

BGTERM

MANUAL

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Version 1.0

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VERSION HISTORY

Version	Comment
1.0	Known Issues added + finalization
0.9	First draft

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1 Disclaimer

BGTerm is released “as it is” and therefore Bluegiga Technologies doesn’t take responsibility about the possible problems it might cause to its users. Bluegiga isn’t committed to support the users in use of BGTerm.

2 General Usage

BGTerm is terminal program that allows easy use of serial ports. It has many features that make using of iWRAP interface easier. BGTerm has internal MUX and OBEX packet parser and also wrapper for MUX frames. You can see the normal layout of the BGTerm program from Figure 1.



Figure 1 Layout of the BGTerm

3 Installation

There are two possible ways of installing the BGTerm into your system. Easier way which only works in Windows operating systems is to extract the BGTerm_Win_exe.zip to desired location. After that you can just execute the BGTerm.exe and you’re ready to go.

If you are using some other operating system than Windows or if you run into troubles when using the first installing method you can use the Python interpreter to run the BGTerm. For this you need to first install the Python (2.4 <) environment into your PC (available from <http://www.python.org/download/>). You also need to install following libraries:

- numpy - http://sourceforge.net/project/showfiles.php?group_id=1369&package_id=175103
- pywin32 - http://sourceforge.net/project/platformdownload.php?group_id=78018
- serialpy - http://sourceforge.net/project/showfiles.php?group_id=46487&package_id=39324

After installing everything above you should be able to run the BGTerm by issuing “python BGTerm.py” in command line in the directory where you have extracted the contents from BGTerm_python.zip.

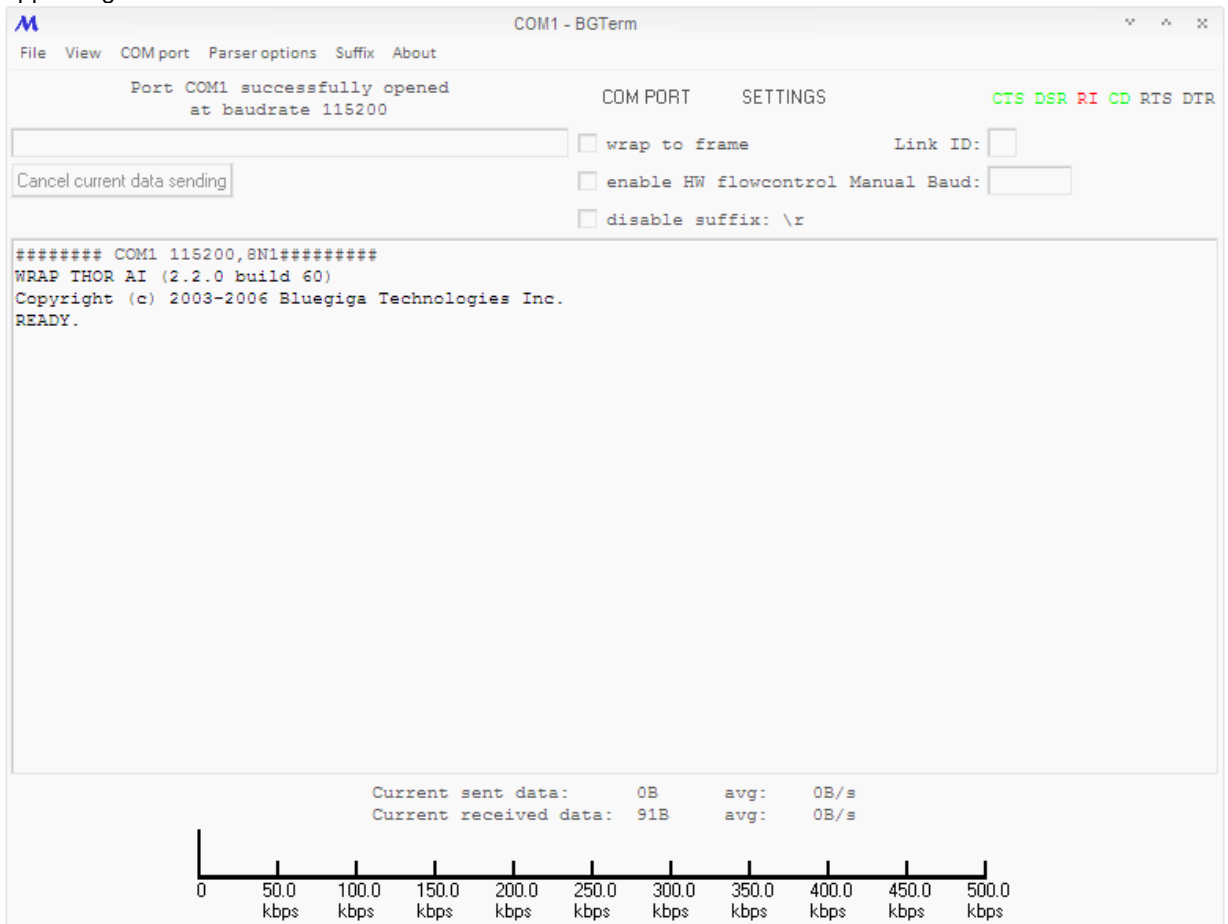
4 Quick start

This is a simple example how to make the BGTerm to interact with your WTX evaluation kit with iWRAP.

1. Make sure that you have a COM port in your computer (native or USB->Serial converter)
2. Open BGTerm by double clicking BGTerm.exe or by running command “python BGTerm.py” in command line (you need to be in the right directory).
3. Now you should have something like this in front of you:



- Select the COM PORT that you want to have the Evaluation Kit WTX connected to by clicking the “COM PORT” button and selecting the right COM port from the emerging drop down list. By default COM1 is selected.
- The BGTerm should by default have the right settings for the COM port so that communicating with iWRAP which has default SET CONTROL BAUD settings is possible. If you have changed SET CONTROL BAUD settings from iWRAP you can change the BGTerm’s COM port settings from the SETTINGS drop down list.
- If you can see text “Port COMX successfully opened at baudrate YYYYYY” you can connect your Evaluation Kit to the COMX port and power it up. After doing this you should see iWRAP boot prompt appearing to the screen:

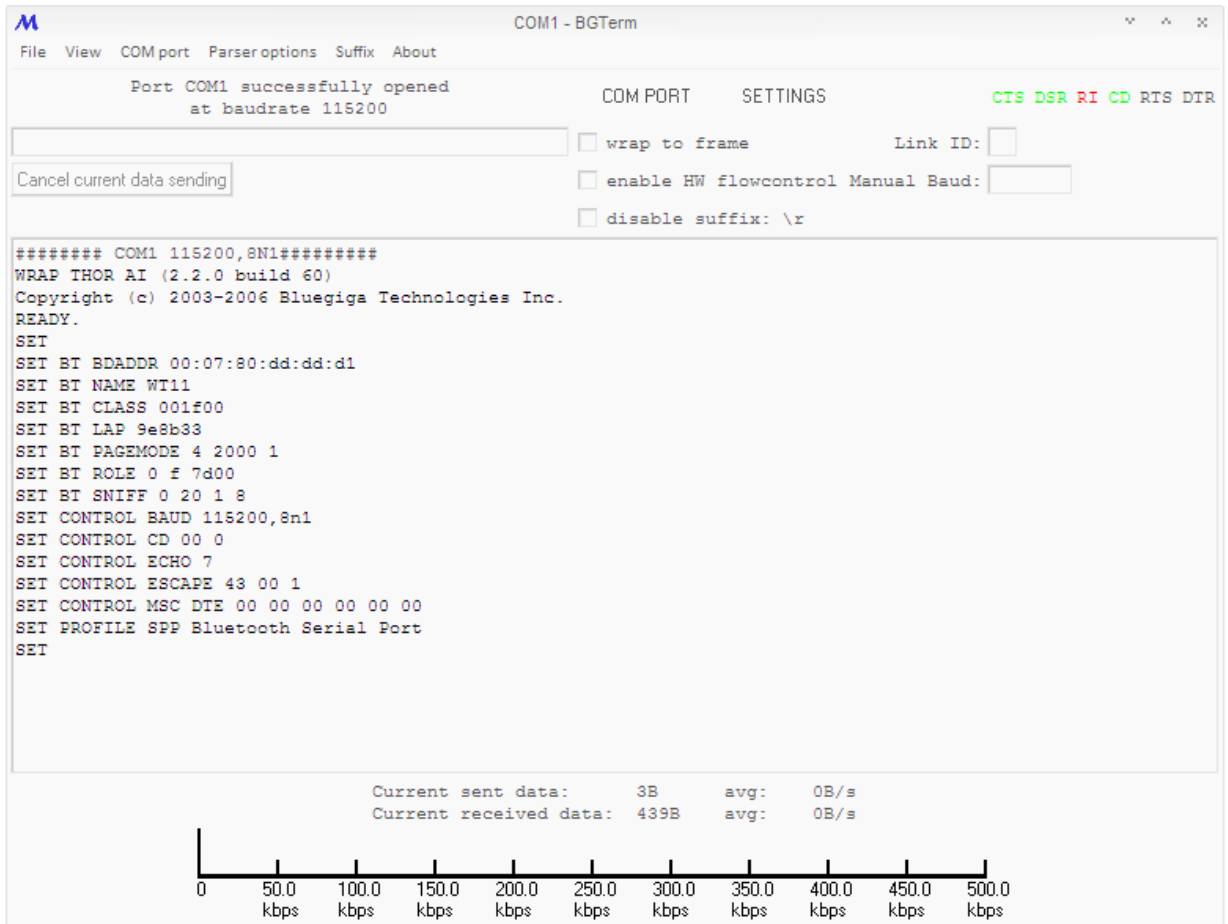


- Now you can interact with iWRAP by typing commands into the command line (Box underneath the text “Port COMX successfully opened at baudrate YYYYYY” text) and pressing Return. If you type text “SET” to the command line like this:



And press RETURN key you should get something like this in return:

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- That's it. Now you can start using iWRAP. If you want to learn more about the features of BGTerm, please check chapter Features.

5 Features

5.1 Layout description

Here is description of the different parts of the BGTerm GUI. These names are used in the descriptions of BGterm features:

5.1.1 TextBox

All data coming from serial port is appearing here. You can clear TextBox from View->Clear Log. The data might contain some extra information depending on your parser settings.

5.1.2 ModemSignals

From here you can see the status of some RS232 modem signals. The four first ones (CTS, DSR, RI and CD) are inputs and the two last ones (RTS and DTR) are outputs. Green color indicates that the corresponding signal is set to high and red color indicates the signal is low. Black color indicates that the status cannot be determined. You can control the output signals by clicking at them with your mouse. Left click set output to

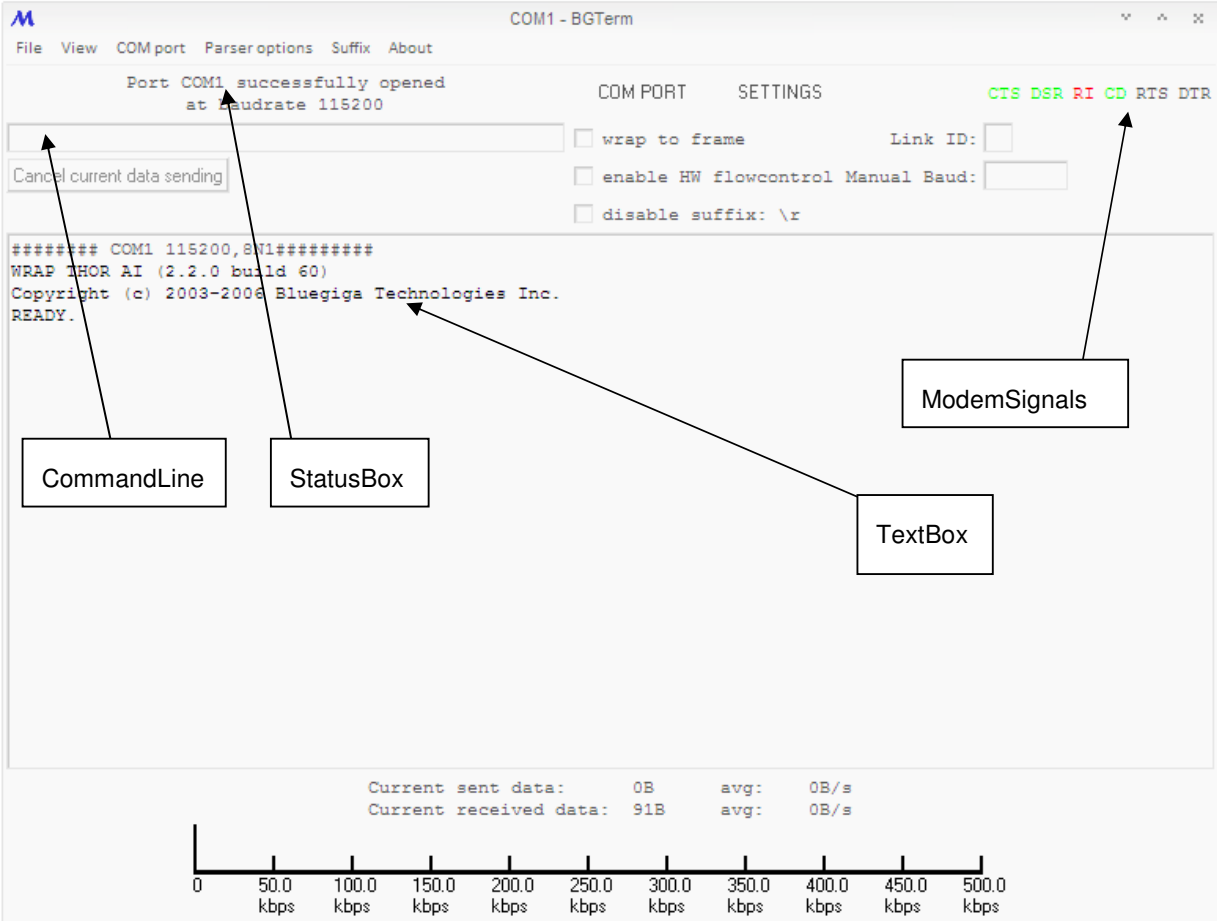
high and right click sets it to low. Note that the manual controlling of the output signals only works if you have HW flowcontrol disabled because otherwise flowcontrol controls these signals.

5.1.3 StatusBox

From here you can see the current status of the selected COM port.

5.1.4 CommandLine

This can be used to send data or commands to serial port. Write the data here and press RETURN to send it. You can select the suffix (line ending) from the Suffix menu or if you want disable the suffix and just send the data check the "disable suffix" checkbox. If you want to encapsulate the data into MUX frame you need to make sure that the "wrap to frame" is checked. By default the data is send to control link (ID=0xff). If you want to send the data into some other link you need to define the link ID. Just type the number of the link you want to send the data to into the Link ID box.



5.2 Sending commands to iWRAP

The very basic functionality of BGTerm is to send and receive information to iWRAP. You can send commands to iWRAP using the CommandLine. Please check 5.1.4 CommandLine for details how to send commands if the iWRAP is in MUX mode.

5.3 Sending a file

BGTerm has option to read files and send them to serial port. You can give either absolute path to file (C:\files\test.txt) or relative path if the file exists in the same directory as the BGTerm (./test.txt). If you want to cancel the data transfer you need to press the "Cancel current data sending" button. After sending has finished you will see some statistics about the transfer.

5.4 Automatic MUX mode detection

When sending a command you can define whether the command is sent as ASCII or encapsulated in MUX frame. If Automatic MUX mode detection is enabled BGTerm can detect in which mode the iWRAP probably is in. This detection is based on the last data packet that is received from iWRAP.

5.5 Close COMs

If some other program needs to use the same COM port that BGTerm is using you can temporarily detach BGTerm from COM port either from "COM port -> Allow use of ports" or by pressing F12 once. You can enable the port usage by doing the same thing again.

5.6 Enable OBEX parsing

If you are using iWRAP version that uses OBEX encapsulation for incoming OBEX packets you can enable this feature which allows you to see the headers of each packet in human readable form. To enable this feature go to "Parser options -> Enable OBEX parsing".

6 Known issues

6.1 Missing DLLs

BGTerm windows executable requires following DLLs in order to work:

- ole32.dll - C:\WINDOWS\system32\ole32.dll
- OLEAUT32.dll - C:\WINDOWS\system32\OLEAUT32.dll
- USER32.dll - C:\WINDOWS\system32\USER32.dll
- IMM32.dll - C:\WINDOWS\system32\IMM32.dll
- SHELL32.dll - C:\WINDOWS\system32\SHELL32.dll
- MSWSOCK.dll - C:\WINDOWS\system32\MSWSOCK.dll
- comdlg32.dll - C:\WINDOWS\system32\comdlg32.dll
- WSOCK32.dll - C:\WINDOWS\system32\WSOCK32.dll
- COMCTL32.dll - C:\WINDOWS\system32\COMCTL32.dll
- ADVAPI32.dll - C:\WINDOWS\system32\ADVAPI32.dll
- msvcrt.dll - C:\WINDOWS\system32\msvcrt.dll
- WS2_32.dll - C:\WINDOWS\system32\WS2_32.dll
- GDI32.dll - C:\WINDOWS\system32\GDI32.dll
- VERSION.dll - C:\WINDOWS\system32\VERSION.dll
- KERNEL32.dll - C:\WINDOWS\system32\KERNEL32.dll

7 Contact Information

Sales: sales@bluegiga.com

Technical support: support@bluegiga.com
<http://www.bluegiga.com/techforum/>

Orders: orders@bluegiga.com

Head Office / Finland:

Phone: +358-9-4355 060

Fax: +358-9-4355 0660

Street Address:

Sinikalliontie 5A

02630 ESPOO

FINLAND

Postal address:

P.O. BOX 120

02631 ESPOO

FINLAND

Sales Office / USA:

Phone: (781) 556-1039

Bluegiga Technologies, Inc.

99 Derby Street, Suite 200 Hingham, MA 02043