

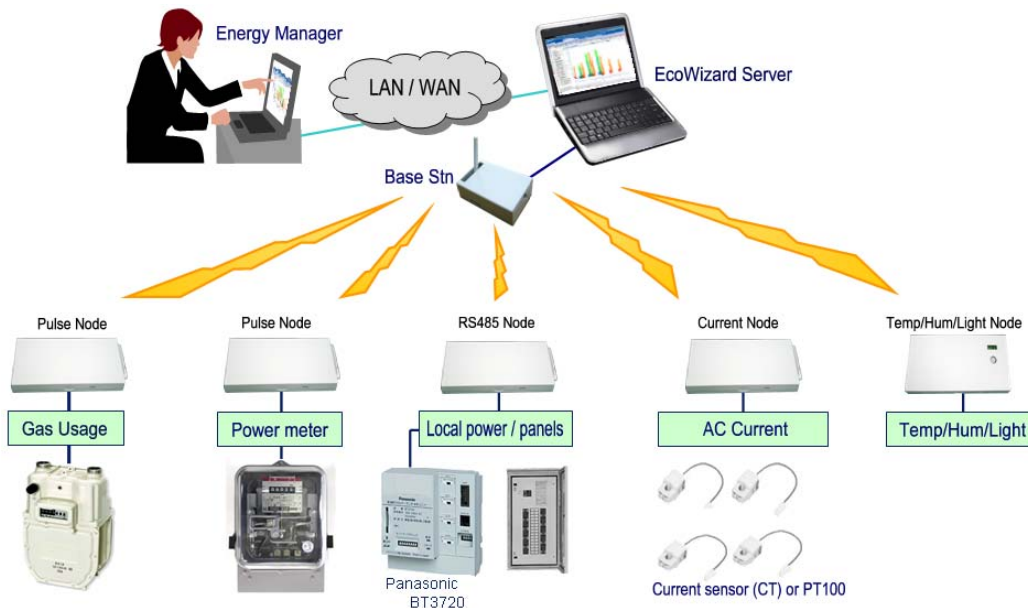
## Visualize Energy Maximize Efficiency

Energy Monitoring System using Wireless Sensor Networks



Measure electric consumptions, temperatures, gas, etc. with cutting edge wireless technology and visualize your data with a simple familiar graphical interface.

That is the **EcoWizard** System.



## ❖ Complete Suite of the Products

- Sensors for electricity, power, water, gas, temperature, etc.
- Data collection and storage in one location
- Hardware and software included

## ❖ Easy to use Graphs

- Numerous options and functionality with intuitive graphical display
- No software installation required
- Familiar web browser (i.e. Internet Explorer) to view and manage data.

## ❖ Easy Installation due to Wireless

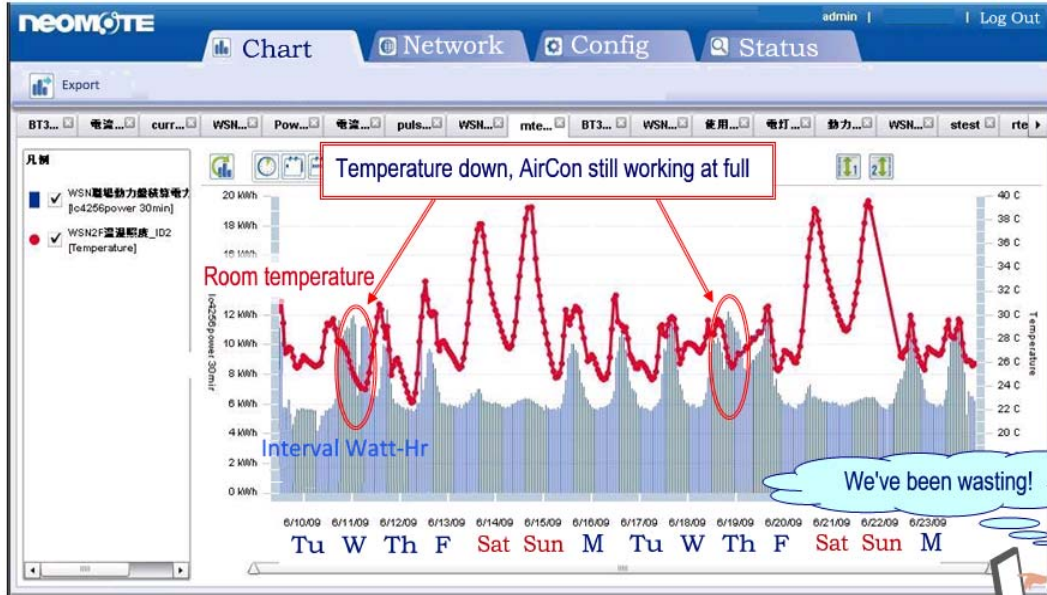
- Compared with wired systems, hardware installation and wiring is cost effective and efficient
- Modification of layout or installation of additional data points or layout change is effortless

## ❖ Real-time Monitoring and Data logging.

- Browse from any PC in the same LAN or via the Internet.
- The alert function sends e-mail alert when sensor data exceeds the set value.

## ❖ Proven NeoMote reliability

- EcoWizard utilizes NeoMote (radio hardware that has been deployed in over 30,000 units, made by Sumitomo Precision Products)

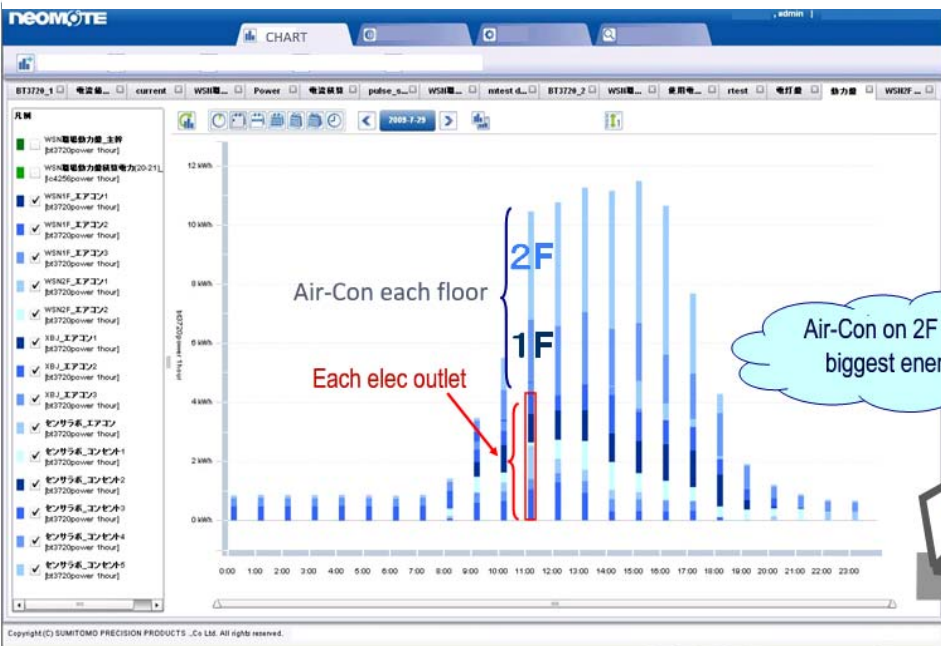


< Easily View Data Integration  
e.g.: Understand relationship between temperature and Air conditioner usage

Charts are configurable

Data can be retrieved using a browser from any PC on the same LAN, to see past and real-time data of energy usage within the system.

Data can be exported to a CSV file to facilitate the creation of energy reports.



< Stacked Bar Graphs


Users can easily determine energy usage of each piece of equipment and their combined power usage.

## Receive E-Mail alerts

You can be notified anytime (24hrs) to changes

| Features               | Description   |
|------------------------|---|
| Sensor Data Management | All sensor data from each NeoMote is collected in real-time (User authorization levels available)   |
| Data display           | <ul style="list-style-type: none"> <li>- Data is categorized (e.g. light, Air-con, breaker panel) and shown on stacked bar-graphs / line graphs. Cumulative power consumption is displayed in the interval of 10min/30min/1hr/1day, etc.</li> <li>- Display range is configurable : hour, day, week, month, year</li> <li>- Ability to overlay past data to current chart (e.g. to compare last week's trend vs this week's trend)</li> </ul> |
| Data output            | Data is exportable in CSV for easy reporting  |
| Network monitor        | Wireless network topology and map display. Shows wireless data routing and link quality between each node.  |
| Alerts                 | Email alerts are triggered if sensor value crosses the set value or threshold.  |
| Maintenance            | Database backup capability, Wireless radio strength assessment tool   |

| Node Types     | Model Nr. | Sensor                    | Description   |
|----------------|-----------|---------------------------|---|
| Elec Power     | WS-Z2016  | Power / cumulative power  | RS485 input (connected to optional power meter BT3720 and CTs), 1Phase2Lines/1Phase3lines/ 3Phase3lines |
| Elec Current   | WS-Z2017  | Ave/Max/Min/Cumul Current | 4ch input, Current Transformer (option) 5A to 500A rms +/-6% 50 or 60Hz sinusoidal                      |
| Pulse          | WZ-Z1013  | Power meter/ gas / water  | 4ch input, Non biased A contact or open collector, width min 30mS, space min 60mS (max 16.7Hz)          |
| Indoor climate | WS-Z1014  | Temp/humidity/light       | -10 to +45C res. 0.01C, 30 to 80%/-10%RH, 1 to 50000lx 10%  |
| Temperature    | WS-Z1018  | Temp probe (PT100/RTD)    | 4ch input, Temp probe PT100 class-B (option), -30 to +70C resolution 0.01C                              |

| Specification |                        | Remarks                                      | Base Station  |
|---------------|------------------------|--|---|
| Radio freq    | 2.4GHz 15 ch 802.15.4  | RF power:10mW for WS-Z2***, 1mW for WS-Z1*** | Connecting the base node WB-Z201 to the base server (provided by Crossbow Japan) creates the EcoWizard base station.<br> |
| Radio range   | Max 800 m              | Dependent on model and surroundings          |   |
| Network type  | Multi-hop ad-hoc       | Automatic routing / automatic healing        |   |
| Power supply  | 3.3Vdc (500uA to 50mA) | AC adopter (AA drycell option for WS-Z1***)  |   |
| Size/Weight   | 219x97x24mm 220g       | Without projections. Wt. not incl batteries  |   |

**Crossbow Japan Ltd.**

[www.xbow.jp/neokit-e.html](http://www.xbow.jp/neokit-e.html)

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