

Research on COAP communication protocol and deployment method on Zolertia Z1 wireless sensor network

Nong Van Thuong

Abstract: This topic focuses on researching and implementing the Constrained Application Protocol (COAP) in the Zolertia Z1 wireless sensor network system, meeting the need for efficient management of energy-constrained devices. The main objective is to build an automatic and reliable environmental monitoring system by using COAP to enhance data transmission capabilities between sensors and the central network gateway. The research method combines both theory and experimentation, with a practical application deployment on the Z1 to verify the protocol's effectiveness. The expected results will provide a useful solution for the Internet of Things (IoT) field, while making an important contribution to the development of sensor network technology.

Keywords: COAP, Wireless Sensor Network, Zolertia Z1, IoT, Environmental Monitoring