

# Energy Box with Real-time Power Monitoring

## EC1000

The EC1000 Energy Box is the latest evolution of NRGence™ - ATEN's energy intelligence solutions. It is the intelligent, cost effective solution to monitor ATEN's Energy PDUs - to ensure safe and effective energy-saving power management.

The EC1000 Energy Box has four Energy Sensor ports to connect to four Energy PDU modules and four Environment Sensor ports for external sensors to monitor environmental conditions. Each environmental sensor can provide measured readings of temperature, humidity, and differential pressure from separate areas of a data room, giving a wide range of monitoring and protection you need.

The Energy Box allows power and environmental data to be monitored and displayed at the rack or remotely for easy viewing and maintenance. The Energy Box is a standalone unit with Over IP monitoring that is controlled by Web GUI or ATEN's eco DC (Energy & DCIM Management / Web GUI) software.

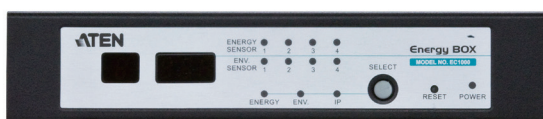
The EC1000 Energy Box features real-time status, system logs, threshold alerts, and event notifications. The EC1000 logs power and environmental conditions according to customizable minimum/maximum thresholds set for electrical current, temperature, humidity, and differential pressure.

Remote monitoring offers secure access with 128-bits SSL encryption, and customizable account policies for user management. Remote authentication supports RADIUS and additional management interfaces including HTTP, HTTPS, and SNMPv1 & v2 & v3 (Read, Write, Trap). Event notifications can be monitored via Syslog / SMTP / SNMP trap and audible alarms for real-time local and remote alerting.

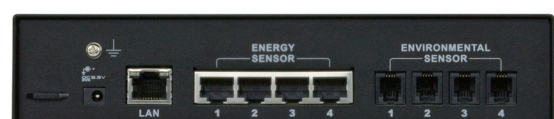
When used in conjunction with ATEN's Energy PDUs\* and eco DC (Energy & DCIM Management / Web GUI), the EC1000 allows you to conveniently upgrade your cabinet with remote energy management functionality to make your server room go green quickly and cost-effectively.

**Note:** \* ATEN series of low cost Energy PDUs (PE1216 / PE1324) and Energy & DCIM Management Web GUI – eco DC are available at [www.aten.com](http://www.aten.com).

Front View



Rear View



## Features

### Operation

- Space saving 1U rack mounting with front and rear mounting
- 4 RJ-45 Energy Sensor Ports to monitor four Energy PDU currents (0A to 32A per port)
- 4 RJ-11 Environment Sensor Ports to monitor temperature, humidity, and differential pressure\*
- Maximum Amperage Monitor 32A@100V~240V (Energy Box)
- 3 digit 7 segment front panel LED displays current / sensor / IP address information
- Threshold monitoring for:
  - Current
  - Temperature\*
  - Humidity\*
  - Differential pressure\*
- Threshold alerting through:
  - Local: audible alarm and LED lights
  - Remote: SMTP / SNMP trap / Syslog

### Management

- Front panel LED indicators for current, temperature\*, humidity\*, differential pressure\*, and IP address information at the Energy Box
- Remote real-time current, temperature\*, humidity\*, and differential pressure\* monitoring and management
- Management through eco DC (Energy & DCIM Management / Web GUI) or 3r party SNMP manager
- Supports name assignment for individual Energy PDUs
- Event Logging – 128 line event log
- Syslog support
- F / W upgradable

### Remote Access

- Remote management via TCP / IP using built in 10 / 100Mbps Ethernet port
- Management via built in browser based GUI
- Network Interfaces: TCP / IP, UDP, HTTP, HTTPS, SSL, SMTP, DHCP, NTP, DNS, 10Base-T/100Base-TX, auto sense, Ping
- Supports SNMP Manager V1, V2, V3

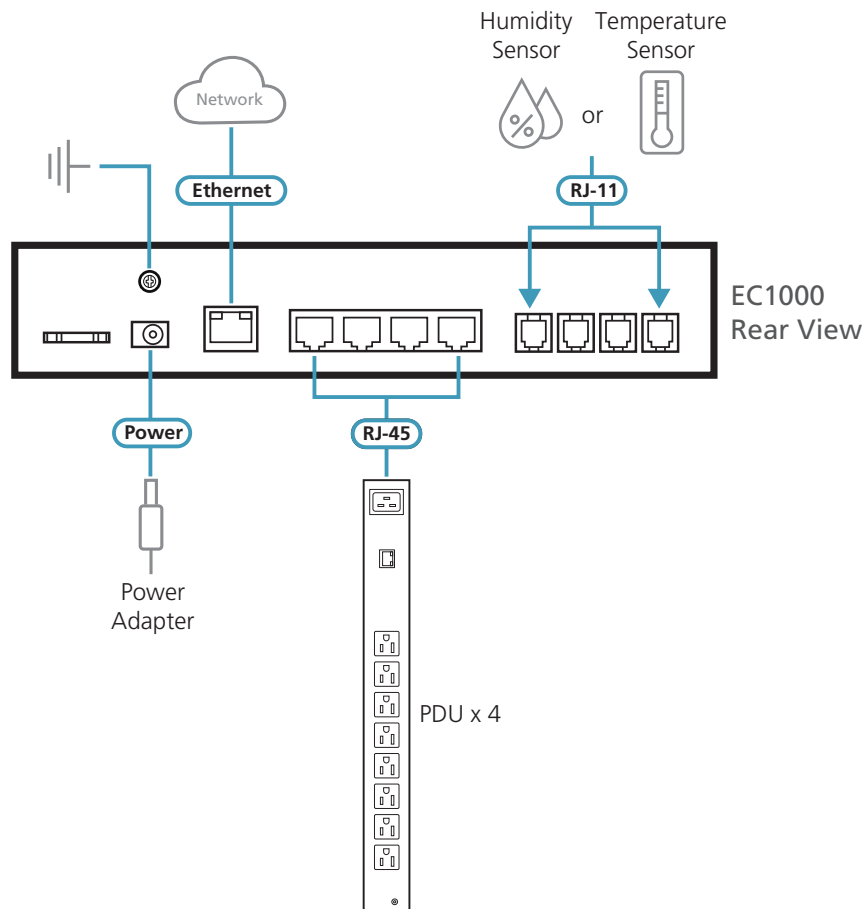
### Security

- Strong security features include password protection and advanced encryption technologies – utilizing 128-bit SSL
- RADIUS authorization and authentication

**Note:** \* Requires external sensors

## Highlights

|                                         |                                                                                                                                                                                                                                                                                                                    |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Real-time Monitoring</b>             | The EC1000 monitors the electrical current of 4 Energy PDU's, along with room temperature, humidity, and differential pressure using environmental sensors.                                                                                                                                                        |
| <b>Early Warning Notification</b>       | The EC1000 allows administrators to set custom thresholds. When levels exceed the user defined thresholds, designated recipients can receive alarm notifications via SMTP email, SNMP traps, or Syslog alerts. An audio alarm and flashing lights can also be set to alert administrators locally.                 |
| <b>External Authentication Supports</b> | The EC1000 supports login authorization management from external sources via RADIUS.                                                                                                                                                                                                                               |
| <b>Cost-effective Energy Management</b> | Using NRGence™ Energy PDUs and an EC1000 Energy Box utilized by the intuitive and user-friendly eco DC (Energy & DCIM Management / Web GUI) allows you to remotely and continuously monitor environment and power status, to optimize data center energy management by utilizing automated power analysis reports. |



## Specifications

|                               | EC1000                                                                                                                          |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| <b>Energy PDU Connections</b> | 4                                                                                                                               |
| <b>Port Selection</b>         | Pushbutton                                                                                                                      |
| <b>Connectors</b>             |                                                                                                                                 |
| Energy Sensor Port            | 4 x RJ-45 Female                                                                                                                |
| Environment Sensor Ports      | 4 x RJ-11 Female                                                                                                                |
| Power                         | 1 x DC Jack                                                                                                                     |
| LAN Ports                     | 1 x RJ-45 Female                                                                                                                |
| <b>Switches</b>               |                                                                                                                                 |
| Reset                         | 1 x Semi-recessed Pushbutton                                                                                                    |
| Selection                     | 1 x Selection Pushbutton                                                                                                        |
| <b>LEDs</b>                   |                                                                                                                                 |
| PDU Status                    | 4 (Orange)                                                                                                                      |
| Environment Sensor Status     | 4 (Green)                                                                                                                       |
| Selected                      | 1 digit 7-segment (Orange)                                                                                                      |
| Power                         | 1 (Blue)                                                                                                                        |
| Link                          | 1 (Orange/Green)<br>1 (Green)                                                                                                   |
| <b>Monitoring Range</b>       | 100 – 240V, 50/60Hz, 0A to 32A (per port)<br>LED Display Resolution: 0.1A<br>Precision: $\pm 0.1A @ 0 \sim 1A$ , $\pm 1\% > 1A$ |
| <b>Power Consumption</b>      | DC5V:2.93W                                                                                                                      |
| <b>Environmental</b>          |                                                                                                                                 |
| Operating Temperature         | 0 – 50°C                                                                                                                        |
| Storage Temperature           | -20 – 60°C                                                                                                                      |
| Humidity                      | 0 – 80% RH, Non-condensing                                                                                                      |
| <b>Physical Properties</b>    |                                                                                                                                 |
| Housing                       | Metal                                                                                                                           |
| Weight                        | 0.59 kg                                                                                                                         |
| Dimensions (L x W x H)        | 20.00 x 7.59 x 4.40 cm                                                                                                          |

## Optional Equipments

### Environment Sensors

Environment Sensors are optional accessories. You can use the EC1000 without sensors. However, if you want to have complete energy management of your data center with the full use of the EC1000, you need to use eco DC (Energy & DCIM Management / Web GUI)\* and install 4 sensors for each of the PDU rack locations to generate a complete energy-efficient data and chart.

| Part No. | Sensor                              |
|----------|-------------------------------------|
| EA1140   | Temperature                         |
| EA1240   | Temperature / Humidity              |
| EA1340   | Differential Pressure / Temperature |

**Note:** Please see [www.aten.com](http://www.aten.com) for more details.

Product information is subject to change without prior notice.

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