Manuals+ — User Manuals Simplified.

OFLY COMM O2066PM Wi-Fi Tri-band 2×2 MIMO DBS Bluetooth 5.2 Module User Manual

O2066PM
Wi-Fi Tri-band 2×2 MIMO DBS
802.11ax + Bluetooth 5.2 Module
www.ofeixin.com
OFEIXIN TECHNOLOGY LIMITED
O2066PM DATESHEET

Cover of Approval Sheet

PRODUCT NAME	Part No.	Description
O2066PM	FWAAO2066PM10	QCA2066 M.2 3.3V 2T2R 22*30* 2.7mm DBS 11ax BT5.2-UART External 3antenna Shield CAN
	FWAAO2066PM20	QCA2066 M.2 3.3V 2T2R 22*30* 2.7mm DBS 11ax BT5.2-USB External 3antenna Shield CAN

Customer:…………………..

Customer P/N:…………………………..
Signature:………………
Date:…………………………

Maker Information:

OFEIXIN TECHNOLOGY LIMITED

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Revision History

Version	Date	Description	Draft	Approved
V1.0	2022-04-06	-Preliminary Project version	CCJ	Turbo
V1.1	2022-06-30	-append current description	CCJ	Turbo
V1.2	2022-08-10	-Addition the description	CCJ	Turbo

Contents

Overview

1.1 Introduction

The O2066PM1 device is a highly integrated module supporting 802.11ax Wi-Fi and Bluetooth (BT) Milan. The O2066PM1 device supporting simultaneous operation on 2.4 GHz and 5 GHz, or 6 GHz, also known as Dual Band Simultaneous (DBS).

The wireless module complies with IEEE 802.11 a/b/g/n/ac/ax 2×2 MIMO standard and it can achieve up to a speed of 2975.6Mbps (5/6G 2×2 160MHz 11ax +2.4G 2×2 40MHz 11ax DBS). The integrated module provides PCIe interface for Wi-Fi, UART/PCM or USB interface for Bluetooth.

1.2 Features

- Supports 2×2 Multi-User Multiple-Input Multiple-Output (MU-MIMO).
- Dual Band Simultaneous (DBS), up to 3 Gbps data rate (5/6G 2×2 160MHz 11ax +2.4G 2×2 40MHz 11ax DBS).
- Tri-band 2.4 GHz/5 GHz/6 GHz support.
- 20MHz/40MHz channel bandwidth for 2.4 GHz and 20MHz/40MHz/80MHz/160 MHz channel bandwidth for 5 GHz/6 GHz.
- Seamless antenna sharing with Bluetooth, LTE, LTE-U, and 5G.
- Dynamic Frequency Selection

- Offloading traffic for minimal host utilization at 802.11ac/ ax speeds.

- Low-power PCIe (with L1 substate) interface.

- Integrated close-loop power detector.

- Supports 2 Mbps Bluetooth Low Energy (BLE), BLE Long Range.

- Split ACL support for A2DP true stereo (earbuds) .

- Dedicated Bluetooth antenna, and concurrent with 5G WLAN.

- Dual eSCO and dual A2DP streams.

- Backward-compatible with previous Bluetooth standards.

- Standard M.2 2230 Key E Golden Finger interface.

1.3 Block Diagram
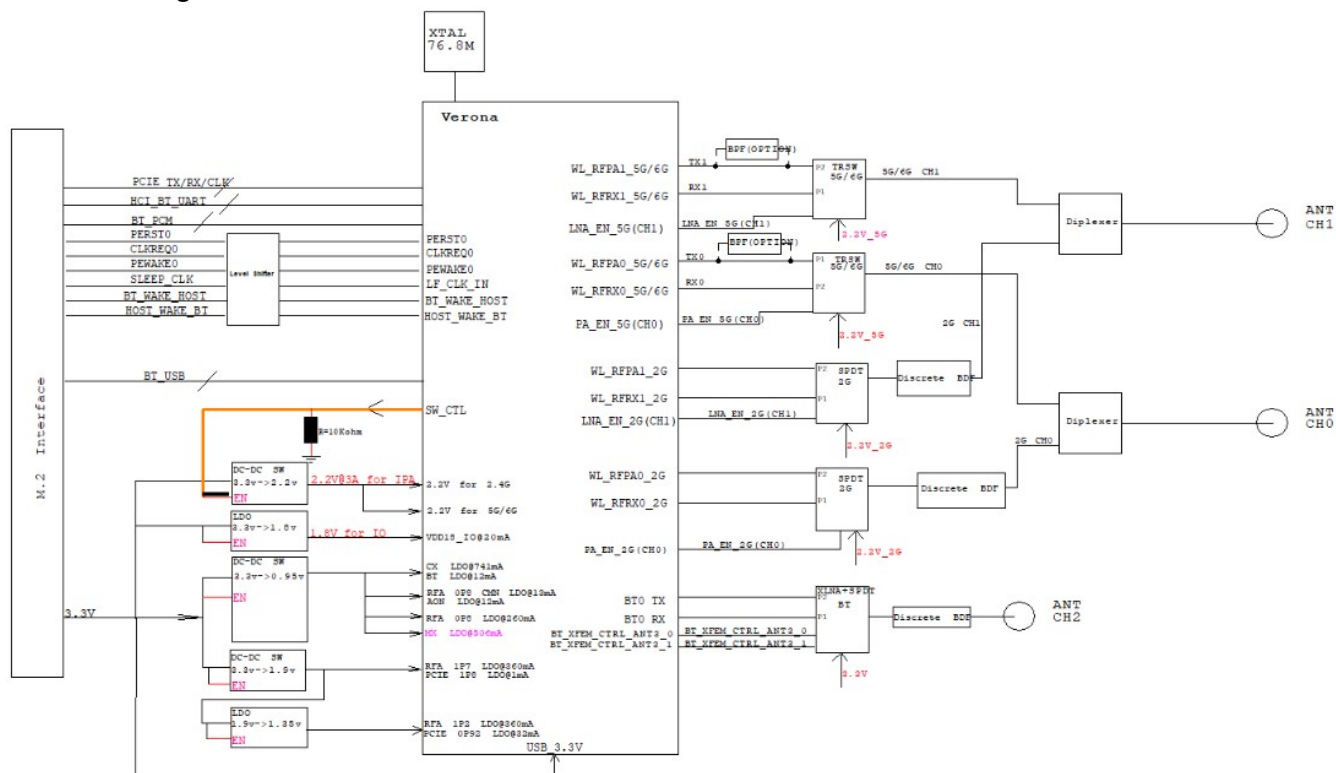
1.4 General Specification

Model Name	O2066PM
Product Description	Support WiFi6E+BT5.2
Dimension	L x W x H: 22 x 30 x 2.7 (typical) mm
Wi-Fi Interface	M.2 2230 Key E
BT Interface	UART/PCM or USB
Operting temperature	-30°C to 85°C*
Storage temperature	-40°C to 125°C

Note: The maximum ambient temperature of 802.11ax 160M MCS11 for long-term stable operation is less than or equal to 82°C.

1.5 Recommended Operating Rating

Feature		Minimum	Type	Maximum	Units
Operating Temperature		-30	25	85	°C
VCC		3.20	3.3	3.45	V
Power Consumption (Type VCC)	TX (2.4G HE40)	441 mA			
	RX (2.4G HE40)	147 mA			
	TX (5G HE160)	554 mA			
	RX (5G HE160)	211 mA			
	Power Up	118 mA			
	BT TX 1M@7dBm	147 mA			
	BT RX	136 mA			

Note: Use QRCT tool, TX mode:EnablingContinuousModulatedTX;Duty Cycle:50%;TX Power **Control:AutoPower,** test the maximum current of the module 3.3V power supply when NSS=1.

RF Specification

2.1 Wi-Fi RF Specification

2.4GHz RF Specification	
Feature	Description
Operating Frequency	2.400 2.4835GHz
Standards	Wi-Fi: IEEE 802.11b/g/n/ac/ax & Wi-Fi compliant
Operating Channel	2.4GHz : Ch1~14
Modulation	802.11b : CCK 802.11 g/n/ac/ax : OFDM /1024-QAM 256-QAM 64-QAM 16-QAM QPSK BPSK
PHY Data rates	Wi-Fi:802.11b:11,5.5,2,1Mbps 802.11g:54,48,36,24,18,12,9,6Mbps 802.11n: up to 300Mbps
	802.11ac: up to 400Mbps 802.11ax:up to 3 Gbps data rate (2.4G 2×2+5G or 6G 2×2 11ax DBS)
Output Power, tolerance ± 1.5 dB	

Protocol Standard	Data Rate	Spec.(dBm)	EVM(dBm)

802.11b	@11Mbps	16	≦-9
802.11g	@54Mbps	16	≦-25
802.11n	@HT40MCS7	16	≦-28
802.11ac	@vHT40MCS9	14.5	≦-32
802.11ax	@HE40MCS11	12.5	≦-35
Receiver Sensitivity, CCK modulation PER≦8% OFDM modulation PER≦10%			
Protocol Standard	Data Rate	Spec.(dBm)	
	1Mbps	-82	

802.11b(20MHz)	11Mbps	-76
802.11g(20MHz)	6Mbps	-82
	54Mbps	-64
802.11n(20MHz)	MCS0NSS1	-82
	MCS7NSS1	-64
802.11n(40MHz)	MCS0NSS1	-79
	MCS7NSS1	-61

802.11ac(20MHz)	MCS0NSS1	-82	
	MCS9NSS1	-59	
802.11ac(40MHz)	MCS0NSS1	-79	
	MCS9NSS1	-57	
802.11ax(20MHz)	MCS0NSS1	-82	

	MCS 11 NSS1	-52
	MCS 0 NSS1	-79
802.11ax(40MHz)	MCS 11 NSS1	-49
5GHz RF Specification		
Feature	Description	

Operating Frequency	5G:5.15 GHz ~ 5.845 GHz (5.0 GHz ISM Band)
Standards	Wi-Fi: IEEE 802.11 a/n/ac/ax 2×2, Wi-Fi compliant
Modulation	802.11 a/n/ac/ax : OFDM /1024-QAM 256-QAM 64-QAM 16-QAM QPSK BPSK
PHY Data rates	Wi-Fi: 802.11a:54,48,36,24,18,12,9,6Mbps 802.11n: up to 300Mbps 802.11ac: up to 800Mbps 5G 2×2 VHT80

802.11ax:up to 3 Gbps data rate (2.4G 2×2+5G 2×2 11ax DBS) |

Output Power, tolerance ± 1.5 dB

Protocol Standard	Data Rate	Spec.(dBm)	EVM(dBm)
802.11a	@54Mbps	16.5	≦-25
802.11n	@HT40 MCS 7	16	≦-28
802.11ac	@vHT80 MCS 9	13.5	≦-32
802.11ax	@HE160 MCS 11	11.5	≦-35

Receiver Sensitivity,OFDM modulation PER≦10%

Protocol Standard	Data Rate	Spec.(dBm)
802.11a(20MHz)	6Mbps	-82
	54Mbps	-64
802.11n(20MHz)	MCS 0 NSS1	-82
	MCS 7 NSS1	-64

	MCS 0 NSS1	-79
802.11n(40MHz)	MCS 7 NSS1	-64

802.11ac(20MHz)	MCS 0 NSS1	-82
	MCS 9 NSS1	-57
802.11ac(40MHz)	MCS 0 NSS1	-79
	MCS 9 NSS1	-54
802.11ac(80MHz)	MCS 0 NSS1	-76
	MCS 9 NSS1	-51
802.11ax(20MHz)	MCS 0 NSS1	-82
	MCS 11 NSS1	-52
802.11ax(40MHz)	MCS 0 NSS1	-79
	MCS 11 NSS1	-49
802.11ax(80MHz)	MCS 0 NSS1	-76
	MCS 11 NSS1	-46
802.11ax(160MHz)	MCS 0 NSS1	-73
	MCS 11 NSS1	-43

6GHz RF Specification

Feature	Description
Operating Frequency	6G: 5.925 GHz ~ 7.125 GHz
Standards	Wi-Fi: IEEE 802.11 a/n/ac/ax 2×2, Wi-Fi compliant
Modulation	802.11 a/n/ac/ax : OFDM /1024-QAM 256-QAM 64-QAM 16-QAM QPSK BPSK

PHY Data rates	Wi-Fi: OFDM:54,48,36,24,18,12,9,6Mbps
	802.11ax:up to 3 Gbps data rate (2.4G 2×2+6G 2×2 11ax DBS)

Output Power, tolerance ± 1.5 dB

Protocol Standard	Data Rate	Spec.(dBm)	EVM(dBm)
802.11a	@54Mbps	13.5	≦-25
802.11n	@HT40 MCS 7	13.5	≦-28
802.11ac	@vHT80 MCS 9	13	≦-32
802.11ax	@HE160 MCS 11	10.5	≦-35

Receiver Sensitivity,OFDM modulation PER≦10%

Protocol Standard	Data Rate	Spec.(dBm)
802.11a(20MHz)	6Mbps	-82
	54Mbps	-64
802.11ax(20MHz)	MCS 0 NSS1	-82
	MCS 11 NSS1	-52
802.11ax(40MHz)	MCS 0 NSS1	-79
	MCS 11 NSS1	-49
802.11ax(80MHz)	MCS 0 NSS1	-76
	MCS 11 NSS1	-46
802.11ax(160MHz)	MCS 0 NSS1	-73
	MCS 11 NSS1	-43

2.2 BT RF Specification

Feature	Description		
Operating Frequency	2.402 2.480GHz		
Number of Channels	79 channels		
Standards	Bluetooth V5.2		
Modulation	8DPSK, π/4 DQPSK, GFSK		
PHY Data rates	Supports 2Mbps Bluetooth Low Energy(BLE),BLELong Range		
Output Power	Min(dBm)	Typical(dBm)	Max(dBm)
		7	10
Sensitivity @ BER=0.1%　for G FSK (1Mbps)		-92	
Sensitivity @ BER=0.01%　for π/4-DQPSK (2Mbps)		-92	
Sensitivity @ BER=0.01%　for 8DPSK (3Mbps)		-85	

Pin Assignments

3.1 Pin Outline

3.2 Pin Definition
Top side

NO	Name	Type	Description	Voltage
1	GND1	–	Ground	
3	BT USB D+	I/O	The usb1.1 interface is only valid for BT USB modules	
5	BT USB D1	I/O	The usb1.1 interface is only valid for BT USB modules	
7	GND2	–	Ground	
9	NC	–		
11	NC	–		
13	NC	–		
15	NC	–		
17	NC	–		
19	NC	–		
21	NC	–		
23	NC	–		
33	GND3	–	Ground	
35	PERP0	I	PCIe RX differential signals	
37	PERN0	I		
39	GND4	–	Ground	
41	PETP0	O	PCIe TX differential signals	
43	PETN0	O		
45	GND5	–	Ground	
47	REFCLKP0	I	PCIe clock differential input signal	
49	REFCLKN0	I		
51	GND6		Ground	
53	CLKREQ0#(I/O)(0/3.3V) ①	I/O	PCIe reference clock request signal, open drain,active low	3.3V

55	PEWAKE0#(I/O)(0/3.3V) ①	I/O	PCIe wake up host, open drain, active low	3.3V
57	GND7	–	Ground	
59	RESERVED_PERP1	–	NC	
61	RESERVED_PERN1	–	NC	
63	GND8	–	Ground	
65	RESERVED_PETP1	–	NC	
67	RESERVED_PETN1	–	NC	
69	GND9	–	Ground	
71	RESERVED_REFCLKP1	–	NC	
73	RESERVED_REFCLKN1	–	NC	
75	GND9	–	Ground	

Bottom side

NO	Name	Type	Description	Voltage
2	3_3V_1	P	Power supply	3.3V
4	3_3V_2	P	Power supply	3.3V
6	NC	–	RESERVED	
8	PCM_CLK	I/O	BT PCM clock Only valid for UART modules	1.8V
10	PCM_SYNC	I/O	BT PCM sync Only valid for UART modules	1.8V
12	PCM_OUT	O	BT PCM data out Only valid for	1.8V
			UART modules	
14	PCM_IN	I	BT PCM data in Only valid for UART modules	1.8V
16	NC	–	RESERVED	
18	GND11	–	Ground	

20	UART_WAKE_N ①	O	BT wake up host signal Only valid for UART modules	3.3V
22	UART_TXD(O)(0/1.8V)	O	BT UART interface Only valid for UART modules	1.8V
32	UART_RXD(I)(0/1.8V)	I		1.8V
34	UART_RTS(O)(0/1.8V)	O	BT UART request to send Only valid for UART modules	1.8V
36	UART_CTS(I)(0/1.8V)	I	BT UART clear to send Only valid for UART modules	1.8V
38	NC	–		
40	NC	–		
42	NC	–		
44	WAKE_BT ①	I	Host wake up BT signal	3.3V
46	LTE_COEX_TXD	O	RESERVED/LTE coexistence UART TXD	1.8V
48	LTE_COEX_RXD	I	RESERVED/LTE coexistence UART RXD	1.8V
50	SUSCLK_32KHZ ①	I	Sleep clock input	3.3V
52	PERST0#(I)(0/3.3V) ①	I	PCIe reset module,internal weak pull down	3.3V
54	NC	–	RESERVED	
56	NC	–	RESERVED	
58	NC	–	RESERVED	
60	NC	–	RESERVED	
62	NC	–		
64	NC	–		
66	NC	–		
68	NC	–		
70	NC			
72	3_3V_3	P	Power supply	3.3V

| 74 | 3_3V_4 | P | Power supply | 3.3V |

Note The I/O level of the pin marked ① is 3.3V, and the other I/O level is 1.8V

Dimensions

4.1 Physical Dimensions and Module Photo
(Unit: mm)

L x W : 30 x 22(+0.3/-0.1) mm	
H: 2.7 (±0.2)mm	
Weight	7.5g

4.2 Module Physical Dimensions
(Unit: mm)

< TOP VIEW >
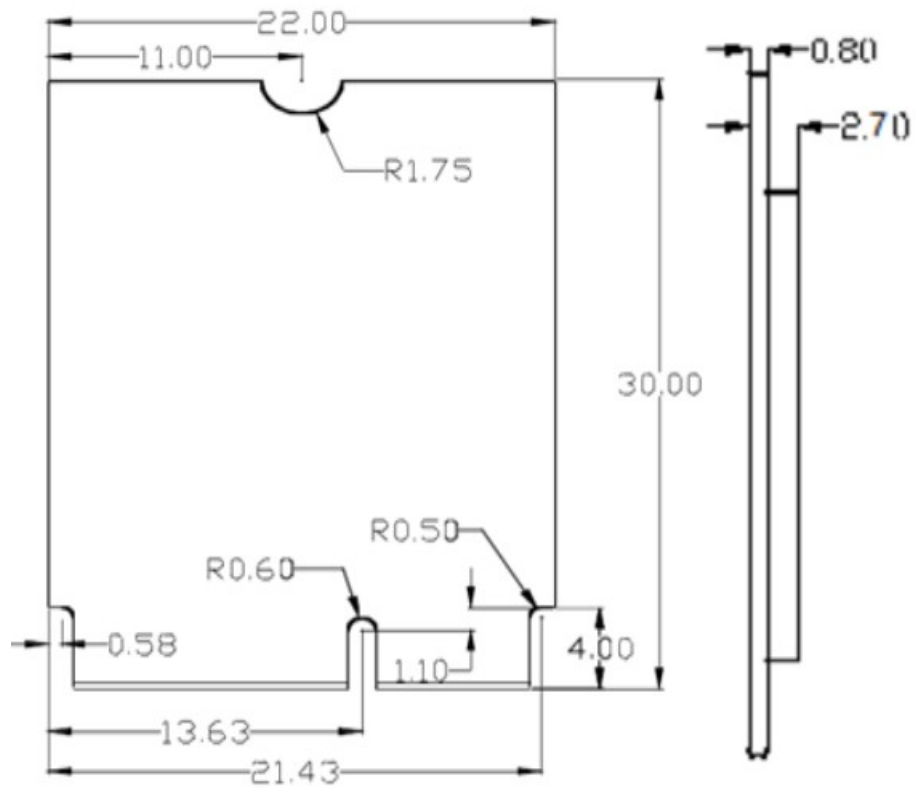
Reference Design

5.1 Reference schematic
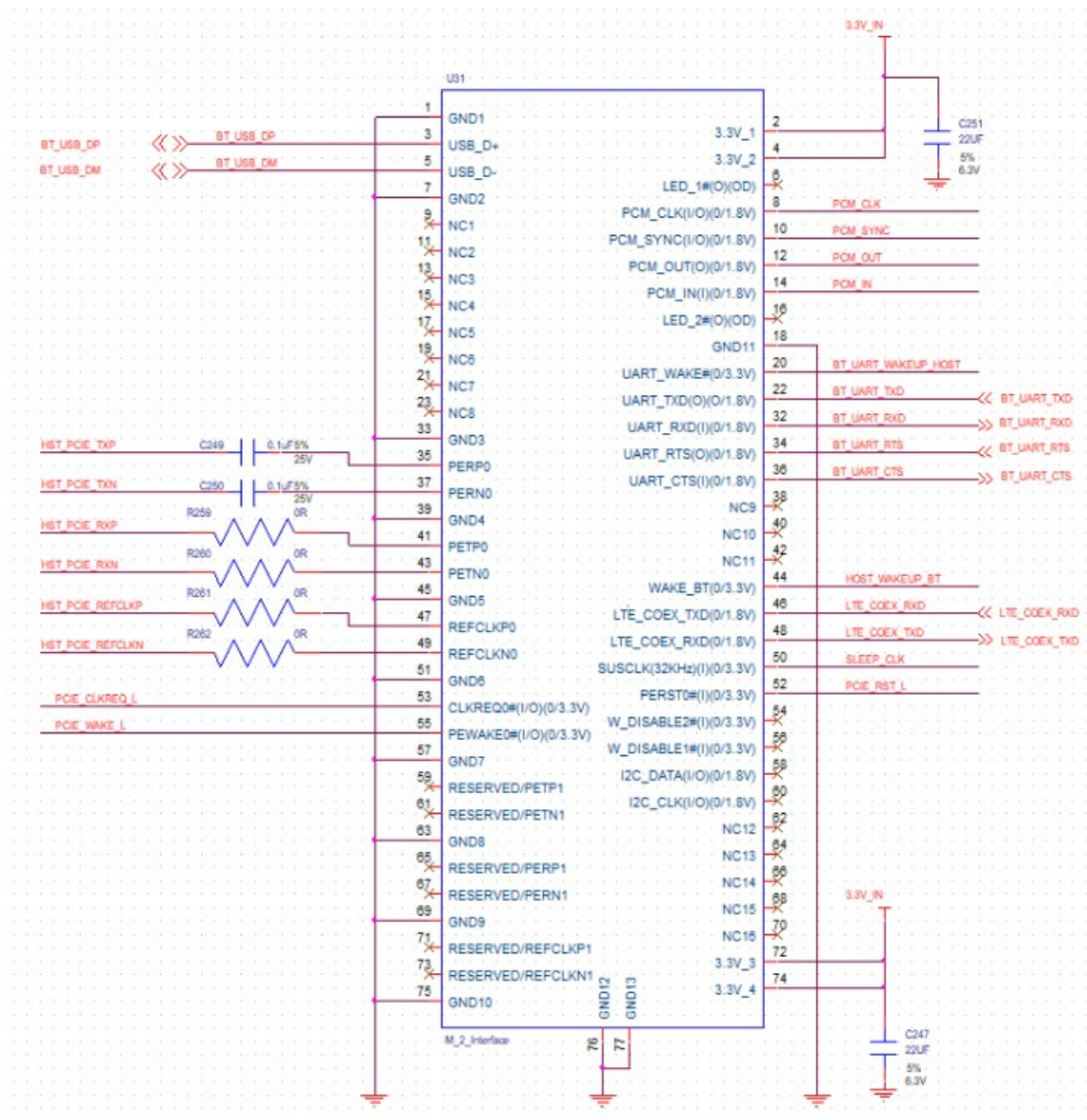
Note

a C247, C251 should be closed to host.

b)The power supply "3.3V_IN" switching noise is less than 100mV and the ripple is less than 30 mV.

c PCIe differential signals should be followed 100 Ohm impedance.

d For the I/O interface voltage, please refer to chapter 5 pin definition.

e For the 1.8V interface, such as PCM, UART and some I/O, if the host voltage level is 3.3V or 5V, need to add level shift circuit.

5.2 External Antenna

When the customer selects an external antenna, the external antenna selected must meet the parameter requirements specified ,Impedance 50Ω

5.3 Real-world Testing

2.4G Real-world Testing					
Protocol Standard		channel	Power (dBm)	EVM(dB)	Rx Sensitivity (dBm)
		2412	15.7	-35.3	-72
		2437	15.9	-35.5	-73

Protocol Standard		channel	Power (dBm)	EVM(dB)	Rx Sensitivity (dBm)
802.11g(54Mps)	ANT0	2472	16.1	-35.1	-73
	ANT1	2412	16.2	-34.2	-73
		2437	16.1	-35.7	-73
		2472	16.4	-34.2	-73
802.11ax(HE20_MCS11)	ANT0	2412	13.6	-38.9	-58
		2437	13.3	-39	-58
		2472	13.8	-39.2	-58
	ANT1	2412	13.9	-37.5	-58
		2437	14.2	-38.7	-58
		2472	13.7	-36.3	-58
802.11ax(HE40_MCS11)	ANT0	2422	12.9	-37.2	-55
		2462	12.8	-37.9	-55
	ANT1	2422	13.2	-37.2	-55
		2462	13.1	-38.9	-55

5G Real-world Testing

Protocol Standard		channel	Power (dBm)	EVM(dB)	Rx Sensitivity (dBm)
802.11a(54Mps)	ANT0	5180	16.9	-33.6	-73
		5500	16.8	-32.9	-73
		5825	16.6	-33.2	-73
	ANT1	5180	16.7	-33.1	-73
		5500	16.6	-33.2	-73
		5825	16.9	-32.9	-73

Protocol Standard		channel	Power (dBm)	EVM(dB)	Rx Sensitivity (dBm)
802.11ax(HE20_MCS11)	ANT0	5180	13.8	-38.6	-59
		5600	13.7	-36.8	-59
		5825	13.1	-38.4	-59
	ANT1	5180	13.8	-38.8	-59
		5600	13.2	-39.4	-59
		5825	13.6	-38.5	-59
802.11ax(HE80_MCS11)	ANT0	5290	12.2	-36.8	-54
		5690	11.8	-37.9	-54
		5775	12.3	-37.1	-54
	ANT1	5290	12.8	-37.4	-54
		5690	12.9	-37.8	-54
		5775	13	-36	-54
802.11ax(HE160_MCS11)	ANT0	5250	11.9	-36.4	-51
		5570	11.6	-36.5	-50
	ANT1	5250	12.2	-37.1	-51
		5570	12.1	-36.6	-51

6G Real-world Testing

Protocol Standard		channel	Power (dBm)	EVM(dB)	Rx Sensitivity (dBm)
	ANT0	6015	14.3	-31.6	-73
		6515	13.4	-33.4	-73
		7115	13.8	-33.6	-73
		6015	14.5	-33	-73

802.11a(54Mps)	ANT1	6515	14.3	-39.7	-73
		7115	13.5	-32.8	-73
802.11ax(HE20_MCS11)	ANT0	6015	13.1	-38.3	-59
		6515	12.5	-38.7	-59
		7115	12	-38.3	-59
	ANT1	6015	12.9	-36.5	-59
		6515	12.1	-40.2	-59
		7115	12.8	-37.1	-59
802.11ax(HE80_MCS11)	ANT0	5985	11.6	-36.9	-54
		6545	11.6	-36.8	-54
		7025	11.1	-37.9	-54
	ANT1	5985	11.6	-37.2	-54
		6545	11.3	-37.2	-53
		7025	11.1	-37.3	-54
802.11ax(HE160_MCS1 1)	ANT0	6025	11.1	-37.2	-51
		6505	11	-37.7	-50
		6985	10.4	-37.4	-50
	ANT1	6025	10.5	-37.6	-51
		6505	10.7	-37	-50
		6985	10.1	-36.2	-50

Host Interface Timing Diagram

6.1 PCIe powerup sequence timing Supports PCIe Gen 3 interface for WLAN.
Compliant to PCIe Gen 3 powerup sequence timing.
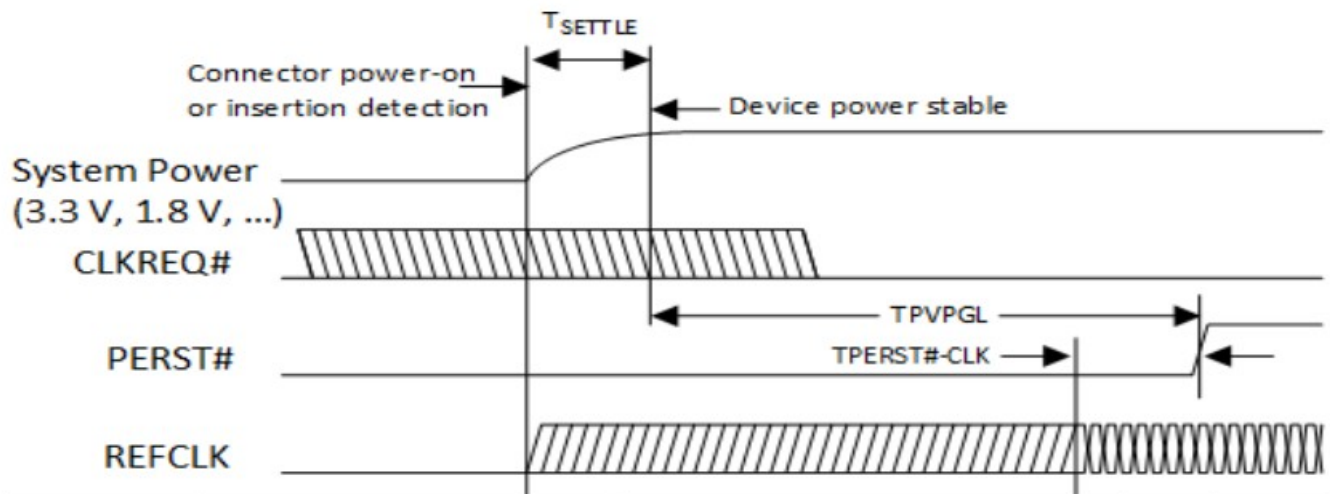
Symbol	Parameter	Min	Max	Units
T_{PVPGL}	Power Valid* to PERST# input inactive	Implementation specific; recommended 50 ms		ms
$T_{PERST\#-CLK}$	REFCLK stable before PERST# inactive	100		µs

Note: *Power Valid when all the voltage supply rails have reached their respective V_{min}.

Package

7.1 Reel

1. Qty:30pcs/laver. 10layers/bag 30layers/carton;
2. The top later used as shield cover without products
3. The two neighboring layers always laid reversely.

30pcs / layer
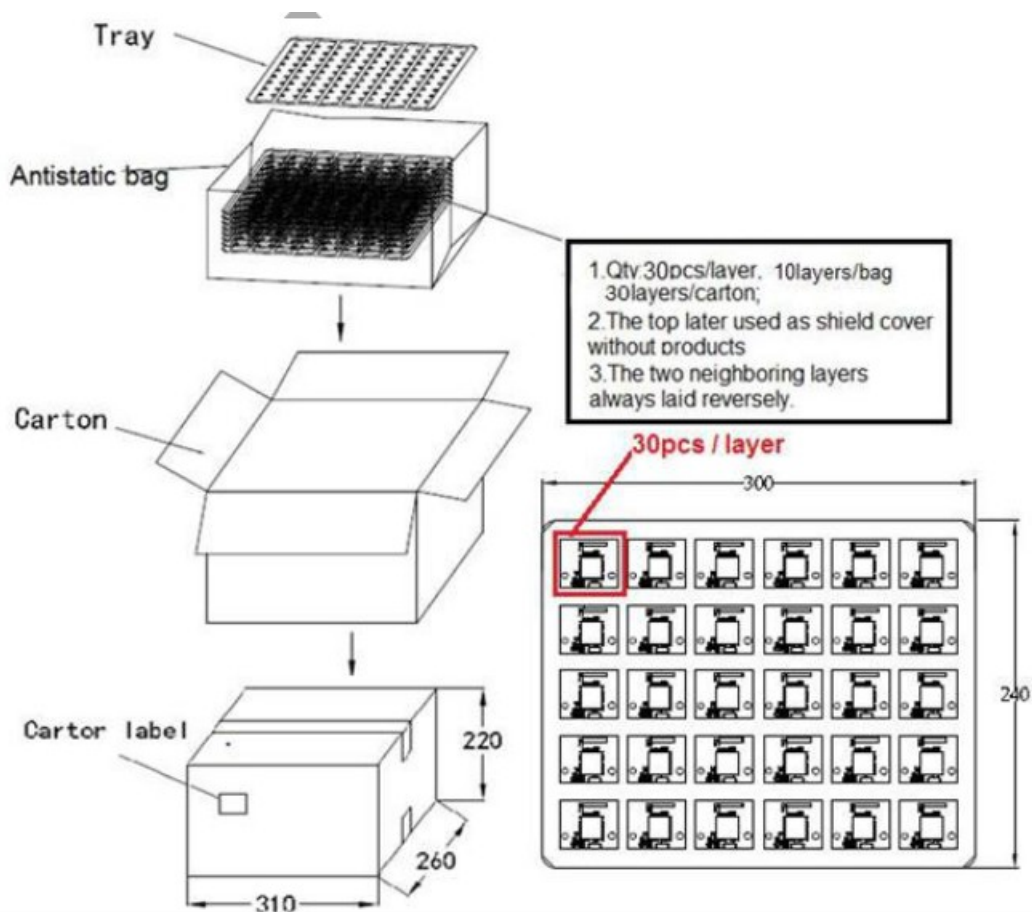
7.2 Storage Temperature And Humidity
The Modules is a Moisture Sensitive Device level 3, in according with standard IPC/JEDEC J-STD-020, take care all the relatives requirements for using this kind of components.
Moreover, the customer has to take care of the following conditions:

a Calculated shelf life in sealed bag: 12 months at <40°C and <90% relative humidity (RH).

b Environmental condition during the production: 30°C / 60% RH according to IPC/JEDEC J-STD-033A paragraph 5.

c The maximum time between the opening of the sealed bag and the reflow process must be 168 hours if condition.

d "IPC/JEDEC J-STD-033A paragraph 5.2" is respected.

e Baking is required if conditions b) or c) are not respected.

f Baking is required if the humidity indicator inside the bag indicates 10% RH or more.

Refer to KDB 996369 D3 section 2

:2.2 List of applicable FCC rules

FCC Part 15.247, FCC Part 15.407

2.6 RF exposure considerations

This equipment complies with the FCC RF 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 and any part of your body.

2.7 Antennas

This product has three external antennas. 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.

No.	Antenna Type	Gain	Impedance
1	External uniqueness Antenna	2400-2500:3.0 dBi	50ohm
2	External uniqueness Antenna	5150-5875: 3.1 dBi	50ohm
3	External uniqueness Antenna	5925-7125: 3.5 dBi	50ohm

2.8 Label and compliance information

Remind end customers to FCC ID label on the final system must be labeled with "Contains FCC ID: 2AT5W-O2066PM" or "Contains transmitter module FCC ID: 2AT5W-O2066PM".

2.9 Information on test modes and additional testing requirements

Contact SHENZHEN OFEIXIN TECHNOLOGY LIMITED will provide stand-alone modular transmitter test mode. Additional testing and certification may be necessary when multiple modules are used in a host.

2.10 Additional testing, Part 15 Subpart B disclaimer

To ensure compliance with all non-transmitter functions the host manufacturer is responsible for ensuring compliance with the module(s) installed and fully operational. For example, if a host was previously authorized as an unintentional radiator under the

Supplier's Declaration of Conformity procedure without a transmitter certified module and a module is added, the host manufacturer is responsible for ensuring that the after the module is installed and operational the host continues to be compliant

with the Part 15B unintentional radiator requirements. Since this may depend on the details of how the module is integrated with the host, SHENZHEN OFEIXIN TECHNOLOGY LIMITED shall provide guidance to the host manufacturer for compliance with

the Part 15B requirements.

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance.

This module certified that complies with RF exposure requirement under mobile or fixed condition, this module is to be installed only in mobile or fixed applications. A separate approval is required for all other operating configurations, including portable

configurations with respect to Part 2.1093 and difference antenna configurations. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

FCC Warning

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.

NOTE 1: This product 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 product 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 product 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 or more 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.

NOTE 2: Any changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE 3: Any modifications made to the module will void the Grant of Certification, this module is limited to OEM installation only and must not be sold to end-users, end-user has no manual instructions to remove or install the device, only software or
operating procedure shall be placed in the end-user operating manual of final products.

NOTE 4: The module may be operated only with the antenna with which it is authorized. Any antenna that is of the same type and of equal or less directional gain as an antenna that is authorized with the intentional radiator may be marketed with, and used with, that intentional radiator.

NOTE 5: For all products market in US, OEM has to limit the operation channels to CH1 to CH11 for 802.11b/g/n-HT20 and CH3 to CH9 for 802.11n-HT40 by supplied firmware programming tool. OEM shall not supply any tool or info to the end-user regarding to Regulatory Domain change.

NOTE 6: The Module be installed in host systems at the factory by the OEM integrator. Operation is subject to the following two conditions:
(1) Prohibited for control of or Communications with unmanned aircraft systems, including drones.
(2) Prohibition on direct connections to the internet (must be via a low-power indoor access point).

Documents / Resources

OFLY COMM O2066PM Wi-Fi Tri-band 2x2 MIMO DBS Bluetooth 5.2 Module [pdf] User Manual
2AT5W-O2066PM, 2AT5WO2066PM, FWAAO2066PM10, FWAAO2066PM20, O2066PM Wi-Fi Tri-band 2x2 MIMO DBS Bluetooth 5.2 Module, O2066PM, Wi-Fi Tri-band 2x2 MIMO DBS Bluetooth 5.2 Module, Tri-band 2x2 MIMO DBS Bluetooth 5.2 Module, 2x2 MIMO DBS Bluetooth 5.2 Module, MIMO DBS Bluetooth 5.2 Module, DBS Bluetooth 5.2 Module, Bluetooth 5.2 Module, Module

References

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