

# Energy Box W/Real Time Power Monitoring

## EC2004

- The EC2004 Energy Box is the latest evolution of NRGence™ - ATEN's energy intelligence solutions. EC2004 Energy Boxes provides instant real-time power management and energy-saving control for data centers— allowing you to upgrade and maintain your current IT power resources quickly and cost-effectively.

The EC2004 Energy Box has four Energy Sensor ports (2 Current Energy Sensors, 2 Current/Voltage Energy Sensors) to connect to four Energy PDU modules, four Environment Sensor ports and one 4-pin dry contact Rack Door Sensor port, these external sensors can monitor environmental conditions and rack door access. Each environmental sensor can provide measured readings of temperature, humidity, and differential pressure from separate areas of a room, giving a wide range of monitoring and protection you need.

The EC2004 Energy Box features real-time status, system logs, threshold alerts, and event notifications. The EC2004 logs power and environmental conditions according to customizable minimum/maximum thresholds set for electrical current, voltage, temperature, humidity, and differential pressure.

The EC2004 Energy Box allows power and environmental data to be monitored by display 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 Sensors software.

Remote monitoring offers secure access with 128bits 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/SNMP/ SNMP trap and audible alarms for real-time local and remote alerting.

When used in conjunction with ATEN's Energy PDUs\* and eco Sensors Energy Management Software\*, the EC2004 allows you to conveniently upgrade your cabinet with remote energy management functionality to make your server room go green quickly and cost-effectively.

\* ATEN series of low cost Energy PDUs (PE2220/PE2340) and energy management software – eco Sensors are available at [www.aten.com](http://www.aten.com).

● EC2004 front view



● EC2004 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, 2 Current Energy Sensors Ports, 2 Current/ Voltage Energy Sensors Ports)
- 4 RJ-11 Environment Sensor Ports to monitor temperature, humidity, and differential pressure\*
- 4-pin dry contact Rack Door Sensor status monitor
- 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, Voltage
  - ◇ 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/voltage, temperature\*, humidity\*, and differential pressure\* monitoring and management
- Management through eco Sensors Energy Management Software 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

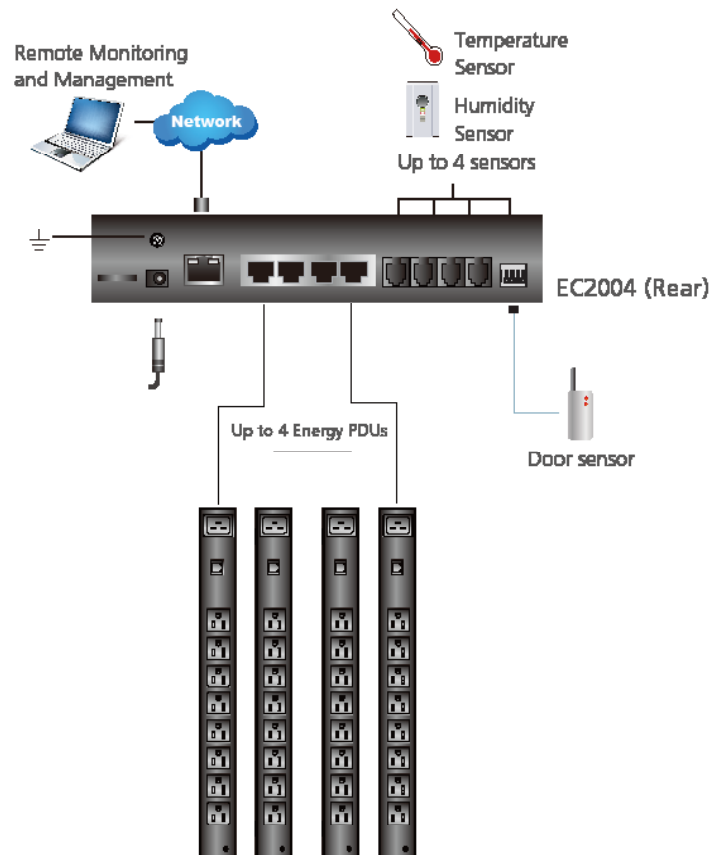
### Security

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

\* Requires external sensors

## Benefits

<b>Real-time Monitoring</b>	The EC2004 monitors the electrical current/voltage of 2 Energy PDU's, along with room temperature, humidity, and differential pressure using environmental sensors.
<b>Early Warning Notification</b>	The EC2004 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 Support</b>	The EC2004 supports login authorization management from external sources via RADIUS.
<b>Cost-effective Energy Management</b>	Using NRGence™ Energy PDUs and an EC2004 Energy Box utilized by the intuitive and user-friendly eco Sensors management software- allows you to remotely and continuously monitor environment and power status, to optimize data center energy management by utilizing automated power analysis reports.



## Specifications

Function		EC2004	
Connectors	Power	1 x DC Jack	
	Current Monitor	2x RJ-45	
	Voltage/Current Monitor	2x RJ-45	
	Env Sensor	4 x RJ-11	
	Door Sensor	4 Pin Dry Contact	
	LAN	1 x RJ-45 Female with LEDs (Silver/LED Orange/Green)	
LEDs	Monitored Sensor Port Status	4(Green)	
	Port Numbers	2 digit 7-segment (Orange)	
	current / sensor / IP	3 (Green)	
	Current /sensor / voltage/ IP Address	3 digit 7-segment (Orange)	
	Power	1 (Blue)	
	Door sensor	1 (Red)	
	LAN	10M / 100Mbps	1(Orange/Green)
		Link	1(Green)
Sensor		4 (Green)	
Switches	Reset	1 x Semi-recessed Pushbutton	
	Selection	1 x Selection Button , 1 x Up , 1 x Down	
Monitoring Range		100~240V~; 50/60Hz; 0A to 32A , LED Display Resolution 0.1A Voltage range: 100VAC ~ 250VAC +/-1% Power range: 100W ~ 5000W +/- 2% Current range: 0.1~1A ±0.1A, 1A~20A ±1%	
Operating Temperature		0 to 50°C	
Storage Temperature		-20 to 60°C	
Operating / Storage Humidity		0 – 80% RH, Non-Condensing	
Housing		Metal	
Weight		0.64 kg	
Size (WxDxH)		20.00 x 7.59 x 4.20 cm	

## Optional

### Environment Sensors

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

### Door Sensors

Part No.	Sensor
EA1440	Photo Door Sensor
EA1441	Inductive Proximity Door Sensor
EA1442	Reed Door Sensor

