



Delta Electronics Inc.

UNOweb HTTP API Manual

Version 0.4.1

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1. Introduction

Each model of UNO sensor is a multi-function sensor, e.g. UNOnext, UNOLite and so on. It provides Temperature ($^{\circ}\text{C}/^{\circ}\text{F}$), Humidity (rH%), Ambient Light (lux), CO₂ (ppm), PM_{2.5} ($\mu\text{g}/\text{m}^3$), PM₁₀ ($\mu\text{g}/\text{m}^3$). The advance model optionally provides PM₁ ($\mu\text{g}/\text{m}^3$), TVOC (ppb), HCHO (ppb), CO (ppm), and O₃ (ppb). This document introduces using UNOweb HTTP API to retrieve the sensor data of the UNO sensor based on JSON format. Additionally, UNOweb HTTP API also provides the moving average data of sensor based on Taiwan regulation. The data density is 1 record per 6 minutes when the UNO sensor is online.

Note. UNOweb HTTP API only supports the UNO sensor which is already set WiFi and connected to UNOweb.

Table 1 Sensor Table

Sensor Type	Key	Data Unit
Temperature	TEMP	°C
NTC Temperature (opt.)	NTC	°C
Temperature °F	TEMP_F	°F
NTC Temperature °F (opt.)	NTC_F	°F
Humidity	HUMI	rH%
Ambient Light	LUX	lux
CO ₂	CO2	ppm
PM2.5	PM2p5	µg/m ³
PM10	PM10	µg/m ³
PM1 (opt.)	PM1	µg/m ³
TVOC (opt.)	TVOC	ppb
HCHO (opt.)	HCHO	ppb
CO (opt.)	CO	ppm
O ₃ (opt.)	O3	ppb

Table 2 Sensor Moving Average Data

Sensor Type	Key	Data Unit	Rule Description
CO ₂	CO2_ma	ppm	8 hours
PM2.5	PM2p5_ma	µg/m ³	24 hours
PM10	PM10_ma	µg/m ³	24 hours
PM1 (opt.)	PM1_ma	µg/m ³	24 hours
TVOC (opt.)	TVOC_ma	ppb	1 hours
HCHO (opt.)	HCHO_ma	ppb	1 hours
CO (opt.)	CO_ma	ppm	8 hours
O ₃ (opt.)	O3_ma	ppb	8 hours

PS. If value of sensor is "null" presented unmounted or data unavailable.

2. API Manual

A. Requirement

- UNOweb account with token API permission.
- The SN of an on-line UNO sensor.
- Prepare a HTTP API client. E.g. Postman (<https://www.postman.com/>), reqBin (<https://reqbin.com/>)

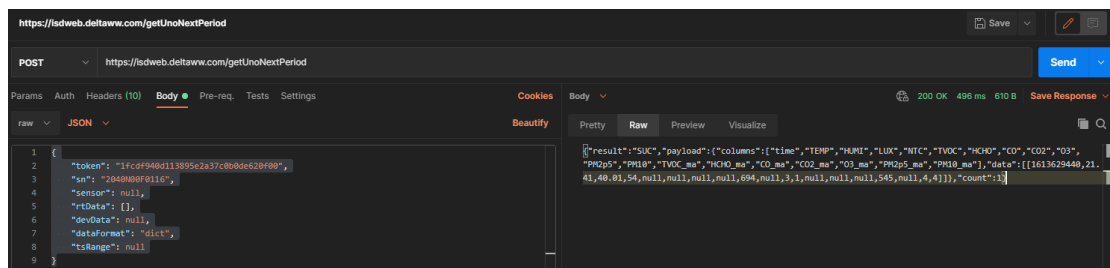


Figure 1 Postman screenshot

B. API

Current UNOweb provides following HTTP API for UNO sensor.

<https://isdweb.deltaww.com/api/getUnoNextPeriod>

Response (application/json)

```
{
  "result": "SUC",
  "payload": {
    "columns": [
      "time",
      "TEMP",
      "HUMI",
      "LUX",
      "NTC",
      "TVOC",
      "HCHO",
      "CO",
      "CO2",
      "O3",
      "PM2p5",
      "PM10",
      "TEMP_F",
      "NTC_F"
    ],
    "data": [
      [
        1619425800,
        23.2,
        67.57,
        282,
        null,
        30000,
        42,
        0,
        920,
        0,
        2,
        1,
        73.76,
        null
      ]
    ]
  }
}
```

```

    ]
  },
  "rawCount": 1,
  "count": 1
}

```

JSON Key Description

Key	Description
result	"SUC" is <i>SUCCESSFUL</i> . "FAIL" and "ERR" are return with error message.
payload.columns	Responded array presented sensor column. "time" is epoch stamp. Others can be found in Table 1 and Table 2
payload.data	Responded nested data array, each item is array corresponded sensor columns. <i>null</i> means no data at this time stamp, unmounted or sensor abnormal.
count	If the "result" is "SUC", the "count" presents the length of valid data (not all <i>null</i> data) array.
rawCount	If the "result" is "SUC", the "count" presents the length of data (contain all <i>null</i> data) array.