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SAN TELEQUIP

Connecting. Converting. Leading !

Document Name : User Manual for GS11/GS81 232/485.

INTRODUCTION

GS11/GS81 232/485 modem is a multi-functional, ready to use, rugged unit that can be embedded or plugged into any application. The modem can be controlled and customized to various levels by using the standard AT commands. The modem is fully type-approved, it can speed up the operational time with full range of Voice, Data, Fax and Short Messages (Point to Point and Cell Broadcast). The modem also supports GPRS (Class 12) for spontaneous data transfer.

Features

- Quad Band 850/ 900/ 1800/ 1900 MHz
- Output power 2W for GSM 850/ 900, 1W for GSM 1800 /1900
- Control via AT commands (GSM 07.07 and 07.05)
- Interface-RS232 (DB9 female connector) or RS485 (3 pin screw type connector).
- Coding Scheme: CS1 to CS4
- CSD up to 14.4 kbps(Non-transparent)
- Mobile Originated (MO) and Mobile Terminated (MT),Cell Broadcast(CB),Text and PDU mode.
- Supports Internet service protocols TCP/UDP/FTP/HTTP/MMS
- Supports Packet Switched Broadcast Control Channel(PBCCH)
- Supports PAP protocol and USSD
- Supports auto-bauding for serial port from 4800 bps to 115200 bps.
- LED Indication for Power ON, Network status, Tx and Rx
- Dimensions: 93 x 78 x 33 mm (excluding connectors)
- Weight: 125 grams
- Housing: Metallic Enclosure

Installing the Modem

To install the modem, plug the device on the provided SMPS Adapter.

Inserting/ Removing the SIM Card

To insert or remove the SIM Card, it is necessary to press the SIM holder ejector button with sharp edged object like a pen or a needle. When this is done the SIM holder comes out a little, then pull it out and insert or remove the SIM Card. Place the SIM card properly as per the direction of the installation. It is very important that the SIM is placed in the right direction for its proper working condition.

Connecting External Antenna

Connect GS11/GS81 232/485 modem to the external SMA antenna male end. The frequency of the antenna should be set to GSM850/900/1800/1900. The right Antenna should be used with the specified frequency or else the antenna can damage the modem or it can affect the communication.

Power Supply – Screw type connector with 9-30V DC, 2A supply.

Modem connection to external devices:
Connectors

Connector	Function
SMA	RF antenna connector
9 pin D-SUB / 3 pin screw type	RS232 link / RS485 link
Adaptor Socket	Power supply connector
SIM card holder	SIM card

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LED Indicators

Network status/GPRS connectivity, Power ON, Tx and Rx status while data transmission.

RS232 Cable details

9 – PIN D-SUB Female Connector

PIN	NAME	Designation	Type
1	NC	-	-
2	Tx	Transmit Data	Input
3	Rx	Receive Data	Output
4	DSR	Data Set Ready	Output
5	GND	Ground	Ground
6	DTR	Data Terminal Ready	Input
7	CTS	Clear to send	Output
8	RTS	Request to send	Input
9	NC	-	-

9- PIN Serial Male to Female Cable Details
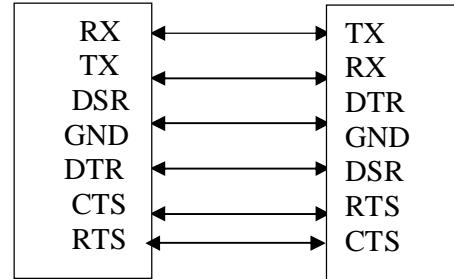
9 Pin male side		9 Pin female side
RX	⟷	TX
TX	⟷	RX
DSR	⟷	DTR
GND	⟷	GND
DTR	⟷	DSR
CTS	⟷	RTS
RTS	⟷	CTS

RS485 Cable details

3 pin screw type connector

PIN	NAME
1	D+
2	D-
3	GND

TROUBLESHOOTING:

Q. The modem does not answer through the serial link
A) Check Power input of the modem
B) Check for proper connections as given in PIN DETAILS section of User manual
C) Check for communication port is properly configured.
   The factory setting for the baud rate is 9600 bps.
D) Close any other application running on the port that you are using for modem

Q) The modem always returns «Error» when trying to issue a communication
Issue AT+CMEE=1 to have extended error code and retry

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Modem basic operation

(A) Modem connection with Hyper Terminal

1) Open Hyper Terminal from **All Programs** ⟶ **Accessories** ⟶ **Communications**

       1) Establish Connection-
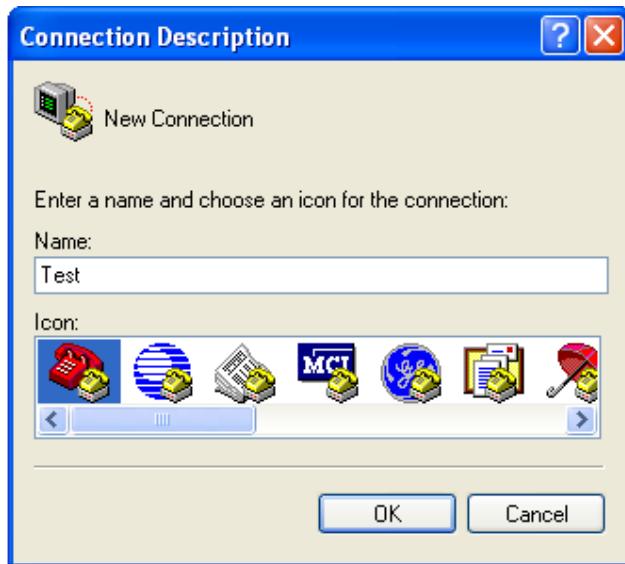

       2) Setting up usage port-

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3) Setting up Port Parameters-
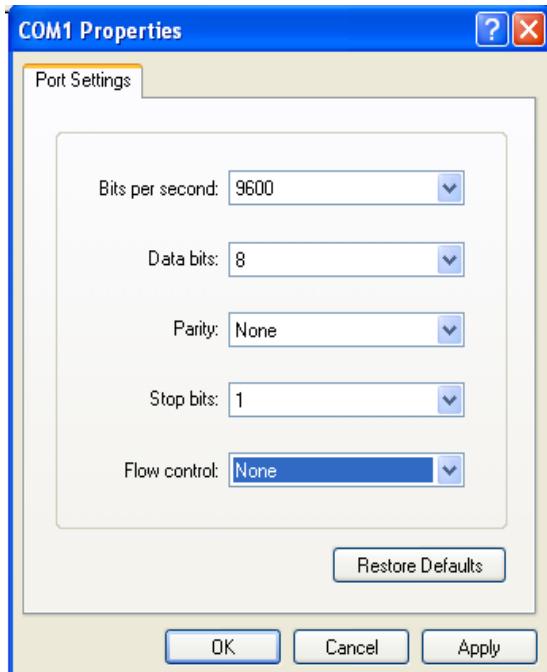
4) Setting up Property in File menu of Hyper Terminal
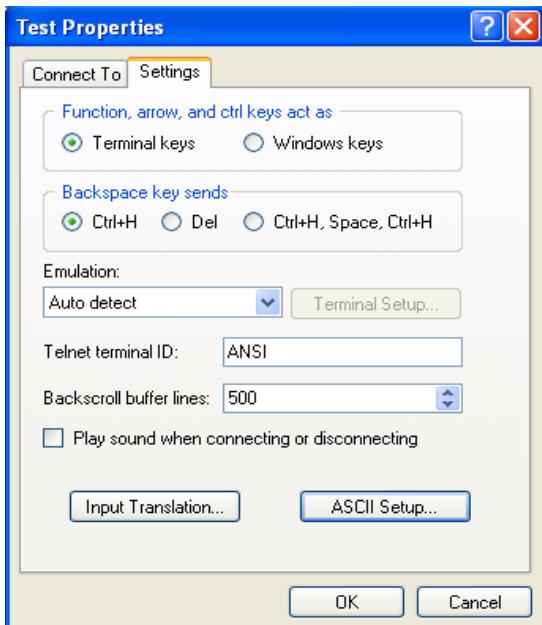
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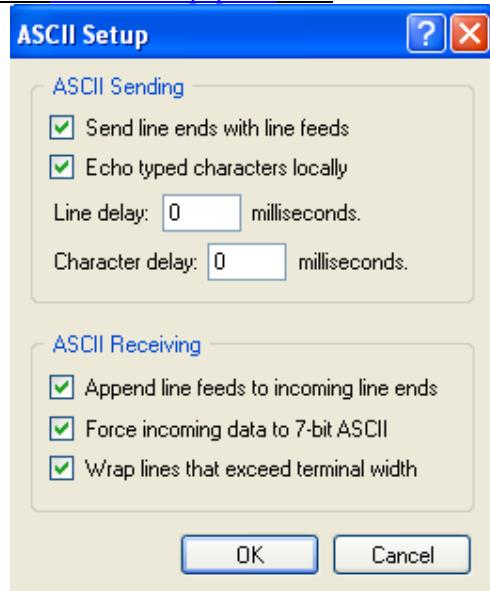
2)   Testing of basic **AT commands** -
      Type **"AT"** word and press **"ENTER"** key. You should get response as **"OK"**. Means modem is
      connected properly.All Commands are executed by pressing ENTER Key.

       Follow following sequence of AT commands-
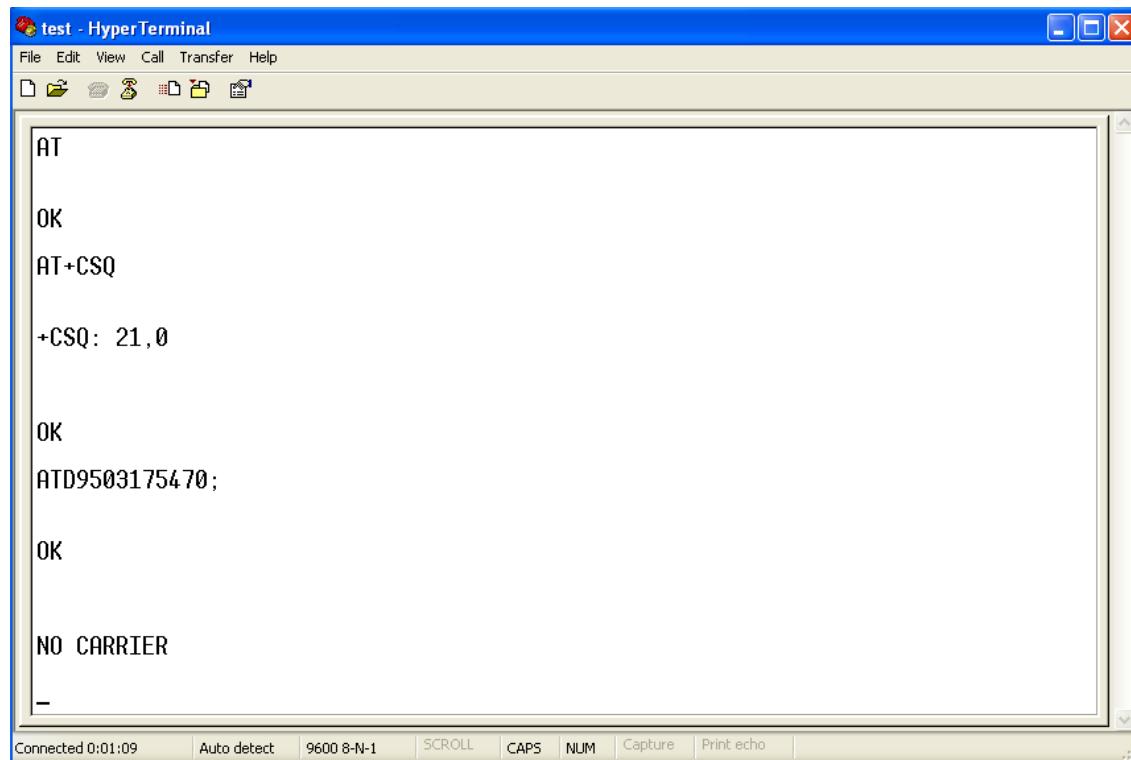
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For sending SMS use following AT commands.
Also type "ctrl z" to send message.

```
test - HyperTerminal
File   Edit   View   Call   Transfer   Help

AT+CMGF=1

OK
AT+CMGS="9503175470"

> TEST MESSAGE→
+CMGS: 2


OK
AT&W

OK



Connected 0:01:06        Auto detect     9600 8-N-1      SCROLL    CAPS    NUM    Capture    Print echo
```

For more AT commands or details, see AT commands manual.

(B) GPRS INTERNET Access-

Given below is the procedure for connecting GSM modem to a PC and establishing a GPRS connection to the internet through standard **"Dial-up-networking"**

Double click the **"Phone and Modems Options"** in **"Control Panel"**.
Double click the **"Phone and Modems Options"** icon.
Select the **"Modems"** tab.
Click the **"Add…"** button at the bottom of the menu

Make sure the **"Don't detect my modem; I will select it from a list."** Is selected.
Your next screen will ask you which modem you have, Make sure **"Standard 9600 bps Modem"** is selected.

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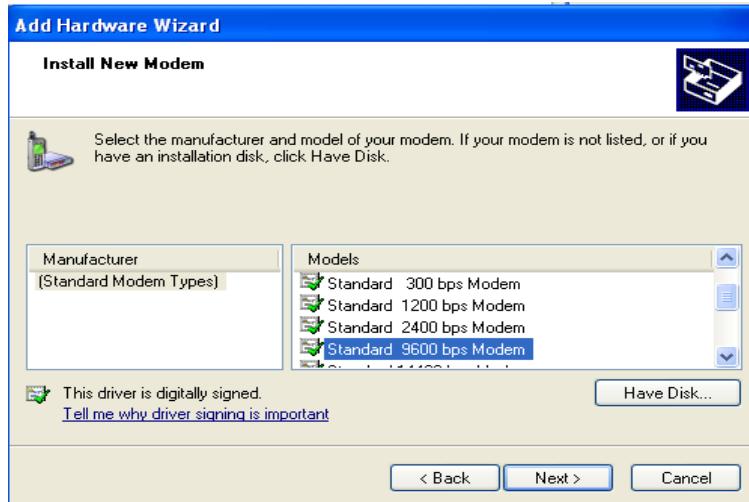
The next screen will ask you which COM port your Modem is connected to.
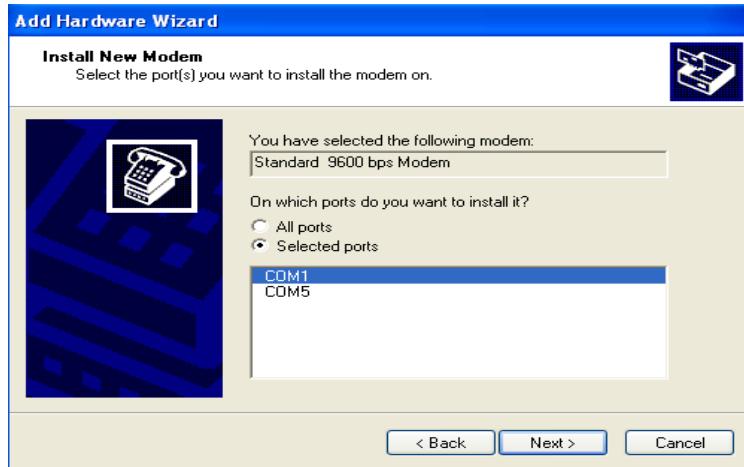
Select COM port to which modem is connected as shown above and press **Next>**

You will then be greeted with a message saying **"Your modem has been set up successfully".**
Press **"Finish"**
Select your Modem from the list in your **"Phone and Modems Options"** and click the **"Properties"**
button.
A new window will appear as shown below.

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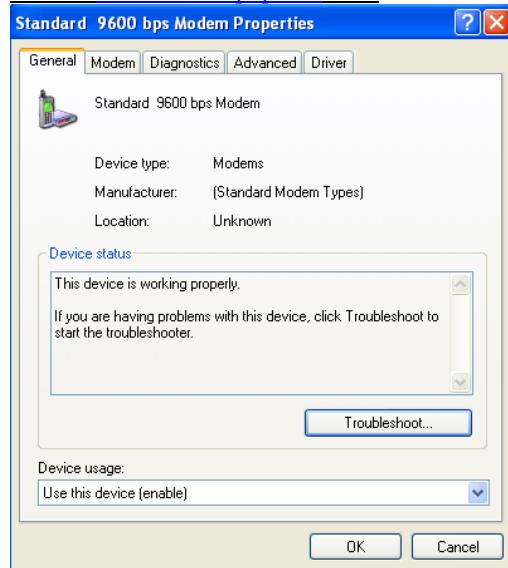
You can choose **"Diagnostics"** to test your modem to ensure you have selected appropriate COM port.

Click on **"Advanced"** Tab and enter the setting as shown below
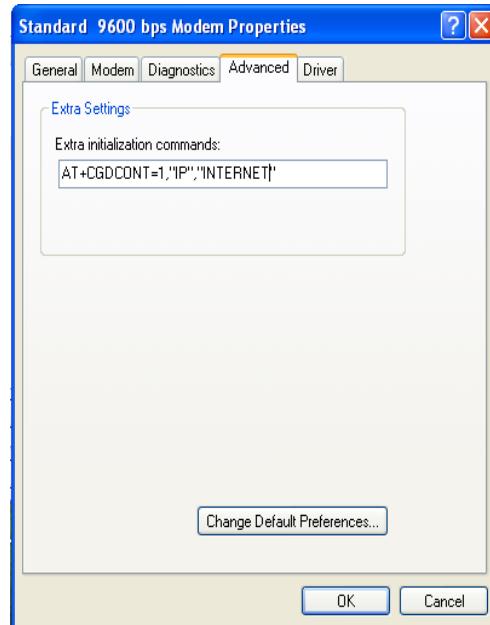
Please note that you have to obtain APN(Access Point name) from your cell phone provider to replace "INTERNET" value in above settings.

You Can then establish a Dial up networking connection as following-
1. Double click **"My Network places"** icon.
2. Select **"View My Network Connections"**
3. Select **"Add a new Network connection"**

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You have to dial number as **"*99#".**

Select Properties in above box.
Select appropriate modem and press Dial.
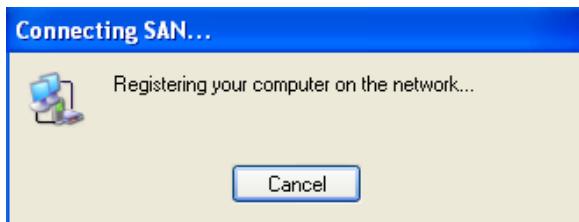
After successful configuration Modem gets connected to GPRS and following message get displayed