

# WCN3660 Split Modular Certification

# System Integrator Instructions

PPD-WCN3660 Ver. 1.3

September 19, 2012

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#### **Revision history**

Revision	Date	Description	
Ver. 1.0	October 2011	Initial release	
Ver 1.1	Nov 30, 2011	FCC Feedback: Add section on alternate radio chips/critical components	
Ver 1.2	June 12, 2012	Final Updates	
Ver 1.3	Sept 19, 2012	Added APQ8064 via Permissive Change	

**NOTE:** The Qualcomm Atheros (QCA) reference design split radio module (the "Split Module") is designed for use only in the specific countries in which QCA has obtained certificates of compliance with applicable laws and regulations. Therefore, the Split Module may not be sold, operated or incorporated into products for use in countries other than those for which it is so designated by QCA. *See* Section 5 herein. In addition, any deviation from the settings, methods, conditions and restrictions for integration of the Split Module into a host system, as detailed in this document, could be a violation of applicable national law and may be punishable as such, and in such event the products into which the Split Module is incorporated may not be lawfully distributed or sold in such countries. QCA assumes no responsibility for any liability or loss related to installation, integration or operation of the module.

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# **1** Introduction

This document describes the steps that the System Integrator must follow when designing and manufacturing a system utilizing Split Modular certifications provided by Qualcomm Atheros (QCA). The term "Split Modular Approval" is defined in FCC Rule Section 15.212. *See* 47 C.F.R. § 15.212. This document details limitations on use and the responsibilities of the System Integrator beyond the conditions set out in FCC Rule Section 15.212.

Failure to follow the instructions in this document may invalidate the FCC certification and authorization of the Split Module for use in the U.S. and in other countries.

The QCA Split Module certifications described in this document apply only to radio conformance for the Module. The System Integrator is responsible for all system-level EMI/EMC and Product Safety testing and certification that apply to the host system in the U.S. and other countries where the system will be marketed or sold.

# 2 Applicable Module

- Radio Front End: WCN3660
- Host Processor: APQ8060A or APQ8064
- FCCID: PPD-WCN3660 IC ID: 4104A-WCN3660
- **NOTE:** The System Integrator may not use any versions of the host processor other than those stated above. The split modular approval offered by QCA is valid only when using the above combination of radio front end and host processors. Other combinations of radio front end and processor will require additional conformance testing and thus cannot be used without QCA's authorization.

# 3 Mandatory Design Review of Each End System

Due to the regulatory requirements applicable to split-module designs, QCA only offers modular approval for this product to certain customers and imposes conditions and limitations on the end integrators. To ensure end-system compliance with the applicable regulations, integrators must submit each end system design to QCA for a design review before finalizing the design and before marketing or selling the end product. This design review includes:

- Review of system schematic and layout for adherence to QCA provided layout, keepout areas, antenna matching and trace layout. This design guidance is provided in the separately supplied document: *WCN3660 MoB Design Guidelines 80-WL300-11*.
- Review of antenna spec sheets including placement
- Determination of need for RF testing using the applicable Part 15 test procedures to evaluate the presence of in-band and out-of-band noise introduced by end system into the radio transmit path

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- Depending on the results of above evaluations, QCA may determine that Part 15 radiated conformance testing is required for the end system per FCC permissive change procedures.
- RF Safety Review (per next section)
- NOTE: Design review by QCA is required for every variant (SKU) of the end-system.
- **NOTE:** Integrators must inform QCA if changes to other (non-QCA) radios in the system are planned after original certification is completed. In particular, switching to alternate pin-compatible radio chips or alternate radio front end critical components may impact compliance of the QCA WLAN device and end-system with FCC rules. QCA must be notified of such changes so that impact to FCC compliance can be evaluated for the system.
- **NOTE:** WCN3660/APQ hardware supports FM transmit/receive features which are not included in the scope of the modular approval. Enabling the FM feature requires additional testing and certification submissions.

QCA will use the following criteria during the design review and determine the appropriate level of end-system RF compliance testing before the design is formally accepted for production:

- New end-system designs (*i.e.*, designs not previously launched) require FCC 15.247 & 15.407 radiated conformance testing and a permissive change report prepared by an experienced and competent FCC test lab. Emissions levels (compared to the original QCA split modular certification) will determine if Class 1 or Class 2 procedures applies. Class 2 emissions reports would be submitted at the same time as the SAR permissive change filing.
- End system variants using identical radio, antenna placement, host board design and enclosure as the originally certified end system, will need QCA design review. QCA may determine that partial/limited radiated conformance testing is needed. However, if the design review determines the differences between the previous and new system cannot impact conformance, then QCA may determine new radiated conformance testing is not necessary. Examples are change in memory capacity or camera features. However, the System Integrator is always responsible for ensuring compliance of each end system variant with FCC and global regulatory requirements.

QCA will provide a written response to the System Integrator stating the conclusion of the design review and actions that the System Integrator must take before launching the end system. This may be in the form of an RFP document created by QCA to be provided to a test lab detailing the required permissive change testing and submissions for the new system.

# 4 Antenna Placement inside the Host System and RF Safety

The FCC and other countries' communications regulatory bodies impose strict conditions and limitations on the RF exposure levels of end products. Acceptable RF exposure levels depend on transmit power, the location of the transmitting antenna(s) inside the host system and the expected separation of the transmitting antennas to the end user. System Integrators must take great care to ensure each host system complies with the applicable RF exposure requirements.

- NOTE: QCA requires System Integrators to complete an RF Safety design review of each end system, as noted in Section 3 above.
  - The RF Safety design review will determine what FCC and international RF Safety regulations apply to each end system.
  - Portable category systems (per FCC rules) must undergo FCC Part 15 RF Safety evaluation and Class 2 permissive change filings. This includes WLAN SAR testing and, if applicable, colocation SAR testing of WLAN and WWAN or other applicable transmitters collocated or plugged into the system.
  - QCA will discuss with the System Integrator ownership of the FCC SAR testing and permissive change filings. QCA must review the final SAR test reports prior to their submission to regulatory agencies.
  - QCA also requires design review of any new or modified host systems launched by the System Integrator after original certifications are completed. Additional RF Safety evaluation, testing and/or regulatory filings may be required before such systems may be launched.

Contact your Qualcomm Atheros account representative with any questions regarding compliance of the host system(s) with these instructions.

# 5 Available Global Modular Approvals from Qualcomm Atheros (QCA)

Split Modular certification is limited to those countries for which QCA has obtained radio modular approvals. Integrators can access the current list of certified countries in one of two ways:

1. Log on to the QCA secure customer support site. Follow the links to regulatory certifications.

Search for the folder WCN3660 on the support site.

Or, if you do not have access to the customer support site:

2. Contact your QCA account representative to request access to the country list and modular certificates.

System Integrators must receive their own radio certification for any country in which the system will be sold if a modular certification for that country is not available from QCA.

# 6 Additional Regulatory Conformance Testing and/or Submissions Required by the Integrator

The global modular certifications apply to radio conformance for the Split Module only.

• The System Integrator is responsible for additional system-level EMI/EMC and Product Safety testing and certification that applies in the U.S. and other countries to the host system

containing the Split Module. This includes, but is not limited to, Federal Communications Commission ("FCC") Part 15 Class B Digital Emissions, China CCC, Taiwan BSMI, Korea KC, ETSI EN 301 489-17 and others.

These system-level EMC tests are to be done with the Split Module installed and included in the scope of the submission.

• Some of the countries for which modular certifications are provided require additional submissions, authorizations or import permission by the system-vendor or importer. The integrator is responsible for these additional actions.

By way of example, the System Integrator must take additional action for radio certification in these countries:

Malaysia	Each importer/distributor needs to file for import permission
Singapore	Recommend use of importer's own local radio dealer number
Israel	Additional approval certificate required for importer

Modular radio certification is not possible in some countries. In those cases, system
integrators must ensure radio certification for the end system is obtained, before placing the
product on the market. A current list of applicable countries can be provided by Qualcomm
Atheros.

Please contact your Qualcomm Atheros account representative if you have questions about the additional regulatory conformance testing and/or related submissions.

## 7 Compliant/Allowable Tx Power Settings Programmed into EEPROM

This following file contains the allowable transmit power settings that may be programmed into the Split Module during original manufacturing:

File Name: WCN3660\_CTL

- **NOTE:** Programming in higher values than provided in this file will invalidate all radio certifications for this Split Module.
  - Please contact your QCA account representative to request the file.

## 8 Allowable Antennas For Use with the Radio Module

The Split Module is certified for use only with certain antennas, as described in this section.

**NOTE:** Allowed Antenna Type: Cabled PIFA/monopole with omnidirectional pattern formed from stamped metal or film. PCB/Trace or other integrated antennas soldered directly to host are not included in the scope of modular approval.

#### Table 1 Allowed Peak Gain (dBi), Including Antenna Cable Loss

2.4 GHz	3.6
5.150-5.350 GHz	5.6
5.470-5.7250 GHz	5.3
5.725-5.850 GHz	4.8

**WARNING:** Use of other antenna types or the same type of antenna but with higher gain than listed above is not allowed without additional testing and submission to FCC. Some examples of antenna types not considered the same type as PIFA/monopole are dipole, PCB trace, patch, and chip antennas.

Contact your QCA account representative for additional guidance if you decide to use different antenna types or higher gain antennas in the end product.

# 9 Simultaneous Transmission with Other Integrated or Plug-In Radios

The FCC imposes conditions and limitations when multiple radios are co-located in the same host system as the QCA Split Module *with capability to transmit simultaneously*. All co-located radios must be disclosed by the integrator during the design review described in Section 3 . One example is an integrated or plug in Wireless WAN/cellular radio. Co-located radios require additional evaluation and possibly submission for authorization from the FCC. The requirements and necessary actions by the integrator will be determined during the design review.

**WARNING:** System Integrators may not collocate the QCA Split Module with other radios (both integrated and plug-in type radios) in the end system without prior authorization from QCA. This applies to original system launch as well as later launches of new product variants.

# **10** Required Labeling on the Outside of the Host

NOTE: Explanatory text in red font must not be included in the final label.

## 10.1 FCC

• The FCC requires a label on the outside of the host system visible to the end user. Example wording is:

Contains:	
FCC ID: PPD-WCN3660	
IC ID: 4104A-WCN3660	

- The FCC requires a logo signifying emissions compliance on the outside of the host system.
- **NOTE:** The System Integrator is responsible for performing FCC Part 15 Class B digital emissions testing on the end system with the radio Module installed. The FCC logo below should not be affixed unless the System Integrator has obtained the necessary Part 15 approval, *e.g.*, self-declaration of conformity.

If the host system is approved to FCC Class B digital emissions limits under a grant of certification issued by a TCB, the FCC ID number shown on the grant should be used on the label instead of the FCC logo below.



## 10.2 Taiwan NCC

Taiwan NCC requires a label on the outside of the host system visible to the end user. The required wording is:

本產品內含射頻模組: ⋘ XXXXXXXXXXX

(Replace X's with actual IDs found in section 2).

### 10.3 European Community R&TTE

• The European Community R&TTE Directive requires the CE Marking shown below <u>on the</u> <u>outside of the host AND on the outside of the shipping container/packaging:</u>



 The European Community R&TTE Directive also requires the following note to consumers on the outside of the shipping container/packaging:

Important Notice: This product is a Radio LAN device operating in 2.4 & 5 GHz bands for Home and Office use in the E.E.A. States with restrictive use are highlighted in grey. Refer to user documentation for details.			
AT	BE	СН	CY
CZ	DE	DK	ES
FI	FR	GB	GR
EE	HU	IT	IE
IS	LI	LT	LU
LV	MT	NL	NO
PL	PT	SE	SI
SK			

**NOTE:** The Integrator is expected to translate the text in this Section into the appropriate local languages for the European countries in which the product will be marketed or sold.

# **11 Required Labeling on the Split Module**

#### 11.1 FCC labeling on the Split Module

The System Integrator must ensure that the FCC ID (as indicated in section 2) is affixed on the Split Module along with other country certification numbers and logos as described herein.

The Split Module ODM manufacturer may affix regulatory labeling at time of module manufacturing. However, the PCOEM must ensure the Split Module label is complete, correct and applicable for all countries to which the host system is to be imported, marketed, or sold.

### 11.2 Rest of world labeling on the Split Module

The System Integrator must ensure the Split Module includes a global regulatory label including certification numbers and logos for all target countries. The System Integrator is responsible to confirm the final regulatory label on the radio module contains all required certification IDs for all countries in which the system will be marketed or sold.

Contact your QCA account representative with any questions regarding labeling and the target country list.

Qualcomm Atheros provides sample artwork with the applicable certification numbers for this Split Module. The provided .PDF document can be opened using Adobe Illustrator so the artwork can be copied. The format of the final label produced by the Split Module manufacturer may vary from this sample. However, the logos and certification numbers must be those shown in the sample global label.

# 11.3 Instructions to download the sample global label with certification IDs

1. Log on to the Qualcomm Atheros secure customer support site. Follow the links to regulatory certifications.

NOTE: Search for the folder WCN3660 in the support site.

- 2. Find the folder: Sample Labeling for Module.
- 3. Download the PDF file found in the folder.

OR, if you don't have access to the customer support site, then:

Contact your Qualcomm Atheros account representative to request the Sample Label file.

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# 12 Required Regulatory Wording for User Manual/Installation Manual

The System Integrator must include the text provided below in the end user manual, quick start guide or other user documentation readily available to the user for products sold in the countries listed below.

NOTE: Text in red font must be replaced.

### 12.1 FCC compliance information

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.

This product does not contain any user serviceable components. Any unauthorized product changes or modifications will invalidate warranty and all applicable regulatory certifications and approvals, including authority to operate this device.

FCC Part 15 Digital Emissions Compliance

We **[System Manufacturer Name, Address, Telephone],** declare under our sole responsibility that the product **[System Name]** 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.

WARNING: 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 and radiates 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 the one the receiver is connected to.
- Consult the dealer or an experienced radio/TV technician for help.

The user may find the following booklet prepared by the Federal Communications Commission helpful:

The Interference Handbook

This booklet is available from the U.S. Government Printing Office, Washington, D.C. 20402. Stock No.004-000-00345-4.

Operation in the 5.15-5.25GHz band is restricted to indoor usage only.

### 12.2 Industry Canada notice

This device complies with Industry Canada RSS-210 and 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.

Ce dispositif est conforme à la norme CNR-210 d'Industrie Canada applicable aux appareils radio exempts de licence. Son fonctionnement est sujet aux deux conditions suivantes: (1) le dispositif ne doit pas produire de brouillage préjudiciable, et (2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.

Caution :

(i) the device for operation in the band 5150-5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems;

(ii) the maximum antenna gain permitted for devices in the bands 5250-5350 MHz and 5470-5725 MHz shall comply with the e.i.r.p. limit; and

(iii) the maximum antenna gain permitted for devices in the band 5725-5825 MHz shall comply with the e.i.r.p. limits specified for point-to-point and non point-to-point operation as appropriate.

(iv) Users should also be advised that high-power radars are allocated as primary users (i.e. priority users) of the bands 5250-5350 MHz and 5650-5850 MHz and that these radars could cause interference and/or damage to Wireless LAN devices.

#### Avertissement:

Le guide d'utilisation des dispositifs pour réseaux locaux doit inclure des instructions précises sur les restrictions susmentionnées, notamment :

(i) les dispositifs fonctionnant dans la bande 5 150-5 250 MHz sont réservés uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux;

(ii) le gain maximal d'antenne permis pour les dispositifs utilisant les bandes 5 250-5 350 MHz et 5 470-5 725 MHz doit se conformer à la limite de p.i.r.e.;

(iii) le gain maximal d'antenne permis (pour les dispositifs utilisant la bande 5 725-5 825 MHz) doit se conformer à la limite de p.i.r.e. spécifiée pour l'exploitation point à point et non point à point, selon le cas.

(iv) De plus, les utilisateurs devraient aussi être avisés que les utilisateurs de radars de haute puissance sont désignés utilisateurs principaux (c.-à-d., qu'ils ont la priorité) pour les bandes 5 250-5 350 MHz et 5 650-5 850 MHz et que ces radars pourraient causer du brouillage et/ou des dommages aux dispositifs LAN-EL. (RF exposure statement)

Radiation Exposure Statement:

This product complies with the Canada portable RF exposure limit set forth for an uncontrolled environment and is safe for intended operation as described in the user manual. Further RF exposure reduction can be achieved if the product is kept as far as possible from the user's body.

#### 12.3 European Community (R&TTE) user manual wording and declaration

NOTE: Text in red font must be replaced with name of company responsible for placing the system on the European Community Market.

#### (€. Europe – EU Declaration of Conformity

Marking by the above symbol indicates compliance with the Essential Requirements of the R&TTE Directive of the European Union (1999/5/EC). This equipment meets the following conformance standards:

ය Česky [Czech]	[COMPANY NAME] tímto prohlašuje, že tento Radiolan je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 1999/5/ES.
da Dansk [Danish]	Undertegnede [COMPANY NAME] erklærer herved, at følgende udstyr Radiolan overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF.
de Deutsch [German]	Hiermit erklärt [COMPANY NAME] dass sich das Gerät Radiolan in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 1999/5/EG befindet.
et Eesti [Estonian]	Käesolevaga kinnitab [COMPANY NAME] seadme Radiolan vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.
en English	Hereby, [COMPANY NAME], declares that this Radiolan is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.
Español [Spanish]	Por medio de la presente [COMPANY NAME] declara que el Radiolan cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.
el Ελληνική [Greek]	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ [COMPANY NAME] ΔΗΛΩΝΕΙ ΟΤΙ Radiolan ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/ΕΚ.
fr Français [French]	Par la présente [COMPANY NAME] déclare que l'appareil Radiolan est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE.
Íslenska [Icelandic]	Hér með lýsir <b>[COMPANY NAME]</b> yfir því að Radiolan er í samræmi við grunnkröfur og aðrar kröfur, sem gerðar eru í tilskipun 1999/5/EC.
it Italiano [Italian]	Con la presente [COMPANY NAME] dichiara che questo Radiolan è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.
Latviski [Latvian]	Ar šo <b>[COMPANY NAME]</b> deklarē, ka Radiolan atbilst Direktīvas 1999/5/EK būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.

EN300 328, EN 301 893, EN 301 489-17, EN60950, EN 62311

Lietuvių [Lithuanian]	Šiuo [COMPANY NAME] deklaruoja, kad šis Radiolan atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.
Malti [Maltese]	Hawnhekk, [COMPANY NAME], jiddikjara li dan Radiolan jikkonforma mal-ħtiġijiet essenzjali u ma provvedimenti oħrajn relevanti li hemm fid-Dirrettiva 1999/5/EC.
hu Magyar [Hungarian]	Alulírott, [COMPANY NAME] nyilatkozom, hogy a Radiolan megfelel a vonatkozó alapvető követelményeknek és az 1999/5/EC irányelv egyéb előírásainak.
Nederlands [Dutch]	Hierbij verklaart [COMPANY NAME] dat het toestel Radiolan in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG.
Norsk [Norwegian]	[COMPANY NAME] erklærer herved at utstyret Radiolan er i samsvar med de grunnleggende krav og øvrige relevante krav i direktiv 1999/5/EF.
Polski [Polish]	Niniejszym [COMPANY NAME] oświadcza, że Radiolan jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 1999/5/EC.
Português [Portuguese]	[COMPANY NAME] declara que este Radiolan está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.
রি Slovensko [Slovenian]	<b>[COMPANY NAME]</b> izjavlja, da je ta Radiolan v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES.
Slovensky [Slovak]	[COMPANY NAME] týmto vyhlasuje, že Radiolan spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/ES.
fi Suomi [Finnish]	<b>[COMPANY NAME]</b> vakuuttaa täten että Radiolan tyyppinen laite on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
Svenska [Swedish]	Härmed intygar [COMPANY NAME] att denna Radiolan står I överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.

# Table 2 Restrictions for use of 2.4 GHz frequencies in European Community countries

France:	The outdoor use is limited to 10 mW e.i.r.p. within the band 2454-2483.5 MHz.
Italia:	For private use, a general authorisation is required if WAS/RLAN's are used outside own premises. For public use, a general authorisation is required.

### 12.4 European Community (R&TTE) Declaration of Conformity for System

In addition to including the radio conformity wording described in the previous section in the user manual, the end integrator must also create and sign a European Declaration of Conformity (DoC) for all European Directives applicable to the end product. At a minimum, this will be a DoC per the R&TTE Directive covering Radio, EMC, product Safety and RF Exposure essential requirements. The DoC must reference harmonized standards used for all radios present in the system.

Full details of R&TTE DoC requirements can be found at: http://www.ec.europa.eu/enterprise/sectors/rtte/index en.htm

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An image of the DoC signed by the OEM integrator may be included in the user manual or a link to the DoC on the integrator's company web site should be provided in the user documentation

#### 12.5 Taiwan user manual wording

**NOTE:** For single band modules, the last line (containing 5.25-5.35) should be deleted.

#### Taiwan NCC

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.

在5.25-5.35秭赫(GHz)頻帶內操作之無線資訊傳輸設備,限於室內使用。

#### 12.6 Korea user manual wording

#### Korea KCC

해당 무선설비는 전파혼신 가능성이 있으므로 인명안전과 관련된 서비스는 할 수 없음

# **13 System Integrator Checklist**

The party below will implement the Qualcomm Atheros Split Module in host systems in accordance with the instructions in this document and the documents referenced herein.

 $\Box$  The System Integrator will complete a design review of the each end system with QCA and provide QCA with the documentation and test sample(s) needed to conduct the review.

□ The System Integrator will inform QCA before launching new end system variants so a design review can be completed by QCA.

□ The System Integrator will implement the Split Module using only the approved combinations of RF front end and host processor versions listed in this document.

□ The System Integrator will ensure the Split Module is integrated in a host systems using only the approved antenna model(s) described in this document.

□ The System Integrator will ensure the antenna placement inside the host system will maintain the required spacing to end user for RF Exposure compliance, as specified in this document.

□ If other radios are integrated inside the host with the QCA Split Module, the System Integrator will contact QCA to determine if additional evaluation of FCC compliance is needed to comply with FCC collocation rules.

□ The System Integrator will ensure end user documentation contains the specified regulatory notices and ensure that the host system and Split Module is labeled as specified herein.

□ The System Integrator will ensure the Split Module is programmed in the factory with compliant transmit power not exceeding the levels specified in this document.

Qualcomm Atheros requests that the System Integrator acknowledge its receipt of this document and the above instructions. You may contact Qualcomm Atheros with any questions concerning this document or the responsibilities of the System Integrator.

Company Name	Signature	
Company Address	Name	
	Title	
	Email	
	Phone	
	Date	

**NOTE:** Please email a signed and completed copy of this acknowledgment to moduleinstructions@qualcomm.com.