

1. Scenario Preset

- (1) There are 10 Houses in a certain area power by 1-phase power system, each house is far from each other so impossible for centralized installation of energy meters.
- (2) For each house, we need to monitor the main incoming circuit 1-phase of it for monitoring the overall house's power consumption.
- (3) Rated voltage of this main incoming circuit 1-phase is 230Vac L-N, and rated/max current was no more than 100A AC. (The rated current of circuit normally same to the CB's rated current of this monitored main circuit 1-phase).
- (4) For the places that we gonna install the energy meter, they are covered by stable 4G signal.
- (5) Eventually, for each house we only need 1 pcs ADW310-D16-4GHW/C 1-phase 4G Energy Meter

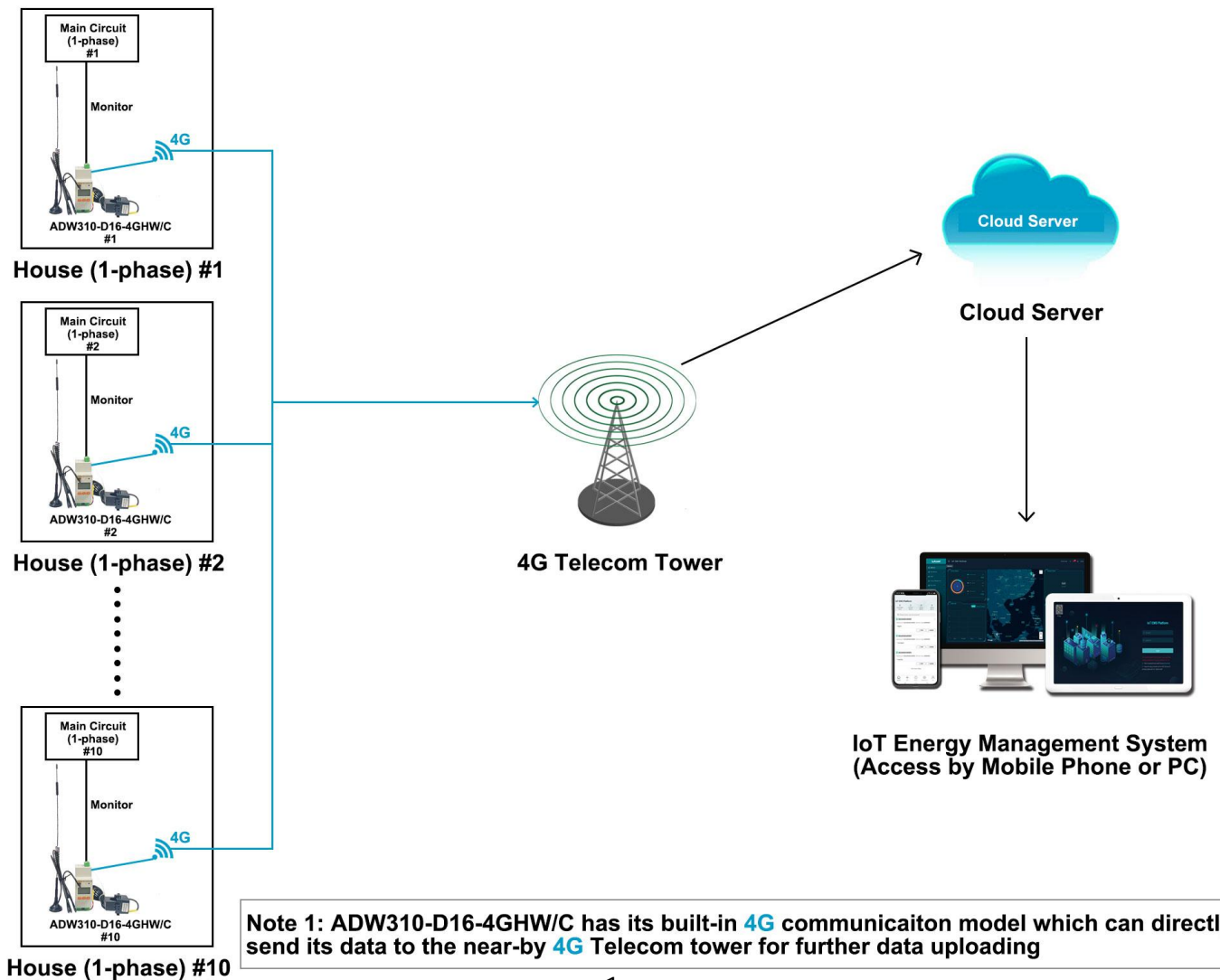
2. Devices Deployment Plan

House (1-phase) #1:

- 1* ADW310-D16-4GHW/C Wireless 4G Energy Meter.

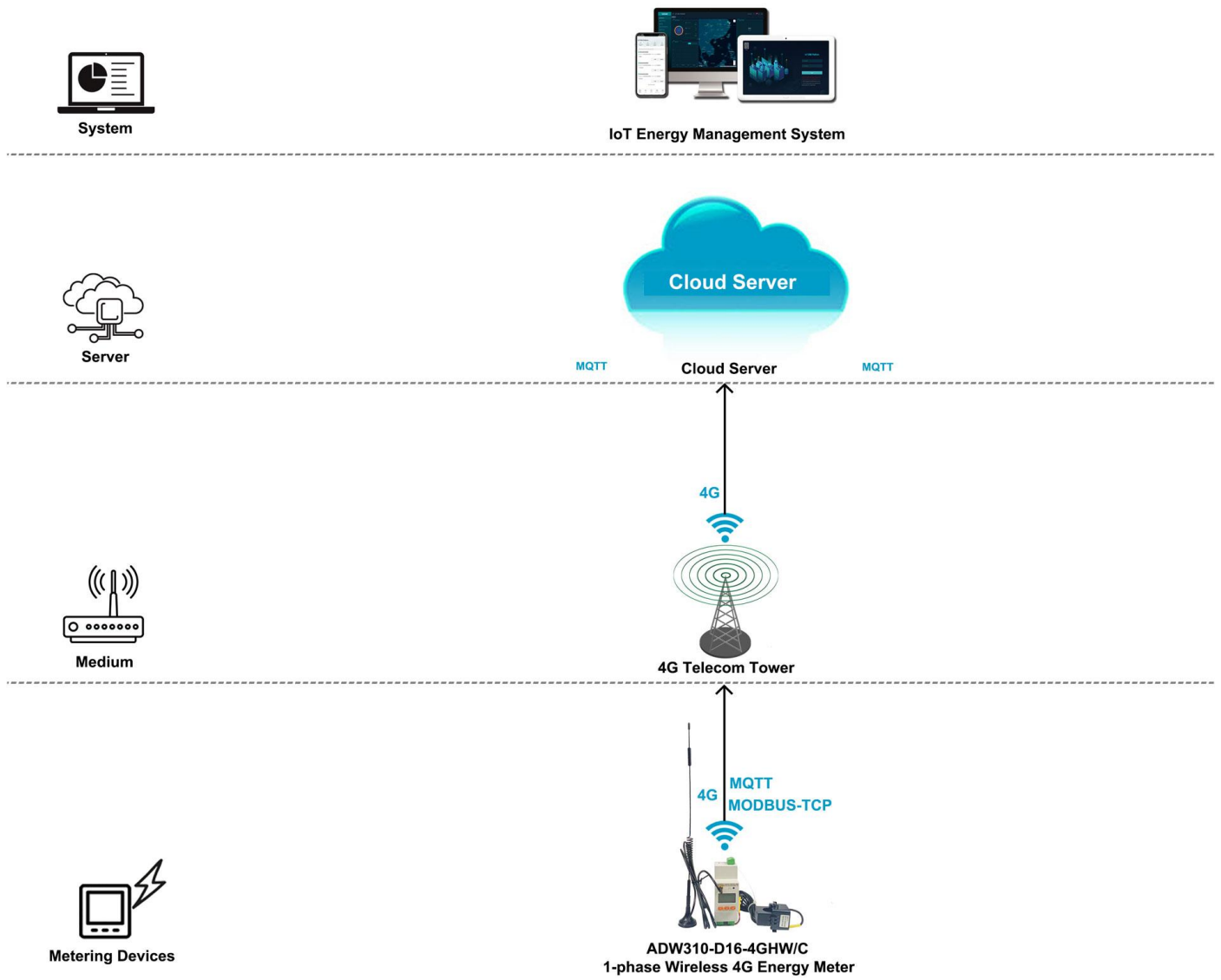
House (1-phase) #10:

- 1* ADW310-D16-4GHW/C Wireless 4G Energy Meter




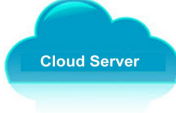

3. Communication Structure&Logic

- (1) 4G Communication could be served as one of the final data upstream methods by sending the data to cloud server deployed in Internet so that Acrel IoT System could be interact with these data collected by bottom metering devices like Energy Meter
- (2) ADW310-D16-4GHW/C Wireless 4G 1-phase Energy Meter has a built-in 4G communication module which allow it to directly send data to local 4G telecom tower through 4G signal based on MQTT and MODBUS-TCP protocol without using a extra 4G IoT Gateway.
- (3) Each ADW310-D16-4GHW/C has a 4G card tray for installing the 4G sim card which could be bought from your local 4G service provider.
- (4) ADW310-D16-4GHW/C also have a RS485 communication normally used for devices adjustment with Acrel ADW310 adjustment software.



4. Overall Model Selection&Quotation

(1) This Quotation doesn't include freight charge. To gain a complete quotation, please refer the actual quantity that you want to request for the actual order, once we receiving it. We will issue a Official Proforma Invoice with Acrel Stamps on it for later procedure.

| System Software | | | | | |
|--|--|---|--|--|--------------|
| Name | Description | System Price | Remark (Choose Host Service or Buy-out Service after 3-month Free Trial of Cloud IoT System) | | |
|  Acrel Cloud IoT Energy Management System | 1.System support all the meters across the country whose data has been sent to cloud server through 4G,WiFi or Ethernet . 2.Remote meter reading and data collection. 3.Provide IoT APP for mobile phone side and IoT WEB for PC side. 4.Generate energy data report of daily, monthly and annually period with year-on-yeay and period-on-period energy analysis. 5.Provide various alarm function to ensure a stable operation of the system and protect your property. 6.Offer 3-month free trial of system with full technical support as for a test phase or pilot project | \$0 (recommended in pilot project) \$xx/Year (For 10 Points) (Price for Host Service Only, recommended in pilot project) \$xxxx/Permanent (Limitless Points) (Price for Buy-out Service Only, recommended in late project) | 3-month Free Trail (Users don't need to rent a cloud server) \$xx to buy Hosting Service for 1 monitoring points connected to the system 1 year (Users don't need to rent a cloud server) 1-time charging of \$xxxx for Buy-out Service of permanent use (A cloud server need to be rent by users) | | |
| Cloud Server | | | | | |
| Name | Description | Server Renting Price (For Reference Only) | Remark | | |
|  Cloud Server | 1.Cloud Server could be rent on the cloud server provider like Amazon Cloud. 2.Users of Cloud IoT Energy Management System only need to rent cloud server when they choose buy-out service of our Cloud IoT System . And if they are using hosting service or 3-month free trial of our Cloud IoT System, we will use our own cloud server which has been rent on Amazon so that users don't need to rent a cloud server. 3.The quotation of Cloud Server is only a reference price that we have rent on Amazon Cloud. | According to Specs of Rented Cloud Server | Below cloud server specs could support 1000~2000 monitoings points connected to the system (Server: 8 core 16G Operation System: windows server 2016) | | |
| 4G Wireless Energy Meter | | | | | |
| Overview Picture | USAGE&MODULE NAME | DESCRIPTION & SPECIFICATION | QUANTITY | FOB UNIT PRICE (USD) | AMOUNT (USD) |
|  | 1-phase 4G Wireless Energy Meter ADW310-D16-4GHWC | Communication: 4G (MODBUS-TCP, MQTT) & RS485 (MODBUS-RTU) Rated Voltage: 220-264Vac L-N Rated Current: 20(100)A AC (via paired external CTs) | 10 pcs | \$ (Including both Energy meter and External CTs) | |
| | Paired 1* External Split-core Current Trasformer | Current Ratio: 100A/25mA AC Aperture: φ16mm Appliaction: Paired with ADW310-D16-WF/C for current input | 10 pcs | | |

5. Acrel IoT Energy Monitoring System (Partail Introduction)

Acrel IoT Energy Monitoring System could be access in 2 different ways:

(1) Access through WEB on your computer.

Access port: <https://iot.acrel-eem.com/>

(2) Access through APP on your mobile phone

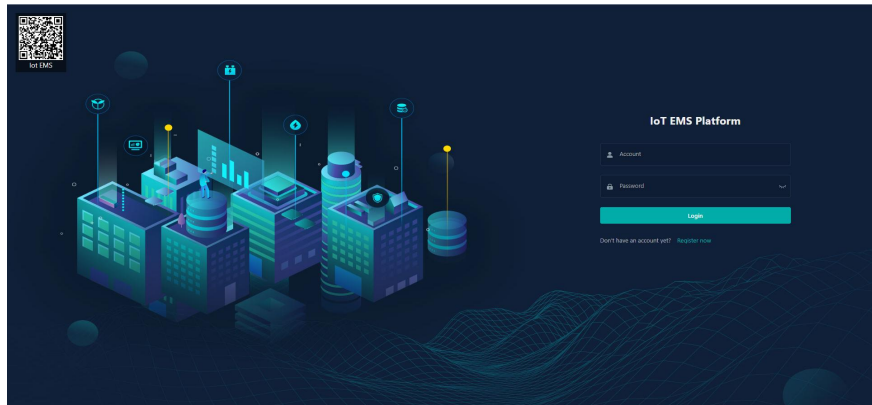
Download Link: <https://play.google.com/store/apps/details?id=com.acrel.iotems>

(1) WEB Accesss (Computer):

Access Port: <https://iot.acrel-eem.com/>

Test Account Name: acrel

Test Account Password: 123456

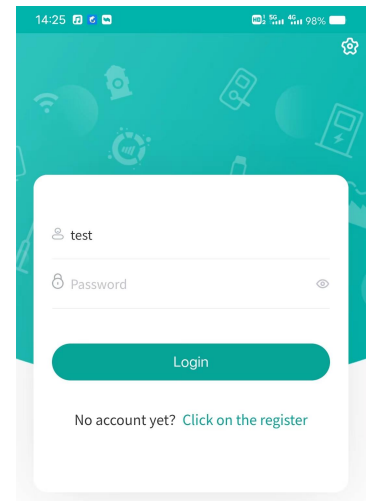
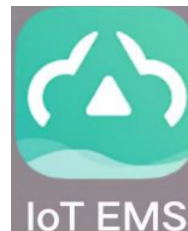


(2) APP Accesss (Mobile):

Download Link: <https://play.google.com/store/apps/details?id=com.acrel.iotems>

Test Account Name: acrel

Test Account Password: 123456

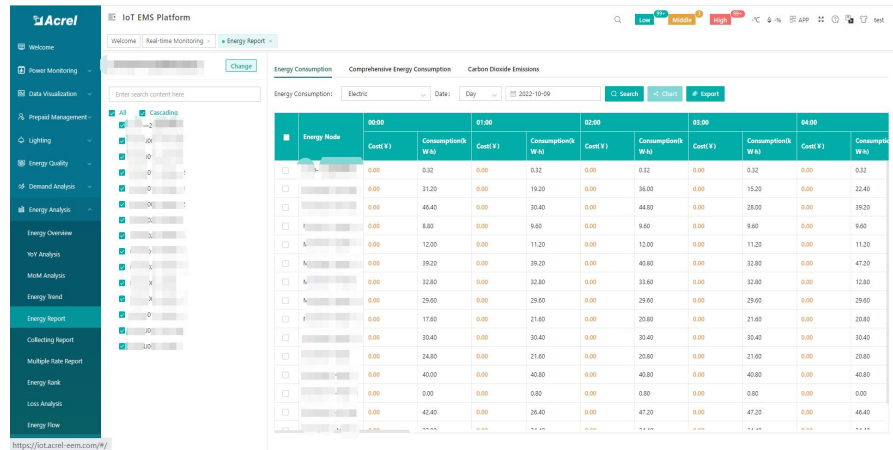


5. Acrel IoT Energy Monitoring System (Partail Introduction)

Main Function of WEB side System:

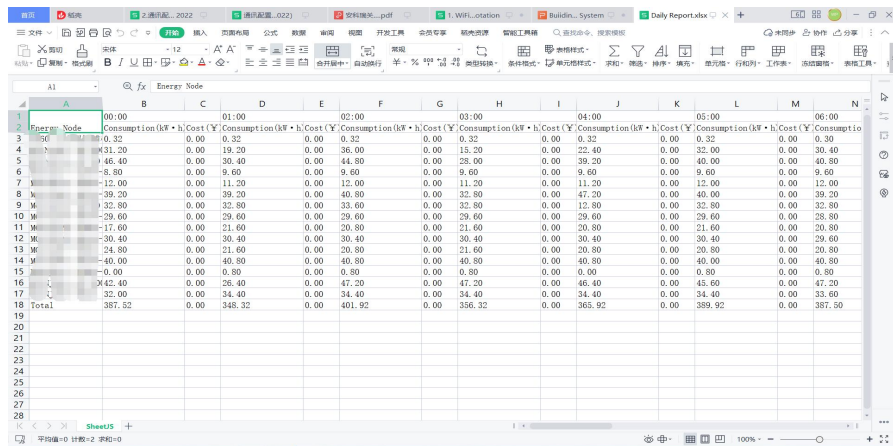
- (1) Devices List (2) History Curve (3) Electricity Parameters Report (4) Energy Consumption Report (Daily, Monthly, Yearly) (5) User Report

(4) Energy Report (Daily): This Interface show the daily energy consumption report (calculated by forward active energy)



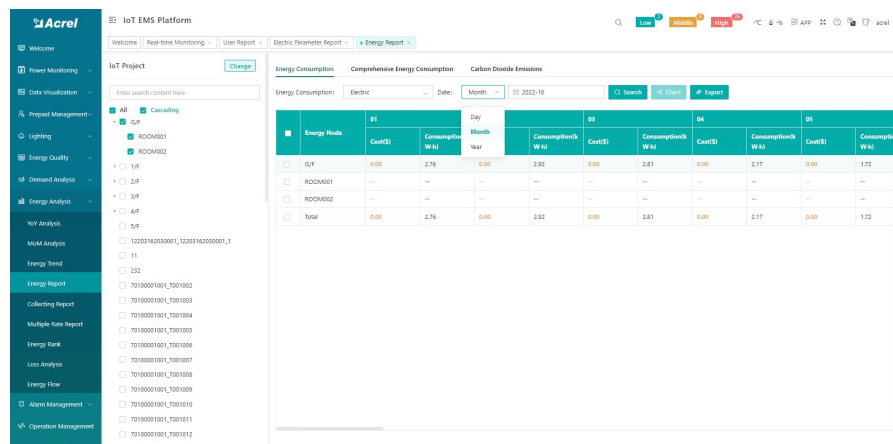
| Energy Node | 00:00 | | 01:00 | | 02:00 | | 03:00 | | 04:00 | |
|-------------|----------|------------------|----------|------------------|----------|------------------|----------|------------------|----------|------------------|
| | Cost (¥) | Consumption (Wh) | Cost (¥) | Consumption (Wh) | Cost (¥) | Consumption (Wh) | Cost (¥) | Consumption (Wh) | Cost (¥) | Consumption (Wh) |
| ... | 0.00 | 0.32 | 0.00 | 0.32 | 0.00 | 0.32 | 0.00 | 0.32 | 0.00 | 0.32 |
| ... | 0.00 | 31.20 | 0.00 | 19.20 | 0.00 | 36.00 | 0.00 | 22.40 | 0.00 | 30.40 |
| ... | 0.00 | 46.40 | 0.00 | 30.40 | 0.00 | 44.80 | 0.00 | 28.00 | 0.00 | 40.00 |
| ... | 0.00 | 8.80 | 0.00 | 9.60 | 0.00 | 9.60 | 0.00 | 9.60 | 0.00 | 9.60 |
| ... | 0.00 | 12.00 | 0.00 | 11.20 | 0.00 | 12.00 | 0.00 | 11.20 | 0.00 | 12.00 |
| ... | 0.00 | 39.20 | 0.00 | 39.20 | 0.00 | 40.80 | 0.00 | 32.80 | 0.00 | 32.80 |
| ... | 0.00 | 32.80 | 0.00 | 32.80 | 0.00 | 33.60 | 0.00 | 30.40 | 0.00 | 30.40 |
| ... | 0.00 | 29.60 | 0.00 | 29.60 | 0.00 | 29.60 | 0.00 | 29.60 | 0.00 | 29.60 |
| ... | 0.00 | 17.60 | 0.00 | 21.60 | 0.00 | 20.80 | 0.00 | 21.60 | 0.00 | 21.60 |
| ... | 0.00 | 30.40 | 0.00 | 30.40 | 0.00 | 20.80 | 0.00 | 20.80 | 0.00 | 20.80 |
| ... | 0.00 | 24.80 | 0.00 | 21.60 | 0.00 | 20.80 | 0.00 | 20.80 | 0.00 | 20.80 |
| ... | 0.00 | 40.00 | 0.00 | 40.80 | 0.00 | 40.80 | 0.00 | 40.80 | 0.00 | 40.80 |
| ... | 0.00 | 0.00 | 0.00 | 0.80 | 0.00 | 0.80 | 0.00 | 0.80 | 0.00 | 0.80 |
| ... | 0.00 | 42.40 | 0.00 | 26.40 | 0.00 | 47.20 | 0.00 | 47.20 | 0.00 | 46.40 |
| Total | 387.52 | 348.32 | 401.92 | 356.32 | 365.92 | 389.92 | 387.50 | | | |

(4) Energy Report (Daily): This daily energy report could be also export to computer in "Excel" format



| Energy Node | 00:00 | 01:00 | 02:00 | 03:00 | 04:00 | 05:00 | 06:00 |
|-------------|--------|--------|--------|--------|--------|--------|--------|
| ... | 0.32 | 0.32 | 0.32 | 0.32 | 0.32 | 0.32 | 0.30 |
| ... | 31.20 | 19.20 | 36.00 | 22.40 | 32.00 | 30.40 | |
| ... | 46.40 | 30.40 | 44.80 | 28.00 | 40.00 | 46.80 | |
| ... | 8.80 | 9.60 | 9.60 | 9.60 | 9.60 | 9.60 | |
| ... | 12.00 | 11.20 | 12.00 | 11.20 | 12.00 | 12.00 | |
| ... | 39.20 | 39.20 | 40.80 | 47.20 | 40.00 | 39.20 | |
| ... | 32.80 | 32.80 | 33.60 | 32.80 | 32.80 | 32.80 | |
| ... | 29.60 | 29.60 | 29.60 | 29.60 | 29.60 | 29.60 | |
| ... | 17.60 | 21.60 | 20.80 | 21.60 | 21.60 | 20.80 | |
| ... | 30.40 | 30.40 | 30.40 | 30.40 | 30.40 | 29.60 | |
| ... | 24.80 | 21.60 | 20.80 | 21.60 | 20.80 | 20.80 | |
| ... | 40.00 | 40.80 | 40.80 | 40.80 | 40.80 | 40.80 | |
| ... | 0.00 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | |
| ... | 42.40 | 26.40 | 47.20 | 47.20 | 46.40 | 47.20 | |
| Total | 387.52 | 348.32 | 401.92 | 356.32 | 365.92 | 389.92 | 387.50 |

(4) Energy Report (Monthly & Yearly): Same as daily energy report, monthly and yearly energy report could be also checked on platform and exported in "Excel" format.



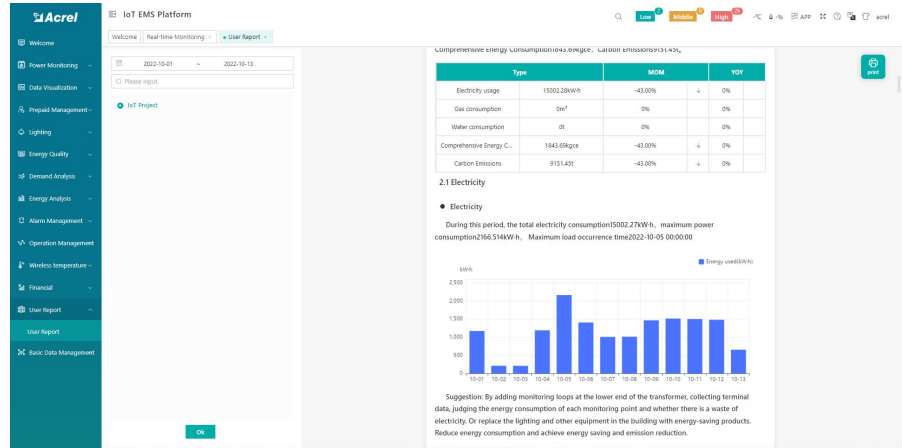
| Energy Node | Day | | Month | | Year | |
|-------------|----------|------------------|----------|------------------|----------|------------------|
| | Cost (¥) | Consumption (Wh) | Cost (¥) | Consumption (Wh) | Cost (¥) | Consumption (Wh) |
| ... | 0.00 | 2.76 | 0.00 | 2.82 | 0.00 | 2.17 |
| ... | 0.00 | 2.76 | 0.00 | 2.82 | 0.00 | 2.17 |
| Total | 0.00 | 2.76 | 0.00 | 2.82 | 0.00 | 2.17 |

5. Acrel IoT Energy Monitoring System (Partail Introduction)

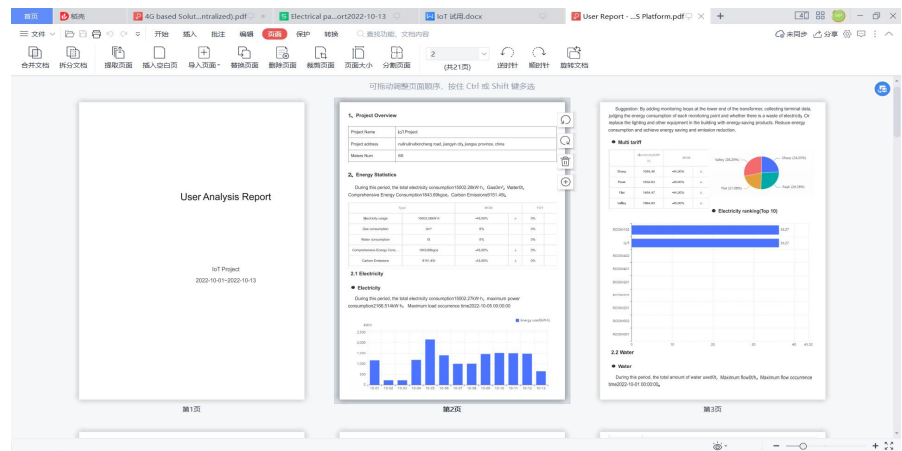
Main Function of WEB side System:

- (1) Devices List (2) History Curve (3) Electricity Parameters Report (4) Energy Consumption Report (Daily, Monthly, Yearly) (5) User Report

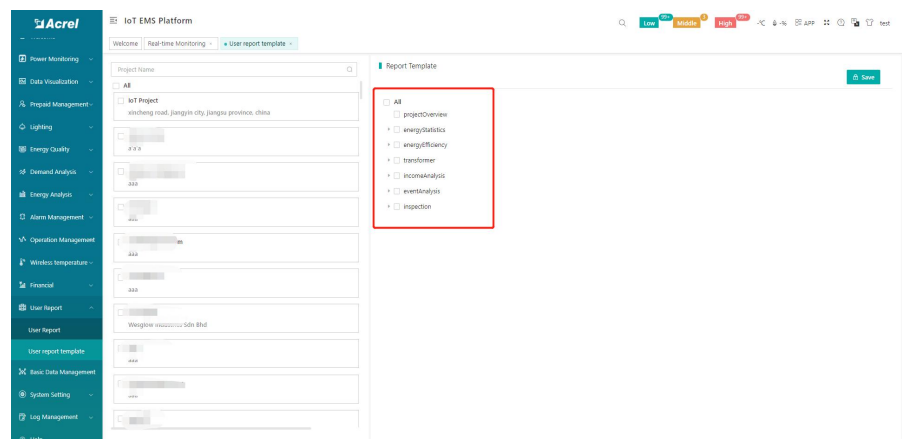
(5) User Report: A comprehensive user report including project overview, energy report, energy analysis and etc could be check on platform



(5) User Report: User report could be exported in "PDF" format into your PC for convenient check and storage.



(5) User Report: User report support template customization in buy-out service of Acrel IoT Energy Monitoring System.

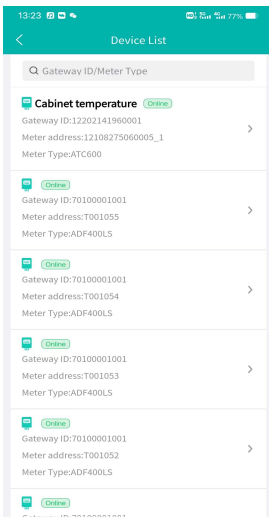


5. Acrel IoT Energy Monitoring System (Partail Introduction)

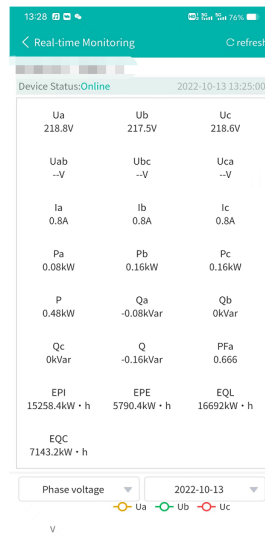
Main Function of APP side System:

(1) Devices List (2) History Curve (3) Electricity Parameters Report (4) Energy Trend (5) Energy Consumption Report (Daily, Monthly, Yearly)

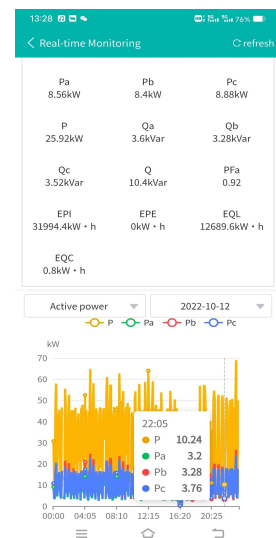
Noted: Since APP side and WEB side of Acrel IoT Energy Monitoring System share the same data, normally recommend our user to add the devices to their account using APP and check the data using WEB platform.



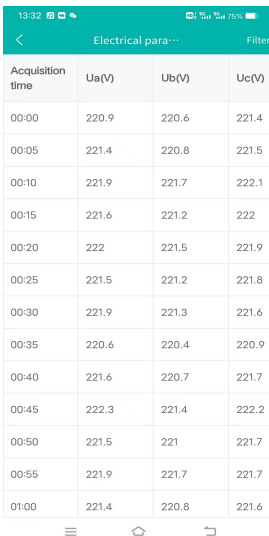
(1) Device List



(2) History Curve

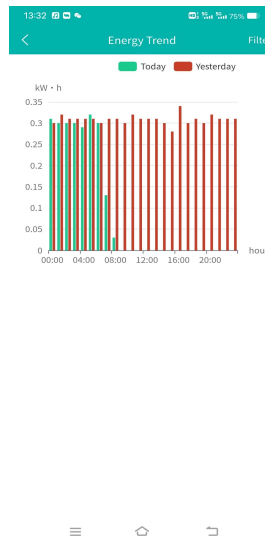


(2) History Curve

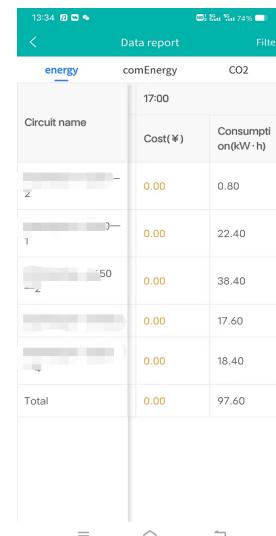


| Acquisition time | Ua(V) | Ub(V) | Uc(V) |
|------------------|-------|-------|-------|
| 00:00 | 220.9 | 220.6 | 221.4 |
| 00:05 | 221.4 | 220.8 | 221.5 |
| 00:10 | 221.9 | 221.7 | 222.1 |
| 00:15 | 221.6 | 221.2 | 222 |
| 00:20 | 222 | 221.5 | 221.9 |
| 00:25 | 221.5 | 221.2 | 221.8 |
| 00:30 | 221.9 | 221.3 | 221.6 |
| 00:35 | 220.6 | 220.4 | 220.9 |
| 00:40 | 221.6 | 220.7 | 221.7 |
| 00:45 | 222.3 | 221.4 | 222.2 |
| 00:50 | 221.5 | 221 | 221.7 |
| 00:55 | 221.9 | 221.7 | 221.7 |
| 01:00 | 221.4 | 220.8 | 221.6 |

(3) Parameter Report



(4) Energy Trend



| energy | comEnergy | CO2 |
|--------------|-----------|------------------|
| Circuit name | Cost(¥) | Consumption(kWh) |
| Z | 0.00 | 0.80 |
| T | 0.00 | 22.40 |
| -50 | 0.00 | 38.40 |
| | 0.00 | 17.60 |
| | 0.00 | 18.40 |
| Total | 0.00 | 97.60 |

(5) Energy Report