



**LG Electronics**

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19-1, Cheongho-ri Jinwi-myeon, Pyeongtaek-si, Gyeonggi-do, 451-713, Korea

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# **PW-MN5275**

## **WLAN Adapter Card**

### **User Guide**

**Version 1.1**

**OCT., 2012**



**LG Electronics**

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19-1, Cheongho-ri Jinwi-myeon, Pyeongtaek-si, Gyeonggi-do, 451-713, Korea

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## Revision History

Release	Date	Revision	Initials
1.1	2012-10-31	First release.	

## STATEMENT and Warning



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.

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

**5150-5250MHz is limited "indoor use only".**

## FCC RF 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.

## IC

This device complies with Industry Canada license-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.

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.

### **French:**

Cet appareil radio est conforme au CNR-210 d'Industrie Canada. L'utilisation de ce dispositif est autorisée seulement aux deux conditions suivantes : (1) il ne doit pas produire de brouillage, et (2) l'utilisateur du dispositif doit être prêt à accepter tout brouillage radioélectrique reçu, même si ce brouillage est susceptible de compromettre le fonctionnement du dispositif.

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.

# Japan

電波法により5GHz帯は屋内使用に限ります。

## NCC

「依據低功率電波輻射性電機管理辦法

第十二條

經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

第十四條

低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。

前項合法通信，指依電信法規定作業之無線電通信。

低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。」

任一平台若裝置本模組，其平台標籤須標示“內建 WiFi 模組 NCC:XXXXXXXXXX”

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

- The antenna must be installed such that 20 cm is maintained between the antenna and users, and
- 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

**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 cannot 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.

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**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 FCC ID: BEJ9QK-DMPWMN5275", "contains IC: 2703H-DMPWMN5275". The grantee's FCC ID can be used only when all FCC/ IC compliance requirements are met.

**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.

# CE

Hereby declares that this WiFi module is in compliance with the essential requirements and other relevant provisions of R&TTE Directive 1999/5/EC. The standards for complying are as following:

ETSI EN 301 489-1 V1.9.2: 2011-09

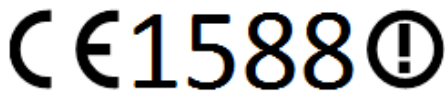
ETSI EN 301 489-17 V2.1.1: 2009-05

ETSI EN 300 328 V1.7.1:2006-10

ETSI EN 301 893 V1.6.1: 2011-11

EN 62311: 2008

EN 60950-1: 2006 +A11:2009



This is a class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

This is a class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

**National Restrictions**

This device is intended for home and office use in all EU countries (and other countries following the EU directive 1999/5/EC) without any limitation except for the countries mentioned below:



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<b>Country</b>	<b>Restriction</b>	<b>Reason/remark</b>
Bulgaria	None	General authorization required for outdoor use and public service
Italy	None	If used outside of own premises, general authorization is required
Luxembourg	None	General authorization required for network and service supply(not for spectrum)
Norway	Implemented	This subsection does not apply for the geographical area within a radius of 20 km from the centre of Ny-Ålesund
Russian Federation	None	Only for indoor applications

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To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that permitted for successful communication.

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## Package Contents

The following items should be found in your package:

- PW-MN5275 WLAN Adapter Card

### Conventions:

The 'Module' mentioned in this user guide stands for PW-MN5275 WLAN Adapter Card without any explanation.



# Chapter 1 Introduction

Thank you for choosing the **PW-MN5275 WLAN Adapter Card!**

## 1.1 Overview of the Product

The module is an IEEE802.11 a/b/g/n client device. It is mainly designed to provide a high-speed and unrivaled wireless performance for wireless embedded system application. With a faster wireless connection, you can get a better Internet experience without the cost of running network cables.

With the 802.11n technology, the PW-MN5275 auto-sensing capability allows high packet transfer rate of up to 300Mbps for maximum throughput. It has good capability on anti-jamming, and it can also interoperate with other wireless (802.11 a/b/g/n) products. The module supports WEP, WPA and WPA2 encryption to prevent outside intrusion and protect your personal information from being exposed.

With unmatched wireless performance, reception, and security protection, it is easily to be used in different kinds of wireless embedded system for its size.

 **Note:**

The PW-MN5275 is designed to be used inside consumer electronic products, such as TV, Blue-Ray, Home Theater, etc.

It's a 2T2R product. So both of the antennas installed on the PCB will be in use at the same time.

## 1.2 Features

- Complies with IEEE802.11a, IEEE802.11b, IEEE802.11g, IEEE802.11n standards
- Supports WPA/WPA2 data security, IEEE802.1x authentication, TKIP/AES encryption, 64/128-bit WEP encryption
- Supports high rate of up to 300Mbps for maximum throughput, supports automatically adjust to lower speeds due to distance or other operating limitations
- Provides USB 2.0 interface
- Good capability on anti-jamming
- Supports roaming between access points when configured in Infrastructure mode
- Ease to configure and provides monitoring information

## Chapter 2 Linux Installation Guide (For Consumer Electronics)

### 2.1 Hardware Installation

For the Consumer Electronics products which use PW-MN5275, it must provide a corresponding connector for the module. After connecting the module to the device, the hardware installation is finished.

### 2.2 Software Installation

For the Consumer Electronics products, the Linux Driver of PW-MN5275 is embedded in default. So the module is a plug and play device. After connecting the module to the device, PW-MN5275 will work well.

### 2.3 Pin Definitions

#### Five-Pin 1.25mm DIP connector

Pin	1	2	3	4	5
Definition	VCC	USB Data-	USB Data+	GND	GND

## Appendix A: Specifications

<b>Normal</b>	
Interface	USB 2.0 Interface
Standards	IEEE802.11a; IEEE802.11b; IEEE802.11g; IEEE802.11n
Operating System	Windows XP, Vista, 7, Linux
Throughput	300Mbps (Max)
Radio Data Rate	11a: up to 54Mbps(Dynamic) 11b: up to 11Mbps (Dynamic) 11g: up to 54Mbps (Dynamic) 11n: up to 300Mbps (Dynamic)
Modulation	11a:OFDM 11b:CCK,QPSK,BPSK 11g:OFDM 11n: QPSK,BPSK,16-QAM,64-QAM
Media Access Protocol	CSMA/CA with ACK
Data Security	WPA/WPA2; 64/128-bit WEP; TKIP/AES
Frequency	2.400 ~ 2.4835GHz 5.15 ~ 5.25GHz (Taiwan is not applicable) 5.725 ~ 5.850GHz
Spread Spectrum	Direct Sequence Spread Spectrum (DSSS)
Safety & Emissions	FCC/ IC/ NCC, CE, Japan

- \* 1. Only 2.412GHz~2.462GHz is allowed to be used in USA, which means only channel 1~11 is available for American users to choose.
2. Rules on the use of 5GHz band channels may vary according to different national laws.

<b>Environmental and Physical</b>	
Operating Temp.	0°C~60°C
Storage Temp.	-20°C ~ 70°C
Humidity	10% ~ 90% RH, Non-condensing
Product Dimensions	45.0* 20.0* 10.7 mm

