

17 JULY 2016

Model: TNET210

User Manual

Rev 1.0

Module description

The TNET210A is a RF module to be inserted in Telematics Wireless streetlight control products. The TNET210A can be configured to be a gateway or a node in Telematics Wireless propriety mesh network.



LED indicators

Tx mode D2 red LED is lit when transmitting data.

Rx mode D1 green LED is lit when receiving mode is enable.

RF Specification

Frequency band	902-928MHz
Modulation	2GFSK
Output power	27dBm max
Bit Rate	110kbps

Power consumption

Tx mode 420mA, 3.6V

Rx mode 40mA, 3.6V

Physical description

Dimension LxWxH 52.5x28.3x8.6 mm

Weight 10 gram

Environment

Operating Temperature -40 to +85deg.C

Certifications

Radio 47CFR FCC Part 15 subpart C section 15.247/RSS-247

EMC 47CFR FCC Part 15 subpart B / RSS-Gen issue 4, ICES-003 Issue 6

Antenna Specification

Frequency range 902-928MHz

Gain +2dBi

Polarization Vertical

Impedance 50 ohm

VSWR 2:1

Radiation omni directional

Regulatory Information

FCC Part 15 Regulation Class B device

The digital circuit of this device 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.

Industry Canada Class B Notice

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.

FCC interference Notice

This device complies with part 15 of the FCC rules. 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.

FCC and Industry Canada Radiation Hazard Warning

The antenna used for this transmitter must be installed to normally provide minimum separation distance of at least 20 cm from all persons.

Le dispositif doit être placé à une distance d'au moins 20 cm à partir de toutes les personnes au cours de son fonctionnement normal. Les antennes utilisées pour ce produit ne doivent pas être situées ou exploitées conjointement avec une autre antenne ou transmetteur.

Requirements for the antenna with regards to FCC/IC compliance

This radio transmitter (IC:4732A-T210A) 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 (IC:4732A-T210A) 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.

Antenna manufacturer	Model no.	Gain
V.torch	VTGSMA-70	2dBi

OEM Integrators Notices

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

- 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 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 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 or authorization.

End Product Labeling

This transmitter module is authorized only for use in device where the antenna may be installed such that 20 cm may be maintained between the antenna and users (for example: wireless AP, wireless Router).

The final end product must be labeled in a visible area with the following: "Contains TX FCC ID:NTAT210A; IC:4732A-T210A".

OEM Manual Information That Must be Included

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 users manual of the end product which integrate this module.

The users manual for OEM integrators must include the following information in a prominent location:

"**IMPORTANT NOTE:** To comply with FCC RF exposure compliance requirements, the antenna used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter."

Installation Instruction

Warning: The user and Installer should be aware that changes or modifications to this equipment not expressly approved by Telematics Wireless could void warranty and the user's authority to operate the equipment.

Professionally trained personnel should install the equipment.

Installation in DCU2 PRO E host

1. Connect the TNET 210 module on board



2. Connect the SOM on board.



3. Close the internal cover of the DCU2 PRO E.



4. Close the external cover of the DCU2 PRO E.



5. The DCU2 must be equipped with a permanently affixed label showing the module identification as follows:

Contains:

FCC ID:NTAT210A

IC:4732A-T210A