

Component Map



M.2 E Key Slot Pin Assignment

Top side		Bottom side	
1	GND	2	VDD_3V3
3	NC	4	VDD_3V3
5	NC	6	NC
7	GND	8	NC
9	NC	10	NC
11	NC	12	NC
13	NC	14	NC
15	NC	16	NC
17	NC	18	GND
19	NC	20	NC
21	NC	22	NC
23	NC		
Mechanical key E			
33	GND	32	NC
35	PCIE0_TX0_P	34	NC
37	PCIE0_TX0_N	36	NC
39	GND	38	NC
41	PCIE0_RX0_P	40	NC
43	PCIE0_RX0_N	42	NC
45	GND	44	NC
47	REFCLK_P	46	NC
49	REFCLK_N	48	NC
51	GND	50	NC
53	CLKREQ_3V3	52	PERST_3V3
55	WAKE_3V3	54	NC
57	GND	56	WLAN_DISABLE
59	PCIE0_TX1_P	58	NC
61	PCIE0_TX1_N	60	NC
63	GND	62	NC
65	PCIE0_RX1_P	64	NC
67	PCIE0_RX1_N	66	NC
69	GND	68	NC
71	NC	70	NC
73	NC	72	VDD_3V3
75	GND	74	VDD_3V3

Power Requirements

DC Power	3.3V
Power Consumption	8.7W (Max)

WiFi 7 (802.11be) 2x2 Dual Band Dual Concurrent Wireless Module

FCC Statement

§ 15.19 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.

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

§ 15.105 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 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.

Notice to Users in Canada for IC compliance: This equipment complies with the Class B limits for radio noise emissions from digital apparatus as established by the Radio Interference Regulations of Industrial Canada.

FCC Radiation Exposure Statement

The modular can be installed or integrated in mobile or fix devices only. This modular cannot be installed in any portable device, for example, USB dongle like transmitters is forbidden. This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

If simultaneous with other transmitters is required, re-evaluation of RF Exposure is required according to KDB 996369. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

If the FCC identification number is not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module. This exterior label can use wording such as the following: " Contains Transmitter Module FCC ID: TK4WL7002E56 Or Contains FCC ID: TK4WL7002E56 "

When the module is installed inside another Host, the user manual of host must contain below warning statements:

1. 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.
2. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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

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.

The end user manual shall include all required regulatory information/warning as shown in this manual, include: This product must be installed and operated with a minimum distance of 20 cm between the radiator and user body.

The device supports 6ID, 6ID is Indoor use only and is prohibited from being operated on oil platforms, cars, trains, boats, and aircraft, except it can be operated in large aircraft while flying above 10,000 feet in the 5.925-6.425 GHz band.

Transmitters in the 5.925-7.125 GHz band are prohibited from operating to control or communicate with unmanned aircraft systems.

Antenna Type and Gain

The following antennas have been certified for use with this module. Antenna Specification list below:

Antenna No	Antenna Type	Frequency Band (GHz)	Max Antenna Gain (dBi)
1	Omni	5150 ~ 7125	6
2	Omni	5150 ~ 5850	3.98
		5925 ~ 7125	4.53
3	Omni	5150 ~ 5850	4.29
4	Omni	5150 ~ 5850	3.68
		5925 ~ 7125	3.62
5	Omni	5150 ~ 5850	3.51
6	Omni	5150 ~ 5850	3.49

The list of applicable FCC rules:

FCC Part 15 (Section 15.407)

IC Statement

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

IC RF Exposure statement

This equipment complies with IC 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.

L'appareil est conforme aux limites d'exposition au rayonnement IC spécifiées pour les environnements non contrôlés. Lors de l'installation et de l'utilisation de cet appareil, la distance entre le radiateur et le corps doit être d'au moins 20 cm.

LE-LAN devices are restricted to indoor operation only in the band 5150-5250 MHz.
Les appareils LE-LAN sont limités à fonctionner à l'intérieur uniquement dans la bande 5150-5250 MHz.

- Devices shall not be used for control of or communications with unmanned aircraft systems.
 - Devices shall not be used on oil platforms.
 - Devices shall not be used on aircraft, except for the low-power indoor access points, indoor subordinate devices, dual client, low-power client devices, and very low-power devices operating in the 5925-6425 MHz band, that may be used on large aircraft as defined in the Canadian Aviation Regulations, while flying above 3,048 metres (10,000 feet).
 - Devices shall not be used on automobiles.
 - Devices shall not be used on trains.
 - Devices shall not be used on maritime vessels.
 - Devices supports 6ID, 6ID is Indoor use only.
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- Les appareils ne doivent pas être utilisés pour le contrôle ou la communication avec des systèmes d'aéronefs sans pilote.
 - Les appareils ne doivent pas être utilisés sur les plates-formes pétrolières.
 - Les appareils ne doivent pas être utilisés à bord des avions, à l'exception des points d'accès intérieurs à faible consommation, des appareils subordonnés intérieurs, double client, des appareils clients à faible consommation et des appareils à très faible consommation fonctionnant dans la bande 5 925-6 425 MHz, qui peuvent être utilisés sur de grands aéronefs tel que défini dans le Règlement de l'aviation canadien, alors qu'il vole à plus de 3 048 mètres (10 000 pieds).
 - Les appareils ne doivent pas être utilisés sur les automobiles.
 - Les appareils ne doivent pas être utilisés dans les trains.
 - Les appareils ne doivent pas être utilisés sur les navires maritimes.
 - L'appareil prend en charge 6ID, 6ID uniquement pour une utilisation en intérieur.