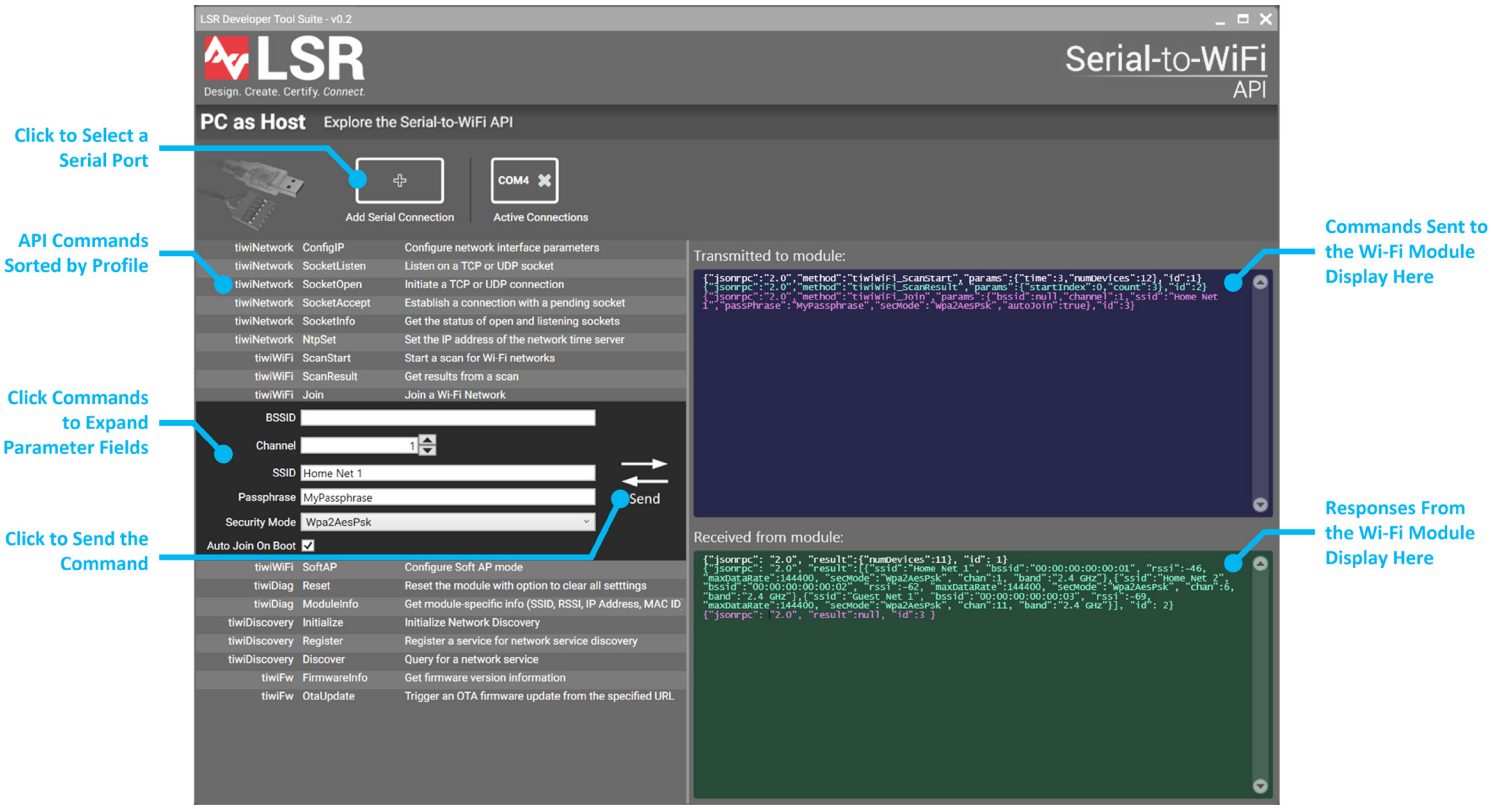
Serial-to-WiFi

PC as Host Tool - Quick Start Guide



LSR's Serial-to-WiFi development kit features the TiWi-C-W. The Serial-to-WiFi firmware for TiWi-C-W is controlled by a host MCU (or in this case a PC with a Serial-to-WiFi adapter) by way of ASCII JSON-RPC commands. These commands are human readable and make for easy troubleshooting during development. Once the module is configured and a socket is open to a remote host, the module switches into "Pass-thru Mode" and allows the host to directly tunnel bytes to/from the remote host. When the connection terminates, the module automatically re-enters JSON-RPC mode. Entry and exit from JSON-RPC command mode is indicated to the host MCU by the state of a handshake pin.

The LSR PC as Host tool provides a convenient way for engineers to learn the Serial-to-WiFi API commands available in the TiWi-C-W Serial-to-Wifi firmware. API commands are listed in an expandable table on the left, each providing the fields necessary to instruct the Wi-Fi module to perform a particular action such as scanning for Wi-Fi networks, joining a Wi-Fi network, opening a socket connection, etc.

To get started, click the + button to add a new serial port connection. Select the lower of the two COM ports associated with the USB to Serial adapter attached to the dev kit, and specify the baud rate as 115200 (default for Serial-to-WiFi firmware). Once connected, you can click a command to expand the view and type in parameters. Click "Send" to send the command. When sending the command, the JSON-RPC text being sent to the Wi-Fi module will appear in the blue terminal window. If the module is connected, its response will appear shortly thereafter in the green terminal window. You can use this approach to learn the available Wi-Fi commands and exercise the capabilities of the Wi-Fi module.

Once you are comfortable with the commands for controlling the Wi-Fi module, you can connect your own host MCU to the host interface (UART1) on the dev kit and begin utilizing Wi-Fi in your own designs! An easy way to get started is to copy and paste the JSON-RPC commands from the PC as Host tool right into your host MCU code.