Triarchy Technologies CORP.

Vincit Omnia Veritas

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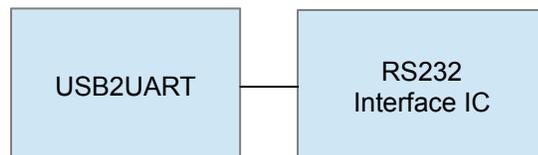## Setup for USB2RS232 TSA USB Adapter

1: Introduction:

The USB2RS232 is an adaptor that allows TSA USB mini spectrum analyzer to be control by embedden system.

The TSA USB mini spectrum will connect to the USB2RS232, USB2RS232 will connect to embedden system
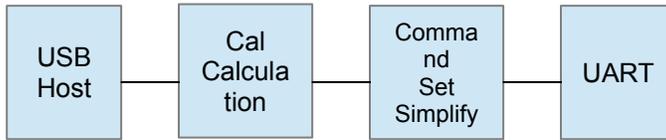
2: USB2RS232 configuration:

The USB2RS232 consist of two sections: USB2UART and RS232 interface IC .

USB2UART is implemented by MCU which is K20 from Freescale. USB2UART will implement four functions:

- USB host, setup communicates with TSA USB mini spectrum analyzer.

- Implement the calibration calculation and store the calibration the file.

- Simplify the command set; end user will only be using two commands to control the TSA product: Start and Stop. Please check the document "Interface Control Document for TSA5G35 USB2UART Adapter" for detail command set.

- Setup COM port (UART) as new interface for end customer to use.

So that USB2UART is real converter which is converting from USB port to UART port.

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USB Host	Cal Calculation	Command Set Simplify	UART

RS232 interface IC will convert UART TTL level into RS232 level. This IC can be bypass, so that USB2RS232 will be only USB2UART.
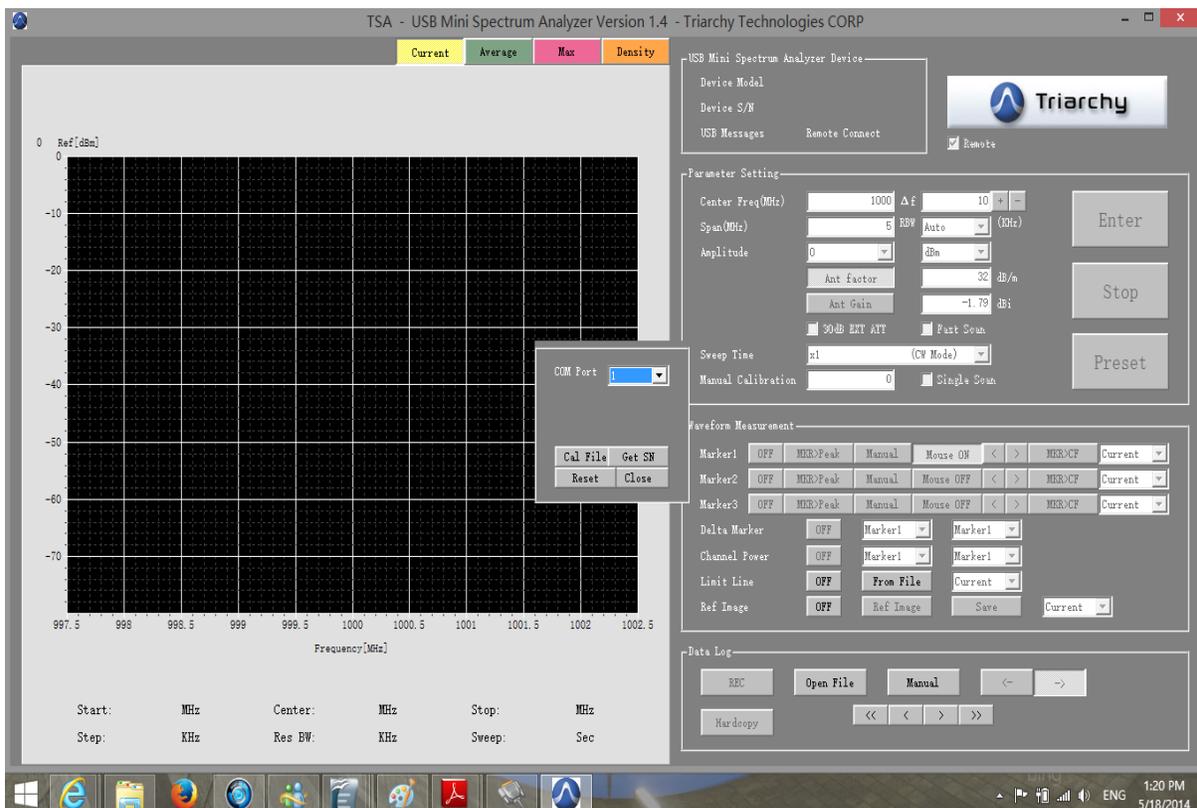
3: USB2RS232 test.

USB2RS232 will use PC to test, PC will install the TSA v1.4 program.

In the real system, embedden system will replace the PC to work. PC is only use for demo purpose.

Plug USB2RS232 into desktop PC which have RS232 port, it COM is 1.

Turn on the TSA v1.4 program, tick the local block, it change to remote.

The remote setup window will be pop up.

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Select the COM port is 1 in the demo.

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Click the Cal File; if the USB2RS232 is first time to use, you need to download the calibration file from your PC into the USB2RS232 adapter. But you need make sure your PC has already installed the calibration file which is matching with the dongle on the USB2RS232.

If your PC have calibration file in the TSA program is not match with dongle which you want to test, it may cause errors.

You may plug TSA dongle device into PC first, make sure it is working well, and then plug dongle in the USB2RS232 adapter.

After click the Cal File, the calibration file on your PC will transfer into the USB2RS232 adapter.
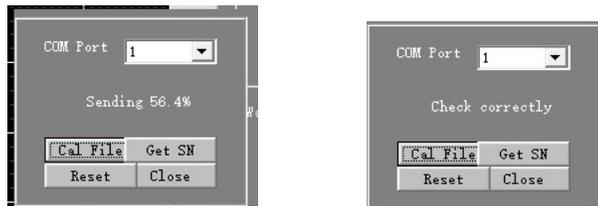
After transfer the calibration file, you can click the Get SN. It means to setup connection with far end TSA dongle. If the communication is successful, the TSA program will shown Device Model TSA6G1 name and Remote connect
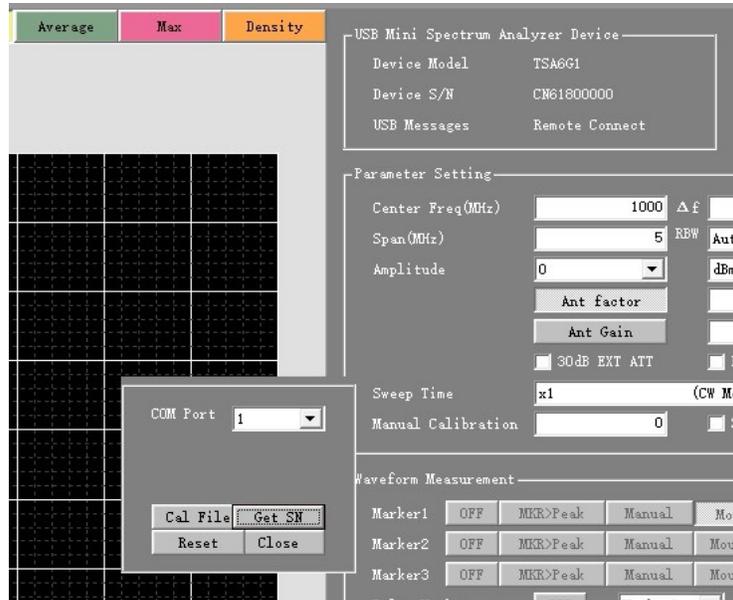
Then click the close to turn off the remote setup window.

You can input parameter of frequency, scan …. click Enter to start the measurement.

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