

ANDROID APPLICATION: LAIRD TOOLKIT (SERIAL FUNCTIONALITY)

Application Note

v1.1

INTRODUCTION

The Laird Toolkit Serial functionality allows text data to be sent from an Android device to a Laird BT900, Bluetooth v4.0 dual mode (BT and BLE) module and back again. This application can be used to remotely control the device through the use of AT commands. This application can run when the BT900 module is in VSP command mode.

REQUIREMENTS

- PC running Windows XP or later
- UWTerminal 7.0 or later
- DVK-BT900 running firmware v9.1.2.0 or later
- USB A to mini B cable
- Android device running android 4.3 or higher with BT 4.0
- Internet connection on Android device (to download the Laird Toolkit application from the PlayStore)
- DVK_BT900 User Guide
- FTDI Drivers <http://www.ftdichip.com/Drivers/VCP.htm> (for some versions of Windows)

DEVELOPMENT KIT SETUP

To setup the BT900 development kit, follow these steps:

1. Configure the BT900 development kit to the following settings:
 - DC/USB power source switch (SW4) – USB
 - 1.8V/3.3V switch (CON17) – 3.3V

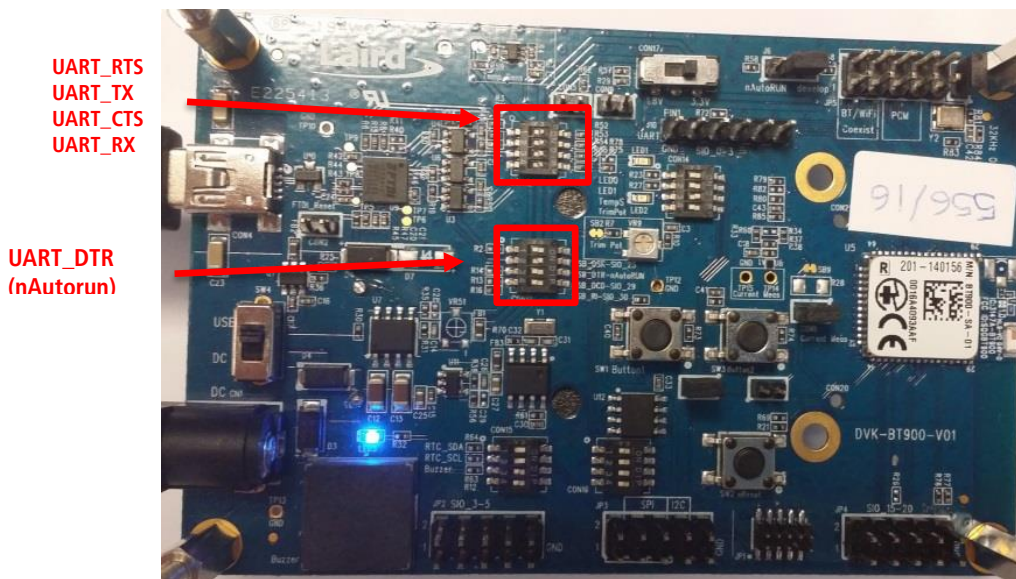


Figure 1: UART_TX/RX/CTS/RTS/DTR (nAutorun) is switched ON all other switched OFF

Ensure that the module is in VSP mode. See [Figure 2](#) and [Figure 3](#).

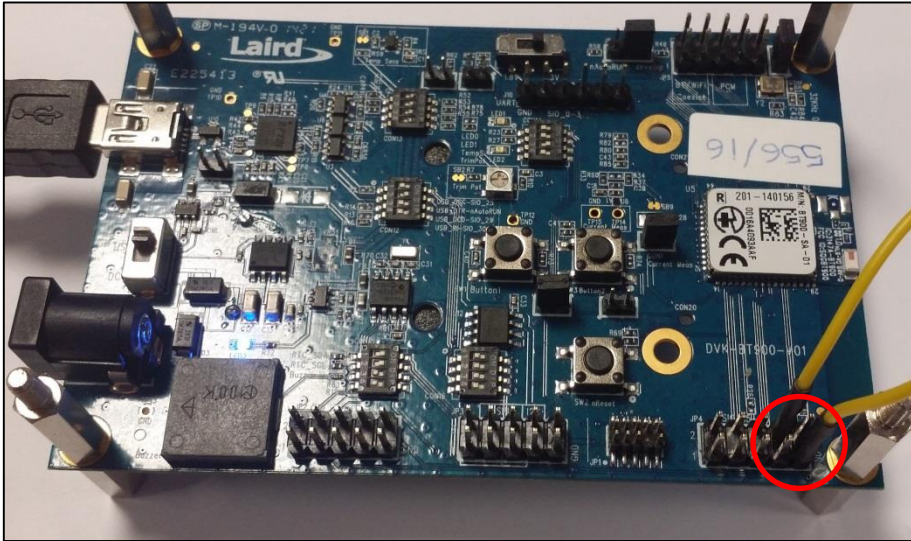


Figure 2: BT900 in VSP mode and jumper attached (front) Pins that the cable is attached: Ground and Pin 19

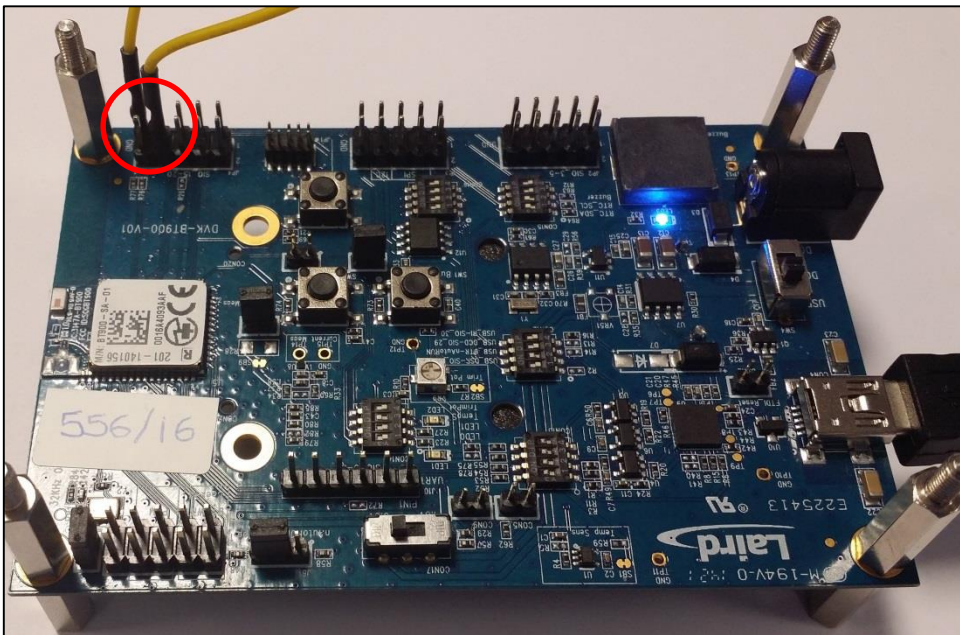


Figure 3: BT900 in VSP mode and jumper attached (back)

2. Connect one end of the mini USB cable to CON4 on the development board and the other end of the cable to your PC.
3. Follow the on-screen prompts. Depending on your version of Windows, you may need to install the FTDI drivers.
When complete, the development board appears in the Windows device manager as a *USB Serial Port*. Make a note of the COM port number to use in step 5.
4. Extract UWTerminal to a selected folder and run the program (no installation is required).
5. Configure the COM port with the port number seen in device manager with the following settings:

- Baudrate – 115200 (v9.1.2.0)
- Parity – None
- Stop Bits – 1
- Data Bits – 8
- Handshaking – CTS/RTS

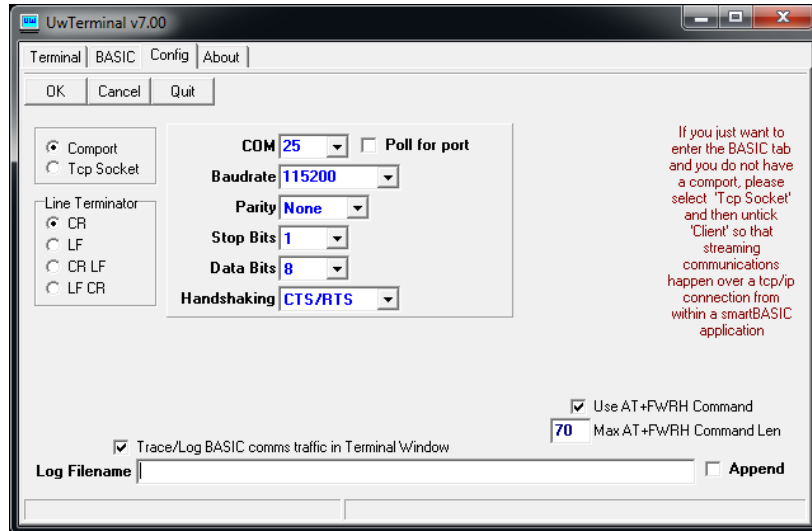


Figure 4: Comms Settings

6. Confirm you can communicate with the development board by typing `at` followed by a <carriage return>. The module responds with `00`.

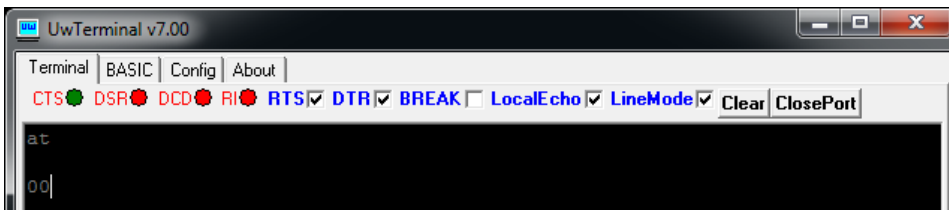


Figure 5: Comms OK

USING THE SERIAL FUNCTIONALITY

1. Install the Laird Toolkit from the Google Play Store and ensure Bluetooth is enabled in the device settings. The application download is labeled Laird Toolkit

Note: The Laird Toolkit is also valid for the following Laird BT4.0+LE module applications: Heart Rate, Blood Pressure, Proximity, Virtual Serial Port, Over-the-Air Downloads, and Batch Command Manager.

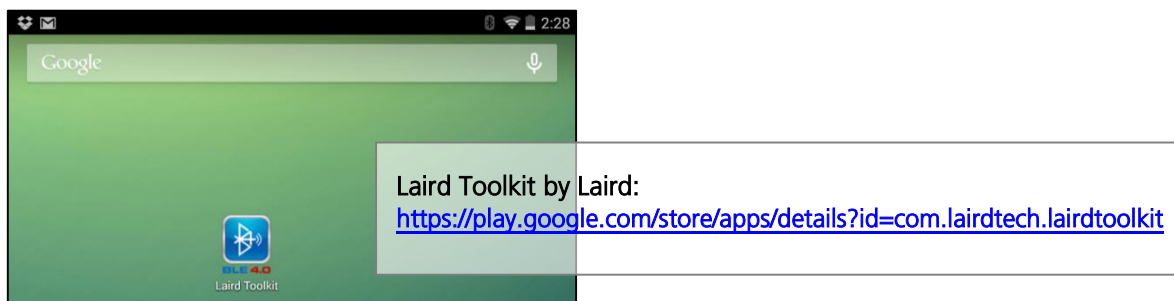


Figure 6: Laird Toolkit app installed

2. Once installed, run the Laird Toolkit application on your Android device.

Android Application: BT900 Serial

Application Note

Do the following:

- Select **Serial** (Figure 8).
- Click **Scan** (Figure 7).
- Select a device that currently runs on VSP (Figure 9).

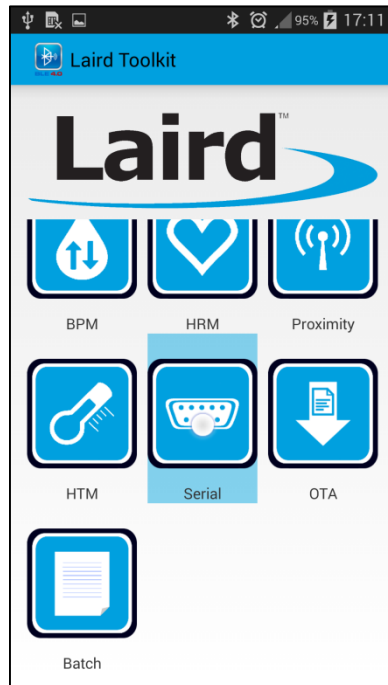


Figure 8: Select Serial

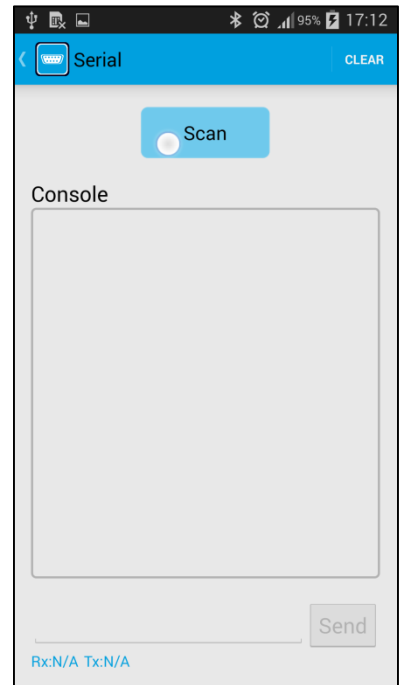


Figure 7: Click Scan

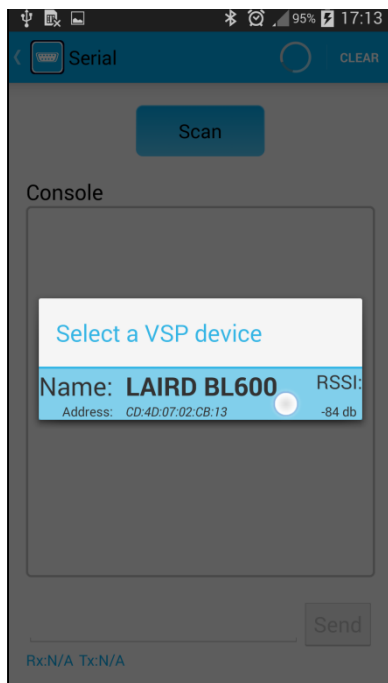


Figure 9: Select a device that currently runs on VSP

Android Application: BT900 Serial

Application Note

- d. Type the AT command that you want to send to the remote device.
- e. Click **Send**.

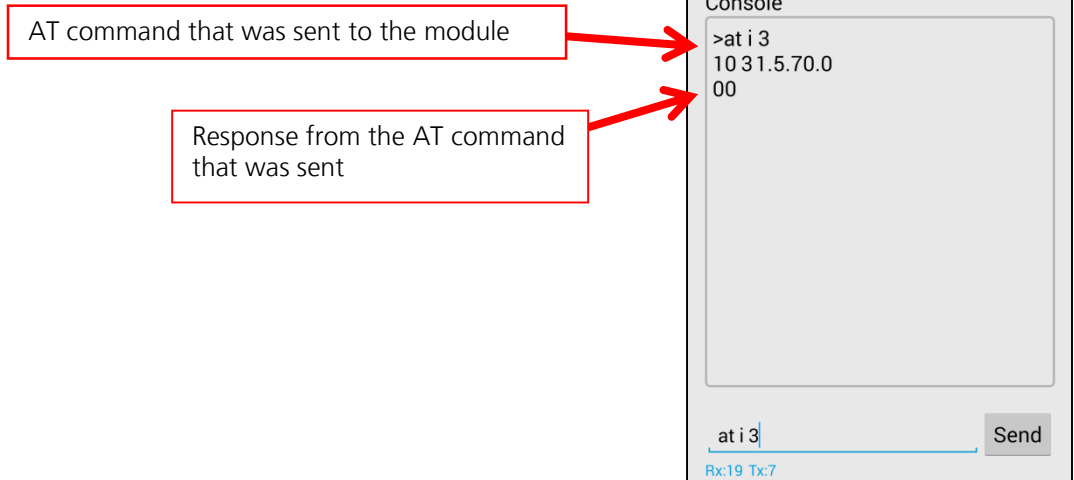


Figure 10: Type the AT command and click Send

REVISION HISTORY

Revision	Date	Description	Approved By
1.0	26 Nov 2014	Initial Release	Jonathan Kaye
1.1	22 Jan 2015	Updated links and images	Sue White