

# Automatic Reading and Billing System of Energy Meter Using IoT

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**Abstract:** *This project describes the implementation of an energy meter with IoT concepts and microcontroller-based designs. The proposed system design eliminates the involvement of human participation in power maintenance. If the purchaser does not pay for the bill within the provided period, power transmission can be switched by the autonomous type of the remote server. The user can control energy consumption in the device from the web page by providing the IP address of the device. The anti-theft recognition unit connected to the energy meter is notified to the company when counter control is performed, and theft recognition information is performed through the modem, and the detected theft is displayed in the terminal window of the company page. The IoT process is carried out by the WiFi unit. The WiFi unit sends data from the energy meter to a web page that can be viewed via an IP address. The hardware interface circuit consists of an ATMEGA 328 microcontroller, MAX232, LCD display, ESP8266 WiFi module and GSM modem. The WiFi unit runs the IOT process by sending data from the energy meter to the website.*

**Keywords:** GSM, ATMEGA328, MAX232, IoT

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