USB Driver:

In order for Windows to recognize the device the USB driver must first be installed, after which it appears as an additional COM port on the computer.

1. Copy the file “cdc_NTXPV764.inf” from the supplied CD to the hard drive.
2. Plug the unit into a free USB port. When the hardware installation wizard asks for the driver location, browse to the “cdc_NTXPVista.inf” file on the hard drive.
3. After the driver has been installed right click “my computer” and select “properties”. In the properties window select the “hardware” tab. Click on “device manager” and expand the “Ports (COM & LPT)” item. Locate the “Spectronix, Inc.” entry and note the assigned COM number, (ie “COM4”). This is the COM port that the software will use to communicate with the Quad Cell Viewer.

Note, on some operating systems such as Window 7, manual USB driver installation may be necessary. If the hardware installation wizard fails, go to “My Computer” > “Properties” > “Hardware” > “Device Manager”, and find the “Spectronix” or “SERIAL DEMO” entry under “Other Devices” and select “Update Driver”. At this point you will be able to browse to the location of the driver.

USB Commands:

The device uses ASCII data to communicate with a host computer; the tables below list the individual commands, parameters, and responses from the unit.

Notes:

1. All communication is initiated by the host.
2. Text is not case sensitive.
3. A space should be inserted between the command and any parameters.
4. All commands should be terminated with <CR>, <LF>, or both.
5. Responses from the device are framed using a binary 0x00 character (start) and terminated with 0x0D0AFF (<CR><LF>0xFF). These framing bytes are not shown in the tables below.
6. Response parameters are variable width, may contain white spaces, and are separated by commas.
7. For the descriptions below, values inside quotations (“”) are literal ASCII values, text inside brackets ([]) are variable ASCII values, and values inside <> are binary values.

Example Command / Response:

Command to turn the unit power on:

Command: **`SetPower 1 0<CR><LF>`**

Get Unit Information	
Command:	Description:
“?”	

Response:	Description:
"?"	Echo command
"100526A"	Unit name (fixed)
[major.minor]	Firmware version
Notes:	

Get operating status	
Command:	Description:
"status"	
Response:	Description:
"status"	Echo command
[unit power]	Per the SetPower command
[Temperature]	Unit temperature ADC Val
[op mode]	Per the SetMode command
[reference]	Per the SetRef command
[source]	Per the SetSource command
[RF on]	Per the RFOn command
[Chan# TSSI]	Chan[0:3] TSSI ADC Val
[Chan# Freq]	Chan[0:3] actual frequency (KHz)
[Chan# Phase]	Chan[0:3] phase (°) – ignore if not supported by mode
[Chan# amp]	Chan[0:3] synthesizer amplitude per SetAmp command
[Chan# gain]	Chan[0:3] RF gain per SetGain command
Notes:	

Turns the unit power on/off	
Command:	Description:
"SetPower"	
[state]	0=off, 1=on
Response:	Description:
Notes: If the there is no AC supply the unit will remain off. If the AC supply is removed while the unit is running, the power will be latched off and the SetPower command will need to be sent.	

Set the operating mode	
Command:	Description:
"SetMode"	
[mode]	W= wideband (no phase adjust), I= integer-N mode with phase adjust
Response:	Description:

Turn the RF on/off	
Command:	Description:
"RFOn"	
[state]	0=off, 1=on
Response:	Description:
Notes:	

Set the output RF amplitude / channel gain in 0.5dB steps	
Command:	Description:
"SetGain"	
[channel no]	0:3
[gain]	0:63 (each step is 0.5dB)
Response:	Description:
Notes: This is a relative setting and not calibrated. The value effects both the internal and external sources.	

Set the synthesizer RF amplitude in 3dB steps	
Command:	Description:
"SetAmp"	
[channel no]	0:3
[amplitude]	0= -4dBm, 1= -1dB, 2= +2dBm, 3= +5dBm
Response:	Description:

Notes: This should be normally kept at +5dBm, but can be reduced as needed for small signals. It is recommended to use the SetGain command to set the output amplitude.	

Set the 10MHz reference source	
Command:	Description:
"SetRef"	
[reference]	I= internal, E= external
Response:	Description:
Notes:	

Set the RF input source	
Command:	Description:
"SetSource"	
[source]	I= internal, E= external
Response:	Description:
Notes:	

Set the RF synthesizer frequency	
Command:	Description:
"SetFreq"	
[channel no]	0:3
[frequency]	Frequency in KHz (integer depending on the mode)
Response:	Description:
Notes: The synthesizer will be tuned to the closest frequency. The tuning resolution depends on the mode.	

Set the RF synthesizer frequency	
Command:	Description:
"SetPhase"	

[channel no]	0:3
[phase]	Synthesizer output phase (0:359°)
Response:	Description:
Notes: This command is only supported in modes that allow phase adjustment.	