

## **Appendix for AW-AM510 User Manual**

### **FCC ID=TLZ-AM510 / IC ID=6100A-AM510**

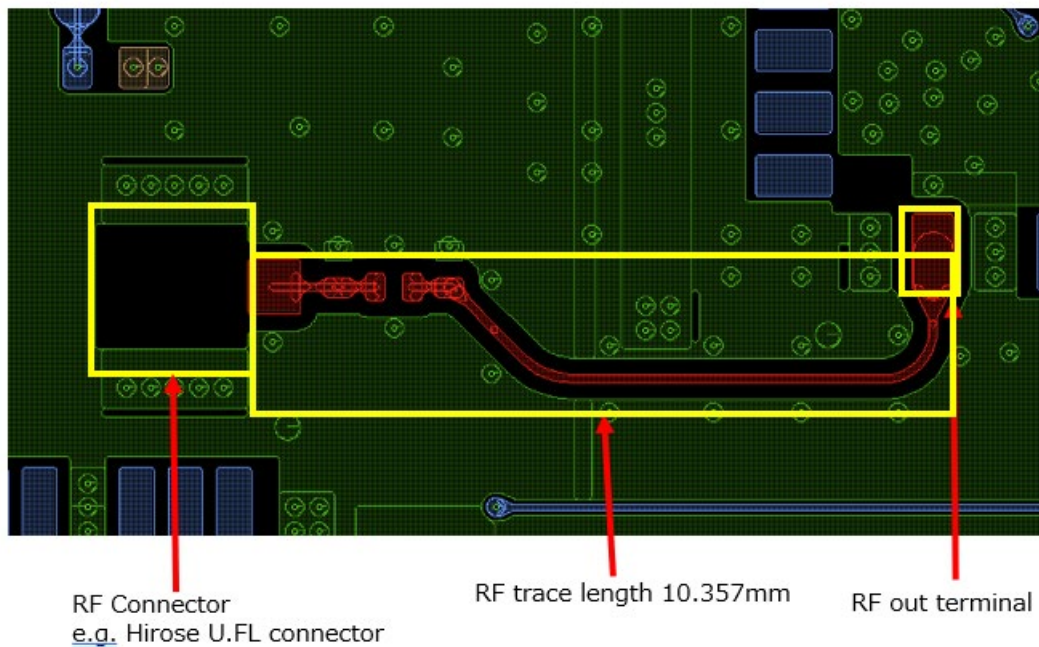
This appendix is referred when the following antennas are used.  
Do not modify the antenna or any other part of the module. Any modifications will invalidate the modular certifications and require new approvals for the host system.

| Model No. | Antenna Type | Antenna Gain                 |
|-----------|--------------|------------------------------|
| IW416-D   | Dipole       | 1.41dBi (max), -2.64dBi(min) |
| IW416-G   | Dipole       | 1.13dBi (max), -2.83dBi(min) |

Professional Installation is required to disable 2.4GHz band(Bluetooth, WLAN) and to use 5GHz band for receiving only.

#### **[Trace antenna designs]**

- RF trace design



RF trace between RF out terminal and RF connector is designed with a 50-ohm line.

- Antenna

Please refer to the antenna datasheet.

- 1) It is a same type as the antenna type of antenna specifications.
- 2) An antenna gain is lower than a gain given in antenna specifications.
- 3) The emission level is not getting worse.

- Connector

Hirose U.FL series or equivalent.

Fine tuning of return loss etc. can be performed using a matching network.

However, it is required to check "Class1 change" and "Class2 change" which the authorities define then.

### **[RF exposure considerations]**

The following statements must be described on the user manual of the host device of this module;

[for FCC]

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines. This equipment should be installed and operated keeping the radiator at least 20cm or more away from person's body.

[for ISED]

This equipment complies with ISED radiation exposure limits set forth for an uncontrolled environment and meets RSS-102 of the ISED radio frequency (RF) Exposure rules. This unit should be installed and operated keeping the radiator at least 20 cm or more away from person's body.

Cet équipement est conforme aux limites d'exposition aux rayonnements énoncées pour un environnement non contrôlé et respecte les règles d'exposition aux fréquences radioélectriques (RF) CNR-102 de l'ISDE. Cet équipement doit être installé et utilisé en gardant une distance de 20 cm ou plus entre le radiateur et le corps humain.

### **[Label and compliance information]**

The following information must be indicated on the host device of this module.

|                            |
|----------------------------|
| Contains FCC ID: TLZ-AM510 |
|----------------------------|

|                          |
|--------------------------|
| Contains IC: 6100A-AM510 |
|--------------------------|

|                                                                                                                                                                                                                                                                                     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

The following information must be indicated in a manual of the host device.

[for FCC]

For 5GHz band

Compliance with FCC requirement 15.407(c)

Data transmission is always initiated by software, which is then passed down through the MAC, through the digital and analog baseband, and finally to the RF chip. Several special packets are initiated by the MAC. These are the only ways the digital baseband portion will turn on the RF transmitter, which it then turns off at the end of the packet. Therefore, the transmitter will be on only while one of the aforementioned packets is being transmitted. In other words, this device automatically discontinues transmission in case of either absence of information to transmit or operational failure.

Frequency Tolerance : +/- 20 ppm

[for ISED]

W52/W53 for indoor use only

W52/W53 Pour usage intérieur seulement

Data transmission is always initiated by software, which is then passed down through the MAC, through the digital and analog baseband, and finally to the RF chip. Several special packets are initiated by the MAC. These are the only ways the digital baseband portion will turn on the RF transmitter, which it then turns off at the end of the packet. Therefore, the transmitter will be on only while one of the aforementioned packets is being transmitted. In other words, this device automatically discontinues transmission in case of either absence of information to transmit or operational failure.

La transmission des données est toujours initiée par le logiciel, puis les données sont transmises par l'intermédiaire du MAC, par la bande de base numérique et analogique et, enfin, à la puce RF. Plusieurs paquets spéciaux sont initiés par le MAC. Ce sont les seuls moyens pour qu'une partie de la bande de base numérique active l'émetteur RF, puis désactive celui-ci à la fin du paquet. En conséquence, l'émetteur reste uniquement activé lors de la transmission d'un des paquets susmentionnés. En d'autres termes, ce dispositif interrompt automatiquement toute transmission en cas d'absence d'information à transmettre ou de défaillance.

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

- (1) This device may not cause interference.
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

1. L'appareil ne doit pas produire de brouillage;
2. L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.