

User Manual

1.0 This is a user manual for host product manufacturers to use when integrating the module in a host product.

For the details about this module, please refer to the specification sheet of module.

This module should be installed in the host device according to the interface specification (installation procedure).

[2.1 General]

This user manual describes the integration procedure per Sec. 2.2 to 2.12 of KDB 996369 D03.

This is Limited modular approval as this module is limited to installation by the grantee into our host systems.

[2.2 List of applicable FCC rules]

This device complies with below part 15 of the FCC Rules.

Part 15 Subpart C Part 15 Subpart E

[2.3 Summarize the specific operational use conditions]

This module is designed for mounting inside of the end product by us professionally.

Bluetooth classic/BLE must be disabled on the host.

Disable Bluetooth/BLE: Do not use the Bluetooth/BLE driver without loading it.

[for ISED]

for indoor use only (5150-5350 MHz)

Pour usage intérieur seulement (5150-5350 MHz)

[2.4 Limited module procedures]

This is Limited modular approval as this module is limited to installation by the grantee into our host systems.

This is a Bluetooth enabled module, but because Bluetooth is disabled on its own host, it has not been evaluated for Bluetooth and therefore does not meet standalone requirements and becomes an LMA.

[2.5 Trace antenna designs] - Not applicable

[2.6 RF exposure considerations]

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

This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

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 equipment should be installed and operated keeping the radiator at least 20cm 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.

[2.7 Antennas]

The device is designed to use the module's antennas. 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 |
|-------------------------------------|--------------|--------------|
| Dualband module antenna(WLAN AntA) | Monopole | 1.15dBi |
| Dualband module antenna (WLAN AntB) | Monopole | 1.59dBi |

| Band | Ant A | |
|--------|------------|-----------------|
| | Freq [MHz] | Peak Gain [dBi] |
| 2.4GHz | 2490 | -0.75 |
| W52 | 5210 | 0.67 |
| W53 | 5320 | 0.85 |
| W56 | 5560 | 0.97 |
| W58 | 5850 | 1.15 |

| Band | Ant B | |
|--------|------------|-----------------|
| | Freq [MHz] | Peak Gain [dBi] |
| 2.4GHz | 2436 | -0.26 |
| W52 | 5240 | 0.91 |
| W53 | 5320 | 1.50 |
| W56 | 5640 | 1.59 |
| W58 | 5770 | 1.50 |

[2.8 Label and compliance information]

[for FCC]

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

Contains Transmitter Module FCC ID: AZDFM3L998

Contains FCC ID: AZDFM3L998

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.

*If it is difficult to describe this statement on the host device due to the size, please describe in the user's manual and also either describe on the device packaging or on a removable label attached to the device.

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

FCC CAUTION

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

[for ISED]

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

Contains IC: 498D-FM3L998

[2.9 Information on test modes and additional testing requirements]

Test modes should take into consideration different operational conditions for a stand-alone modular transmitter in a host, as well as for multiple simultaneously transmitting modules or other transmitters in a host product.

[2.10 Additional testing, Part 15 Subpart B disclaimer]

The modular transmitter is only FCC authorized for the specific rule parts (i.e., FCC transmitter rules) listed on the grant (FCC Part 15.247/15.407), and the host product manufacturer is responsible for compliance to any other FCC rules that apply to the host not covered by the modular transmitter grant of certification.

The final host product still requires Part 15 Subpart B compliance testing with the modular transmitter installed.

[2.11 Note EMI Considerations]

We recommend to use "best practice" RF design engineering testing and evaluation in case non-linear interactions generate additional non-compliant limits due to module placement to host components or properties.

The host manufacturer is responsible for ensuring compliance with the applicable FCC rules for the transmitters operating individually and simultaneously. This includes compliance for the summation of all emissions from all outputs occupying the same or overlapping frequency ranges, as defined by the applicable rules.

[2.12 How to make changes]

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