



Inspired Wireless M2M Technology

Modem Troubleshooting

Application Note 4
Rev 1.1

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Introduction

This document is intended to give guidance when troubleshooting a Siretta modem.

The procedures stated throughout this document are recommended by Siretta. You do not have to follow these procedures, however this may affect the way your modem functions.

About Siretta

Siretta, located in Reading, United Kingdom have been manufacturing antennas, cable assemblies and cellular modems for over 10 years. We supply our products globally to many of the world's leading organisations.

Whether you require an off the shelf or custom solution, Siretta has a wide portfolio of antenna, RF cable assemblies and modems to fit your application.

Our extensive knowledge and experience in the wireless market allows us to support a wide range of customer applications, focusing on frequencies typically within the 75MHz - 5.8GHz range. These encompass the HF, VHF, ISM, GSM/GPRS/3G/4G and GPS frequencies as well as industrial WLAN and VHF/UHF antenna/Wi-Fi antenna solutions.

With a heavy emphasis on design, we have a team of dedicated Application Engineers and Product Managers, backed up by Field Sales Engineers, who specialise in wireless applications.

We have made significant investments in R&D facilities which boast GPS hardware development equipment and a GSM Pico Cell on site, as well as development software and a comprehensive suite of Industrial, Scientific and Medical band, and non ISM band frequency products. We have many technology partners enabling us to keep at the forefront of the communications industry and offer class leading wireless solutions.

LED Not Lit

If the LED on your Siretta modem is not lit, please check the following procedures:

- » Check the modem has been connected to the correct power supply
- » Check the power connector is inserted correctly
- » Check the power has been switched on at the mains

Modem Reboot

If you Siretta modem keeps manually rebooting, please check the following procedures:

- » Check the SIM card has been inserted
- » Check the SIM card has been inserted correctly

No Serial Connection

If you Siretta modem has no serial connection, please check the following procedures:

- » Check the serial cable has been inserted correctly
- » Check the serial cable has the correct pin alignment*
- » Check the modem emulator program has the proper settings
(Factory settings = 115200, 8, n, 1)
- » Check there isn't another program interfering with the communication program
- » Check there isn't a conflict with communication port access

*See relevant Hardware Reference Manual for your modem for more information of pin number

'No Carrier' Message

If your Siretta modem returns a 'No Carrier' message upon an attempted call (voice or data), please consider the following possible causes:

If the modem returns...	Then ask?	Action
'No Carrier'	Is the received signal strong enough?	Use ' AT+CSQ ' to check RSSI. Check signal strength indication.*
	Is the antenna connected correctly?	Ensure antenna is firmly screwed into place.
'No Carrier' (when trying to issue voice communication)	Is the semicolon (;) entered immediately after the phone number in the AT command?	Ensure that the semicolon (;) is entered immediately after the phone number in the AT command. (e.g. <i>ATD123456;</i>)
'No Carrier' (when trying to issue data communication)	Is the SIM card configured for data / fax calls?	Configure the SIM card for data / fax calls. (Ask your network provider if necessary)
	Is the selected bearer type supported by the called party?	Ensure the selected bearer type is supported by the call party.
	Is the selected bearer type support by the network?	Ensure the selected bearer type is support by the network. If no success, try bearer select type by AT command: ' AT+CBST=0,0,3 '

* Value of RSSI	Interpretation
0 to 12	Insufficient or weak
13 to 19	Average
20 - 31	Good
99	No Signal

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Siretta does not take responsibility for any application developed using the device characterized in this document and notes that any application of this device must comply with the safety standards of the applicable country and comply with the relevant wiring rules. Siretta reserves the right to make modifications, additions and deletions to this document due to typographical errors, inaccurate information, or improvements to equipment at any time and without notice. Such changes will be incorporated into new editions of this document.

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Definitions

Term	Definition
AT	Attention command
LED	Light Emitting Diode
RSSI	Received Signal Strength Indication
SIM	Subscriber Identity Module



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