

# 基于单片机的数字温湿度计

## 摘 要

本设计是一种采用 DHT22 传感器、ESP8266wifi 模块制作的无线数字温湿度计，基于 STC89C52 单片机，能用于居家室内，或是农业生产等对于环境有着较为严格要求并需要实时监控的场所。整个设备体积较小，通过硬件电路设计和软件程序设计以及采用数字信号传输数据，比较与以往的模拟方案，有着更高的精确度，稳定性和抗干扰性，而且通过软件的设计使得该数字温湿度计有着一定的智能化功能，能够对于采集的温湿度数据进行初步的处理。

**关键词：**STC89C52；DHT22；ESP8266

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## Abstract

This design is a kind of wireless digital hygrometer which is made of dht22 sensor and ESP8266wifi module. Based on STC89C52 single chip microcomputer, it can be used in home, or agricultural production and other places which have strict requirements for the environment and need real-time monitoring. The volume of the whole equipment is small, through the design of hardware circuit and software program, as well as the use of digital signal transmission data, compared with the previous analog scheme, it has higher accuracy, stability and anti-interference, and through the design of software, the digital thermometer has a certain intelligent function, which can preliminarily process the collected temperature and humidity data.

**Key Words:** STC89C52; DHT22; ESP8266

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