DESIGN OF A PACKAGE RECEIVING SYSTEM USING ESP32 CAM AND TELEGRAM APPLICATION

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ABSTRACT

The rapid growth of e-commerce has led to an increase in online shopping, creating challenges in safe package delivery. Often the recipient is not at home to receive the shipment, resulting in misplaced or stolen packages. Therefore, a system is needed that can overcome this problem, namely by developing an automatic package recipient system that utilizes the Internet of Things using the ESP32 CAM microcontroller and the Telegram application as a medium for sending messages in the form of object photos. The system consists of 2 cameras to take pictures of the courier and goods, and a solenoid door lock to open the storage box. Images from both cameras are then sent to the telegram application. The results of testing this package recipient system obtained the results of testing against the distance, the accuracy value of the ESP32 CAM was obtained which was able to take courier objects and packages clearly at close, medium, somewhat far and far distances in good lighting conditions. Meanwhile, if the lighting in the area is not good, the resulting image is also less clear. In addition, From several test results on the System, the accuracy value of the two ESP32 CAMs was obtained which were able to send the results of taking photos of courier objects or goods packages and moving the door lock solenoid with a reasonable delay time, so from the test the percentage value of the success rate was obtained, namely 100%.

Keywords*: Internet of Things, ESP32 CAM, Goods Package Recipient, Telegram*