

User Manual

WLAN Module

WN4640R

Liteon P/N : AAZ100136D0

Version 1.0

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Change History

Revision	Date	Author	Change List
Version 1.0	2015 / 06 / 03	Kaysa Lee	Initial release

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1 PRODUCT OVERVIEW

1.1 DESCRIPTION

WN4640R is a WLAN module which using MTK Chipset MT7603U

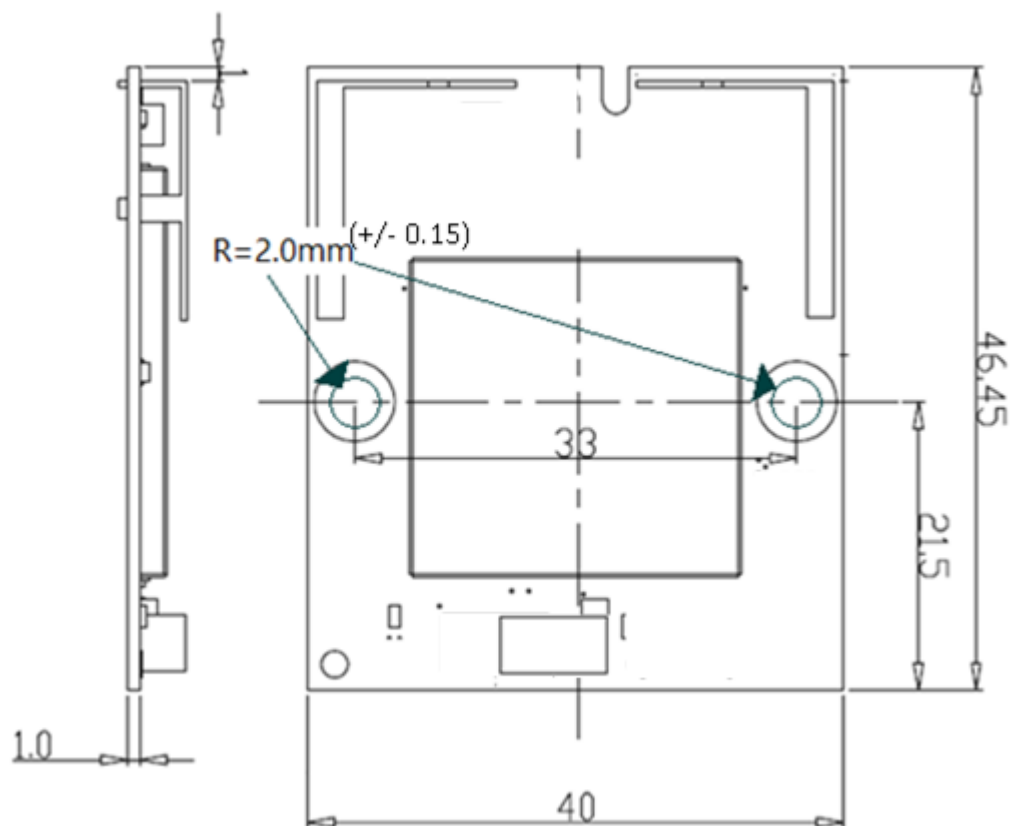
1.2 FEATURES

- Operate at 2.4GHz band
- 150Mbps PHY Rate Support
- 2T2R Modes
- 20MHz Bandwidth Support
- USB 2.0 support for data rates up to 12Mbps full speed and 480Mbps high speed
- IEEE standards support: IEEE 802.11b/g and 802.11n
- 802.11i- WEP 64/128, AES, TKIP
- RoHS compliance
- Low Halogen compliance

1.3 GENERAL SPECIFICATIONS

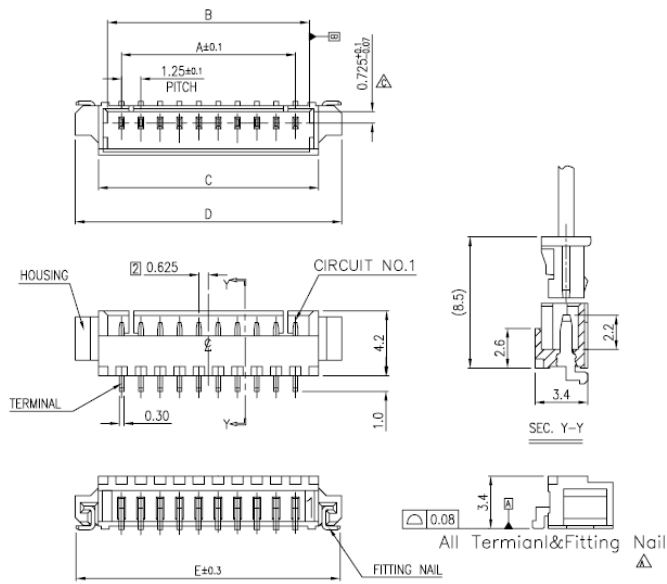
Main Chipset	MT7603U
Standard	IEEE 802.11b/g/n
Bus Interface	USB 2.0
Form Factor	53.8mm x 20mm x 5mm
Weight	4.3g
Data Rate	802.11b: CCK, DQPSK, DBPSK 802.11g: 64QAM, 16QAM, QPSK, BPSK 802.11n: 64QAM, 16QAM, QPSK, BPSK
Frequency Range	2.400 ~ 2.4835 GHz
Receive Sensitivity	11b @ 11Mbps: (Max.) : -85dBm , (Typical) : -91dBm (PER<8%) 11g @ 54Mbps: (Max.) : -69dBm , (Typical) : -77dBm (PER<10%) 11n @ MCS7: (Max.) : -67dBm , (Typical) : -74dBm (PER<10%)
Temperature & Humidity	Normal Test Condition: 25 +/- 2deg.C , 65 +/- 2% RH Operating: -10 to 70 deg.C Storage: -40 to 85 deg.C
Operating Voltage	5V ±10% I/O supply voltage
Antenna Type	On Board Metallic Antenna x 2

1.4 BOARD OUTLINE



Dimension Tolerance : $\pm 0.15\text{mm}$

1.6 WTB CONNECTOR



NOTES:

1. MATERIAL:
HOUSING: HALOGEN FREE PLASTIC, UL94V-0
TERMINAL: COPPER ALLOY
PLATING: "SEE P/N LEGEND"
FITTING NAIL: COPPER ALLOY
PLATING: "SEE P/N LEGEND"
2. APPLY EVEN CIRCUIT PRODUCTS.
3. LOCKING WINDOW: ONE PLACE FOR 2&3 CKTS.
TWO PLACES FOR MORE THAN 4 CKTS.
4. COPLANARITY 0.1 MM MAX. BASE ON DATUM A
5. TRUE POSITION 0.1 MM MAX. BASE ON DATUM B
6. SPEC PLS REFER TO PS-50271-XXXX-XXX.
7. PACKING. PLS. SEE P/N LEGEND

P/N LEGEND
50271-XXX X X-XXX

NO OF CKT

PACKING

0: TAPE & REEL

1: TUBE

PLATING

L: LEAD FREE (PURE TIN)

1: GOLD FLASH OVER ALL

N: MATT TIN

△ C: 15° GOLD ON CONTACT FOR LEAD FREE

XXX	Material&Color	PACKING
001	HF Plastic&Black	85204-XXXX-TRP
J01	HF Plastic&Black	
S01	HF Plastic&Black	85204-XXXX-U-TRP
S02	HF Plastic&Natural	

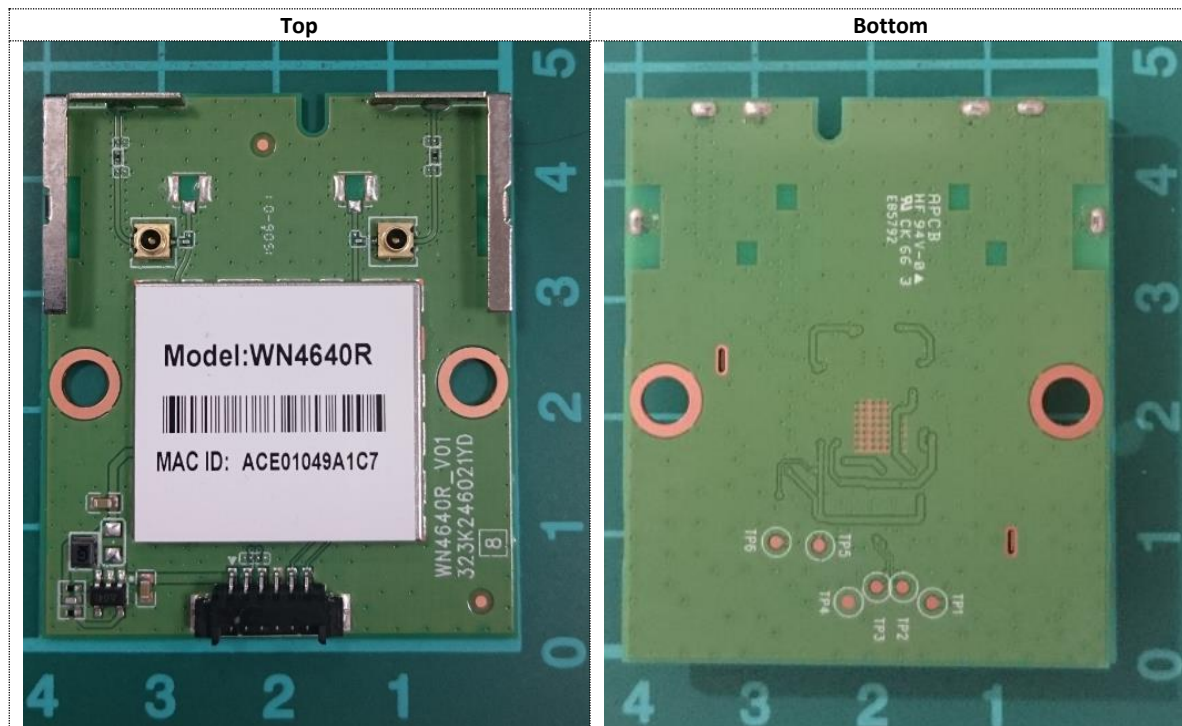
CKT	Dim A	Dim B	Dim C	Dim D	Dim E
2	1.25	3.05	4.25	7.25	7.15
3	2.50	4.30	5.50	8.50	8.40
4	3.75	5.55	6.75	9.75	9.65
5	5.00	6.80	8.00	11.00	10.90
6	6.25	8.05	9.25	12.25	12.15
7	7.50	9.30	10.50	13.50	13.40
8	8.75	10.55	11.75	14.75	14.65

1.7 PIN CONFIGURATION

Pin	Name	Type	Description
1	VCC	-	Ground
2	DM	I/O	USB Data -
3	DP	I/O	USB Data +
4	GND	-	Ground
5	RESET	I/O	LDO_RST_N

2 Appearance, Marking

2.1 Appearance



FCC WARNING STATEMENT

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.

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.

You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

FCC RF Radiation Exposure Statement: 1. This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. 2. This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

Information to OEM integrator

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 manual of the end product. The user manual which is provided by OEM integrators for end users must include the following information in a prominent location.

1. To comply with FCC RF exposure compliance requirements, the antenna used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter, except in accordance with FCC multi-transmitter product transmitter product procedures.
2. Only those antennas with same type and lesser gain filed under this FCC ID number can be used with this device.
3. The regulatory label on the final system must include the statement: “Contains FCC ID: PPQ-WN4640R”.
4. The final system integrator must ensure there is no instruction provided in the user manual or customer documentation indicating how to install or remove the transmitter module except such device has implemented two-ways authentication between module and the host system.

IC WARING STATEMENT

Canada, Industry Canada (IC) Notices

This Class B digital apparatus complies with Canadian ICES-003 and RSS-247.

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.

Canada, avis d'Industry Canada (IC)

Cet appareil numérique de classe B est conforme aux normes canadiennes ICES-003 et RSS-247.

Son fonctionnement est soumis aux deux conditions suivantes : (1) cet appareil ne doit pas causer d'interférence et (2) cet appareil doit accepter toute interférence, notamment les interférences qui peuvent affecter son fonctionnement.

Radio Frequency (RF) Exposure Information

The radiated output power of the Wireless Device is below the Industry Canada (IC) radio frequency exposure limits. The Wireless Device should be used in such a manner such that the potential for human contact during normal operation is minimized.

This device has also been evaluated and shown compliant with the IC RF Exposure limits under mobile exposure conditions. (antennas are greater than 20cm from a person's body).

Informations concernant l'exposition aux fréquences radio (RF)

La puissance de sortie émise par l'appareil de sans fil est inférieure à la limite d'exposition aux fréquences radio d'Industry Canada (IC). Utilisez l'appareil de sans fil de façon à minimiser les contacts humains lors du fonctionnement normal.

Ce périphérique a également été évalué et démontre conforme aux limites d'exposition aux RF d'IC dans des conditions d'exposition à des appareils mobiles (les antennes se situent à moins de 20 cm du corps d'une personne).

NCC Warning Statement**Article 12**

Without permission, any company, firm or user shall not alter the frequency, increase the power, or change the characteristics and functions of the original design of the certified lower power frequency electric machinery.

Article 14

The application of low power frequency electric machineries shall not affect the navigation safety nor interfere a legal communication, if an interference is found, the service will be suspended until improvement is made and the interference no longer exists.