

WL-6210-V3

WLAN 11n Module

Manufacturer : PC PCARTNER LTD.

FCC 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 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.

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.

For product available in the USA/Canada market, only channel 1~11 can be operated. Selection of other channels is not possible.

This device and its antenna(s) must not be co-located or operation in conjunction with any other antenna or transmitter.

This device is going to be operated in 5.15~5.25GHz frequency range, it is restricted in indoor environment only.

IMPORTANT NOTE:

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. 20cm minimum distance has to be able to be maintained between the antenna and the users for the host this module is integrated into. Under such configuration, the FCC radiation exposure limits set forth for an population/uncontrolled environment can be satisfied. 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. If the size of the end product is smaller than 8x10cm, then additional FCC part 15.19 statement is required to be available in the users manual: 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: NPFPCPWL6210V3-IP ". If the size of the end product is larger than 8x10cm, then the following FCC part 15.19 statement has to also be available on the label: 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.

Operational Description

Overview

This device is a WLAN 11n dual band USB Client Adapter, which operates in the 2.4G/5GHz ISM band. The system is compliant with IEEE Wireless LAN standards 802.11b/g/n/a.

It uses OFDM technique that the maximum data rate could up to 300Mbps. If the signal to noise ratio is too poor which could not support 300Mbps, the 11Mbps data rate with DSSS technique will be applied.

System Structure

The Wireless LAN network interface controller (RTL8192DU) implements multiple inputs, multiple output (MIMO), orthogonal frequency division multiplexing (OFDM) with 2 transmits and 2 receive paths. It also included two spatial streams transmission, short guard interval of 400ns, spatial spreading, and transmission over 20 MHz and 40 MHz bandwidth. At the receiver, extended range and good minimum sensitivity is achieved by having receiver up to 2 antennas.

The RTL8256 uses a direct conversion /zero-IF architecture. An internal Voltage Controlled Oscillator (VCO) drives the modulator and demodulator. The VCO is phase-locked by an internal 3-wire-interfaced PLL.

The 40MHz crystal oscillator feeds to the RTL8192DU.

The antennas are printed antenna and support antenna connector.

Power Supply

The EUT is powered by 5Vdc from the host equipment.

Features

- 2x2 MIMO technology improves effective throughput and range over existing 802.11 a/b/g products
- Operates in 2.4 and 5 GHz frequency bands

Freq.	Bands	Frequency
2.4 GHz		2.312-2.472 GHz, 2.484 GHz
5 GHz	UNII1	5.18 -5.825 GHz

- Data rates of up to 150 Mbps for 20 MHz channels and 300 Mbps for 40 MHz channels
- 802.11e-compatible bursting
- Support for the IEEE 802.11e, and i standards
- BPSK, QPSK, 16 QAM, 64 QAM, DBPSK, DQPSK, and CCK modulation schemes
- WEP, TKIP, and AES hardware encryption Schemes
- Support soft AP for Windows XP, Vista and Windows 7.

General Specification

Model Name	WL-6210-V3
Product Name	WLAN 11n Dual Band Module
Standard	802.11a/b/g/n
Data Transfer Rate	1,2,5.5,6,11,12,18,22,24,30,36,48,54,60,90,120,180,240,270 and maximum of 300Mbps
Modulation Method	BPSK/ QPSK/ 16-QAM/ 64-QAM/ DBPSK/ DQPSK/ CCK
Frequency Band	2.4GHz and 5GHz ISM Band
Spread Spectrum	IEEE 802.11b: CCK (Complementary Code Keying) IEEE 802.11g/n:OFDM (Orthogonal Frequency Division Multiplexing)
RF Output Power	< 13dBm@11n/11a, < 17dBm@11b, < 15dBm@11g
Operation Mode	Ad hoc, Infrastructure, Soft AP
Receiver Sensitivity	11Mbps -80dBm@8%, 54Mbps -70dBm@10%, 300Mbps -64dBm@10%
Operation Range	Indoor up to 100 meters, Outdoor up to 280 meters
LED	Power
OS Support	Windows XP /Vista /7, Linux
Security	64 bit/128 bit WEP, TKIP, AES, WPA, WPA2 WPS button for easy and secure establishment of a wireless network
Interface	USB 2.0 type A male connector
RF output	RF miniature connectors
Power Consumption	Transmit: around 420 mA Receive: around 280 mA
Operating Temperature	0 - 45° C ambient temperature
Storage Temperature	-10 ~ 70° C ambient temperature
Humidity	5 to 90 % maximum (non-condensing)
Size	55 x 19 mm (L x W)