AT Commands Over SMS

Application Note

Version: 2.01

NOVATEL WIRELESS

02 December, 2013

General

TERMS OF USE OF NEW MATERIALS - PLEASE READ CAREFULLY

From time to time, Novatel Wireless M2M, in its sole discretion, may make available for download on its website (www.novatelwireless.com), or may transmit via mail or email, updates or upgrades to, or new releases of, the firmware, software or documentation for its products (collectively, 'New Materials'). Use of such New Materials is subject to the terms and conditions set forth below, and may be subject to additional terms and conditions as set forth in Novatel Wireless M2M's Technical Support Policy (posted on its website) and/or any written agreement between the user and Novatel Wireless M2M.

All New Materials are provided AS IS. Novatel Wireless M2M makes no warranty or representation with respect to the merchantability, suitability, functionality, accuracy or completeness of any such New Materials. The user of such New Materials assumes all risk (known or unknown) of such use. Novatel Wireless M2M reserves all rights in such New Materials. The user shall have only a revocable and limited license to use such New Materials in connection with the products for which they are intended. Distribution or modification of any New Materials without Novatel Wireless M2M's consent is strictly prohibited.

IN NO EVENT WILL Novatel Wireless M2M BE RESPONSIBLE FOR ANY INCIDENTAL, INDIRECT, CONSEQUENTIAL OR SPECIAL DAMAGES AS A RESULT OF THE USE OF ANY NEW MATERIALS. Novatel Wireless M2M'S MAXIMUM LIABILITY FOR ANY CLAIM BASED ON THE NEW MATERIALS SHALL NOT EXCEED FIFTY U.S. DOLLARS ($50).

Version Verification

Please ensure you have the latest version of this document by downloading it from www.novatelwireless.com

Copyright

251 Renner Pkwy

Richardson, TX 75080 USA

Phone: (972) 633-4400

Fax: (972) 633-4444

Email: info@nvtl.com

www.novatelwireless.com

Table of Contents

1

ATCommands Over SMS

This document is specific to the Enabler IIG, Enabler III-G, and Assisted GPS products only.

By default, AT commands over SMS are no longer limited to addresses in the AT$SMSDA. From factory default settings, a user must set AT$SMSDAEN=0 to completely disable AT commands over SMS, or populate settings in AT$SMSDA to limit which addresses can send AT commands over SMS to a device.

By design, whenever the modem receives an inbound SMS, GPRS will momentarily be placed in a SUSPENDED state while the SMS message is processed. Although processing the SMS message normally takes a few seconds, if a GPRS message is generated by either the incoming SMS or the event engine, while GPRS is in a suspended state, there is a possibility that the GPRS message will not be sent. Integrators may choose to enable bit 6 of Parm2 to store the GPRS message until the modem comes out of the suspended GPRS state.

A user can send AT commands to Novatel Wireless M2M modems via SMS. The following guidelines must be followed:

- AT commands over SMS are enabled by setting AT$SMSDAEN=1 (default).
- To completely disable AT commands over SMS, set AT$SMSDAEN=0.
- AT commands sent via SMS must originate from an address listed in AT$SMSDA, if there are entries populated in this command. If there are no entries in AT$SMSDA, and AT$SMSDAEN=1, then all AT Commands over SMS sent to the device with the correct format and containing the correct MDMID, will be accepted.
- An incorrectly formatted SMS message will be processed as a regular SMS message.
- Not having the originating address of the SMS message listed in AT$SMSDA command will result in the SMS message being processed as a regular SMS message.
- Query of an AT command setting that returns more than 160 bytes will result in data being truncated to a maximum of 160 bytes.

> AT$RESET should be sent alone if using SMS to send the AT command to the modem. If the AT$RESET is used as the last AT command in a multiple AT-Command SMS message, NO RESPONSE will be sent back to the sender.

The following syntax is used:

```
>RSP=[T/F];ID=[modem id];[at command]<
```

[at command] field has to be set to an AT command from the following list:
- AT$ACKTM
- AT$ACTIVE
- AT$APIPWD
- AT$AREG
- AT$ATEXEC
- AT+CBST
- AT+CGDCONT
- AT+CGMI
- AT+CGMM
- AT+CGMR
- AT%CGPCO
- AT+CGSN
- AT$CONNTO
- AT+COPS?
- AT+CREG?
- AT+CSQ
- Any AT command that starts with B
- Any AT command that starts with E
- Any AT command that starts with F
- Any AT command that starts with G
- Any AT command that starts with H
- Any AT command that starts with I
- Any AT command that starts with L
- Any AT command that starts with M

- Any AT command that starts with N
- Any AT command that starts with O
- Any AT command that starts with P
- Any AT command that starts with R
- Any AT command that starts with S

SMS ERROR CODE REFERENCE

For SMS error code information, please refer to the following:

- Novatel Wireless M2M document GSM0308AT001 – Enabler IIIG AT Command Set
  - Appendix A – Unsolicited Result Codes
  - Appendix B – SMS Error Codes