User Manual

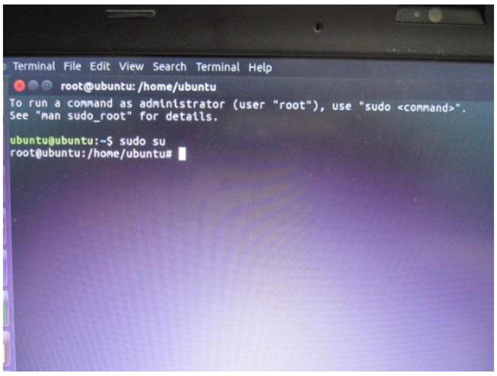
1. Introduction, Feature and Voltage

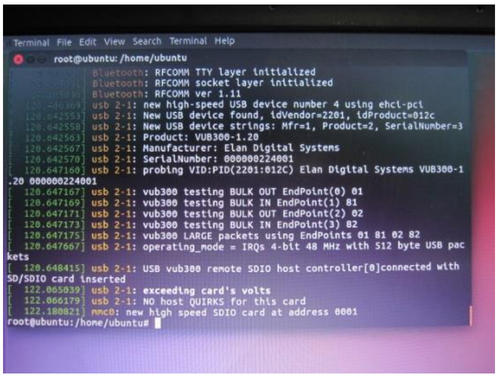
1. Introduction
   WM-BAC-MT-53 is 1x1 802.11a/b/g/n/ac dual-band Wi-Fi + BT 5.1 Module. The Wi-Fi subsystem contains 802.11a/b/g/n/ac MAC /Baseband /Radio. The Bluetooth subsystem contains Baseband/Radio/Link controller. The module is a small size module based on metal lid shielding package that provides full function of 802.11a/b/g/n/ac and Bluetooth 5.1 in a tiny module via 75 pins LGA footprint.
2. Feature
   1) Full IEEE 802.11a/b/g/n/ac compatibility with enhanced performance.
   2) Support dual-band WiFi 1T1R mode. Only 20M bandwidth in 2.4G band and 20/40/80M bandwidth in 5G band. IEEE 802.11 d/e/h/i/j/k/r/v/w support.
   3) Support BT5.1 with BLE2M, BLE long range and compatible BT4.2. Support 7 simultaneous active ACL connection and 16 BLE links.
   4) Frequency Band
      2.4 to 2.5GHz
      4.9 to 5.845GHz
   5) Operating Temperature
      -10°C to 70°C
   6) Relative Humidity range
      Less than 60% for Storage
      Less than 85% for Operation
3. The host via the power pins will provide power supply for the WM-BAC-MT-53 module.

Symbol	Parameter	Min	Typ.	Max	Unit
VDD33	3.3V supply voltage	2.97	3.3	3.63	V
VDD33_2	3.3V supply voltage	2.97	3.3	3.63	V
VDD18	1.8V supply voltage	1.7	1.8	1.9	V
DVDDIO_ANTSEL	1.8V supply voltage	1.7	1.8	1.9	V

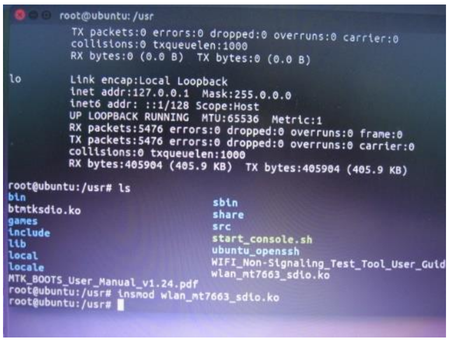
2. User Mode (WiFi)

1. Boot up PC or NB with the flash installed Linux OS.
2. 5V for EUT from the power supply.
3. Type “sudo su” on Terminal in Linux to get root authority. EUT could be controlled if “mmc0: new high speed SDIO card at address 0001” is shown after typing “dmesg.”

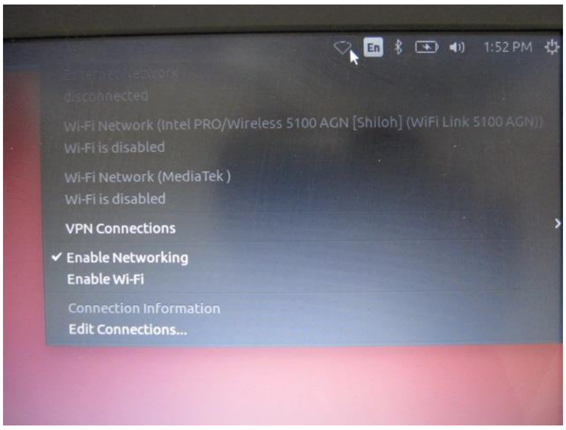




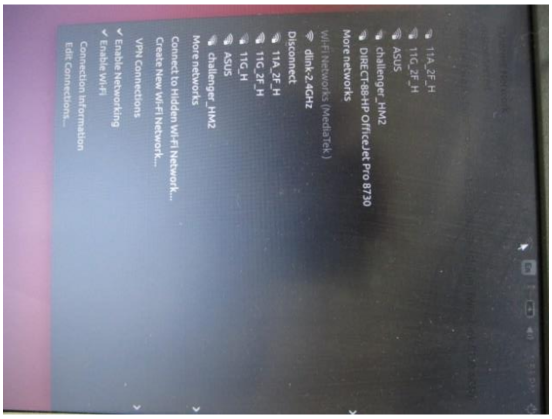
4. Type “cd /usr” and then “insmod wlan_mt7663_sdio.ko” to enable WiFi function of EUT.



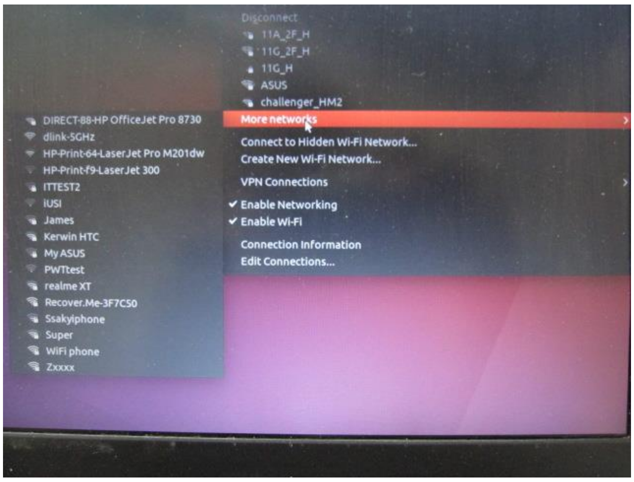
5. Link to AP with another PC or NB through Ethernet cable, open DHCP function in it and record the IP address.
6. Click WiFi icon on upper-right corner on Linux and disable WiFi.



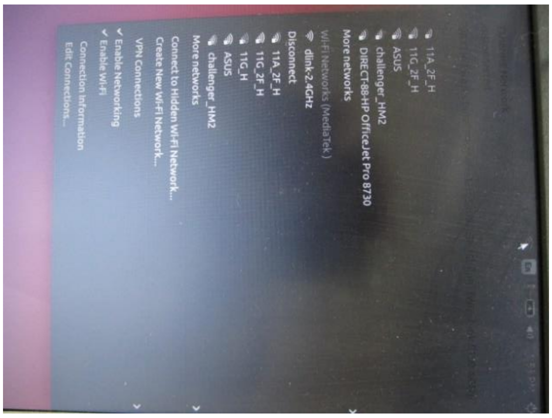
7. After disabling WiFi, then enable Wi-Fi, and Wi-Fi Networks (Intel….) and Wi-Fi Networks (MediaTek) would be visible. The Wi-Fi Networks (MediaTek) is device name of EUT.



8. Select the SSID you would link to by Wi-Fi Networks (MediaTek).



9. Click Connection Information, check the IP address and record it.



10. Copy iperf tools for Linux on Linux Desktop and then use the command below to copy the tools in usr file.
    cp /home/ubuntu/Desktop//iperf /usr/
11. Use the command below to install the tools in cd /usr path.
    apt install iperf
12. Enter the command below.
    chmod 777 iperf
13. Enable the function for possible applition as below on the 2 PCs or NBs.

iperf client side

iperf -c IP -t 10000 -i 1

iperf server side

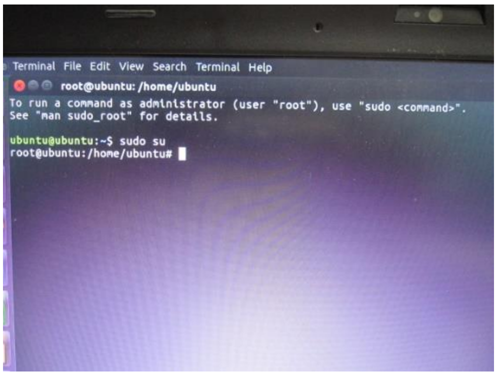
iperf -s -i 1

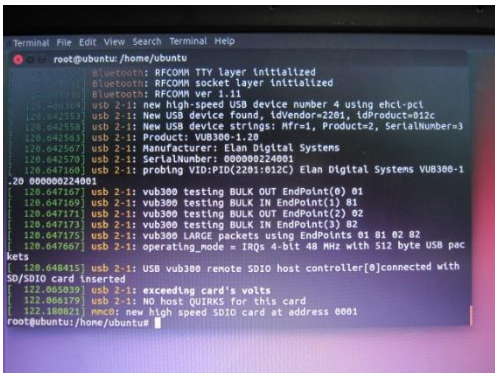
14. Ping function is also usable and ctrl+c could stop the ping function.

    ping IP

3. User Mode (EDR-BT2.0)

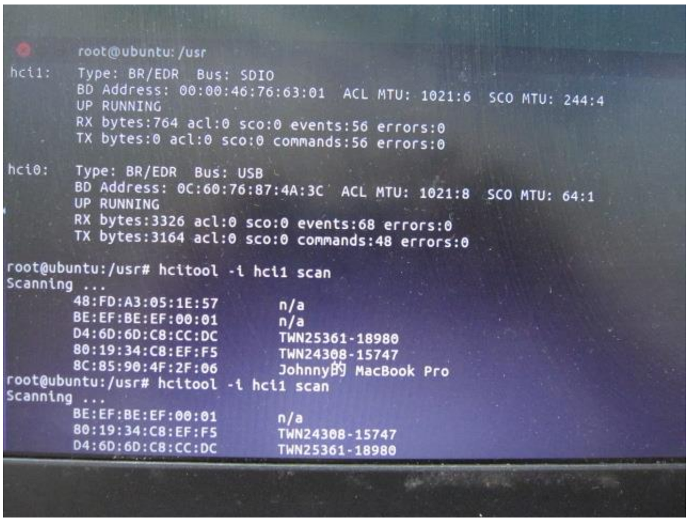
1. Boot up PC or NB with the flash installed Linux OS.
2. 5V for EUT from the power supply.
3. Type "sudo su" on Terminal in Linux to get root authority. EUT could be controlled if "mmc0: new high speed SDIO card at address 0001" is shown after typing "dmesg."





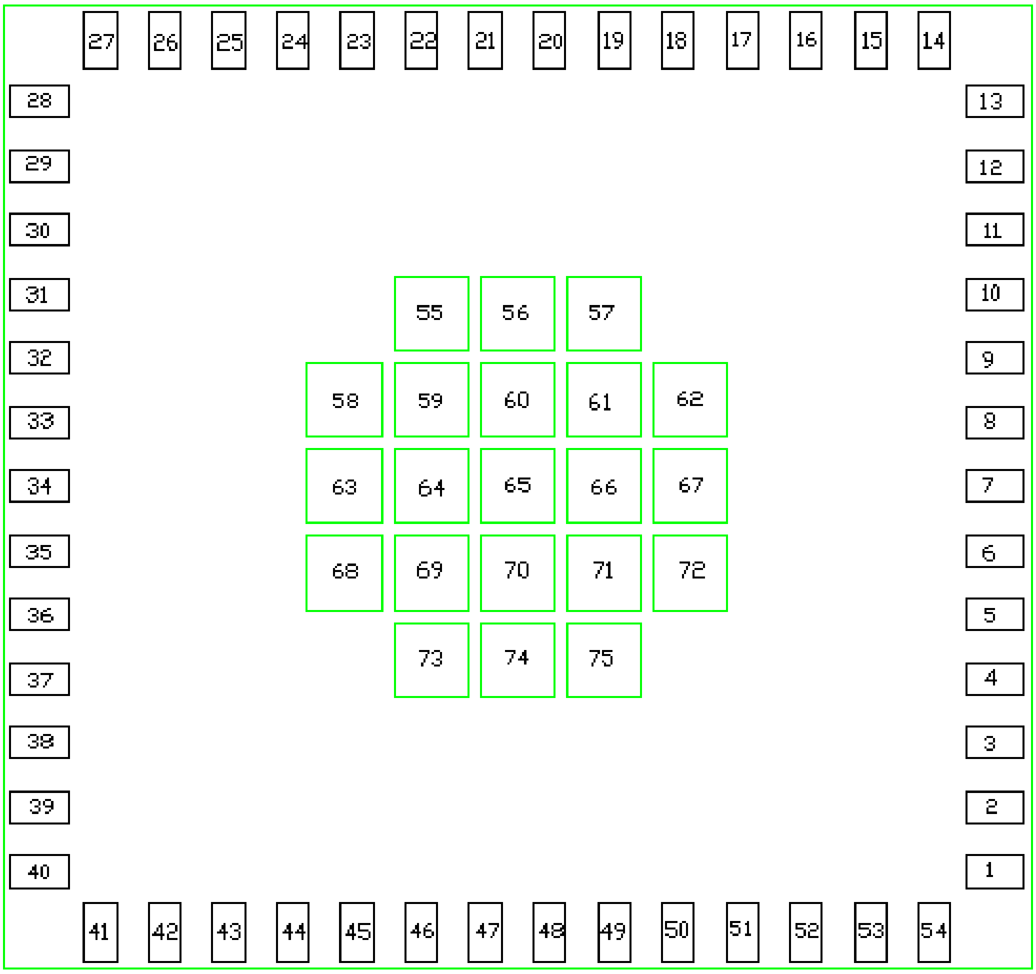
4. Copy "btmtksdio_user.ko" file onto Linux Desktop and use the below command to copy "btmtksdio_user.ko" in the "usr" file.
   cp /home/ubuntu/Desktop/btmtksdio_user.ko /usr/
5. Search "BT device" by the below command.
   modprobe hci_uart
   insmod btmtksdio_user.ko
6. Pair EUT to the BT device to be linked as shown below.

7. After pairing, check the MAC address of the BT device in Bluetooth Settings.
8. Use the command "hciconfig" to check the hci number of EUT. For each number shown "Bus: SDIO", it would be the one of EUT.



9. Replace MAC (such as B8:D5:0B:2E:30:48) and hci number (such as hci1) with the actual ones in the below command and the ping function with BT link would be enabled.
while [-z `pidof l2ping`]; do sudo l2ping -i hci1 B8:D5:0B:2E:30:48; sleep 3; done

4. Module Pin Definition



Pin #	Module Pin Name	Description
1	GND	Ground
2	WIFI_ANT1	WIFI_ANT1 port
3	GND	Ground
4	GND	Ground
5	GND	Ground
6	GND	Ground
7	GND	Ground
8	GND	Ground
9	GND	Ground
10	GND	Ground
11	GND	Ground
12	NC	NC

13	GND	Ground
14	GPIO3	GPIO3 In/Out
15	GPIO2	GPIO2 In/Out
16	GPIO1	GPIO1 In/Out
17	GND	Ground
18	BT_ANT	BT_ANT port
19	GND	Ground
20	PCM_SYNC	PCM interface sync
21	PCM_CLK	PCM interface clock
22	PCM_IN	PCM interface input data
23	PCM_OUT	PCM interface output data
24	UART_RXD	UART receive
25	UART_TXD	UART transmit
26	WIFI_INT_B	WLAN host interrupt
27	VDD33_2	3V3 power supply
28	SYSRST_B	External system reset active low
29	GPIO0	GPIO0 In/Out
30	BGF_INT_B	BT host interrupt
31	SDIO_DAT2	SDIO data bit 2
32	SDIO_DAT3	SDIO data bit 3
33	SDIO_CMD	SDIO command
34	SDIO_CLK	SDIO clock
35	SDIO_DAT0	SDIO data bit 0
36	SDIO_DAT1	SDIO data bit 1
37	SDIO_DS	SDIO data strobe
38	GND	Ground
39	LX	BUCK 1.4V out
40	AVDD14_CLDO	BUCK 1.4V input
41	GND	Ground
42	VDD18	LDO 1.8V output
43	DVDDIO_ANTSEL	GPIO voltage level for PDET and ANTSEL
44	VDD33	3V3 power supply
45	ANTSEL0	RF switch control 0
46	ANTSEL1	RF switch control 1
47	ANTSEL2	RF switch control 2
48	ANTSEL3	RF switch control 3

49	**GND**	**Ground**
50	**PDET3**	**External PA TSSI input**
51	**PDET2**	**External PA TSSI input**
52	**PDET1**	**External PA TSSI input**
53	**PDET0**	**External PA TSSI input**
54~75	**GND**	**Ground**

Note: All USI part numbers share the same pin description except special specified.

5. Regulatory

This module is intended for OEM integrators under the following conditions:

1. Ensure that the end-user has no manual instructions to remove or install module.
2. This module is certified pursuant to Part 15 rules section 15.247, 15.407 and RSS-247.
3. This module has been approved to operate with the antenna types listed below, with the maximum permissible gain indicated and cable loss.

Frequency Band	Antenna Type	Model Number	Gain(dBi)
2400-2483.5MHz; BT	PIFA	MT53	4.35
2400-2483.5MHz; WiFi			4.27
5150-5850MHz; WiFi			6.06

The antennas listed above are required to reduce 0.06 dB @5GHz in power. Fixed outdoor applications for point to multipoint operations are subject to the conditions in Part 15.407(a)(1)(i).

**The loss is the compensated trace loss on PCB between Ant. and module.

Manufacturer:
Amazon.com Services LLC
410 Terry Avenue North, Seattle, WA 98109, USA

EU & UK

This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.
The device is restricted to indoor use only when operating in the 5150 to 5350 MHz frequency range in the following countries:

AT	FI	IT	PL	UK(NI)	RO
BE	FR	LV	PT	IS	TR
CY	DE	LT	SK	LI	HR
CZ	EL	LU	SI	NO	
DK	HU	MT	ES	CH	
EE	IE	NL	SE	BG	

Output power (EIRP)

1. 2.4GHz band for WiFi
   19.97dBm (Max.)
2. 5GHz band for WiFi
   22.99dBm (Max.)
3. BDR/EDR/BLE
   19.53dBm (Max.)

EU and UK shall be the 2 independent codes in the country code of the equipment installing with the module (WM-BAC-MT-53), whose power are different from each other in specific band.

Importer:

Amazon.com Services LLC
EU address: Amazon EU L-1855 Luxembourg
UK address: Amazon UK 1 Principal Place, Worship Street, London, EC2A 2FA, United Kingdom

US

Information for OEMs and host integrators

The OEM or integrator is obligated to adhere to these requirements and restrictions as a condition for using the module's certification. The OEM or integrator is responsible to perform the required additional host regulatory testing and/or obtaining the required host approvals for compliance.

Per KDB 996369 D03 v01r01 OEM Manual section 2.2 to 2.12, this module is intended for OEM integrators under the following conditions:

2.2 List of applicable FCC rules

This module is certified pursuant to two Part 15 rules sections (15.407, 15.247).

2.3 Summarize the specification operational use conditions

This module has been approved to operate with the antenna types listed below, with the maximum permissible gain indicated and cable loss.

Frequency Band	Antenna Type	Model Number	Gain(dBi)
2400-2483.5MHz; BT	PIFA	MT53	4.35
2400-2483.5MHz; WiFi			4.27
5150-5850MHz; WiFi			6.06

The antennas listed above are required to reduce 0.06 dB @5GHz in power. Fixed outdoor applications for point to multipoint operations are subject to the conditions in Part 15.407(a)(1)(i).
**The loss is the compensated trace loss on PCB between Ant. and module.

2.4 Limited module procedures

Not applicable, this device is a single modular approval and meets FCC 47 CFR 15.212 requirement.

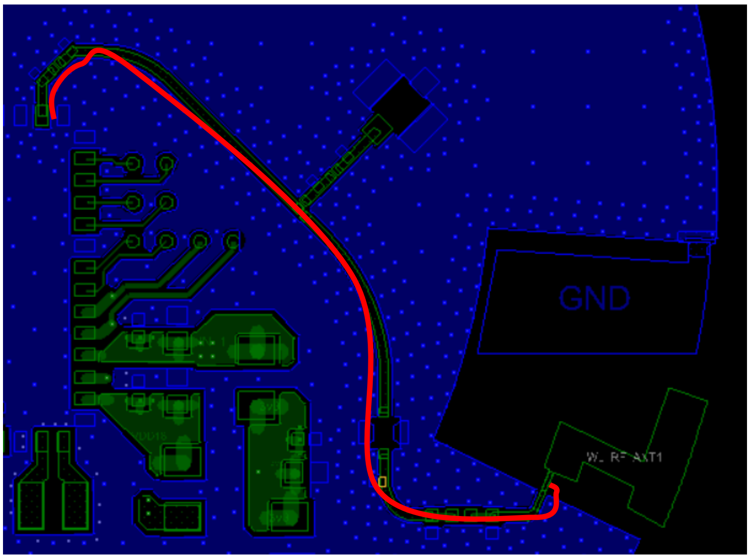
2.5 Trace antenna designs

WLAN WiFi

Top layer

Trace length

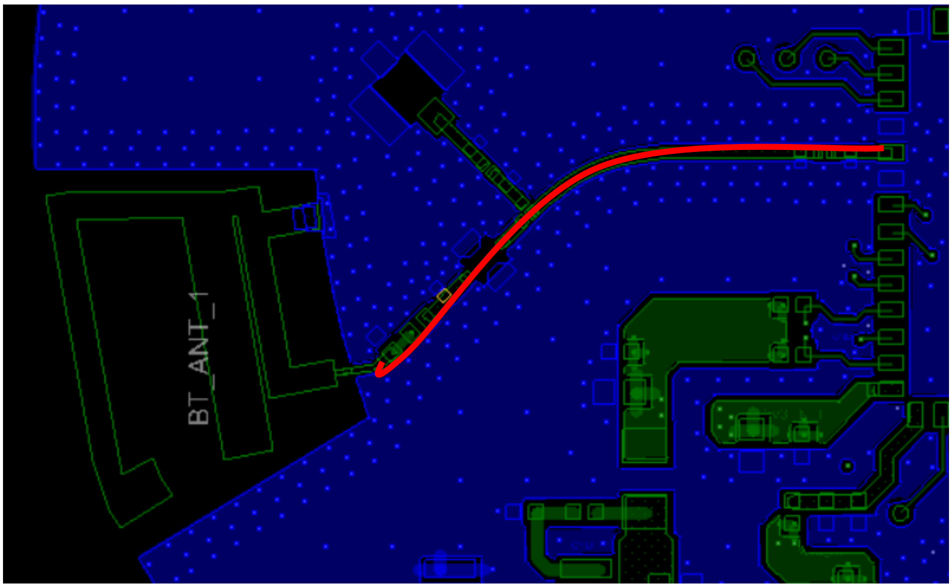
WiFi (1567.99mil)



WLAN BT

Top layer

BT_ANT (957.25mil)



RF traces width: 12 mil, spacing 6 mil

Recommend PCB Stackup

PCB stack (1-2-1) is as follows:

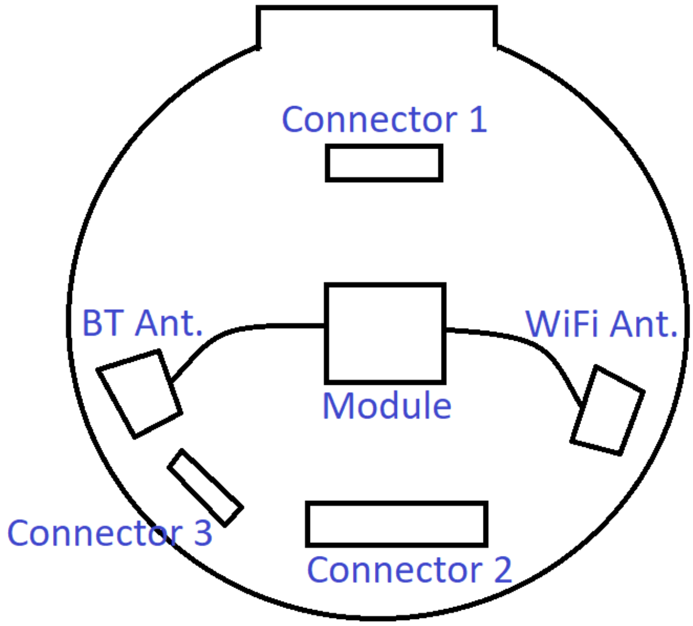
Layer	Type		Thickness (mil)			DK/DF
Top side solder mask				0.70	mils	4.1/0.022
L1	TOP	Signal	copper+plating	1.3	mils	
		TU-768	1067LDP 71%	2.18	mils	3.7/0.0251
L2		Signal	copper+plating	1.1	mils	
		TU-768 TU-768	106 73% 106 73%	4.26	mils	3.70/0.0255
L3		Signal	copper	0.7	mils	
		TU-768	core	26	mils	4.3/0.021
L4		Signal	copper	0.7	mils	
		TU-768 TU-768	106 73% 106 73%	4.26	mils	3.70/0.0255
L5		Signal	copper+plating	1.1	mils	
		TU-768	1067LDP 71%	2.18	mils	3.7/0.0251
L6	Bottom	Signal	copper+plating	1.3	mils	
Bottom side solder mask				0.70	mils	4.1/0.022
TOTAL				46.48	mils	
				1.18	mm	

Total Thickness: 46.48mil

*Note: The thickness of Solder Mask on top side is necessary to be controlled within 25um

The Land Pattern and Dimensions should be compliance with USI's Standard PCB Design. The characteristics of products may vary depending on the pattern drawing method, grounding method, land dimensions, land forming method of the NC terminals and the PCB material and thickness. Therefore, be sure to verify the characteristics in the actual set. When using non-standard lands, contact Universal Global Scientific Industrial Co., Ltd. Beforehand.

Antenna Specification



(1) Antenna frequency: (1)WiFi :2.4~2.5G / 5.15~5.85G
(2) BT : 2.4~2.5G

(2) Antenna type: (1)WiFi & BT antenna = PIFA type

(3) Antenna VSWR: 2 : 1 Max

(4) Antenna Polarization: Linear, Vertical

(5) Antenna Peak Gain:

2G WiFi	WiFi antenna	
	Mea. Eff.(dB)	Mea. Peak Gain (dBi)
ch1 2412	-1.6	4.12
Ch6 2437	-1.53	4.27
Ch11 2462	-1.73	4.04
Ch13 2472	-1.95	3.92
5G WiFi	WiFi antenna	
	Mea. Eff.(dB)	Mea. Peak Gain (dBi)
ch36 5180	-0.15	6.02
ch64 5320	-0.32	6.06
ch100 5500	-0.15	5.92
ch165 5825	-0.16	5.97

BT/BLE	BT antenna	
	Mea. Eff.(dB)	Mea. Peak Gain (dBi)
2402	-2.27	4.21
2440	-2.01	4.35
2480	-2.66	3.71

USI uses various test mode programs for test set up which operate separate from production firmware. Host integrators should contact USI for assistance with test modes needed for module/host compliance test requirements.
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.

2.6 RF exposure considerations

This module is restricted to installation in products for use only in mobile and fixed applications.
The host product manufacturer must provide following statement in end-product manuals.
The user manual of the end product should include:
FCC 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.

2.7 Antennas

This module has been approved to operate with the antenna types listed below, with the maximum permissible gain indicated.

Frequency Band	Antenna Type	Model Number	Gain(dBi)
2400-2483.5MHz; BT	PIFA	MT53	4.35
2400-2483.5MHz; WiFi			4.27
5150-5850MHz; WiFi			6.06

2.8 Label and compliance information

Label of the end product:
The host product must be labeled in a visible area with the following " Contains FCC ID: **2A4DH-1021** ".
The end product shall bear the following 15.19 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.
If the labelling area is considered too small and therefore it is impractical (smaller than the palm of the hand) to display the compliance statement, then the statement may be placed in the user manual or product packaging.

2.9 Information on test modes and additional testing requirements

This module is restricted to integration into hosts for indoor use only.
This module has been approved under stand-alone configuration.
The separate approval is required for all other operating configurations, including portable configurations with respect to Part 2.1093 and different antenna configurations.
The information on how to configure test modes for host product evaluation for different operational conditions for a stand-alone modular transmitter in a host, versus with multiple, simultaneously transmitting modules or other transmitters in a host can be found at KDB Publication 996369 D04.

2.10 Additional testing, Part 15 Subpart B disclaimer

Appropriate measurements (e.g. 15 B compliance) and if applicable additional equipment authorizations (e.g. SDoC) of the host product to be addressed by the integrator/manufacturer.
This module is only FCC authorized for the specific rule parts 15.247, 15.407 listed on the grant, and the host product manufacturer is responsible for compliance to any other FCC rules that apply to the host product as being Part 15 Subpart B compliant.

2.11 Note EMI Considerations

Note that a host manufacture is recommended to use D04 Module Integration Guide recommending as "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.
For standalone mode, reference the guidance in D04 Module Integration Guide and for simultaneous mode; see D02 Module Q&A Question 12, which permits the host manufacturer to confirm compliance.

2.12 How to make changes

If any changes or modifications need to be made to the integrated product, such as adding or adjusting the antenna or cable, follow the guidelines provided by Grantee. For further assistance, please contact:

The party responsible for FCC compliance is Amazon.com Services LLC (410 Terry Ave North, Seattle, WA 98109 USA). If you wish to contact Amazon, visit “www.amazon.com/devicesupport”, select United States, click Help & Troubleshooting, then click on Contact Us.

The user manual of the end product should include (information for OEMs)

The module must be installed and used in strict accordance with the manufacturer's instructions as described in the user documentation that comes with the product.

Information To Be Supplied to the End User by the OEM or Integrator

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.
The antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons.
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 device is restricted to indoor use.
The antenna(s) used for this transmitter must not transmit simultaneously with any other antenna

or transmitter.
The end user manual shall include all required regulatory information/warning as shown in this document.

Canada

This device complies with ISED's licence-exempt RSSs. 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.

Cet appareil est conforme aux RSS RSS de ISED. Son utilisation est soumise aux deux conditions suivantes: (1) Cet appareil ne doit pas causer d'interférences nuisibles et (2) cet appareil doit accepter toutes les interférences reçues, y compris celles pouvant entraîner un fonctionnement non souhaité.

This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter.

Cet appareil et son (ses) antenne (s) ne doivent pas être co-localisés ou utilisés conjointement avec une autre antenne ou un autre émetteur.

Radiation Exposure Statement:
This equipment complies with ISED 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.

Déclaration d'exposition aux radiations:
Cet équipement est conforme aux limites d'exposition au rayonnement ISED établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé à une distance minimale de 20 cm entre le radiateur et votre corps.

This device is intended only for OEM integrators under the following conditions: (For module device use)

1) The antenna must be installed such that 20 cm is maintained between the antenna and users, and
2) The transmitter module may not be co-located with any other transmitter or antenna.

While the 2 conditions above are met, further transmitting tests won't be required. However, the OEM integrator shall still meet those additional compliance tests for the end products with the module installed.

Cet appareil est destiné uniquement aux intégrateurs OEM dans les conditions suivantes: (Pour une utilisation avec un appareil de module)

1) L'antenne doit être installée de manière à ce qu'il reste 20 cm entre l'antenne et les utilisateurs, et
2) Le module émetteur ne peut pas être co-localisé avec un autre émetteur ou une antenne.

Bien que les 2 conditions ci-dessus soient remplies, des tests de transmission supplémentaires ne seront pas nécessaires. Toutefois, l'intégrateur OEM doit toujours satisfaire à ces tests de conformité supplémentaires pour les produits finaux avec le module installé.

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 Canada authorization is no longer considered valid and the IC 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 Canada authorization.

NOTE IMPORTANTE:

Si ces conditions ne peuvent pas être remplies (par exemple, certaines configurations d'ordinateurs portables ou la co-localisation avec un autre émetteur), l'autorisation du Canada n'est plus considérée comme valide et l'ID IC ne peut pas être utilisé sur le produit final. Dans ces circonstances, l'intégrateur OEM sera responsable de la réévaluation du produit final (y compris de l'émetteur) et de l'obtention d'une autorisation distincte du Canada.

End Product Labeling

This transmitter module is authorized only for use in device where the antenna may be installed such that 20 cm may be maintained between the antenna and users. The final end product must be labeled in a visible area with the following: "Contains IC: 24273-1021".

Étiquetage du produit final

Ce module émetteur est uniquement autorisé à être utilisé dans un appareil où l'antenne peut être installée de manière à ce que 20 cm puissent être maintenus entre l'antenne et les utilisateurs. Le produit final doit être étiqueté dans une zone visible avec les informations suivantes: "Contient le module d'émission IC: 24273-1021".

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.

Informations manuelles à l'utilisateur final

L'intégrateur OEM doit être conscient de ne pas fournir à l'utilisateur final des informations concernant la procédure d'installation ou de suppression de ce module RF dans le manuel de l'utilisateur du produit final qui intègre ce module.
Le manuel de l'utilisateur final doit inclure toutes les informations / avertissements réglementaires requis, comme indiqué dans ce manuel.

This radio transmitter [IC: 24273-1021] has been approved by Innovation, Science and Economic Development Canada to operate with the antenna types listed below, with the maximum permissible gain indicated. Antenna types not included in this list that have a gain greater than the maximum gain indicated for any type listed are strictly prohibited for use with this device.

Frequency Band	Antenna Type	Model Number	Gain(dBi)
2400-2483.5MHz; BT	PIFA	MT53	4.35
2400-2483.5MHz; WiFi			4.27
5150-5850MHz; WiFi			6.06

Le présent émetteur radio [IC: 24273-1021] a été approuvé par Innovation, Sciences et Développement économique Canada pour fonctionner avec les types d'antenne énumérés ci dessous et ayant un gain admissible maximal. Les types d'antenne non inclus dans cette liste, et dont le gain est supérieur au gain maximal indiqué pour tout type figurant sur la liste, sont strictement interdits pour l'exploitation de l'émetteur.

Frequency Band	Antenna Type	Model Number	Gain(dBi)
2400-2483.5MHz; BT	PIFA	MT53	4.35
2400-2483.5MHz; WiFi			4.27
5150-5850MHz; WiFi			6.06

The device for operation in the band 5150-5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems.

Les dispositifs fonctionnant dans la bande 5150-5250 MHz sont réservés uniquement pour une utilisation à l’intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux.

Japan

R XXX-YYYYYY

T DXXXYYYZZZ

W52/W53 屋内使用限定ただし登録局に接続される場合は除く

Brazil

Este equipamento não tem direito à proteção contra interferência prejudicial e não pode causar interferência em sistemas devidamente autorizados. Para maiores informações, consulte o site da ANATEL – https://www.gov.br/anatel

Model: WM-BAC-MT-53

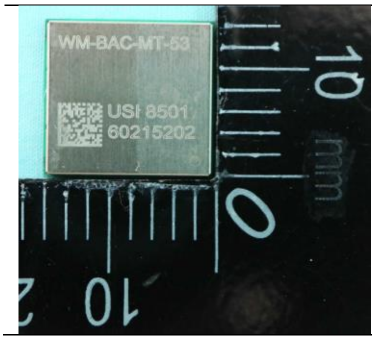
ANATEL: HHHHH-YY-FFFFF

EU Declaration of Conformity

We,

Name of Manufacturer:	Amazon.com Services LLC
Address:	410 Terry Avenue North, Seattle, WA 98109, USA
Telephone number:	(650) 694 8333

hereby, declare under our sole responsibility that the requirements set out in the **Directive 2014/53/EU** has been fully fulfilled on our product with indication below:

Product Name:	802.11a/b/g/n/ac dual-band Wi-Fi + BT 5.1 Module
Model Number:	WM-BAC-MT-53
Serial Number:	85016021510122031480003018
Object of the Declaration:	

The object of the declaration described above is in conformity with the relevant Union harmonization legislation:

Radio Equipment Directive (RED) 2014/53/EU

Restriction of Hazardous Substances Directive (RoHS) 2011/65/EU

Waste Electrical and Electronic Equipment Directive (WEEE) 2012/19/EU

The following standards and technical specifications have been applied:

Article 3.2 & 3.3 : EN 300 328 V2.2.2, EN 301 893 V2.1.1, EN 300 440 V2.2.1

Article 3.1(b) : ETSI EN 301 489-1 V2.2.3, ETSI EN 301 489-17 V3.2.4

Article 3.1(a) : EN IEC 62311:2020, EN 50665:2017

Article 3.1(a) : EN IEC 62368-1:2020+A11:2020

Notified Body:

UL Verification Services Inc, Body number: 0984, performed an assessment of Article 3.1a, 3.1b and 3.2 and issued EU-type examination certificate AN23C14210 with Module B+C

Additional Information:

Software: N9 FW version –0.0.0[DEC]

Accessories:

Signed for and on behalf of:

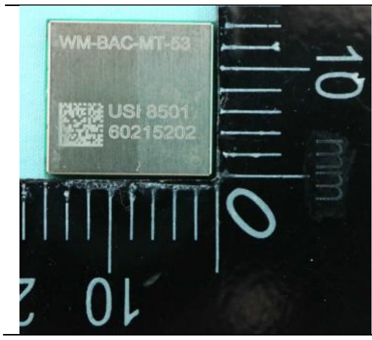
Signature :

September 20, 2023

Name : Amit Gaikwad

E-mail : device-certification@amazon.com

Declaration of Conformity

Declaration of conformity No.:	(optional)
Name of Manufacturer:	Amazon.com Services LLC
Address:	410 Terry Avenue North, Seattle, WA 98109, USA
Product Name:	802.11a/b/g/n/ac dual-band Wi-Fi + BT 5.1 Module
Model Number:	WM-BAC-MT-53
Serial Number:	85016021510122031480003018
Object of the Declaration:	

We, Amazon.com Services LLC, declare under our sole responsibility that the above product is in conformity with the relevant statutory requirements:

RER 2017 (SI 2017/1206)

The following designated standards or technical specifications were used in relation to which conformity is declared:

Regulation 6.2 : EN 300 328 V2.2.2, EN 301 893 V2.1.1, Voluntary National Specification 2030/8/3

Regulation 6.1b : ETSI EN 301 489-1 V2.2.3, ETSI EN 301 489-17 V3.2.4

Regulation 6.1a : EN IEC 62311:2020, EN 50665:2017

Regulation 6.1a : EN IEC 62368-1:2020+A11:2020, BS EN IEC 62368-1:2020+A11:2020

UK Approved Body:

UL Verification Services Inc., Body number: 0984, performed an assessment in accordance with the procedures in Schedule 3 Module against the essential requirements Regulation 6.1a, 6.1b, and 6.2 of the RER 2017 (SI 2017/1206) and issued the Type examination certificate: **xxx**

Description of accessories and components, including software, which allow the radio equipment to operate as intended and covered by the Declaration of conformity

Software: N9 FW version –0.0.0[DEC]

Accessories:

Signed for and on behalf of:

Signature :

September 20, 2023

Name : Amit Gaikwad

E-mail : device-certification@amazon.com