

RANCANG BANGUN SISTEM KEAMANAN DAN KONTROL RUMAH DENGAN NodeMCU ESP8266 BERBASIS IoT

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ABSTRACT

Recently, the internet has become one of the needs of the Indonesian people. This internet network is used as a data transmission tool that will connect the home control system with smartphones using the Internet of Things. The smart home system in this study can study LPG gas leaks and other home security. To support this home control system, it uses a NodeMCU ESP 8266 microcontroller as the central control, MQ-2 sensor for gas detection, RFID as door security, DHT11 sensor as a temperature sensor and other supporting components. These systems can be monitored and controlled using a smartphone to happen when no one is in the house, which will still provide a sense of security. In its application, the DHT11 sensor, MQ-2 sensor, RFID, fan, buzzer and servo have excellent performance, displaying the performance of the DHT11 sensor is 99,754%, MQ-2 sensor is 96,667%, RFID, servo and buzzer are 100%. It shows that the system is working correctly. In-application monitoring can also work well.

Keywords: *Surya Panels, Arduino Uno, RTC (Real Time Clock)*