



Declaration of Product Modifications

Nov. 22, 2017

This is to request a Class II permissive change for FCC ID: WL6GWS-CSCG, originally granted on 06/13/2017.

The major change filed under this application is:

Change #1:

Add load switch to turn on/off power of UBLOX M8C GNSS module. A GPIO is to control the load switch.

Change #2:

GPS: To unpopulated the unused GPS level shifter (U2B2).

Change #3:

Add boost after charger to stabilize system power while battery going low.

Change #4:

Remove redundant 0R resistors (keep those for RF tuning, stuff option, and VR output)

Change #5:

Remove C2C16 and C2C15 100uF large capacitor since boost is added.

Change #6:

Remove USB switch (SoFIA - MCU) and rout MCU USB to charger connector.

Change #7:

Change OTG 5V boost from TPS61170 to TPS61236 to fix voltage ripple issue.

Change #8:

Use Telink MCU A1 sample. (DVT is using A0)

Change #9:

At pull-up 3.3V add a resistor R2E1 (165K), C1E4 (47pF) on I2C1 to tune the frequency and slew rate.

Change #10:

Add 2 MOSFETs between OLED and 12V boost to fix OLED residual issue.

Change #11:

Change Zigbee and Wifi antenna from PCB antenna to Chip Antenna

1. Original antenna: JEM IAHA20170411 (Zigbee), IAH20170410 (Wifi & GPS) PIFA antenna.
2. New antenna: Walsin RGFR1903041A1T chip antenna

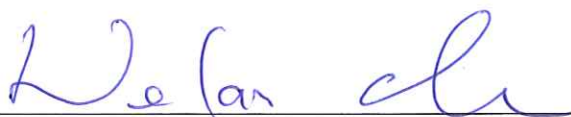
Schematic & Layout change: remove IPEX connector and change antenna to chip/SMT type.

Change #12:

Change GNSS antenna to active patch antenna

1. Original antenna: IAH20170410 (Wifi &GPS) PIFA antenna.
2. New antenna: INPAQ customized active antenna (patch antenna + LNA + co-axial cable), P/N: TBD
3. Schematic & Layout change: remove LNA on PCB and add 3V LDO for active antenna. Antenna will be installed on top of device.
4. Chassis is increase for patch antenna.

Sincerely,



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