

F1203 CDMA MODEM

USER MANUAL







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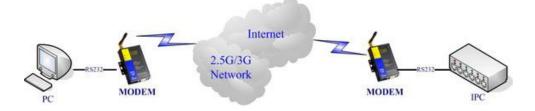
Chapter 1 Brief Introduction of Product

1.1 General

F1203 CDMA MODEM is a kind of cellular terminal device that provides SMS and dial-up function by public CDMA network.

It adopts high-powered industrial cellular module and supports RS232 port that can conveniently connect one device to a cellular network, allowing you to connect to your existing serial device.

It has been widely used on M2M fields, such as intelligent transportation, smart grid, industrial automation, telemetry, finance, POS, water supply, environment protection, post, weather, and so on.



1.2 Features and Benefits

Design for Industrial Application

- High-powered industrial cellular module
- Housing: iron, providing IP30 protection.



• Power range: DC 5~35V

Stability and Reliability

- RS232 port: 15KV ESD protection
- ◆ SIM/UIM port: 15KV ESD protection
- Power port: reverse-voltage and overvoltage protection
- Antenna port: lightning protection(optional)

Standard and Convenience

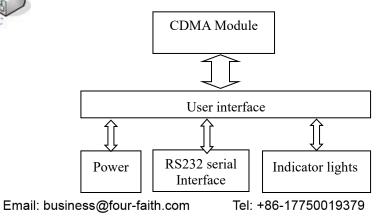
- Support standard RS232 port that can connect to a serial device directly
- Provide dial-up software that can make it always online
- Provide SMS tool software
- Support standard AT command

High-performance

- Support SMS and dial-up function
- Support APN/VPDN

1.3 Working Principle

The principle chart of the MODEM is as following:



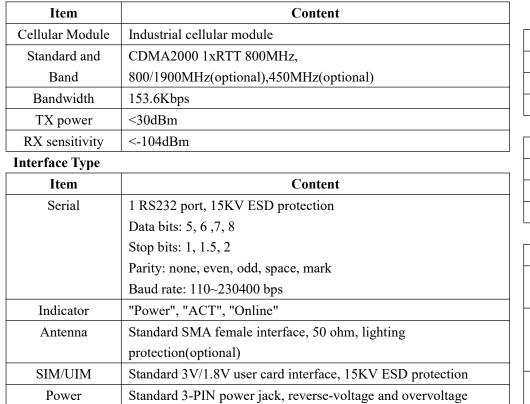
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protection

1.4 Specifications

Cellular Specification





Power Input

Item	Content
Standard Power	DC 12V/1.5A
Power Range	DC 5~35V
Consumption	<200mA (12V)
Physical Characte	ristics
Item	Content

Item	Content
Housing	Iron, providing IP30 protection
Dimensions	91x58.5x22 mm
Weight	195g

Environmental Limits

Item	Content
Operating	-25~+65°C (-13~+149°F)
Temperature	
Extended	-30~+75°C(-22~+167°F)
Operating	
Temperature	
Storage	-40~+85°C (-40~+185°F)
Temperature	
Operating	95% (Non-condensing)
Humidity	





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Chapter 2 Installation Introduction

2.1 General

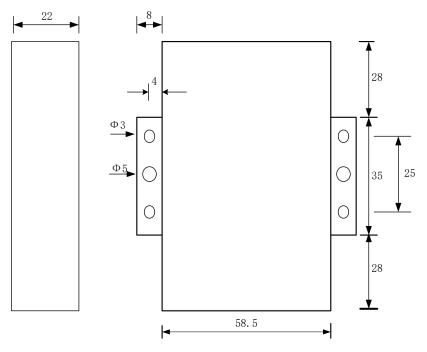
The MODEM must be installed correctly to make it work properly. Warning: Forbid to install the MODEM when powered!

2.2 Encasement List

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

2.3 Installation and Cable Connection

Dimension: (unit: mm)



Installation of SIM/UIM card:

Firstly power off the MODEM, and press the out button of the SIM/UIM 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: Forbid to install SIM/UIM card when powered!

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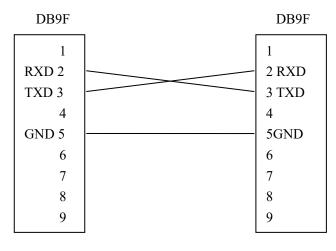
Installation of antenna:

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.

The signal connection of the RS232 data cable is as follows:



RS232 data cable

2.4 Power

The power range of the MODEM is DC 5~35V.

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 12V/0.5A power adaptor.

2.5 Indicator Lights Introduction

The MODEM provides three indicator lights: "Power", "ACT", "Online".

Indicator	State	Introduction
Light		
Power	ON	MODEM is powered on
	OFF	MODEM is powered off
ACT	BLINK	Data is communicating
	OFF	No data
Online	ON/	MODEM has logged on network
	BLINK	
	OFF	MODEM hasn't logged on network



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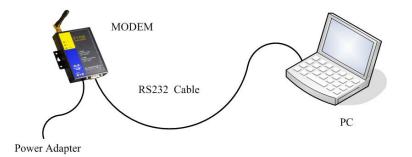
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Chapter 3 Dial-Up Settings

3.1 MODEM Connection

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



3.2 Dial-Up Settings

1. Press "start" \rightarrow "Settings" \rightarrow "Control Panel", Double click "Phone and Modem Options"

Control Panel File Edit View Favorites Tools Help 🕥 🔹 🏂 🔎 Search 🍋 Folders 🔳 G idress 🔂 Control Panel 🖌 🋃 Co X P N O G Control Panel Accessibility Add Hardware Options Add or Administrative Tools Automatic Updates Date and Time Display Folder Options 📴 Switch to Category View Remov. 0 Ter Simo See Also Fonts Game Controller Internet Keyboard Mous 🌯 Windows Update () Help and Support 4 Printers and Faxes Regional and Scanners and Scheduled Tasks Security Center Sounds and Audio Devices wer Options Speed Language . Wireless Network Set.. User Accourt Firewall

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





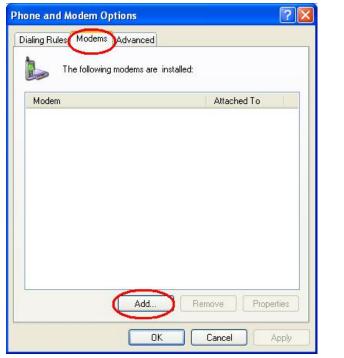
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3. Choose "Don't detect my modem;I will select it from a list", and click "Next"



4. Manufacture choose "Standard Modem Types", Models choose "Standard 33600 bps Modem", click "Next" button





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Add Hardware Wizard	
Install Ne w Modem	
Select the manufacturer have an installation disk,	and model of your modem. If your modem is not listed, or if you click Have Disk.
Manufacturer	Models
(Standard Modem Types)	Standard 19200 bps Modem
	Standard 33600 bps Modem
This driver is digitally signed. <u>Tell me why driver signing is ir</u>	Have Disk
	<back next=""> Cancel</back>

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

Install New Modem Select the port(s) y	ou want to install the modern on.	E C
	You have selected the following modem:	
	Standard 33600 bps Modem	
	On which ports do you want to install it?	
AL POIL	C All ports	
	Selected ports	
	COM1	⋗
and the second		
	< Back Next >	Cancel

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



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nstall New Modem Modem installation is	finished
	Your modem has been set up successfully. If you want to change these settings, double-click the Phone and Modem Options icon in Control Panel, click the Modems tab, select this modem, and then click Properties.
	K Back Finish Cancel

one and Modem Options	?
ialing Rules Modems Advanced	
The following modems are	installed:
Modem	Attached To
Standard 33600 bps Modem	COM1
Add	Remove Properties

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



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Phone and Mod	em Options		? 🛛
Dialing Rules M	odems Advanced		
The fo	ollowing modems are install	ed:	
Modem		Alteched To	
Standard 3	3600 bps Modem	COM1	
	Add	Remove	perties
	ОК	Cancel	Apply

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

	d 33600 bps Moc			<u> </u>
iener	Modem Diagnosti	cs Advanced	Driver	
Port:	COM1			
Spe	aker volume			
	Low U	Hi	gh	
- M	imum Port Spood			
Мах	imum Port Speed		<u> </u>	
	115200			
	Control			
- Dial				
Dial	Darlas tas status	and balance of the		
Dial	Wait for dial to	one before dialin	19	
Dial	Wait for dial to	one before dialin	ig	
Dial	Wait for dial to	one before dialin	ig	

9. Choose "Advanced" page, click "Change Default Preferences" button





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Standard 33600 bps Modem Properties 🛛 🛛 🔀
General Modem Diagnostic Advanced Driver
Extra Settings Extra initialization commands:
Change Default Preferences
OK Cancel

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

	Advanced			
- Call pr	eferences			
	lisconnect a call i	f idle for more	than	mins
C	Cancel the call if r	not connected	d within	secs
	ata Protocol:		~	
	Flow contro	None	×)	(I

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





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andard	33600	bps Moder	n Properti	es	? 🛛
General	Modem	Diagnostics	Advanced	Driver	
Extra	Settings				
		on commands:			
	In Inclaine Gale	on commando.	8		
83					
		-			
		Ch	nange Defaul	Preferences	
				ОК	Cancel
					Cancer

Phone and Modem Options	? 🛛
Dialing Rules Modems Advanced	
The following modems are insta	alled:
Modem	Attached To
Standard 33600 bps Modem	COM1
Add	Remove Properties
ОК	Cancel Apply

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



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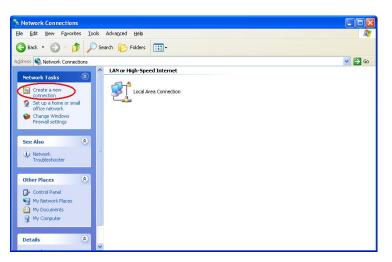
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13. Click "Create a new connection" to start creating a new Dial-Up connection.



14. Click "Next" button



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



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

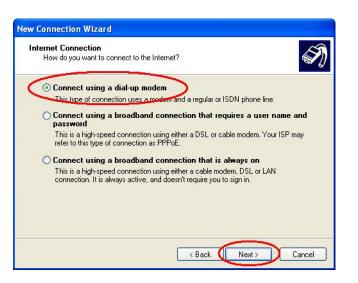


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17. Choose "Connect using a dial-up modem", click "Next"



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







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

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Connection Name What is the name of the se	rivice that provides your Internet connection?	Ŋ
Type the name of your ISP i	n the following box.	
ISP Name		
CDMA_DIAL		
The name you type here will	be the name of the connection you are creating.	

20. Input the access number of your ISP. In China, It is #777, click "Next" button

	er to Dial			15
What is you	r ISP's phone number?			
Type the ph	none number below.			
Phone r	number:			
#777	>			
	id the extra numbers, di nodem sound, the numl	al the phone number on ber dialed is correct.	your telephone. If you	

21. Input the username and password. In China they are both "card".Click "Next"





You will need an acco	unt name and password to sign in to your Internet account.
	name and password, then write down this information and store it in a forgotten an existing account name or password, contact your ISP.
User name:	
Password:	
Confirm password:	
Use this account this computer	name and password when anyone connects to the Internet from
🗹 Make this the defa	ult Internet connection
Make this the defa	ult Internet connection

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

New Connection Wizard	
	Completing the New Connection Wizard You have successfully completed the steps needed to create the following connection: GPRS_DIAL • Make this the default connection • Share with all users of this computer • Use the same user name & password for everyone The connection will be saved in the Network Connections folder.
WAS 2	Add a shortcut to this connection to my desktop
	To create the connection and close this wizard, click Finish.
	< Back Finish Cancel

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

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

Connect CI	DMA_DIAL	? 🛛
User name: Password:		
🖲 Me o	is user name and password for the fol inly ine who uses this computer	lowing users:
Dial:	#777	~
Dial	Cancel Properties	Help

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

and the second se	m - Standard 33600 bps Mod m - Standard 33600 bps Mod	
(>
Area code	Phone number: #777 gion code:	Alternates
Countyrie	giorreode,	~
🗌 Use dia	aling rules	Dialing Rules

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





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Modem C	onfiguration		? 🛽	
2	Standard 33600 bps	Modem (COM1)		
Mavimum	speed (bps):	115200		>
Modem pr		110200	×	
Hardwa	e features			
	able hardware flow co able modem error cont	No. No. And No. of Street Stre		
-	able modern compress			
=	erminal window			
Enable	modem speaker		DK Cancel	

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

Phone number Area code: Phone number: #777 Alternates	2 2
All devices call the same numbers Configure Phone number Area code: Phone number: #777 Alternates	2
All devices call the same numbers Configure Phone number Area code: Area code: Phone number: #777 Alternates	
Phone number Area code: Phone number: #777 Alternates	1.
Phone number Area code: Phone number: #777 Alternates	า
#777 Alternates	·
	es
Country/region code:	_
	V
Use dialing rules	iles

28. Click "Dial" button to start dial





nnect CDMA_DIAL			
ser name:	Z)		
assword:			
Save this user name and Me only Anyone who uses this		owing users:	
Dial: #777		~	
Dial Cancel	Properties	Help	
	Properties		

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

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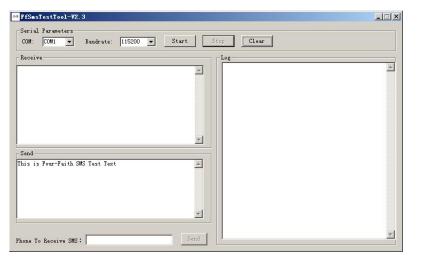
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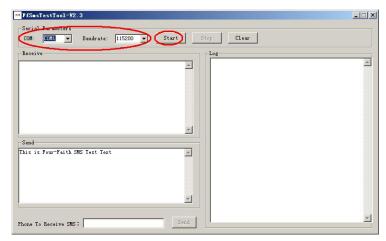
Chapter 4 SMS Test

Modem can also be used to send and receive SMS (Short Message Service) except setting up dial-up connection. To simplify customer program, we supply a DLL(Dynamic Link Library) and sample program source code, all the SMS operations can be processed through simple API functions. The following describes how to test the SMS function.

- 1. Connect PC and Modem with the shipped RS-232 cable and power on Modem, The connection diagram please refer chapter 3.1
- 2. Run FfSmsTestTool-En.exe



3. Choose the COM port which connect to MODEM, baud rate is 15200, click "Start" button



4. The tool will initiate Modem after clicking the "Start" button, If initiate success, the log column will show "Start Success", It's now ready for sending and receiving SMS.

Serial Parameters		
	115200 💌 Start Stop Clear	
Receive		
	Start Success	
	<u> </u>	
Send		
This is Four-Faith SMS Test Text		
	*1	

5. Input the phone to receive this test SMS, click "Send" button





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COM: COM1 V Baudrate: 115200 V Stard	StopClear
ecceive end is is Four-Faith SMS Test Text	Log Start Success Start Success, Content: This is Four- Faith SMS Test Test

₩ FfSmsTestTool-¥2.3 - IX -Serial Parameters Stop Clear COM: COM1 - Baudrate: 115200 -Receive Log Start Success neceive SMS: <2008-11-25 17:40:07> <8615710661740. hello,world ! 4 Send This is Four-Faith SMS Test Text --Send Phone To Receive SMS:

6. The result state will display in the Log column

COM: COM1 💌 Baudrate: 115200 💌	Start Stop Clear	
eccive	Start Success Start 13306036572 SM	S Success, Content This is Four
	<u> </u>	
end is is Four-Faith SMS Test Text	<u> </u>	

7. When received SMS, It will display in the receive column





8. Complete SMS test.

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Chapter 5 Appendix

The following steps describe how to setup Windows XP Hyper Terminal and send AT command to modem with it.

 Press "Start" → "Programs" → "Accessories" → "Communications" → "Hyper Terminal"



3. Choose the correct COM port which connects to modem, choose "OK"

Connect To	? 🛛
e 1 6	
Enter details for	the phone number that you want to dial:
Country/region:	United States (1)
Area code:	123
Phone number:	
Connect using:	СОМ1
	OK Cancel

4. Configure the serial port parameters as following, choose "OK"

Bits per second: 115200 Data bits: 8 Parity: None Stop bits: 1 Flow control: None

2. Input connection name, choose "OK"





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COM1 Properties		? 🛛
Port Settings		
Bits per second:	115200	~
Data bits:	8	~
Parity:	None	~
Stop bits:	1	~
Flow control:	None	×
	Restore	Defaults
0	Cancel	Apply

5. Complete Hyper Terminal operation, It runs as following

🌯 ff - HyperTerminal								
File Edit View Call Transfer Help								
□☞ ☞ ፮ ▫ Ⴆ ₪								
Connected 0:00:06 Auto detect	Auto detect	SCROLL	CAPS	NUM	Capture	Print echo		

6. Type "AT" in the blank of Hyper Terminal and press "Enter", the modem will return "ok".





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