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# 1.SPECIFICATION

## 1-1 Basic Specification

Item	Contents		
Manufacture	Arcadyan		
Product Name	Wireless LAN Network Module		
FW	ODM	Arcadyan	
	FW spec	Manufacturing Firmware	
Driver/Utility	Driver	No need	
	ODM		
Support Band	Refer wireless spec		
Interface	Item	Type	Number of ports
	Misc.	100 pin connector	1
	Console	4 pin connector	N/A
Supply Voltage	20V/5V		
Power consumption	15.871W		
Dimensions	120 x 75 x 13 mm		
Operating Environment	Temperature	-10~40	Degree C (*Note)
	Humidity	10~90	% (Non Condensing)
Storage Environment	Temperature	-10~70	Degree C
	Humidity	10~80	% (Non Condensing)
Design life time	5 years at 25 Degree C		
Factory location	China		

## 1-2 Certification Verified (Module level)

FCC Parts15B/15C/15E

CE EN 300 328/EN 301 893

EN 301 489-1/-17

## 2. Detail Specification

### 2-1. Product Specification

Items		Contents
RAM	Type	DDR3L
	Width	16bit
	Max. Operating Freq.	1866MHz
	Capacity	2Gb
ROM	Type	NAND Flash

	I/O speed	52MHz			
	Capacity	4GB			
Wired LAN	Number of port	1			
	Connector	Type	Color		
		PIN stick	N/A		
	Chip	Vendor	Chip		
		MAC	Qualcomm	Embedded in IPQ4019	
		PHY	N/A	N/A	
	Standard	10BASE-T/100BASE-TX/1000BASE-TX			
USB	-	Standard	USB3.0/2.0	Host or device	
	-	Bus power	5V	External supply	

### 2-1-1. Connector Specification

Items	Contents
Box header connector	Female 50x2p @CON1

CON1 – 50x2 pin connector

### 2-1-2. Power Consumption

20V\_IN (off in standby mode) :

	3.3V	5V	5V	(Total W)
Peacock	(450mA)			
Peacock FEM X2	(520mA)			
2.4G FEM TX X2		(820mA)		
5G FEM TX X2			(560mA)	
FPGA	(400mA)			
Watt	(4.521W)	(4.1W)	(2.8W)	(11.421W)
Eff	85%	90%	90%	
	(5.32W)	(4.56W)	(3.11W)	(12.99W)

Less than 20W

5V\_IN (AON) :

	1.1V	1.35V	3.3V	5V	(Total W)
IPQ4019	(1609mA)		(283mA)		
SPI NOR			(25mA)		
NAND			(30mA)		
DDR3 RAM		(275mA)			
Other			(200mA)		
2.4G FEM RX X2				(28mA)	
5G FEM RX X2				(30mA)	
CSR8675			(100mA)		
(W/O Loss)	(1.77W)	(0.37W)	(2.02W)	(0.29W)	(4.45W)
Eff	85%	85%	90%	100%	
	(2W)	(0.44W)	(2.24W)	(0.29W)	(4.97W)

Less than 5W

## FCC Statement

### Federal Communication Commission Interference Statement

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 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.

For product available in the USA/Canada market, only channel 1~11 can be operated. Selection of other channels is not possible.

This device is restricted for indoor use.

### **IMPORTANT NOTE:**

#### **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.

**IMPORTANT NOTE:**

This module is intended for OEM integrator. The OEM integrator is responsible for the compliance to all the rules that apply to the product into which this certified RF module is integrated.

Additional testing and certification may be necessary when multiple modules are used.

**USERS MANUAL OF THE END PRODUCT:**

In the users manual of the end product, the end user has to be informed to keep at least 20cm separation with the antenna while this end product is installed and operated. The end user has to be informed that the FCC radio-frequency exposure guidelines for an uncontrolled environment can be satisfied.

The end user has to also be informed that any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate this equipment.

If the labelling area is small than the palm of the hand, then additional FCC part 15.19 statement is required to be available in the users manual: This device complies with Part 15 of 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.

**LABEL OF THE END PRODUCT:**

The final end product must be labeled in a visible area with the following " Contains TX FCC ID: 2ACIX-LWM ".

If the labelling area is larger than the palm of the hand, then the following FCC part 15.19 statement has to also be available on the label: This device complies with Part 15 of 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.

**Antenna List****Antenna Information**

Ant.	Port	Brand	P/N	Antenna Type	Connector	Gain (dBi)		
						WLAN 2.4GHz	WLAN 5GHz	BT
1	1	LUXSHARE ICT	DCIW303	Dipole Antenna	I-PEX	2.02	3.06	-
2	2	LUXSHARE ICT	DCIW303	Dipole Antenna	I-PEX	2.02	-	-
3	1	LUXSHARE ICT	DCIW303	Dipole Antenna	I-PEX	-	3.06	-
4	2	LUXSHARE ICT	DCIW303	Dipole Antenna	I-PEX	-	3.06	-
5	1	LUXSHARE ICT	DCIW303	Dipole Antenna	I-PEX	-	3.06	2.02
6	2	LUXSHARE ICT	DCIW303	Dipole Antenna	I-PEX	-	3.06	-

Note1: The EUT has six antennas.

**IC Statement**

This device complies with Industry Canada's licence-exempt RSSs. 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.*

**For product available in the USA/Canada market, only channel 1~11 can be operated. Selection of other channels is not possible.**

*Pour les produits disponibles aux États-Unis / Canada du marché, seul le canal 1 à 11 peuvent être exploités. Sélection d'autres canaux n'est pas possible.*

This device and its antenna(s) must not be co-located with any other transmitters except in accordance with IC multi-transmitter product procedures.

Referring to the multi-transmitter policy, multiple-transmitter(s) and module(s) can be operated simultaneously without reassessment permissive change.

*Cet appareil et son antenne (s) ne doit pas être co-localisés ou fonctionnement en association avec une autre antenne ou transmetteur.*

This radio transmitter (11946B-LWM) has been approved by Industry Canada to operate with the antenna types listed below with the maximum permissible gain indicated. Antenna types not included in this list,



having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

*Le présent émetteur radio (11946B-LWM) a été approuvé par Industrie Canada pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal d'antenne. Les types d'antenne non inclus dans cette liste, ou dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l'exploitation de l'émetteur.*

Dynamic Frequency Selection (DFS) for devices operating in the bands 5250- 5350 MHz, 5470-5600 MHz and 5650-5725 MHz.

*Sélection dynamique de fréquences (DFS) pour les dispositifs fonctionnant dans les bandes 5250-5350 MHz, 5470-5600 MHz et 5650-5725 MHz.*

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.*

The maximum antenna gain permitted for devices in the bands 5250-5350 MHz and 5470-5725 MHz shall be such that the equipment still complies with the e.i.r.p. limit.

*le gain maximal d'antenne permis pour les dispositifs utilisant les bandes 5250-5350 MHz et 5470-5725 MHz doit se conformer à la limite de p.i.r.e.*

The maximum antenna gain permitted for devices in the band 5725-5850 MHz shall be such that the equipment still complies with the e.i.r.p. limits specified for point-to-point and non-point-to-point operation as appropriate.

*le gain maximal d'antenne permis (pour les dispositifs utilisant la bande 5725-5850 MHz) doit se conformer à la limite de p.i.r.e. spécifiée pour l'exploitation point à point et non point à point,*

*selon le cas.*

For indoor use only.

*Pour une utilisation en intérieur uniquement.*

**IMPORTANT NOTE:**

**IC Radiation Exposure Statement:**

This equipment complies with IC RSS-102 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.

*Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps.*

**IMPORTANT NOTE:**

This module is intended for OEM integrator. The OEM integrator is responsible for the compliance to all the rules that apply to the product into which this certified RF module is integrated.

Additional testing and certification may be necessary when multiple modules are used.

Any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate this equipment.

**USERS MANUAL OF THE END PRODUCT:**

In the users manual of the end product, the end user has to be informed to keep at least 20cm separation with the antenna while this end product is installed and operated. The end user has to be informed that the IC radio-frequency exposure guidelines for an uncontrolled environment can be satisfied.

The end user has to also be informed that any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate this equipment. 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.

**LABEL OF THE END PRODUCT:**

The final end product must be labeled in a visible area with the following " Contains IC: 11946B-LWM ".

The Host Model Number (HMN) must be indicated at any location on the exterior of the end product or product packaging or product literature which shall be available with the end product or online.

This product meets the applicable Industry Canada technical specifications. / Le présent matériel est conforme aux spécifications techniques applicables d'Industrie Canada.

The Ringer Equivalence Number (REN) is an indication of the maximum number of devices allowed to be connected to a telephone interface. The termination of an interface may consist of any combination of devices subject only to the requirement that the sum of the RENs of all the devices not exceed five. / L'indice d'équivalence de la sonnerie (IES) sert à indiquer le nombre maximal de terminaux qui peuvent être raccordés à une interface téléphonique. La terminaison d'une interface peut consister en une combinaison quelconque de dispositifs, à la seule condition que la somme d'indices d'équivalence de la sonnerie de tous les dispositifs n'excède pas cinq.

**Antenna List****Antenna Information**

Ant.	Port	Brand	P/N	Antenna Type	Connector	Gain (dBi)		
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3	1	LUXSHARE ICT	DCIW303	Dipole Antenna	I-PEX	-	3.06	-
4	2	LUXSHARE ICT	DCIW303	Dipole Antenna	I-PEX	-	3.06	-
5	1	LUXSHARE ICT	DCIW303	Dipole Antenna	I-PEX	-	3.06	2.02
6	2	LUXSHARE ICT	DCIW303	Dipole Antenna	I-PEX	-	3.06	-

Note1: The EUT has six antennas.