

Guangzhou ITS Communication Equipment Co., Ltd

Address: No.5, Huangfeng Road, Yonghe Development Zone, Luogang,
Guangzhou

Postal code

Service hotline

Fax

Website

Electronic label

User manual

Guangzhou ITS Communication Equipment Co., Ltd

Warranty card

User information			
User name			
User address			
Telephone		Contact person	
Product model		Product number	
Purchasing date		Invoice no.	
Servicing history			
No.	Date	Record	Servicing personnel and unit
1			
2			
3			
4			
5			
6			

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Special instruction

- This product was issued by Guangdong combined electronic tolling holdings co.,ltd as specified in <Guangdong expressway network tolling management method> and applied for Guangdong expressway network tolling.
- This product is only used for expressway with available automatic tolling function. Expressway with available automatic tolling function has been marked with “automatic tolling driveway” at driveway.
- This product must be used together with Pass card to perform automatic tolling without parking.



Automatic tolling service marking (white text with green base)

Only for automatic tolling vehicle

Automatic tolling driveway marking (black text with yellow base)

Note: Automatic tolling driveway is possibly marked with stop sign to prohibit other non-automatic tolling vehicles from driving-in, those vehicles with electronic label are not limited but allowed to pass.

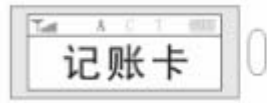
Warranty service

- When electronic label is unavailable or can not be used normally, please turn to pass card serving center for examination and repair.
- Warranty card shall be taken care by user, invoice will be used as evidence of warranty, if missing, no allow to re-deliver.
- From the date user purchased this product (based on the date of invoice), we will provide one year warranty period under normal condition.
- We will provide serving after warranty period is due.

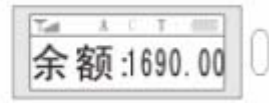
Non-warranty **condition:**

- Those products disassembled or repaired in servicing point not authorized by manufacturer
- Malfunction of products resulted from incorrect operation, flood, fire hazard, earthquake, or thunder and etc. earthquake, or thunder and etc.
- For non-warranty products, user service center of manufacturer may provide servicing.

3. When insert IC card, green indicator flashes one time, LCD displays “A account card” (account card) or “A balance” (value card), the character “A” indicates battery low-voltage alarm of electronic label.



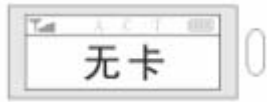
Account card



Value card

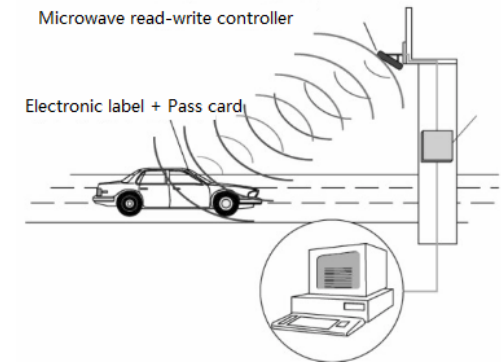
(Tip) the above display means low capacity of battery, if this case occurs for many times, please turn to the user service center for examination and repair.

4. When normal passing or IC card insertion, red indicator flashes, LCD displays “no card”



No card

(tip) the above display means electronic label can not read card correctly, Please confirm your card and re-insert it, if this case occurs again, please turn to the user service center for examination and repair.



Introduction of automatic tolling system

Integrated with electronic, microwave communication, and computer network technique, the automatic tolling system comprises two portions: microwave read-write controller and electronic label.

It adopts 5.8GHz microwave-band special short-distance communication technique integrated with high-safety financial CPU card (pass card) so as to realize tolling mode of “two-sheet type electronic label plus double-interface CPU card”, i.e. when vehicles enter automatic tolling driveway, vehicle-carried electronic label is intercommunicated with microwave read-write controller to perform information exchange between road network and vehicle, thereby automatically finishing tolling without parking.

- Vehicle enters automatic tolling driveway, floor-sensing winding is actuated and system automatically starts the microwave read-write controller to emit microwave signal continuously, awaiting to communicate with electronic label.
- Vehicle-carried electronic label detects the microwave signal, electronic label is activated and starts to communicate with microwave read-write controller

- Microwave read-write controller transfers data of electronic label and Pass card to driveway controller to verify the validity of electronic label and Pass card, after successful verification, process the acquired data and write entrance information or perform deduction.
- After write entrance information or perform deduction, driveway toll display board shows relevant information, indicator becomes green, driveway guardrail is lifted to release vehicles.
- Microwave read-write controller is closed and driveway controller transfers the traded data to the central control system by network.

Note:

- This product is mainly used for ETC tolling system and never intended for other purpose.
- Once product is installed, never disassemble it by yourself, if disassembled It will be failure
- It should prevent product from being immersed in water or electric shock or compulsory damage, otherwise it will result in failure.
- Never be intended to destroy, decode, counterfeit, re-change, tamper or other means to damage this product.
- The battery of product is consumable and never charged, if the following cases occur, the battery may occur overheating, fire hazard or explosion:
 - 1) Thrown into fire, extruded, pressurized, collided or charged.
 - 2) Battery is short-circuited
- The IC card mated with this product is provided with Guangdong combined holding co., ltd
- Before using the electronic label, please read this user manual carefully.

Fault display information

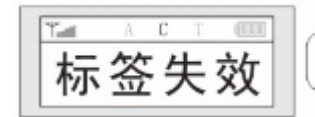
1. When vehicles are not in communication area, insert IC card, red indicator flashes one time, LCD displays “C label failure”, then green indicator flashes one time LCD displays “C account card” or “C balance”



Account card



Balance



Label failure

tip: this display means electronic label failure due to being disassembled, turn to the user service center for examination and repair.

2. When vehicles passes communication area, insert IC card, red indicator flashes one time, LCD displays “C account card” or “C balance” (value card), driveway system does not lift guardrail, vehicle cannot pass.



Account card



Value card

tip: this display means electronic label can not perform normal trading due to vehicle interference or trading system failure, please turn to walkway, if this fault occurs continuously, turn to the user service center for Electronic tolling examination and repair.

Normal display information

1. When vehicles are not in communication area, insert IC card, if it is account card, green indicator flashes one time, LCD displays “account card”, if it is value card, green indicator flashes one time, LCD displays “balance”



Account card



Value card

2. When vehicle passes communication area, perform normal trading If it is account card, buzzer of electronic label sounds one time, green Indicator flashes one time, LCD displays “account card”, if it is value card, buzzer of electronic label sounds one time, LCD displays “balance”



Account card



Value card

Product name
Two-sheet type
electronic label

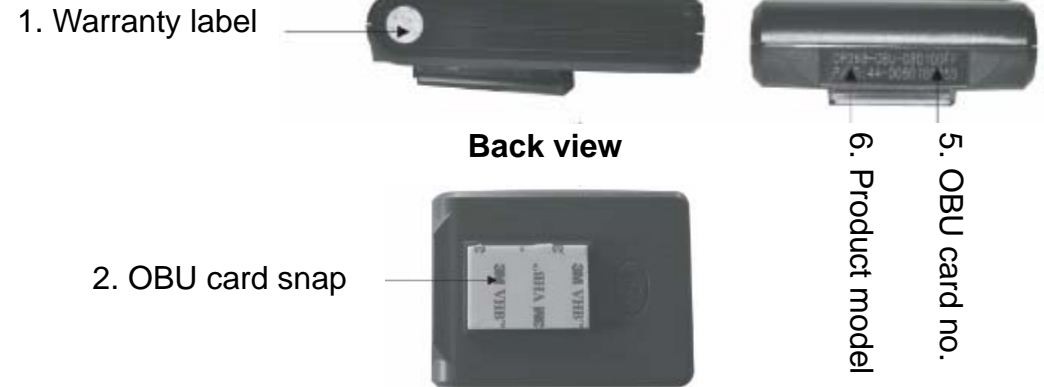
Product model
DP268-A

Product outline
(right figure)

Front view



Side view



Back view

2. OBU card snap

Part description

1. LCD: displays operation information, trading information, card insertion error information and etc during use.
2. IC card socket: guides the IC card insertion for user
3. Red indicator: indicates operation, trading, wrong information and etc. during use
4. Green indicator: indicates operation, trading, wrong information and etc. during use
5. Enclosure: for product assembly.

Technical specification

Mechanical characteristic	
Physical size	86mmx70mmx20mm
Weight	80g
Installation method	vehicle windshield inside
Electrical characteristic	
Power consumption	static current<2 μ A operation current<5mA
Battery capacity	3.6V/1200mAH
Typical trading time	≤CPU card electronic-wallet method
Environmental characteristic	
Operation temperature	-40℃~+70℃
Operation humidity	30%-85%

Installation requirement of electronic label

1. Before installation of electronic label, clean the installation position inside vehicle with alcohol, and then wipe with dry cloth or paper to ensure installation position clean, after installation, never disassemble by yourself, or electronic label will be failure and unable to pass automatic tolling driveway
2. Electronic label must be installed according to installation standard, electronic label is a special equipment and has specific particularity Improper installation position and method has large impact on application effect, so that passing rate is reduced and even vehicle can not pass.

or during use insert and pull pass card with excessive force, so as to result in failure due to looseness of electronic label.

◆ “your balance is insufficient” reminder

Operation method: turn to manual tolling driveway for cash tolling possible cause: pass card has insufficient balance to pay for this pass

◆ “card-write failure” prompt

Operation method: back a vehicle to allow electronic label to re-trade or turn to manual tolling driveway possible cause: communication link is interfered

◆ “overpass”

Operation method: back a vehicle for above 10m, wait 5s to re-drive into driveway or turn to manual tolling driveway.

Possible cause: vehicle speed is too rapid and vehicle top exceeds guardrail.

◆ "please insert card" prompt

Operation method: insert pass card into electronic label

Possible cause:

◎ Pass card is not inserted or is not inserted properly, judgment method refers to "normal display information" and "fault display information"

◎ Pass card or electronic label is damaged, judgment method refers to "normal display information" and "fault display information"

◆ "entrance unavailable" prompt

Operation method:

Turn to manual tolling driveway

Possible cause: user swipe your card with manual method, but data occurs error or card is not swiped successfully

◆ "vehicle model unavailable"

Operation method: turn to manual tolling driveway to swipe pass card

Possible cause: user swipe your card with manual method, but data is inputted incorrectly

◆ "Illegal disassembly of electronic label" prompt Operation method: turn to manual tolling driveway to swipe pass card, please refer to "fault display information".

Special windshield processing:

High-density metal ion distributed in explosion-proof film can eliminate or obstruct the interactive transfer of microwave signal between equipments, so that electronic label can not be used normally and vehicles are unable to pass automatic tolling driveway.

When windshield of vehicle has explosion-proof film but pre-retain "microwave clerestory" area (no explosion-proof film partially), electronic label shall be installed at proper position in this area.

For vehicles with windshield covered entirely or later added with explosion-proof film, particular processing shall be performed, explosion-proof film shall be cut to have "rectangular window" at proper position according to installation criteria, electronic label is installed in this window.

Using method:

User can select automatic tolling driveway or manual tolling driveway to pass the entrance and exit of expressway

I. Selecting automatic tolling driveway

1. Before user enter the automatic tolling driveway, correctly insert pass card into electronic label according to the arrow direction, ensuring pass card has sufficient toll.

2. When a tick sound from electronic label is heard by user, Toll display board shows information, driveway light shows green, driveway guardrail is lifted automatically, user can drive to pass.

Note: when passing automatic tolling driveway, the following rules must be followed in order to ensure vehicles smooth and safe.

- ◆ Compliance to the specification on driveway speed-limit sign vehicle speed shall not exceed 30kilometer/h
- ◆ Compliance to “one rail, one vehicle”, vehicle can drive into automatic tolling driveway only after its front vehicle has passed and guardrail comes down completely, 5-10m distance shall be kept between two vehicles.
- ◆ Please do not use mobile phone or other high-radiation strong-interference electronic products.

II. Selecting manual tolling driveway

1. When user drives into manual tolling driveway at the entrance, hand the pass card to toll collector to swipe, after finish operation, toll collector returns it to user, when user inserts pass card into electronic label, electronic label emits two ticks, while LCD shows “entrance written” marking at right side it means pass card is swiped successfully, entrance information has written into pass card, user can drive to pass only after guardrail is opened.

If not showing above marking, it means unsuccessful card swiping, it is required to re-swipe card by user.

2. When user drives into manual tolling driveway at the exit, hand the pass card to toll collector to swipe, after finish operation, toll collector returns it to user, user inserts pass card into electronic label, user can drive to pass only after guardrail is opened.

Note: For above two ways, when red indicator of electronic label becomes on, do not insert pass card, if you have inserted by mistake, pull it out and wait red indicator goes out, then re-insert it into electronic label.

FCC STATEMENT

1. 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.
- (2) This device must accept any interference received, including interference that may cause undesired operation.

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

Troubleshooting

1. When user want to pass the automatic tolling driveway at the entrance and exit, driveway system shows red signal or guardrail is not lifted due to malfunction, user should follow the direction of toll collector to turn to manual tolling driveway.
2. When toll station closes the automatic tolling driveway at the entrance and exit of expressway, electronic label can not be used, user shall turn to manual tolling driveway.
3. if trading is unsuccessful and user can not pass, please watch the display board at the left of driveway, perform corresponding operation according to the following:

- ◆ “no electronic label” prompt

Operation method: back a vehicle for 5-10m, wait 5s and then re-drive into automatic tolling driveway or turn to manual tolling driveway.

Possible cause:

- ◎ Vehicle drives into driveway too fast or too slow so as to exceed or not enter communication range.
- ◎ When the front vehicle has no electronic label, it turns to manual tolling driveway, at this time if the vehicle with electronic label is too close to its front vehicle, driving to driveway system is not to be processed. (it is suggested keeping above 5m distance between two vehicles when entering driveway)
- ◎ Electronic label is damaged, refer to “fault display Information

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.

RF warning statement:

The device has been evaluated to meet general RF exposure requirement.

The device can be used in portable exposure condition without restriction.