

ABSTRACT

IoT technology can be implemented in various fields. This allows IoT devices to be deployed to areas that are not covered by electricity and requires IoT devices to use batteries, for example in an agricultural sector located on a plantation. The use of batteries has limitations on the power capacity used, therefore a method is needed to be able to save power consumption on IoT devices.

To be able to help these problems, a system is created that can save power usage on IoT devices. In this study, using a deep sleep algorithm that functions to activate a mode on the microcontroller used, namely ESP32. Deep sleep mode can set some components to turn off temporarily when not in use. So it is expected that power consumption on IoT devices can be minimized. By using deep sleep mode, this research results in power consumption that can turn out to be smaller than before. Power consumption can be saved by 41.4% when used for 24 hours.

Keywords: *Algorithm, Deep sleep, ESP32, IoT*