

User Guide

**Single-Band 802.11ac mini-PCle
Wireless LAN Card**

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.

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.

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.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Operations in the 5.15-5.25GHz band are restricted to indoor usage only.

WL960E5 User Guide

This device is intended only for OEM integrators under the following conditions:

- 1) The antenna must be installed such that 20 cm is maintained between the antenna.
- 2) The transmitter module may not be co-located with any other transmitter or antenna.

As long as 2 conditions above are met, further transmitter test will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirements required with this module installed (for example, digital device emissions, PC peripheral requirements, etc.).

IMPORTANT NOTE: In the event that these conditions can not be met (for example certain laptop configurations or co-location with another transmitter), then the FCC authorization is no longer considered valid and the FCC ID can not be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate FCC authorization.

End Product Labeling

This transmitter module is authorized only for use in device where the antenna may be installed such that 20 cm may be maintained between the antenna and users. The final end product must be labeled in a visible area with the following: "Contains TX FCC ID: RK9-WL960E5".

Manual Information to the End User

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's manual of the end product which integrates this module.

The user's manual for OEM integrators must include the following information in a prominent location "IMPORTANT NOTE: To comply with FCC RF exposure compliance requirements. The antenna must not be co-located or operating in conjunction with any other antenna or transmitter.

This radio transmitter FCCID: RK9-WL960E5 has been approved by FCC to operate with the antenna types listed below with the maximum permissible gain and required antenna impedance for each antenna type 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.

Canada-Industry Canada (IC)

Operation is subject to the following two conditions:

This device may not cause interference and this device must accept any interference, including interference that may cause undesired operation of the device.

IMPORTANT NOTE:

IC Radiation Exposure Statement:

This equipment with IC radiation exposure limits set forth for an uncontrolled environment. To maintain compliance with IC RF exposure compliance requirements, please follow operation instruction as documented in this manual.

1. INTRODUCTION

The WL960E5 provides ultra-high performance (up to 1.3Gbps) transmission rate in the 5GHz band (3TX/3RX). Backward compatible with the current 802.11 ac/an/a network devices gives your laptop the freedom of wireless connectivity with the performance, security, and manageability industry standards in the security and quality of service (QoS), as the draft 802.11i and 802.11e standards respectively. The WL960E5 is complemented by drivers and networking tools for various versions of the Windows operating system. Extensive technical documentation on integration issues such as antenna design, customizing driver, and management software can be obtained by request.

Application

- Wireless client cards for desktop PCI Express
- Wireless multimedia
- High performance 11ac access point, router, and DSL gateways that feature the PCIe host interface

PCB Dimension



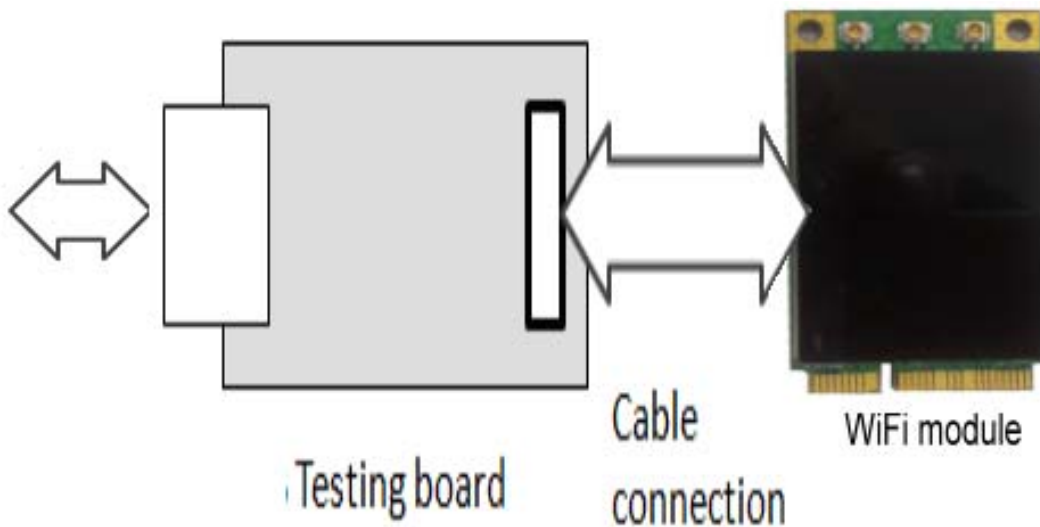
2. INSTALLATION

2.1 Installed in Laptop PC

The Main board of the system should provide a Host connector and Cable connection for wifi module. Please follow the SOP to install & assemble it step by step.

2.2 Testing in Lab

The module is embedded inside Notebook or other Equipment. If for testing purpose, we provide the "Testing Board" in order to let tester connect WL960E5 via the special cable connection to PC externally. The Testing Board provides 3.3V conversion from PC Host. Please plug into any con port on your PC.



After Hardware installation, when system find the new hardware, please install the driver / software correctly.

WL960E5 User Guide

WiFi Functional Specifications

Standards Conformance	IEEE 802.11a, IEEE 802.11an, IEEE802.11ac
Bus Interface	PCI Express
Modulation Techniques	802.11a/an/ac: 64 QAM, 16 QAM, QPSK, BPSK
Network Architecture	WiFi: Ad-hoc mode (Peer-to-Peer) Infrastructure mode
Operating Channels	WiFi 5GHz: 20MHz band width : Ch36, 40, 44, 48,149,153,157,161,165 40MHz band width : Ch38, 46, 151,159
Frequency Range	5.150GHz ~ 5.250GHz 5.725GHz ~ 5.850GHz
Security	WPA, WPA-PSK, WPA2, WPA2-PSK, WEP 64bit & 128bit, IEEE 802.11x, IEEE 802.11i