

**Manual**  
**Unihan UPWL6017SH2**

## 1.General Description

The UPWL6017SH2 wireless module is a fully assembled and tested general-purpose module using the BCM43217KMLG wireless System-on-Chip(SoC). The module contains BCM43217KMLG chip and all other necessary components to operate the UPWL6017SH2.

For detailed information on the UPWL6017SH2 component itself, refer to the UPWL6017SH2 datasheet.

## 2. Features

Features	Description
Network Standard	IEEE 802.11 b/g/n (final n)
Chipset	BCM43217KMLG
Input Voltage	3.3V,5V
Data Rate	802.11b: 1, 2, 5.5, 11Mbps 802.11g: 6, 9, 12, 18, 24, 36, 48, 54Mbps 802.11n-20 MHz: MCS0~MCS15 802.11n-40 MHz: MCS0~MCS15(300Mbps)
Modulation	<b>802.11b:</b> DBPSK(1Mbps),DQPSK(2Mbps),CCK(5.5Mbps,11Mbps) <b>802.11g:</b> BPSK(6Mbps,9Mbps),QPSK(12Mbps,18Mbps), 16QAM(24Mbps,36Mbps),64QAM(48Mbps,54Mbps) <b>802.11n:</b> BPSK(MCS0,MCS8), QPSK(MCS1,MCS2,MCS9,MCS10), 16QAM(MCS3,MCS4,MCS11,MCS12), 64QAM(MCS5,MCS6,MCS7,MCS13,MCS14,MCS15)
Operating Frequency	802.11b/g/n (2412 ~ 2462 MHz)
Operating Channel	1~11 for North America,
Transceiver/Receiver Mode	2T2R Mode

### **3. Benefits**

- Small, self-contained SMT module.
- 2X2 MIMO function support
- High power solution support high speed transmittance

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

### **4. FCC Statement**

#### **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.

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 antennas(s) must not be co-located or operating in conjunction with any other antenna or transmitter except in accordance with FCC multi-transmitter product procedures.

**IMPORTANT NOTE:**

This module is intended for OEM integrator. The OEM integrator is responsible for the compliance to all the rules that apply to the product into which this certified RF module is integrated. Additional testing and certification may be necessary when multiple modules are used.

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: VUIUPWL6031SH2** ". 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.

**5. IC Statement**

CAN ICES-3 (B)/NMB-3(B)

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.

*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 ne 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.*

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

*Pour les produits disponibles aux États-Unis / Canada du marché, seul le canal 1 à 11 peuvent être exploités. Sélection d'autres canaux n'est pas possible.*

This device and its antennas(s) must not be co-located or operating in conjunction with any other antenna or transmitter except in accordance with FCC multi-transmitter product procedures.

*Cet appareil et son antenne (s) ne doit pas être co-localisés ou fonctionner en association avec une autre antenne ou transmetteur.*

The device could automatically discontinue transmission in case of absence of information to transmit, or operational failure. Note that this is not intended to prohibit transmission of control or signaling information or the use of repetitive codes where required by the technology.

*Le dispositif pourrait automatiquement cesser d'émettre en cas d'absence d'informations à transmettre, ou une défaillance opérationnelle. Notez que ce n'est pas l'intention d'interdire la transmission des informations de contrôle ou de signalisation ou l'utilisation de codes répétitifs lorsque requis par la technologie.*

#### **IMPORTANT NOTE:**

##### **IC Radiation Exposure Statement:**

This equipment complies with IC RSS-102 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.

*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.*

#### **IMPORTANT NOTE:**

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.

## 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 IC 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. IC statement is required to be available in the users manual: This Class B digital apparatus complies with Canadian ICES-003. 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 IC : 7582A - UPWL6017SH2** ".

## 6. Antenna information

This radio transmitter(IC: 7582A-UPWL6017SH2) has been approved by Industry Canada 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.

Cet émetteur radio (IC: 7582A-UPWL6017SH2) a été approuvé par Industrie Canada pour fonctionner avec les types d'antennes énumérés ci-dessous avec le gain maximal admissible et nécessaire impédance d'antenne pour chaque type d'antenne indiqué. Types d'antennes ne figurent pas dans cette liste, ayant un gain supérieur au gain maximum indiqué pour ce type, sont strictement interdites pour une utilisation avec cet appareil.

"To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (EIRP) is not more than that required for successful communication"

"This device has been designed to operate with an antenna having a maximum gain of **2.7** dBi. Antenna having a higher gain is strictly prohibited per regulations of Industry Canada. The required antenna impedance is 50 ohms."

«Pour réduire le risque d'interférence avec d'autres utilisateurs, le type d'antenne et son gain doivent être choisis afin que la puissance isotrope rayonnée équivalente (PIRE) ne dépasse pas ce qui est nécessaire pour une communication réussie"

«Ce dispositif a été conçu pour fonctionner avec une antenne ayant un gain maximal de **2.7** dBi. Antenne ayant un gain supérieur sont strictement interdites par la réglementation d'Industrie Canada. L'impédance d'antenne requise est de 50 ohms."

This module card will be sold with two sets of antenna as following table.

### ● HL Technology

Antenna Model	Type	Connector	2400~2483.5MHz
260-26028	PCB	UFL	2.58 dBi
260-26013	PCB	UFL	2.7 dBi

## 7. About this guide

This user guide contains the information your PEGATRON WIFI Module.

## 8. System requirements

Before installing the PEGATRON WIFI module, make sure that your system meets the following requirements:

- Intel® Pentium® 4 or AMD K7/K8 system
- Minimum 64MB system memory
- Windows® XP/VISTA operating system

## 9. Installing the device drivers

To install the device driver in your computer:

Insert the support CD to the optical drive and follow the following procedure.

Step 1



## Step 2



## Step 3



Step 4



Step 5



## Found New Hardware Wizard



### Completing the Found New Hardware Wizard

The wizard has finished installing the software for:



Broadcom 802.11n 網路卡

Click Finish to close the wizard.

< Back

Finish

Cancel