

## **ABSTRACT**

The development of cellular technology in Indonesia has now entered the 4G era. Based on information from the Minister of Communications and Information Technology, although telecommunications technology can be said to be developing very rapidly, there are still challenges to improving data access and reliability that spur research on the latest technology to meet these needs. The number of telecommunications service providers that are growing quite rapidly is currently making efforts to improve service quality. With a lot of construction of Base Transceiver Station or BTS which is now called Node B is needed. The construction of Node B is intended as a signal transmitter to serve customers, so it requires a strategic location in its placement. However, the rise of cases of theft of UPS equipment is quite disturbing for telecommunications service providers, because there is no backup power for other Node B devices if the UPS is lost. Therefore, we need an alarm security system that is capable enough to reduce cases of theft in the Node B area. This research uses Arduino and ESP8266 as microcontrollers that will connect ultrasonic sensors and telegram messaging applications.

**Keywords** : Arduino, ESP8266, Telegram, *microcontroller*