BioIntelliSense, Inc

FCC ID: 2ASE7-BIOHB02CTM10

- **GENERAL PRODUCT DESCRIPTION**

The ME910G1-WW module is a CATM communication product that allows integrators to plan availability for lifecycle applications, highly recommended for new designs specified for worldwide coverage.

- **Product Frequency Band**

Product	HW Rev	2G Band (MHz)	LTE CATM1	NBIoT	CS Voice VoLTE	External Antenna Tuner Support	Region
ME910G1-WW	0.0	850, 900, 1800, 1900	B1, B2, B3, B4, B5, B8, B12, B13, B18, B19, B20, B25, B26, B27, B28, B66, B85, B8_39d*	B1, B2, B3, B4, B5, B8, B12, B13, B18, B19, B20, B25, B26, B28, B66, B71, B85, B86*, B8_39d*	N	N	Worldwide
	1.0					Y	

- **TX Output Power**

Band	Mode	Class	RF power (dBm) Nominal*
850/900MHz	GSM/GPRS	4	32.5
	EGPRS	E2	27
1800/1900MHz	GSM/GPRS	1	29.5
	EGPRS	E2	26
B1, B2, B3, B4, B5, B8, B12, B13, B18, B19, B20, B25, B26, B27, B28, B66, B85, B8_39d	(LTE) CAT-M1	3	23

- **Mechanical Specifications Dimensions**

The overall dimensions of ME910G1-WW is:

The Dimension as blow :

L : (mm) 22.15mm

W : (mm) 0.1143mm

Thickness : (mm) 0.033mm

Impedance : 50ohm

- Temperature Range

Temperature Range		Note
Operating Temperature Range	-40°C to +85°C	The module is fully functional (*) and compliant according to regulatory standards.
Storage Temperature Range	-40°C to +105°C	The module is not powered and not connected to power supply

- **POWER SUPPLY**

The power supply circuit and board layout are an important part of the product design. Make sure to follow the guidelines and requirements for optimal performance

Power Supply Requirements The external power supply must be connected to VBATT and VBATT_PA pads and must fulfil the following requirements:

Power Supply	Value
Nominal Supply Voltage	3.8V
Operating Voltage Range	3.2 V - 4.2 V
Extended Voltange Range	2.6 V - 4.5 V
$VBATT_{min}$	2.7V

- Layout of trace design, parts, antenna, connectors, and isolation requirements.

Antenna information:

For WWAN						
Antenna No.	Band	Model	Freq. Range	Antenna Net Gain (dBi)	Antenna Type	Connector Type
1	WNC		GPRS (824-849MHz)	-1.22	PIFA	none(SMT ANT)
			GPRS (1850-1910 MHz)	2.06		
			Band 2 (1850-1910 MHz)	2.06		
			Band 4 (1710-1755 MHz)	2.2		

			Band 5 (824-849MHz)	-1.22		
			Band 12 (699-716 MHz)	-7.22		
			Band 13 (777-787n MHz)	-4.03		
			Band 25 (1850-1915 MHz)	2.06		
			Band 26 (814-849MHz)	0.10		
			Band 66 (1710-1780 MHz)	2.20		
			Band 85 (698-716 MHz)	-7.22		

Federal Communication Commission Interference Statement

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.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

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

Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

- **FCC 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, and that 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. If the grantee markets their product as being Part 15 Subpart B compliant (when it also contains unintentional-radiator digital circuity), then the grantee shall provide a notice stating that the final host product still requires Part 15 Subpart B compliance testing with the modular transmitter installed. The end product with an embedded module may also need to pass the FCC Part 15 unintentional emission testing requirements and be properly authorized per FCC Part 15.

This module is intended for OEM integrators only. Per FCC KDB 996369 D03 OEM Manual v01 guidance, the following conditions must be strictly followed when using this certified module:

KDB 996369 D03 OEM Manual v01 rule sections:

2.2 List of applicable FCC rules

This module has been tested for compliance to FCC Part 22, 24, 27, 90,

2.3 Summarize the specific operational use conditions

The module is tested for standalone mobile RF exposure use condition. Any other usage conditions such as co-location with other transmitter(s) or being used in a portable condition will need a separate reassessment through a class II permissive change application or new certification.

2.4 Limited module procedures

Not applicable.

2.5 RF exposure considerations

This equipment complies with FCC mobile radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm between the radiator & your body. If the module is installed in a portable host, a separate SAR evaluation is required to confirm compliance with relevant FCC portable RF exposure rules.

2.6 Antennas

The following antennas have been certified for use with this module; antennas of the same type with equal or lower gain may also be used with this module. The antenna must be installed such that 20 cm can be maintained between the antenna and users.

Antenna Type	PIFA
Antenna connector	none(SMT ANT)

2.7 Label and compliance information

The final end product must be labeled in a visible area with the following: “Contains FCC ID: **2ASE7-BIOHB02CTM10**”. The grantee's FCC ID can be used only when all FCC compliance requirements are met.

2.8 Information on test modes and additional testing requirements

This transmitter is tested in a standalone mobile RF exposure condition and any co-located or simultaneous transmission with other transmitter(s) or portable use will require a separate class II permissive change re-evaluation or new certification.

2.9 Additional testing, Part 15 Subpart B disclaimer

This transmitter module is tested as a subsystem and its certification does

not cover the FCC Part 15 Subpart B (unintentional radiator) rule requirement applicable to the final host. The final host will still need to be reassessed for compliance to this portion of rule requirements if applicable.

As long as all conditions above are met, further transmitter test will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirements required with this module installed.

IMPORTANT NOTE: In the event that these conditions can not be met (for example certain laptop configurations or co-location with another transmitter), then the FCC authorization is no longer considered valid and the FCC ID can not be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate FCC authorization.

Manual Information To the End User

The OEM integrator has to be aware not to provide information to the end user regarding how to install or remove this RF module in the user's manual of the end product which integrates this module.
The end user manual shall include all required regulatory information/warning as show in this manual.

OEM/Host manufacturer responsibilities

OEM/Host manufacturers are ultimately responsible for the compliance of the Host and Module. The final product must be reassessed against all the essential requirements of the FCC rule such as FCC Part 15 Subpart B before it can be placed on the US market. This includes reassessing the transmitter module for compliance with the Radio and EMF essential requirements of the FCC rules. This module must not be incorporated into any other device or system without retesting for compliance as multi-radio and combined equipment.