

PiFly Applications

These are character drawing of possible applications, not complete schematics.

Component Hole Count: 4
SMT pad Count: 3
Board width: &DimWidthmm mm
Board length: &DimLengthmm mm

Designer: Robert Rau
Parts Cost: &CostTotal
At a quantity of: 1000
Cost of Assembly: &CostTotalAsy
Operating temperature range: -40° C to 85° C &NoteTempWavr
Net List File Name: &FileNetList
Package count component side: 0
Package count solder side: 0
Error Count: 4
Warning Count: 8

Component side area used is &AreaCompUsedmm2 mm², or &AreaCompUsedPct% of &AreaCompmm2 mm²
Solder side area used is &AreaSoldUsedmm2 mm², or &AreaSoldUsedPct% of &AreaSoldmm2 mm²

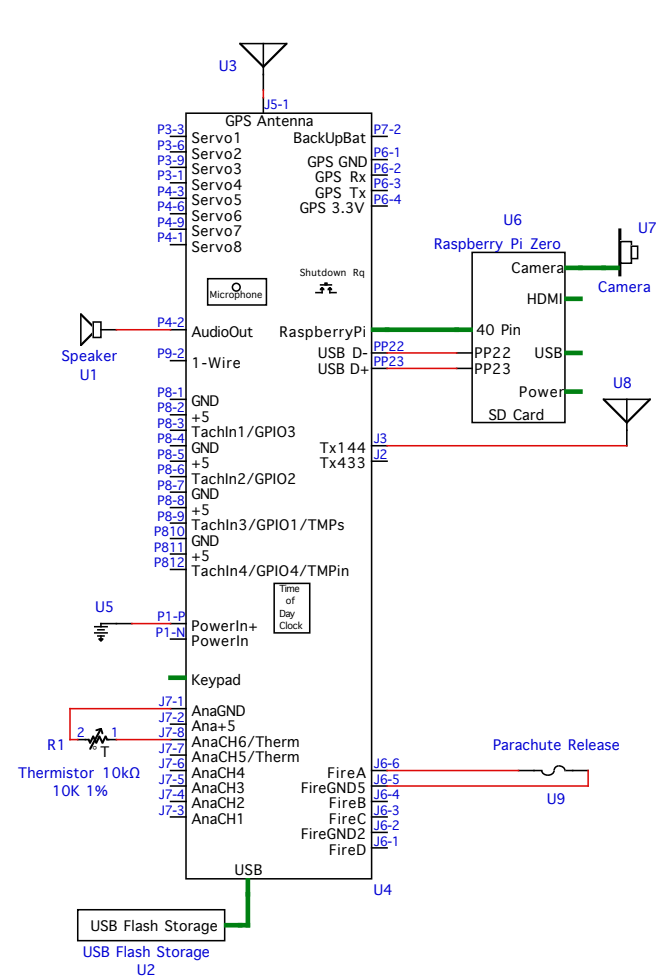
Design Revision: 1.0 Drawing Revision: A

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TITLE: PiFly Applications	
Document Number:	Rev: 1.0
Date: Modified: 12/30/2016 10:30 AM	Sheet: 1 of 3

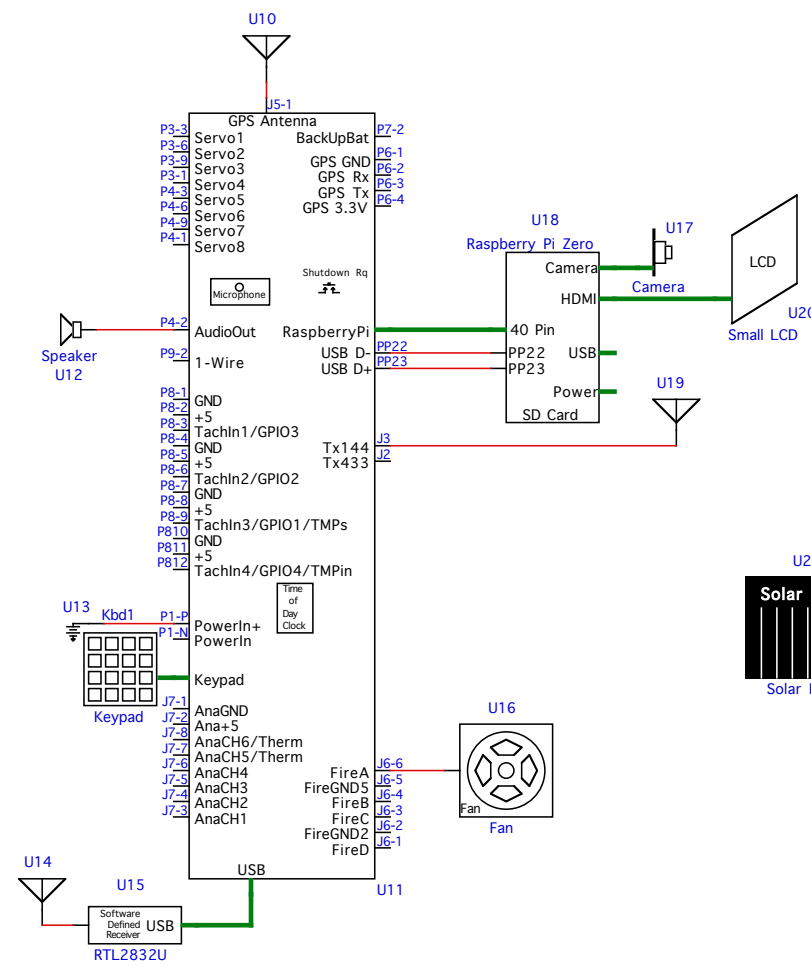
File: PiFly Applications.cct
Created: 12/30/2016 10:30 AM
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Rocket Flight Data Collection and Recovery System



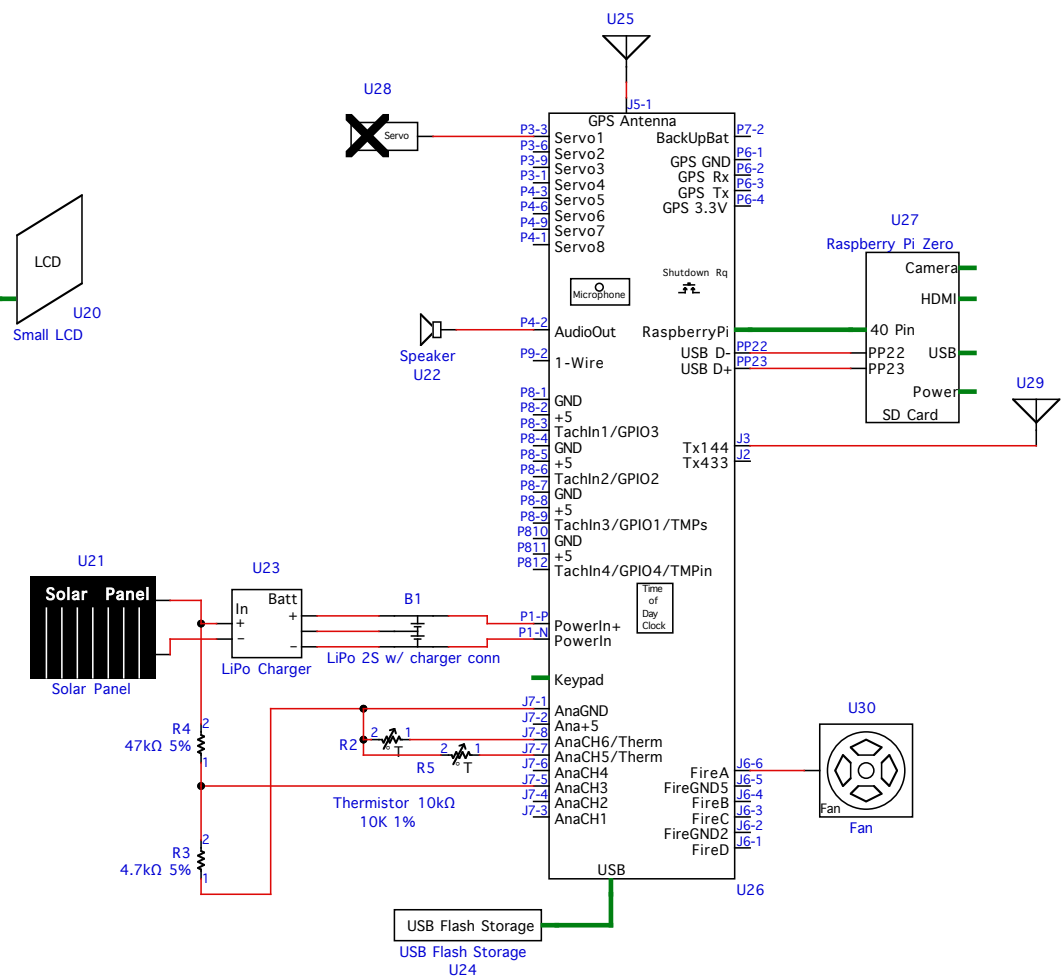
Features:
 1.0GHz 32 bit processing power
 Telemetry downlink transmitter
 Large data logging storage with USB Flash drive
 Data includes GPS, pressure, board and remote temperature, humidity, magnetometer, audio, & video
 Parachute release based on altitude and/or time
 Telemetry/Log can be date & time stamped
 Audio annunciator for on pad confirmation of readiness
 Uses on board super capacitor for GPS and time of day clock

HAM Radio Smart Transceiver



Features:
 1.0GHz 32 bit processing power
 Supports audio, video (SSTV), and APRS
 16 key keypad
 Optional Fan for cooling Raspberry Pi
 See http://rau-deaver.org/1-wire_keyboard.html for keyboard software

Remote Data Acquisition System for Packet Radio



Features:
 1.0GHz 32 bit processing power
 Telemetry transmitter
 Large data logging storage with USB Flash drive
 Data includes Solar voltage, GPS, pressure, board and remote temperature, humidity, magnetometer, audio, & video
 Telemetry/Log can be date & time stamped
 Can use either on board super capacitor for GPS and time of day clock or external backup battery
 Servo for solar panel pointing to maximize charging current.

Design Revision: 1.0 Drawing Revision: A

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TITLE: PiFly Applications	
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File: PiFly Applications.cct
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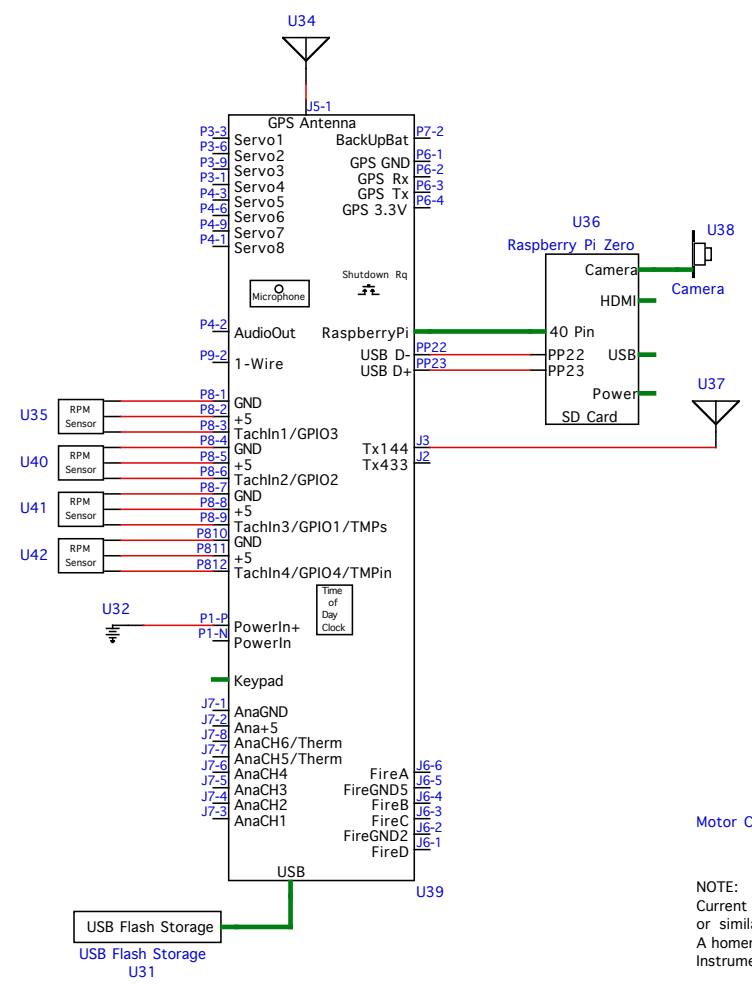
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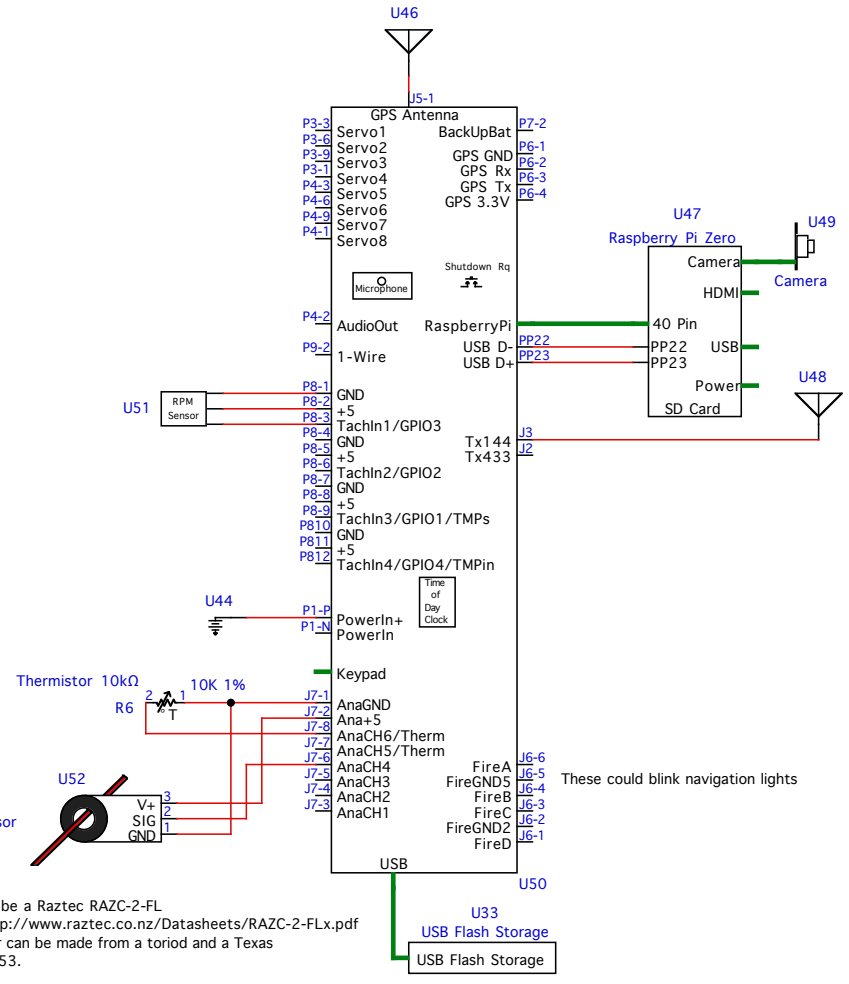
Quadcopter Data Collection

Electric RC Airplane Data Collection

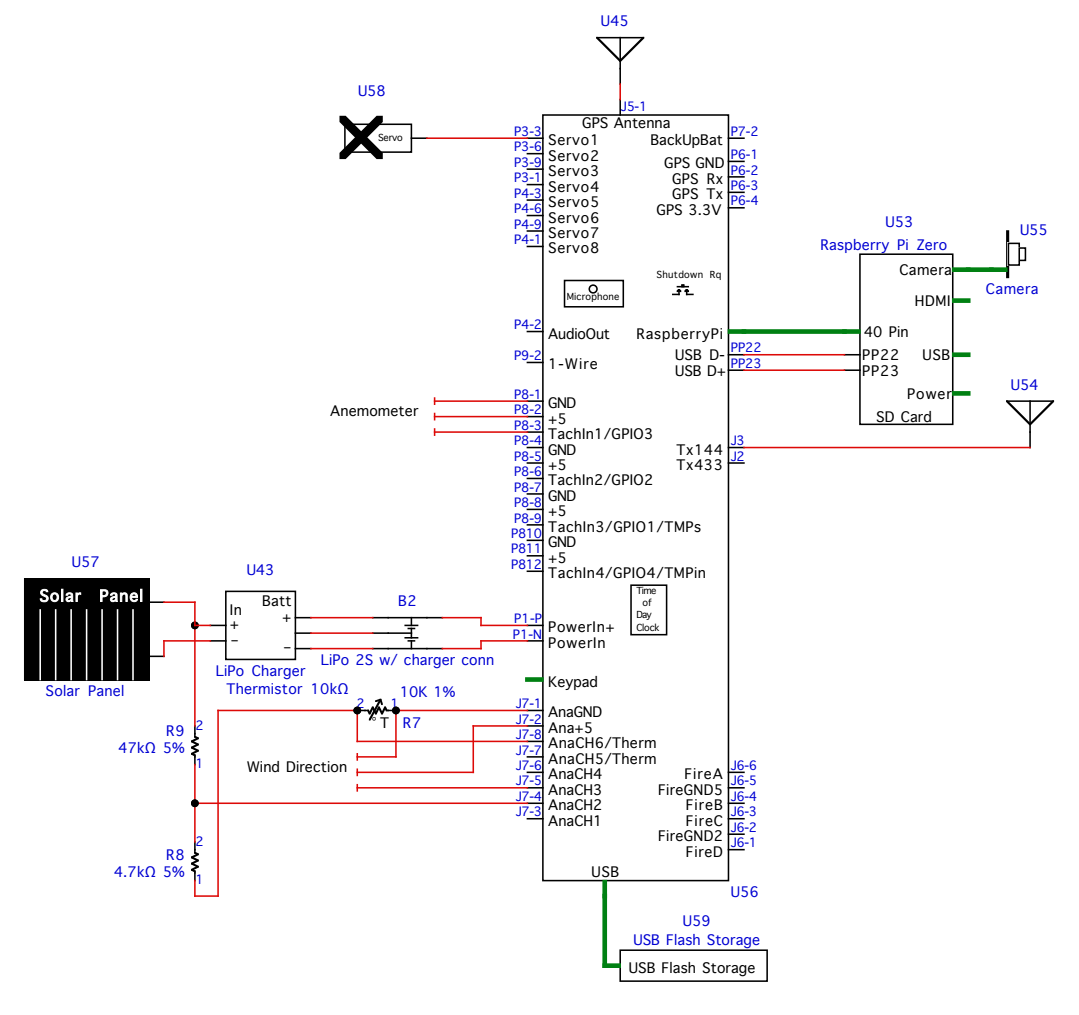
Electric RC Airplane Data Collection



Features:
 1.0GHz 32 bit processing power
 Telemetry downlink transmitter
 Large data logging storage with USB Flash drive
 Data includes RPM for each motor, GPS, pressure, temperature, humidity, magnetometer, audio, & video
 Telemetry/Log can be date & time stamped
 Uses on board super capacitor for GPS and time of day clock



Features:
 1.0GHz 32 bit processing power
 Telemetry downlink transmitter
 Large data logging storage with USB Flash drive
 Data includes motor current, motor temperature, RPM, GPS, pressure, temperature, humidity, magnetometer, audio, & video
 Telemetry/Log can be date & time stamped
 Uses on board super capacitor for GPS and time of day clock
 True airspeed with differential pressure sensor and Pitot tube



Features:
 1.0GHz 32 bit processing power
 Telemetry transmitter
 Large data logging storage with USB Flash drive
 Data GPS, pressure, temperature, humidity, magnetometer, wind direction, wind speed, & video
 Telemetry/Log can be date & time stamped
 Uses on board super capacitor for GPS and time of day clock
 Solar power
 Servo to optimize solar panel pointing.
 A SDR could replace the USB stick to monitor weather channels for warnings and a horn connected to FireA.

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