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Wireless Sensor Data Acquisition System

Team 2



Project Description

- Sensor inputs from the environment are digitized and sent to a microcontroller through a wireless module (using appropriate protocols).
- This design is to be used for CT scan imaging machines in a high speed rotating environment.
- Using the wireless transmitters we would eliminate costly wiring and allow flexibility in the location/placement of these sensors.



Key Requirements

1. Operating Temperature: 15-60C & Humidity Range: 10-90% rH
2. Battery powered sensor devices that can sense Temperature, Pressure and G-Force of environment
3. AD conversion circuitry with at least 8 bits of resolution
4. Data acquisition at a minimum of 500 Hz
5. Capability of enabling/disabling transmission of data
6. 5W maximum power dissipation
7. Proposed market price: \$250 (including receiver hardware)

Block Diagram

Block Color Code

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