

# **Intelligent Vehicle Network Gateway**

**TN-IVS-8000**

**User Manual**

Zhejiang Third Net Technology Co., Ltd



## 1. Product profiles

TN-IVS-8000 is an intelligent vehicle network gateway produced by Zhejiang Third Net Technology Co., Ltd. With multiple functions it supports 3G/4G mobile networks, WIFI network , GPS and multimedia center. Data exchanging between mobile and WIFI networks can let customer using WIFI to browse website in the bus. Build in multimedia center provides plenty of films, music, magazines, games, advertising and also other information.

The combination of GPS and mobile network provides a powerful management function, such as real time tracking, remote managing, scheduling, first aid, video monitoring, emergency alarm push and so on.

As special designed for the vehicle, the equipment has strong anti vibration, surge protection and power protection abilities.

## 2. Product Specifications

### 2.1. Hardware

Device size: length / width / height (mm) 235 / 191 / 46

### 2.2. Front panel

Composed of 6 parts

A) Ethernet interface : 5 interfaces, 1 WAN; 4 LAN

B) SD card slot

C) SIM card slot

D) One USB interface

E) A reset push button

\* SD and SIM slots are covered by a plastic plate to prevent loss

### 2.3. Rear panel

A) A power connector

B) 5 antenna connectors

a) 1 GPS connector

b) 2 WIFI connectors

c) 2 of 3G/4G connectors

## 3. Installation

3.1. Equipment is in power down statement

3.2. Open the plastic plate to insert SIM card and SD card ( if needed)

3.3. Connect 4G , WIFI and GPS antennas

3.4. Connect power cable, the voltage is 9-36V

3.5. Connect Ethernet cable (if needed)

3.6. Install the equipment to the bus ( see installation manual)

4. Start up

4.1. Turn on power, when 2 LEDs are light , the equipment has been working well

4.2. Check WIFI hot spots, find the SSID of “ IVS8000-i” ( i : 1 ~ n)

4.3. Log in the hot sport ( currently no password required),

4.4. Web browsing

5. Antenna

5.1. 4G Antenna manufacturer,type,and Electrical Characteristics

manufacturer :Shanghai Roadeo Technology Co., Ltd.

Part number : LTE\_PM800W1\_J1M

Electrical Characteristics

1	Frequence Range	FDD LTE:B1/B3 TDD LTE:B38/B39/B40/B41 TDSCDMA:B34/B392400-2500MHz WCDMA:B1 CDMA2000 1x/EVDO:BC0 GSM:900/1800MHz
2	V.S.W.R	2:1
3	Impedance	50 ohm
4	Gain(Typical)	1dBi @FDD LTE:B1/B3 1 dBi @TDD LTE:B38/B39/B40/B41 1 dBi @TDSCDMA:B34/B392400-2500MHz

		1 dBi @WCDMA:B1 1 dBi @CDMA2000 1x/EVDO:BC0 1 dBi @GSM:900/1800MHz
5	Azimuth	Omni-direction
6	Polarization	Linear polarization

## 5.2. 2.4G Wifi Antenna manufacturer,type,and Electrical Characteristics

manufacturer :Shanghai Roadeo Technology Co., Ltd.

Part number : WIFI\_PM900W1\_J5M

Electrical Characteristics:

1	Frequence Range	WIFI:2400-2500MHz
2	V.S.W.R	2:1
3	Impedance	50 ohm
4	Gain(Typical)	3 dBi
5	Azimuth	Omni-direction
6	Polarization	Linear polarization

## 5.3. GPS Antenna manufacturer,type,and Electrical Characteristics

manufacturer :Shanghai Roadeo Technology Co., Ltd.

Part number : DAM1575A4A1LC01\_G3\_J1M

Electrical Characteristics

1	Frequency Range	1575.42MHz $\pm$ 1.02 MHz
2	V.S.W.R	1.5:1
3	Impedance	50 ohm
4	Gain(Typical)	5dBic Based on 7 $\times$ 7cm ground plane
5	Band Width	> 10 MHz
6	Polarization	RHCP

## 6. Safety warning

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.

**FCC**

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

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.

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.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm

between the radiator & your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

## IC

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 aux CNR exempts de licence d'Industrie Canada. Le fonctionnement est soumis aux deux conditions suivantes:

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

The device meets the exemption from the routine evaluation limits in section 2.5 of RSS 102 and compliance with RSS-102 RF exposure, users can obtain Canadian information on RF exposure and compliance.

Le dispositif rencontre l'exemption des limites courantes d'évaluation dans la section 2.5 de RSS 102 et la conformité à l'exposition de RSS-102 rf, utilisateurs peut obtenir l'information canadienne sur l'exposition et la conformité de rf.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body. Cet émetteur ne doit pas être Co-placé ou ne fonctionnant en même temps qu'aucune autre antenne ou émetteur. Cet équipement devrait être installé et actionné avec une distance minimum de 20 centimètres entre le radiateur et votre corps.

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.