11.22 MB
Load Address: 80008000
Entry Point: 80008000
Kernel:   arch/arm/boot/uImage is ready
```

```
atmark@atde7:~/software/kernel/linux-4.9-x1-at15$ ls -l arch/arm/boot/uImage arch/arm/boot/dts/armadillo_iotg_g3l.dtb
-rw-r--r-- 1 atmark atmark 51606 Jul  3 11:12 arch/arm/boot/dts/armadillo_iotg_g3l.dtb
-rw-r--r-- 1 atmark atmark 11768600 Jul  3 11:13 arch/arm/boot/uImage
atmark@atde7:~/software/kernel/linux-4.9-x1-at15$
```

5、ゲートウェイカーネル更新

```
root@armadillo:~# mount -t vfat /dev/mmcblk2p1 /mnt
root@armadillo:~# ls -l /mnt
total 11546
-rwxr-xr-x 1 root root    51606 Jul  3 12:42 armadillo_iotg_g3l.dtb
-rwxr-xr-x 1 root root 11768600 Jul  3 12:42 uImage
root@armadillo:~# █
```

6、BLE 起動 log

```
Jul  3 12:55:28 armadillo kernel: IPv6: ADDRCONF(NETDEV_UP): wlan0: link is not ready
Jul  3 12:55:29 armadillo kernel: (stk) :response timeout/signaled during fw download
Jul  3 12:55:29 armadillo kernel: (stk) :download firmware failed
Jul  3 12:55:29 armadillo NetworkManager[903]: <info> [1593752129.1401] device (usb)
Jul  3 12:55:29 armadillo NetworkManager[903]: <info> [1593752129.1464] device (usb)
Jul  3 12:55:29 armadillo kernel: (stk) :ldisc_install = 0
Jul  3 12:55:29 armadillo kernel: (stc): st_tty_close
Jul  3 12:55:29 armadillo kernel: Bluetooth: st_register failed -22
```