How to send SMS messages with an AirLink device using AT commands?

Requirements:

- Be sure the SIM/account supports SMS or text messages. Many accounts do not come with SMS, so you may need to contact your Mobile Network Operator to add SMS service to your account.
- Computer with a serial port and/or Telnet application to send ALEOS AT commands

This article applies to GX400, GX440 and LS300 devices running the latest ALEOS software version, as posted in our web site. Legacy Raven X and Pinpoint X running ALEOS software version 4.0.11 support the AT commands explained in this article, but only when using them on the serial port interface.

Sending an SMS from the Serial Port

Connect a computer to the serial port. On the PC, open a terminal application such as HyperTerminal or Putty.exe. Remember to setup the serial port interface in the application to match the AirLink device’s default parameters: 

- **Bits per second** = 115200
- **Data bits** = 8
- **Parity** = None
- **Stop bits** = 1
- **Flow control** = Hardware

Once connected to the device, you can enter ALEOS commands. To send a SMS use AT*SMSM2M command with the following syntax:

```
AT*SMSM2M="<phone> <message>"
```

This allows an SMS message to be sent to another device as a single line item.

```
AT*SMSM2M ="16042555555 This is a test"
OK
```

Sending an SMS using Telnet Port 2332

It is possible to Telnet into the AirLink device and use the AT*SMSM2M command. This is only supported by LS and GX Series devices. This is possible using DOS command prompt, putty.exe application, or any other Telnet application. Let us show you with an example.
Telnet 192.168.13.31 2332
Welcome to the Sierra Wireless Inc. ALEOS Environment
LS300 login: user
Password:
OK
ate1
OK
at*smsg2m="16042555555 this is a test"
OK

This example uses the leading "1" in front of the ten-digit phone number which is commonly used for GSM operators. Also, the sending of the SMS in this example has us establishing a local Telnet session using its default local IP address of 192.168.13.31. The same can be accomplished by establishing a remote Telnet session to the device using the carrier-assigned WAN IP address.

Note: ATE1 enables echo terminal, which displays what you are typing on screen. It is optional command. Refer to the ALEOS Software Configuration User Guide for full set of AT commands.

Displaying incoming SMS messages on ACEmanager

ACEmanager shows incoming messages on the screen when you are using an SMS mode other than "Password Only". We suggest to set the device in ACEmanager > Services > SMS to “Control Only”. In the screen shot below, the device shows the last incoming message. It also shows the sender's phone number. This is useful to determine whether or not your Mobile Network Operator sends messages with the leading “1” in front of the phone number.

By default, trusted phone numbers have access and non-trusted phone numbers do not.

Troubleshooting

1) For GSM SIM cards, you can test the SIM card in a cellphone to determine if it can send and receive SMS messages.

2) Send an SMS to a cell phone or the device itself using the command.

   at*smsg2m=16042555555 this is a test"
If it doesn’t work, check with your Mobile Network Operator to confirm that the account supports SMS messages. Some Mobile Network Operators do not enable SMS on data-only accounts.

3) SIM account has been tested. It can send and receive SMS messages in a phone. ACEmanager receives SMS messages, but still cannot send SMS messages with at*smsem2m. This is common scenario for European and Canadian Mobile Network Operators. Please go to ACEmanager > Services > SMS > Advanced.

Try a different setting in the AT+CGSMS field. By default, it is set to “Do nothing”. We suggest to start with AT+CGSMS=1. Remember to click the “Apply” button in ACEmanager. Reboot the device and test again.

Finally the “Quick Test” button allows you to quickly test sending SMS messages to a phone or the device itself to test SMS functionality. In the “Quick Test Destination” field, type the phone number to send a text message to.

Note: The ALEOS Software Configuration User Guide has all the possible option for the AT+CGSMS command which allows you to choose the technology used to send SMS messages.

- Do nothing (default)
- Set AT+CGSMS=0—GPRS
- Set AT+CGSMS=1—Circuit switched
- Set AT+CGSMS=2—GPRS Preferred (Uses circuit switched if GPRS is not available)
- Set AT+CGSMS=3—Circuit Switched Preferred (Uses GPRS if circuit switched is not available)

4) For Raven X and Pinpoint X devices experiencing the issue reported in item 3). To change AT+CGSMS settings, connect locally on the serial port and type the following AT commands. Reboot the device and test again.
<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATE1</td>
<td>Echo Command</td>
</tr>
<tr>
<td>OK</td>
<td>ACK from device</td>
</tr>
<tr>
<td>AT\APASSTHRU</td>
<td>Set device in “Pass-thru mode”. Device will be offline.</td>
</tr>
<tr>
<td>OK</td>
<td>Up to 10 sec to get OK from the device</td>
</tr>
<tr>
<td>AT+CGMS=1</td>
<td>Change settings</td>
</tr>
<tr>
<td>OK</td>
<td>ACK from device</td>
</tr>
</tbody>
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