

## KPE1301

Smart Meter Monitoring APP

(Designed to work  
with Microsoft IoT Central)



### Introduction

Traditional manufacturing has always had a threshold for cloud solutions, so that it cannot be popularized, which is due to the high price and complicated cloud software compilation. SUNIX using innovative EAZInet technology and Microsoft's latest SaaS platform to create a dedicated cloud based of Azure IoT Central. Customers can match suitable application packages for different fields, and can complete the development of equipment requirements within a few hours. No need to intrude into the equipment, no need programing experience. It' s completed with just few steps.



### Features

- All-in-one IoT Kit for Rapid Deployment
- Code-free, No Programming
- Easy to use, Setup in Hours
- Simple IoT Kit for Non-developers

## Application Scenario

An electronic manufacturer has two factories, and has signed a power contract with Taipower, the contract usage is 49KW, Because of the factories power consumption are often exceeds the contracted thus that is a serious problem

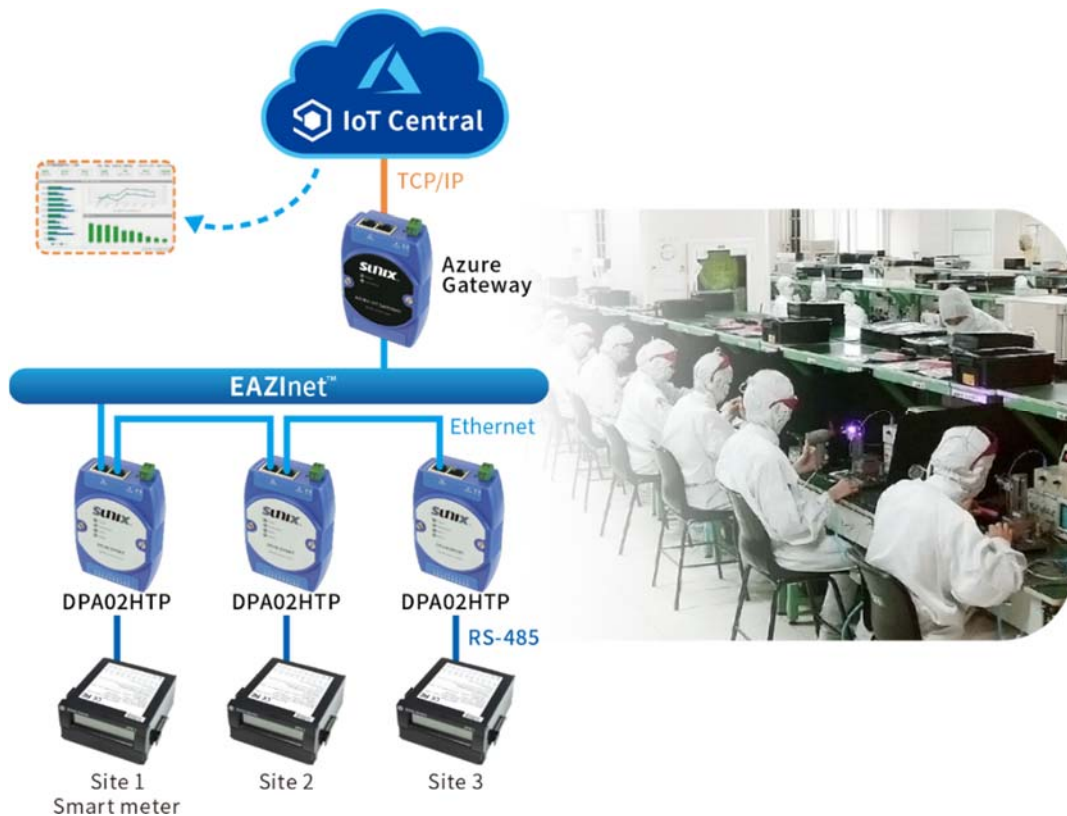
- Problems before improvement: (unmanaged)

In the case of unmanaged power consumption, the power consumption is often exceeded, and the average monthly is about 10,000 TWD. The annual is up to 100,000 TWD or more.

- Improved issues: (Import IoT Central records and monitoring)

- via RS-485 connected factory digital meter
- Send data to IoT Central via Azure Gateway for logging and monitoring

If the power consumption is about to exceed the standard (49KW), an email notification and alarm will be sent.



## Devices List:

### ■ Communication Layer:

EZG1200 (Azure IoT Central GW)

DPAD02HTP (RS-422/485)

### ■ Device Layer:

Smart Meter (RS-485)

## Common Specifications for Communication Layer Devices

### LAN

Ethernet: 2-port 10/100 Mbps RJ45 ports

Protection: 1.5 KV magnetic isolation

Protocols: SUNIX EAZInet

### Physical Characteristics

Dimensions: 72.1 x 108 x 33.7 mm

(2.83 x 4.25 x 1.32 in)

Weight: 118 g

Mounting: DIN rail or wall

### Environmental Limits

Operating Temperature:

-25 to 70°C (-13 to 158°F)

Storage Temperature:

-30 to 75°C (-22 to 167°F)

Operation Humidity:

5 to 95% (non-condensing)

### Standards and Certifications

- **EMC:** EN 55032, 55035
- **EMI:** FCC Part 15B Class B
- **EMS:** IEC 61000-4-2
- **ESD:** Contact: 4 kV; Air: 8 kV

## EZG1200 Azure IoT Central Gateway Specifications

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It is designed to work with Microsoft Azure IoT Central. The customer leverage SUNIX communication protocol for establishing direct connections with Azure IoT cloud.



## DPAD02HTP Serial to Ethernet Port Specifications

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### Serial Interface

Number of ports: 2

Serial Standards: RS-422/485

Connector: Terminal Block

### Serial Signals

RS-422: TxD+, TxD-, RxD+, RxD-, GND

RS-485: Data+, Data-, GND

### Serial Communication Parameters

Stop Bits: 1, 1.5, 2

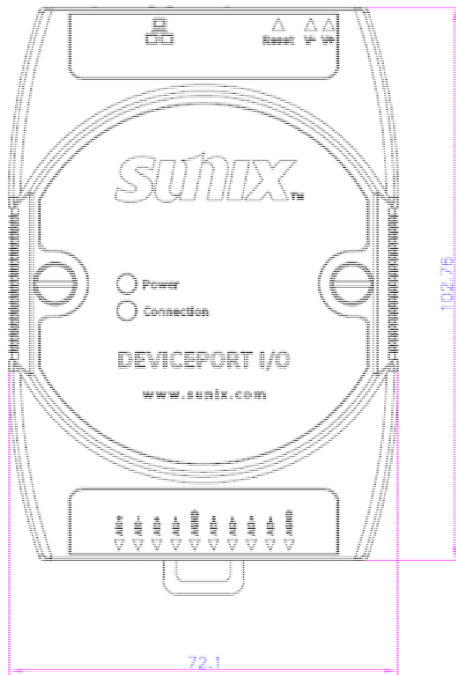
Parity: None, Even, Odd, Space, Mark

Flow Control: XON/XOFF (Software)

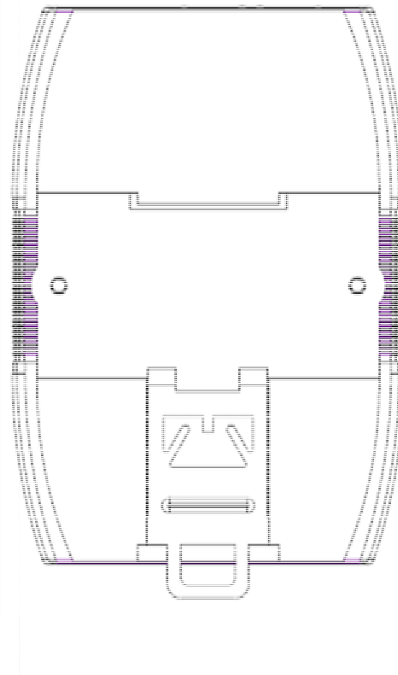
Baud Rate: 50bps ~921.6Kbps

# Dimensions

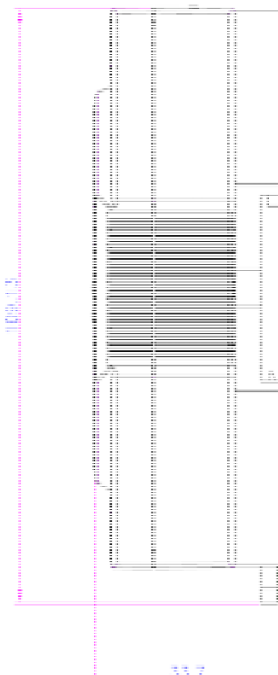
72.1 x 108 x 33.7 mm (2.83 x 4.25 x 1.32 in)



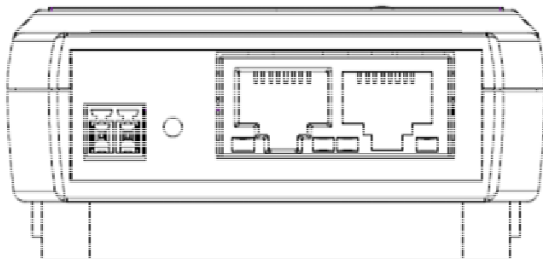
Front View



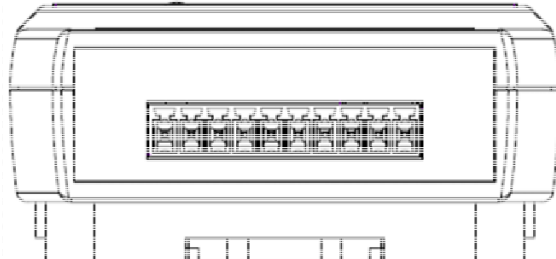
Rear View



Side View



Top View



Bottom View

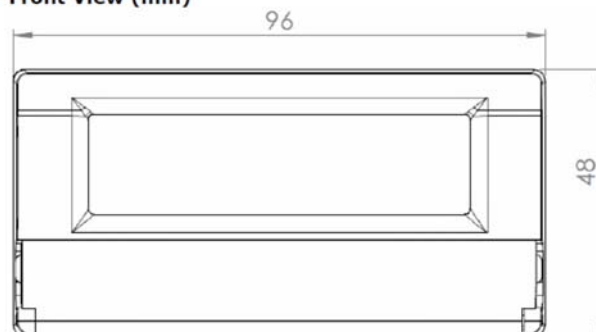
## Smart Meter (RS-485) Specifications

Measuring Target System	3P4W, 3P3W-2CT, 3P3W-3CT, 1P3W, 1P2W, Wiring auto-detection	
Sampling rate	3600 points/Second	
Accuracy	Voltage:0.2% Current:0.2% kW, kVAR, kVA:0.5 % kWh, kVARh, kVAh:0.5 % Power Factor:0.5% Frequency:0.1%	
Aux. power	100-240VAC/100-300VDC	
V input	10-600V (VLL)	
I input	5mA-5A	
Power consumption	1.73W/4.59VA (Backlight off) · 1.92W/4.96VA (Max. Backlight)	
Frequency	47-63Hz	
Communication(Optional)	Primary port : RS485 Modbus protocol, 2 -wire,4800~57600bps	
Mount	Panel Mount	
Size(mm)	96(W) × 48(H) × 111.2(L)	
Weight	273g	
Display	70mmX18mm Monochrome LCD	
Operation T.	Operation T. : - 20 ~ 70 °C. Storage T. : - 25 ~ 70 °C	
Humidity(RH, %)	95%	
Index of Protection	IP40(Panel) IP20(Case)	
Certificate	<ul style="list-style-type: none"> <li>● LVD : EN61010-1</li> <li>● CE : EN61326-1 EN61000-3-2 EN61000-3-3 IEC61000-4-2 IEC61000-4-3 IEC61000-4-4</li> </ul>	<ul style="list-style-type: none"> <li>IEC61000-4-5</li> <li>IEC61000-4-6</li> <li>IEC61000-4-8</li> <li>IEC61000-4-11</li> <li>● FCC : FCC PART 15B CISPR 22 ICES-003 Issue 5 ANSI C63.4</li> </ul>

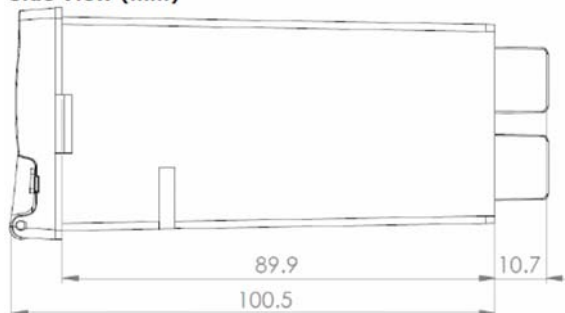
### Dimension:



Front View (mm)



Side View (mm)



After mounting the instrument, place all four support latch in position.  
Panel cut-out area is 93x45mm (+/-0.5mm)

## Packing Contents

- EZG1200 - Azure IoT Central Gateway x1
- DPAD02HTP - DevicePort Ethernet to 2-port RS-422/485 Serial x1
- Smart Meter (SPM-1) x1
- Quick installation guide

## Ordering Information

- KPE1301 - Smart Meter Monitoring APP