

## AlertWerks ServSensor Monitoring Hubs and Intelligent Sensors

Guard your mission-critical IT equipment against physical threats—remotely.

- › Monitors temperature, humidity, water, airflow, motion, and voltage.
- › Notifies you by audible alarms, e-mail, SNMP, text messages, or fax.



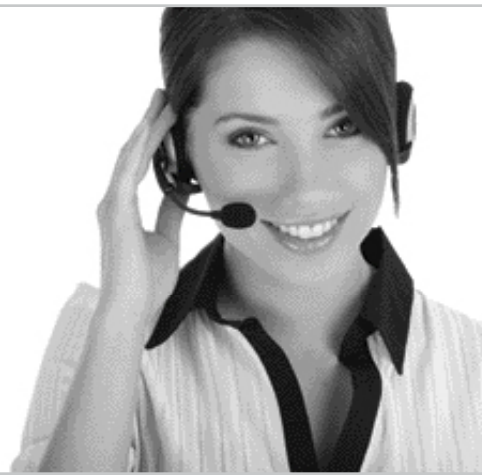
### About Black Box

Black Box Network Services is your source for more than 10,000 networking and infrastructure products. You'll find everything from cabinets and racks and power and surge protection products to media converters and Ethernet switches—all supported by free, live Tech Support.

---

#### FREE, Live, 24/7 Tech Support

We're here to help! If you have any questions about our products, contact Black Box Network Services and talk to Tech Support in your own language.



### Why buy from Black Box?

#### Exceptional value. Exceptional Tech Support. Period.

Recognize any of these situations?

- You wait more than 30 minutes to get through to a vendor's tech support.
- The so-called "tech" is a customer service rep who can't help you.
- You don't have a purchase order number or a credit card so the tech won't help you.

According to a survey by Data Communications magazine, 90% of network managers surveyed say that getting the technical support they need is extremely important when choosing a vendor. But even though network managers pay anywhere from 10 to 20% of their overall purchase price for a basic service and support contract, the technical support and service they receive falls far short of their expectations—and certainly isn't worth what they paid.

At Black Box, we guarantee the best value and the best support. You can even consult our Tech Support experts before, during, and long after your transaction. It's all part of our commitment to your success.

## Table of Contents

|                                                                                                 |       |
|-------------------------------------------------------------------------------------------------|-------|
| Environmental Monitoring Solutions .....                                                        | 4     |
| Buyer's Guide .....                                                                             | 5     |
| AlertWerks Products .....                                                                       | 6-11  |
| ServSensor V4E (EME134A) .....                                                                  | 6-7   |
| ServSensor Expansion Units (EME1X8, EME1P8, EME1DC16) .....                                     | 6-7   |
| Cameras (SCA201, SCE201, EME1FC-NTSC, EME1FC-PAL).....                                          | 7     |
| ServSensor Hubs (EME108A-EME110A) .....                                                         | 8-9   |
| ServSensor Junior (EME102A-EME104A).....                                                        | 8-9   |
| Dry Contacts for ServSensor Junior (EME1DC-015, EME1DC-060, EME1DC-100, EME1DC-UPG) .....       | 8-9   |
| ServSensor Contact (EME111A-20-EME113A-20, EME112A-60-EME113A-60).....                          | 8-9   |
| Intelligent Sensors .....                                                                       | 10-11 |
| Temperature Sensors (EME1T1-001, EME1T2-005, EME1T3-015, EMEDTEMP, EMEDTEMP4, EMEDTEMP8) .....  | 10    |
| Dual Temperature/Humidity Sensors (EME1TH1-001, EMET1H2-005, EME1TH3-015) .....                 | 10    |
| Thermocouples (EME1TCPJ, EME1TCPK, EME1TCAJ-005, EME1TCAK-005, EME1TCBJ-005, EME1TCBK-005)..... | 10    |
| Water Sensors (EME1W1-015, EME1W1-060, EMETW1-100) .....                                        | 10    |
| Rope Water Sensors (EMERW-020, EMERW-010) .....                                                 | 10    |
| Intelligent Rope Water Sensors (EMELW-020, EMELW-010).....                                      | 10    |
| Security Sensors/Contacts (EME1Y1-015, EME1Y1-060, EME1Y1-100) .....                            | 10    |
| Airflow Sensor (EME1F1-005) .....                                                               | 10    |
| Dry-Contact Sensors (EME1K1-015, EME1K1-060, EME1K1-100).....                                   | 10    |
| Voltage Sensors (EME1A1-005, EME1D1-005).....                                                   | 11    |
| Power Monitors (EME1PM, EME2PM) .....                                                           | 11    |
| Smoke Detector Sensor (EME1S2-005).....                                                         | 11    |
| 4-20 mA Converter (EME1C1-005) .....                                                            | 11    |
| Digital I/O Sensors (EME1J8-005, EME1KJ8-005) .....                                             | 11    |
| Siren and Strobe Light (EME1SS-005) .....                                                       | 11    |
| Power Switch (EME1P1-005) .....                                                                 | 11    |
| Motion Detector Sensor (EME1M1-005-R2).....                                                     | 11    |

We are here to help! If you have any questions about your application, our products, or this brochure, please contact Black Box FREE Tech Support. Go to [blackbox.eu](http://blackbox.eu) and contact us. You'll be live with one of our technical experts in less than 30 seconds.

# Guard your mission-critical IT equipment against physical



## Beyond virus protection.

It has become almost automatic to protect your data center by backing up your servers, installing firewalls and virus protection, and keeping the protection up-to-date.

But what about more tangible threats? Do you have hot spots in your racks? If the cooling system shuts down, how will you know when temperatures climb out of control? Are you alerted to humidity changes or water leaks that threaten your equipment?

Planning for the unexpected is a critical task because there are more systems performing mission-critical functions than ever before. These systems are often deployed without the proper environmental infrastructure to support them. Equipment density is increasing constantly, which is creating more stress on ventilation and power.

That's where Black Box's environmental monitoring systems enter the picture.

## The top three IT risks:

### 1. Environmental disruption.

The number one cause of downtime for remote locations, environmental problems go beyond fires and floods and affect as much as 30% of a company's mission-critical infrastructure. Cooling and power are key points of exposure and increase as equipment density does.

### 2. Unnecessary risk.

When systems are housed in less-than-optimal settings, or are in remote and unsupervised locations, any error causes downtime. Yet, it's not practical to have someone babysitting the servers. We offer more effective ways to keep track of your equipment.

### 3. Sabotage.

Regardless of the probability, terrorism is now something each of us must plan for. Your systems can also be brought down from within if the proper security safeguards are not in place.

## What's an environmental monitoring system?

Environmental monitoring products enable you to actively monitor the conditions in your rack, server room, data center, or anywhere else you need to protect critical assets. Conditions monitored include extreme temperatures, humidity, power spikes and surges, water leaks, smoke, and chemical materials. With proper environmental monitoring, you're alerted to any conditions that could have an adverse effect on your mission-critical equipment. These products can also alert you to potential damage from human error, hacking, or prying fingers.

Environmental monitors consist of three main elements: a base unit, probes or sensors, and network connectivity and integration. The base units may contain one or more built-in sensors, as well as ports for hooking up external probes. Additionally, they include an Ethernet port and have software for remote configuration and graphing. This software may also work with existing network management software, such as SNMP systems.

## Features:

### Measurement (see chart below).

The environmental monitoring appliance displays the values measured by the attached probes, e.g. temperature, humidity, airflow, status of dry contact, door, motion detector, and other sensors.

### Data collecting and graphing (see chart below).

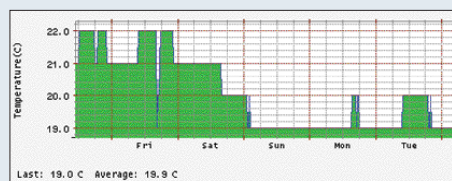
The measurements are periodically stored in the internal memory or external storage media and displayed as graphs.

### Alerting (see chart on facing page).

When the measured value exceeds the predefined threshold, it triggers an alert: a blinking LED on the front panel, an audible alarm, SNMP trap, e-mail, etc. The environmental monitoring appliance can also activate an external alarm system like a siren or strobe light.

|                  |               |
|------------------|---------------|
| Temp Rack 03     | 66° F (19° C) |
| Humidity Rack 03 | 34%           |

### Measurement



Data Collecting and Graphing

## Benefits of environmental monitoring:

- Reduced downtime—When things go wrong, you're the first to know. Minimize downtime by being alerted about conditions that cause damage to servers and other network devices.
- Increased profits—Black Box environmental monitoring systems are easy to implement. Also, they help you cut replacement equipment costs and redistribute your workforce more effectively.
- Increased employee satisfaction—With built-in notification features like e-mail, SMS, and SNMP traps, a remote monitoring system enables employees to better manage their work.



## Applications:

The Black Box AlertWerks System consists of SNMP-enabled, Web-based monitors that alert the user to any abnormal conditions. AlertWerks monitors multiple environmental conditions, including temperature, humidity, airflow, smoke, security, and voltage. Black Box has complete solutions for a variety of applications, including:

- Data center monitoring
- Computer room monitoring
- Rackmount industrial equipment
- Telecommunications
- UPS/battery backup
- Educational institutions
- Food and beverage applications
- Buildings/warehouses
- Air conditioner/refrigerants/freezer monitoring
- Greenhouses

# threats— from temperature extremes to water damage.

Buyer's Guide | AlertWerks Sensor Hub Features

For product details, see pages 6–9 or go to [blackbox.com](http://blackbox.com).

|                                             | ServSensor Junior (EME102A) | ServSensor (EME108A) | ServSensor V4E (EME134A) |
|---------------------------------------------|-----------------------------|----------------------|--------------------------|
| <b>Features</b>                             |                             |                      |                          |
| Cameras supported                           | —                           | —                    | 4                        |
| Dry contacts supported                      | 10*                         | 20 or 60             | 20 or 60                 |
| Intelligent sensors supported               | 2                           | 8                    | 8                        |
| Connect voice modem                         | —                           | —                    | Yes†                     |
| Connect GSM/GPRS modem                      | —                           | —                    | Yes‡                     |
| External microphone                         | —                           | —                    | Yes                      |
| External speaker                            | —                           | —                    | Yes                      |
| <b>Notification Actions</b>                 |                             |                      |                          |
| Send e-mail alerts                          | Yes                         | Yes                  | Yes                      |
| SNMP traps                                  | Yes                         | Yes                  | Yes                      |
| Send SMS alerts                             | Yes§                        | Yes§                 | Yes**                    |
| Send MMS alerts                             | —                           | —                    | Yes**                    |
| E-mail/SMS alerts if phone line fails       | —                           | —                    | Yes**                    |
| Control relay                               | Yes                         | Yes                  | Yes                      |
| FTP upload                                  | —                           | —                    | Yes                      |
| Picture log                                 | —                           | —                    | Yes                      |
| Skype call alerts                           | —                           | —                    | Yes                      |
| Telephone call alerts                       | —                           | —                    | Yes**                    |
| Custom scripts                              | —                           | —                    | Yes                      |
| Fax                                         | —                           | —                    | Yes                      |
| Sound log                                   | —                           | —                    | Yes                      |
| Control siren & strobe light                | Yes                         | Yes                  | Yes                      |
| Mobile access                               | —                           | —                    | Yes                      |
| Wake up / shutdown                          | —                           | —                    | Yes                      |
| <b>Sensors</b>                              |                             |                      |                          |
| Temperature sensor                          | Yes                         | Yes                  | Yes                      |
| Water-resistant temperature sensor          | Yes                         | Yes                  | Yes                      |
| Daisychainable temperature sensor           | —                           | —                    | Yes                      |
| Temperature/humidity sensor                 | Yes                         | Yes                  | Yes                      |
| Water resistant temperature/humidity sensor | Yes                         | Yes                  | Yes                      |
| Water sensor                                | Yes                         | Yes                  | Yes                      |
| Security sensor                             | Yes                         | Yes                  | Yes                      |
| Airflow                                     | Yes                         | Yes                  | Yes                      |
| Dry contact                                 | Yes                         | Yes                  | Yes                      |
| AC voltage detector                         | Yes                         | Yes                  | Yes                      |
| Digital voltmeter                           | Yes                         | Yes                  | Yes                      |
| Power monitor sensor                        | —                           | —                    | Yes                      |
| 4-20 mA converter                           | Yes                         | Yes                  | Yes                      |
| Sensor controlled relay                     | Yes                         | Yes                  | Yes                      |
| 8 Port sensor relay                         | —                           | —                    | Yes                      |
| Smoke detector                              | Yes                         | Yes                  | Yes                      |
| Motion detector                             | Yes                         | Yes                  | Yes                      |
| Siren & strobe light                        | Yes                         | Yes                  | Yes                      |
| Temperature sensor as thermostat            | Yes                         | Yes                  | Yes                      |
| 10 dry-contact inputs (cable)               | Yes                         | —                    | —                        |
| Thermocouple sensor                         | —                           | —                    | Yes                      |
| Sound detection                             | —                           | —                    | Yes                      |
| Camera                                      | —                           | —                    | Yes                      |

\*With two additional optional 5-dry contact cables and software license.

†RS-232.

‡RS-232 or USB.

§Requires a third-party e-mail-to-SMS gateway.

\*\*Requires a third-party GSM modem (not included).

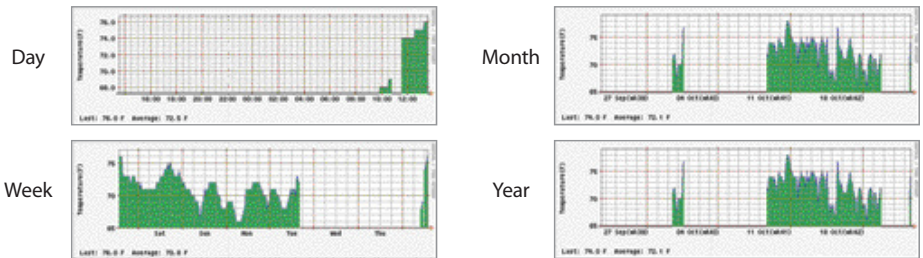
## AlertWerks ServSensor V4E Hub

Real-time, extensive environmental and video monitoring and alerting system.

- Supports up to eight plug-and-play Intelligent Sensors (pages 10–11).
- Can be daisy-chained to expansion hubs, increasing the total sensor count to more than 600.
- Also supports up to four surveillance cameras (see facing page for the AlertWerks cameras).
- Notifies you of alarms in a variety of ways, including e-mail, SNMP, and text messages.
- Can also monitor up to 80 SNMP devices.
- Manageable through an easy-to-use Web interface.
- Full SNMP v1, v2, and v3 compliance.
- Includes a combination temperature/humidity sensor.



EME134A: top: front view; bottom: rear view



The ServSensor V4E automatically generates graphs for each sensor.

The AlertWerks ServSensor V4E enables you to integrate environmental sensors and surveillance cameras into one seamless remote monitoring system that watches over your premises.

Plug up to eight AlertWerks Intelligent Sensors (pages 10–11) into the RJ-45 ports of the ServSensor V4E. Sensors automatically configure and go on-line, ready to report any status change. Choose from a wide variety of sensors, including temperature, humidity, water, airflow, motion, and voltage.

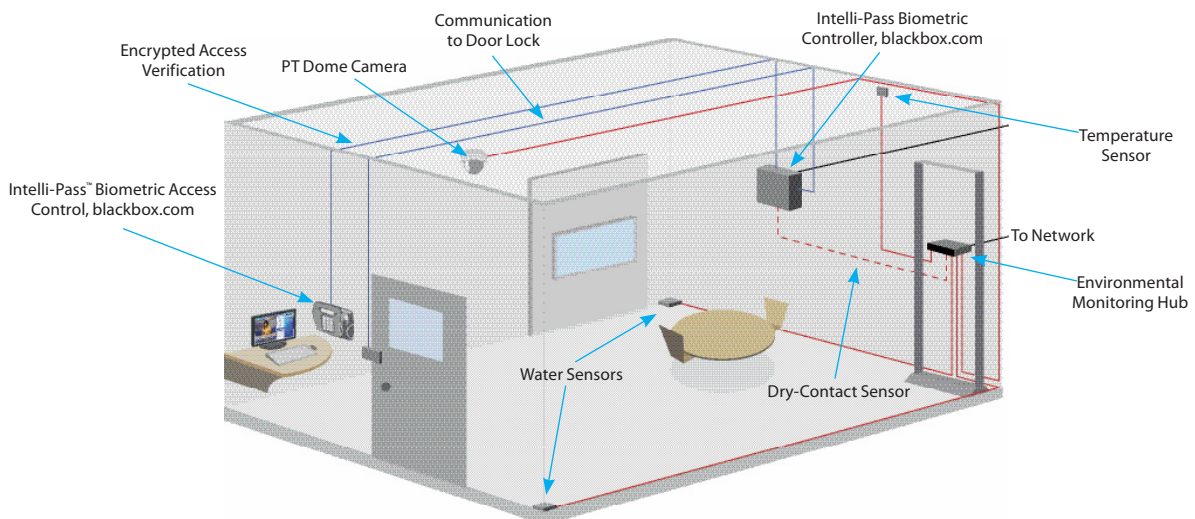
The ServSensor V4E supports a wide range

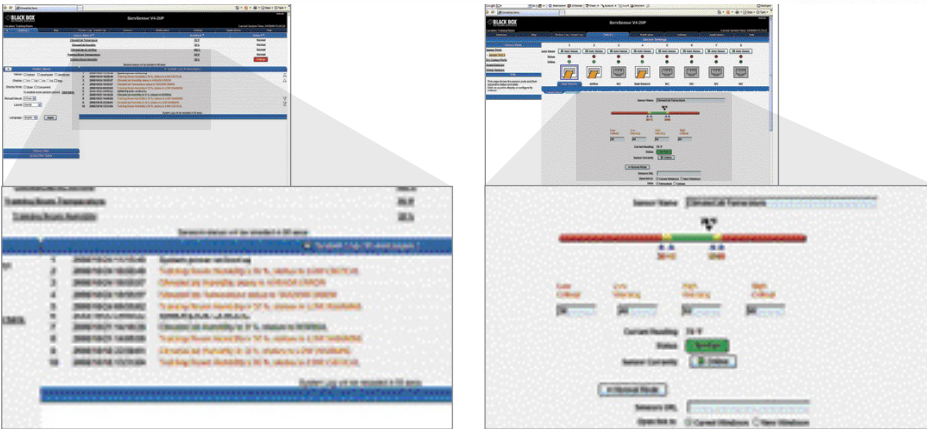
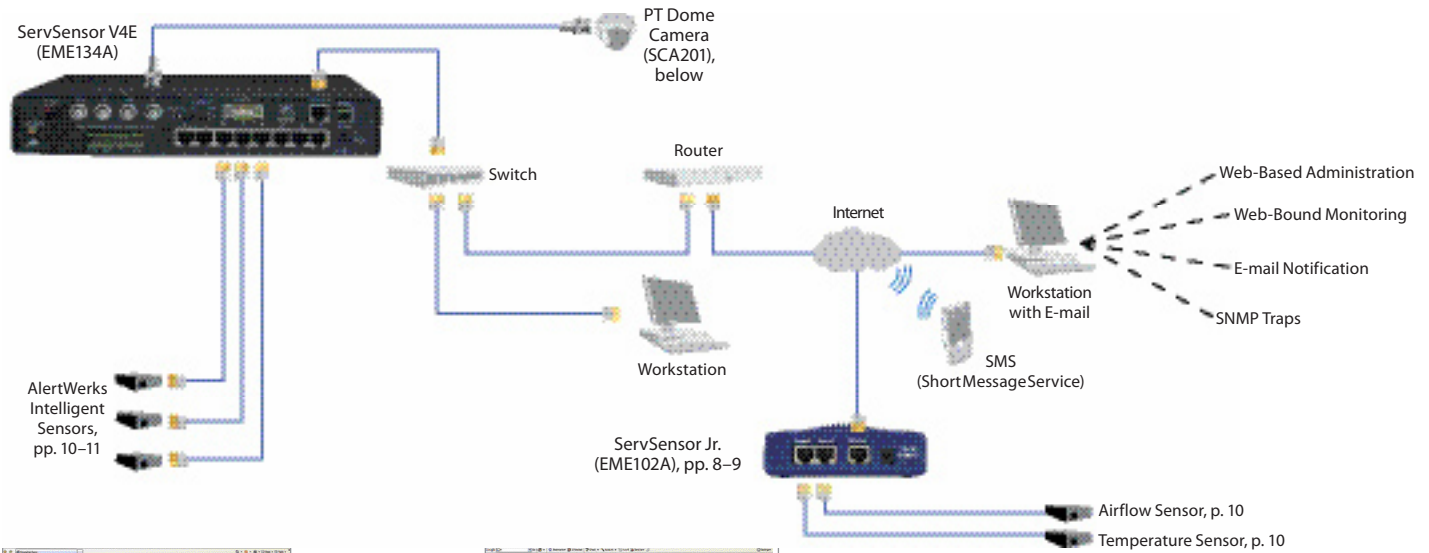
of up to four analog cameras — your existing security cameras, sophisticated night-vision cameras, outdoor cameras, or low-cost CCTV cameras.

The ServSensor V4E gathers and displays sensor data in its easy-to-use, Web-based user interface. It automatically generates day, week, month, and year graphs for each sensor. The data can be downloaded in a text file for external processing or remotely polled and saved automatically to a PC.

The Notification Wizard enables the ServSensor V4E to notify you of changes in sensor status

in real time. Configure each notification by choosing a sensor, selecting the alarm condition, and defining what to do when the alarm is triggered. For instance, you can have the system e-mail you if the temperature in your data center goes over 75° and send you a text message if the temperature continues to climb and goes over 80°.





Access the clear, easy-to-use graphical interface from your Web browser, like Alert log (left) and Sensor configurations (right).

CE — Yes  
RoHS — Yes

| Item                       | Code     |
|----------------------------|----------|
| AlertWerks ServSensor V4E  | EME134A  |
| ServSensor Expansion Units |          |
| 8-Port Sensor Hub          | EME1X8   |
| 8-Port Relay Hub           | EME1P8   |
| 16-Port Dry Contact Hub    | EME1DC16 |

**You may also need...**

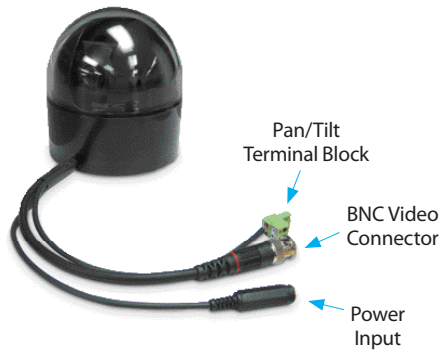
- Rackmount Bracket for EME134A and (1) Expansion Hub EME1X8
- Rackmount Bracket for EME134A with Integral Half-Width DIN Rail for Mounting Sensors EME1P8
- DIN Rail Mounting Bracket for Sensors EME1DC16

## AlertWerks Cameras

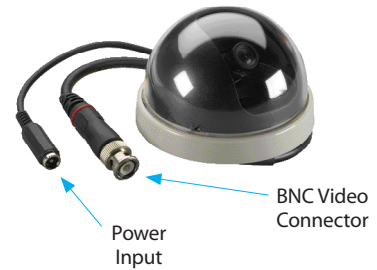
### High-resolution dome cameras.

- High-resolution 1/8" Sony™ CCD cameras.
- Dome cameras feature remote pan and tilt; universal-mount cameras are stationary.
- All the cameras add video capability to the ServSensor V4E (facing page).
- Clear, sharp pictures, even in low light conditions.
- Horizontal resolution of 640 pixels.
- A precision, custom-designed stepper motor moves the dome camera over 330° (pan) and 160° (tilt) and can be controlled by the ServSensor V4E via its Web interface.

SCA201, SCE201 camera shown



EME1FC-NTSC, EME1FC-PAL camera shown



### TECH SPECS

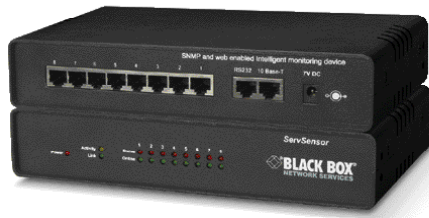
Engine — All models: Image sensor: Type: 1/8" Interline CCD; Min. illumination: 0.5 Lux / F1.2;  
Picture elements: 640(H) x 480(V);  
Dome models: S/N ratio: 45dB or more (AGC off)  
Environmental — Temperature: 32 to 104° F (0 to 40° C); Humidity: 10–80% relative humidity, noncondensing  
Opticals — Lens type: fixed; Focal length: 3.6 mm; Viewing angle: 92°;  
Video resolution: 330 TV lines;  
Features: auto white balance, electronic iris 1/50 to 1/100,000;  
P/T: Pan movement: 0 to 330°;  
Tilt movement: 0 to 80°

Video Standard — SCA201, EME1FC-NTSC: NTSC; SCE201, EME1PC-PAL: PAL  
CE Approval — Yes  
Interface — Standard BNC or RCA (for best results, use BNC connectors and RG-6 coaxial cable)  
Connectors — All models: Video: (1) BNC M Composite video, (1) Power input;  
SCA201, SCE201: Also have (1) pan/tilt terminal block  
Power — All models: 9-VDC external power supply;  
EME1FC-NTSC, EME1FC-PAL: IEC adapter and EU, U.K., U.S., or Australia power cord  
Size — SCA201, SCE201: 4.2"H x 4.5"W (10.7 x 11.5 cm); EME1FC-NTSC, EME1FC-PAL: 2.6"H x 3.5" dia. (6.5 x 8.8 cm)  
Weight — 1.1 lb. (0.5 kg)

| Item                               | Code        |
|------------------------------------|-------------|
| AlertWerks PT Dome Cameras         |             |
| North American                     | SCA201      |
| European PAL                       | SCE201      |
| AlertWerks Universal-Mount Cameras |             |
| North American                     | EME1FC-NTSC |
| European PAL                       | EME1FC-PAL  |

### Safeguard your infrastructure and resources

EME108A: Top: rear view;  
bottom: front view



EME102A: front view

- Function as a central hub for your AlertWerks Intelligent Sensors.
- Work with a wide range of sensors: temperature, humidity, water, airflow, smoke, motion, security, dry contact, and AC and DC voltages.
- Java™ based Web user interface enables you to access the hub over any IP network—even the Internet.
- Send alerts through SNMP or e-mail.



EME102A: rear view

#### The brains of your environmental monitoring system

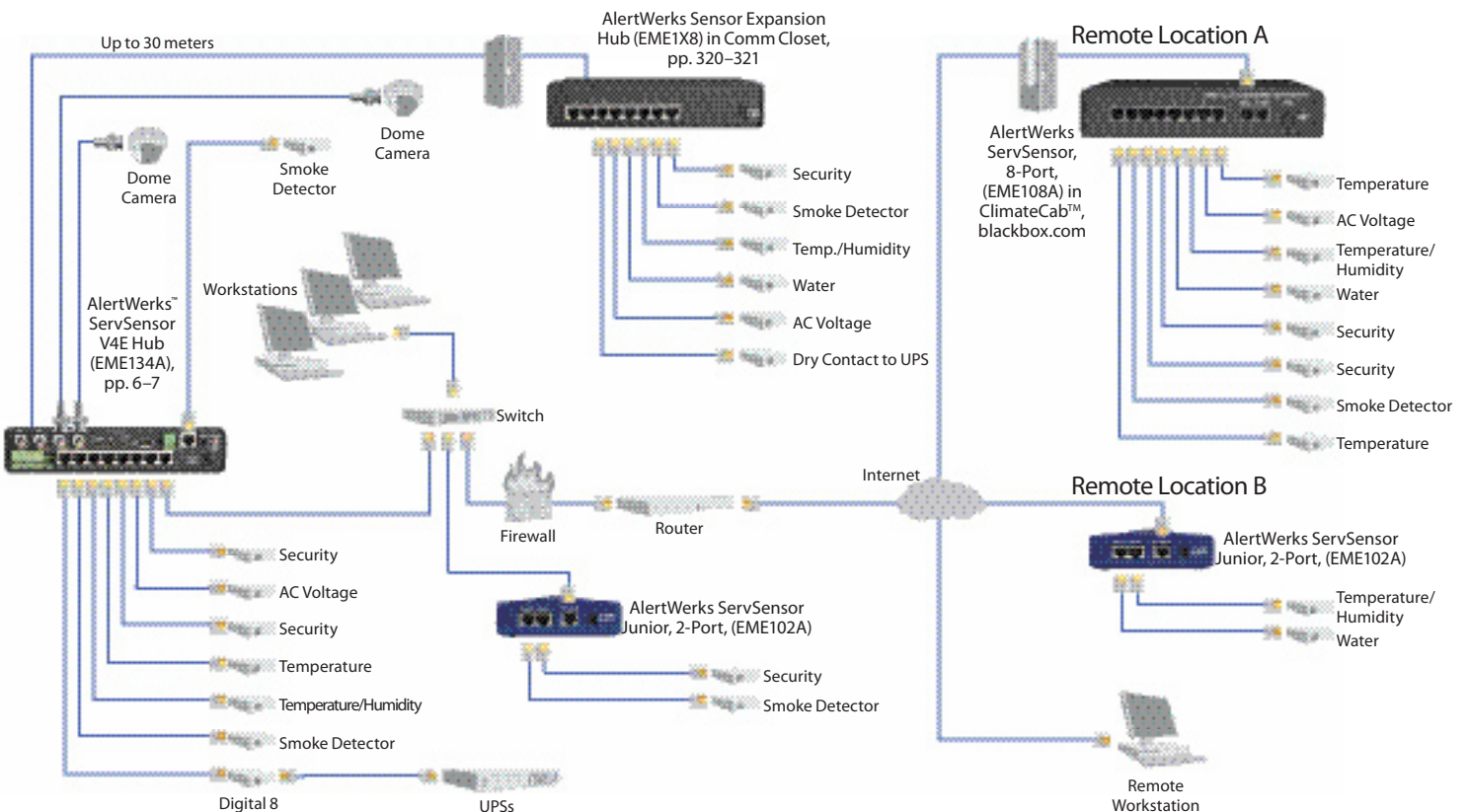
The AlertWerks ServSensor is the central hub of the AlertWerks environmental monitoring system. Connect it to your network, attach AlertWerks sensors (pages 10–11), and you're ready to remotely view the status of your data centers and other facilities. Check for temperature, humidity, and liquids. Know when server cabinet doors are open or closed and whether the cabinet is overheating. Use it for remote monitoring and management of a wide range of devices such as HVAC systems, security equipment, UPSs, generators, and industrial equipment.

#### Active alarming

In addition to enabling you to passively monitor sensors, the AlertWerks ServSensor actively alerts you when sensors exceed limits you determine. It can send alerts via SNMP or by e-mail.

#### Nice and easy

The ServSensor installs in minutes. Simply assign an IP address and connect to the embedded Web server. Plug in any of our AlertWerks Intelligent Sensors and the ServSensor's autosensing feature will recognize the type and automatically configure the sensor.



Notifications: E-mail, SNMP+PAPS, SMS, MMS, Phone Call, Audio and Visual Alerts



with these affordable monitoring hubs.



EME111A-20: top: front view;  
bottom: rear view

**ServSensor**

The basic ServSensor features eight autosensing RJ-45 ports for connecting any of the Intelligent Sensors on pages 10–11.

**ServSensor Junior**

For small installations, choose the ServSensor Junior. With only two sensor ports, it's an economical way to watch over limited areas like wiring closets.

**ServSensor Contact**

Use the ServSensor Contact with equipment and devices that use dry contact outputs to send alarm signals. The ServSensor Contact is adaptable to a wide range of devices such as UPSs, other remote monitoring systems, and building management systems.

The hub comes with eight autosensing RJ-45 ports for connecting any of the Intelligent Sensors on pages 10–11 plus 20 or 60 additional 2-wire, dry-contact ports. These specially designed ports enable you to make your own dry-contact cables quickly and easily.

The ServSensor Contact is rackmountable on standard 19" rails and includes rackmount ears.

The built-in database maintains a time-stamped log of all events, so you can go back to see what happened and when it happened. The integrated data collection and graphing package is especially useful for providing historical information for analysis.

**TECH SPECS**

Configuration — Software utility for IP setup, then over Web browser  
 Environmental —  
 Temperature: EME108A–EME110A, EME102A–EME104A: 32 to 104° F (0 to 40° C);  
 EME111A-20–EME113A-60: 32 to 131° F 0 to 55° C)  
 Humidity: EME108A–EME110A, EME102A–EME104A: 30 to 70% noncondensing;  
 EME111A-20–EME113A-60: 20 to 80%, noncondensing  
 Monitoring and Alarms — Via Web browser, e-mail, SNMP trap  
 Protocols Supported (Client) — EME111A-20–EME113A-60: DHCP, DNS, SMTP, (S) NTP, SNMPv1  
 Security — User/administrator password-protected login  
 Connectors —  
 EME108A–EME110A:  
 (8) RJ-45 sensor ports,  
 (1) 10BASE-T Ethernet port;  
 EME102A–EME104A:  
 (2) RJ-45 sensor ports;  
 (1) 10BASE-T Ethernet port;

EME111A-20–EME113A-20:  
 (8) RJ-45 sensor ports;  
 (20) dry contacts;  
 (1) RJ-45 10BASE-T Ethernet port;  
 EME111A-60–EME113A-60:  
 (8) RJ-45 sensor ports;  
 (60) dry contacts;  
 (1) RJ-45 10BASE-T Ethernet port  
 Power —  
 EME108A–EME110A, EME102A–EME104A: 90–260 VAC, 47–63 Hz autosensing external power supply;  
 EME111A-20–EME113A-60: 100–240 VAC, 47–63 Hz autosensing external power supply  
 CE Approval — Yes except EME1DC-UPG  
 RoHS — EME104A only  
 Size —  
 EME108A–EME110A: 1.8"H x 9.2"W x 5.4"D (4.6 x 23.4 x 13.8 cm);  
 EME102A–EME104A: 1.3"H x 4.5"W x 2.5"D (3.2 x 11.4 x 6.4 cm);  
 EME111A-20–EME113A-60: 1.7"H x 18"W x 5"D (4.2 x 45.7 x 12.7 cm)

**e Black Box Explains**

**Dry contacts.**

A dry contact, also called a volt-free contact, is a relay contact that does not supply voltage. The relay energizes or de-energizes when a change to its input has occurred. In other words, a dry contact simply detects whether or not an input switch is open or closed.

The dry contacts in the ServSensor Contact provide a simple two-wire interface that can be easily adapted to third-party sensors and devices. Because you define what the open or closed condition means, dry contacts are infinitely adaptable.

Use dry contacts to monitor alarms such as fire alarms, burglar alarms, and alarms on power systems such as UPSs. A very common use for dry contacts is to detect whether a cabinet door is open or closed.

| Item                                                   | Code       |
|--------------------------------------------------------|------------|
| <b>AlertWerks ServSensor Hubs</b>                      |            |
| <b>ServSensor</b>                                      |            |
| 8-Port, No Sensor                                      | EME108A    |
| 8-Port, (1) Temperature Sensor (Kit)                   | EME109A    |
| 8-Port, (1) Dual Temperature and Humidity Sensor (Kit) | EME110A    |
| <b>ServSensor Junior</b>                               |            |
| 2-Port, No Sensor                                      | EME102A    |
| 2-Port, (1) Temperature Sensor (Kit)                   | EME103A    |
| 2-Port, (1) Dual Temperature and Humidity Sensor (Kit) | EME104A    |
| <b>Dry Contacts for ServSensor Junior, 5 Inputs</b>    |            |
| 15 ft. (4.5-m)                                         | EME1DC-015 |
| 60 ft. (18.2-m)                                        | EME1DC-060 |
| 100 ft. (30.4-m)                                       | EME1DC-100 |
| Software for ServSensor Junior Dry Contacts            | EME1DC-UPG |
| <b>ServSensor Contact</b>                              |            |
| 8-Port, 20 Dry Contacts with                           |            |
| No Sensors                                             | EME111A-20 |
| Temperature Sensor                                     | EME112A-20 |
| Temperature/Humidity Sensor                            | EME113A-20 |
| 8-Port, 60 Dry Contacts with                           |            |
| No Sensors                                             | EME111A-60 |
| Temperature Sensor                                     | EME112A-60 |
| Temperature/Humidity Sensor                            | EME113A-60 |

AlertWerks Intelligent Sensors, turn the page. 

## AlertWerks Intelligent Sensors

Choose from a wide range of sensors to



EME1T2-005

CE Approval — Yes

### Temperature Sensors

- Never need calibration.
- Measurement range of -67 to +167° F (-55 to +75° C) with 1° F resolution.
- Measurement accuracy of ±0.9° F from +14 to +167° F (-10 to +75° C).
- Connect up to four daisychainable sensors with CAT5 cable for a total distance of up to 1000 feet (304.8 m).

| Item                                  | Code       |  |
|---------------------------------------|------------|--|
| <b>AlertWerks Temperature Sensors</b> |            |  |
| Standard                              |            |  |
| 1-ft. (0.3-m) Cable                   | EME1T1-001 |  |
| Remote                                |            |  |
| 5-ft. (1.5-m) Cable                   | EME1T2-005 |  |
| Waterproof                            |            |  |
| 15-ft. (4.5-m) Cable                  | EME1T3-015 |  |
| Daisychainable                        | EMEDTEMP   |  |
| 4-Pack                                | EMEDTEMP4  |  |
| 8-Pack                                | EMEDTEMP8  |  |



EME1TH3-015

### Dual Temperature/Humidity Sensors

- Measure temperature from -40 to 167° F (-40 to +75° C) in 1° F increments.
- Accurate to ±0.9° F.
- Measure 0 to 100% relative humidity with 1% resolution and accuracy of ±3% at 77° F.
- Sensor element is water resistant.

| Item                                                | Code        |  |
|-----------------------------------------------------|-------------|--|
| <b>AlertWerks Dual Temperature/Humidity Sensors</b> |             |  |
| Standard                                            |             |  |
| 1-ft. (0.3-m) Cable                                 | EME1TH1-001 |  |
| Remote                                              |             |  |
| 5-ft. (1.5-m) Cable                                 | EME1TH2-005 |  |
| Waterproof                                          |             |  |
| 15-ft. (4.5-m) Cable                                | EME1TH3-015 |  |



EME1TH2-005

CE Approval — Yes



EME1TCAK-005



EME1TCPK

CE Approval — Yes

### Thermocouples

- One measurement reading every second.
- For use in extreme industrial environments.
- J-Type model measures temperature ranges of +32 to +1382° F (0 to +750° C).
- K-Type model measures temperature ranges of -328 to +1472° F (-200 to +800° C).
- Use Thermocouple Adapters to attach a thermocouple to the AlertWerks ServSensor V4E (EME134A), pages 6–7.

| Item                                                             | Code         |  |
|------------------------------------------------------------------|--------------|--|
| <b>AlertWerks Thermocouples</b>                                  |              |  |
| J-Type                                                           | EME1TCPJ     |  |
| K-Type                                                           | EME1TCPK     |  |
| <b>AlertWerks Thermocouple Adapters with 5-ft. (1.5-m) cable</b> |              |  |
| J-Type                                                           | EME1TCAJ-005 |  |
| K-Type                                                           | EME1TCAK-005 |  |
| <b>AlertWerks Thermocouple and Thermocouple Adapter</b>          |              |  |
| J-Type                                                           | EME1TCBJ-005 |  |
| K-Type                                                           | EME1TCBK-005 |  |



EMERW-020

EME1W1-015

CE Approval — Yes

### Water Sensors

- Accurate enough to measure distilled water.
- Use **Rope Water Sensors** on the floor to detect the presence of water or liquid.
- **Intelligent Rope Water Sensors** report where the water is along the length of the sensor.

| Item                                             | Code       |  |
|--------------------------------------------------|------------|--|
| <b>AlertWerks Spot Water Sensors</b>             |            |  |
| 15-ft. (4.5-m) Cable                             | EME1W1-015 |  |
| 60-ft. (18.2-m) Cable                            | EME1W1-060 |  |
| 100-ft. (30.4-m) Cable                           | EME1W1-100 |  |
| <b>AlertWerks Rope Water Sensor</b>              |            |  |
| 20-ft. (6.0-m) Cable                             | EMERW-020  |  |
| 10-ft. (3.0-m) Extension                         | EMERWE-010 |  |
| <b>AlertWerks Intelligent Rope Water Sensors</b> |            |  |
| 20-ft. (6.0-m) Cable                             | EMELW-020  |  |
| 10-ft. (3.0-m) Extension                         | EMELWE-010 |  |



EME1Y1-015

CE Approval — Yes

### Security Sensors/Contacts

- Tell you when doors to secure areas have been opened.

| Item                                        | Code       |  |
|---------------------------------------------|------------|--|
| <b>AlertWerks Security Sensors/Contacts</b> |            |  |
| 15-ft. (4.5-m) Cable                        | EME1Y1-015 |  |
| 60-ft. (18.2-m) Cable                       | EME1Y1-060 |  |
| 100-ft. (30.4-m) Cable                      | EME1Y1-100 |  |



EME1F1-005

CE Approval — Yes

### Airflow Sensor

- Thermistor sensor.
- On/off alarm signal for airflow.
- Two LEDs indicate the status.

| Item                             | Code       |  |
|----------------------------------|------------|--|
| <b>AlertWerks Airflow Sensor</b> |            |  |
| 5-ft. (1.5-m) Cable              | EME1F1-005 |  |

NOTE: For other sensor lengths, call Tech Support.



EME1K1-015

CE Approval — Yes

### Dry-Contact Sensors

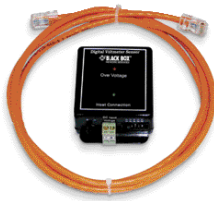
- Open/closed contact switch indicates Alarm or Normal.
- The input voltage range of 0 to 5 VDC can be set through software.
- Normally open; normally closed can be set through software.
- Current range: can sink up to 20 mA.

| Item                                  | Code       |  |
|---------------------------------------|------------|--|
| <b>AlertWerks Dry-Contact Sensors</b> |            |  |
| 15-ft. (4.5-m) Cable                  | EME1K1-015 |  |
| 60-ft. (18.2-m) Cable                 | EME1K1-060 |  |
| 100-ft. (30.4-m) Cable                | EME1K1-100 |  |

# work with AlertWerks ServSensor hubs.



EME1A1-005



EME1D1-005

CE Approval — Yes

### Voltage Sensors

- **AC Voltage Sensor** detects voltage from 50 to 250 VAC and indicates Alarm or Normal.
- **DC Voltage Sensor** is user programmable with both the base and top voltage from 0 to 60 volts.

| Item                                                | Code       |
|-----------------------------------------------------|------------|
| AlertWerks Voltage Sensors with 5-ft. (1.5-m) Cable |            |
| AC                                                  | EME1A1-005 |
| DC                                                  | EME1D1-005 |



EME1C1-005

CE Approval — Yes

### AlertWerks 4-20 mA Converter

- Add a third-party, industrial sensor to AlertWerks ServSensor hubs.
- Enables you to communicate with equipment in industrial settings.

| Item                         | Code       |
|------------------------------|------------|
| AlertWerks 4-20 mA Converter |            |
|                              | EME1C1-005 |



EME1P1-005

CE Approval — Yes

### Power Switch

- Relay contacts rated at 15A/220 VAC.
- Powered by the ServSensor hub.
- Metal oxide varistors (MOVs) and snubber circuit protect the open contact of the relays from high-voltage spikes.

| Item                                         | Code        |
|----------------------------------------------|-------------|
| AlertWerks Power Switch, 5-ft. (1.5-m) Cable |             |
| 110-VAC                                      | EME1P1-005  |
| 220-VAC                                      | EME1P2-005  |
| 250-VDC                                      | EME1PDC-005 |



EME1PM

CE Approval — Yes

### Power Monitors

- Multifunctional four-wire, three-phase meters can also be used as single-phase meters.
- Measure total active power, total reactive power, active power, reactive power, phase line voltage, phase line current, and power factor.
- Come in protective plastic enclosures that can be DIN-rail mounted.

| Item                      | Code   |
|---------------------------|--------|
| AlertWerks Power Monitors |        |
| 110-VAC                   | EME1PM |
| 220-VAC                   | EME2PM |



EME1K8-005

CE Approval — Yes

### Digital I/O Sensors

- Provide eight dry contacts on one sensor port.

| Item                                                    | Code        |
|---------------------------------------------------------|-------------|
| AlertWerks Digital I/O Sensors with 5-ft. (1.5-m) Cable |             |
| (8) Dry Contacts                                        | EME1J8-005  |
| (2) RJ-45 to (8) Dry Contacts                           | EME1KJ8-005 |



EME1M1-005-R2

CE Approval — Yes

### Motion Detection Sensor

- Detection speed of 0.5–9.8 feet per second (0.15–3 m/sec).
- Temperature range of -4 to +144° F (-20 to +50° C).
- 150° detection angle.

| Item                              | Code          |
|-----------------------------------|---------------|
| AlertWerks Motion Detector Sensor |               |
| 5-ft. (1.5-m) Cable               | EME1M1-005-R2 |



EME1S2-005

CE Approval — Yes

### Photoelectric Smoke Detector Sensor

- More effective than ionization smoke detectors at sensing smoldering fires.
- Auto resets when smoke clears.

| Item                                           | Code       |
|------------------------------------------------|------------|
| AlertWerks Photoelectric Smoke Detector Sensor |            |
| 5-ft. (1.5-m) Cable                            | EME1S2-005 |



EME1S5-005

CE Approval — Yes

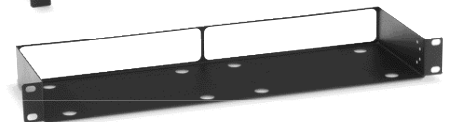
### Siren and Strobe Light

- Siren sounds at 100 ± 3 dB at 100 cm.
- Supports maximum cable runs of up to 1000 feet (304.8 m). For details, contact our FREE Tech Support.
- Can be triggered by any other sensor connected to the ServSensor hub.

| Item                              | Code       |
|-----------------------------------|------------|
| AlertWerks Siren and Strobe Light |            |
| 5-ft. (1.5-m) Cable               | EME1S5-005 |



EMESDIN



EMEDRMK

### Rackmount Kits

CE Approval — Yes

| Item                                                                                 | Code    |
|--------------------------------------------------------------------------------------|---------|
| AlertWerks Rackmount Kits                                                            |         |
| Rackmount DIN Rail                                                                   | EMEDIN  |
| DIN Rail Mounting Bracket for Sensors                                                | EMESMB  |
| Rackmount Bracket for EME134A and (1) Expansion Hub                                  | EMEDRMK |
| Rackmount Bracket for EME134A with Integral Half-Width DIN Rail for Mounting Sensors | EMESDIN |

# Intelli-Pass

Physical access control for ultimate security

Intelli-Pass™ Biometric Access Control uses fingerprint identification to keep your high-security areas protected.



- » Two-part architecture, signal encryption, and anti-tamper circuitry provide superior security.
- » Multistage fingerprint identification is highly reliable and accurate.
- » No need for keys or ID cards that can be lost or stolen.
- » Extensive management options for controlling multiple doors and logging access.
- » Available in an IP-addressable version.

Use the Intelli-Pass system at entrances to high-security areas of your building like data centers, research labs, control rooms, storage rooms containing sensitive records and hazardous materials, corporate accounting departments, or anywhere you keep expensive equipment, confidential data, or critical assets.

© Copyright 2011. Black Box Corporation. All rights reserved. Printed in U.S.A. Black Box® and the Double Diamond logo are registered trademarks, and Intelli-Pass is a trademark, of BB Technologies, Inc. Any third-party trademarks appearing in this product data sheet are acknowledged to be the property of their respective owners.

EME134A\_(27032)-eu



[www.blackbox.eu](http://www.blackbox.eu)