Delivery Specification

Compal Model Name: 1T8C000002I/1T8C000003I

Arcadyan Model Name: WN8122BTEAC-HF-CP

	Arcadyan		Compal	
Title	Project Manager	Sales	Purchasing	RD
Name	Nia Hsiao	Alvin Yang		
Signature				
Date	2018/06/15	2018/06/15		

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

Document Updates Log

Rev.	Revision Date	Revision Contents	Requested by
V 0.1	09/07/2017	Initial Document	Bill Chang
V 0.2	11/13/2017	Update 2.4G HT40- MCS7 Power setting	Nia Hsiao
V 0.3	01/12/2018	Update 2.4G HT40- MCS7 Power setting & Power Consumption	Sho Tu
V 0.4	03/27/2018	Update Packing Label information	Nia Hsiao
V 0.5	04/10/2018	Update PCB dimension	Nia Hsiao
V 0.6	04/20/2018	Update Compal 2D Barcode Rule & Packing	Nia Hsiao
V 0.7	05/08/2018	Update PCBA photo	Nia Hsiao
V 0.8	06/12/2018	Update Certification Statement, External Antenna List, SN/MAC Label for certification ID, Carton Label for FCC statement	Nia Hsiao

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1. SPECIFICATION

1-1 Basic Specification

Item	Contents			
Manufacture	Arcadyan Technology Corporation			
Arcadyan Part Number		FICCP8122000J		
Product Name	Wireless LAN Network Module			
Chip	SOC		Vendor	Model name
	CPU		None	
	2.4GHz MAC/BB/RF		MediaTek	MT7668AUN
	2.4GHz PA(Tx)		MediaTek	Embedded in MT7668AUN
	2.4GHz LNA(Rx)		MediaTek	Embedded in MT7668AUN
	2.4GHz BPF(Tx/Rx)		ACX	Diplexer:DP1608-A2455D TA2T
			Murata	Diplexer:LFD182G45MJK E484
	5GHz MAC/BB/RF		MediaTek	MT7668AUN
	5GHz PA(Tx)		MediaTek	Embedded in MT7668AUN
	5GHz LNA(Rx)		MediaTek	Embedded in MT7668AUN
	5GHz BPF(TX/Rx)		Used with 2.4G	
FW	ODM		Arcadyan Technology Corporation	
	FW spec		Manufacturing Firmware	
Driver/Utility	Driver		No need	
	ODM			
Support Band	Refer wireless spec			
Interface	Item	Type	Number of ports	
	USB2.0	10 pin connector	1	
Supply Voltage	5V			
Power consumption	2.415W			
Weight(with head think)	TBD			
Dimensions	40mm*46.5mm*9.06mm			
Operating Environment	Temperature		0~70	Degree C
	Humidity		10~90	% (Non Condensing)
Storage Environment	Temperature		-10~75	Degree C
	Humidity		10~90	% (Non Condensing)
Design life time	TBD			
Factory location	China			

1-2 Certification Verified (Module level)

Regulatory/Connectivity/Safety Certification	
Countries and Regions	Regulatory
USA	FCC Part 15B,C,E, (including MPE report)
Canada	RSS-247, RSS-102 and ICES003
BQB	RF.TS.5.0.0 and RF-PHY.TS.5.0.0

2. Detail Specification

2-1. Product Specification

Items		Contents		
WiFi/BT Chip	Vendor	MediaTek		
	Parts number	MT7668AUN		
USB	-	Standard	USB2.0	Client
	-	Bus power	5V	External supply

2-1-1. Connector Specification

Items	Contents
Box header connector	Female 10p @CON8

CON1 – 10 pin connector

Pin NO.	Define
1	WIFI-reset
2	BT_WAKE_HOST
3	GND
4	WoWL
5	GND
6	USB_DM
7	USB_DP
8	SET_PWR
9	BT_IR
10	GPIO_X

2-1-2. Power Consumption

CALCULATED MAX POWER CONSUMPTION				
	Chip Model	Voltage	Current Consumption (mA)	Power consumption (W)
RF	RF IC (2.4G) MT7668AUN	3.3V	495	1.63
	RF IC (5G) MT7668AUN	3.3V	690	2.277
	BT MT7668AUN	3.3V	42	0.138
			Total (W)	2.415

2-1-3. Electrical Characteristics

Absolute maximum rating

Symbol	Parameters	Maximum rating	Unit
VDD33	3.3V Supply Voltage	-0.3 to 3.63	V
VDD18	1.8V Supply Voltage	-0.3 to 3.63	V
T_{STG}	Storage Temperature	-40 to +125	°C
VESD	ESD protection (HBM)	2000	V

Absolute maximum rating

Recommended operating range

Symbol	Rating	MIN	TYP	MAX	Unit
VDD33	3.3V Supply Voltage	2.97	3.3	3.63	V
VDD18	1.8V Supply voltage	1.7	1.8	1.9	V
$T_{AMBIENT}$	Ambient Temperature	-10	-	70	°C

Recommended operating range

3. Notice

3-1-1. ESD protection

ATTENTION: Operators need to wear the antistatic ring when assembled module.

CAUTION: Improper operation without proper prevention for ESD may cause equipment damage.

4. Certification Statement

4-1. 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.

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:

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 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.

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: RAXWN8122B ".

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.

Ant.	Port	Brand	P/N	Antenna Type	Connector	Gain (dBi)			Remark
						WLAN 2.4GHz	WLAN 5GHz	BT	
1	1	arcadyan	-	Printed Antenna	N/A	3.5	4.7	-	Internal antenna
2	2	arcadyan	-	Printed Antenna	N/A	0.8	3.8	-	
3	1	arcadyan	120800060900J	PIFA Antenna	I-PEX	0.1	3.16	-	External antenna
4	2	arcadyan	120800060400J	PIFA Antenna	I-PEX	-0.7	3.25	-	
5	1	arcadyan	120800060300J	PIFA Antenna	I-PEX	-	-	2.04	

4-2. 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 radio transmitter (IC:4711A-WN8122B) 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 (IC:4711A-WN8122B) 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.

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 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.

IMPORTANT NOTE:

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: 4711A-WN8122B". 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.

Ant.	Port	Brand	P/N	Antenna Type	Connector	Gain (dBi)			Remark
						WLAN 2.4GHz	WLAN 5GHz	BT	
1	1	arcadyan	-	Printed Antenna	N/A	3.5	4.7	-	Internal antenna
2	2	arcadyan	-	Printed Antenna	N/A	0.8	3.8	-	
3	1	arcadyan	120800060900J	PIFA Antenna	I-PEX	0.1	3.16	-	External antenna
4	2	arcadyan	120800060400J	PIFA Antenna	I-PEX	-0.7	3.25	-	
5	1	arcadyan	120800060300J	PIFA Antenna	I-PEX	-	-	2.04	