

# USER MANUAL

IEEE802.11a/b/g/n/ac  
Wireless LAN module

Model Name : TNPA6600

Version : 1.0  
1, Feb , 2018

**Panasonic Corporation**

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# 1. PRODUCT OVERVIEW

## 1.1 DESCRIPTION

TNPA6600 is a IEEE802.11a/b/g/n/ac wireless LAN module using chipset MT7618BUN.

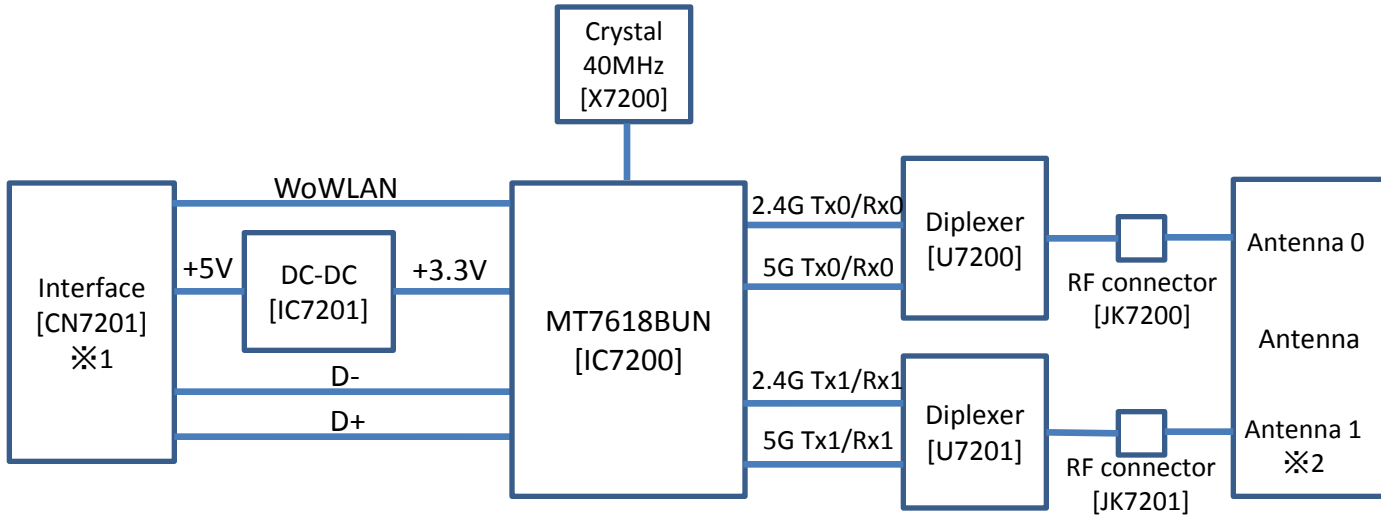
## 1.2 GENERAL SPECIFICATIONS

Main Chipset	MT7618BUN
Standard	IEEE802.11a/b/g/n/ac
TX/RX	2TX , 2RX
Frequency Range	2400 – 2483MHz 5150 – 5350MHz 5470 – 5725MHz 5725 – 5850MHz
Maximum Data Rate	802.11b : 11Mbps 802.11g : 54Mbps 802.11a : 54Mbps 802.11n : 300Mbps 802.11ac : 866.7Mbps
Operating Temperature	0 – 60°C
Operating Voltage	5V DC ±10%
Antenna Type	Printed Antenna

## 1.3 CERTIFICATION ID

FCC	ACJ-TNPA6600
IC	216A-TNPA6600
TELEC	003-170109
JATE	D170061003

## 1.3 BLOCK DIAGRAM



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Frequency range (Antenna 0) : 2.412~2.462 GHz, 5180~5825MHz  
Frequency range (Antenna 1) : 2.412~2.462 GHz, 5180~5825MHz

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This interface is only used for test measurement or to connect mainboard.  
This is not to support general equipment like PC or Notebook PC.

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## 2. PRECAUTIONS

The following limits are in place regarding the usage of this module. You must be aware of these limits before using this module. Panasonic will in no way be responsible for any incidental damage which may arise due to a failure to obey these limits, or to any condition of use or disuse of this module.

- Data transmitted and received over radio waves may be intercepted and monitored.
- This module contains delicate electric components.

Please use this module in the manner in which it was intended and Follow the following points.

- Do not expose this module to high temperatures or direct sunlight.
- Do not bend, or subject this module to strong impacts.
- Keep this module away from moisture.
- Do not disassemble or alter this module in any way.

**FCC Statement**

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.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: 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.

Important Note:

**Radiation Exposure Statement**

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

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Country Code selection feature to be disabled for products marketed to the US/Canada.

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

As long as the three conditions above are met, further transmitter testing will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirements required with this module installed.

**Important Note:**

In the event that these conditions cannot be met (for example certain laptop configurations or co-location with another transmitter), then the FCC authorization is 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 the transmitter) and obtaining a separate FCC authorization.

**End Product Labeling:**

The final end product must be labeled in a visible area with the following "Contains FCC ID: ACJ-TNPA6600"

**Manual Information to the End User:**

The OEM integrator has to be aware not provide information to the end user regarding how to install or remove this RF module in the user's manual of the end product which integrates this module.

The end user manual shall include all required regulatory information/warning as show in this manual.

### **ISED Statement**

- English: 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. The digital apparatus complies with Canadian CAN ICES-3 (B)/NMB-3 (B).

- French: 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.

This radio transmitter (ISED certification number: 216A-TNPA6600) has been approved by Industry Canada to operate with the maximum permissible gain indicated. Strictly prohibited for use with this device with maximum antenna gain.

Le présent émetteur radio (ISED certification number: 216A-TNPA6600) a été approuvée par Industrie Canada pour fonctionner avec le gain maximal indiqué. Strictement interdite pour utilisation avec ce dispositif avec le maximum de gain d'antenne.

### **Radiation Exposure Statement**

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

### **Déclaration d'exposition aux radiations**

Cet équipement est conforme Canada limites d'exposition aux radiations dans un environnement non contrôlé. Cet équipement doit être installé et utilisé à distance minimum de 20 cm entre le radiateur et votre corps.

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

The transmitter module may not be co-located with any other transmitter or antenna.

As long as the condition above is 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 required with this module installed.

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

Le module émetteur peut ne pas être co-implanté avec un autre émetteur ou antenne.

Tant que les 1 condition ci-dessus sont remplies, des essais supplémentaires sur l'émetteur ne seront pas nécessaires. Toutefois, l'intégrateur OEM est toujours responsable des essais sur son produit final pour toutes exigences de conformité supplémentaires requis pour ce module installé.

### **Important Note:**

In the event that these conditions cannot be met (for example certain laptop configurations or co-location with another transmitter), then the Canada authorization is no longer considered valid and the IC cannot be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate Canada authorization.

### **Note Importante:**

Dans le cas où ces conditions ne peuvent être satisfaites (par exemple pour certaines configurations d'ordinateur portable ou de certaines co-localisation avec un autre émetteur), l'autorisation du Canada n'est plus considérée comme valide et l'IC ne peut pas être utilisé sur le produit final. Dans ces circonstances, l'intégrateur OEM sera chargé de réévaluer le produit final (y compris l'émetteur) et l'obtention d'une autorisation distincte au Canada.

### **End Product Labeling**

The final end product must be labeled in a visible area with the following: Contains IC:216A-TNPA6600.

**Plaque signalétique du produit final**

Le produit final doit être étiqueté dans un endroit visible avec l'inscriptions suivante: Contient des IC:216A-TNPA6600.

**Manual Information to the End User**

The OEM integrator has to be aware not to provide information to the end user regarding how to install or remove this RF module in the user's manual of the end product which integrates this module.

The end user manual shall include all required regulatory information/warning as show in this manual.

**Manuel d'information à l'utilisateur final**

L'intégrateur OEM doit être conscient de ne pas fournir des informations à l'utilisateur final quant à la façon d'installer ou de supprimer ce module RF dans le manuel de l'utilisateur du produit final qui intègre ce module.

Le manuel de l'utilisateur final doit inclure toutes les informations réglementaires requises et avertissements comme indiqué dans ce manuel.

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) For devices with detachable antenna(s), the maximum antenna gain permitted for devices in the bands 5250-5350 MHz and 5470-5725 MHz shall be such that the equipment still complies with the EIRP limit;
- (iii) For devices with detachable antenna(s), the maximum antenna gain permitted for devices in the band 5725-5850 MHz shall be such that the equipment still complies with the EIRP limits specified for point-to-point and non-point-to-point operation as appropriate; and operations in the 5.25-5.35GHz band are restricted to indoor usage only.

**Avertissement:**

- (i) les dispositifs fonctionnant dans la bande de 5150 à 5250 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) pour les dispositifs munis d'antennes amovibles, le gain maximal d'antenne permis pour les dispositifs utilisant les bandes de 5250 à 5350 MHz et de 5470 à 5725 MHz doit être conforme à la limite de la p.i.r.e.;
- (iii) pour les dispositifs munis d'antennes amovibles, le gain maximal d'antenne permis (pour les dispositifs utilisant la bande de 5725 à 5850 MHz) doit être conforme à la limite de la p.i.r.e. spécifiée pour l'exploitation point à point et l'exploitation non point à point, selon le cas; Les opérations dans la bande de 5.25-5.35GHz sont limitées à un usage intérieur seulement.