ANT-1776ZB bi-directional serial setup

Contents

Please note: Currently there is a known bug and it may be necessary to toggle the "State" between Off and On (see Figure 2**) and then click Save to enable the serial port function after each power cycle.**

The guide shows the setup require for the ANT-1776ZB serial port connection with a PC based TCP over IP connection and the physical RS-232 port.

IF would be prudent to test with the PC's before using other equipment to ensure the setup is correct and data can be transmitted and received via the ANT-1776ZB.

For further help and advice please contact Antrica on:
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Document info

Version	date	author	Comments
0.1	7-Sep-23	David M	Initial draft with f/w v1.0.9.0

1. Setup

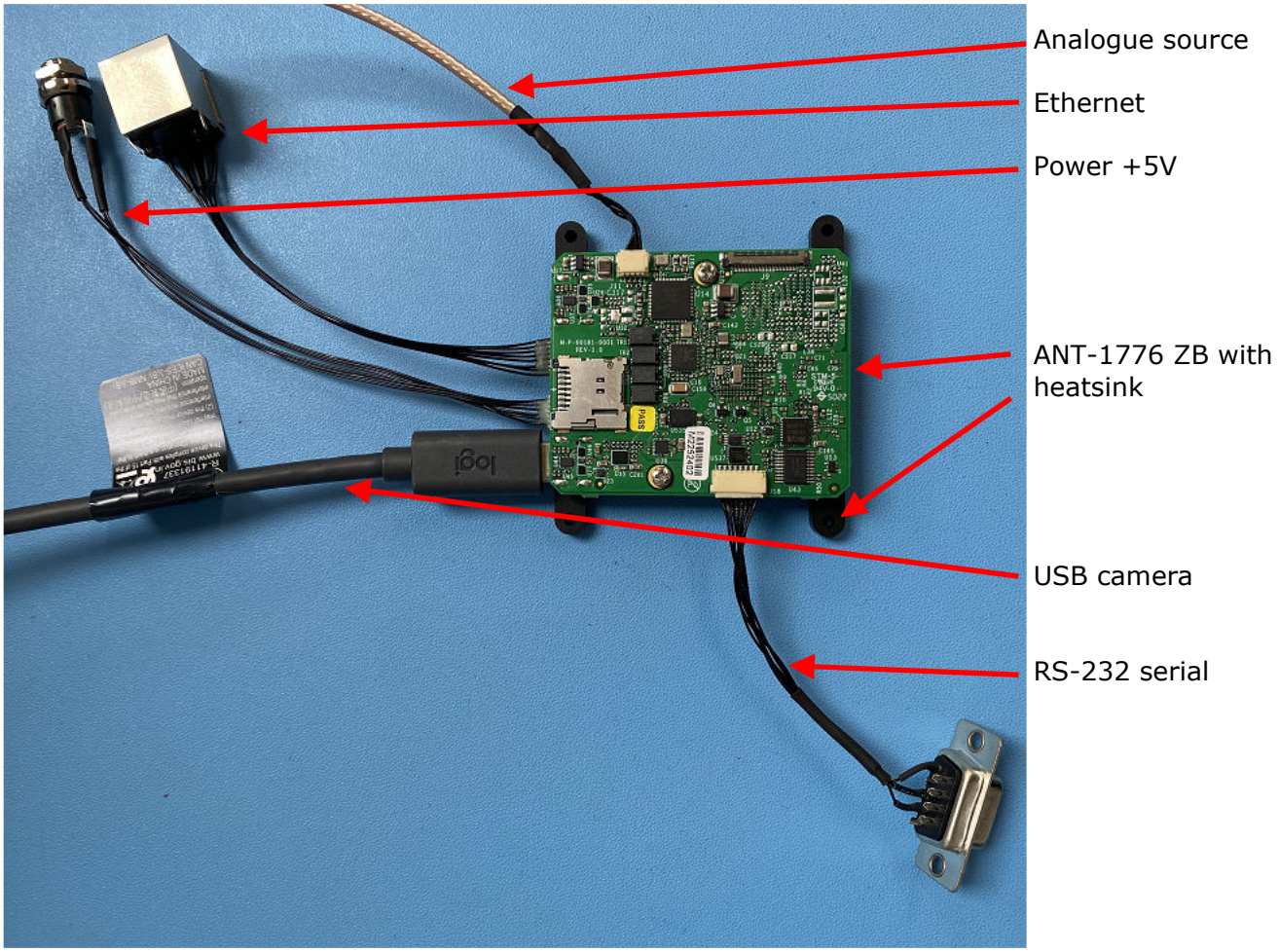
The program Tera Term is being used to access the RS-232 port on the PC. Tera Term is also being used to access the TCP over IP connection.

Tera Term can be downloaded for free from https://ttssh2.osdn.jp/index.html.en . In this example Tera Term version 4.91 is being used.

1.1. Connections to ANT-1776ZB

In this enable other functionality is also used, but may be not documented.

Figure 1 : ANT-1776 ZB cable connections – ref IMG_4850.JPG



1.2. ANT-1776 ZB webpage

Access the webpage (default IP address is 192.168.0.30) using any modern browser, i.e., Chrome, Microsoft Edge, Firefox.

Click the "SETTINGS" from the top menu, then "Data" from the side menu, this will access the "UART to Ethernet" settings, see Figure 2.

Change the setting as shown in Figure 2 and Table 1 and then click "Save".

Figure 2 : webpage "serial port" setup

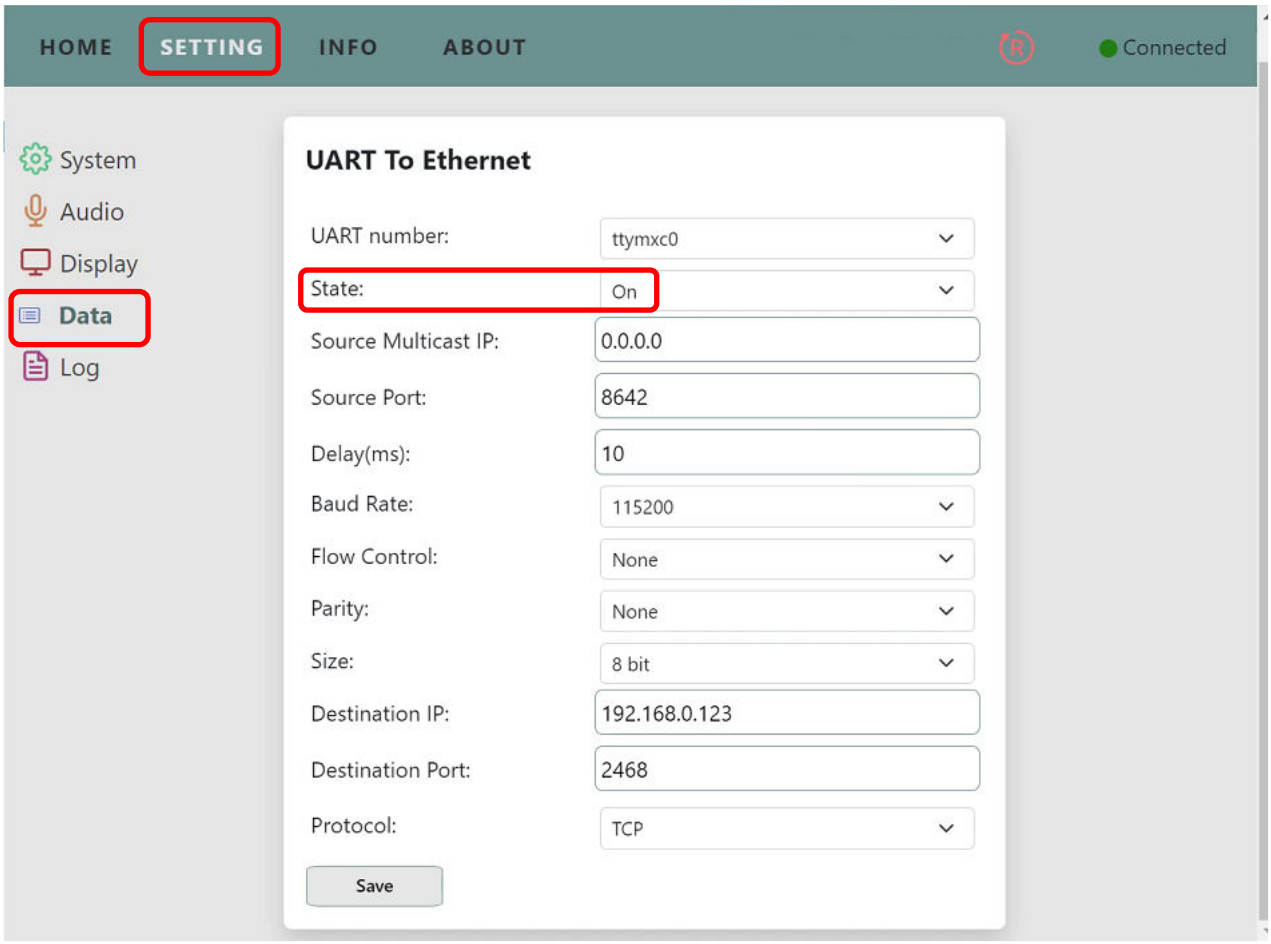


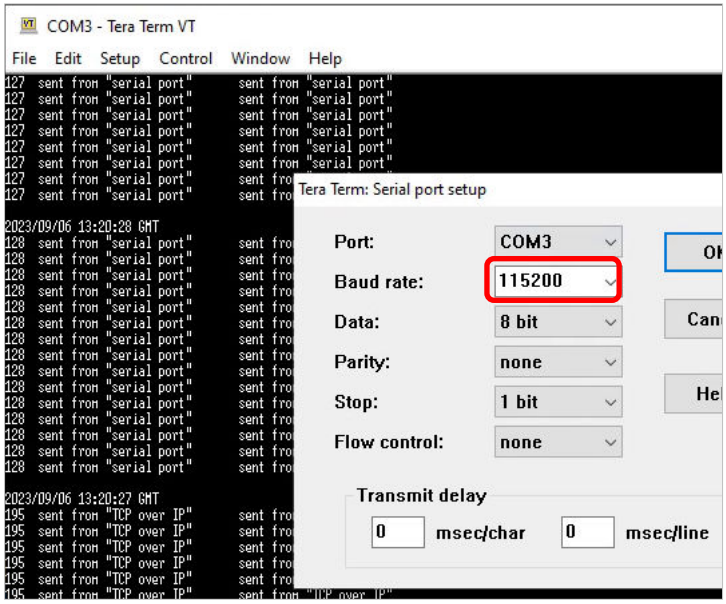
Table 1 : Settings required for example setup

Parameter	Settings	Comments
State	On	
Source port	8642	Port that ANT-1776 will accept data - example
Baud rate	115200	Baud rate used in this example
Destination IP	192.168.0.123	IP address of PC running the TCP over IP program
Destination Port	2468	Port data is transmitted away from ANT-1776 - example
Protocol	TCP	As example is using a TCP over IP program

1.3. Physical serial port connected to ANT-1776

These are the settings for the physical RS-232 port on the PC. As can be seen in Figure 3, the Buard Rate matches that show in Figure 2.

Figure 3 : PC RS-232 port settings



1.4. TCP over IP connection

This is to enable the TCP over IP data to the ANT-1776ZB. In Tera Term -> File -> New connection, and the Pop-up windows, as shown in Figure 4 will be seen. For this example, the values shown in Figure 4 and Table 2 are used.

Figure 4 : TCP over IP setting

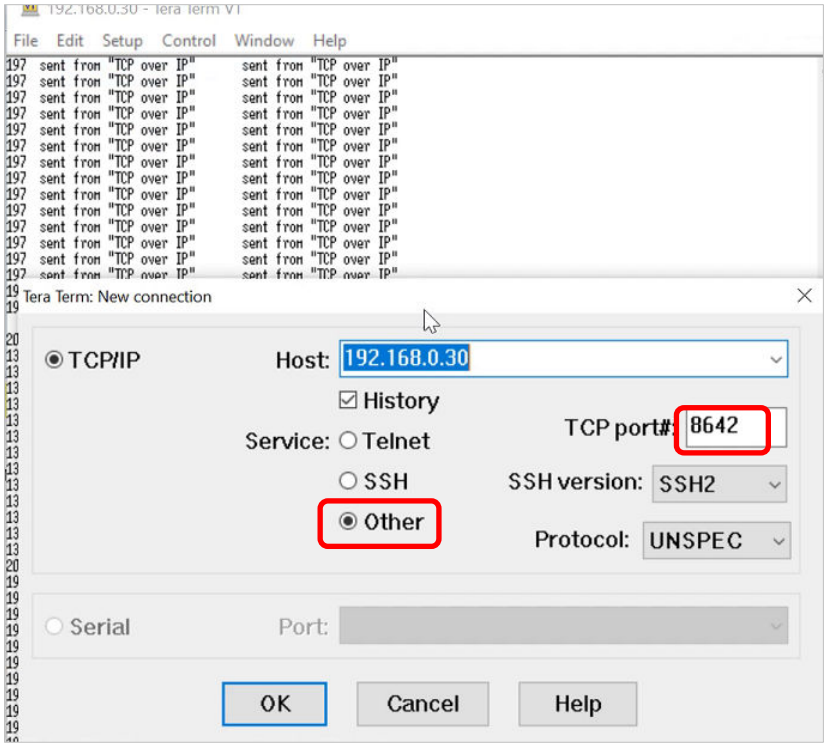


Table 2 : TCP over IP settings

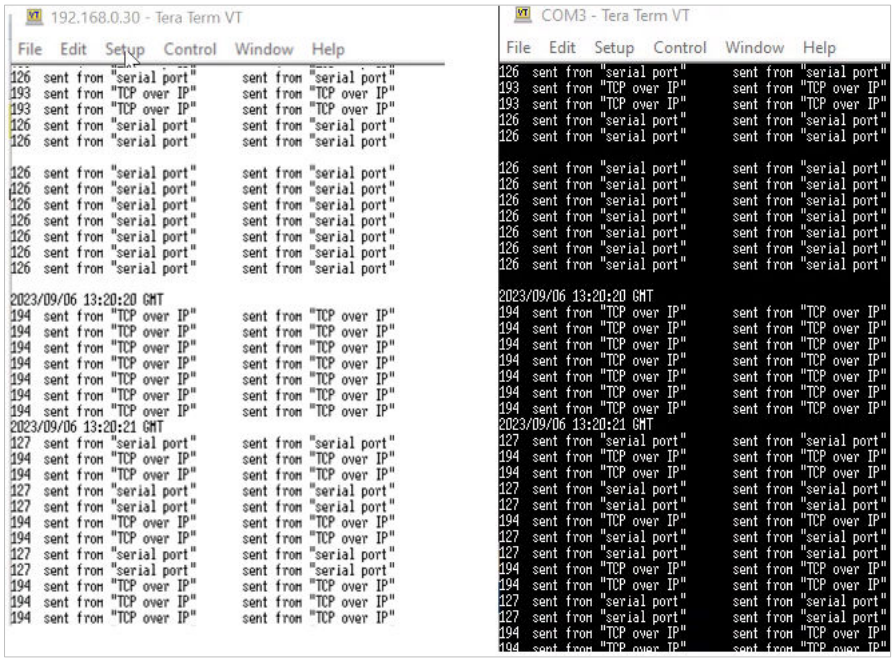
Parameter	Value	Comment
Host	192.168.0.30	IP address of the ANT-1776ZB
Service	Other	
TCP port#	8642	this is to match the value "Destination Port" shown in Figure 2

2. Demonstration using example settings

To demonstrate the connection is established and bi-directional 2 simple scripts are used. One run from the TCP over IP Tera Term with the text `<count> sent from "TCP over IP"  sent from "TCP over IP"` and another script run from the RS-232 port Tera Term with the text `<count> sent from "serial com port"  sent from "serial com port".`

As shown in Figure 5 the TCP over IP (on the left) is shown next to the RS-232 (on the right) and the data can be seen on both terminals. The ***sent from "serial com port"*** is transmitted from the "right side" and the ***sent from "TCP over IP"*** is transmitted from the left side.

Figure 5 : Tera Term TCP over IP and RS-232



To enable Tera Term to display this text correctly and to display on the local terminal, the terminal settings for each Tera Term were configured as shown in Figure 6.

Figure 6 : Tera Term Terminal settings