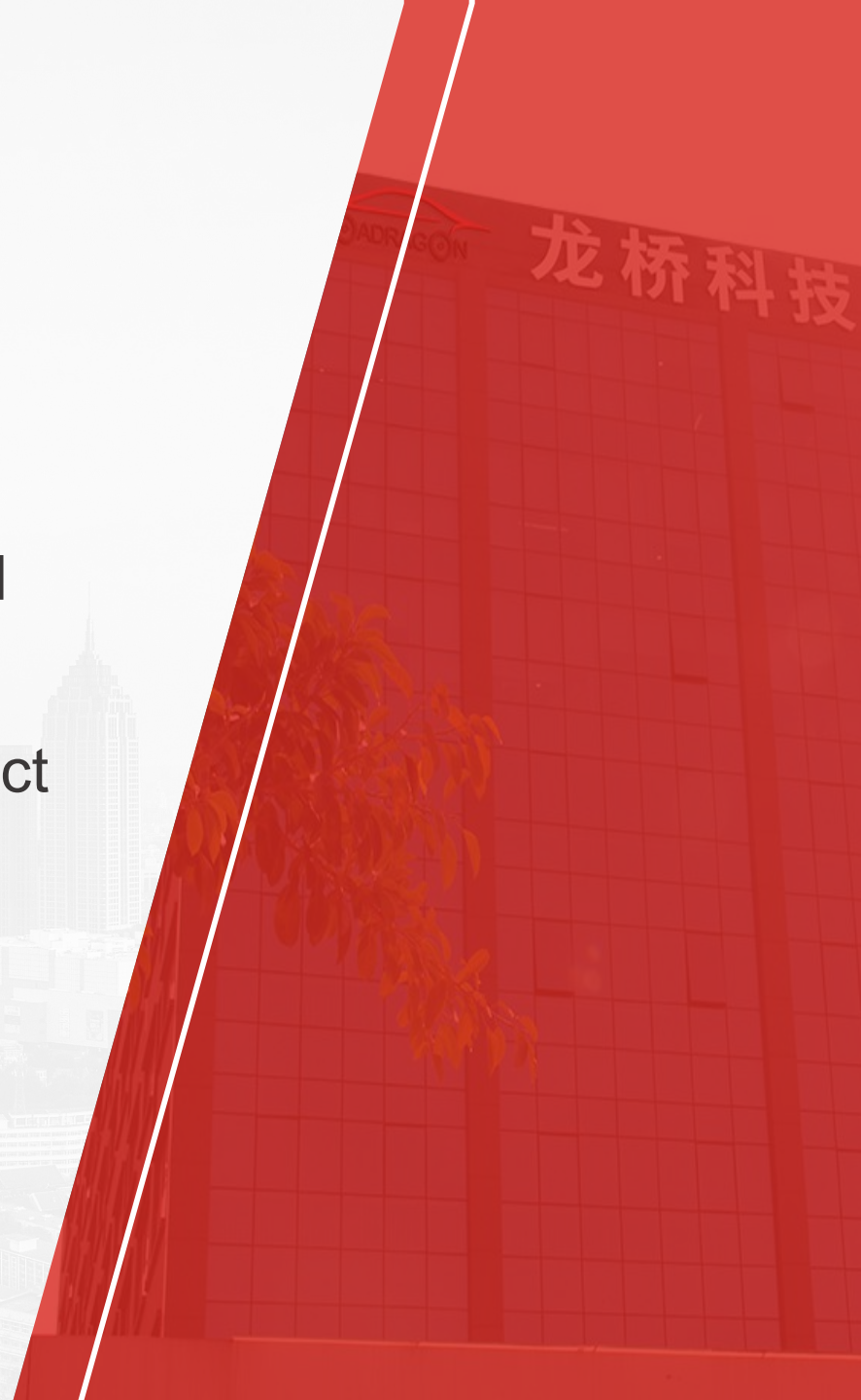
ROADRAGON®
路特龙

Company Profile&Product Description

Shenzhen Dragon Bridge Technology Co,Ltd

Web:www.roadragon.com

CONTENTS

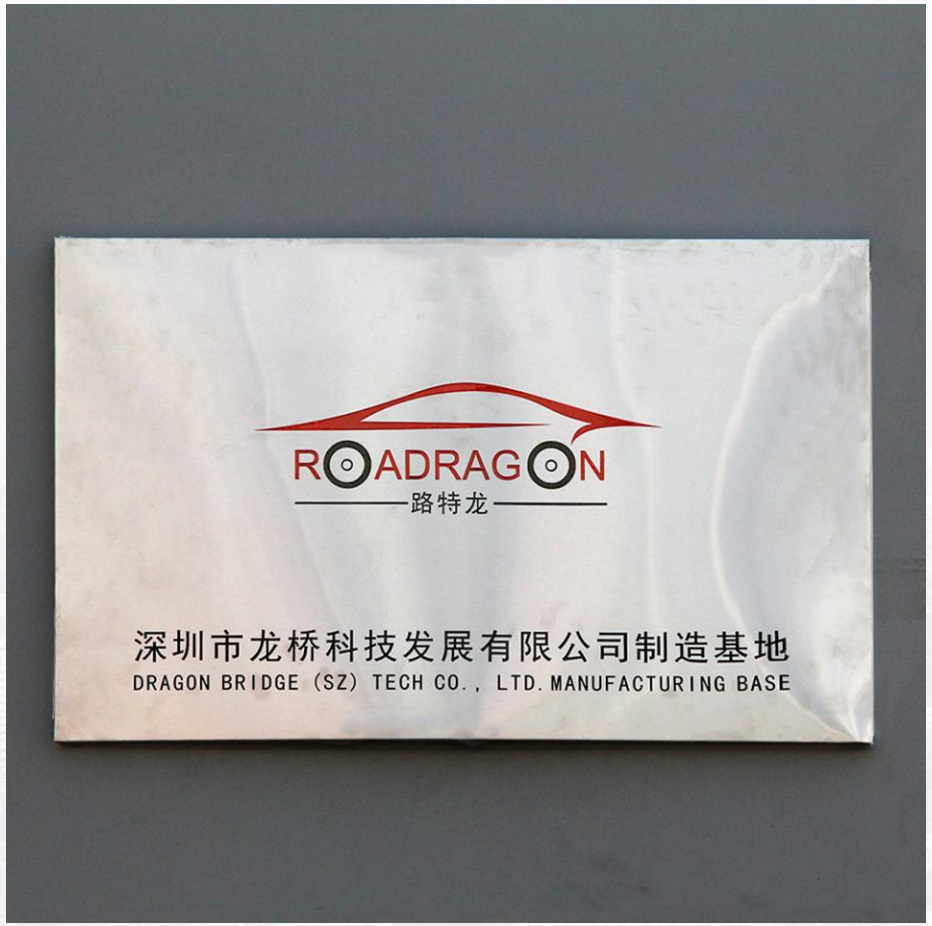


01

Company Profile

DRAGON BRIDGE (SZ) TECH CO., LTD has long been focusing on the research, development, production and service of satellite positioning mobile target management and monitoring system products since 2005. It has deep technical precipitation in Beidou/GPS/GSM/GPRS/CDMA/3G/4G products, with unique and leading technology products and the most extensive market applications.

Company Profile



ROADRAGON®
路特龙

The R&D team that has been carefully crafted for many years, with rigorous scientific research attitude, is committed to breaking the lack of innovation in the industry. In the field of satellite positioning vehicle monitoring, car driving recorder, multimedia car driving recorder, car network intelligent terminal, industry management platform software system, the company has made a comprehensive attack and built the "Roadragon" industry brand.

Company Profile

The most stable technical backbone team in China, ensuring that the company has industry-leading competitiveness

Roadragon is the earliest domestic high-tech enterprise engaged in satellite positioning and monitoring system industry.
In 1998, the first GSM mobile phone module GPS terminal was produced.

The most complete range of in-vehicle satellite positioning terminal products:
It has formed 3 types of in-vehicle satellite positioning wireless terminals, car driving recorders and multimedia vehicle driving recorders, and 10 series products.

OEM/ODM products customize the most customers:
Product customization and platform operation software system services for more than 100 operators, automotive and construction machinery manufacturers and more than 200 operating platforms in China

The industry with the best reputation in the industry:
Longqiao information products all use industrial-grade components design and production, strict "four detection" production quality control process, professional vehicle environment adaptation design, full-life quality tracking service

02

Enterprise qualification and brand

Roadragon is the first batch of GPS Certification passed Natianalhigh-tech enterprises in Shenzhen since 2005.

Enterprise qualification and brand

营业执照（副本）

统一社会信用代码 91440300771634124A

名　　称　深圳市龙桥科技发展有限公司

主体类型　有限责任公司

住　　所　深圳市福田区梅华路梅林多丽工业区厂房2栋第6楼2606

法定代表人　葛志龙

成立日期　2005年03月03日

重要提示

登记机关　2017 年 02 月 23 日

中华人民共和国国家工商行政管理总局监制

高新技术企业 证书

深圳市高新技术企业 证书

中华人民共和国 增值电信业务经营许可证

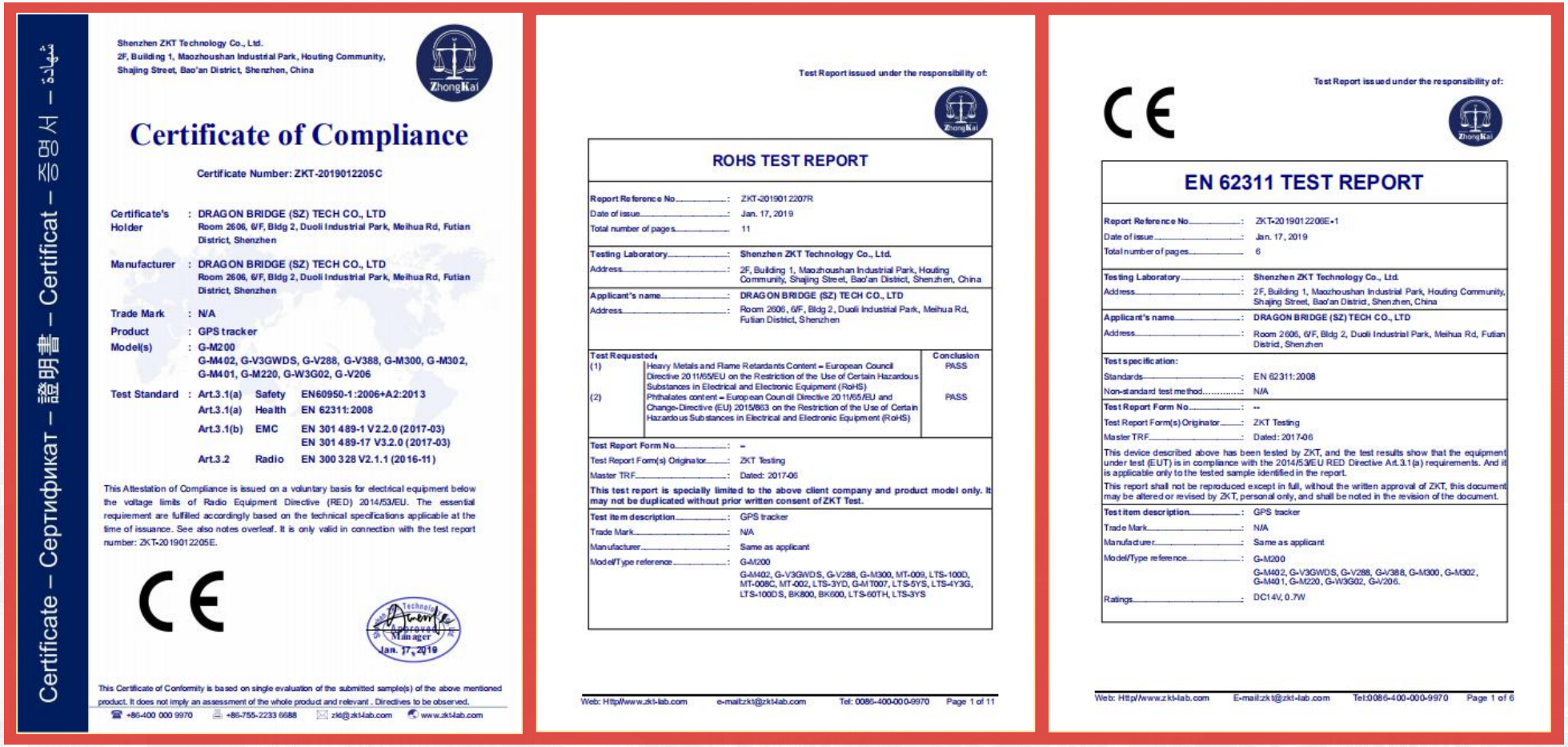
商标国际注册申请确认表 Submission Information

ROADRAGON

Enterprise invention patent

Product Certificate

All of our product lines have been certified by CE and ROHS.



Certificate – Сертификат – 證明書 – Certificat – 증명서 – شهادة

Shenzhen ZKT Technology Co., Ltd.
2F, Building 1, Maozhoushan Industrial Park, Houting Community, Shajing Street, Bao'an District, Shenzhen, China

Certificate of Compliance

Certificate Number: ZKT-2019012205C

Certificate's Holder	:	DRAGON BRIDGE (SZ) TECH CO., LTD Room 2606, 6/F, Bldg 2, Duoli Industrial Park, Meihua Rd, Futian District, Shenzhen
Manufacturer	:	DRAGON BRIDGE (SZ) TECH CO., LTD Room 2606, 6/F, Bldg 2, Duoli Industrial Park, Meihua Rd, Futian District, Shenzhen
Trade Mark	:	N/A
Product	:	GPS tracker
Model(s)	:	G-M200 G-M402, G-V3GWDS, G-V288, G-V388, G-M300, G-M302, G-M401, G-M220, G-W3G02, G-V206

Test Standard	:	Art.3.1(a) Safety	EN60950-1:2006+A2:2013
		Art.3.1(a) Health	EN 62311:2008
		Art.3.1(b) EMC	EN 301 489-1 V2.2.0 (2017-03) EN 301 489-17 V3.2.0 (2017-03)
		Art.3.2 Radio	EN 300 328 V2.1.1 (2016-11)

This Attestation of Compliance is issued on a voluntary basis for electrical equipment below the voltage limits of Radio Equipment Directive (RED) 2014/53/EU. The essential requirement are fulfilled accordingly based on the technical specifications applicable at the time of issuance. See also notes overleaf. It is only valid in connection with the test report number: ZKT-2019012205E.

CE

Technology Co., Ltd. Approved Manager
Jan. 17, 2019

This Certificate of Conformity is based on single evaluation of the submitted sample(s) of the above mentioned product. It does not imply an assessment of the whole product and relevant . Directives to be observed.

☎ +86-400 000 9970 +86-755-2233 6688 zkt@zkt4lab.com www.zkt4lab.com

Test Report issued under the responsibility of:

ROHS TEST REPORT

Report Reference No.	ZKT-2019012207R
Date of issue	Jan. 17, 2019
Total number of pages	11
Testing Laboratory	Shenzhen ZKT Technology Co., Ltd.
Address	2F, Building 1, Maozhoushan Industrial Park, Houting Community, Shajing Street, Bao'an District, Shenzhen, China
Applicant's name	DRAGON BRIDGE (SZ) TECH CO., LTD
Address	Room 2606, 6/F, Bldg 2, Duoli Industrial Park, Meihua Rd, Futian District, Shenzhen

Test Requested		Conclusion
(1)	Heavy Metals and Flame Retardants Content – European Council Directive 2011/65/EU on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS)	PASS
(2)	Phthalates content – European Council Directive 2011/65/EU and Change-Directive (EU) 2015/863 on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS)	PASS

Test Report Form No.	--
Test Report Form(s) Originator	ZKT Testing
Master TRF	Dated: 2017-06

This test report is specially limited to the above client company and product model only. It may not be duplicated without prior written consent of ZKT Test.

Test item description	GPS tracker
Trade Mark	N/A
Manufacturer	Same as applicant
Model/Type reference	G-M200 G-M402, G-V3GWDS, G-V288, G-M300, MT-009, LTS-100D, MT-008C, MT-002, LTS-3YD, G-MT007, LTS-5YS, LTS-4Y3G, LTS-100DS, BK800, BK600, LTS-60TH, LTS-3YS

CE

Test Report issued under the responsibility of:

EN 62311 TEST REPORT

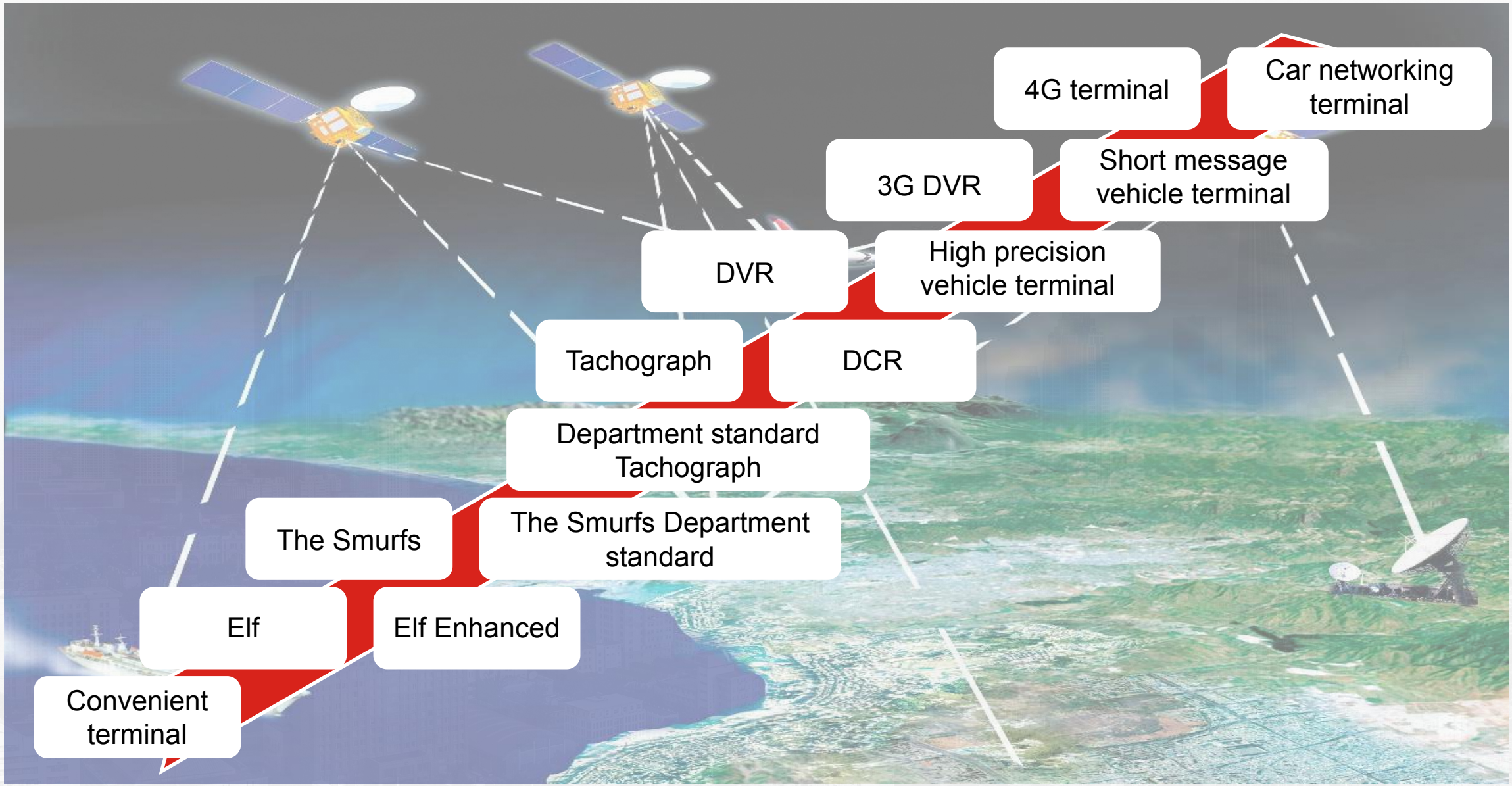
Report Reference No.	ZKT-2019012206E-1
Date of issue	Jan. 17, 2019
Total number of pages	6
Testing Laboratory	Shenzhen ZKT Technology Co., Ltd.
Address	2F, Building 1, Maozhoushan Industrial Park, Houting Community, Shajing Street, Bao'an District, Shenzhen, China
Applicant's name	DRAGON BRIDGE (SZ) TECH CO., LTD
Address	Room 2606, 6/F, Bldg 2, Duoli Industrial Park, Meihua Rd, Futian District, Shenzhen
Test specification:	
Standards	EN 62311:2008
Non-standard test method	N/A
Test Report Form No.	--
Test Report Form(s) Originator	ZKT Testing
Master TRF	Dated: 2017-06

This device described above has been tested by ZKT, and the test results show that the equipment under test (EUT) is in compliance with the 2014/53/EU RED Directive Art.3.1(a) requirements. And it is applicable only to the tested sample identified in the report.

This report shall not be reproduced except in full, without the written approval of ZKT, this document may be altered or revised by ZKT, personal only, and shall be noted in the revision of the document.

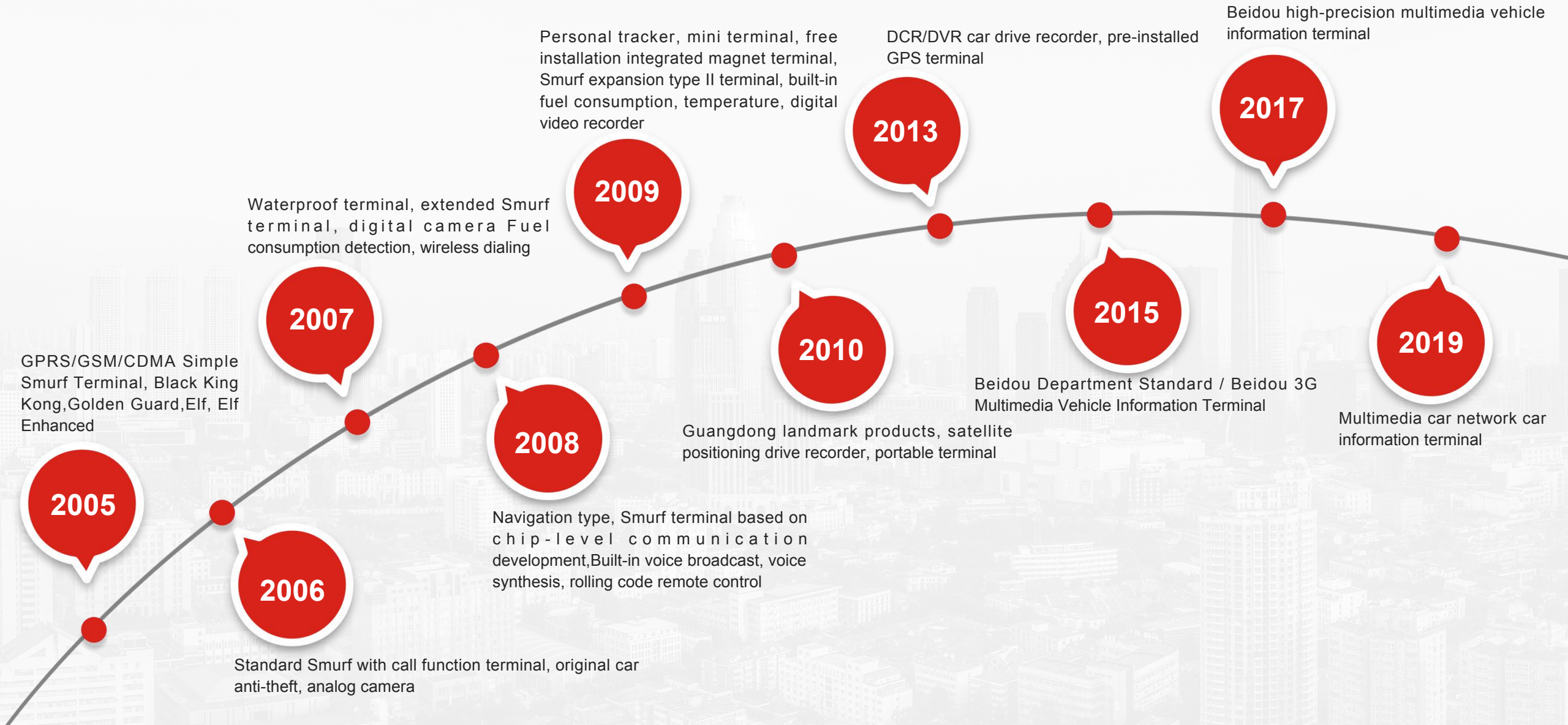
Test item description	GPS tracker
Trade Mark	N/A
Manufacturer	Same as applicant
Model/Type reference	G-M200 G-M402, G-V3GWDS, G-V288, G-V388, G-M300, G-M302, G-M401, G-M220, G-W3G02, G-V206.
Ratings	DC14V, 0.7W

Universal product system



Product history

Company product development history



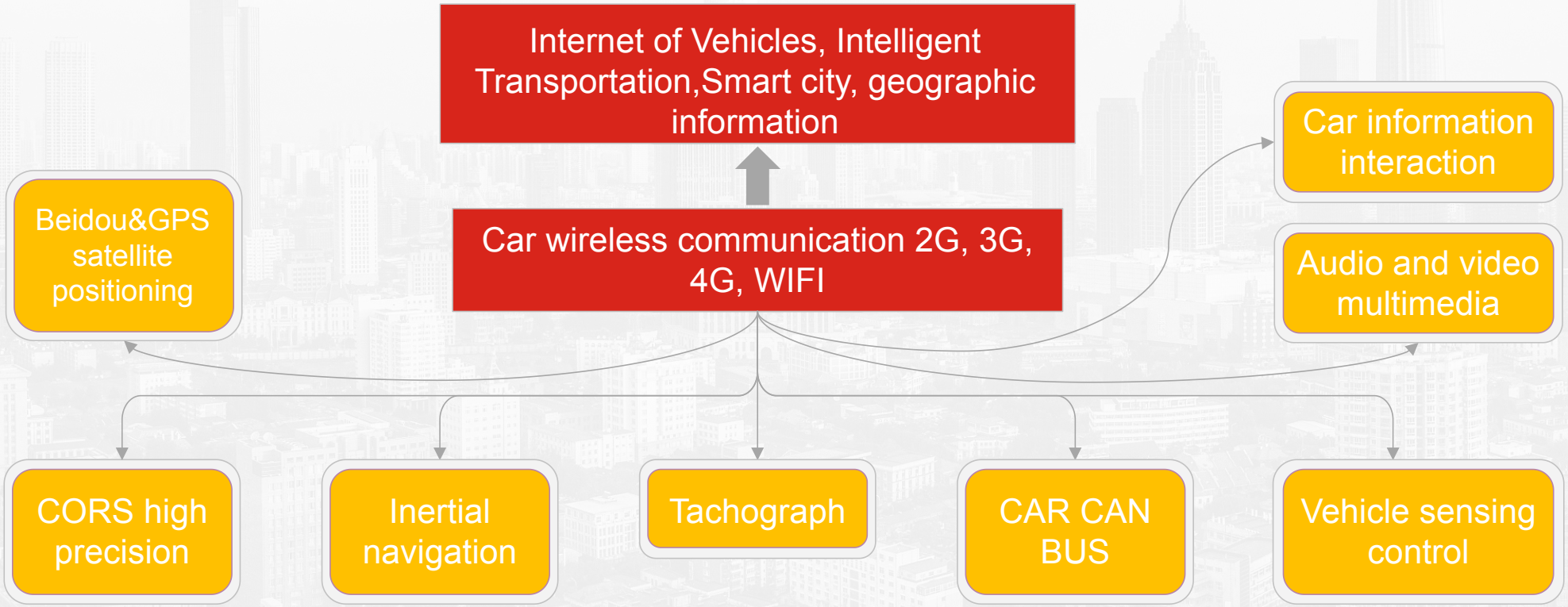
Business background

Technology application convergence

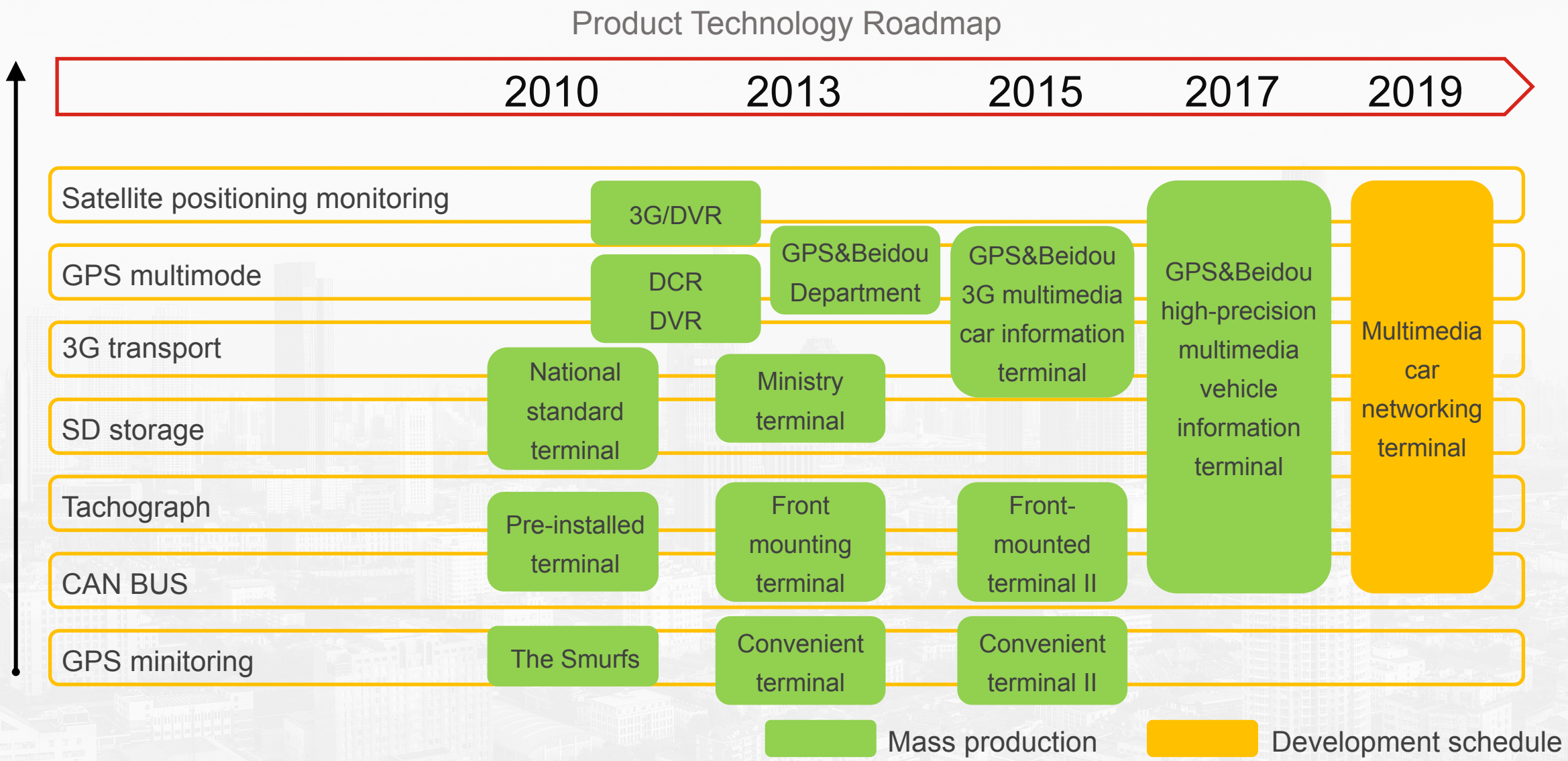
- Satellite positioning monitoring
- Car wireless communication
- Car driving record
- Driving behavior analysis
- Car video surveillance
- Car remote diagnosis
- Multimedia car networking

Product development policy

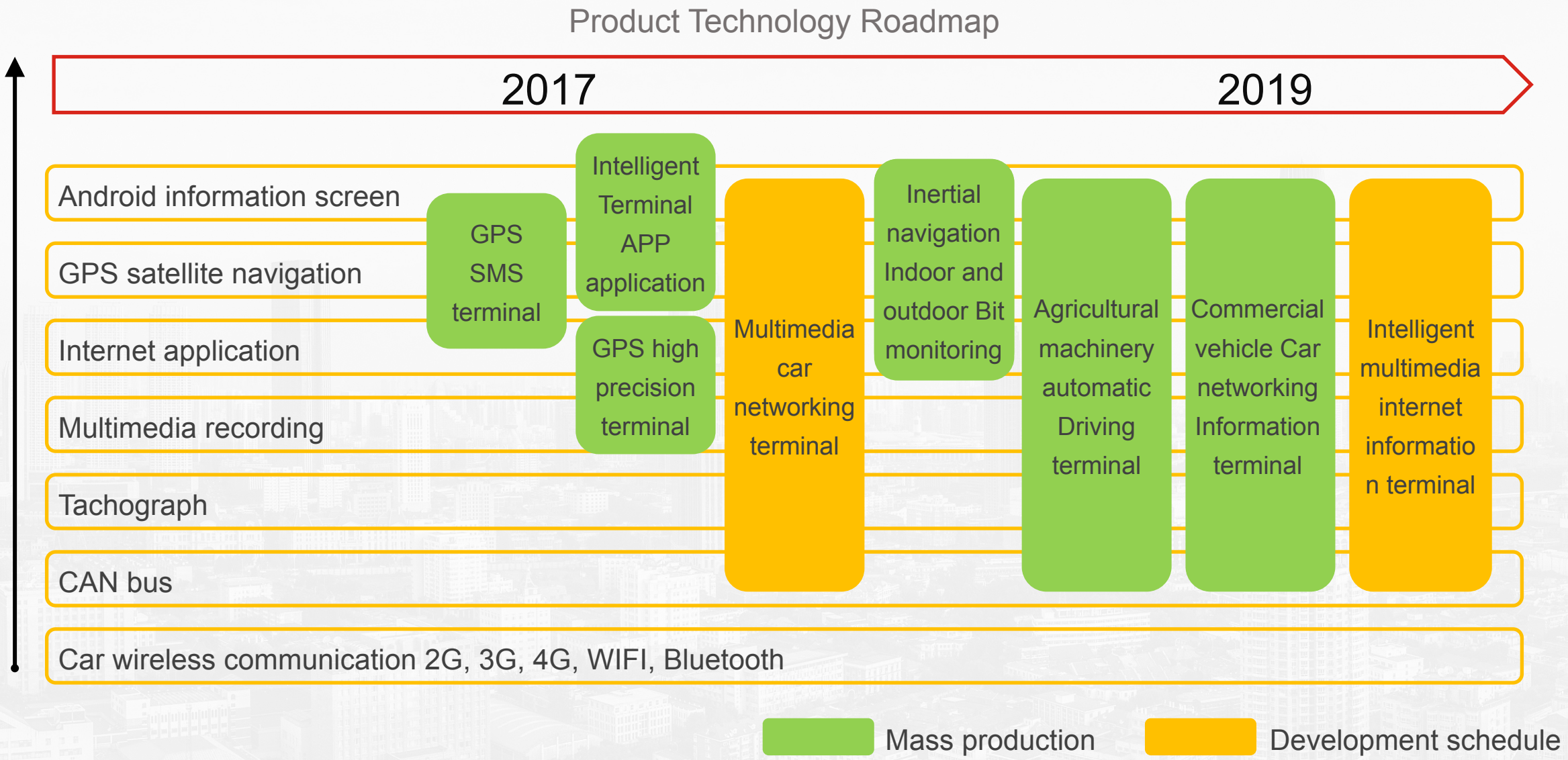
Taking the wireless communication network of the car as the core, focusing on the industry application, taking the Beidou application as an opportunity, aiming at the geographic information Internet service, and using innovative applications as a means.



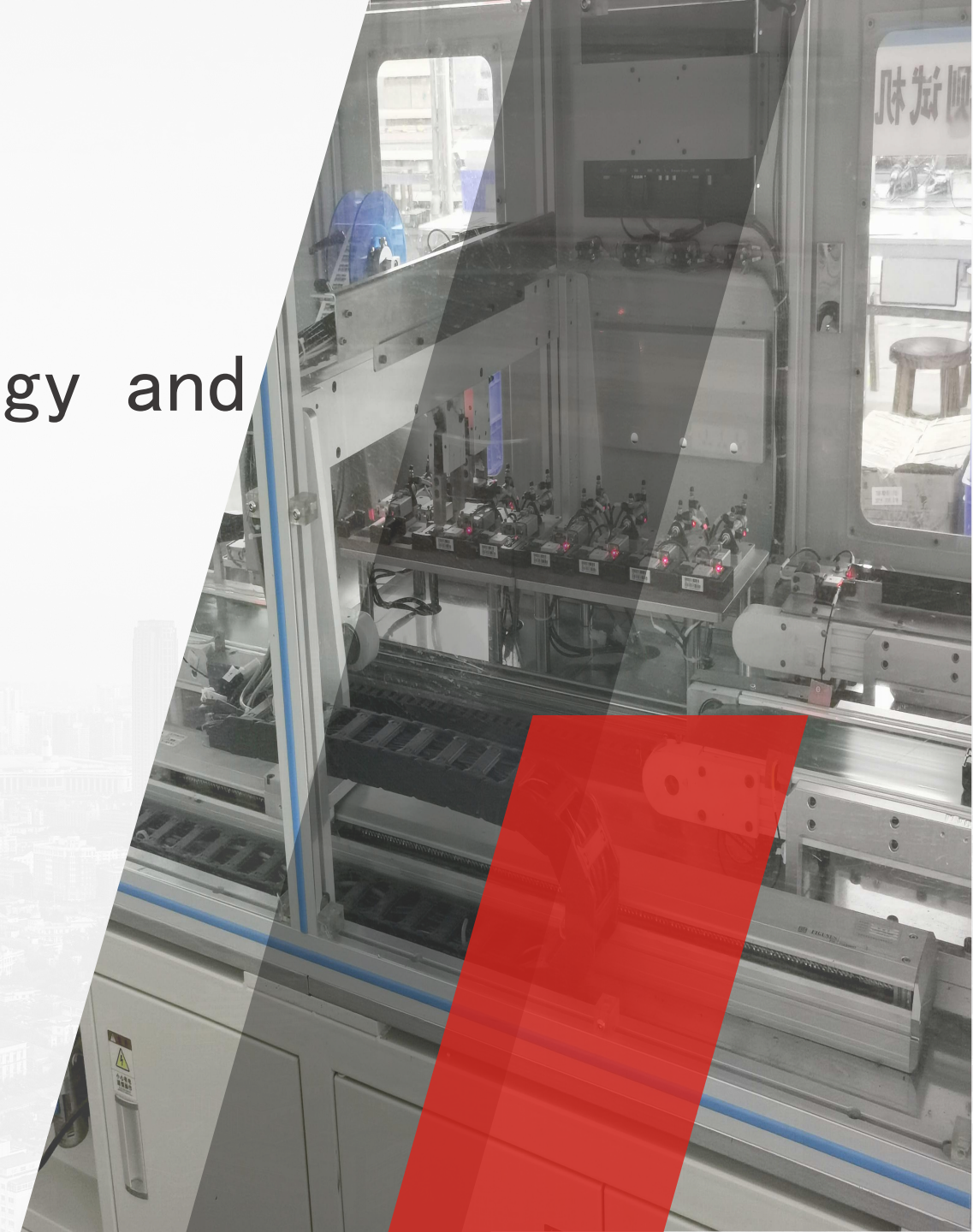
Product Technology Roadmap 1



Product Technology Roadmap 1



03 Application technology and product combination



Application technology and product combination

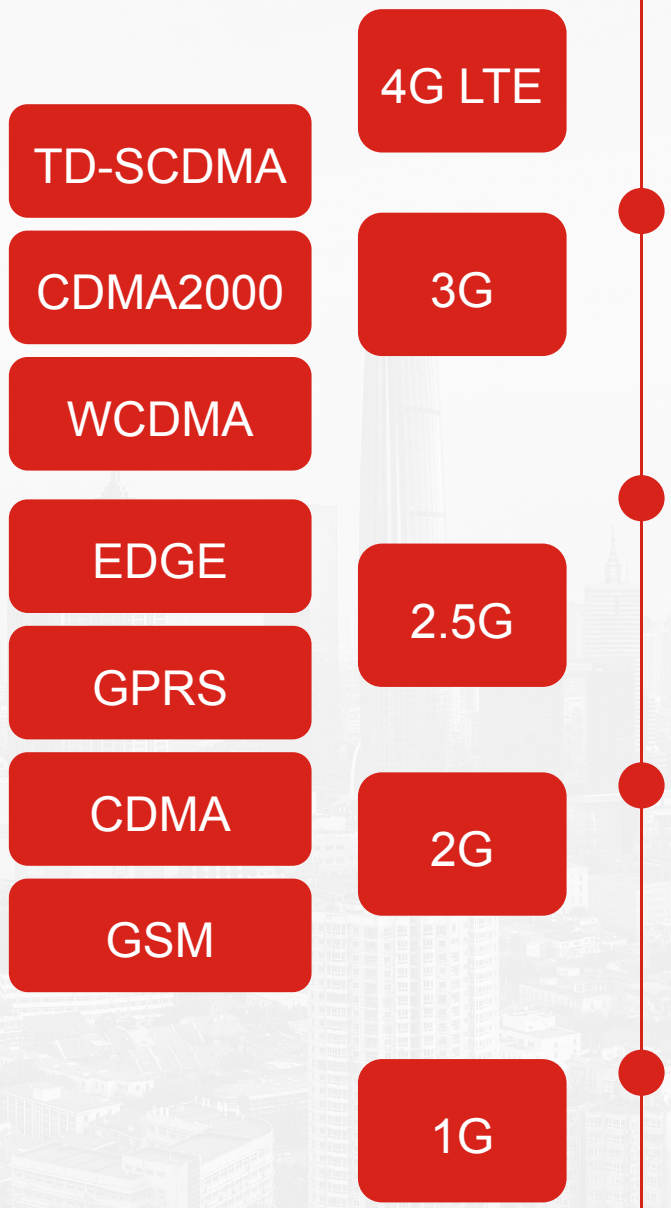
Needless to say, provide mobile broadband Internet services. Achieve true mobile broadband Internet services.The vehicle terminal realizes the real Internet information service, and all the original fixed information interactions can all be moved.

It realizes the combination of wireless communication and multimedia communication, and provides various information services such as web browsing, multimedia, video calling, and e-commerce connected with the Internet.The information terminal that enables the vehicle terminal to truly realize mobile interconnection. The real-time transmission of video and audio enables the vehicle terminal to monitor multimedia.

Upgrade low-rate Internet data services.The vehicle-mounted mobile terminal can be networked with the Internet information to realize wireless mobile transmission of pictures and compressed audio.

Fully digitized, increased confidentiality, and increased capacity to transmit low-speed data services.The short message is mainly used to realize the information interconnection between the vehicle terminal and the monitoring center.

Analog Cellular: The technology used in mobile communication networks mainly uses frequency division duplexing and frequency division multiple access systems. It also uses cellular networking technology to improve the utilization of frequency resources without digital services.



Application technology and product combination

Short-range wireless communication technology

In order to realize the Internet of Things and Internet information services, the vehicle terminal needs to communicate with many intelligent handheld terminals and fixed point devices. This requires in-vehicle devices to realize networking of various short-range wireless communications.

WIFI

Wi-Fi is a technology that wirelessly connects terminals such as personal computers and handheld devices (such as PDAs and mobile phones). It is a short-range wireless transmission technology that supports Internet access in hundreds of feet. signal.In addition to the in-vehicle smart device interconnection, the in-vehicle environment can also realize the wireless Internet access requirements of passengers in the car.

Zigbee

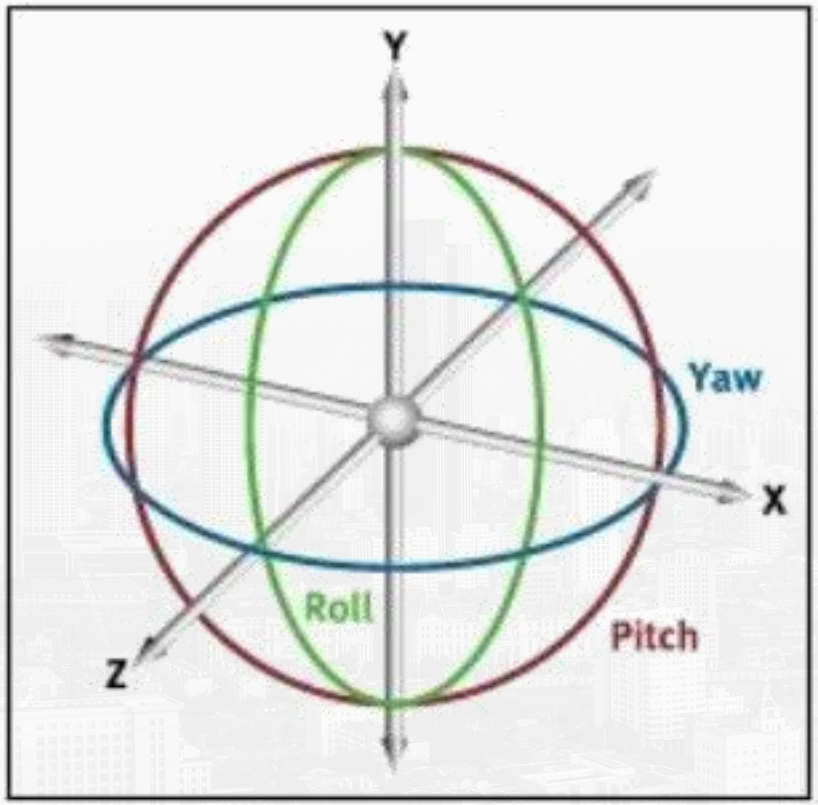
Zigbee is a low-power personal area network protocol based on the IEEE802.15.4 standard. It is a short-distance, low-power wireless communication technology. It is characterized by close proximity, low complexity, self-organization, low power consumption, low data rate, and low cost. It is a cheap, low-power, short-range wireless networking communication technology.The Zigbee communication of the vehicle terminal is mainly used for the interaction of the vehicle interior sensor, the vehicle-vehicle network and the vehicle-station network communication information.

Bluetooth

Low-Power Bluetooth (BLE) technology is a low-cost, short-range, interoperable, robust wireless technology that operates in the 2.4G band. BLE uses a variable connection time interval of a few milliseconds to a few seconds. With a fast connection, the link is only turned on when necessary, and then the link is closed in the shortest possible time, so it has extremely low running and standby power. Consumption.Realize device interconnection in the vehicle environment, reduce wiring and facilitate installation.

Application technology and product combination

Inertial navigation technology



Satellite navigation and positioning is mainly a global positioning navigation system, which belongs to the radio navigation mode. Inertial navigation is an autonomous navigation method. The three-axis angular velocity is measured by the gyroscope and the three-axis velocity is measured by the acceleration. Modern application adopts two kinds of combined navigation methods, which use satellite positioning as the main navigation means. Inertial navigation is to assist satellite positioning service. The data update rate of satellite positioning is low. For high dynamic conditions, tracking carrier motion cannot be implemented. Inertial navigation can improve the speed of data update; at the same time, when satellite positioning is lost or occluded, inertial navigation can maintain high positioning accuracy (indoor navigation) in a short period of time; and feedback, inertial navigation and satellite positioning navigation The combination can shorten the positioning time of the satellite.In the field of vehicle safety, inertial navigation technology can also be used to determine the attitude and acceleration of the vehicle, and to achieve vehicle rollover, collision warning and alarm. At the same time, the driver's driving behavior can also be analyzed.

Application technology and product combination

Automotive CAN bus technology

Intelligent vehicle terminal

CANbus module

CAN High

CAN Low

Vehicle security

- ✓ Emergency alarm
- ✓ ACC ignition detection
- ✓ Intelligent power off
- ✓ Compatible with original car lock, window lifter
- ✓ Tamper alarm

Intelligent fault diagnosis

- ✓ Remote reading of vehicle fuel consumption information
- ✓ Remote reading of vehicle single mileage information
- ✓ Remote reading of total vehicle mileage information
- ✓ Remotely read vehicle fault information
- ✓ Remote read clear vehicle fault information
- ✓ Remote reading of engine operating parameters

Vehicle automation control

- ✓ Vehicle pre-start
- ✓ Intelligent acceleration and deceleration
- ✓ Vehicle intelligent air conditioner
- ✓ Dangerous vehicle driving control
- ✓ Autopilot

Application technology and product combination

Audio and video multimediatechnology

Voice information interaction

Voice call, voice prompt, TTS voice information broadcast, voice navigation, voice recognition.In the future, information interaction and control of in-vehicle smart devices will be based on voice interaction for driving safety.

Video driving record, monitoring

Indoor and outdoor omnidirectional video surveillance and recording, remote video surveillance via broadband wireless network.Realize all-round recording of video and audio, effectively enhance the vehicle travel record function, real-time remote video surveillance, and strengthen the means of vehicle safety management.

Image recognition and analysis

Face recognition, number of people in the car, fatigue driving analysis, lane departure recognition, license plate recognition, vehicle travel distance alarm. Image recognition and image analysis pioneered the function of car sensing,In future automotive applications, cameras will become an important sensor for car driving and car driving.

Application technology and product combination

Car information interaction technology

Car cockpit electronics and infotainment systems, driven by the location-based subscription service market, are becoming more and more complex, bringing new and practical services to users. Cars, laptops, new mobile operating systems, new languages, health monitoring, Google and Apple are starting an amazing war. The new smart car vehicle networking terminal will form an interconnection and interaction with the personal intelligent terminal, and the complex and re-personalized requirements will be completed by one APP under the mobile operation platform.The car will be a "biggest" mobile smart terminal.

Application technology and product combination

Automotive sensing control technology

Tire pressure	ECU	Body sensing	Electronic weighing	Concrete Positive reversal
Fuel consumption	Battery management	Electronic lock	Refrigeration temperature control	etc.

Cars are a "most complex" control system, and every development of sensing technology will revolutionize the car's environmental, safety and ease of driving.

04

Vehicle terminal technology introduction

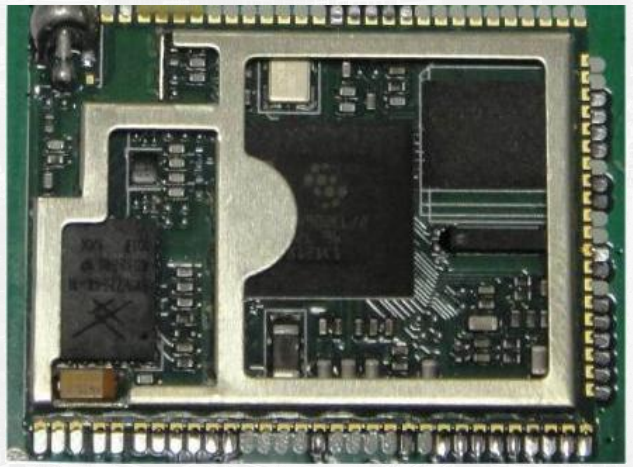
Green,secure,communication.

It is the eternal theme of automotive electronics development!

Vehicle terminal technology introduction

Shenzhen Roadragon information product technical characteristics

- Industrial-grade chip architecture products based on independent intellectual property rights, dual-core construction, powerful.
- The industry's first company to develop industrial-grade communication modules with independent intellectual property rights
- The industry's first company to scale its communication modules using proprietary intellectual property rights
- The first company to develop satellite positioning monitoring applications in communication modules.
- Apply the most experienced companies in in-depth development within the communication module.

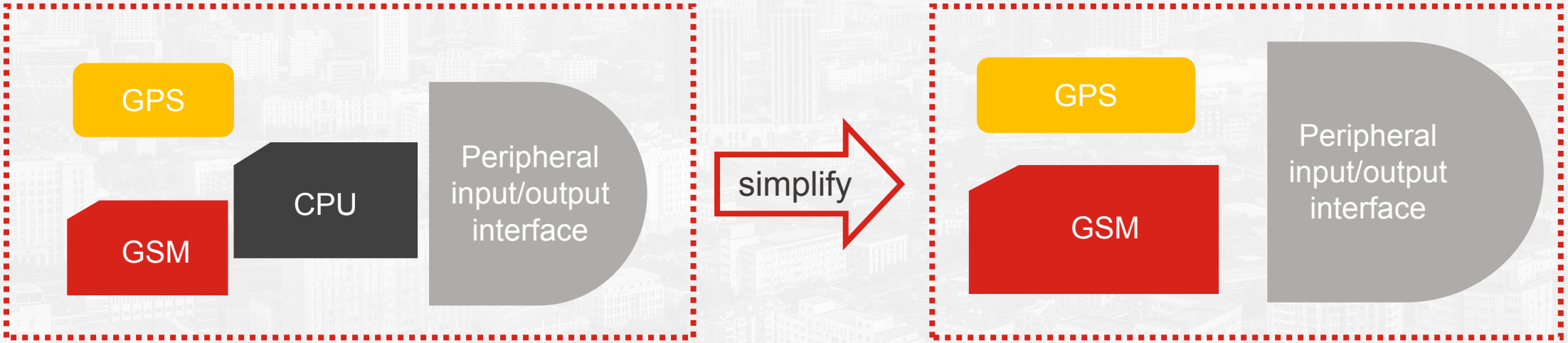


Vehicle terminal technology introduction

1. Simplify the product system structure Reduced product shape and increased integration

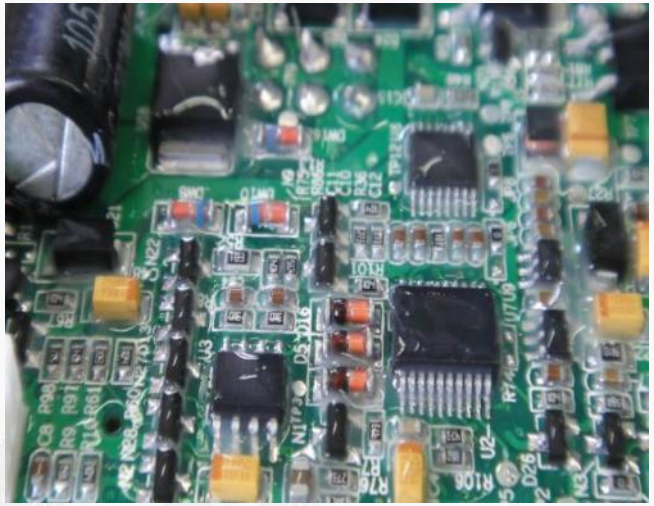
2.Improve product reliability Reduce component count and reduce connectors

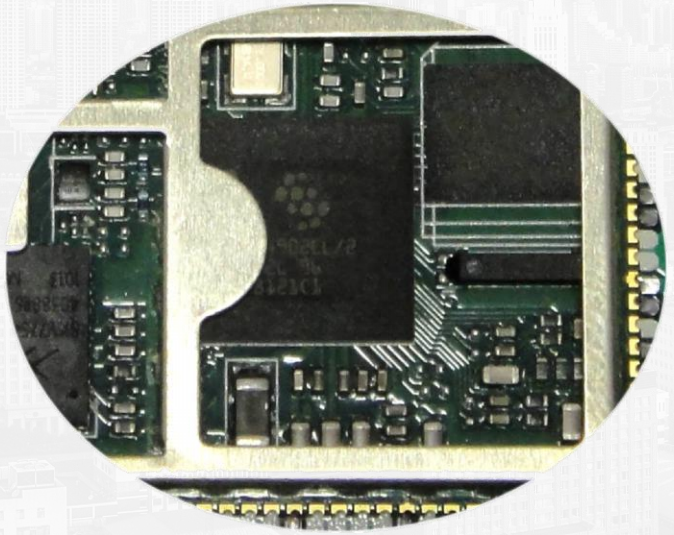
3. Reduce product power consumption Operating current is only 15mA in power saving mode



Vehicle terminal technology introduction

Product reliability: The company always pays attention to the reliability of the vehicle environment in the design of vehicle terminal products, product three-proof design, power supply 4 protection, level 4 "watchdog, currently on the vehicle terminal products, our company's products are The lowest power consumption, this has good protection for the vehicle battery.

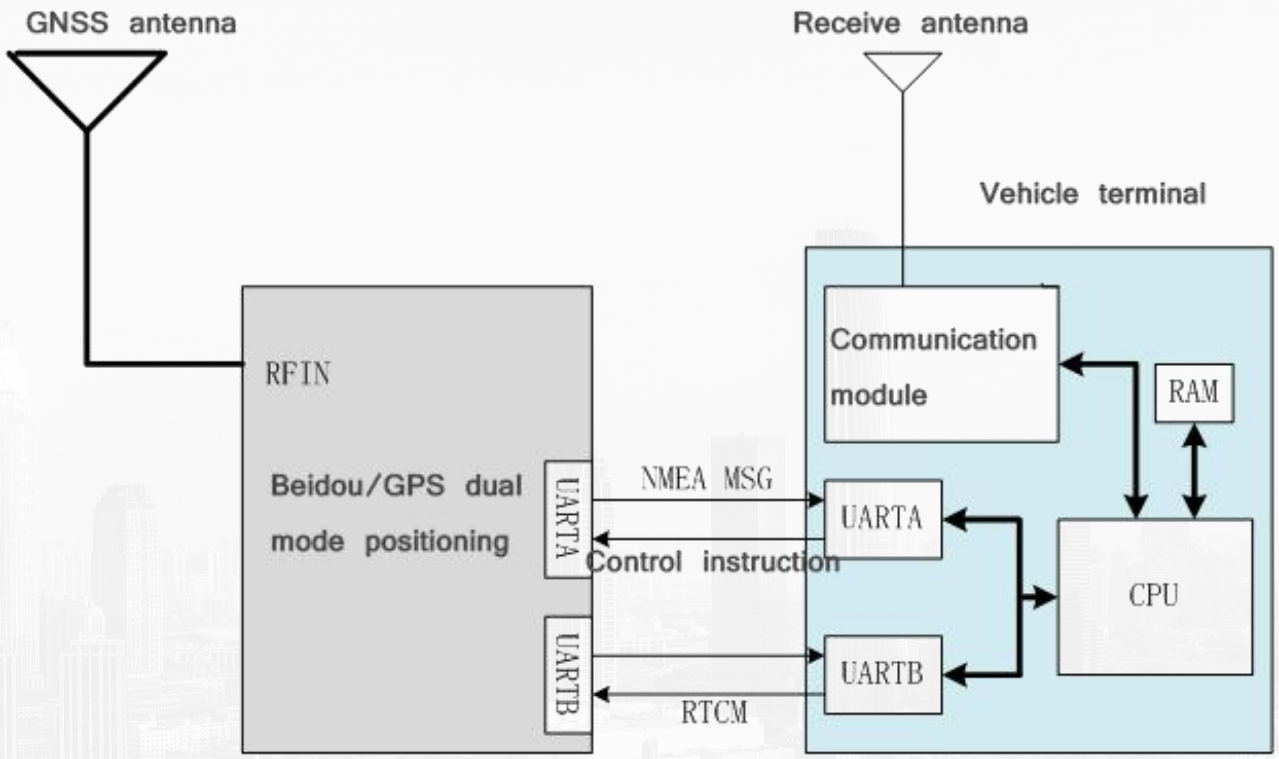




Technical advantages of module design: The communication module in our company's products is designed by our company. The module solution adopts integrated design and embedded software embedded in the communication module system. It can effectively use the idle resources of the internal system of the communication module. The external use of MCU and FLASH effectively reduces product cost, saves resources, and improves product reliability.

Vehicle terminal technology introduction

The original 2G/3G communication function of the satellite positioning vehicle terminal is used to establish contact with the ground-based enhanced network, and the GNSS information of the Beidou/GPS dual-mode positioning module is sent to the ground-based enhanced network server, and the ground-based enhanced network server real-time RTCM pseudorange difference is accepted. Correct the information to achieve satellite positioning and monitoring of meter-level accuracy.



The Beidou Ground Augmentation System Longbridge Information Series Beidou Satellite Positioning Terminal can realize full series of high-precision positioning.

Vehicle terminal technology introduction

Technical and functional characteristics	Product advantages
high-precision satellite positioning	Realize submarine-level vehicle satellite positioning monitoring
Inertial navigation	Vehicle positioning and trajectory monitoring in the case of satellite navigation signal obscuration and absence
Product functional integration	Vehicle driving recorder, Beidou/GPS high-precision positioning monitoring, inertial navigation, 3G/4G communication module, video and audio monitoring, CAN bus communication module and SD card/hard disk storage integration
Modular design	Based on the standard modular design, based on the power supply and interface backplane, the above functional modules are integrated, and the functions can be matched and combined according to different needs of customers.
Multimedia information storage	Use dual SD card / hard disk storage. The multimedia information data is written into the SD card/hard disk storage by streaming media to avoid data loss caused by vehicle vibration and abnormal power failure.
Power protection	With 4-level power protection, 4-level "watchdog" and 12V/24V adaptive power supply design, each functional unit's power supply can be independently controlled and powered.
Product power consumption	Average operating current: 300mA@24V (peripheral not powered) Maximum working current: 1200mA@24V (4-way camera works and night vision light is on)Power saving mode: <30mA DC 24V

Vehicle terminal technology introduction

G-M200 (2G/4G)

Note: 12V car

Function:

- OBDII/EOBD Data
- Remaining Oil
- Intelligent Track
- Vehicle data Flow
- Dashboard Milage
- Driving Behavior

G-M402 (2G/4G)

Note: 24V truck

Function:

- OBDII/EOBD Data
- Six-axis Gyroscope
- Intelligent Track
- 2 high-speed CAN
- 4 inputs/4 Outputs
- 2 RS485 Interfaces

(OBD GPS Tracker)

MT-009

Function:

- Remotely Cut Off Oil
- Intelligent Track
- Over Speed Alarm
- Electronic Fence
- Remove Light Alarm
- Intelligent Sleep Mode

G-V202(4G)

Function:

- SOS Alarm
- 4 Inputs /2 Outputs
- Cold chain Car sensor (Optional)
- Intelligent Track
- Taking pictures (Optional)
- Support RS485 or RS232 or CAN interface

(Vehicle Real-time GPS Tracker)

Vehicle terminal technology introduction

LTS-3YS (2G/4G)

Function:

- Long Standby 3 years
- Remove Light Alarm
- Address query
- Electronic Fence
- Change Time interval
- Magnetic Adsorption

LTS-100DS (2G/4G)

Function:

- Rechargeable 10000mah Battery
- Electronic Fence
- Magnetic Adsorption
- Long Standby 100 Days
- Remove Light Alarm
- Change Time interval

LTS-3YD

Note: Insurance Car

Function:

- Long Standby 5 years
- Remove Light Alarm
- Address query
- Electronic Fence
- Change Time interval
- Magnetic Adsorption

LTS-60TH

Note: Temp&Humility tracker

Function:

- Rechargeable 5000mah Battery
- Monitor Temperature
- Change Time Interval
- Long Standby 60 Days
- Monitor Humility
- Various Alarm

(Asset GPS Tracker)

(GPS Tachograph)

G-V301

Function:

- Intelligent Track
- Taking pictures (Optional)
- CAN bus
- 4 RS-232/1 USB interface
- Driver IC card

Standard: Chile/Vietnam/China

G-V303

Function:

- Intelligent Track
- SD data Card Lock
- Driver IC card
- CAN Bus
- 4 RS-232/1 USB interface
- Taking pictures (Optional)

ROADRAGON®
路特龙

THANK YOU