

DUAL SIM MODEM



USER MANUAL

Developed & Designed by:



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415/A, 20 [™] Main, Chord Road, 1st Block, Rajajinagar, Bangalore-560003 India. Ph: +91 80 2342 0460 Fax: +91-80-2352 2650. Email: contactus@webstarsoftware.com



Chapter 1: Brief Introduction of Product

1.1 General

Dual SIM modem is based on GPRS network and adopts industrial GPRS module. It supports SMS, CSD and function. It is designed with industrial standards and has been widely used on finance, water supply, weather fields and so on.

1.2 Product features

Designed with industrial standard. Supports SMS, CSD and data function. Supports RS232 & USB port. Power range DC 5V to 24V.

1.3 System Components

The modem is composed of following parts mainly. GPRS module. RS232 module. Power supply. GPRS antenna.

1.4 Working principle



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1.5 Technical specification

Wireless specification:

Supports DTMF. Support SMS, CSD and Data function. Standard AT command Interface. Q2686 or Q2687 wireless module.

Interface:

RS232 serial port, rates: 115200 bps max. Indicator lights:"Power","Signal","Sim1 LED", and "Sim2 LED. Antenna interface: Standard SMA Female interface, 500hm. Standard user card interface. Power interface: 2Pin Terminal block.

Power Supply:

Power range: DC 5 to 24V.



Chapter 2: Installation introduction

2.1 General

The MODEM must be installed correctly to make it work properly.

2.2 Encasement list

Name	Quantity	Remark
MODEM host	1	
Antenna	1	
Power adapter	1	
RS232 data cable	1	
Manual CD	1	

2.3 Installation and cable connection

Installation of SIM card:

Firstly power off the MODEM, and press the out button of the SIM card outlet with a needle object. Then the SIM/UIM card sheath will flick out at once. Put SIM/UIM card into the card sheath (Pay attention to put the side which has metal point outside), and insert card sheath back to the SIM/UIM card outlet.

Warning: Do not insert SIM card when powered!

Installation of antenna:

Screw the SMA male pin of the antenna to the female SMA outlet of the

MODEM tightly. Warning: The antenna must be screwed tightly, or the signal quality of antenna will be influenced!

Installation of cable:

Insert DB9F end of the RS232 data cable into the DB9M interface of MODEM, and connect the other end with user's device.

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2.4 Power

The power range of the MODEM is 5 - 24V. Warning: When we use other power, we should make sure that the power can supply power above 4W. We recommend user to use the standard DC 05V/0.5A Power adapter.

2.5 Indicator Lights Introduction

Indicator lights	: "Power", "Signal", "Sim1 LED", and "Sim2 LED.: Modem
Power LED ON	is powered.
Signal LED Dark	: Data is not communicating. :
Twinkle	Data is communicating. : Sim 1
Sim1 LED ON	is activated. : Sim 2 is activated.
Sim2 LED ON	



Chapter 3: <u>Dial-Up settings</u>

3.1 Modem Connection:

Connect Modem and PC with the shipped RS-232 cable as following:



3.2 Dial-Up Settings:

1. Press "Start" "Settings" and Modem" Options







2. Choose "Modems", Press "Add" button.



3. Choose "Don't detect my modem; I will select it from a list", and click "Next".





4. Manufacture choose "Standard Modem Types", Models choose "Standard 56000bps Modem", click "Next" button.

Install New Hodem		Ŵ
Select the manufacturer here an installation disk.	and model of your modern. If yourn dick Heve Disk.	nodern is: not listed, or if you
Naturiant an Standard Modern Types	Modek Standard 19200 bps Mode Standard 33800 bps Mode Standard 33800 bps Mode Standard 55000 bps Mode	
This diver is digitally signed. <u>Tell me why diver signing is in</u>	neotiani	Have Disk

5."Selected ports" choose the actual COM port which connects to Modem, click

"Next" button.

Add Hardware Wizard	
Install New Modem Select the port(s) you r	want to install the modern on.
	You have selected the following modern: Standard 33600 bps Modern On which ports do you want to install i? All ports Selected ports COMM
	(Back Nest) Cancel



6. Click "Finish" button, return back to "Modems" page



h	Jens Advanced	
Ihe fol	owing modems are instal	led:
Modem		Attached To
🎉 Standard 330	500 bps Modem	DOM1
	Add	Remove Propertie

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7. Choose the modem you have just installed, click "properties "button to configure the modem driver



8. Choose "Modem" page, set Maximum Port Speed as 115200.

ndarı	d 33600 bps Moden	n Properti	95	?
re- 🌔	Modern Diagnostics	Advanced	Driver	
Pat	COM1			
Spec	sker volune			
	Lan J	Ha	;h	
Maxi	num Port Speed			
	115200		7	
			-	
Dial	Control			
	Wait for dial type	helper dialo	-	
	La tran is selled is	sensere si salisitett		
				_
			DK.	Dancel



9. Choose "Advanced" page, input Extra Initialization commands: For example: For airtel AT+CGDCONT=1,"IP","airtelgprs.com", click "Change Default Preferences" button

andard 33600 bps Modem Properties	2
General Modern Diagnostic Advanced river	
Exclusion Settlings	
AT+CGDCONT-1.1P*1CMNET*	
	_
Characteristics	
Change Distant Preferences	\supset

10. "Port Speed" choose 115200, "Flow control" choose None, click "OK" button.

	Advanced	
Calip	eteren ook	
	Disconnect a call if idle for more than	mine
	Cancel the call it not connected within	secs
1	Data Protocol 🛛 🗹	



11. On the "Advanced" page, click "OK" button return to "Phone and Modems" page, click "OK" button to finish the Modem driver installation

Phone and Modern Options	20
Dialing Rules Modems Advanced	
The following moderns are instal	ed.
Modem	Attached To
Standard 33500 bps Mail en	
	Remove Properties
UK V	Cancer Apoly

12.Finish installing Modem driver, It's necessary to install the Dial-Up connection. Open "Control Panel", double click "Network connections"





13. Click "Create a new connection" to start creating a new Dial-Up connection.



14. Click "Next" button





15. Choose "Connect to the Internet", click "Next" button.



16. Choose "Set up my connection manually", click "Next"



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17. Choose "Connect using a dial-up modem", click "Next"



18. Choose the Modem driver installed just now, click "Next" button

Select a Device This is the device that will	be used to make the connection.	
You have note than one d	ial-up device on your computer.	
Select the devices to use it	n this comme clian:	
🗆 🎒 Modern - Stendard	33600 laps Moden #2 (00 N3)	
Charles Moden - Stendard	338UU bipo Moden (LU H1)	-
		_
		_



19. Input the ISP Name, click "Next" button



20. Input the call center number of your ISP. In China, It is *99***1#. Click "Next"button.





21. Input the username and password. In India they are both null. Click "Next".

n	ternet Account Information You will need en account name and password to sign in to your internet account.
	Type an ISP account name and pizeword, then write down this information and store it in- sets place. If you have toget an an-setting account name is pizeword, contact, your ISP
	User name:
	Paraword
	Confirm password
	Vise this account name and password when anyone connects to the internet from this computer
	Makethis the delault internet connection

22. Choose "Add a shortcut to this connection to my desktop", click "Finish" button.





23. Double click the Dial-Up shortcut on your desktop to run Dial- Up program.



24. Click the "Properties" button of the Dial-Up program

onnect GPI	IS_DIAL	2
6		
User name: Password:		
C Save this ⊕ Me on ⊖ Acpon	wer name and paraword for th / swho uses this computer	e following users
Diet	-391#	V
Dial	Cancel Propert	ieo Help



25. Choose the Modem driver installed before, Click "Configure" button

GPRS_DIAL Pr	operties	2
General Options	Security Networking .	Advanced
Connect using:		
AR A Madem - S	Standard 33600 bps Mode	m ICDM11 💦 😚
🗆 🧶 Modem - S	Standard 33600 bps Mode	am #2 (DOM:3)
21		*
All devices cal	I the same numbers 🦷 🕻	Configure
Phone number		
Area code:	Phone number:	
4	*99°**1#	Alternates
Countralization	and at	
		~
Use daing	rules	Dialing Rules
)
🔄 Show icon in r	otification area when con	nected
		OK Cancel

26. Set "Maximum Speed [bps]" as 115200, set Hardware features as following, click "OK" button

Modem Configuration	2 🛛
Standard 33600 bps Modern (COW1)	
Maximum speed (bps) 115200	
Madem protocol	~
Hardwave banches Enable hardwave flow control Enable modern compression Enable modern compression Shore terminal window Enable modern apeaker	
	Cancel



27. Click "OK" button to finish Dial-Up program configuration

Connect using: Modem - Des Modem -	Standard 33600 bos Mod Standard 33600 bos Mod	en (CDH1) en #2 (COM3)
<	41	>
Al devices co	If the same numbers	Configure
Phone number		
Area code:	Phone number:	
Y	°99°°1#	Alternates
Country/regio	n code.	
		14
🔲 Use dialing	g rule e	Dialing Rules

28. Click "Dial" button to start dial



29. When dial success, There is a connection icon on the right of your taskbar.





Chapter 4: SIM Card Selection Procedure

4.1) Manual SIM Selection:

Hardware Configuration in PCA (TIPA0260):

• SIM1 will be selected by default

 \circ Short Pin No. 1 and 2 of JP3 to select SIM1

• Short Pin No. 2 and 3 of JP3 to select SIM2

 \circ Note: JP2 and JP4 are OPEN

Default Settings:

Baud-rate: 115200, Bits: 8, Parity: None, Stop bit:1 Flow control: Hardware.

4.2) SIM selection using AT Commands

For sending Commands to the Modem use Hyper terminal or COMMAN (Provide with the CD)

• AT command to select SIM1: AT+WIOM=1, "GPIO22",1,0

• AT command to select SIM2: AT+WIOM=1, "GPIO22",1,1

 \circ AT command to save the selection made : AT+WIOM=4

Response to above commands should be OK.

Hardware Configuration in PCA (TIPA0260) : JP3 and JP4 are OPEN, JP2 is Shorted

After Saving any SIM selection send these commands:

AT+CFUN=1 AT+CGDCONT=1,"IP","AIRTELGPRS.COM" // FOR AIRTEL AT+CGACT=1,1 AT+CGATT=1



If the response for all the above 4 commands are OK, Then the Modem is ready for Dialing.

AT Commands for Sending / Receiving SMS.

AT+CMGS="MOBILE NO" and Press Ctrl+Z after typing the message to SEND aSMS.

AT+CMGR="Index No" to READ a SMS.

(Index no. appears on receipt of any SMS to the modem)



Chapter 5: Serial Cable wiring Details

8 Core Cross cable:



RS232 data cable



Chapter 6: <u>Photos</u>







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