Nodes for sensor networks

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Abstract. The theoretical aspects of nodes in sensor networks are examined in this article, with a focus on their use in Internet of Things (IoT) applications. Sensor nodes are essential parts that make data processing, communication, and acquisition possible in a variety of settings. The paper examines several sensor network node layouts, communication protocols, and energy-efficient designs [1]. Among the methodologies covered are networking methods and an investigation of low-power wireless communication technologies like MQTT and BLE [2,3]. The theoretical approach assesses the trade-offs between data throughput, communication range, and power consumption among node design characteristics. According to the research, enhancing sensor node performance is essential for increasing network lifespan and enhancing data dependability in Internet of Things systems.

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