

Remote Alert SMS SMS-Alert-01



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1. Introduction

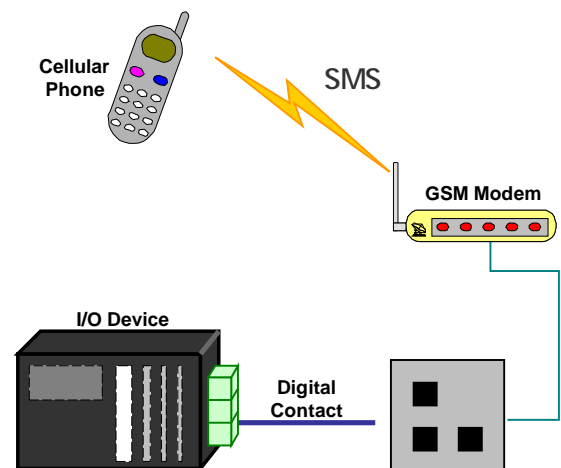
The Remote Alert SMS (SMS-Alert-01) is a cost effective System Alert Device. It allows user to alert operators or technicians by sending SMS messages that based on discrete contact input. The contact input could be wired from any device that generate relay contact upon alarm or fault. In this manner, operators or technicians can be alerted immediately.

Remote Alert SMS function as a transparent device for remote alert via paging. It has a built-in microprocessor chip running on a real-time operating system. This helps to eliminate the system from overloading with extraneous requests. This component will also enable the system to be more stable and reliable during data transmission as well as data conversion.

The Remote Alert SMS does not require a Data Communication Expert to configure it. Its user-friendly interface software makes configuring very easy and convenient. It comes with an enclosure that can be mounted on Din-rail.

Features

- Customize message
- Assigned alarm to mobile phone numbers
- Define up to 5 mobile phone numbers per input
- Reminder up to 3 times
- Acknowledgement to Alarm
- Up to 130 characters can be defined in per message
- 2 different message for every input
- Send on Logic '0', '1' or change in state



2. Specification

Physical Dimension

Dimension	110mm x 55mm x 75mm
Weight	800g
Diagnostic LEDs	Serial: Tx, Rx, Power
Installation Method	35mm Din-Rail, desk mount.

Environmental

Operating Temperature	10°C – 50°C
Operating Humidity	5 – 90 % non-condensing

Power

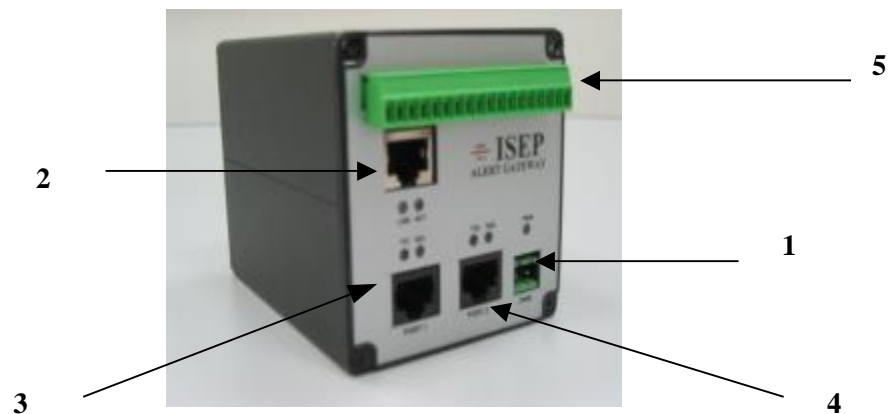
Supply Voltage	unregulated 10 to 30 VDC, polarity independent
Current	150mA
Power Consumption	5 watts
Connection	Screw terminal

Communication Interface

- Serial Port 1	RS232
Data rate	4800-113200 bit/s Half duplex or simplex
Data format	8 Data bits, No parity, 1 stop bit
Connection	RJ45 connector
- Serial Port 2	RS232 (Configuration Port)
Data rate	4800-113200 bit/s Half duplex or simplex
Data format	8 Data bits, No parity, 1 stop bit
Connection	RJ45 connector
- Network Port	10BaseT, IEEE std 802.3, RJ45 connector
Data rate	10 Mbit/sec, half duplex

3. Installation

1. Connect power to the screw terminal
2. LAN Port – Not Used
3. Serial port 1 connected to the GSM modem.
4. Serial port 2 for configuration only.
5. Digital input – Connected to alarms



Ethernet 10 Base T , RJ 45 connection

Pin	Signal	Direction	Description
1	TD+	Out	Transmitted data
2	TD-	Out	Transmitted data
3	RD+	In	Received Data
4			Not connected
5			Not connected
6	RD-	In	Received Data
7			Not connected
8			Not connected

Serial Port 1 , RJ 45 connection

Pin	Signal	Direction	Description
1	RX	In	Received data
2			Not connected
3			Not connected
4	Gnd		Gnd
5			Not connected
6			Not connected
7			Not connected
8	TX	Out	Transmitted data

Serial Port 2 , RJ 45 connection

Pin	Signal	Direction	Description
1	RX	In	Received data
2			Not connected
3	CTS		Clear to send
4	GND		Gnd
5	DSR		Data Set Ready
6	DTR		Data Terminal Ready
7	RTS		Request to Send
8	TX	Out	Transmitted data

Cables connection

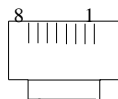


Figure 2: RJ45 Connector

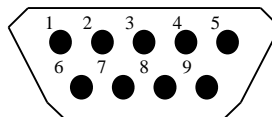
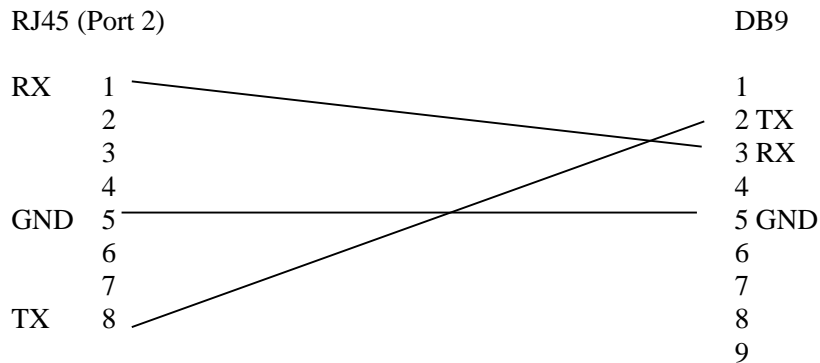
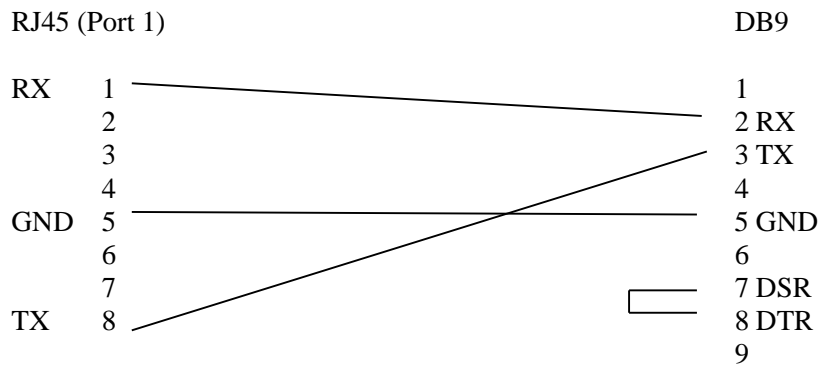


Figure 3: B9 Male Connector

Configuration Cable



GSM modem Cable



Where:

- RX - Receive
- TX - Transmit
- GND - Ground
- DSR - Data Set Ready
- DTR - Data Terminal Ready

LEDs

TX1	Color Green	ON: Mark (>3 V)	OFF : Space (<-3V)
RX1	Color Red	ON: Mark (>3 V)	OFF : Space (<-3V)
TX2	Color Green	ON: Mark (>3 V)	OFF : Space (<-3V)
RX2	Color Red	ON: Mark (>3 V)	OFF : Space (<-3V)
PWR	Supervise Green	ON: Power OK OFF: No Power	

4. Function Description

Configurable message to be send

The Alert SMS is used for alerting people on critical alarm for equipment and machines. It can monitor up to 4/8/16 digital inputs signal. Alert can be activated upon digital input at logic '0', logic '1' or at a change in state. Alarm message is configurable for each state.

Up to 5 escalation mobile numbers.

User can assign the alarm to mobile phones. For every digital input, it can store up to 5 different mobile phone numbers. You can also configure the escalation delay of mobile phone. There are two alarms message for you to configure in every digital input. Alarm message for logic '1' and for logic '0'.

Reminder and Acknowledgement

When there is an alarm, the Alert SMS gateway will send the alarm message through SMS. Reminder delay interval is configurable, it will remind the user by sending SMS again up to maximum of 3 times unless the user acknowledge the alarm by sending ACKx (where x is the input channel number) to the Alert SMS Gateway.

Status Monitoring

The Alert SMS Gateway is also capable of monitoring the Digital Input status. (See section 5 – Configuration)

Alarm Messages

Alarm message will be sent to the handphone as follow.

<Tue 12/01/2001 19:50:23> DI1 ERROR MESSAGE, AlmOn

Commands

- a. Input Status request

Send the command "STATUS" to the gateway's SIM card's number.

Return message will be:

"STATUS : DI0=1, DI1=1, DI2=1, DI3=1, DI4=1, DI5=1, DI6=1, DI7=1, DI8=1, DI9=1, DI10=1, DI11=1, DI12=1, DI13=1, DI14=1, DI15=1"

b. Alarm Acknowledge

Send the following command to the gateway's SIM card's number to acknowledge the alarms.

“ACK0” for input alarm 0.
“ACK1” for input alarm 1.
:
:
“ACK15” for input alarm 15.

c. Last alarm status request

Send the following command to the gateway's SIM

“ALARM0” to retrieve last alarm message for input point 0.
“ALARM1” to retrieve last alarm message for input point 1.
:
:
“ALARM15” to retrieve last alarm message for input point 15.

Return message type 1: Alarm on without acknowledgment.
<Tue 12/01/2001 19:50:23> DI1 ERROR MESSAGE, AlmOn UnAck

Return message type 2: Alarm off without acknowledgment
<Tue 12/01/2001 19:50:23> DI1 ERROR MESSAGE, AlmOff <Wed 12/02/2001
10:14:17> UnAck

Return message type 3: Alarm on with acknowledgment
<Tue 12/01/2001 19:50:23> DI1 ERROR MESSAGE, AlmOn Ack by <+6597831234>
<Wed 12/02/2001 10:14:17>

Please take note that all commands are case sensitive.

5. Configuration

This section describes the installation and configuration of the Alert SMS

System requirements:

To install and run the configuration program from PC, the following requirement are needed.

Minimum PC requirement

386, 486 or Pentium processor PC
Microsoft window 98, Window NT, Window 2000
16MB of RAM for Window 98
24MB of RAM for Window NT
32MB of RAM for Window 2000
CD-ROM drive
8MB of hard disk space
Serial connection

Installation

Insert the configuration tool CD-ROM into the CD-ROM drive
Copy “Alert SMS.exe” into your destination folder

Run Configuration

To start the configuration tool, click the configuration tool icon

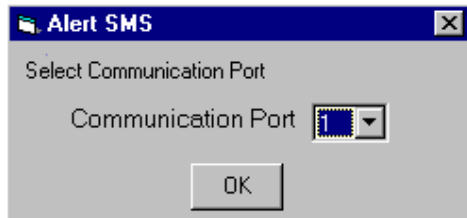
After the configuration tool has been successfully open, the program will prompt the user to select the serial communication port that is connected to the Alert SMS gateway. The program will wait indefinitely if the COM port is selected wrongly or the Alert SMS gateway is not connected.

Once the Alert SMS gateway is detected, user can proceed to set or change configuration for :

- Mobile phone numbers and Escalation Delay
- Alarm Message
- Alarm Logic and Reminder Delay
- Serial Communication Port

The user can configure the Alert SMS gateway at any time when it is running. The user also can view the Digital Input status at the Digital Input Status tab.

Communication Port Settings

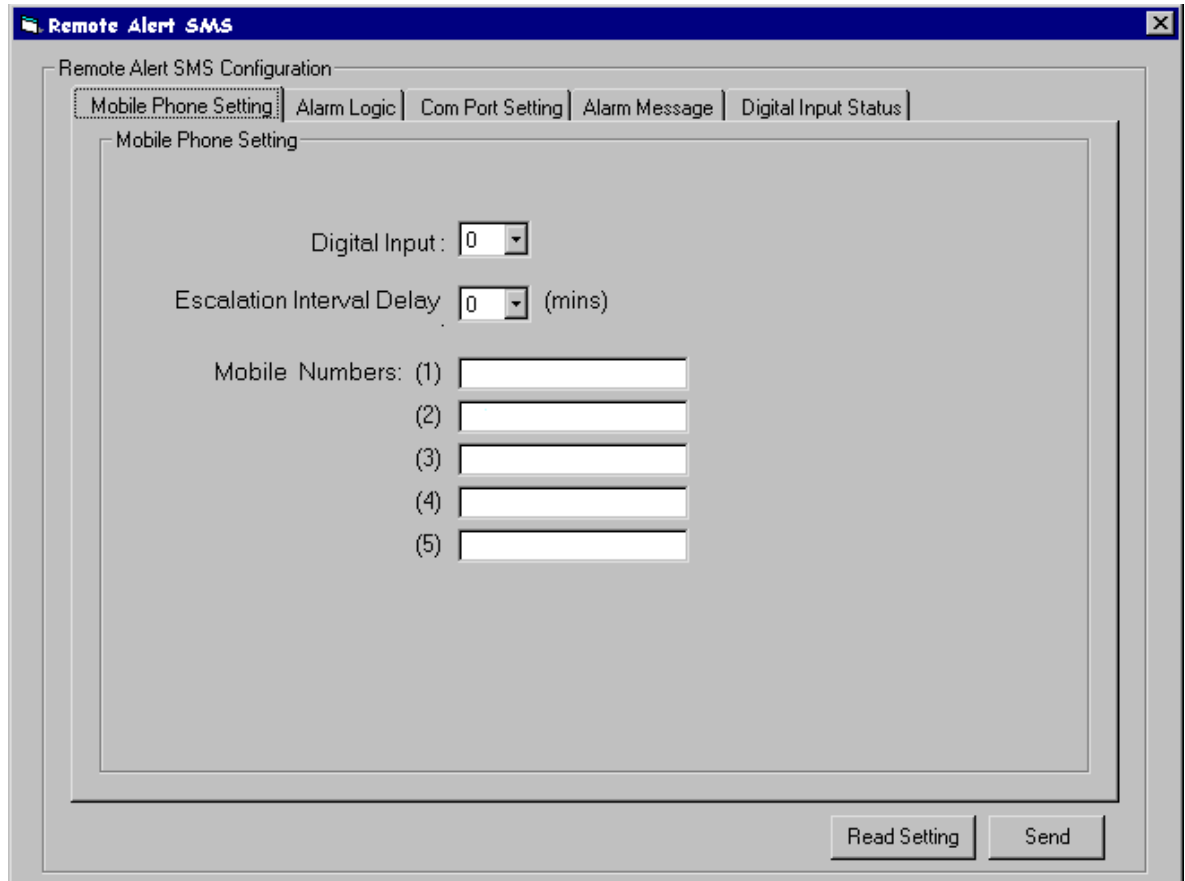


Communication Port settings

Communication Port: The serial port that is connected to the Alert SMS gateway.

Mobile Phone Settings

Setting the mobile phone number for alert. Up to 5 level of escalation is possible for each digital input / alarm



Mobile Phone Settings

Digital Input:

The input channel that the user wants to configure

Escalation Interval Delay:

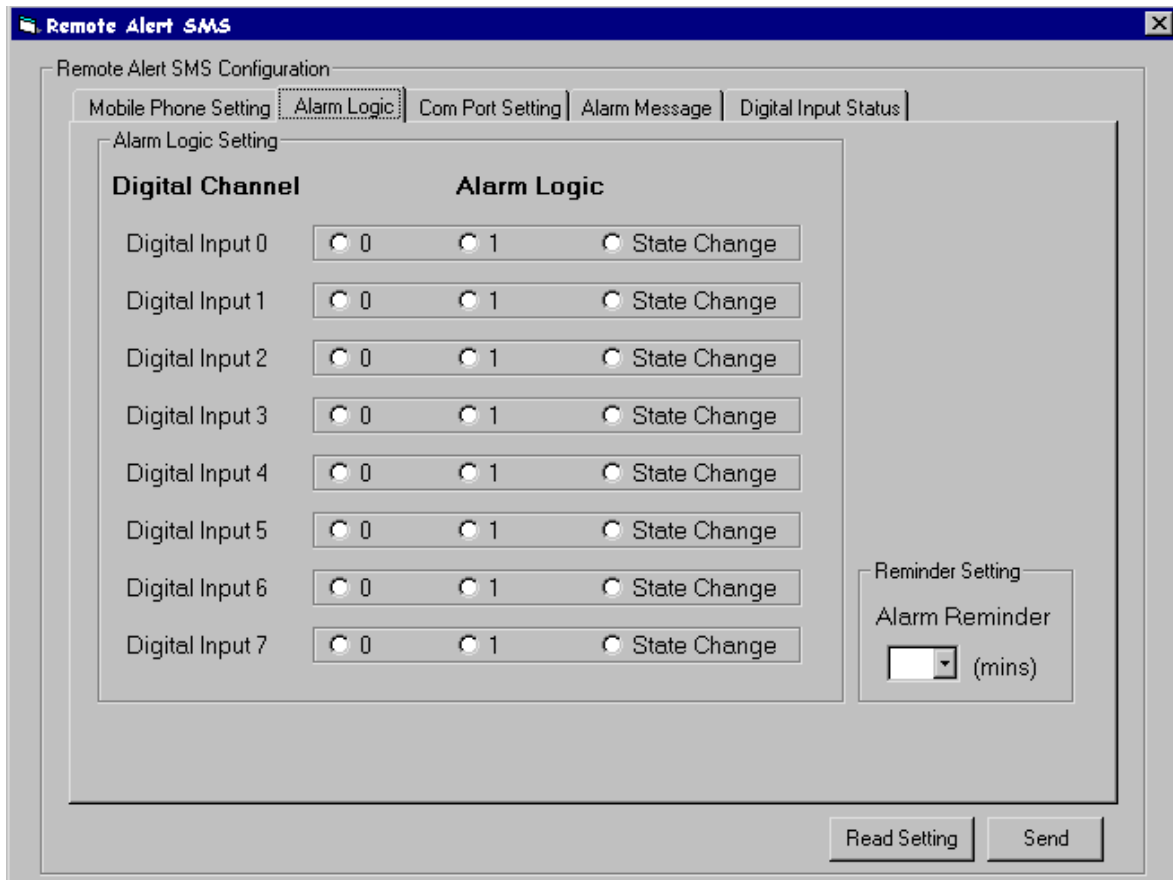
Set the time interval to escalate to the next mobile phone
0 min indicate no escalation, all mobile phone configured here will be activated at once.

Mobile Phone Number:

Set the mobile phone number that is going to be alert
The number indicate the order of escalation

Alarm Logic

Setting the logic for alarm activation. Alarm reminder (in minutes) can be configured. 3 reminders are provided as default



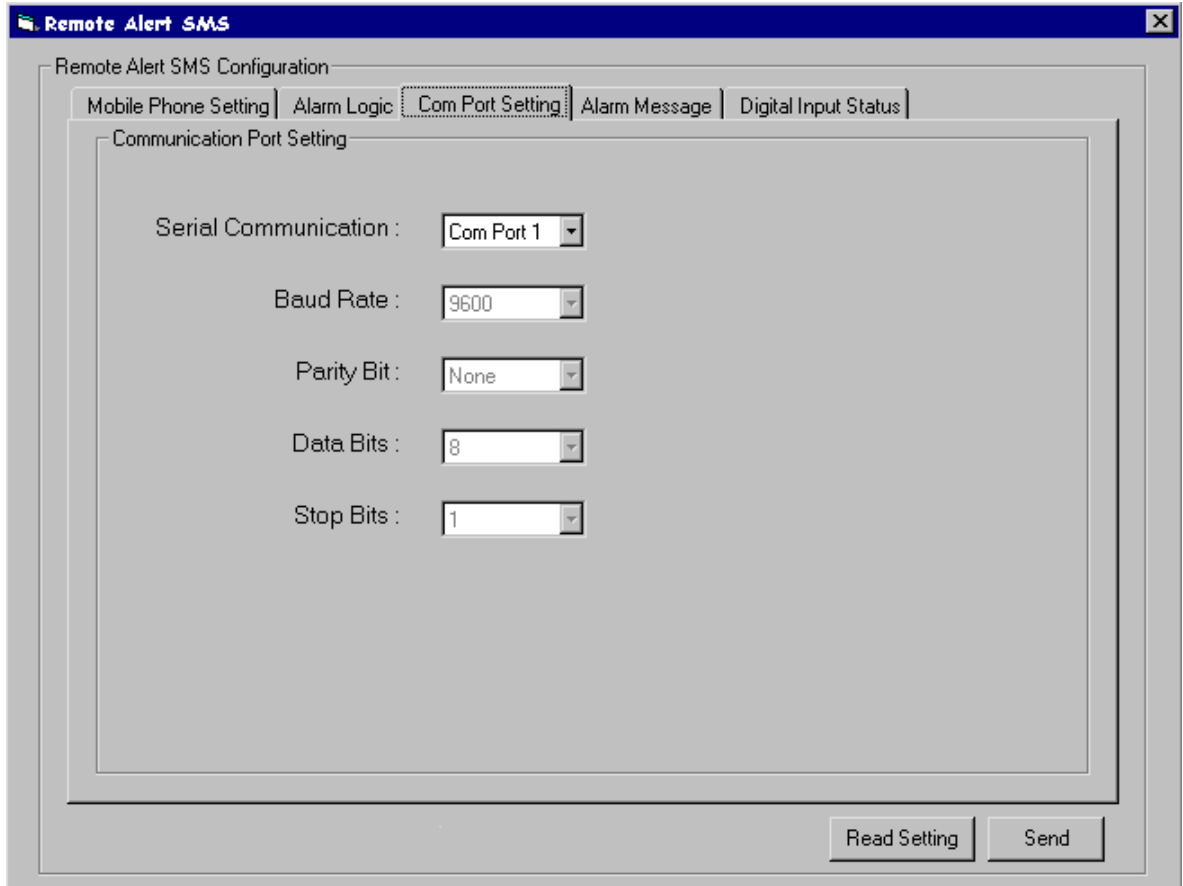
Mobile Phone Settings

Alarm Logic: ‘0’ means when channel is at logic ‘0’ will send an alarm
 ‘1’ means when channel is at logic ‘1’ will send an alarm
 “State Change” means whenever the channel change logic it will send an alarm

Alarm Reminder: Set the time interval to remind the user of an alarm

Com Port Setting

Setting of the serial communication parameter for connecting a PC to the gateway.



Com Port Settings

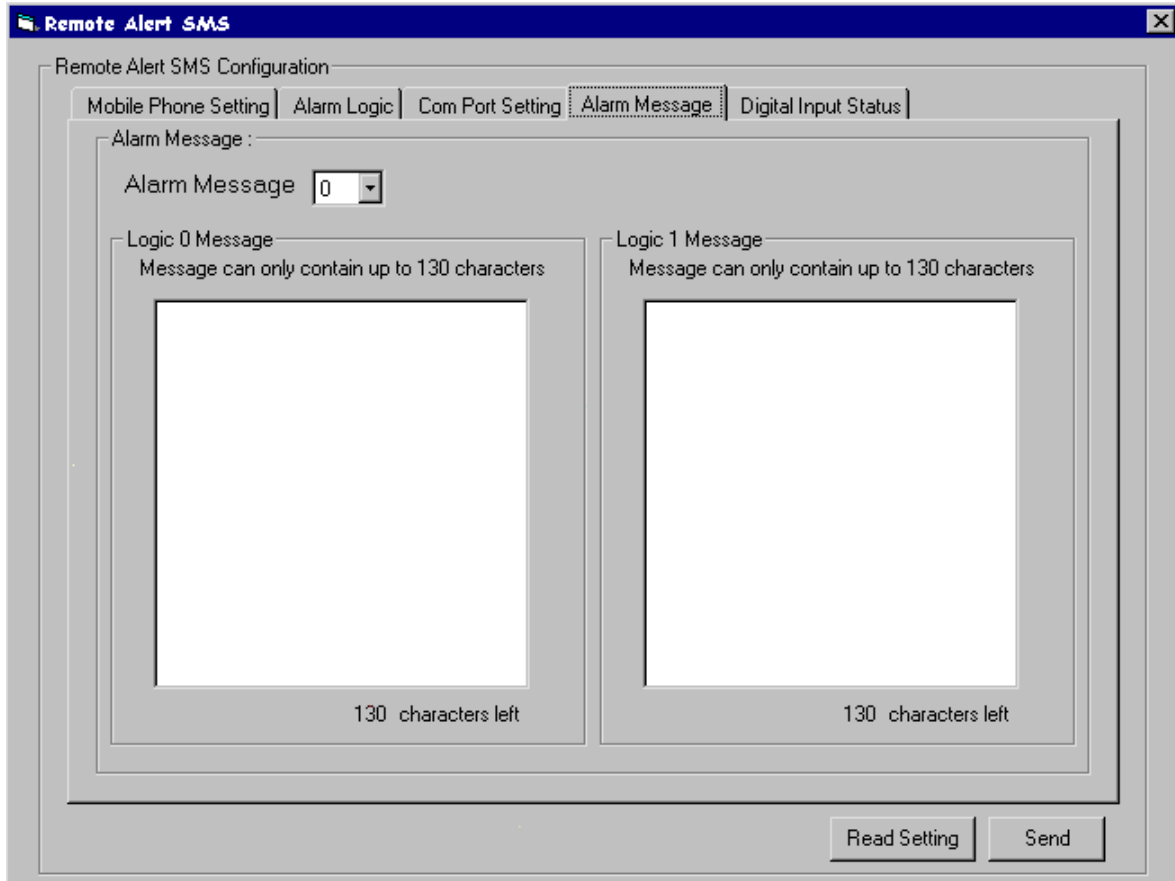
Serial Communication: Allow setting of the COM port that is connected to the Alert SMS gateway online.

Other parameters are default and fixed:

Baud Rate:	9600
Parity Bits:	None
Data Bits:	8
Stop Bits:	1

Alarm Message

Configure messages for logic 0 or logic 1 such that the respective message will be sent when the alarm state is at the particular logic. Up to 40 characters can be configured for each logic state.

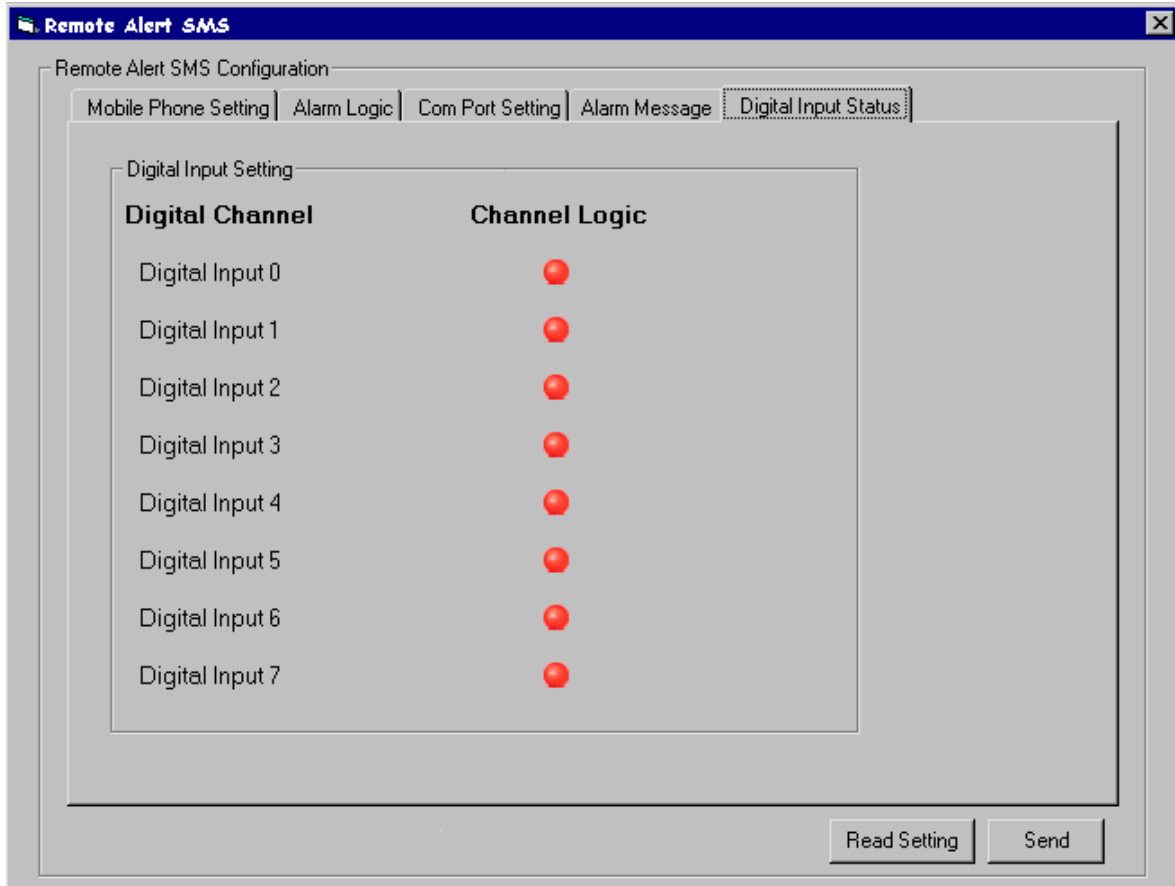


Alarm Message Settings

- Alarm Message: Select the Digital Input for message to be configured.
- Logic 0 Message: Set the Alarm Message when the Digital Input is at logic '0'
- Logic 1 Message: Set the Alarm Message when the Digital Input is at logic '1'

Digital Input Status

Allow online monitoring of the status via the serial communication.



Digital Input Status

Red Bulb: Means the logic at the respective Digital Input is at logic '0'

Green Bulb: Means the logic at the respective Digital Input is at logic '1'

Read Setting Button: Get the configuration from the Alert SMS gateway

Send Button: Update the modify values to the Alert SMS gateway

