WISE-4220-S231

Wi-Fi IoT WSN with Temperature and Humidity Sensors

Main Features

NEW

- Built-in temperature and humidity sensors
- 2.4GHz Wi-Fi reducing the wiring cost during big data acquisition
- Easily extend the existing network by adding APs, and share existing Ethernet software
- Configured by mobile devices directly without installing any software or Apps
- Zero data loss using the log function with RTC time stamp
- Data can be automatically pushed to Dropbox or computer
- Supports RESTful web API in JSON format for IoT integration

Introduction

The WISE-4220 series is an Ethernet-based wireless IoT device, integrated with IoT data acquisition, processing, and publishing functions. As well as various I/O and sensor types, the WISE-4220 series provides data pre-scaling, data logic, and data logger functions. These data can be accessed via mobile devices and be published to the cloud with security at anytime and anywhere.

Features

IEEE 802.11 b/g/n 2.4GHz Wi-Fi with AP Mode

The Wi-Fi interface is easily integrated with wired or wireless Ethernet devices, users only need to add a wireless router or AP to extend existing Ethernet network to wireless. The limited AP mode enables the WISE-4220 to be accessed via other Wi-Fi devices directly as an AP.
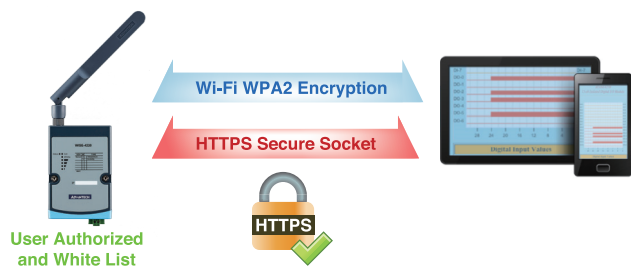
HTML5 Web Configuration Interface

All the configuration interfaces are applied in web service, and the web pages are based on HTML5, so users can configure the WISE-4220 without the limitation of OS/devices. You can use your mobile phone or tablet to directly configure the WISE-4220.

RESTful Web Service with Security Socket

As well as supporting Modbus/TCP, the WISE-4220 series also supports IoT communication protocol, RESTful web service. Data can be polled or even be pushed automatically from the WISE-4220 when the I/O status is changed. The I/O status can be retrieved by internet media types like JSON. The WISE-4220 also supports HTTPS which has security that can be used in a Wide Area Network (WAN).

Wi-Fi WPA2 Encryption

HTTPS Secure Socket

User Authorized and White List

HTTPS

Data Storage

The WISE-4220 can log up to 10,000 samples of data with a time stamp. The I/O data can be logged periodically, and also when the I/O status changes. Once the memory is full, users can choose to overwrite the old data to ring log or just stop the log function.

10,000 Samples

25℃ 0405 14:20
28℃ 0405 11:20

Cloud Storage

Data logger can push the data to file-based cloud services like Dropbox using pre-configured criteria. With RESTful API, the data can also been pushed to a private cloud server in the format of JSON. Users can setup their private cloud server using the provided RESTful API and their own platform.

File-based Public Cloud

Private Cloud

batch / push

Specifications

Temperature Sensor

- **Operating Range**   -25°C ~ 70°C (-13°F ~ 157.9°F)
- **Resolution**   0.1 (°C/°F/K)
- **Accuracy**   ±1.0°C (±1.8°F) (vertical installation)

Humidity Sensor

- **Operating Range**   10 ~ 90% RH
- **Resolution**   0.1% RH
- **Accuracy**   ±4% for 0%~50% RH
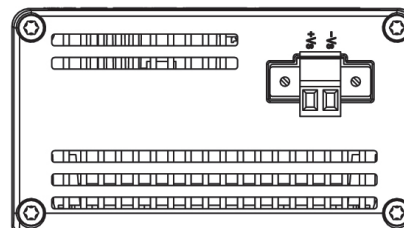   ±6% for 50%~60% RH
      ±10% for 60%~90% RH

General

- **WLAN**   IEEE 802.11b/g/n 2.4GHz
- **Outdoor Range**   150m with line of sight
- **Connectors**   Plug-in screw terminal block (power)
- **Watchdog Timer**   System (1.6 second) and Communication (programmable)
- **Certification**   CE, FCC, IC, RED, NCC, SRRC, RCM, VCCI, TELEC (CC3200 listed antenna)
- **Dimensions (W x H x D)**   70 x 102 x 38 mm
- **Enclosure**   PC
- **Mounting**   DIN 35 rail, wall, stack, and pole
- **Power Input**   10 ~ 50 V_{DC}
- **Power Consumption**   1.2 W @ 24 V_{DC}
- **Power Reversal Protection**
- **Supports User Defined Modbus Address**
- **Supports Data Log Function**   Up to 10000 samples with RTC time stamp
- **Supported Protocols**   Modbus/TCP, TCP/IP, UDP, DHCP, and HTTP
- **Supports RESTful Web API in JSON format**
- **Supports Web Server in HTML5 with JavaScript & CSS3**
- **Supports System Configuration Backup and User Access Control**

Environment

- **Operating Temperature**   -25 ~ 70°C (-13~158°F)
- **Storage Temperature**   -40 ~ 85°C (-40~185°F)
- **Operating Humidity**   20 ~ 95% RH (non-condensing)
- **Storage Humidity**   0 ~ 95% RH (non-condensing)

Pin Assignment

Ordering Information

- **WISE-4220-S231A**   IoT WSN with Temperature and Humidity Sensors

Selection Table

Model Name	Analog Input	Digital Input	Digital Output	Relay Output	RS-485	Built-in Sensor
WISE-4012	4		2			
WISE-4050		4	4			
WISE-4051		8			1	
WISE-4060		4		4		
WISE-4220-S231						Temp. & Humidity

Accessories

- **PWR-242-AE**   DIN-rail Power Supply (2.1A Output Current)
- **PWR-243-AE**   Panel Mount Power Supply (3A Output Current)
- **PWR-244-AE**   Panel Mount Power Supply (4.2A Output Current)

Dimensions

Unit: mm

Front View   Side View   Mounting Kit