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SIMCom Inside

10 Anniversary(2002-2012) Special Issue 12/2012

10 years of excellence

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SIMCom Customers' Applications

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SIMCom Wireless Solutions Co., Ltd.

SIMCom
A company of SIM Tech

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Dear readers,

Jianguo Shen
General Manager

> *At the moment of celebrating the 10th anniversary of SIMCom, we'd like to take this opportunity to formally launch our "SIMCom Inside"*

From 2002 to 2012, with great support from vast customers and partners, SIMCom has gone through the ups and downs of this decade. In the 10-year journey full of trials and hardships, many friends and customers, together with us, have witnessed the growth, advance and development of SIMCom. The first time when the shipment broke through 1-million, the first time of being ranked Number One in the Chinese market, the first time of making a breakthrough in the overseas market, the first time of obtaining TOP operator approval, …, all these achievements are the results of the hardworking and contributions of the company staffs, and as well as benefited from the consistent faith and support from our vast customers and partners for long term. Today, through this magazine, taking the opportunity of SIMCom's 10th anniversary, we will extend our heartful gratitude to all our colleagues, customers and partners. Thank them for accompanying us to grow together!

In recent years, the global macro-economy is not optimistic. Many industries are faced with dual challenges and pressure brought by bad market circumstances and cut-throat competition. To our joy, Internet of Things industry (M2M industry) still shows a bright future with the policy support of various governments and the spreading and penetration of the global Informatization. More and more industry applications need modules with connectivity, for example, the Smart Home, telemedicine, environmental monitoring, etc.

We have reason to believe that the M2M industry will bring more opportunities and space to our vast customers and partners.

SIMCom has always been focusing on the wireless module, and offers competitive products and services. Our products cover GSM/GPRS, WCDMA/HSPA,TD-SCDMA, CDMA EVDO, SRD, GPS,GLONASS,WIFI and other technical standards. Our products SIM300 series and SIM900 series are well recognized by the customers and have been well sold in over 100 countries and areas around the world, covering all M2M industries. With the global elite partners and our well-trained engineering team, SIMCom provides customers with model selection recommendation/ schematic diagram review/ RF instructions/ product pretest and other all-round technical support and service.

We know clearly that, as a globally leading wireless solution supplier, there are still many things that we need to do. As the module market competition becomes more and more fierce, we shall further take up the market, continually develop more competitive products, improve our technical service capability and the customer satisfaction, so as to more perfectly demonstrate our brand and comprehensive strength in the international market.

In the next decade, SIMCom will accompany with you, jointly expand the market and open up a new career prospect.

2013.01 shanghai

Milestones

2002
The establishment of the company, launched the first module ITM100

2004
Launched our own GSM/GPRS SIM100 Series module

2005
In 2005 June 30 IPO listed in Hongkong(HK 2000), The market share rank No.1 in Asia

2006
Global shipments of rank third & Scale into India/ Easter Europe and other oversea markets

2007
Launched the first WCDMA module SIM5210 and the first TD-SCDMA module SIM4100

2008
1st 10million units shipped, Listed as a M2M100 company from Y2008

2009
SIM5215 module awarded best of narrow band 3G module by GSMA, Shipment rank No .2 globally

2010
SIM900, SIM900B earned AT&T approval

2011
SIM5320A earned AT&T approval

2012
Earn TS16949 certification for automotive application

2013~
Worth looking forward to the more brilliant

Fully Self-Owned Factory

"Relying on the fully self-owned factory and the sufficient production capability, SIMCom can ensure the quick and timely delivery of ordered products and as well as good control of quality"

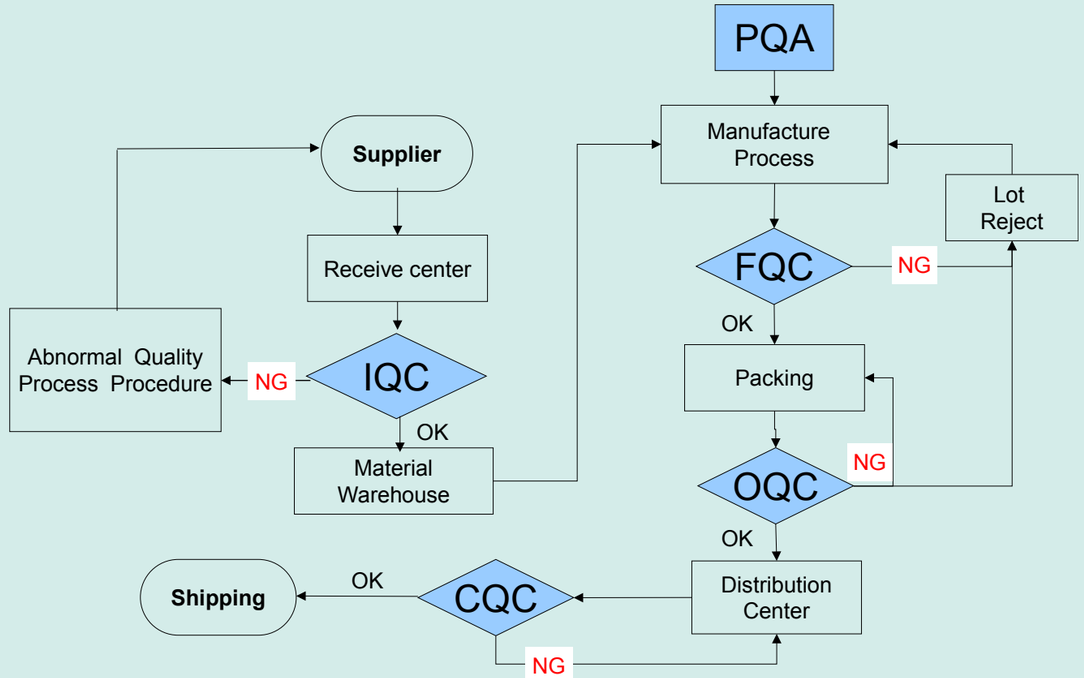
----- Deputy General Manager (R&D), Yongsheng Li

- Advanced SMT line, sufficient production capability



Model	Capacity	Max Monthly Output
Wireless Module	120K/Day	3600K Units/30Days

- Strict Quality Control Process



- Quality and Management system

No.	Standard	Category
1	ISO9001:2008	Quality
2	ISO 14001:2004	Environmental
3	OHSAS 18001:2007	Occupational Health and Safety Assessment
4	RoHS Compliance	RoHS Compliance
5	ISO/TS 16949	Automotive grade device manufacture


ISO9001


IS014001


OHSAS18001

TS16949-2009

Supply Chain

Rich management experience of electronics supplier chain

More than 20 years partnership with electronics vendors

The predecessor of SIM Technology Group…
Sunrise was founded in 1986 in HK, which focused on electronic component distribution.
In 1991, Sunrise authorized distributor of NSC, EPSON,INTEL,ADI, LG etc.
In 2001, Sunrise was acquired by Avnet.

Supply Chain share with Mobile phone BU

Sharing the supply chain resource with Mobile phone business unit could guarantee that the module component procurement has advantages of large scale to achieve lower unit price.

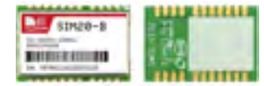
Product Portfolio

Technology	GSM/GPRS Module				GSM/GPRS+GPS/GMS Module		WCDMA/HSPA Module				CDMA-EVDO Module	Technology
Name	SIM900	SIM900B	SIM900D	SIM900E	SIM908	SIM968	SIM5215	SIM5216	SIM5218	SIM5320/SIM5310	SIM6320C	Name
Picture												Picture
Interface	SMT	60pin B2B	SMT	LGA	80-pad with SMT type	80-pad with SMT type	70 pinB2B	70 pinB2B	70 pinB2B	SMT	SMT	Interface
Frequency Band	Quad-Band 2G	Quad-Band 2G	Quad-Band 2G	Quad-Band 2G	Quad-Band 2G	Quad-Band 2G	Dual-Band 3G+Quad/Tri-Band 2G	Dual-Band 3G+Quad/Tri-Band 2G	Tri-Band 3G+Quad-Band 2G	SIM5320:Dual-Band 3G+Quad-Band 2G SIM5310:Single-Band 3G+Quad-Band 2G	Single-Band	Frequency Band
Dimensions(mm)	24*24*3	40*33*3	33*33*3	19.8*19.8*3	30*30*3.2	30*30*3	36*26*4.7	36*26*4.7	58*26*4.5	30*30*2.9	30*30*2.9	Dimensions(mm)
Supply voltage range	3.2~4.8V	3.2~4.8V	3.2~4.8V	3.2~4.8V	3.2~4.8V	3.2~4.8V	3.3~4.2V	3.3~4.2V	3.3~4.2V	3.3~4.2V	3.3~4.2V	Supply voltage range
Operation temperature	-40 ℃ to +85 ℃	-40 ℃ to +85 ℃	-40 ℃ to +85 ℃	-40 ℃ to +85 ℃	-40 ℃ to +85 ℃	-40 ℃ to +85 ℃	-40 ℃ to +85 ℃	-40 ℃ to +85 ℃	-40 ℃ to +85 ℃	-40 ℃ to +85 ℃	-30 ℃ to +80 ℃	Operation temperature
Voice	•	•	•	•	•	•	option	option	option	option	•	Voice
SMS	•	•	•	•	•	•	•	•	•	•	•	SMS
Fax	•	•	•	•	•	•	•	•	•	•	•	Fax
CSD	•	•	•	•	•	•	•	•	•	•	•	CSD
Data Transfer												**Data Transfer**
GPRS multi-slot	class 10	class 10	class 10	class 10	class 10	class 10	class 12	class 12	class 12	class 12		GPRS multi-slot
EDGE(Max.)							DL/UL:236.8Kbps/118Kbps(Max)	DL/UL:236.8Kbps/118Kbps	DL/UL:236.8Kbps/118Kbps	DL/UL:236.8Kbps/118Kbps		EDGE(Max.)
WCDMA(Max.)							DL/UL:384Kbps/384Kbps(Max)	DL/UL:HSDPA 3.6Mbps/384Kbps(Max)	DL/UL:HSDPA 7.2Mbps/HSUPA 5.76Mbps(Max)	SIM5320:HSDPA3.6Mbps/384Kbps(DL/UL) SIM5310: 384Kbps/384Kbps(DL/UL)		WCDMA(Max.)
CDMA EVDO(Max.)											EVDO,DL/UL:3.1Mbps/1.8Mbps	CDMA EVDO(Max.)
Software												**Software**
TTS	•											TTS
Audio Record & Play	•											Audio Record&Play
TCP/IP	•	•	•	•	•	•	•	•	•	•	•	TCP/IP
JAVA	•											JAVA
FTP/HTTP	•	•	•	•	•	•	•	•	•	•	•	FTP/HTTP
POP3/SMTP							•	•	•	•		POP3/SMTP
FOTA	•	•	•	•			•	•	•	•		FOTA
MMS	•	•	•	•	•	•	•	•	•	•		MMS
Embedded AT	•	•	•		•	•						Embedded AT
GPS												**GPS**
Receive type					42 channels	99 channels(GNSS)						Receive type
Support A-GPS									•	• (SIM5320), 仅 SIM5320 支持		Support A-GPS
Support Stand-alone GPS					•	•			•	• (SIM5320), 仅 SIM5320 支持		Support Stand-alone GPS

Product Portfolio

Technology	GPS			GPS/GLONASS		
Name	SIM08	SIM18	SIM28	SIM68	SIM68R	SIM68V
Picture						
Package & PINs	16 Pins SMT	24 Pins SMT	24 Pins SMT	34 Pins SMT	28 Pins SMT	24 Pins SMT
General Features						
GPS Chipset	STE	Sirf	MTK	ST	MTK	MTK
Operation Temperature	-40°C to +85 °C	-40°C to +85 °C	-40°C to +85 °C	-40°C to +85 °C	-40°C to +85 °C	-40°C to +85 °C
Dimensions(mm)	11.5 *9.5 *2.3	11*11*2.2	16*12.2*2.4	15*13*2.4	22.4*17*2.7	16*12.2*2.4
Electrical Data						
Supply Voltage	3.0V to 5.5V	1.71V to 1.89V	2.9V to 3.6V	3.0V to 3.6V	2.8V~4.3V	2.8V~4.3V
Power Acquisition	43mA	45mA	23mA	100mA	34mA	34mA
Power Tracking	41mA	40mA	17mA	65mA	30mA	30mA
GPS Specifications						
Receive type	42-channel GPS L1 C/A code	48-channel SiRF4 engine GPS L1, C/A Code	22 tracking/66 acquisition channel GPS receiver GPS L1 C/A Code	32 tracking channel and 2 fast acquisition channel compatible with GPS, Galileo,QZSS and Glonass systems	33 tracking/99 acquisition channel GNSS receiver	33 tracking/99 acquisition channel GNSS receiver
Sensivitivity	Tracking : -161 dBm Cold starts : -144 dBm Reacquisition : -151 dBm	Tracking : -163 dBm Cold starts : -147 dBmReacquisition : -160 dBm	Tracking : -165 dBm Cold starts : -147 dBmReacquisition : -160 dBm	Tracking : -162 dBm Cold starts : -148 dBmReacquisition : -160 dBm	Tracking : -167 dBm Cold starts : -148 dBmReacquisition : -160 dBm	Tracking : -167 dBm Cold starts : -148 dBm Reacquisition : -160 dBm
Max Update Rate	1 Hz	1 Hz	1 Hz	10 Hz	10Hz	10Hz
TTFF (time to first fix)	Cold starts:35s (typ.) Hot starts:3s (typ.)	Cold starts:35s (typ.) Hot starts:0.6s (typ.)	Cold starts:31s (typ.) Hot starts:<1s (typ.)	Cold starts:35s (typ.) Hot starts: 1s (typ.)	Cold starts:28s (typ.) Hot starts:<1s (typ.)	Cold starts:28s (typ.) Hot starts:<1s (typ.)
Postion accuracy	<2.5m CEP	<2.5m CEP	<2.5m CEP	< 2.5m CEP	<2.5m CEP	<2.5m CEP
Interfaces						
UART		•	•	•	•	•
SPI	•	•	•	•		•
USB				•		
I2C		MuxIti with SPI	MuxIti with SPI	•	•	MuxIti with SPI
CAN				•		
Digital I/O		•	•	•		

Technology	Terminal	
Name	T900	T5320
Picture		
Interface		
Frequency Band	Quad band 2G	Dual-Band 3G+Quad-Band 2G
Dimensions(mm)	98*60*22	98*60*22
Supply voltage range	5V~30V	5V~30V
Operation temperature	-40 ℃ to +85 ℃	-40 ℃ to +85 ℃
Voice		option
SMS	•	•
Fax	•	•
CSD	•	•
Data Transfer		
GPRS multi-slot	class 10/8	class 12
EDGE(Max.)		DL/UL:236.8Kbps/118Kbps
WCDMA(Max.)		DL/UL:HSDPA3.6Mbps/384Kbps(Max)
CDMA EVDO(Max.)		
Software		
TCP/IP	•	•
JAVA		
FTP/HTTP	•	•
POP3/SMTP	•	•
FOTA		•
MMS	•	•
Embedded AT	•	
GPS		
Receive type		
Support A-GPS		
Support Stand-alone GPS		

Technology	Short-Range Module
Name	SIM20
Picture	
Interface	SMT
Frequency Band	
Dimensions(mm)	2.1*13.8*2.6
Supply voltage range	3.0V~3.6V
Operation temperature	-40 ℃ to +85 ℃
SRD RF	
Maximum transmit power	18dBm
Receive sensitivity	-118dBm@2400bps
Transmission distance	1500m

Edward Fu
Deputy General Manager (R&D)

Go to 4G with LTE

Mr. Edward Fu got his bachelor's degree in University of Electronic & Science Technology of China and MBA in Shanghai Jiao Tong University. As deputy General Manager of SIMCOM Wireless Solution, Mr. Fu always focuses on innovation, leading teams to develop products which are beyond customer imagination and affordable to customers. Mr. Edward Fu has 8 years of experiences in 3G products. One of them got "Best Narrow bandwith 3G Module" awards from GSMA. Mr. Fu is an excellent technical leader and always focuses on future development and improvement.

Up to 2013 Jan., there are 145 commercial LTE networks in 66 countries according to GSACom.com. The well known operators are Verizion, AT&T, Sprint in USA; Rogers, Bell in Canada; Docomo, Softbank, KDDI, Smartone, SK Telecom, Telstra, Virgin in Asia-Pacific region; and DT, EE in Europe, etc.; Thirteen of which own TD-LTE commercial networks. However, LTE basically covers the area with dense population right now. Verizion, AT&T and Japanese operators have large coverage area. In Europe, most operators are not eager to fully deploy LTE network and they care more about the dual-carrier HSPA+, i.e.to provide to customers with broadband service of downlink 42Mbps and uplink 11Mbps.

Since the frequency spectrum resources in all countries are increasingly scarce resource, the frequency ranges for LTE are scattered. The available frequency ranges conforming to 3GPP standard definition are as follows:

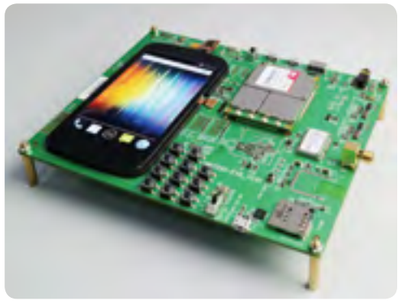
EUTRA Operating Band	Uplink (UL) operating band		Downlink (DL) operating band		Duplex Mode
	BS receive / UE transmit		BS transmit / UE receive		
	FUL_low – FUL_high		FDL_low – FDL_high		
1	1920 MHz	1980 MHz	2110 MHz	2170 MHz	FDD
2	1850 MHz	1910 MHz	1930 MHz	1990 MHz	FDD
3	1710 MHz	1785 MHz	1805 MHz	1880 MHz	FDD
4	1710 MHz	1755 MHz	2110 MHz	2155 MHz	FDD
5	824 MHz	849 MHz	869 MHz	894 MHz	FDD
6	830 MHz	840 MHz	875 MHz	885 MHz	FDD
7	2500 MHz	2570 MHz	2620 MHz	2690 MHz	FDD
.....					
17	704 MHz	716 MHz	734 MHz	746 MHz	FDD
.....					
33	1900 MHz	1920 MHz	1900 MHz	1920 MHz	TD
34	2010 MHz	2025 MHz	2010 MHz	2025 MHz	TD
35	1850 MHz	1910 MHz	1850 MHz	1910 MHz	TD
36	1930 MHz	1990 MHz	1930 MHz	1990 MHz	TD
37	1910 MHz	1930 MHz	1910 MHz	1930 MHz	TD
38	2570 MHz	2620 MHz	2570 MHz	2620 MHz	TD
39	1880 MHz	1920 MHz	1880 MHz	1920 MHz	TD
40	2300 MHz	2400 MHz	2300 MHz	2400 MHz	TD

On the other hand, there are various 3G technologies in the market, such as WCDMA, CDMA EVDO, and TD-SCDMA. Different 3G operators may select different LTE modes; most of them tend to choose FDD LTE and some of them select TDD LTE. At the present stage, the operators require the terminal manufacturers to provide the multi-mode terminal which is backward compatible. As a result, there are various combinations of 3G and LTE mode, for example, Verizion requires the combination of "CDMA 1x+CDMA EVDO+FDD LTE", AT&T requires the combination of "GSM+WCDMA+FDD LTE", Softbank requires the combination of "WCDMA+TDD LTE", CMCC requires the combination of "GSM+TD-SCDMA+TDD LTE". Since there are amounts of frequency-bands and various combinations of 2G/3G/4G modes, it is very difficult to develop a universal terminal satisfies to all operators; at the same time, the complexity and cost of terminal are increased, it is difficult to introduce a low-cost multi-mode and multi-band LTE terminal in a short period of time.

Now 3GPP R8 defines 5 UE categories and most of products in the market support category 3, which downlink/uplink maximum speed is 100Mbps/50Mbps. In 2013, a small quantity of commercial products which support Category 4 shall be released in the market. Category 4 not only provides high bandwidth of 150Mbps, but also supports carrier aggregation technology which combine discrete carrier into 20M bandwidth.

Parameter	Cat1	Cat2	Cat3	Cat4	Cat5
Peak data rate(Mbps)-downlink	10	50	100	150	300
Peak data rate(Mbps)-uplink	5	25	50	50	75
RF bandwideth(MHz)	20	20	20	20	20
Modulation-downlink	QPSK 16-QAM 64-QAM	QPSK 16-QAM 64-QAM	QPSK 16-QAM 64-QAM	QPSK 16-QAM 64-QAM	QPSK 16-QAM 64-QAM
Modulation-uplink	QPSK 16-QAM	QPSK 16-QAM	QPSK 16-QAM	QPSK 16-QAM	QPSK 16-QAM
Rx diversity	Yes	Yes	Yes	Yes	Yes
2x2 MIMO	No	Yes	Yes	Yes	Yes
4x4 MIMO	No	No	No	No	Yes

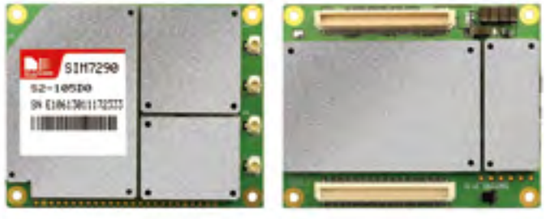
Opinions of SIMCOM on LTE product



At present, LTE terminal mainly includes smart phone, USB Dongle and MiFi router, and its application to M2M is extremely rare. However, M2M application with high bandwidth and low latency will have a certain demand for LTE. In addition, some governmental departments will use TDD LTE to build their private networks.

After LTE network coverage is good enough, high efficient M2M services will adopt LTE technology to deploy terminals, low latency, high bandwidth and efficient QoS of LTE will be fully used for these services. LTE has great significance in the video monitoring and emergent security applications. Besides, Life cycle of LTE is greatly longer than that of 2G technologies which are generally used. The adoption of LTE ensures the customer's long-term investment and reduces the total cost of owner (TCO).

In my opinion, MCU+LTE mode is not suitable to high-efficiency M2M applications, because MCU could not fully use the capability of LTE, and only high performance applications could afford high price of LTE module in early stage. Consequently, LTE module to be released by SIMCOM integrates with high performance AP and WiFi/BT/GPS, etc., and provide Android platform to customers directly, which greatly reduce the time to market for the customers.



Fanbing Kong
Feild Application Engineer

Glance at Embedded AT

The SIMCom wireless modules have been widely used for various M2M solutions over the years. It is SIMcom's concern and continuous effort to help customers with their secondary development and to reduce the customer's development cost. It is propelling our R&D team to continuously develop the innovative and competitive software and hardware products.

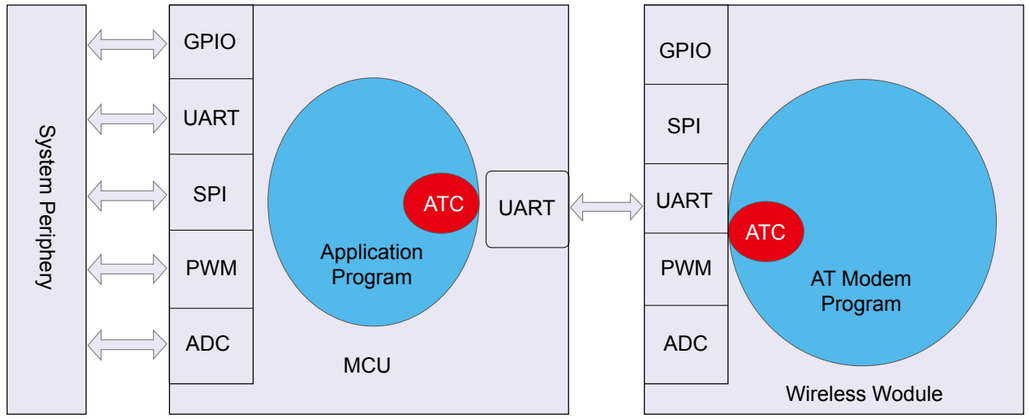
Aim of Embedded AT

Over three years, SIMCom team has provided the Embedded AT solution. Embedded AT is the SDK of wireless modules which is launched based on years of industrial application experiences. It aims to enable the customers to quickly migrate the program operating on MCU into the wireless module itself, thus eliminating the use of external MCU and helping the customer to save product cost, lower power consumption and reduce product volume.

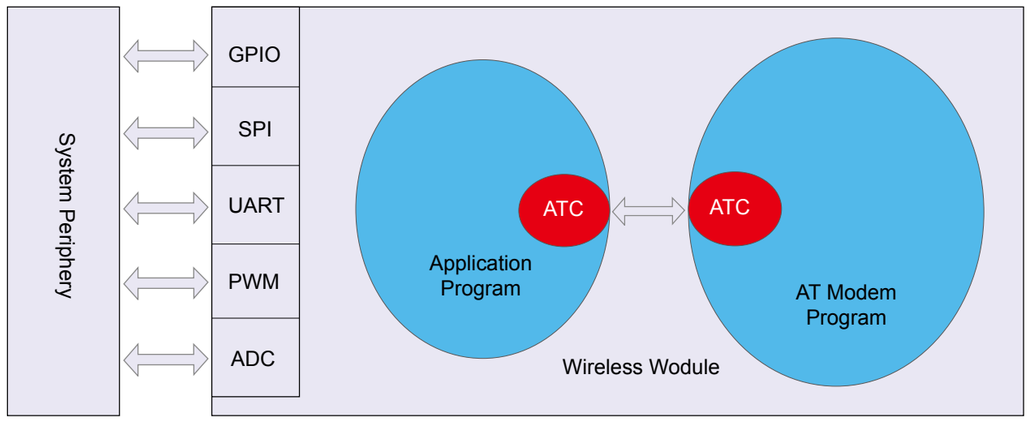
Embedded AT uses C programming language and supports free GCC compiler. Its programming interface and resources is very similar to the MCU's. So, when a customer selects Embedded AT, the software engineers can immediately begin the migration of their program without any additional training or investment in the development tool. During two years since its launch, Embedded AT has been successfully applied to different industrial applications and its ease of use has been accepted by the customers.

Framework of Embedded AT

Embedded AT is introduced totally based on the application scenario of traditional AT wireless module. In most application scenario of traditional AT wireless module, the Embedded AT system is shown in the figure below.



It is obvious that the customer's application program is the control center of the whole system, using the peripheral resources of MCU to control the whole system, including control by AT command of wireless module. For these application scenario, SIMCom wireless module generates a virtual "MCU" to run the customer's application program, which could now use the peripheral resources (such as GPIO, SPI, UART, ADC, PWM, etc.) to control the whole system, thus substituting the customer's MCU, and the system will be changed into the figure below:

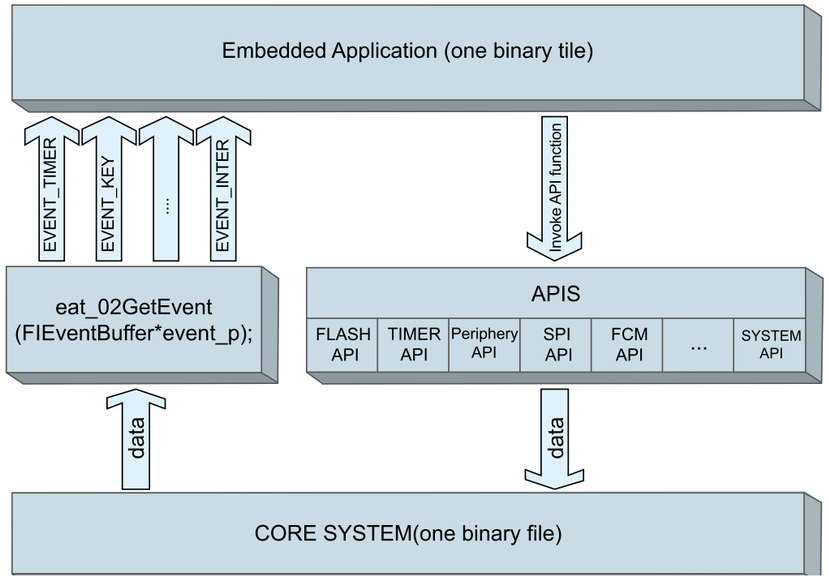


In this figure, there are two sets of programs in the wireless module: one is the wireless module program originally in charge of AT command execution and network functions , and the other is the customer's application program running on the virtual "MCU". The network functions of wireless module are still realized through the interaction of AT command; the real MCU sends AT command through UART interface and the virtual "MCU" through API function. This secondary development mode is accordingly called "Embedded AT". In this development mode, AT command continues to be used as the interface, with obvious advantages:

From the perspective of customer application, the original program framework is not changed, the codes in charge of combined delivery, reception and analysis of AT commands are reusable and the codes subsequently developed on Embedded AT still have good reusability; the software engineer can quickly conduct the product development with no need to grasp too many API functions, greatly improving the efficiency of code migration; the coupling between the customer's application program and the wireless modules is minimized, and the complexity of development and debugging is reduced to a minimum extent.

From the perspective of Embedded AT, Embedded AT is developed based on traditional AT wireless module program, ensuring the reliability of Embedded AT development platform; in addition, the development mode in which AT command interface makes SIMCom capable of quickly providing Embedded AT SDK on the different platforms and network system of the traditional AT wireless modules while making the software function upgrading of Embedded AT and traditional AT wireless module consistent.

Inside Embedded AT, the customer application program accomplishes resource utilization of these wireless modules by calling related API functions, whereas the wireless module program feeds back the related information to the customer application program by sending EVENT message, as shown in the following figure:



Actualization and application of Embedded AT

Here we introduce the enforcement of Embedded AT on SIM900 module. SIM900 module is a STE platform based GPRS/GSM wireless module, its CPU is ARM926EJS and its core frequency is 156MHz.

The exclusive resources assigned to the customer application program are shown in the below figure:

RAM	1024 KBytes
Code Flash Memory	1024 KBytes
Data Flash Memory	1024 KBytes
GPIO	23
UART	2
SPI	1
PWM	2
10bitADC	1
ADC(10bit)	1

It is obvious that Embedded AT creates a virtual "MCU" with abundant resources for the user on SIM900 module; when the application program is migrated to the so-called virtual "MCU", only codes of driver layer are changed; for example, when the UART transmission and reception interruption service program and the timer interruption service program are migrated to the background TASK program in Embedded AT, the codes of application layer are almost directly placed in the foreground TASK program in Embedded AT for running. In order to facilitate the customer's development , SIMCom provides related integrated development environment IDE, and detailed documents of development guidance and lots of application examples are provided. For related detailed information, please contact SIMCom.

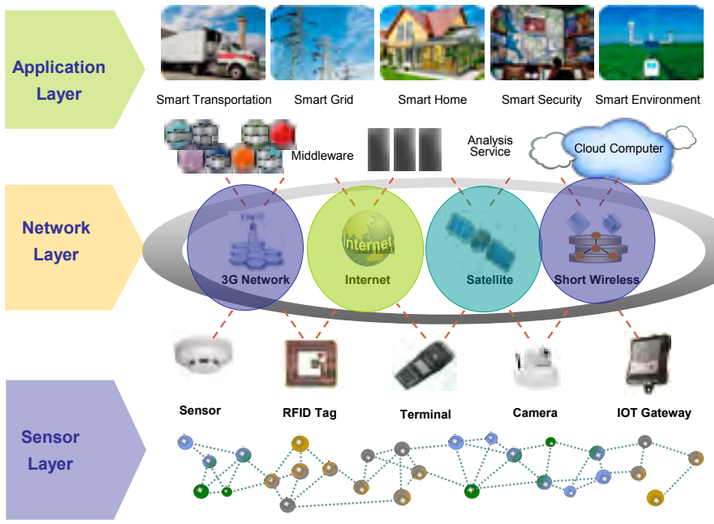
SIMCom believes that Embedded AT will bring our customers amazing value for return. It has been proven that number of users of Embedded AT has been increased since its launch. SIMCom will explore the best combination of customer application demand and internal resources of wireless module as always and provide customers most suitable software and hardware products.

Lipeng Li
Regional Sales Director

Cooperation of CMCC and SIMCom

CMCC and SIMCom Making Joint Efforts in Creating the IOT Module

The Internet of Things (IOT) is called as the next tetra-scale information industry. It is predicted by IDC that there will be over 50 billion M2M (Machine to Machine) devices connected to the public network by 2020 around the globe; the study made by CCID Consulting Company Limited shows that the market size of IOT as a whole in China will reach RMB 750 billion by 2015; the latest data prepared by China Academy of Telecommunication Research of MIIT reveals that the industry sacle of the IOT will be RMB 500 billion by the end of the Twelfth Five-Year Plan, while the time point when the tera-scale size may really be formed will occur at the latter period of the Thirteenth Five-Year Plan.



The concept of the Internet of Things is described as follows in the Internet of Things White Paper released by China Academy of Telecommunication Research of MIIT in May 2011: “The IOT is the expanded application and network extension of the communication network and internet, which takes advantage of the perceptive technologies intelligent units to perceive and identify the physical world. Through the network transmission and interconnection, it carries out computing, processing and knowledge mining, so as to enable the Human to Thing and Thing to Thing information interaction and seamless linking, thus satisfying the purpose of implementing the real-time control, precise management and scientific decision-making for the physical world. Briefly, the IOT is comprised of the perception layer, network transmission layer and application layer.” SIMCom’s main business focuses on the communication module in the above-mentioned perception layer.

CMCC has uniformed and standardized the IOT products for the IOT application. IO modules are mounted in the IOT devices, and the functions such as terminal management and business statistics are realized via the Internet of Things platform. Therefore, they are highly favored by numerous merchants as they are easy to use. As the most leading wireless module designer and manufacturer in China, SIMCom is actively engaged in the development of CMCC IOT. We have established the strategic partnership with CMCC and become one of China’s first manufactures participating in the design of the CMCC IOT module, which has acquired excellent market effects in the industry application.

In 2009, the first TD-SCDMA IOT module SIM4200 jointly developed by us and Research Institute of China Mobile entered the trial production stage. On Apr. 28, 2010, it was officially released and introduced at the IOT Seminar and Introduction Meeting on IOT TD Module by CMCC.

As the first generation of TD IOT module with its own intellectual property rights, SIM4200 is the first module that integrated M2M communication protocol WMMP 3.0 in China,. Meanwhile, which conforms to the wireless communication module norms defined by Research Institute of China Mobile and approved by operators.

During 2011-2012, Shanghai SIMCom Wireless Solutions Limited has successively introduced two models of 2G “EAT” module kits: SIM900S and SIM800DS, which have been introduced in the mobile product library. These two IOT modules are widely applied in multiple IOT applications such as Home Security, Automotive, Wireless Tax control machine, Smart Agriculture,etc.

In Aug. 2012, SIMCom work out purchase agreement on over 100,000 EAT module kits with the CMCC IOT base, enabling the IOT module to enter the full development stage.

With the rapid development of the communication business, the traditional voice communication market has been on the verge of saturation. According to the statistical data by Ministry of Industry and Information and Information Technology of the People’s Republic of China, Chinese mobile phone users had approached 1 billion by the end of Dec. 2011. Obviously, it is not likely that the number of mobile phone users will continuously increase any more. As a result, it is urgent for the telecommunication operator to seek a new market with business growth! Now the IOT has appeared acting the role of savor at the right time, whose user number is at least 5 times of the mobile phones! The rising of the Internet of Things will give birth to opportunities for telecommunication operators in the aspects of user scale, strategic status, resource utilization and application innovation etc. As the world’s leading M2M module designer, SIMCom will proactively cooperate with various telecommunication operators over IOT development strategies.

Introduction to the IOT module

IOT module is a special communication module provided by CMCC for the terminal device of the IOT. Combined with embedded SIM card, this module can directly be connected to the private network of CMCC IOT, not only providing basic communication capabilities, but also supplying remote management of terminal and other value-added services to customers.

Product (SIM900S) features:

1. Dedicated numbers:
One card can enjoy completed IOT Netword without additional roaming charge.

2. Dedicated network:
The private core network is established, offering access service for highly reliable communication.

3. Dedicated protocol
the communication module integrated with built-in WMMP protocol, offers terminal management and data transmission, rely on the operation management platform.

4. Private module
Industrial standard module provide high stability, reliability, anti-dithering, anti-oxidation, anti-electromagnetic interference and other properties,
IOT module focus on is the industry-stand customers who need the industry stand built-in SIM cards

Target industry:
Power: Wireless meter reading and monitoring of the high-tension terminal device
Transportation: In-vehicle terminal and drive recorder
Financial: Wireless POS machine and tax control invoice printer
Other industries:
Safety & security monitoring, Smart Home, Tele-medicine, environmental detection, etc.

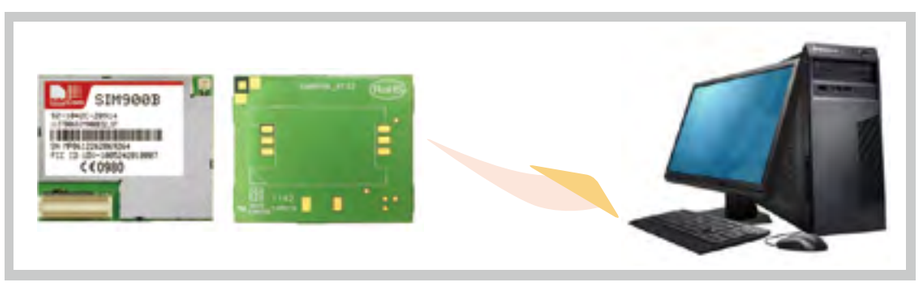
Applications:

The IOT module has been successfully applied in the network billing machine of Chongqing Local Taxation Bureau recently, by means of which real time tax collection is conducted to the operation sites. Chongqing CMCC provides IOT products matched the network billing machine which carries in-built IOT module. The utilization status, geological location, fault information, switching-on/off status etc. are real time monitored and controlled online by the local taxation bureau through the terminal management platform of network billing machine.

This project has significantly improved the tax collection and management level, and is highly recognized by Chongqing Local Taxation Bureau and domestic tax control specialists. It has played an exemplary and model role among other counterparts in China.

It has addressed in earnest related issues and demands such as the difficulty in deployment and management arising out from the reform efforts during introduction of network invoice made by the local taxation bureau. With the cooperation, the local taxation bureau can be assisted in deploying network invoices so as to take lead in the introduction speed, technical mode and business mode. This is the comprehensive business innovation of the M2M application in the taxation industry, moreover, the purpose of gaining new mobile users and increasing informational income in the taxation industry can also be satisfied.

This business innovation mode is highly recognized by Chongqing Local Taxation Bureau and domestic tax control specialist. Now there are thousands of users in Chongqing. Accordingly, the seamless transmission of tax control data can be achieved and the operating conditions of terminals can be remotely monitored as well, thus helping the local taxation bureau to take an effective management on invoices, putting an end to false invoices, tax dodging, tax evasion and other situations, and increasing the tax revenues.



Thomas Hsu
Product Marketing Manager

SIMCom Location Technology

Global navigation satellite system (GNSS) is a collective term used to refer to all global navigation satellite systems and their augmentation systems and it is the globally-covered all-weather radio navigation system established using all global navigational satellites. At present, there are four major global navigation satellite systems, including American global positioning system (GPS), Russian GLONASS satellite navigation system, Chinese Bei-Dou satellite navigation system and European Galileo satellite navigation system.

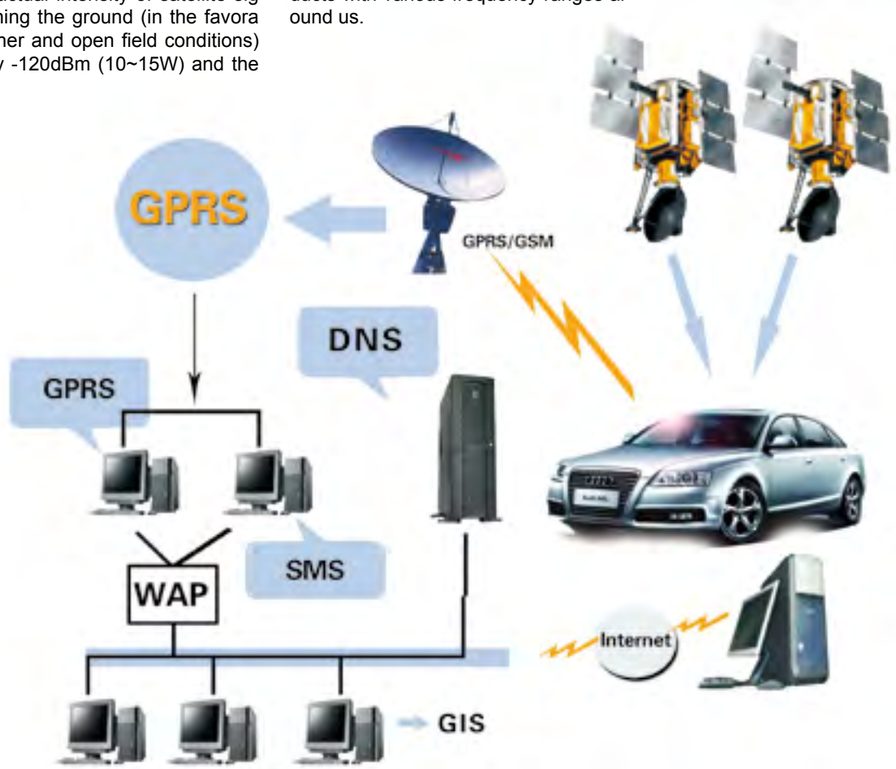
SIMCom has large investment in such four technology of global navigation satellite systems, and works out high performance-price ratio products in the respect of GPS and GLONASS. For Bei Dou Navigation Satellite System, we are actively keeping up with the technological development. SIMCom has some advanced technologies of global navigation satellite.

Jamming Removing

Since GNSS adopts the satellite communication system and the signal to the ground receiver is very weak, GNSS module is sensitive and could have the problem of interference. GNSS satellite 2. send signal 20,000 kilometers away with output power of 30W; the signal is disturbed by the atmospherical layer when passing through such a distance, and the actual intensity of satellite signal reaching the ground (in the favorable weather and open field conditions) is usually -120dBm (10~15W) and the attenuation is increased to 20~30dB when the signal enters into the residential housing.

Except that the weak signal is easy to be interfered, GNSS module must deal with the disturbance produced by peripheral electronic environments, especially the wireless signals of electronic products with various frequency ranges around us.

The GNSS module from SIMCom has the built-in special jamming removing algorithm, which enables GNSS module to restrain many interference signals, for example, SIM18, SIM28, SIM68, SIM68R and SIM68V of SIMCom i.e.



A-GPS

Assisted Global Positioning System (A-GPS) is a mode of operation used for GPS positioning in a certain auxiliary coordination, including Autonomous mode and Server based mode. A-GPS is a kind of technology to position mobile station, which has combined with network base station information and GPS information, and can be used in GSM/GPRS, WCDMA and CDMA2000 networks. In weak signal conditions, such as in a city, these signals could be weakened by irregular buildings, walls or trees. In such case, the navigation equipment without A-GPS fails to make positioning quickly. In Autonomous mode, GNSS system forecasts the location information obtained from current positioning through reading the last stored ephemeris so as to accelerate the positioning speed; in this mode, the stored ephemeris is effective for a maximum period of 7 days, and the more shorter the time interval between double positioning is, the more obviously the positioning speed is improved. In Server Based mode, GNSS system acquires related ephemeris information through accessing the server, and calculates the location in combination with currently captured satellite and ephemeris so as to accelerate the positioning speed, with available period of ephemeris of 14 days at maximum.

The acquisition of first GNSS positioning(cold start) without A-GPS generally requires a few minutes in a poor signal condition, whereas the positioning time of SIMCom products supporting A-GPS needs a few seconds only, which is the greatest advantage of these products compared to GNSS module without AGPS assisting. For example, SIM18, SIM28, SIM68, SIM68R and SIM68V.

Inertial Navigation

GNSS positioning and navigation is dependent on the satellite signal reception. In the urban environment, GNSS signal is constantly jammed, besides, with the multipath effect of tall buildings on signal, the quality of GNSS signal is reduced. In the tunnel or underground parking lot, GNSS module does not conduct the positioning, so the inertial navigation could provide necessary supplementary service to the customers.

The inertial navigation system is a calculated navigation mode, that is, from the location of a given point, the location of the next point is calculated based on successively measured course angle and speed of the carrier, thus continually detecting current locations of a mobile. The gyroscope in the inertial navigation system is used to form a coordinate system for navigation, in which the measurement axis of accelerometer is made stabilized, with the heading and attitude angle given out; the accelerometer is used to measure the accelerated speed of the mobile and the speed is obtained through the integral of the time, and then the distance is obtained through the integral of the time.

GNSS module of SIMCom is configured externally with accelerometer and gyroscope, and the path calibration of GNSS module during positioning and its path estimation without positioning are actualized through the sampling and calculation of signals of MEMS device in the module. SIM68 of SIMCom now supports the inertial navigation function.

Cell Location

As the main positioning technology, GPS and GLONASS are widely used for the navigation, positioning monitoring, etc. However, the positioning of GPS and GLONASS is limited and affected in such aspects as buildings, trees, weather, interference source, etc. In order to solve the problem of positioning in the complex environment and severe weather, SIMCom uses the community positioning technology, which can effectively resolve these problems.

For the community positioning technology, the location information (geographical coordinates or geodetic coordinates) of mobile terminal user is acquired by means of the operator's radio communication network (such as GSM network, CDMA network) or external positioning mode (such as GPS, GLONASS, COMPASS, etc.), and this technology, supported by Geographic Information System (GIS) platform, is a value added service, providing users with related services. Currently, the community positioning is realized by GPRS/WCDMA module (combined with GNSS module). For instance, GPRS module "SIM900" from SIMCom supports the function.

SIMCom has devoted to the industry of global navigation satellite system for many years and launched many high performance products, such as GPS modules "SIM18" and "SIM28", GPS/GLONASS modules "SIM68", "SIM68R" and "SIM68V", etc., and plans to make more investment in this field, including Bei Dou, Galileo System.

Ya Li
Hardware Engineer

Design of Quad-band Monopole PCB Antenna

Considering the increase of wireless communication systems applications, the demands of antenna design are more and more, such as wider bandwidth and higher gains. The design of the antenna will face more challenges, so the following rules should be better to obey:

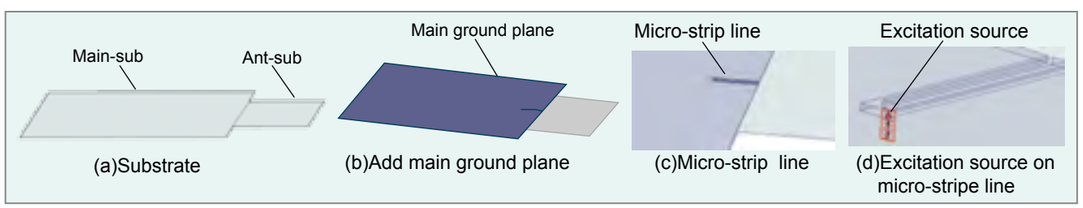
- *The antenna should be miniaturized to reduce the size of device.*
- *Keep the impedance matching to ensure the maximum power transfer.*
- *The gain of the antenna should be relatively high to obtain more wide coverage.*

In this paper, design of quad-band monopole PCB antenna is presented. Due to the antenna's wide bandwidth, it can be used not only in the full band GSM wireless communication devices, but also in 3G devices like TD-SCDMA and WCDMA. Moreover, since it's a printed planar structure, it can be assembled easily with low cost.
The antenna is simulated with HFSS, a well-known professional high frequency simulating software. In the following section, the antenna design procedure will be described, and then the antenna simulated results will be presented.

The antenna design procedure

1. a) Create a dielectric substrate of the motherboard named main-sub and assign another substrate on the right named ant-sub, and combine the both substrates;
   b) Create copper on the top of the motherboard as the main ground plane.
   c) Draw a micro-strip line in the right of the main-sub;
   d) Set this micro-strip line as the excitation source of the antenna.

Keep the impedance of this feeding line as 50 ohm to minimize the return loss and get the most radiation power.



Figur1 Antenna environment and its excitation

2. Found the antenna 3D model as shown in figure 2(a), in which the left part is the motherboard and the right part is antenna. The antenna is monopole type laid on the PCB. When the simulation model is build, make sure the model where the antenna put is as close as the actual, considering all structure and mental components to get the accurate simulated results.

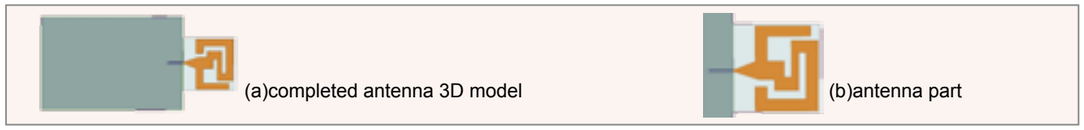


Figure 2 3D antenna model

3. The antenna is driven by an integration line defined in the wave-port, which is a vector that specifies the direction of the excitation field pattern at the port, in such case field pattern is consistent at the port. Two arms generate two resonance frequencies corresponding high and low frequencies, shown in figure 2(b). The slot-coupling is used to widen the high frequency band.
4. Choose the material type. Assign the main-sub as FR4 with dielectric constant 4.4 and set the main ground plane as Copper. Set the radiation boundaries and ensure that the distance between antenna and six faces of air box is longer than λ/4.

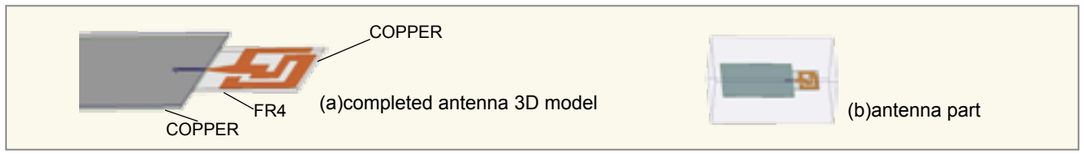
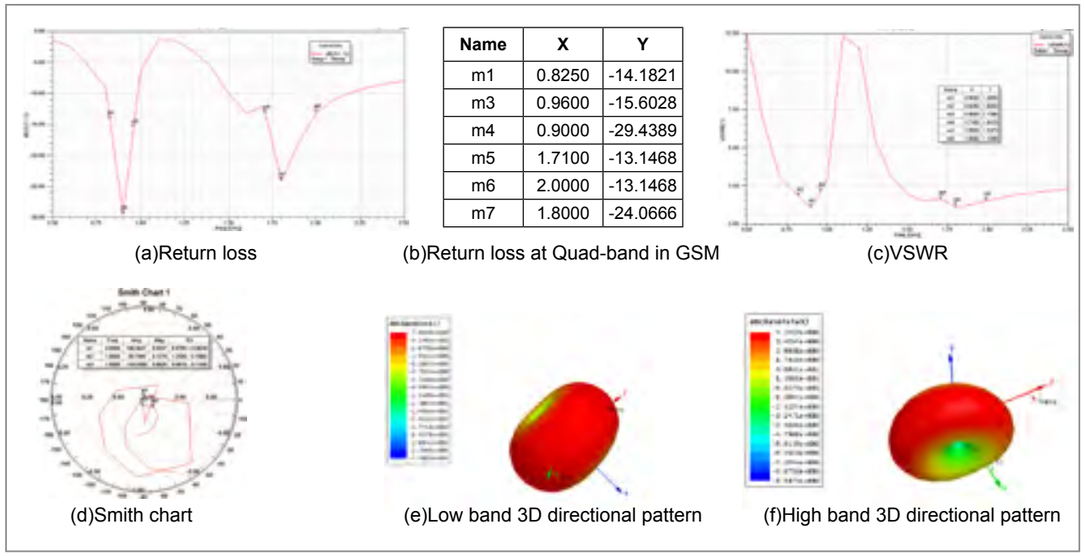


Figure 2 3D antenna model

5. Assign the frequency range and validate the design to check right or not. If there is no error replied, the antenna design project has been done.

Antenna simulated results

The simulated result are presented and main parameters of antenna such as return loss, VSWR, smith-chart, radiation pattern, and field overlays are shown in the below figure. The bandwidth is bigger than 1GHz in the high band and 300 MHz in the low band. The directional pattern is omni-directional in both low and high band.



Name	X	Y
m1	0.8250	-14.1821
m3	0.9600	-15.6028
m4	0.9000	-29.4389
m5	1.7100	-13.1468
m6	2.0000	-13.1468
m7	1.8000	-24.0666

(a)Return loss
(b)Return loss at Quad-band in GSM
(c)VSWR
(d)Smith chart
(e)Low band 3D directional pattern
(f)High band 3D directional pattern

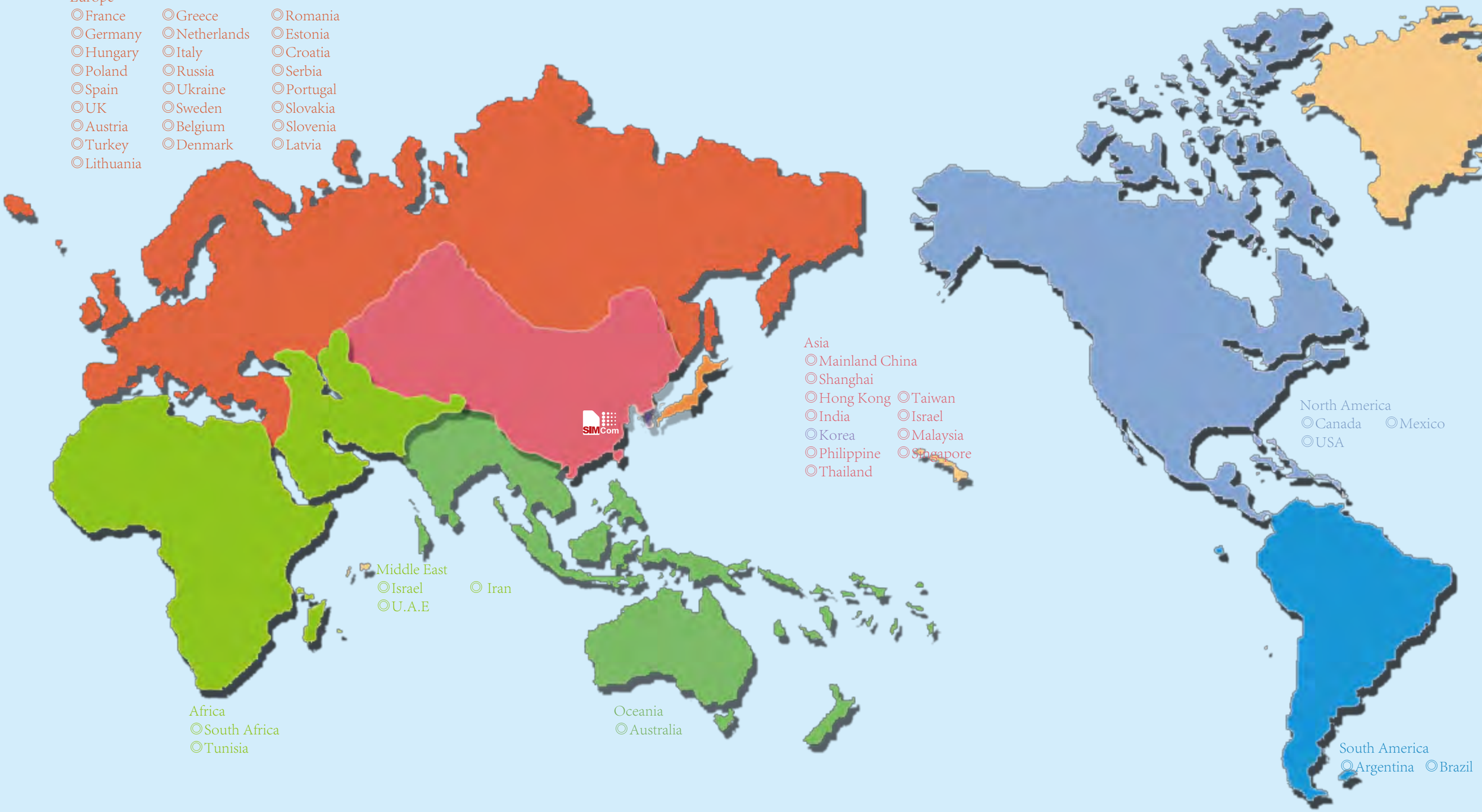
Figure4 The simulated results of the antenna

The frequency makers in figure 4(b) cover all the quad-band frequencies in GSM wireless communication, of which the return loss are less than -13db. The gain in low band is 1dbi and 4.2dbi in high band.

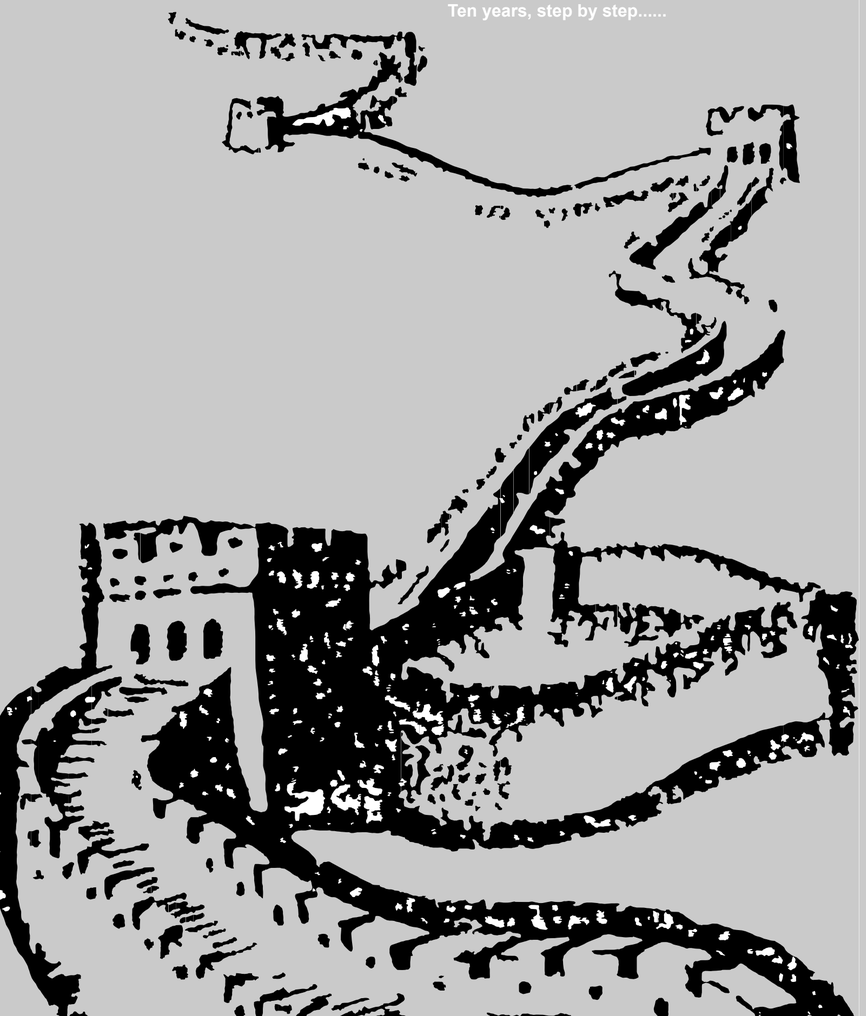
Conclusion

In this paper, we have presented a design of printed monopole antenna in GSM bands GSM850/EGSM900/DCS1800/PCS1900, and investigated its simulated performance. We can see, the antenna can be easily constructed on a low cost FR4 PCB. Owning to wide bandwidth and high gain, the antenna also can be used in bands A/B of TD-SCDMA network and bands 1/2/5/8 of WCDMA network.

Global Footprint



Ten years, step by step.....



2002-

TH

-2012

Tenth Anniversary

SIMCom,Drive Forward. .....

Wendy Wang
Deputy General Manager

10 Years of Excellence

As Deputy General Manager, Miss Wendy Wang leads the SIMCom wireless module division in creating the vision and execution plans to ensure that SIMCom products and services become the leader in their markets. Prior to SIMCom, she continuously creates winning teams through her leadership, communication, and motivation skills. Miss Wang creates a “Get it Done” company culture, resulting in strong customer referrals and a significant industry footprint.

Miss Wendy Wang graduated from Harbin P. R. China, with an bachelor degree in electronic engineering and an EMBA program in CEIBS.

TEN YEARS ago, SIMCom launched its first GSM module (ITM-100). In the years since, we have developed more than 20 modules WINNING numerous international accolades. By designing a combination of reliability in a dynamic POWERFUL 2G,2.5G and 3G platform, we have brought satisfaction to our global customers base on five continents (Europe, North America, South America, Africa and Asia). Our commitment to tireless improvement has resulted in strong CORPORATE GROWTH exceeding 110% during the recent economic crisis and we are excited to celebrate our 10 year anniversary by launching our new HSPA, HSPA+ and LTE products. Feel invited to our stand on all major M2M shows globally.

electronica CTIA CES GSMA

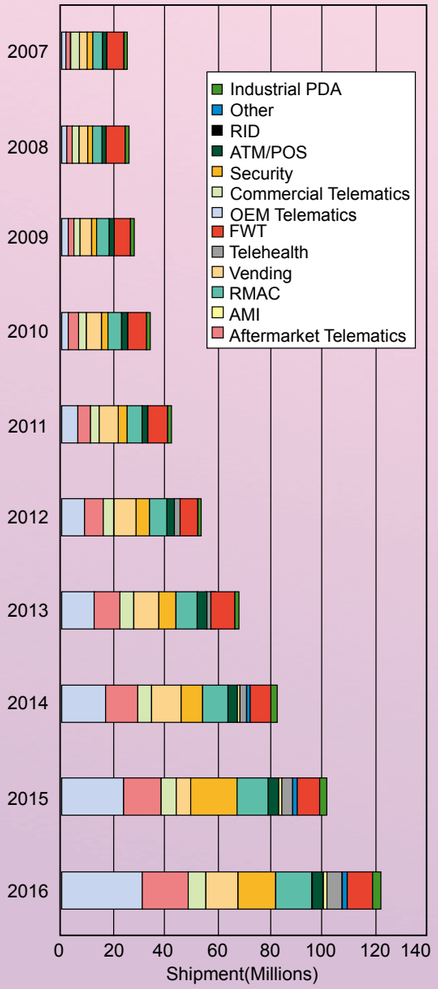
Machine to machine (M2M)

M2M refers to technologies that allow both wireless and wired systems to communicate with other devices of the same ability. M2M uses a device (such as a sensor or meter) to capture an event (such as temperature, inventory level, etc.), which is relayed through a network (wireless, wired or hybrid) to an application (software program), that translates the captured event into meaningful information (for example, items need to be restocked). Such communication was originally accomplished by having a remote network of machines relay information back to a central hub for analysis, which would then be rerouted into a system via mobile cellular network such as GSM/GPRS, WCDMA/HSPA, CDMA/EVDO AND LTE/WiMAX etc.

M2M is gaining significant market traction as it addresses the ever-increasing demands in speed, savings, safety, environmental protection, localization, remote control, accuracy, and others in the business world. Today, M2M applications are serving key functions. The M2M market is growing rapidly. According to many specialists, the global market for machine-to-machine (M2M) device connections will grow from less than 40 million devices in 2010 to 2.1 billion devices in 2020. According to market research company ABI Research, cellular M2M connections will more than triple their current number of about 125 million by 2016.

M2M applications can be found in a wide range of industries and sectors including vending machines, automatic meter reading (AMR), Point of sales (POS) terminals, transport and logistics (fleet management), healthcare, security technology, and many other applications. To ensure that value-chain players can profit from efficiency benefits afforded by the use of M2M modules, high quality, cost-effective, scalable and market-oriented solutions are needed.

Additionally, the demands on M2M modules will continue to increase in the future – requiring substantial added versatility in use. The integration of complementary technologies such as Wi-Fi, GPS, Bluetooth and ZigBee at module level is constantly gaining increasing importance while the demand for small and compact modules for terminals geared towards the consumer market will also steadily grow (e.g. vital-sign monitoring, location and alerts for people with health conditions, and personal navigation) from the perspective of total cost of ownership and time to market.



M2M>SEGMENTS

A smart grid is an electrical grid that uses information and communications technology to gather and act on information, such as information about the behaviors of suppliers and consumers, in an automated fashion to improve the efficiency, reliability, economics, and sustainability of the production and distribution of electricity. Roll-out of smart grid technology also implies a fundamental re-engineering of the electricity services industry, although typical usage of the term is focused on the technical infrastructure.

Telematics typically is any integrated use of telecommunications and informatics, also known as ICT (Information and Communications Technology). The application of telematics is with any of the following: The technology of sending, receiving and storing information via telecommunication devices in conjunction with affecting control on remote objects;
The integrated use of telecommunications and informatics, for application in vehicles and with control of vehicles on the move; Telematics includes but is not limited to Global Positioning System technology integrated with computers and mobile communications technology in automotive navigation systems.

Point of sale (POS) or checkout is the place where a transaction occurs in exchange for goods or services. The point of sale often refers to the physical electronic cash register or dedicated POS hardware used for checkout, but the POS is simply the location where the sale is conducted, money changes hands and a receipt is given, which can also occur on a smartphone, tablet, laptop, or mobile POS device when the right hardware and POS software is combined with the mobile device. The modern point of sale will also include advanced functionalities to cater to different verticals, such as inventory, CRM, financials, warehousing, and so on, all built into the POS software.

eHealth (also written e-health) is a relatively recent term for healthcare practice supported by electronic processes and communication, dating back to at least 1999. Usage of the term varies: some would argue it is interchangeable with health informatics with a broad definition covering electronic/digital processes in health while others use it in the narrower sense of healthcare practice using the mobile cellular network. A common example of a back-end exchange is when a patient on vacation visits a doctor who then may request access to the patient's health records, such as medicine prescriptions, x-ray photographs, or blood test results. Such an action may reveal allergies or other prior conditions that are relevant to the visit.

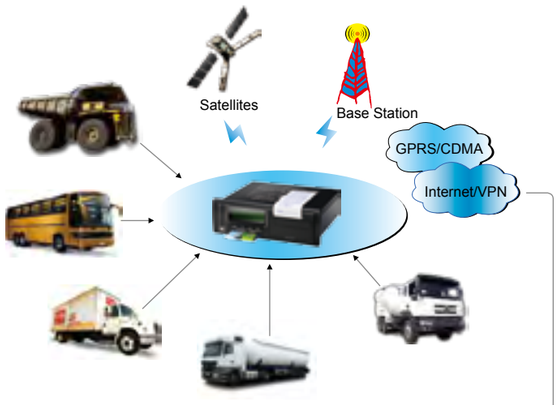
Security is a basic need, for businesses as well as for individuals. Security applications with integrated machine-to-machine solutions can simplify and automate alarm monitoring and management, freeing up vital security resources and lowering costs. Cellular technology based M2M communications can also increase flexibility and availability while lowering installation expenses. Security systems can send automatic alerts when something seems amiss and remote monitoring can confirm situations or even give an all-clear, eliminating false alarms.

Application

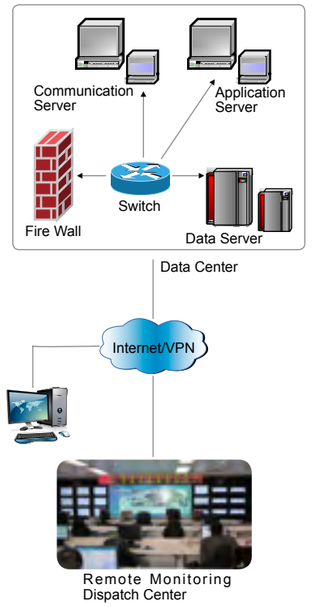
Telematics

Huabao and SIMCOm are strategic cooperation partners.

Huabao automotive telematics collects vehicle running data, vehicel status data, driver's operation behaviour data from CAN bus and all kinds of sensors, and transmits these data in real-time to the data processing center via wireless



communucation module. Then the center analyzes and disposes the received mass data in real time through commercial intelligent technologies. Finally, as a result of domestic and overseas advanced management ideas, reports and diagrams are produced to show driver's bad behivours, fuel usage, vehicle running data, maintenaince plan, etc.



Shenzhen Huabao Electronic Co. Ltd.
China
www.sinoHB.cn

HB-R03

>> Real-time Positioning
>> Geo-Fence
>> Emergency ,Speeding and Equipment Failure Alarm
>> Regional Speed Limit
>> Vehicle Sensor & Remote Monitoring
>> Data Logging and Track Playback
>> Data Communication
>> Remote Online Upgrade
>> Vehicle and Driver File Management

Which module do you use and why?
SIM900A. Because SIM900A has very high popularity, Huabao's engineers choose this module to development primarily.

Company profile
Shenzhen Huabao Electronic Technology Co. Ltd specialises in R & D and manufacture of intelligent transportation industry products. Huabao products have been installed as automobile accessories in a number of automobile manufacturers and won a lots of patents at home and aboard.Huabao is able to continually provide high quality products and timely response to customers of product upgrading and customized needs with perfect after sales service. You can rest assured of a safe journey with Huabao products.

HUABAO 华宝科技

SIMCom is definitely a very reliable partner, offering a valuable commercial and technical support which has convinced us for long term cooperation.

Coyote System
HQ based in France (also available in Benelux, Italy, Spain)
www.coyotesystems.eu

New Coyote

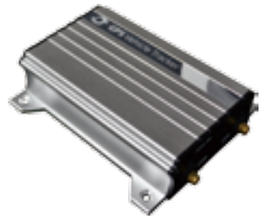
>> Real-time speed camera information: fixed cameras, mobile cameras
>> Number of Scouts currently on the same road
>> Real-time road safety information: accidents, congestion, hazardous conditions, etc
>> Wuilt-in speech recognition system
>> Bluetooth connection

Which module do you use and why?
SIM300D in the past, and now the SIM900 family is for us the right choice in terms of quality and cost optimization.

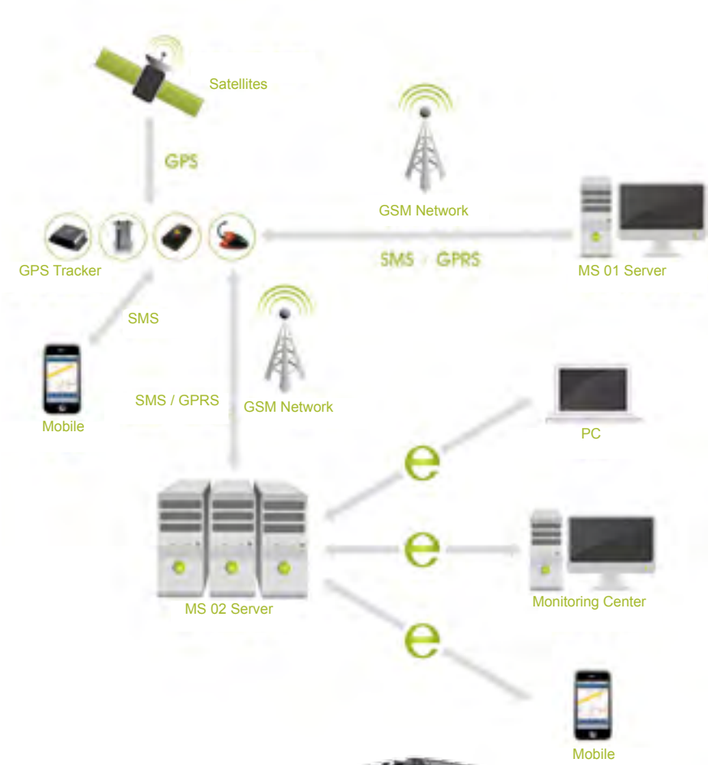
Company profile
Created in June 2005, Coyote System is an innovative french company with the first geolocation information solution making it possible to communicate speed limits in real-time, traffic information and the dangers of the road.Leader of these solutions, Coyote is the #1 driver community in Europe.

Coyote cloud-based services : "Coyote System has built its reputation on the quality of its service developed with sophisticated server and client-based technologies. Equipped with GPS and GSM technologies with very reliable partners like Simcom (for the Mini Coyote V1 for example), the system is in constant communication with a central server which transmits the relevant information to the users. It also enables each motorist to notify all other members of the Coyote community, in real time, of the presence of hazards on the road (live speed cams, speed limits, traffic info, road incidents) simply by pressing a button. The company has conceived powerful algorithms to aggregate, filter, verify and rank community alerts in real-time. As an example, Coyote users know not only how many community members ("scouts") are ahead of them at any time on the road but also the expected quality of their reporting. Benefiting from European coverage, Coyote System now has a community of over 2 millions users.Coyote services are adapted according to local laws applicable in each country

We have collaborated with SIMCom for almost 8 years, SIMCom have proven to be a reliable partner, giving comprehensive technical, logistics and commercial support.



Meitrack Family GPS Tracking System is a prefessional server-based tracking software platform for web and mobie phone based real-time GPS Tracking and fleet management. From the alrm reports and analysis report, for the company managers ,you can easy to get your staff and vehicles' status and real-time location;for personal users,you can keep eyes on your kids, pet and vehicles via this GPS tracking system. There are hundreds of functions for you and Meitrack have designed different GPS tracking system to meet your special requirements.



Shenzhen Meiligao Electronics Co., Ltd.
China
www.meitrack.net

T1

>> Work Time: 43 hours in power-saving mode and 10 hours in normal mode
>> LED: 2 LED lights to show GPS, GSM and other status
>> Button: 1 SOS (for SMS or making call) and 1 power on/off
>> Memory: 8M Byte
>> Sensor Motion: sensor & acceleration sensor
>> GSM Frequency: GSM 850/900/1800/1900MHz
>> GPS Chip: Latest GPS SIRFStar III chipset
>> GPS Sensitivity: -159dB
>> Positioning Accuracy: 10 meters, 2D RMS
>> Interface: 3 Digital Input, 2 Analog Input Detection ,3 Output, 1 RS232 and 1 USB port

Which module do you use and why?
We are satisfied with SIM900's compact form factor by its good cost and high quality.

Company profile
Shenzhen Meiligao Electronics Co., Ltd (Meitrack) is a global leader in R&D innovation, manufacturing superior GPS products in terms of GPS Personal Tracker, GPS Vehicle Tracker, GPS Tracking System and Integrated GPS Tracking Solutions.

We have chosen SIMCom as long-term partner because SIMCom wireless module is widely used in global market and their advantage in good cost and delivery. We are satisfied with their constant technical support and service. They were very responsive and efficient.

Wonde Proud Technology Co.LTD
Taiwan
http://www.wondeproud.com/index.html

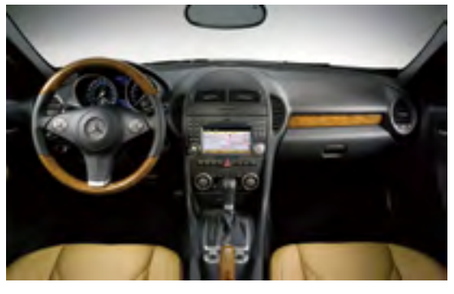
WP9900 Android System Car Navigation Box

>> Phone Connection
>> GPS for navigation and other application
>> 3G / Wifi access
>> Multi-language support
>> Android 2.3.7 OS
>> HDMI resolution 720P/1080P
>> Optional to 5 Uart port
>> Remote control support

Which module do you use and why?
SIM5320

Company profile
Wonde Proud Technology specializes in designing the most advanced, integrated, and user friendly GPS products which had been widely-used in commercial and military field, where reliability and stability are most concerned. Over the past years, we have registered numerous patents and intellectual property which give us competitive edges in this vigorous market.

WP9900 is an Android black box with built in GPS for navigation or other GPS applications. Embedded with SIM5320 3G module and Wifi optional, WP9900 provides internet access as your car computer for APK market download. With optional phone connection feature, you can easily operate your mobile phone through

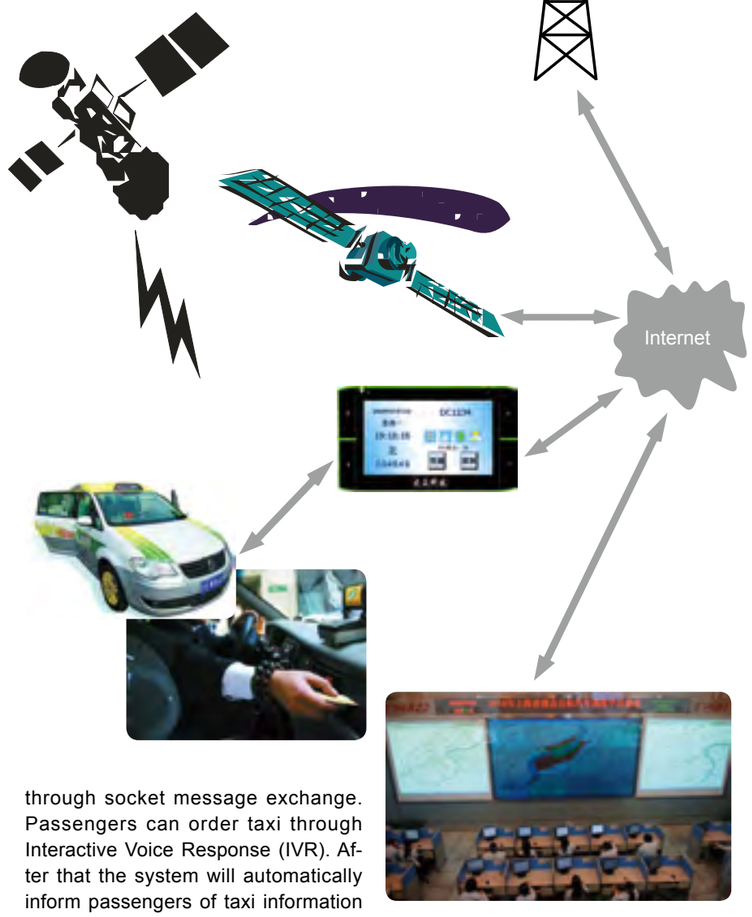


WP9900 on your car's monitor. And multi-language and resolution support has made WP9900 a universal Android unit.

Telematics

SIMCom's products have high performance, and SIMCom provide goog technical supports, so we choose SIMCom.

Intelligent dispatching system make use of instant TCP, GIS, GPS etc. It is quick and efficient for the systems to find the taxi for the reason that it can match the taxi location and passengers' address. And the system has the ability to set different algorithm based on different regions and car types.Automatic vocal service:The system is capable of seamless combining with call system



through socket message exchange. Passengers can order taxi through Interactive Voice Response (IVR). After that the system will automatically inform passengers of taxi information whether the order is successful or not.

Shanghai Dazhong Technology Co., Ltd.
China
http://www.dztechsh.com

DZD-02C

>> Auto response for dispatching of temporary taxi reservation and booking,or logistics.
>> Telephone communication between drivers and dispatch center, drivers and clients as well.
>> Emergency alarm , Anti-theft alarm and Cross-border Alarm
>> Navigation;
>> Wireless date transmission of taximeter and transportation card by swiping driver's management card;
>> Support wireless update of program;

Which module do you use and why?
Because of the SIM900S can be compatible with SIM300, can accelerate the development .

Company profile
Shanghai Dazhong Technology Co., Ltd. was established in March 1994, controlled by Dazhong Transportation Group. Dazhong Technology possesses a strong team of experienced professionals and specialists from different areas ranging from HW/SW to radio communications, which provides overall solution to customers. Dazhong Technology has independently developed GPS / GPRS vehicle terminal, taxi meter, POS machines and other high-tech products, which covered 127 cities and towns.

SIMCom have proven to be a reliable partner, giving comprehensive technical, logistics and commercial support, have convinced us for long term cooperation."--- Issam MSALLEM, VP Sales & Marketing

DIALINE
France
www.dialine.fr

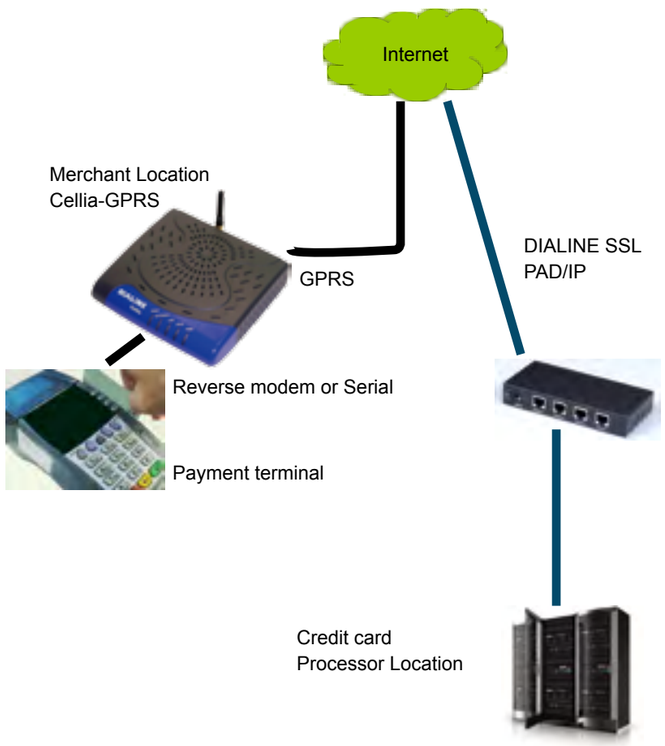
Cellia-GPRS

>> Plug & Play GPRS support for legacy PSTN EPOS terminal
>> Able to connect into VPN network
>> Support SSL V3
>> Provide WAN acess

Which module do you use and why?
SIM900's compact form factor along with its good cost and high quality is the smart decision among all other module selections.

Company profile
Dialine design value added M2M routers and appliances. EPOS transaction is an important market for DIALINE since 2003. DIALINE provides innovative solution for its customers including Telco, Banks , system integrators and OEM's...

Dialine lately launched their Cellia-GPRS, a third generation mobile router for high performance support for electronic money transport protocol. CELLIA-GPRS enables service provider to deploy electronic money value added services using GPRS mobile subscriptions. It is full compliant GIE CB recommendations (in FEANCE) and support SSL V3.
Dialine providing easy migration of Legacy EPOS terminal from PSTN connectivity to Mobile network (GPRS).



SIMCom's technical support and response speed is supreme. Most issue can be solved with 24 hours. We are quite satisfied with their service.

With the reliable performance of open source, embedded Linux, the all-in-one touch-screen interfaced HHC-80XX wireless Hand-held Compute with integrated thermal printer makes unlimited mobile transactions possible. This is an ideal solution for real-time,

information-intensive applications in banking, finance, retail, distribution, warehousing, manufacturing, and healthcare.
The customers who are already utilizing wireless, Hand-held Compute are able to complete transactions, check inventory, take payments, deliver goods, print receipts and report progress to headquarters in a timely fashion. With complete field visibility for the organization, mobile organizations gain real-time, actionable information that translates into better field operations management, trend response and sales productivity with this new device.

Clancor Technovates India Private Limited
India
http://www.clancor.net/

Handheld Terminal/Computer

>> 3.5 touch screen,
>> bar code scanner ,
>> RFID , Finger printe sensor,
>> GPS,GPRS,Ethernet,
>> 2 Thermal printer,
>> Full QWERTY KEY BAD,
>> Smart cad interface
>> Camera & voice support
>> Embedded Linux OS with SDK

Which module do you use and why?
SIM900A's compact form factor along with its good cost with high quality

Company profile
With more than one decade of experience in this sphere, Clancor Technovates India Private Limited is capable to offer high quality Hand-held Compute to our clients. Their entire range is manufactured as per ISO 9001: 2000 standards and we are committed to deliver reliable, best in class Products, Services & Solutions and ensure customers satisfaction.

SIMCom offers the right answers to our needs, and it has been rewarding to work with their high quality modules.--- Luís Coelho, C-Log's Product Manager

ISA - Intelligent Sensing Anywhere
Portugal
www.isasensing.com

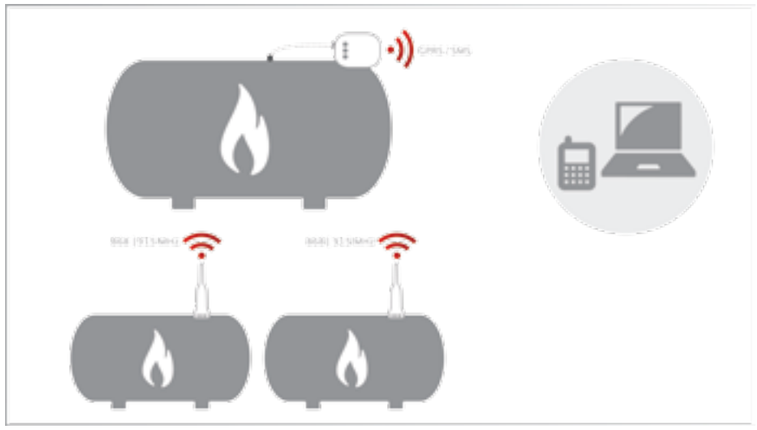
C-Log

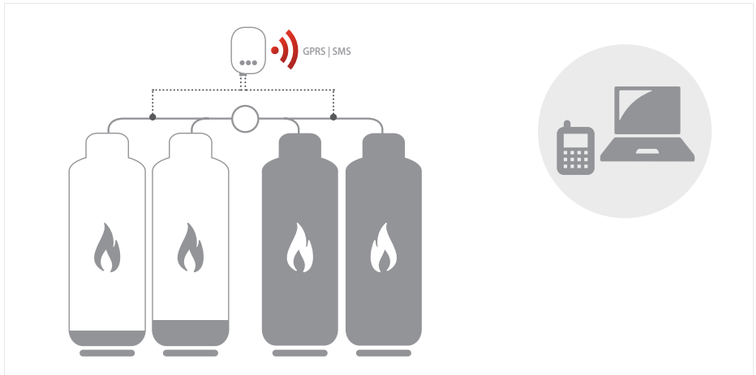
>> Analog and Digital inputs
>> Monitoring up to 9 sensors; RF communication status monitoring
>> Memory capacity: 240 acquisitions
>> Supply availability: 4V or 5V for Pressure Sensors
>> Alarms: up to 24 alarms can be configured
>> Operating frequency: 868MHz (915Mhz Optional)
>> Frequency band: Quad Band (900/1800MHz and 850/1900 MHz)
>> Operating Conditions: Temperature: -20ºC to +60ºC / Humidity: 10% to 90%

Which module do you use and why?
We use SIM900 because is the best cost-effective solution for our M2M products.

Company profile
ISA is a distinguished technology-based company specialized in intelligent telemetry and remote management solutions applied to the areas of energy, environment, oil and gas. Through their own technology, the company develop remote monitoring and control solutions.

C-Log is a multi-purpose remote management system that provides data logging, automatic meter reading and alarm triggering. The device can be connected to different wired sensors or wirelessly through an RTU (Remote Transmitter Unit). The received data is saved and forwarded to a remote central server via GSM, through SMS/GPRS, with a sending frequency which is configurable from once a week up to several times a day. Forwarded data can then be observed through a web page or integrated within the client's ERP. C-Log is a battery-powered device. This product has very easy installation methods, and it only takes some minutes to place it to work.





SIMCom is a long-term, reliable partner of eDevice and allows the company to benefit from high-reactivity support on powerful and low-cost cellular modules.----------Marc Berrebi, CEO

Smart water-metering,a water distributor for local French authorities is using eDevice's WireX solution. All its equipment performing supervision and management of technical works are now connected to the cellular network and can be remotely managed via the mobile phone network. This solution required no further adaption to the already existing equipment. It enables the company to realize significant economies of scale by replacing fixed phone lines with GPRS M2M subscriptions.

eDevice
eDevice
http://www.edevice.com

WireX

WireX is a flexible and cost-effective solution allowing legacy equipment with built-in modems to connect to the cellular 3G network. Expensive phonelines subscriptions can now be replaced by cost-competitive SIM cards, decreasing the overall telecom budget and, at the same time, offering worldwide mobility for the end-user.

Which module do you use and why?
SIM900 was selected for its cost-efficiency, its programmable features and worldwide GSM coverage.

Company profile
eDevice is a leading provider of complete Machine-to-Machine (M2M) solutions with more than 3 million products embedding eDevice's technology already in the field. eDevice is ISO-9001 certified and serves international customers including Fortune 500 companies in various activity areas such as metering, security, monitoring, and a specific focus on mHealth and telemedicine.

We appreciate that SIMCom has fast, effective and flexible technical support . We enjoy to work with such a reliable partner.

Russian Navigation Technologies JSC
Russia
www.autotracker.ru

AutoTracker - Fleet Management System

>> Build in GLONASS + GPS modem
>> Active internal GSM antenna
>> Connection of Wireless sensors and devices.
>> Connection up to 256 additional sensors and devices
>> Power surge protection up to 1000 +/- 230V
>> Dual processor configuration
>> Linking through special connectors
>> 2 SIM cards for the most affordable communication rates

Which module do you use and why?
We use SIM900 along with good cost and high quality. it also includes specific functions that are necessary for GPS Monitoring such as InBand modem

Company profile
Russian Navigation Technologies JSC is the largest developer and manufacturer of the GLONASS/GPS-enabled motor vehicle tracking and control systems in the Russian market

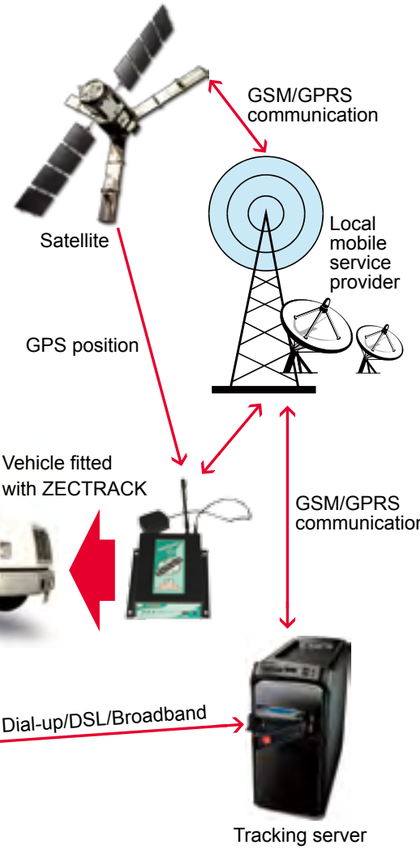
AUTO TRACKER
ГЛОНАСС/GPS МОНИТОРИНГ

The AutoTracker system is a multi-function smart fleet management system for remote control of vehicles, specialized machinery, and other mobile equipment. AutoTracker's modern satellite navigation and mobile communication technology provides real-time data on the exact location of vehicles and various other parameters, including distance, speed, fuel consumption, deviation from planned route, and cargo hold temperature.
The on-board GSM module is the heart of the AutoTracker system and a necessary element thereof. It is installed directly inside the vehicle and performs most of the work on the initial processing of information about vehicle movement and events on board.
With the help of a GPS or GLONASS positioning system, the on-board module determines the coordinates of the object location, collects and processes information on the condition of the various devices of the transport, and uses a GSM cellular network or a similar communication channel to transmit the necessary information to the dispatcher.

Site name:	Time of arrival to the site (hh:mm)	Time of departure from the site (hh:mm)	Haulage to the site (km)	Travel time to the site (hh:mm)	Haulage inside the site (hh:mm)	Duration of standing at the site (hh:mm)	Total time spent at the site (hh:mm)
MAZ (R942HO)							
PK 400 PK 410	16-09-2009 09:55	16-09-2009 10:05	24.08		1.93	0 00:02	0 00:07
PK 350 PK 360	16-09-2009 10:14	16-09-2009 10:20	3.94	0 00:10	0.00	0 00:09	0 00:06
PK 400 PK 410	16-09-2009 10:26	16-09-2009 10:35	4.21	0 00:06	2.11	0 00:02	0 00:08
PK 350 PK 360	16-09-2009 10:42	16-09-2009 10:47	4.16	0 00:07	0.04	0 00:00	0 00:04
PK 400 PK 410	16-09-2009 10:55	16-09-2009 11:56	4.35	0 00:08	2.02	0 00:35	0 00:41
PK 350 PK 360	16-09-2009 11:48	16-09-2009 11:56	4.14	0 00:11	0.08	0 00:07	0 00:08

SIMCom office & application lab in India helps for all-round personal technical support.

"Zectrack" is a GPS based Vehicle Tracking Unit with latest state of art technology and unmatched features. Zectrack is useful for individuals, rent a car, logistic, fleet owners, tours & travels, corporate offices, public transport,courier services, call centre, BPO, Buses, Cranes etc. Vehicle Tracking Unit works on system which helps you to track and locate all moving objects all over the world. Vehicle can be tracked if stolen or misused plus saves on cost as no need for security personal. Zectrack reduces the tension of the client as the vehicle can be watched and managed from home/office, it also sends messages on mobile if stolen or misused.



ZENTEK ELECTRONICS & COMMUNICATION PVT. LTD.
India
www.zentekelectronics.com

Vehicle Tracking System

Small form factor.
Passed local certifications.
Rugged to operate in worst / hostile envirnment

Which module do you use and why?
SIM900 & SIM18/SIM68 having compact form factor along with its good cost and high quality is the smart decision among all other module selections.

Company profile
ZENTEK ELECTRONICS & COMMUNICATION PVT. LTD. is a leading supplier of vehicle tracking unit

SIMCom have proven to be a reliable partner, giving comprehensive technical, logistics and commercial support, have convinced us for long term cooperation.

“Tiras-12” Ltd
Ukraine
www.tiras.ua

TAMS “Most-P” FIRE CONTROL MONITORING SYSTEM

Two channels of receiving information from fire control panels:
>> PSTN (autodial)
>> GSM (CSD / GPRS)
the transmission of information:
>> PSTN (autodial) - 40-60sek,
>> GSM (CSD) - 25 - 40sek,
>> GSM (GPRS) - 3-4sek.
>> Number of objects in the system - to 2000-fire control panels.

Which module do you use and why?
The SIM900 GPRS module, good cost-performance rating.

Company profile
“Tiras-12” Ltd is one of the leading Ukrainian manufacturers of fire devices objects and consoles at the markets of Ukraine and in CIS countries.The production of “Tiras-12” Ltd corresponds to European standards EN-54 (part 1-21).

Transmission alarm messages system “Most-P” meets ДСТУ CLC / TS 50136-4:2009 and is used for the fire monitoring, to detect fire and transfer signal indication to the following MUS server in the protocol SOS Access V3 by two independent channels Ethernet. Contact firefighters objects specified at autodial dial-up telephone lines areas and in the channel data cellular GSM-connection (CSD, GPRS - formats).

System<<Most-P>>

PSP<<Pakt-2.P>>

PSP<<Pakt-GSM>>

Autodial chanel

GSM chanel (CSD/GPRS)

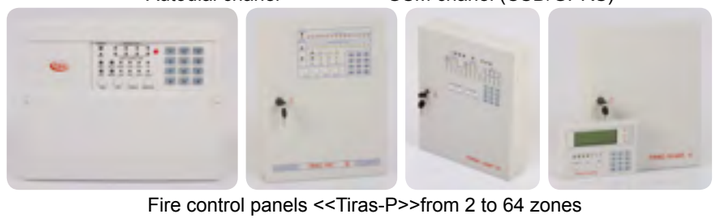
MCA

MCA-GSM

MCA-GSM.4

Autodial chanel

GSM chanel (CSD/GPRS)



Fire control panels <<Tiras-P>>from 2 to 64 zones

SIMCom’s M2M modules help us shortened the product’s time to market. Also, it enhances our industrial users’ satisfactory level.

Temperature@lert Cellular Temperature monitor is a high-performance device that monitors the ambient temperature in your server room, refrigerator, freezer, lab, vacation home, RV or other locations.
When you plug the Temperature@lert Cellular Edition into a power outlet, it immediately begins transmitting temperature readings over the AT&T and T-Mobile cellular phone networks to our 24/7 monitoring system and Dashboard website. The monitoring system logs the current temperature and checks to see if it is outside your acceptable range. If the temperature is outside your acceptable range, the system alerts you via email, text message, and/or telephone call. It will also alert you if the temperature returns to normal. You can view the current temperature, temperature history, and set your alerts all from the Temperature@lert Dashboard website.

Tempreture@lert
USA
http://www.temperaturealert.com

Cellular Temperature monitor

>> Real time temperature alerts
>> Easy to use
>> No batteries to change
>> Includes free upgrades/support
>> Temperature sensor accurate to within ±0.5°C
>> Temperatures report range from -40°F to +200°F
>> Optional humidity sensor operates from 10% to 90%RH within ±3%RH
>> Optional Pressure, 4-20mA, flood & more

Which module do you use and why?
Sim900 is the Quad-Band GSM/GPRS module designed to be fully compatible with most of the 2G network around the world. It enables the device to response fast, allows the devices works under extreme condition with mistakes. The module is FCC, PTCRB and ATT approved.

Company profile
Temperature@lert is the leading provider of low-cost, high-performance temperature monitoring products. The products provide early warning of temperature changes before it’s too late. Since launching, over 20,000 Temperature@lert products have been sold to customers in over 40 countries. Temperature@lert systems are protecting over $250,000,000 of customer assets.

Information Display

We apreciate SIMCom's 3G module allowing us to meet special needs in Japan market. The product stability and reliability have convinced us to expect more cooperation in M2M market in near future.

CATHAY TRI-TECH.,INC.
Japan
http://www.cathay.jp/

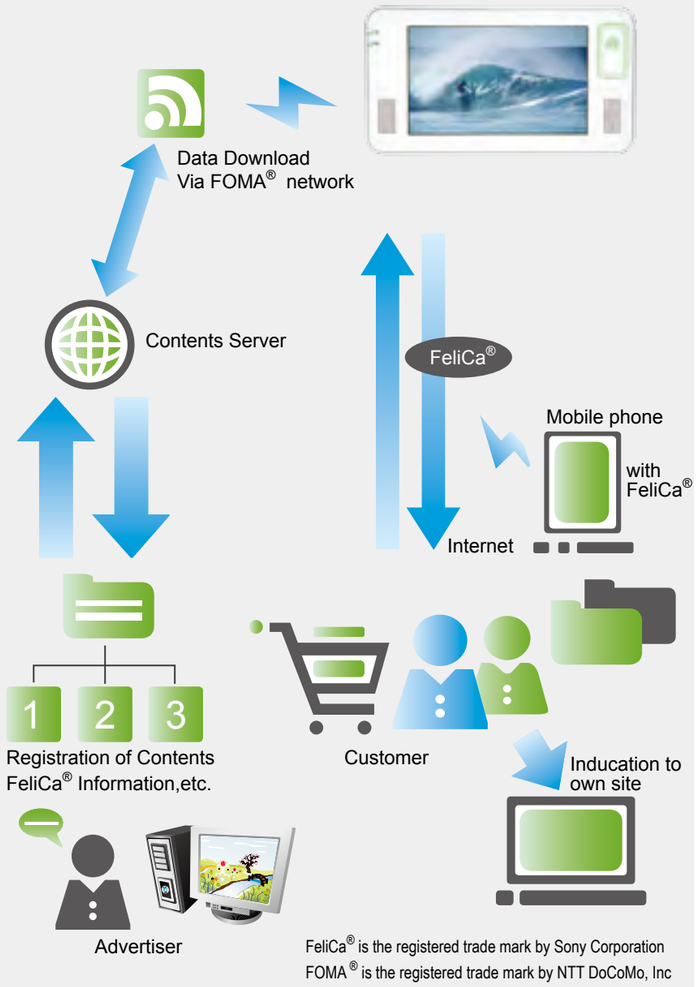
Digital Signage Terminal CTE-001

Three big featurs for a smater Signage
>> Sharp display with programable contents to fit the individual Advertisement for various products and services
>> Easy and anywhere setting as using FOMA® wireless service which is No.1 in Japan.
>> FeliCa® Linkage for smarter advertisemnet of services and products

Which module do you use and why?
SIMCOM Module Line-Up of SIM5218 and SIM5320 compact form factor along with its good cost and high quality is the smart decision among all other module selections.

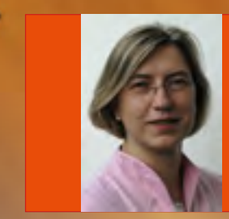
Company profile
Established in'93.Sept.,with HQ in Japan and two Develoment Companies in China.The company is long-term specialized in mobile device related embedded system solutions, product development, as well as software manufacture and services.

Japanese nation wide food material vender adopts CTE-001 and its application system for every major supermarkets in Japan to display individual season/weather- matched Ads. and Recipe to promote their food materials.



FeliCa® is the registered trade mark by Sony Corporation
FOMA® is the registered trade mark by NTT DoCoMo, Inc

Certificates & Approvals



Dr. Sabine Müller-Albrecht
Head of User Equipment

SIMcom SIM900/900B and SIMSIM5320E modules have passed the Vodafone Innovation Park Labs certification process and proven their general usability for a wide range of machine-to-machine (M2M) applications

Both modules have passed the Vodafone Innovation Park Labs for certification to show that the both modules are suitable for M2M and automotive applications such as asset tracking, fleet management, remote monitoring automation, point of sale (PoS) terminals, vending and many more of those M2M applications.

"We look forward to a close partnership with SIMcom to see how the SIMcom modules work in our network" said Dr. Sabine Müller-Albrecht, Head of User Equipment "Our target is to approve hardware as part of our portfolio which makes it easy for our customers to design M2M solutions based on those modules that are certified for the Vodafone network." Certification of modules is one part of the relationship. "But, for us as an innovation lab it's also important to see which new technology comes along with our partners."

Certificates & Approvals

AT&T

AT&T is the largest mobile operator in USA, AT&T supports GSM/GPRS and WCDMA network. Currently our 2G modules and 3G modules successfully earned AT&T approval.

Bouygues

Bouygues is an active operator in France and our modules passed Bouygues certification.

Orange

Orange is the key brand of France Telecom, one of the world's leading telecommunications operators. France Telecom is the largest operator in France.

TIM

TIM is part of the Telecom Italia Group that operates in mobile telecommunications, with 34.2 million customers. SIMCom has good relationship with TIM, and our 2G module and 3G modules owned TIM certification.

Vodafone

Vodafone is a global telecom operator with proportionate mobile customer base of over 269 million. They operates in Germany, Italy, Spain, UK, Albania, Greece, Ireland, Malta, Netherlands, Portugal, Czech Republic, Hungary, Egypt, Romania, Turkey, India, Australia, New Zealand, USA, (partnership with Verizon Wireless), 3.21% stake in China Mobile.

SoftBank

The SOFTBANK Group has set its insights to become No.1 in the mobile Internet, and has focused business development in this area based on the corporate philosophy of “Information Revolution - Happiness for everyone.”

Docomo

NTT DOCOMO is Japan's premier provider of leading-edge mobile voice, data and multimedia services. With more than 60 million customers in Japan, the company is one of the world's largest mobile communications operators.
DOCOMO also is an influential force in the continuing advancement of mobile technologies and standards. DOCOMO is expanding its global reach through offices and subsidiaries in Asia, Europe and North America, as well as strategic alliances with mobile and multimedia service providers in markets worldwide.

ATEX Certification

ATEX stands for Atmospheres Explosives and was introduced by the EEC to become effective by 1st July 2003. A British Standard, EN 60079-11:2007, covering electrical equipment for explosive atmospheres. Our SIM900 series modules could be used in explosive gas atmosphere only when it is installed in an enclosure, which complies with EN 60079-0:2009 and EN 60079-11:2007.

ISO/TS16949

The ISO/TS 16949 was jointly developed by the IATF members and submitted to the International Organization for Standardization (ISO) for approval and publication. It is a common automotive quality system requirements based on ISO 9001:2008, and specific requirements from the automotive sector. It coupled with customer-specific requirements defines quality system requirements for use in the automotive supply chain.
The IATF has developed a common registration scheme for supplier 3rd party registration to the ISO/TS 16949. The registration scheme includes third party auditor qualifications and common rules for consistent global registration. It is for improved product and process quality, additional confidence for global sourcing, reassignment of supplier resources to quality improvement, common quality system approach in the supply chain for supplier/subcontractor development and consistency.

Media & PR

Join us at our new venue, Fira Gran Via Barcelona
MOBILE WORLD CONGRESS
25-28 February 2013
mobileworldcongress.com
SIMCom
A company of SIM Tech
芯讯通无线2012北京品牌推介会
METERING
国际电子商情
PR Newswire
global sources
CONNECTED WORLD

Service & Support

Jeffrey Song
FAE Director

Support and service

we have a strong FAE team, covering APAC, EMEA, North America and Latin America. Every member has very good and professional wireless communication knowledge and experience.

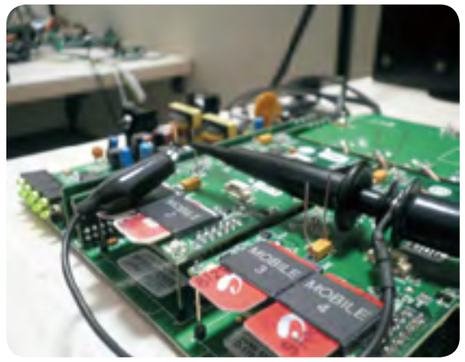
Partnership

SIMCom has worldwide footprint. We have partners in every region, including APAC, EMEA, North America and Latin America. Our partners will provide fast and efficient local technical support.

Every year, we invite our partners' engineers come to SIMCom office for technical training, case review and communication.

We visit our partners regularly, bring them new technologies and have know-how communication for each product/solution to make them know well the product property, test procedure and application scenario.

We also visit our customers actively and give them field support. For every request, our engineer will respond within 24 hours.



Seminars

Thanks to seminars, we communicate with our customers. we take care of customer's design and application. We travel globally and sharetechnologies with our customers.

Service

SIMCom own its professional testing lab and two plants. Thanks to the professional lab, we design and produce every qualified product and solution.
1) Our products have CE,FCC, PTCRB, GCF, ANATEL,RoHS/Reach,etc, certifications;
2) Our products have AT&T, IC,Rogers,Vodafone, TIM,Orange,SoftBank, etc, homologations.
Here, we help our customers do schematic/PCB layout review and necessary pre-test, in order to save approval testing time and cost, speed up the production.

SIMCom owns its professional lab, which ensures every product is conforming to the required indexes, including CE, FCC, PTCRB etc. At same time, we can also help our customers to conduct test, saving their time and test cost to a great extent.
We help our customers in every link from design of schematic diagram, PCB layout to site test and output tracking.

FAE study

We keep moving on wireless communication world.
We visit worldwide, to deliver SIMCom solution and technologies.

Voice

"Over the past 5 years I have worked with SIMCom Wireless and have witnessed their evolution into a global M2M leader. Throughout an ever changing market they have consistently provided a level of excellence to companies across all industry sectors. From innovative design expertise to turn-key application support they have always provided our customers with the tools they require to meet their development needs and realize a faster time to market."

-- Matthew,Canada

To Be Leading Global M2M Solution Provider