

## Product Outline

This product has a function as an IEEE802.11 a/b/g/n/ac MIMO + BT + BLE

- Product Size : 20.9 x 18.5 x 2.6 [mm]
- RF-IC : Marvell 88W8897
- Reference Clock : 40MHz X'tal

## Feature

- Product Name : Communication Module
- Model Name : LBEQ6ZZ1BN
- Purpose of the equipment : Telecommunication
- Equipment Type : Transceiver
- Frequency : 2.4~2.485, 5.15~5.35, 5.47~5.725, 5.725~5.85GHz
- Channel : 1~11ch/ 36~64ch/(FCC:100~144ch)(IC:100~116, 132~144ch)  
149~165ch
- Bandwidth : 2.4GHz 11n 20MHz/40MHz,  
5GHz 11a (20MHz) / 11n (20/40MHz)  
11ac (20/40/80MHz)
- Input Voltage to RF parts : VDD33 Typ.3.3V

# LBEQ6ZZ1BN User Manual

WLAN	STA	2.4GHz	11b/g/n	HT20	1ch-11ch
		5GHz	11a	HT20	W52/53/56/58 with ch144/142/138 There is Slave DFS test. DFS(Device without Radar detection capability) No TPC
			11n	HT20/40	
	11ac	VHT20/40/80			
	AP	2.4GHz	11b/g/n	HT20	1ch-11ch
		5GHz	11a	HT20	W52/58 No TPC
			11n	HT20/40	
11ac	VHT20/40/80				
BT	BR /EDR / LE				

FCC ID of this product is as follows.

FCC ID: VPYLB1BN

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 shown in User manual.

# Notice

This module complies with below part 15 of the FCC Rules.  
Part 15 Subpart C  
Part 15 Subpart E

The modular transmitter is only FCC authorized for the specific rule parts (i.e., FCC transmitter rules) listed on the grant, 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.

This module designed for mounting inside of the end product by us professionally.  
Therefore, it complies with the antenna and transmission system requirements of §15.203.

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.

## FCC CAUTION

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

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

## **This device is intended only for OEM integrators under the following conditions:**

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. As long as 2 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

# Notice

## **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:  $\pm 20\text{ppm}$

# Notice

- Please describe the following warning on the final product which contains this module.

Contains Transmitter Module FCC ID:VPYLB1BN

or

Contains FCC ID: VPYLB1BN

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 of the device.

※When the product is small, as for these words mentioned above, the posting to a manual is possible.

- Please describe the following warning to the manual.

## FCC CAUTION

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

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

## **Compliance with FCC requirement 15.407(c)**

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Frequency Tolerance:  $\pm 20\text{ppm}$

- When installing it in a mobile equipment. Please describe the following warning to the manual.

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.

- When installing it in a portable equipment.

It is necessary to take a SAR test with your set mounting this module.  
Class II permissive change application is necessary using the SAR report.  
Please contact Murata.

Note)

Portable equipment : Equipment for which the spaces between human body and antenna are used within 20cm.

Mobile equipment : Equipment used at position in which the spaces between human body and antenna exceeded 20cm.