

Project Number : #PP0010

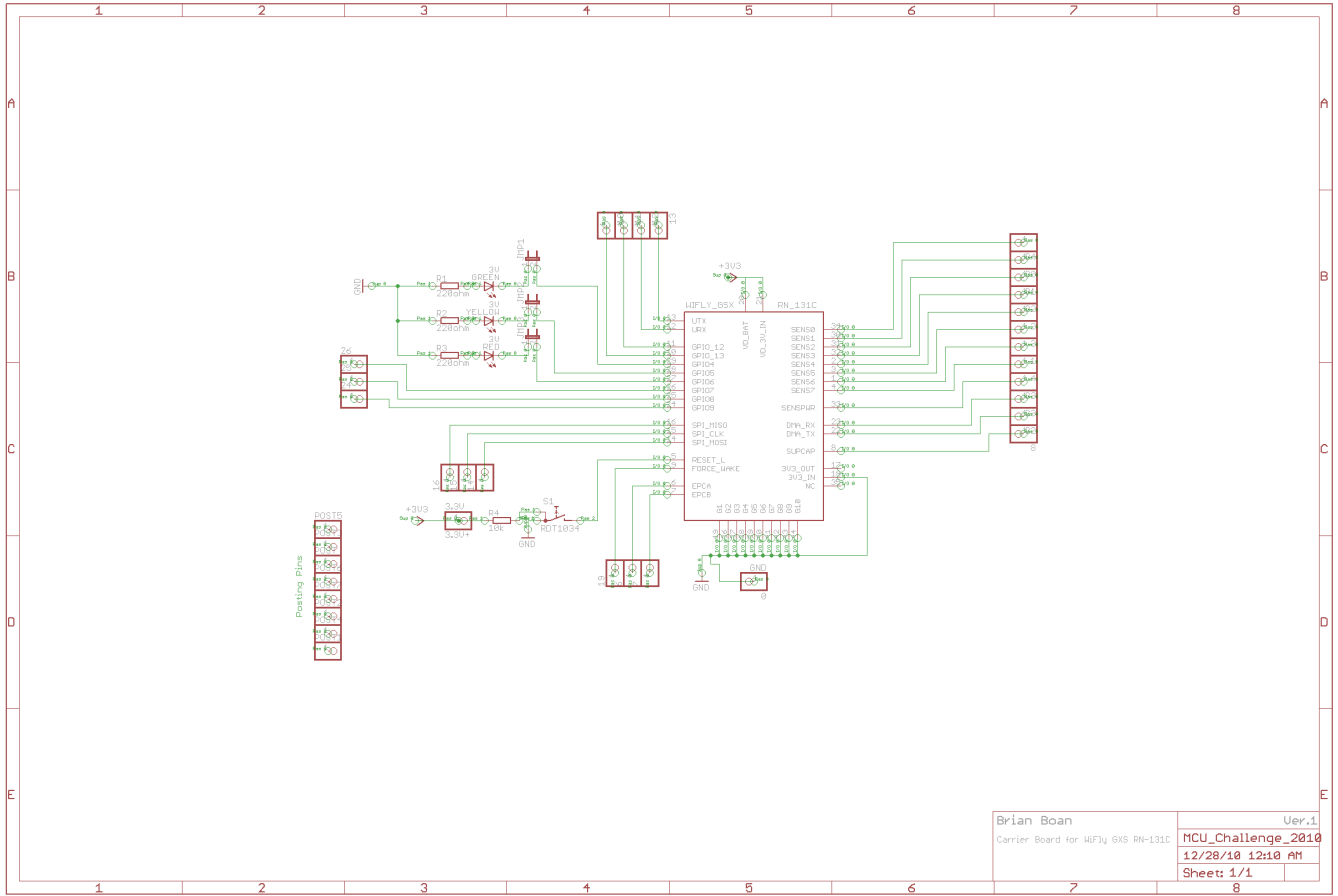
Brian Boan

#### Project Description:

In this MCU Challenge, I would have designed a scanner unit for my sister's business. A modified Cue-Cat scanning module sends ASCII keyboard data to a PS/2 connector connected to the SchmartBoard Propeller module. The Propeller saves the bar code information on a SD-Memory module as a file name whose contents are timestamps of scans delimited by “;” in an Excel compatible (.csv) format. When a wifi enabled laptop wakes up a wireless (WiFly GXS RN-131C) unit in the scanning device, the Propeller transmits the SD stored bar-code files to the laptop for data analysis. A visual cue for customer acknowledgement in the form of a flashing green light will be mounted with variable frequency rates to distinguish between member login and manual updates for new members. Also, if a member's scan is found in memory, the green light flashes and a pleasant audible beep sounds through a peiziospeaker. When a manual member update with a new bar-code is needed, a mounted pushbutton is used. Data communication between the Propeller chip, SD-module and the WiFly unit is made through an UART interface. The scanner runs on a 9V battery.

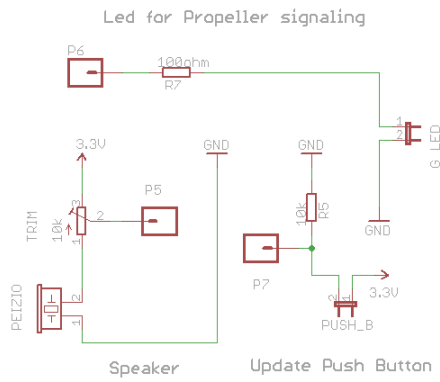
Unfortunately, I did not complete my design. As a novice, the time required for me to learn the specs for the my design was too great in the short time I had. Understanding the WiFly GSX RN-131C module for wifi communication and the Eagle CAD/PCB software took a good deal of time. But, I will complete the project and keep you abreast of my progress, since I believe the scanner project may be of interest to many; and my sister is expecting it for her business. Enclosed are schematics and board layouts for a main interface between the Shmartboard Propeller module, Cue-Cat scanner and the WiFly GSX carrier board I designed. Given the specs for the WiFly unit, I believe it to be an inexpensive wireless solution (at \$42 with a small footprint) for direct interfacing with standard wifi compatible laptops where in its most simplistic (default) configuration requires only four lines for UART connectivity. No initialization is needed- just a UART formatted package over the Rx or Tx lines. With its own TCP/IP stack and UDP configurability, my project for the next Parallax competition will be made simpler and more useful

Schematic:

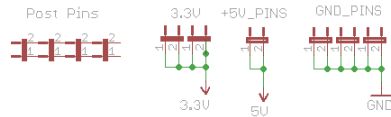
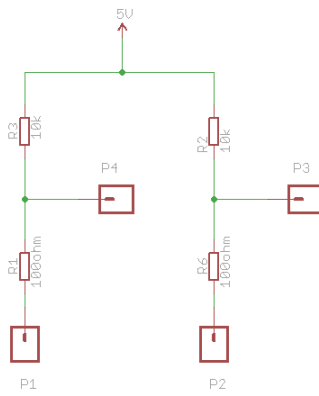


Brian Boan  
 Carrier Board for WIZnet W610 6XS RN-131C

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PS/2 Scanner Interface.



Brian Boan  
Scanner Main board Interconnect

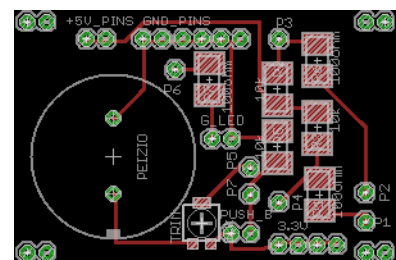
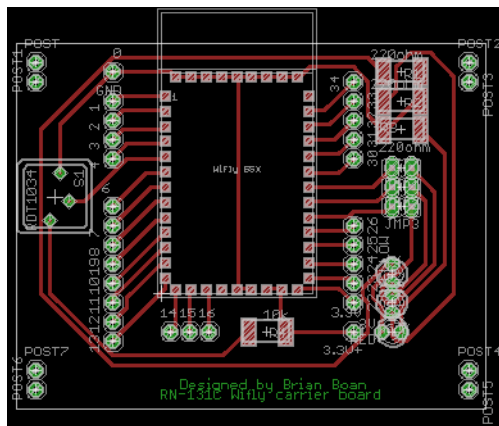
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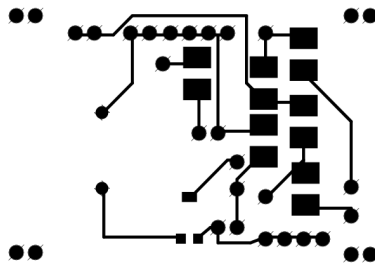
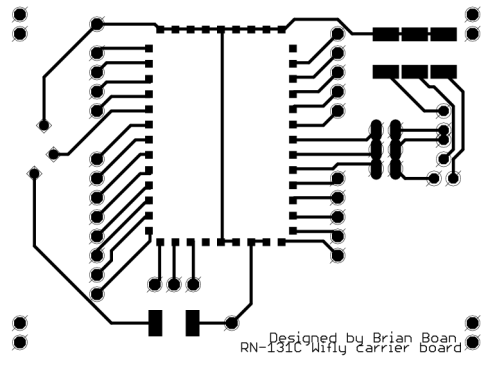
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