

# Regulatory Module Integration Instructions

This module has been granted modular approval for mobile applications. OEM integrators for host products may use the module in their final products without additional FCC / IC (Industry Canada) certification if they meet the following conditions. Otherwise, additional FCC / IC approvals must be obtained.

- The host product with the module installed must be evaluated for simultaneous transmission requirements.
- The users manual for the host product must clearly indicate the operating requirements and conditions that must be observed to ensure compliance with current FCC / IC RF exposure guidelines.
- To comply with FCC / IC regulations limiting both maximum RF output power and human exposure to RF radiation, the maximum antenna gain including cable loss in a mobile-only exposure condition must not exceed the following:

## Peak Antenna Gain

Frequency(GHz)	2.4	2.44	2.48	5.2	5.3	5.5	5.6	5.8
Gain(dBi)	2.41	2.81	2.86	5.49	5.57	4.81	4.84	1.99

Antenna Manufacturer: Pulse, Part Number: CW1043

## Antenna Cable Loss

Frequency(GHz)	2.4	2.44	2.48	5.2	5.3	5.5	5.6	5.8
Cable loss	0.9	0.9	0.9	2	2	2	2	2

Cable Manufacturer: Pulse, Part Number: CW9009

- Any device incorporating this module must include an external, visible, permanent marking or label which states:  
Contains FCC ID: VOB-P2180  
Contains IC: 7361A-P2180

The final host / module combination may also need to be evaluated against the FCC Part 15B criteria for unintentional radiators in order to be properly authorized for operation as a Part 15 digital device.

If the final host / module combination is intended for use as a portable device (see classifications below) the host manufacturer is responsible for separate approvals for the SAR requirements from FCC Part 2.1093 and RSS-102.

Note: In the case where the Host / Module combination has been re-certified the FCC ID shall appear in the product manual.

# Device Classifications

Since host devices vary widely with design features and configurations module integrators shall follow the guidelines below regarding device classification and simultaneous transmission, and seek guidance from their preferred regulatory test lab to determine how regulatory guidelines will impact the device compliance. Proactive management of the regulatory process will minimize unexpected schedule delays and costs due to unplanned testing activities.

The module integrator must determine the minimum distance required between their host device and the user's body. The FCC provides device classification definitions to assist in making the correct determination. Note that these classifications are guidelines only; strict adherence to a device classification may not satisfy the regulatory requirement as near-body device design details may vary widely. Your preferred test lab will be able to assist in determining the appropriate device category for your host product and if a KDB or PBA must be submitted to the FCC.

Note, the module you are using has been granted modular approval for mobile applications. Portable applications may require further RF exposure (SAR) evaluations. It is also likely that the host / module combination will need to undergo testing for FCC Part 15 regardless of the device classification. Your preferred test lab will be able to assist in determining the exact tests which are required on the host / module combination.

It is the responsibility of the manufacturer of the final product to verify whether or not further standards, recommendations or directives are in force

## FCC Definitions

**Portable:** (§2.1093) — A portable device is defined as a transmitting device designed to be used so that the radiating structure(s) of the device is / are within 20 centimeters of the body of the user.

**Mobile:** (§2.1091) (b) — A mobile device is defined as a transmitting device designed to be used in other than fixed locations and to generally be used in such a way that a separation distance of at least 20 centimeters is normally maintained between the transmitter's radiating structure(s) and the body of the user or nearby persons. Per §2.1091d(d)(4) In some cases (for example, modular or desktop transmitters), the potential conditions of use of a device may not allow easy classification of that device as either Mobile or Portable. In these cases, applicants are responsible for determining minimum distances for compliance for the intended use and installation of the device based on evaluation of either specific absorption rate (SAR), field strength, or power density, whichever is most appropriate.

# Simultaneous Transmission Evaluation

Any simultaneous transmission condition established through module integration into a host product **must** be evaluated per the requirements in KDB447498 and KDB616217 (for laptop, notebook, netbook, and tablet applications).

These requirements include, but are not limited to:

- Transmitters and modules certified for mobile or portable exposure conditions can be incorporated in mobile host devices without further testing or certification when:
- The closest separation among all simultaneous transmitting antennas is  $\geq 20$  cm,

Or

- Antenna separation distance and MPE compliance requirements for **ALL** simultaneous transmitting antennas have been specified in the application filing of at least one of the certified transmitters within the host device. In addition, when transmitters certified for portable use are incorporated in a mobile host device, the antenna(s) must be  $\geq 5$  cm from all other simultaneous transmitting antennas.
- All antennas in the final product must be at least 20 cm from users and nearby persons.

# OEM Instruction Manual Content

Consistent with §2.909(a), the following text must be included within the user's manual or operator instruction guide for the final commercial product. OEM-specific content is displayed in ***bold-italics***.

## **Operating Requirements and Conditions:**

The design of ***(Product Name)*** complies with U.S. Federal Communications Commission (FCC) guidelines respecting safety levels of radio frequency (RF) exposure for ***(OEM manufacturer to insert device classification: Mobile or Portable)*** devices.

## **FCC ID:**

This product contains FCC ID: ***(Include FCCID of the Module)***

Note: In the case where the Host / Module combination has been re-certified the FCCID shall appear in the product manual as follows:

FCC ID: ***(Include Standalone FCC ID)***

## **Mobile Device RF Exposure Statement (If Applicable):**

RF Radiation Exposure Statement

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

Only those antennas with same type and lesser/equal gain filed under this FCC ID number can be used with this device.

## **Portable Device RF Exposure Statement (If Applicable):**

RF Exposure - This device has been tested for compliance with FCC RF exposure limits in a portable configuration. At least ***(Insert Required Separation Distance from RF Exposure Evaluation)*** cm of separation distance between the ***(Product Name)*** device and the user's body must be maintained at all times. This device must not be used with any other antenna or transmitter that has not been approved to operate in conjunction with this device.

## **Caution Statement for Modifications:**

CAUTION: Any changes or modifications not expressly approved by ***(Company Name)*** could void the user's authority to operate the equipment.

## **FCC Part 15 Statement (Only Include if FCC Part 15 is Required on the End Product):**

Note: This equipment has been tested and found to comply with the limits for a ***(OEM to insert device type: Class A or Class B)*** digital device, pursuant to Part 15 of the FCC Rules.

OEM must follow Part 15 guidelines (§15.105 and §15.19) to determine additional statements required in this section for their device class.

Consistent with Industry Canada RSS\_GEN and RSS-247, the following text must be included within the user's manual or operator instruction guide for the final commercial product. The content must be provided in **both English and French**. OEM-specific content is displayed in **bold-italics**. The content below does NOT contain certified translations.

#### **Operating Requirements and Conditions:**

This radio transmitter (**identify the device by certification number or model number if Category II**) has been approved by Industry Canada to operate with the antenna types listed below with the maximum permissible gain 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.

Le présent émetteur radio (**identifier le dispositif par son numéro de certification**) a été approuvé par Industrie Canada pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal. Les types d'antenne non inclus dans cette liste, et dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l'exploitation de l'émetteur.

#### ***list of all antenna types approved for use with the transmitter, indicating the maximum permissible antenna gain (in dBi).***

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.

les dispositifs fonctionnant dans la bande de 5 150 à 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;

Note: 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 LE-LAN devices.

Remarque: les utilisateurs de radars de haute puissance sont désignés utilisateurs principaux (c.-à-d., qu'ils ont la priorité) des bandes de 5 250 à 5 350 MHz et de 5 650 à 5 850 MHz et ces radars pourraient causer du brouillage et/ou des dommages aux dispositifs de RL-EL.

#### **IC ID:**

This product Contains IC: (**Include IC ID of the Module**)

Note: In the case where the Host / Module combination has been re-certified the ID shall appear in the product manual as follows:

IC: (**Include Standalone IC ID**)

**Mobile Device RF Exposure Statement (If Applicable):**

## RF Radiation Exposure Statement

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

## Déclaration d'exposition aux radiations:

Cet appareil est conforme aux limites d'exposition aux rayonnements définies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé à une distance minimale de 20 centimètres entre le radiateur et votre corps.

**Portable Device RF Exposure Statement (If Applicable):**

## RF Radiation Exposure Statement

This device has been tested for compliance with IC RSS 102 RF exposure limits in a portable configuration. At least ***(Insert Required Separation Distance from RF Exposure Evaluation)*** cm of separation distance between the radiating elements and the user's body must be maintained at all times. This device must not be used with any other antenna or transmitter that has not been approved to operate in conjunction with this device.

## Déclaration d'exposition aux radiations:

Ce dispositif a été testé pour la conformité avec IC RSS 102 limites d'exposition aux RF dans une configuration portable. Au moins ***(Insérer requis Séparation Distance de RF évaluation de l'exposition)*** cm de distance de séparation entre les éléments rayonnants et le corps de l'utilisateur doit être maintenu en tout temps. Ce dispositif ne doit pas être utilisé avec une autre antenne ou émetteur qui n'a pas été approuvé pour fonctionner en combinaison avec cet appareil.

**IC RSS-Gen Statement:**

This device complies with Industry Canada's licence-exempt RSSs.. 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;
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.