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# Manual For WCH730B

## 1. Introduction

WCH730B is a Wi-Fi / Bluetooth Combo module compliant with IEEE802.11 a/b/g/n/ac MAC/baseband/radio and Bluetooth 4.1+HS optimized for low-power applications.

The core chipset is from Broadcom, part number BCM43569

WCH730B is the 802.11a/b/g/n /ac +Bluetooth 4.1 COMBO Module that acts as a communication controller for users of a wireless device to connect to SMART TV

### - Features

- >IEEE 802.11ac Draft compliant.
- >Dual-band 2.4GHz /5 GHz
- >Dual-stream spatial multiplexing up to 867Mbps data rate
- >Support 20, 40,80MHz channel with optional SGI (256QAM modulation)
- >On-chip power amplifiers and low –noise amplifiers for both bands
- >Complies with Bluetooth Core Specification Version 4.1 + HS
- >Bluetooth Class 1 or 2 transmitter operation.
- >Adaptive frequency hopping (AFH) for reducing radio frequency interference

### - RF Details

#### > Data Modulation

DSSS: CCK, BPSK, QPSK for 802.11b

OFDM: BPSK, QPSK, 16QAM, 64QAM, 256QAM for 802.11a/g/n/ac

FHSS: GFSK, OQPSK, 8DPSK,  $\pi/4$ DPSK for Bluetooth

> Frequency: 2.4 GHz and 5 GHz

> Power: +5V  $\pm$ 5% (+4.75V ~ +5.25V)



### 3. Notice

## Approval Statement

### **CE Statement**

Hereby, we declare that this device is in compliance with the essential requirements and other relevant provisions of directive 1999/5/EC.

### **FCC approval**

This device complies with Part 15 of the FCC's 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 undesirable operation.

To satisfy FCC exterior labeling requirements, the following text must be placed on the exterior of the end product.

**Contains Transmitter module FCC ID: A3LWCH730B**

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.

### **IC approval**

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.

*Cet appareil est conforme avec Industrie Canada exempts de licence standard RSS (s). L'opération est soumise aux deux conditions suivantes:*

- (1) cet appareil ne peut causer d'interférences, et*
- (2) cet appareil doit accepter toute interférence, y compris les interférences qui peuvent causer un mauvais fonctionnement de l'appareil.*

The host device must be labeled to display the Industry Canada certification number of the module.

**Contains transmitter module IC:649E-WCH730B**

*Le dispositif d'accueil doivent être étiquetés pour afficher le numéro de certification d'Industrie Canada du module.*

**Contient module émetteur IC :649E-WCH730B**



## **IMPORTANT NOTE**

This device complies with FCC & IC radiation exposure limits set forth for an uncontrolled environment. This device should be installed and must not be co-located or operating in conjunction with any other antenna or transmitter.

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

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

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 with this module installed. In the event that these conditions cannot be met, then the FCC & IC authorizations are 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 this module and obtaining separate FCC & IC authorizations. And OEM integrator is responsible for a notice about the distance of usage for end users.

*Cet appareil est conforme aux limites de la FCC et IC exposition aux radiations dans un environnement non contrôlé. Cet appareil doit être installé et ne doit pas être co-localisées ou opérant en conjonction avec une autre antenne ou un autre émetteur.*

*Cet appareil est conçu uniquement pour les intégrateurs OEM dans les conditions suivantes :*

- 1 ) L'antenne doit être installée de telle sorte que 20 cm est maintenue entre l'antenne et les utilisateurs .
- 2 ) Ce module ne peut pas être co-localisé avec d'autres émetteurs ou des antennes .

*Aussi longtemps que deux conditions précitées sont remplies, le test du transmetteur supplémentaires ne seront pas tenus. Toutefois, l'intégrateur OEM est toujours responsable de tester leurs produits finis pour toutes les exigences de conformité supplémentaires avec ce module installé.*

*Dans le cas où ces conditions ne peuvent pas être remplies, alors la FCC et IC autorisations ne sont plus considérés comme valides et l'ID de la FCC ne peut pas être utilisé sur le produit final. Dans ces circonstances, l'intégrateur OEM sera responsable de réévaluer le produit final, y compris l'obtention de ce module et séparée de la FCC et IC autorisations*

*Et intégrateur OEM est responsable d'un avis concernant la distance d'utilisation pour les utilisateurs finaux.*

## **User Information**

**Caution:** Any changed or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

**Attention:** *Toute changé ou modifications non expressément approuvés par la partie responsable de la conformité pourraient annuler l'utilisateur `autorité de faire fonctionner cet équipement.*

This device is restricted to indoor use only within the 5.15 ~ 5.25GHz Band.

*Cet appareil est restreint à l'utilisation à l'intérieur seulement dans la bande 5.15 ~ 5.25GHz.*