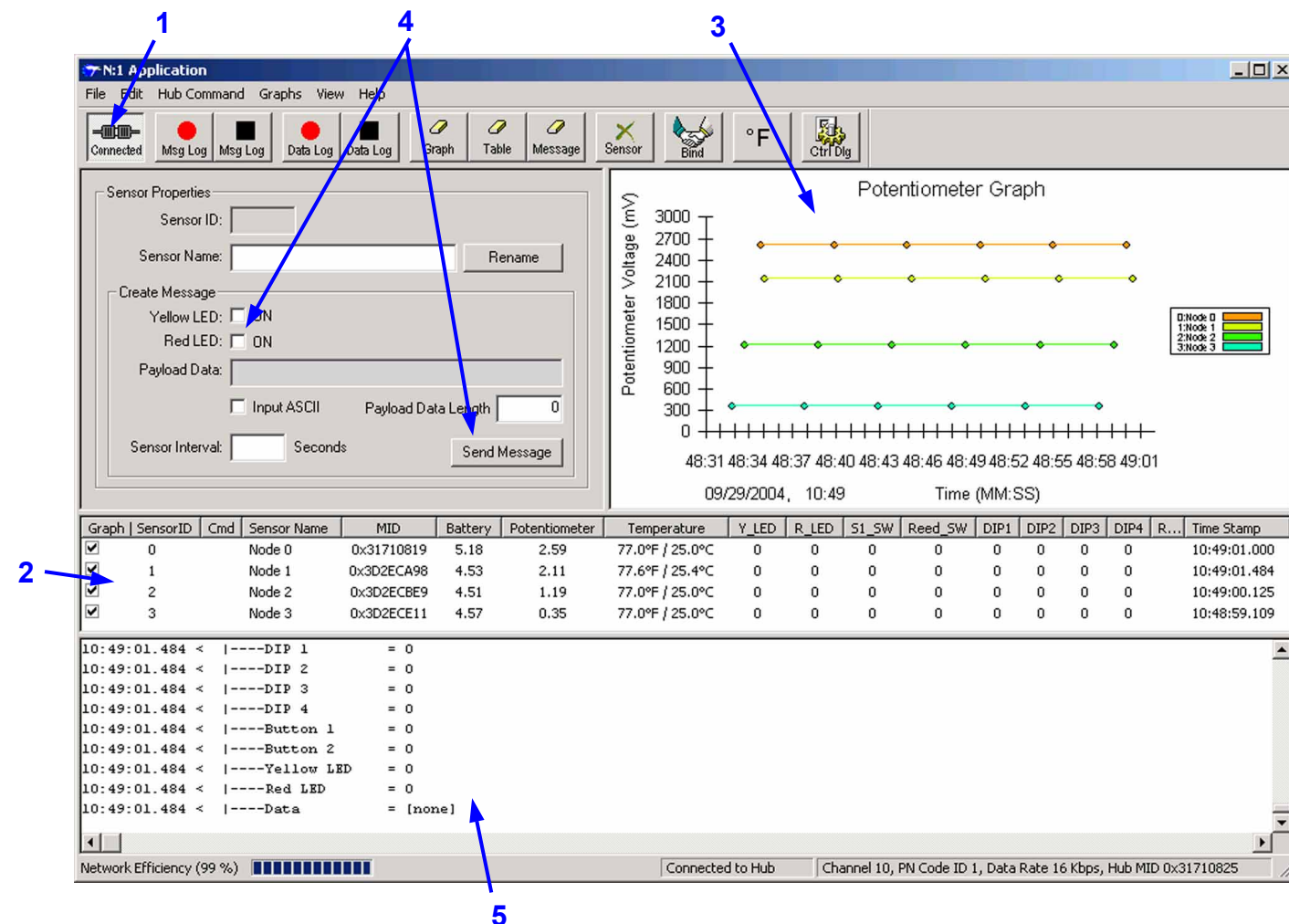


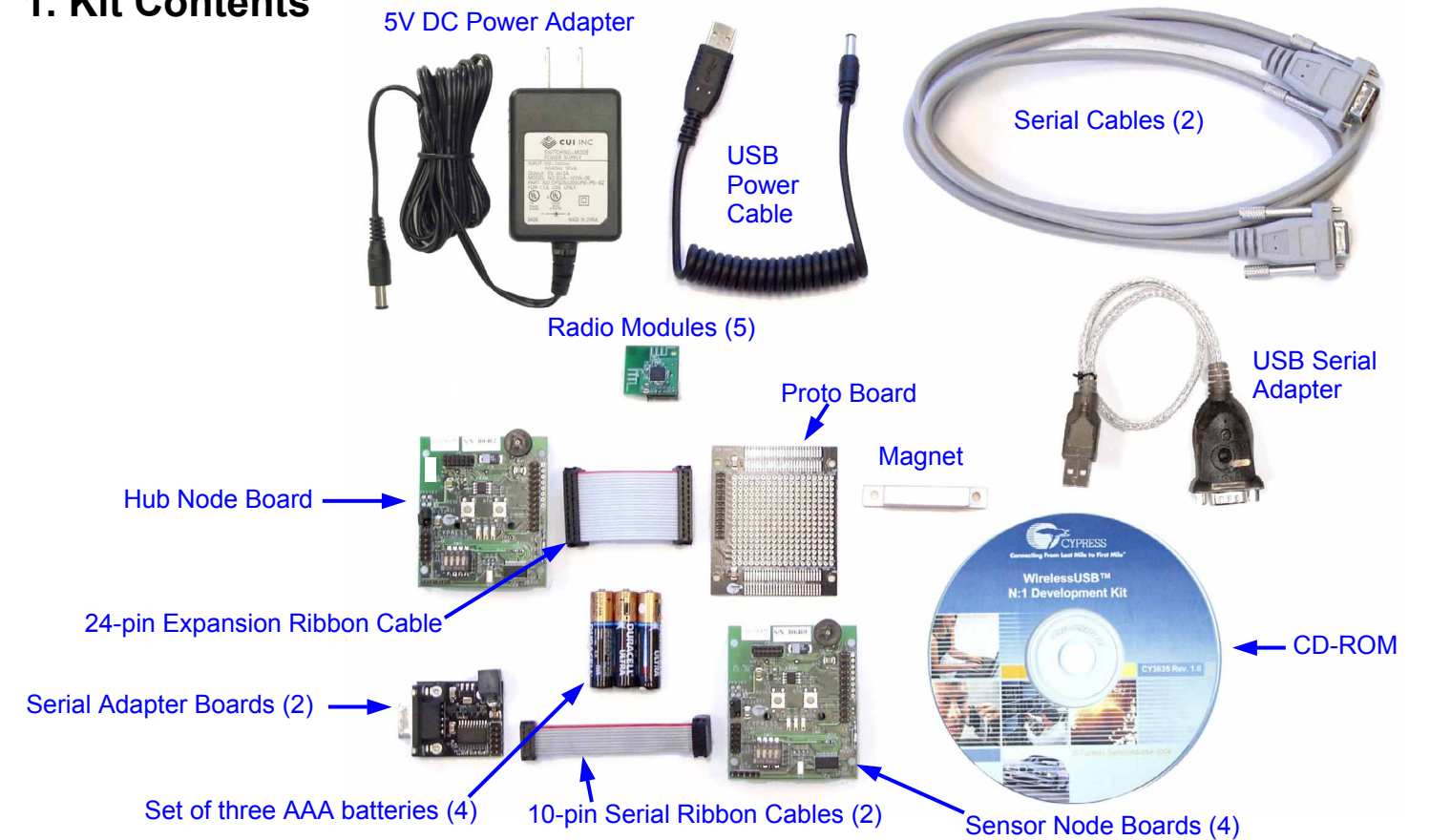
## 5. Software Operation

- After selecting the COM port, the software will automatically attempt to initiate communication with the Hub.
  - If the communication is successful, the Connect button will change to Connected.
- If the sensors are properly configured and powered, then they should appear in the *Sensor Status Table*.
  - The status of all of the inputs for each sensor board are shown in the status table
  - Note: The Hub and Sensors are configured to automatically establish a network out of the box without user intervention. After the network has been established, swapping radios between node boards will cause the Sensor to be unbound (not part of the network). To get the Sensor back on the network, an Auto Bind or Seeded Bind will need to be performed. Please refer to the *N:1 DVK User's Guide* for more information.
- Graphing of the potentiometer will also be initiated automatically.
  - Try rotating the potentiometer on any of the 4 sensors boards to observe the resulting graph
  - The potentiometer voltage is only updated during the periodic report interval, or sooner, if the user initiates an asynchronous event by pressing the *User Button* or by activating the *Magnetic Reed Switch*.
- Try activating the Red LED on a *Sensor Node Board*
  - Click on the desired sensor ID in the status table to highlight the row
  - Then click the Red LED checkbox in the Sensor Properties area of the window
  - Then click the Send Command button
  - The Red LED for the selected sensor will illuminate the next time that the sensor communicates with the Hub
- For debugging purposes, the serial communication between the PC Host and the Hub are shown in the message logging window



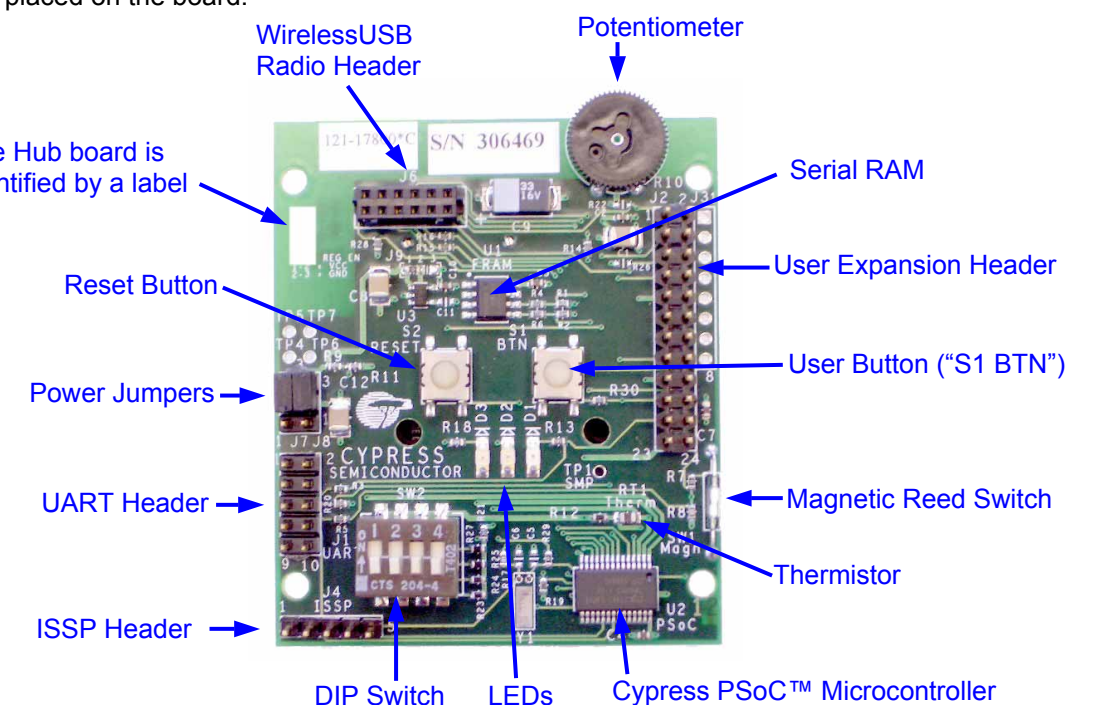
## WirelessUSB™ N:1 DVK Quick Start Guide

### 1. Kit Contents



### 2. Node Board Components

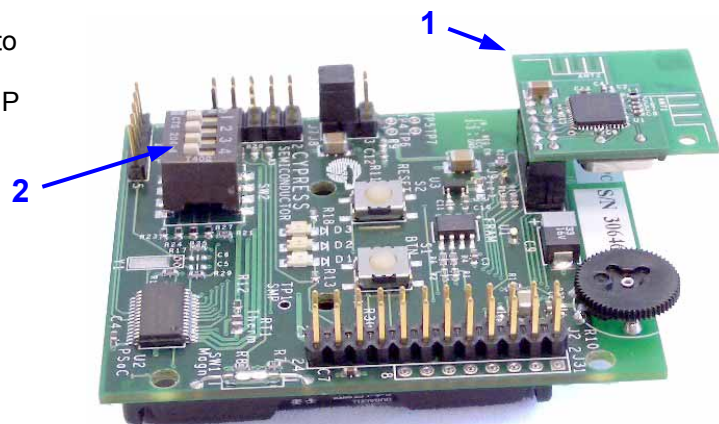
The following diagram identifies the main components of each Node Board. The *Hub Node Board* and *Sensor Node Board* are physically identical. They contain different firmware programs, and the Hub can be identified by a "Hub" label placed on the board.





3. Hardware Assembly

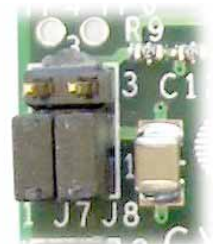
- 1. Install a WirelessUSB Radio Module into each of the 5 Node Boards
- 2. For default operation, make sure the DIP switches are all off



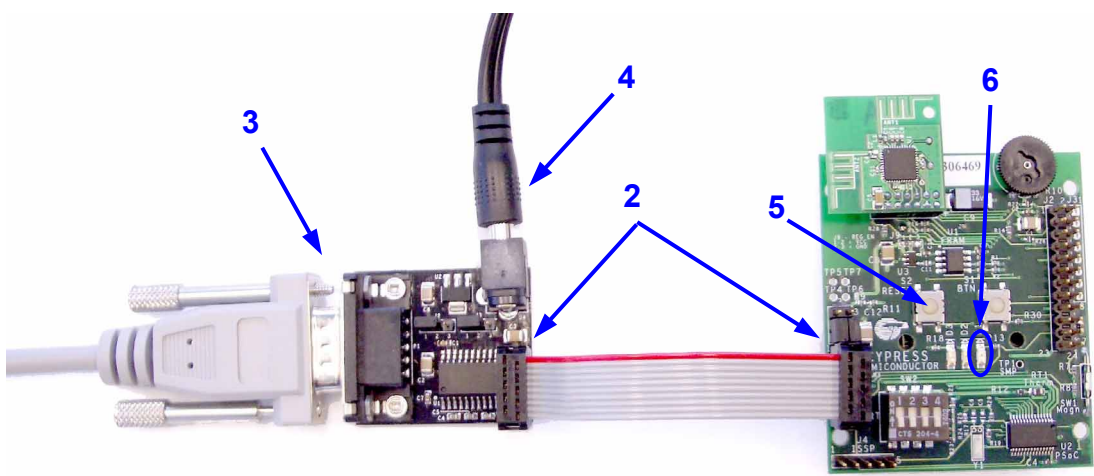
3A. Hub Setup

- 1. Ensure the Power Jumpers for the Hub Node Board are in the following positions:

Hub:  
J7: position 1-2  
J8: position 1-2



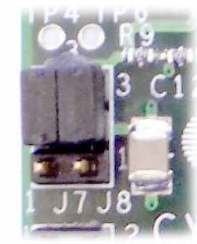
- 2. Connect the 10-pin Serial Ribbon Cable from J1 of the Serial Adapter Board to J1 of the Hub Node Board observing pin1 polarity.
- 3. Connect the Serial Cable between P1 of the Serial Adapter Board and a free PC COM port.
- 4. Power up the Hub Node Board by plugging the 5V DC Power Adapter into J4 of the Serial Adapter Board and into an available power outlet.
- 5. Press the Reset button on the Hub Node Board.
- 6. The Green LED (D1) should now be flashing, indicating that the Hub is operational.



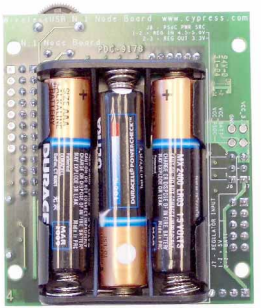
3B. Sensor Setup

- 1. Ensure the Power Jumpers for the 4 Sensor Node Boards are in the following positions:

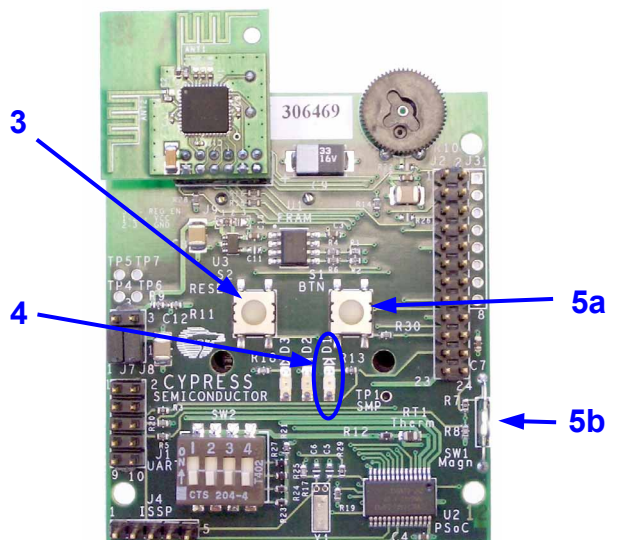
Sensor:  
J7: position 2-3  
J8: position 2-3



- 2. Power up the 4 Sensor Node Boards by installing the AAA batteries into the battery holders on the back of each sensor



- 3. Press the Reset button on each Sensor Node Board.
- 4. The Green LED (D1) will flash every time the PSoc wakes up to transmit a packet.
  - a. By default, each sensor will periodically transmit a packet once every 5 seconds.
- 5. There are two ways to initiate an asynchronous packet transfer
  - a. Pressing the User Button will initiate a sensor report
  - b. Passing the magnet within 3/4" of the Magnetic Reed Switch will also initiate a sensor report.



4. Software Installation and Configuration

- 1. Insert the WirelessUSB N:1 DVK CD-ROM into your PC's CD drive and launch the CD installer:
  - D:\Install WirelessUSB N-to-1 DVK.exe
- 2. Follow the on-screen instructions to complete the CD installation.
- 3. Launch the "WirelessUSB N-to-1" software application from the desktop shortcut created by the installer.
  - The application can also be found directly on the CD at D:\Software\Nto1\Nto1\Release\Nto1.exe
- 4. Go to the File menu and select Preferences -> Serial Port
- 5. Select the desired COM port from the pull-down menu, select 115200 Baud, and click OK.

