

DETAILED PROJECT REPORT

IoT LED message display

This is a detailed project report of IoT LED message display

□ ABSTRACT

This project aims to develop a smart notice board system using LED matrix display and IoT *Technology*. The system is designed to display important messages in schools, colleges, banks, and other public places. The system is controlled by NodeMCU ESP8266 microcontroller, which interfaces with the Wi-Fi module and P10 LED display. Text-based commands are transmitted through Wi-Fi and received by the esp8266 Wi-Fi module. The microcontroller processes the information and scrolls the message on the P10 LED display. The system replaces the older message with a new one. The nodeMCU ESP8266 is loaded with an intelligent program written in embedded 'C' language to perform the task. The system provides an efficient and effective way of displaying important information to the public. The project is a cost-effective solution that can be implemented in various settings to improve communication and information. Overall, the project provides an effective solution for displaying important information to the public in various settings.

❑ Introduction

The communication of important information in public spaces is crucial for the effective Functioning of these institutions. The traditional notice board systems used to display such information are often inefficient, time-consuming, and labor-intensive. In this project, we aim to develop a smart notice board system that utilizes P10 LED display and IoT technology to provide an efficient and cost-effective solution for displaying important information.

❑ Project objectives

The project's objective is to provide an efficient and effective way of displaying important information to the public in various settings, including schools, colleges, banks, and other public places. The system is cost-effective, easy to use, and scalable, making it suitable for implementation in different institutions.

❑ Design and components

❖ LED matrix display(UART)

Type : LED dot matrix display

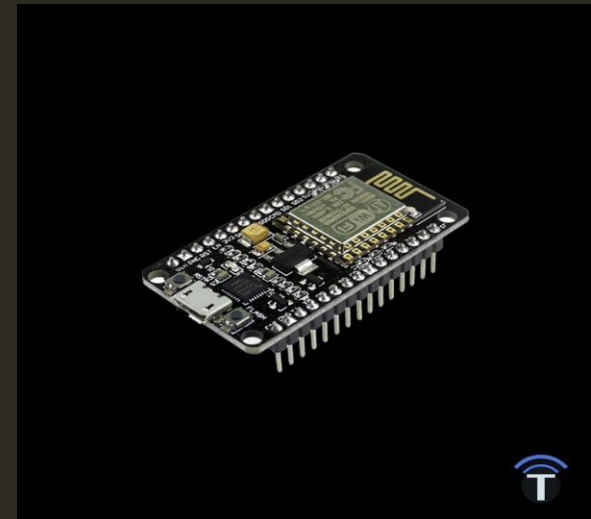
Purpose: it displays important information to the public in various settings



❖ NodeMCU ESP8266 or ESP32 Board

TYPE : it's is an open-source Lua based firmware and development board especially targeted for IOT applications

Purpose : it provides a versatile and cost-effective approach to connect devices to the internet



❖ Connecting wires

purpose : simple wires that have connector pins at each end allowing them to be used to connect two points to each other



❖ Connecting diagram

