

WIRELESS BASED DETECTION OF CO₂ LEVEL FOR INDUSTRIAL APPLICATION

ABSTRACT:

Single network for traditional wired and monitoring systems in the wiring, coverage, scalability, compatibility and other aspects of the problem, this paper proposes to Zigbee technology-based, GSM technology, supplemented by the master-slave wireless network, this system architecture designed remote detection terminal, control master station, mobile monitoring terminal communication protocol. Remote monitoring terminal is used to detect the site environment and gas concentration. Remote sense terminals to detect scene conditions and gas concentration state. Control station is used to handle the main station to join the network of remote detection terminal data, timely alarm information sent to your phone via GSM module monitoring terminal. In addition, through the serial port to transfer data to a computer monitor server, to achieve the status of each remote terminal data analysis and management. Experimental results show that this paper designed system is capable of long-term stable and reliable operation with low power consumption, always online, covering a wide area advantages.

EXISTING METHOD:

ZigBee-based wireless sensor network, Implementation of gas concentration detection and alarm.

DEMERIT:

This method only to achieve a single node applications, without a network, you can not achieve real-time monitoring.

PROPOSED METHOD:

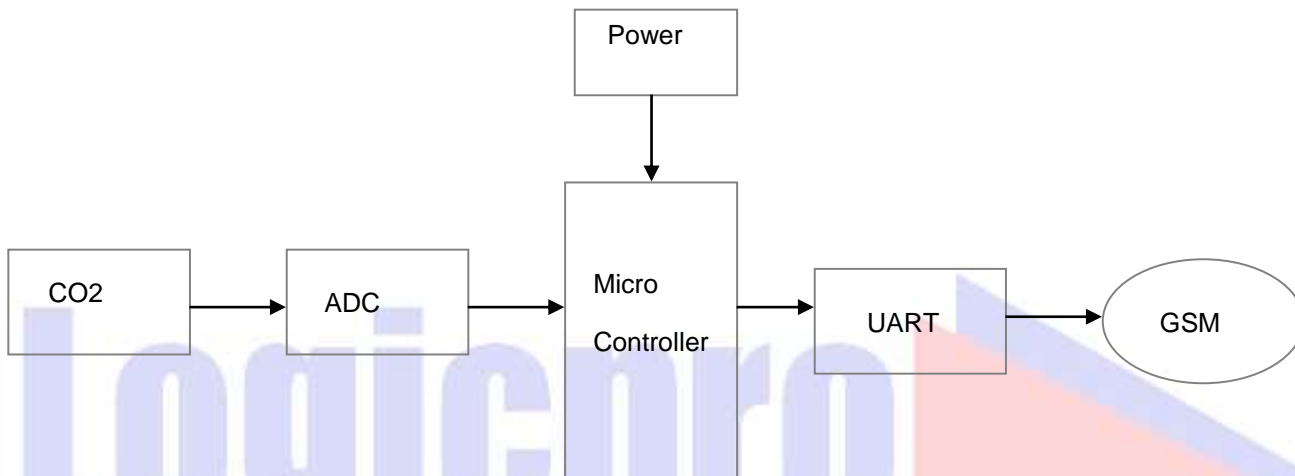
Harmful gases Wireless Network Monitoring System Design using GSM Technology. This paper designs GSM network technology used. The level of CO₂ detect by CO₂ sensor and take control action by micro controller to send the information about harmful gas. Then we take the necessary action for protect the major accident in industry.

MERIT:

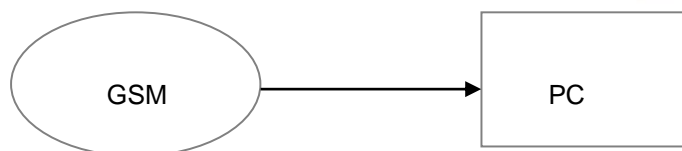
This paper designs GSM network technologies based on ZigBee gas monitoring system that combines low-rate ZigBee technology, low cost, low power consumption and GSM network coverage, cheap price advantage, the ability to put the terminal data uploaded to the monitoring server, and timely transmission of the alarm information to the relevant person in charge of promotion of high practical value.

BLOCK DIAGRAM:

TRANSMITTER SIDE:



RECEIVER SIDE:



HARDWARE REQUIREMENTS

- Micro controller
- Power supply
- UART
- GSM
- ADC
- Co2 sensor

SOFTWARE REQUIREMENTS

- MCU COMPIERS
- PROTEUS SOFTWARE

MICROCONTROLLER may ATMEGA,8051,PIC OR Arduino