AT command over IP (Ethernet)

1. Introduction

1.1 Overview

This document contains information regarding the configuration of AT over IP, e.g. able to send SMS messages via a ethernet connection to the Modem.

This guide has been written for use by technically competent personnel with a good understanding of the communications technologies used in the product, and of the requirements for their specific application.

1.2 Compatibility

This application note applies to ：
Models Shown: 641M series.
Firmware Version: V1.1.2 (3be6e5a) or newer
Other Compatible Models: None

1.3 Version

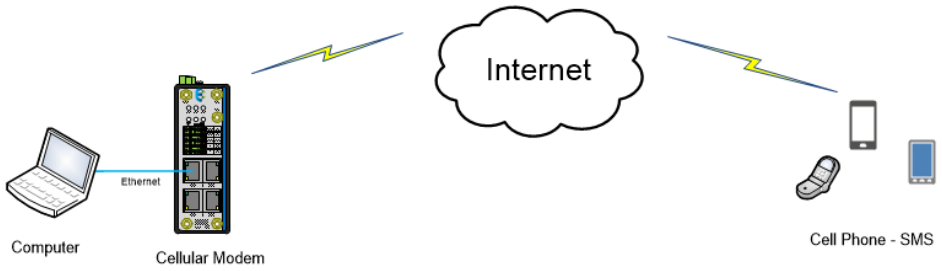
Updates between document versions are cumulative. Therefore, the latest document will include all the content of previous versions.

Release Date	Doc. Version	Firmware Version	Change Description
2020/04/14	V1.0.0	V1.12 (3be6e5a)	First released

1.4 Corrections

Appreciate for corrections or rectifications to this application note, and if any request for new application notes please email to: support@elprotech.com

2. Topology



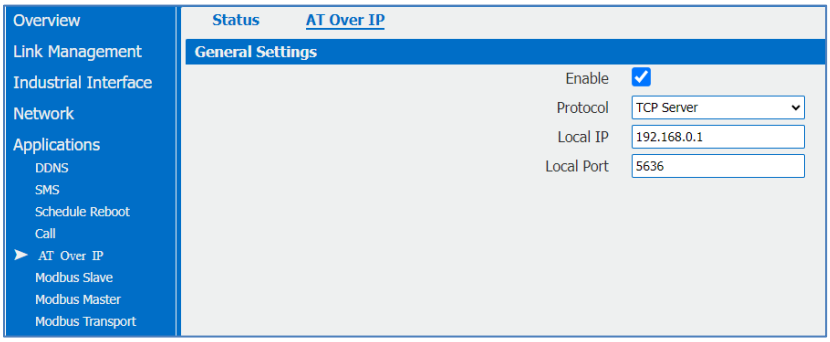
1. 641M connect to Internet via SIM card
2. PC connect to 641M via Ethernet (IP Address and Port)
3. PC send the special command via the terminal connection to the 641M and trigger it to send an SMS to a Mobile Phone.

Note:
This application note will show how to send the AT Commands via an IP connection which allows you to send text SMS messages.

3. Configuration

3.1 641M Configuration

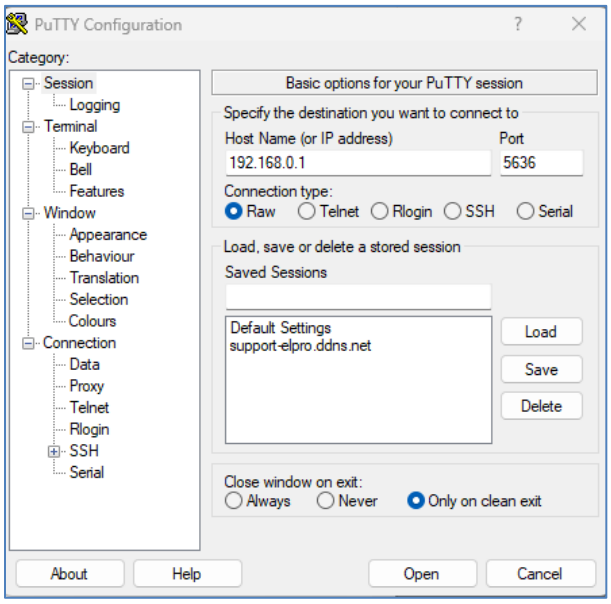
1. It is assumed that the modem has the AT over IP application installed. If not go to **Maintenance> Software** and upload the app.



2. Go to **Application> AT over IP** , enable AT over IP feature like above:
3. Configure the Protocol (TCP IP or UDP), Local IP and Port number.
4. Click Save & Apply

4. Testing

Open a “Putty” Session and Connect to the IP address and Port that has been Configured in the previous step.



Send the commands.

“**at+cmgf=1\r**”

Should get an “**OK**” Response.

Then Send “**at+cmgs=”Mobile Phone Number with Country Code”\r**, eg 61419773552”

Again you should get a response with a “**>**”

Now you can enter the text message you wish to SMS.

Type Message, e.g. “**HELLO**” then we need to send a (end of file character) by holding down the “**ALT**” key and enter “**026**” on you keyboard and you hopefully should see the following response.

“+CMGS: 46

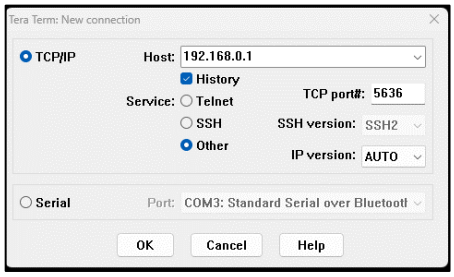
OK”

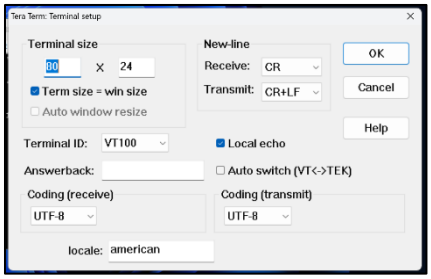
Note: “\r” means the keyboard Carriage return (CR / enter key)

(Make sure num lock is on keyboard and type 026 using numpad. On some keyboards, number keys on top of letters may not work)

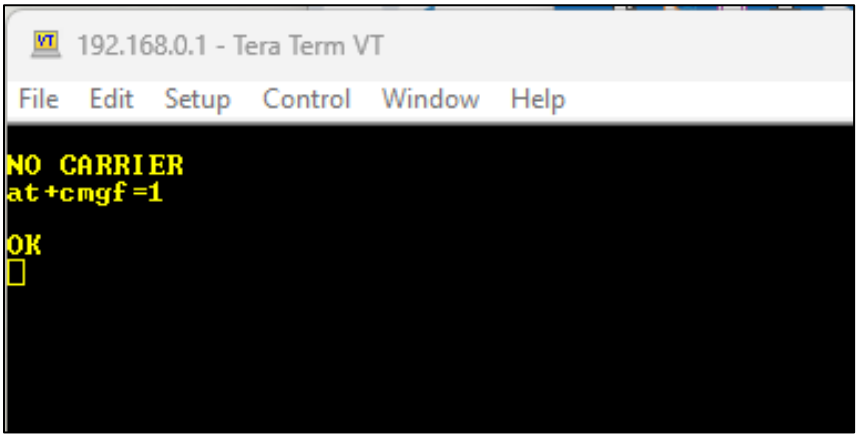
You may also be able to use a Terminal application like Terraterm but connect to the IP address and port

1. Run Tera Term software and connect the 641M router via TCP/IP & port, Seelct Setup/Terminal and check the session has, Transmit CR+LF, and local echo enabled as per below:

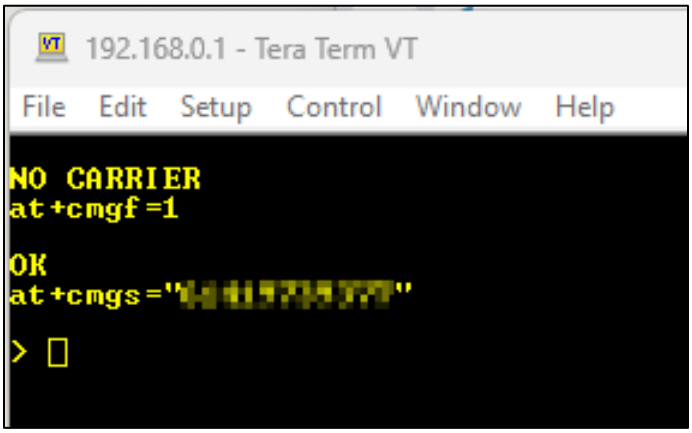




2. Send the AT command **at+cmgf=1** to initialise. Command must be typed using lower case characters on keyboard. Cut and paste will not work properly with Tera Term.

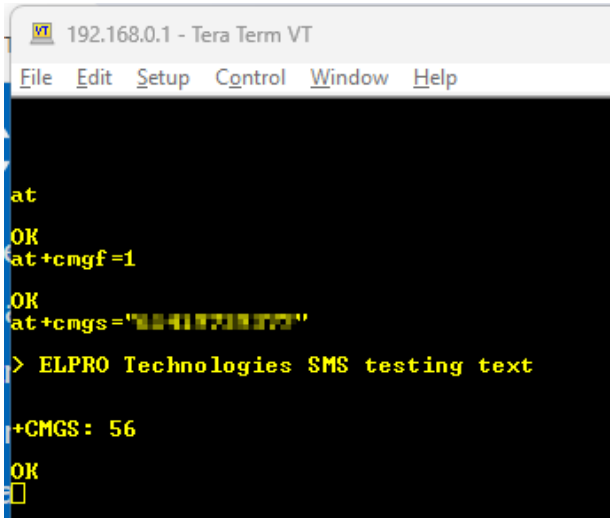


You should get an "**OK**" to indicate success.



3. Enter the AT command **at+cmgs="61419773552"**, then press enter.
   Phone number (61419773552) should be the full phone number with the country code (61= Australia)
   You should get a "**>**" to indicate Text entry mode.
4. Next, enter the text you wish to send, i.e. "**ELPRO Technologies SMS testing text** " and press enter.

No need to put Quote marks(“ “).



5. To complete the process, you need to send an “end of file” character, i.e “1a” in HEX.
   To do this, press and hold **ALT** key, then type **026** and release the ALT key (may need to then press <enter>).
   (Make sure num lock is on keyboard and type 026 using numpad. On some keyboards, number keys on top of letters may not work)

   You see the reply “OK”, which means it has sent out the SMS successfully.

6. Test successfully, the mobile phone can receive the SMS message.