Company Profile & Product Description 2019

Shenzhen Dragon Bridge Technology Co., Ltd
Web: www.roadragon.com
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 for 14 years. 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

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.
Enterprise qualification and brand

Roadragon is the first batch of GPS Certification passed National high-tech enterprises in Shenzhen since 2005.
Enterprise invention patent
All of our product lines have been certified by CE and ROHS.
Universal product system

- 4G terminal
- Car networking terminal
- 3G DVR
- Short message vehicle terminal
- DVR
- High precision vehicle terminal
- DCR
- Department standard Tachograph
- The Smurfs Department standard
- The Smurfs
- Elf
- Elf Enhanced
- Convenient terminal
Company Profile

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.

The most stable technical backbone team in China, ensuring that the company has industry-leading competitiveness.
Company product development history

Product history

2019
Multimedia car network car information terminal

2017
Beidou high-precision multimedia vehicle information terminal

2015
Beidou Department Standard / Beidou 3G Multimedia Vehicle Information Terminal

2013
DCR/DVR car drive recorder, pre-installed GPS terminal

2010
Guangdong landmark products, satellite positioning drive recorder, portable terminal

2009
Personal tracker, mini terminal, free installation integrated magnet terminal, Smurf expansion type II terminal, built-in fuel consumption, temperature, digital video recorder

2008
Navigation type, Smurf terminal based on chip-level communication development, Built-in voice broadcast, voice synthesis, rolling code remote control

2007
Waterproof terminal, extended Smurf terminal, digital camera Fuel consumption detection, wireless dialing

2006
Standard Smurf with call function terminal, original car anti-theft, analog camera

2005
GPRS/GSM/CDMA Simple Smurf Terminal, Black King Kong, Golden Guard, Elf, Elf Enhanced
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


- **3G/DVR**
  - 2010
  - 2013
  - 2015
  - 2017
  - 2019

- **3G transport**
  - Pre-installed terminal
  - Front mounting terminal

- **SD storage**
  - National standard terminal
  - Ministry terminal

- **Tachograph**
  - Pre-installed terminal
  - Front mounting terminal
  - Front-mounted terminal II

- **CAN BUS**
  - The Smurfs
  - Convenient terminal
  - Convenient terminal II

- **GPS monitoring**
  - The Smurfs
  - Convenient terminal

- **GPS multimode**
  - 3G/DVR
  - GPS & Beidou Department
  - GPS & Beidou 3G multimedia car information terminal
  - GPS & Beidou high-precision multimedia vehicle information terminal

- **Multimedia car networking terminal**

- **Precise positioning**
  - CORS
  - GPS multimode
  - 3G transport
  - SD storage
  - Tachograph
  - CAN BUS
  - GPS monitoring

- **Development schedule**
  - Mass production
  - National standard terminal
  - Convenient terminal II
  - Multimedia car networking terminal
**Product Technology Roadmap 1**

- Android information screen
- GPS satellite navigation
- Internet application
- Multimedia recording
- Tachograph
- CAN bus
- Car wireless communication 2G, 3G, 4G, WIFI, Bluetooth

**2017年**
- GPS SMS terminal
- GPS high precision terminal
- Intelligent Terminal
- APP application

**2019年**
- Multimedia car networking terminal
- Inertial navigation
- Indoor and outdoor Bit monitoring
- Agricultural machinery automatic Driving terminal
- Commercial vehicle Car networking Information terminal

**Development schedule**

**Mass production**
Application technology and product combination

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 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.

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. 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 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.

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.
Automotive CAN bus technology

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
Audio and video multimedia technology

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.

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.

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.
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.
Automotive sensing control technology

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

<table>
<thead>
<tr>
<th>Technical and functional characteristics</th>
<th>Product advantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>high-precision satellite positioning</td>
<td>Realize submarine-level vehicle satellite positioning monitoring</td>
</tr>
<tr>
<td>Inertial navigation</td>
<td>Vehicle positioning and trajectory monitoring in the case of satellite navigation signal obscurcation and absence</td>
</tr>
<tr>
<td>Product functional integration</td>
<td>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</td>
</tr>
<tr>
<td>Modular design</td>
<td>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.</td>
</tr>
<tr>
<td>Multimedia information storage</td>
<td>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.</td>
</tr>
<tr>
<td>Power protection</td>
<td>With 4-level power protection, 4-level &quot;watchdog&quot; and 12V/24V adaptive power supply design, each functional unit's power supply can be independently controlled and powered.</td>
</tr>
</tbody>
</table>
| 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 |
**Product Introduction**

- **OBD-200 (2G/4G)**
  - Note: car
  - GPS positioning
  - Driving behavior
  - OBD data
  - Alarm reminder

- **OBD-402 (2G/4G)**
  - Note: bus truck
  - Mini body
  - Light tamper
  - Anti detection
  - Strong magnetic adsorption
  - Standby for Five years
  - Real-time positioning
  - 60 days standby
  - Timely upload

- **LTS-3YD**
  - Temperature and humidity sensor

- **LTS-60th**
  - Image transmission
  - Car GPS monitoring
  - Voice and call
  - Road monitoring
  - Print report
  - Standard: Chile/Public/Vietnam
  - GPS+GSM tracking
  - Fence area alarm
  - Mileage report
  - Detect door status
  - Standard: Chile/Public/Vietnam

---

- **GLL-150 (2G/4G)**
  - Built-in GPS module
  - High capacity battery
  - Remote configuration unlock
  - Built-in strong magnetic strength (GPS padlock)

- **MT009**
  - Remote cut-off
  - Mileage statistics
  - Multi-type map
  - Track replay
  - Shock sensor

- **MT-008**
  - Real-time query location
  - Timing tracking
  - Large capacity battery
  - Electric fence

- **LTS-J10Y (2G/4G)**
  - Positioning error <10m
  - GPS base station positioning
  - Waterproof and dustproof
  - Long standby for 10 years

- **LLS-100T (2G/4G)**
  - Navigation track management
  - Solar charging
  - Low power protection
  - Support for tampering alarm

---

**www.roadragon.com**
thank you

win-win

win-win