

SIM928&SIM928A&SIM968-E VB kit_User Guide_V1.00





Document Title:	SIM928-EVB kit User Guide		
Version:	1.00		
Date:	2013-04-08		
Status:	Release		
Document Control ID:	SIM928&SIM928A&SIM968-EVB kit_User Guide_V1.00		

General Notes

SIMCom offers this information as a service to its customers, to support application and engineering efforts that use the products designed by SIMCom. The information provided is based upon requirements specifically provided to SIMCom by the customers. SIMCom has not undertaken any independent search for additional relevant information, including any information that may be in the customer's possession. Furthermore, system validation of this product designed by SIMCom within a larger electronic system remains the responsibility of the customer or the customer's system integrator. All specifications supplied herein are subject to change.

Copyright

This document contains proprietary technical information which is the property of SIMCom Limited., copying of this document and giving it to others and the using or communication of the contents thereof, are forbidden without express authority. Offenders are liable to the payment of damages. All rights reserved in the event of grant of a patent or the registration of a utility model or design. All specification supplied herein are subject to change without notice at any time.

Copyright © Shanghai SIMCom Wireless Solutions Ltd. 2013



Contents

Contents	
Version History	
1. EVB Overview	7
2. SIM928 EVB Introduction	7
3. EVB Accessory	9
4. Accessory Interface	
4.1 Power Interface	
4.2 Audio Interface	11
4.3 SIM card interface	
4.4 Antenna Interface	
4.5 Serial port Interface	
4.5.1 GSM part	
4.5.2 GNSS Part	
4.6 LED Indicator	
4.6.1 GSM Part	
4.6.2 GNSS Part	
5. Test Interface	
5.1 J101 J102 J103 J104 J105 test interface	
6. EVB and Accessory	
7.1 GSM Part	
7.1.1 Power on GSM Part:	
7.1.2 Registering Network and making a call	
7.1.3 GSM Firmware update	
7.1.4 Turn off	
7.1.5 Charging	
7.2 GNSS Part	
7.2.1 Power on GNSS part	
7.2.2 SIMCom GNSS Testing Tool	
7.2.2.1 Port setting	
7.2.2.2 Click to run	
7.2.2.3 TTFF Test	
7.2.2.4 PMTK command input	
7.3 GNSS Firmware update	
Appendix	
A. Related Documents	
B. Terms and Abbreviations	



Figure Index

FIGURE 1: EVB TOP VIEW	7
FIGURE 2: EVB BOTTOM VIEW	
FIGURE 3: EVB ACCESSORY	9
FIGURE 4: POWER INTERFACE	10
FIGURE 5: AUDIO INTERFACE	11
FIGURE 6: SIM CARD INTERFACE	12
FIGURE 7: ANTENNA INTERFACE	13
FIGURE 8: GSM SERIAL PORTS	14
FIGURE 9: GNSS SERIAL PORTS	15
FIGURE 10: GSM LED INDICATOR	16
FIGURE 11: GNSS LED INDICATOR	17
FIGURE 12: TEST INTERFACE OVERVIEW	18
FIGURE 13: EVB AND ACCESSORY	20
FIGURE 14: CHECK THE SERIAL PORT NUMBER	21
FIGURE 15: OPEN THE HYPERTERMINAL	22
FIGURE 16: NEW CONNECTION	22
FIGURE 17: CONFIGURE THE SERIAL PORT NUMBER	23
FIGURE 18: SET THE BAUD RATE AND FLOW CONTROL	23
FIGURE 19: CONNECT THE MODULE	24
FIGURE 20: AT COMMAND	24
FIGURE 21:GSM FIRMWARE UPDATE	25
FIGURE 22: TESTING TOOL INTERFACE	26
FIGURE 23: SETTING WINDOW	27
FIGURE 24: CLICK TO RUN	27
FIGURE 25: THE MODULE IS RUNNING	28
FIGURE 26: SETTING TTFF TESTING CONFIGURATION	28
FIGURE 27: TTFF TEST RESULT	29
FIGURE 28: COMMAND WINDOW	29
FIGURE 29: POWER FLASH MAIN UI	
FIGURE 30: THE MAIN UI	30
FIGURE 31: SETTING PORT	31
FIGURE 32: SETTING BAUD RATE	31
FIGURE 33: DETAILED SETTINGS	32
FIGURE 34: DA FILE IN DOWNLOADING PROCEEDING	32
FIGURE 35: ROM FILE IN DOWNLOADING PROCEEDING	
FIGURE 36: FIRMWARE UPDATE SUCCEEDS	



Table Index

TABLE 1: POWER INTERFACE	10
TABLE 2:HEADSET INTERFACE	11
TABLE 3:EARPHONE INTERFACE:	11
TABLE 4:MAIN INTERFACE:	14
TABLE 5:DEBUG INTERFACE:	14
TABLE 6: GNSS NMEA INTERFACE	15
TABLE 7:WORKING STATE OF GSM LED	16
TABLE 8:WORKING STATE OF GNSS LED	17
TABLE 9:J101 INTERFACE	
TABLE 10:J102 INTERFACE	
TABLE 11:J103 INTERFACE	19
TABLE 12:J104 INTERFACE	19
TABLE 13:J105 INTERFACE	19
TABLE 14: RELATED DOCUMENTS	
TABLE 15: TERMS AND ABBREVIATIONS	



Version History

Data	Version	Description of change	Author
2013-04-08	1.00	Origin	Shengwu.Sun

SCOPE

This document describes how to use SIM928-EVB to do test; user can get useful info about the SIM928 EVB quickly through this document.

This document is subject to change without notice at any time.



1. EVB Overview

SIM928-EVB can work with the SIM928, SIM928A and SIM968 modules.

2. SIM928 EVB Introduction



Figure 1: EVB TOP view







Figure 2: EVB BOTTOM view

- A: GSM MAIN serial port
- B: GSM DEBUG serial port
- C: GNSS NMEA serial port
- D: Reserved
- E: SIM card holder
- F: GSM Power switch
- G: Charge switch
- H: Download and power on GSM switch
- I: Headset jack
- J: GNSS Power switch
- K: Reserved
- L: Reserved
- M: Module-TE interface (The interface compatible with SIM928-TE, SIM928A-TE and SIM968-TE)
- N: Reserved
- O: The jumper for GNSS
- P: Test point
- Q: Headphones jack
- R: DC jack
- S: LED indicator for GSM
- T: LED indicator for GNSS



3. EVB Accessory



Figure 3: EVB Accessory

- A: 5V DC adapter
- B: GSM Antenna
- C: GNSS Antenna
- D: USB to Serial Port cable
- E : Antenna cable
- F : CD-ROM drive for USB to Serial Port cable



4. Accessory Interface

4.1 Power Interface



Figure 4: Power Interface

Table 1: Power Interface

Pin	Signal	I/O	Description
1	Adapter input	Ι	5V/2.0A DC source input



4.2 Audio Interface



Figure 5: Audio Interface

Table 2:Headset Interface

Pin	Signal	I/O	Description
1	MIC1P	Ι	Positive microphone input
2	SPK1P	0	Positive receiver output
3	MIC1N	Ι	Negative microphone input
4	SPK1N	0	Negative receiver output

Table 3: Earphone Interface:

Pin	Signal	Input/Output	Description
5	MIC2P&SPK2P	I/O	Auxiliary audio input/output



4.3 SIM card interface



Figure 6: SIM card interface



4.4 Antenna Interface



Figure 7: Antenna Interface



4.5 Serial port Interface

4.5.1 GSM part



Figure 8: GSM Serial Ports

Serial Port 1——GSM MAIN Interface Serial Port 2——GSM DEBUG Interface

Table 4:Main Interface:

Pin	Signal	I/O	Description
1	DCD	0	Data carrier detection
2	TXD	0	Transmit data
3	RXD	Ι	Receive data
4	DTR	Ι	Data Terminal Ready
5	GND		GND
7	RTS	Ι	Request to Send
8	CTS	0	Clear to Send
9	RI	0	Ring Indicator

Table 5:Debug Interface:

Pin	Signal	I/O	Description
2	DEBUG_TX	0	Transmit data
3	DEBUG_RX	Ι	Receive data
5	GND		GND

SIM928&SIM928A&SIM968-EVB kit_User Guide_V1.00



4.5.2 GNSS Part



Figure 9: GNSS Serial Ports

Serial Port 3—GNSS NMEA Interface

Table 6: GNSS NMEA Interface

Pin	Signal	I/O	Description
2	GNSS_TX	0	Transmit data
3	GNSS_RX	Ι	Receive data
5	GND		GND



4.6 LED Indicator

4.6.1 GSM Part



Figure 10: GSM LED Indicator

Table 7:Working state of GSM LED

Name	Description	STATUS
HL303 Power ON/OFF indicator		Bright: EVB Power ON;
		Extinct: EVB Power OFF
HL304	GSM status indicator	Bright: GSM system runs normally Extinct: System is powered down
HL301	GSM_NET status indicator	Blinking at a certain frequency according various GSM net status





4.6.2 GNSS Part



Figure 11: GNSS LED Indicator

Table 8:Working state of GNSS LED

Name	Description	STATUS		
HL302	1PPS signal indicator	Bright: GNSS system is fixed succeed ; Extinct: GNSS system is not fixed ;		
HL305	Module status indicator	Bright:GNSS system runs normallyExtinct:GNSS System is powered down		



5. Test Interface



Figure 12: Test interface overview

5.1 J101 J102 J103 J104 J105 test interface

Table 9:J101 Interface

Pin	Signal	I/O	Description
1	TXD	0	Transmit GSM data
2	RXD	Ι	Receive GSM data
3	DCD	0	Data carrier detection
4	RI	0	Ring Indicator
5	CTS	0	Clear to Send
6	GND	/	GND
7	DTR	Ι	Data Terminal Ready
8	DEBUG_RXD	Ι	Receive GSM data
9	RTS	I Request to Send	
10	DEBUG_TXD	0	Transmit GSM data

Table 10:J102 Interface

Pin	Signal	I/O	Description
1,2,3,4,5,6,7,	NC		
8,9,10			
11	AADET_N	Ι	GNSS Antenna detect
12	PWKEY	Ι	POWER KEY IN for GSM part
13	GND	/	GND
14	VBAT	Ι	Power for GSM part



Table 11:J103 Interface

Pin	Signal	I/O	Description
1	DISP_CS	0	Display select output
2	WAKE(BACKUP)	Ι	GNSS wakeup from backup mode
3	DISP_CLK	0	Display clock output
4	BUZZER	0	PWM output
5	DISP_DATA	0	Display data
6	ADC0	Ι	ADC input
7	DISP_D/C	0	Display data or address select
8	SIM_PRESENCE	Ι	SIM detect input
9	DISP_RST	Ι	DISP reset input
10	VDD_EXT	0	POWER

Table 12:J104 Interface

Pin	Signal	I/O	Description
1	GNSS_BOOT	Ι	Reserved
2,4,6,	NC		
8,9,10,12			
3	STDBYN	Ι	Reserved
5	GNSS_RST	Ι	Reserved
7	GNSS_1PPS	0	GNSS 1PPS output
11,13	GND	/	GND

Table 13:J105 Interface

Pin	Signal	I/O	Description
1	GNSS_TXB	0	Reserved GNSS data
2	GNSS_TXA	O Transmit GNSS data	
3	GNSS_RXB	Ι	Reserved
4	GNSS_RXA	Ι	Receive GNSS data
5,7	GNSS_STDBYOUT	0	GNSS power output for antenna
6	GNSS_VANT	Ι	GNSS power input for antenna
8	GNSS_VRTC	Ι	Power input for GNSS RTC
9,10	GND		GND



6. EVB and Accessory



The EVB and its accessory are equipped as the Figure 13

Figure 13: EVB and Accessory



7. Illustration

7.1 GSM Part

7.1.1 Power on GSM Part:

- Connect the Module-TE to the 60-pin connector on SIM928 EVB, plug in 5V DC adapter, switch S102 to "ON" state; keep S105 at "OFF" state,
- (2) Switch S101 to "**ON**" state for more than 1 second and then switch to "**OFF**" state, the GSM part will be powered on.

After the GSM part is powered on, the light HL304 will bright and the light HL301 will flash at a certain frequency. Through the state of LED, users can judge registering status of the module. For detailed description, please refer to the document [1].

Note: customers should equip four sets of screws for better grounding to achieve a better performance.

7.1.2 Registering Network and making a call

(1) Connect the antenna to the Module-TE, insert SIM card and earphone.

(2) Connect the serial port cable to the GSM MAIN serial port; Open the Hyper Terminal (AT command windows) on user's computer.

(3) Check the serial port number:

My computer (right click) →Manage → Device Manager → Ports (COM&LPT)







- (4) Use the Hyper Terminal to call the module as following:
 - a. Open the HyperTerminal
 - START \rightarrow All Programs \rightarrow Accessory \rightarrow Communication \rightarrow HyperTerminal.

	7-Zip		~		
Ben GU	CCC Accessories	•	Accessibility	•	•
	Catalyst Control Center	•	m Entertainment	F -	
A Internet	Cames Games	×	🛅 System Tools	•	
Internet Explorer	📷 Intel® Matrix Storage Manager	×	💟 Address Book		
E-mail Microsoft Office Out	🛅 LANDesk Management	E	Calculator		
	microsoft Office	E	Command Prompt		
Communicator 20	Microsoft Office Live Meeting 2007	X	🗒 Notepad		
0	m PDFCreator	Ł	🦉 Paint		
UltraEdit-32 Text Edi	PDFCreator Toolbar	×	🍘 Program Compatibility Wizard		
	CoundMAX SoundMAX	×	i Synchronize		
SpyTracerV2-v2.7.2.	🛅 ST Wireless LAN	×	Tour Windows XP		
TINA-VPN II	C Startup	×	🔯 Windows Explorer		
	m TINA-VPN II	E	📝 WordPad	-	
Source Insight 3.5	TINA Remote access	E	Communications	Þ 🧕	HyperTerminal
	😕 Adobe Reader 9				Network Connections
Microsoft Office Exce	Microsoft Office Communicator 2007			1	Network Setup Wizard
	Microsoft Office Outlook				New Connection Wizard
bhoader_ID_7.4.5.e	🗐 Outlook Express			Q	Remote Desktop Connection
	💫 Remote Assistance			00	Wireless Network Setup Wizard
All Programs	😢 Windows Media Player			6	🖞 HyperTerminal 🛛 🔸
	Windows Movie Maker				
	🔎 Windows Search				
背 start 🔰 🖉	🛅 UltraEdit				. 🔯 31 🔻 🌈 I 🗳

Figure 15: Open the HyperTerminal

New Connection - HyperTerminal File Edit View Call Transfer Help		
	Connection Description ? × Image: New Connection Price a name and choose an icon for the connection: Name: Image: Name: Icon: Image: New Connection Icon: Image: New Connection Icon: Image: New Connection Image: New Connection Image: New Connection Image: New Connection	
Disconnected Auto detect	Auto detect SCROLL CAPS NUM Capture Print echo	

Figure 16: New Connection



(5) Configure the serial port number

SIMCom Proper	ties		? 🛛
Connect To Set	tings		
SIMCom		Change <u>I</u>	con
<u>Country</u> /region:	United States	: (1)	~
Enter the area co	ode without the	e long-distance	prefix.
Ar <u>e</u> a code:	89		
<u>Phone number:</u>			
Connect using:			~
✓ <u>U</u> se country/ <u>R</u> edial on bus	Agere System COM31 COM32 COM15 COM3 TCP/IP (Wins	s HDA Modem sock)	
<u> </u>		ОК	Cancel

Figure 17: Configure the serial port number

(6) Set the baud rate and flow control

COM3 Properties		? 🔀
Port Settings		
Bits per second:	115200	
<u>D</u> ata bits:	8	~
<u>P</u> arity:	None	~
<u>S</u> top bits:	1	~
<u>F</u> low control:	None	~
	<u>R</u> estore	Defaults
0	K Cancel	Apply

Figure 18: Set the baud rate and flow control



User can set the baud rate from 1200bps to 115200bps, and the flow control set to "None"

(7)Act on the step of running which mentioned above, power on the module, typing the AT command in the HyperTerminal, and then the module will execute its corresponding function.

🏀 021 - HyperTerminal				
File Edit View Call Transfer Help				
D 🚅 👩 🖏 🖻 🖆 👘				
call key				
Connected 0:00:21 Auto detect	Auto detect SCROLL	JCAPS NUM Capture	Print echo	li.

Figure 19: Connect the module

Click the "call" icon.

- b. Typing the AT command. When module is powered on with autobauding enabled, user must firstly send "AT" to synchronize the baud rate. The default setting of the module is autobauding.
- c. Use AT command to make a call.



Figure 20: AT command



7.1.3 GSM Firmware update

Connect the serial port cable to the GSM DEBUG serial port, plug in 5V DC adapter, open the download tool and click the START key, switch the S102 and S101 to "**ON**" state. An example of SIM928 is show as below.

SIN900 Series download	l Tools Customer 1.8 📃 🔲
Target Port B	aud Rate DownloadOption ReadBufferSize
SIM928 💽 COM3 🗾 1	15200 💌 Normal 💌 2048 💌
Download File	
Time	
Core File 37B01V01SIM928M64	
Time 2013-01-04, 15:12:08	000000000 Size 0x27F8D0
Flash Type Not Detected	Start Download Stop Download
0%	00:00:03 Exit
	Refresh COM port
tatus: Power On/Reset Target 000'00"000 - 2013-04-09 15: 000'00"000 - Opened COMM por 000'00"000 - Power On/Reset '	53:43 t Target

Figure 21:GSM Firmware Update

7.1.4 Turn off

Turn off the module: switch S101 to "OFF" state for about 2 seconds, the module will be turned off.

7.1.5 Charging

Connect the Module-TE to the 60pins connector on SIM928 EVB and the external battery to charging interface, which have been provided on the EVB. Insert the direct current source adapter; switch shifter S105 on the OFF state, shifter S105 on the ON state, then the Module will go to the charging state.

7.2 GNSS Part

7.2.1 Power on GNSS part

Connect the Module-TE to the 60-pin connector on SIM928 EVB, plug in 5V DC adapter, switch S102 and 107 to

SIM928&SIM928A&SIM968-EVB kit_User Guide_V1.00



"ON" state; keep S103 and S104 at "OFF" state. Then, the GNSS part of the module begins to run.

Users will see the GNSS LED indicator (HL305) on the EVB bright all the time, then users can judge whether the EVB and the GNSS part of the module is running or not.

Notes: There are two types of GNSS antenna:

One is active antenna, if the customer uses the active GNSS antenna in the SIM928-EVB kit to demo GNSS, for providing the power to the active GNSS antenna, it is necessary to short J114 and J221 by jumper.

The other is passive antenna, if the customer wants to use passive GNSS antenna to demo GNSS, there is no need to short J114 by jumper.

7.2.2 SIMCom GNSS Testing Tool

Users can use SIMCom GNSS testing Tool to test the modules, for example cold TTFF and so on.

- (1) Connect the serial port line to the GNSS_NMEA serial port
- (2) Connect the GNSS antenna to the module using an antenna transmit line
- (3) Run the GNSS part of the module as 7.2.1 described
- (4) Then users will see the information transmitted by the GNSS_NMEA serial port in our demo tool

7.2.2.1 Port setting

In the testing tool interface, open the "setting" window according to the following path: Module \rightarrow Properties.

SINCom GPS DENO V1.04 Nodule:	SI 19 68		
Module Windows Tools Help			
Properties	N 🕂 80	_	
Connect	* Signal	× Position	×
Disconnect	GPS [1-32][33-64(+87)]	GLONASS [65-96]	
BJ Time Latitud Longitude Altitude Speed PDOP HDOP VDOP GPS average power GLONASS average power			80 80
×	<u> </u>	KestartType CycleTimes(T) BDT I0	UnfixTimeOut (S) 60 5 UR Constraint of the output of the
		Command	Stop Start
Log LaSava Rouga Clear		Command Result	Without CheckSum + -
Satting Compart	<u> </u>		

Figure 22: Testing tool interface

Setting			×	
Model				
Module	SIM968 💌			
RF Type	BMC4751: Tham	es, Ext. Ant.	Ψ.	
-ComPort -				
NMEA COM	COM8 -	BaudRate 9600	•	
Pair COM		1		
Main COM		BaudRate 115200	Y	

Figure 23: Setting Window

In the "NMEA COM" drop down list choose the corresponding commentioned before. The baud rate is 115200 or 9600. Then click OK.

7.2.2.2 Click to run

Click the button "Run Comport" to run the module.

	M SINCom GPS DENO V1.04 Nodule:	SI 1 968		
	Module Windows Tools Help			
		80		
	Neneral info	Signal	× Position	×
	UTC Time	GPS [1-32][33-64(+87)]	GLONASS [65-96]	$ \rightarrow $
D	BJ Time			
Run Comport	Latitud			
	Longitude			$\langle \rangle \rangle \rangle$
	Altitude			
	Speed			90 /60 /30
	PDOP HDOP VDOP			\checkmark //
	GPS average power			
	GLONASS average power			
	x		RestartType (VelaTipes(T) Unfix	TimeOut(S) EivedTimeOut(S)
			HOT - 10 60	5 UR
				<u>~</u>
			[INFO] TIME Test and	Stop Start
			Connand	▼ Send
	Log IsSave Pause Clear		Command Result	Without CheckSum + -
	就绪			

Figure 24: Click to run

The module will run as the following figure:



Smart Machine Smart Decision



Figure 25: The Module is running

After position has been fixed, the GNSS information can be viewed in the "General info" window. In the "Signal" window, satellite signal has been tracked as showing, GNSS on the left side and GLONASS on the right side. The NEMA message can be accessed on the bottom window, and it will be saved as txt file in the GNSS testing tool directory, with start time as its name.

7.2.2.3 TTFF Test

The test configure should be set before each TTFF test. It is in the right bottom of the tool interface.

The restart type (hot, warm or cold) could be selected in the drop down list of "Restart type". Fill in the next three blank ("Cycletimes" for the testing times, "Unfixtimeout" for the max time limit of each test and "Fixedtimeout" for the time waiting before next TTFF test) and press the start button.



Figure 26: Setting TTFF testing configuration

The result of each TTFF will be shown in the window, each TTFF shorter than the "UnfixTimeOut" is labeled asSIM928&SIM928A&SIM968-EVB kit_User Guide_V1.00282013.04.08



Figure 27: TTFF Test Result

7.2.2.4 PMTK command input

就绪

The module supports some kinds of modes that must be enabled by PMTK commands as mentioned in the HD document, GNSS Demo provides an access to send PMTK command to module, as the following figure shows, customer can refer to document[2] to get the detailed information of PMTK list that module supported.

RestartType	CycleTimes(T)	UnfixTimeOut(S)	FixedTime	Out (S)
HOT	• 20	60	5	UR
				<
[INFO] TIFF Test	end			Stop Start
Command \$PMTK161,	0			👻 Send
[PASS] command set	nd success.		With Check	Sum + +
Li no o je o nomeni a co o			1 "I'll onoon	

Figure 28: Command window

7.3 GNSS Firmware update

С

To update the module software, the following operations are needed:

- 1. Install the tool of "Power Flash".
- 2. Connect the SIM928-EVB GNSS NMEA port to PC with Serial Port cable.

SIM928&SIM928A&SIM968-EVB kit_User Guide_V1.00



Pass.



3. Plug in 5V DC adapter

4. Switch on S102 and S107

Step1. Customer should open the tool Power Flash, the following figure shows the interface of power flash.

M IITE I	owerflash for	[Sincon]					
<u>F</u> ile <u>A</u> ct	ion <u>T</u> est <u>C</u> omPort	<u>W</u> indow <u>O</u> ption	A <u>b</u> out				
Download 4	gent ROM	Connect	😨 Test	0 Stop	Clean	About	
DA				ROM	E:\Project\SIM68	8V\DVT阶段软件\20	120918_SIMCOM_Modul

Figure 29: power flash main UI

Step 2.Using the combination key "CTRL+ALT+T" to set the port, the password is "123456".

M IIK Powerf	lash for [S	incon]					
<u>F</u> ile <u>A</u> ction <u>W</u> i	ndow A <u>b</u> out						
Download Agent	а ROM	Connect	😨 Test	Stop	11 Clean	About	
		Pa	ssvord Modify 0K	Cancel			
DA			1	ROM E:\Projec	t\SIM68V\DVT购↑ŧ	设软件\20120918_S	IMCOM_Modul

Figure 30: the main UI

Step 4.Setting the number of comport as following figure shows, here is the comport 3.





Figure 31: setting port

Step 5.Setting the update baud rate as 115200.

M IIK Powerflash for	[Simcom]						
<u>File Action Test</u> ComPort	<u>W</u> indow <u>O</u> ption A	4 <u>b</u> out					
<u>C</u> OM	<u> </u>	C3	0			M	
Download Agent F Upda	te Baudrate 🕨 <u>9</u> 2	1600	Stop		Clean	About	
<u>N</u> MEA	Baudrate 🕨 🗸 <u>4</u> 60	0800					
	23	0400					
	11	5200					
	51	600					
	<u>3</u> 8-	400					
	19.	400					
	<u>1</u> 4	00					
	9 <u>0</u> 481	00					
	10						
DA			ROM	E:\Project	\SIM68V\DVT阶	段软件\20120918_	SIMCOM_Modui

Figure 32: setting baud rate

Step 6.Load files to the power flash.



M MIK Powerflash for [Simcom]	
Eile Action Iest ComPort Mindow Option About	
Download Agent ROM Connect Test	Stop Clean About
Click to browse Click to browse DA file ROM Click connect, then click Test	
DA	ROM E:\Froject\SIM68V\DVT阶段软件\20120918_SIMCOM_Modul

Figure 33: detailed settings



<u>M</u> 11	IK Pow	erflash for	[Sincon]					
<u>F</u> ile Down	<u>A</u> ction	<u>T</u> est <u>C</u> omPort 20 ROM	Window Option #	t <u>b</u> out O Test	0 Stop	ট Clean	M About	
M C	0∎ 20	Ready F	ail(ComPort)	Fail(Do	mload)			
Sock Seria	ket (al Number	Serial No. : 📗						
BIN	4ac Addr i				Faill C [Finish] Take(0)	pen ComPort Fai secs to test.	111	<u> </u>
					[Finish] Take(13	3) secs to test.		
					[Flash Dov	wnload]		
				c	INR			
					0			
				33	3%			
DA	E:\Proj	ect\SIM68V\DVTβ)段软件\MTK_AllInO	ne_DA_MT3333_M	ROM E: \	Project\SIM68V\DV	T阶段软件\20120	918_SIMCOM_Modul

Figure 34: DA file in downloading proceeding

Step 8. The ROM is in downloading proceeding.



M IIIK Powe	rflash for	[Simcom]					
File Action	Test ComPort	Mindow Option	A <u>b</u> out				
Download Agent	2 ROM	Connect	🔁 Test	0 Stop	D Clean	M About	
M COI 20 1	Read y F	ail(ComPort)	Fail (Do	mload)	1		
Socket	Serial No. :						
Serial Number :							
BT Mac Addr:							
				[Flash Dor PassII Flash T [Finish] Take(2 [Flash Dor	wnload] ype:[AMD] AM29 3) secs to test. wnload]	DL640D/G, AM	41DL6408G, S2
			c	INR			
				0			
			2.	3%			
DA E:\Proje	ect\SIM68V\DVTØ	阶段软件\MTK_AllIn	Dne_DA_MT3333_M	ROM E: V	Project\SIM68V\DV	T阶段软件\20120	918_SIMCOM_Modui

Figure 35: ROM file in downloading proceeding

Step 9.Firmware update succeeds.

M HTK P	owerflash for	[Sincon]					
<u>F</u> ile <u>A</u> ct Download A	ion <u>T</u> est <u>Com</u> Port 21 gent ROM	: <u>W</u> indow <u>O</u> ption J Connect	A <u>b</u> out Q Test	0 Stop	D Clean	M About	
М сон	20 Ready - F	Fail(ComPort)	Fail (Do	wnload)			
Socket	Serial No. : ber :						
				Take(23 [Flash Dow PassII Flash Ty [Finish] Take(23) secs to test. nload] pe:[AMD] AM29) secs to test.	DL640D/G, AM4	11DL6408G, S2
			c	INR			
				0			
			10	10%			
DA E: \1	roject\SIM68V\DVT	阶段软件\MTK_AllIn0	ne_DA_MT3333_M	ROM E:\P	roject\SIM68V\DV	T阶段软件\201209	918_SIMCOM_Modui

Figure 36: Firmware update succeeds



Appendix

A. Related Documents

Table 14: Related documents

SN	Document name	Remark
[1]	SIM928/SIM928A/SIM968_Hardware Design_V1.00	
[2]	SIM28/68R / 68V NMEA Messages SpecificationV1.01	

B. Terms and Abbreviations

Table 15: Terms and Abbreviations

Abbreviation	Description
DC	Direct Current
I/O	Input/Output
LED	Light Emitting Diode
GNSS	Global Positioning System
GSM	Global Standard for Mobile Communications
NMEA	National Marine Electronics Association
UART	Universal Asynchronous Receiver & Transmitter



Contact us:

Shanghai SIMCom Wireless Solutions Ltd.

Add: SIM Technology Building, No.633, Jinzhong Road, Changning District, Shanghai P.R. China 200335

Tel: +86 21 3235 3300 Fax: +86 21 3235 3301 URL: <u>www.sim.com/wm</u>