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# IEEE 802.11b/g/n (2T2R) WLAN Half-size Mini PCIe Module User Manual

**Model:** SWN24EA-0

**Version:** 1.0

**Date:** Nov 24, 2015

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## **1. FCC & IC Statement**

### **1.1. FCC Caution**

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

### **1.2. FCC Radiation Exposure Statement**

#### **IMPORTANT NOTE:**

This equipment complies with FCC radiation exposure limits. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

The device supports the highest gain of antenna is 4.0dBi.

This module is intended for OEM integrator. The OEM integrator is still responsible for the FCC compliance requirement of the end product, which integrates this module

The final end product must be labeled in a visible area with the following" Contains

FCC ID: VZFSWN24EA0



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### 1.3. IC Warning

RSS (Category I Equipment):

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 n' 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.

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada.

*This radio transmitter (identify the device by certification number) 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.* The device supports the highest gain of antenna is 4.0dBi.

Cet émetteur radio (identification de l'appareil par numéro de certification) a été approuvé par Industrie Canada pour fonctionner avec les types d'antenne ci-dessous avec le maximum de gain admissible indiqué. Types d'antenne non inclus dans cette liste, ayant un gain supérieur au gain maximum indiqué pour ce type, sont strictement interdits pour une utilisation avec cet appareil

The device is compliance with RF exposure guidelines, users can obtain Canadian information on RF exposure and compliance. The minimum distance from body to use the device is 20cm.

Le présent appareil est conforme

Après examen de ce matériel aux conformité ou aux limites d'intensité de champ RF, les utilisateurs peuvent sur l'exposition aux radiofréquences et la conformité and compliance d'acquérir les informations correspondantes. La distance minimale du corps à utiliser le dispositif est de 20cm.

Contains transmitter module IC: 10609A-SWN24EA0

where 10609A-SWN24EA0 is the module's certification number.

This module is intended for OEM integrator. The OEM integrator is still responsible for the IC compliance requirement of the end product, which integrates this module

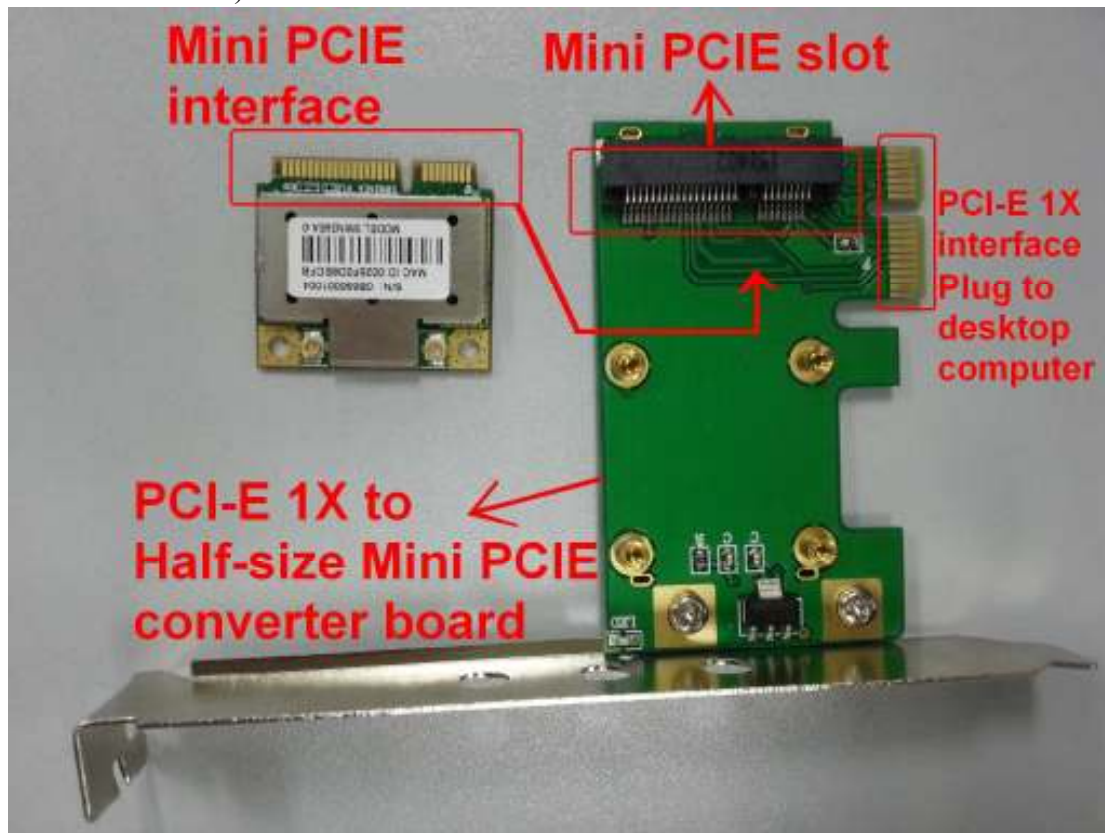
The final end product must be labeled in a visible area with the following” Contains

IC: 10609A-SWN24EA0

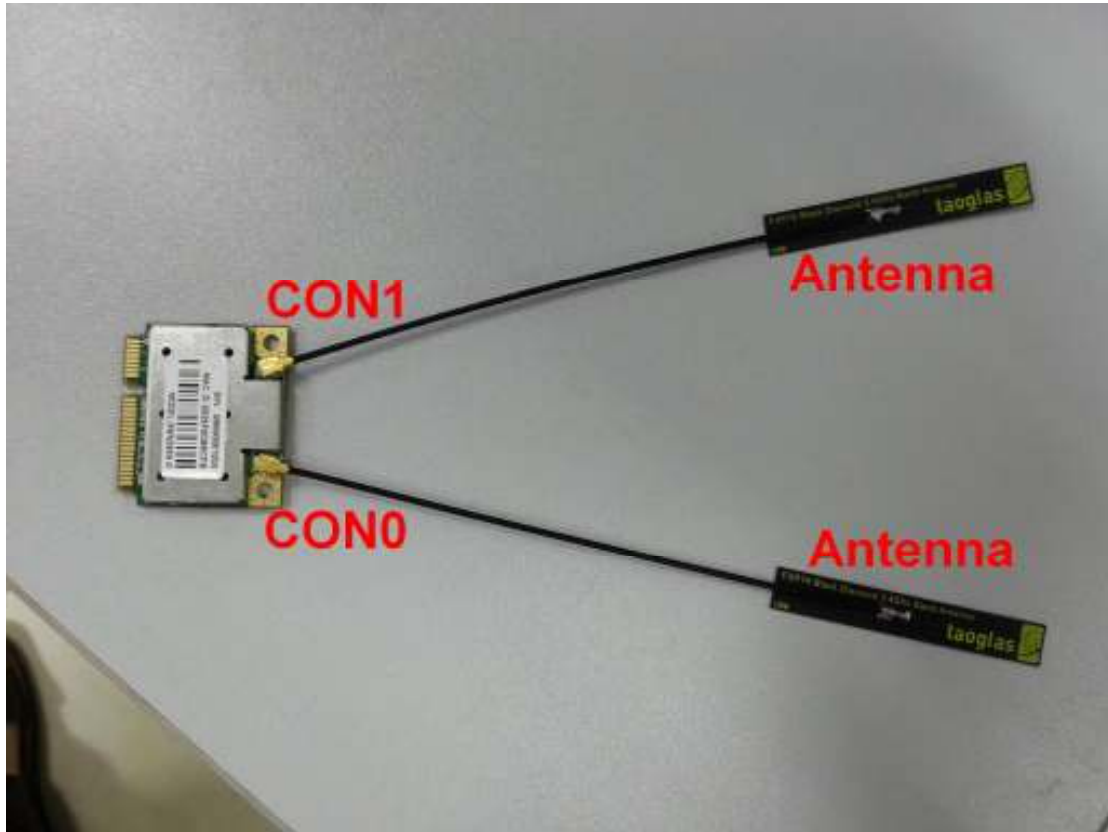
## 2. Hardware Installation

### 2.1. Hardware Installation Procedures

- 2.1.1. Plug SWN24EA-0 module into the mini-PCIE slot of the desktop computer with PCI-E 1X to Half-size Mini PCIE converter board installed, as shown below).



- 2.1.2. Connect one antenna to CON0 port, and connect another antenna to CON1 port, as shown below.



### 3. Software Installation

#### 3.1. STA Linux driver installation

- 3.1.1. The desktop computer must install Linux system (Ubuntu 2.30.2, or above)
- 3.1.2. Install MT7603E STA Linux driver (MT7603-STA-PCI-V3.0.0.0) into the desktop computer, as shown below:

Open the terminal, input below commands:

```
# cd MT7603_wifi/DPA/os/linux  
# sudo insmod mt7603e_sta.ko  
# sudo ifconfig ra0 up
```

**Note:** Do not power off the desktop computer, otherwise, above commands re-input is needed.



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## **4. Example: Associate SWN24EA-0 module with a router for surfing the internet**

### **4.1. Router setting**

Connect the router to internet by WAN

SSID: ODMTEST

Mode: b/g/n mixed mode

Bandwidth: 20/40MHz Auto

Encryption: WPA2PSK/AES

Password: odm0123456789

### **4.2. Associate SWN24EA-0 with the router**

Open the terminal, input below commands:

```
# sudo iwpriv ra0 set NetworkType=Infra
```

```
# sudo iwpriv ra0 set AuthMode=WPA2PSK
```

```
# sudo iwpriv ra0 set EncrypType=AES
```

```
# sudo iwpriv ra0 set SSID=ODMTEST
```

```
# sudo iwpriv ra0 set WPA2PSK=odm0123456789
```

```
# sudo iwpriv ra0 set SSID=ODMTEST
```

```
# sudo ifconfig ra0 192.168.11.3 (IP according to the router LAN IP range )
```

Now you can enjoy your internet surfing.

## **5. Device Labeling**

The host device containing this module must either:

(1). Make the module label visible so that the FCC/IC ID is visible in the end construction.

(2). Label the end product with the FCC ID and IC ID of the module. For example:

“Contain FCC ID: [VZFSWN24EA0](#)” and “Contain IC: [10609A-SWN24EA0](#)”.



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## **6. Disclaimer**

Suga Electronics Limited assumes no responsibility for errors or omissions in the materials available on this Document.

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