SENSAPHONE®

REMOTE MONITORING SOLUTIONS

Infrastructure Monitoring Systems

New for 2007

- Temperature
- Power Failure
- Physical Security
- Server Operation
- Water on the floor
- Network Connectivity

SENSAPHONE IMS Solutions

The IMS series of Sensapahone products allows you to watch over many of the potential threats in your computer room. They combine environmental monitoring, physical security, network monitoring and more into one easy to manage system. The IMS System is always storing history and trending information, and will notify the appropriate personnel when conditions exceed acceptable limits. There are two different IMS solutions, the IMS-4000 and the IMS-1000. Both systems have the following features ...

Environment Monitoring:

- Temperature
- Humidity
- Water on the floor
- Power Failure
- Smoke and Fire

Servers don't operate properly unless they are in a proper environment. High temperatures increase the chance of a system crash. Power failure, water on the floor, smoke and fire obviously cause even more issues. Sensors are available for the IMS System to monitor all of the critical environmental conditions that are important for smooth operation of your computer equipment.

Physical Security:

- Motion detection
- Cabinet Door Switches
- Room Access Switches
- Network Video Cameras

There is a growing concern for physical security in the data center. Malicious activity, and even accidental activity make it necessary to watch over your computer room. Who was there after hours? Who opened the cabinet door just before the system crashed? The IMS System has the capability to supply this type of information. Security sensors can be configured to track all access activity in and around your data center and generate instant alarm notifications. Any monitored condition can even trigger an image capture from a camera which can be immediately e-mailed to the appropriate personnel.

IP Monitoring:

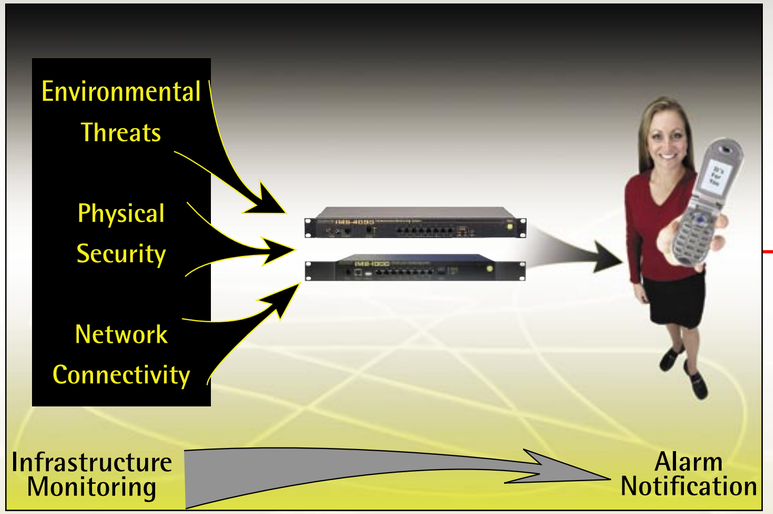
- Network Ping
- Verify Port Services

The IMS System provides integrated monitoring of network connectivity and server operation. A ping request can be sent periodically and an alarm is generated when there is no response. Even more detailed monitoring can be performed with the Port Service Response function. The IMS System can send specific requests to servers for SMTP, POP, HTTP, FTP, or any other port service for a proper response. You will know immediately when a service fails on any of your servers. And unlike other monitoring systems, a failure on your e-mail server won't prevent the alarm message from being delivered. The IMS-4000 comes standard with a phone line interface for alarm notification, so network problems and server failures can't prevent the alarm message from being delivered.

Alarm Notification:

- Send E-mails
- Fax Reports
- Voice Phone Calls
- Send SNMP traps
- Text Messaging

When an alarm condition is detected, the notification process begins. Both the IMS-4000 and IMS-1000 systems can deliver alarm messages through the network as e-mails and SNMP traps. For additional convenience and redundancy, the IMS-4000 has a built in telephone interface and the IMS-1000 has an optional phone interface. Voice phone calls can be made with custom messages describing, in your own voice, where the problem occurred. Messages are sent continuously until someone responds.



History and Trends:

Full event-history and trending are provided with the Data Logging feature. User-selectable sampling lets you store critical temperature, humidity, or other environmental information about your infrastructure by the minute, hour or day.

Use the data for graphing, database, or auditing purposes. Events are recorded for review: user access, alarm detection, dispatch, and alarm acknowledgement. The IMS systems provide you with everything you need for a reliable and consistent audit trail.

The Two IMS Solutions

IMS-1000 – The Single Room Solution

The IMS-1000 system is the newest addition to the Sensaphone IMS series of products. It is a lower cost version of the IMS-4000 that still provides effective infrastructure monitoring and alarm notification for many installations. Up to eight external sensors can be connected to the IMS-1000 to monitor a variety of

environmental conditions. TCP/IP port service monitoring is also provided for up to 16 network devices or port services. An alarm condition is generated whenever any environmental sensor goes out of range, or when any network port service stops responding. The IMS-1000 will then initiate its alarm notification process following the programmed list of personnel to be notified.

E-mails are sent describing the alarm condition. If network cameras are installed, the e-mails will even contain one or more attached images captured from the video camera. SNMP traps can also be sent to network management systems.

An internal telephone modem is available as an option to the IMS-1000 product. This feature provides additional options for alarm delivery. Custom messages can be recorded and stored in the 1000, and voice phone calls can be made to announce alarm conditions. In addition to the convenience of the voice phone call, the phone modem also provides an alarm delivery path independent of the computer network. In the case of network failures, or e-mail servers going offline, the phone call may be the only path available to properly notify the appropriate personnel.

The IMS-1000 is designed for high reliability with no moving parts. It is completely standalone with its own internal battery backup system. All programming and status information are available through its internal web server. In addition to the web server, the IMS-1000 is fully SNMP manageable. The IMS-1000 solution can effectively monitor the most critical conditions in your server room or data center.

IMS-4000 – The Expandable Enterprise Solution

For larger monitoring requirements with multiple locations, the IMS-4000 Enterprise Solution can expand and grow with your needs. The IMS-4000 Host performs all of the same monitoring functions as the IMS-1000, but with the ability to monitor multiple locations within a facility, or even multiple locations across the globe. The key to this distributed monitoring is the addition of IMS-4000 Nodes. Each Node can also monitor up to 8 external IMS sensors, but it reports back to a Host through the network. Up to 31 IMS Nodes can report back to a single IMS Host. The IMS-4000 Console View software package is included with each Host providing an enterprise view of up to 32 locations per Host. If you have more than 32 locations, no problem, multiple Host networks can be managed within the same Console View software package. A multi-site/multi-user software license is included with the purchase of the Host, so you don't need to worry about additional licensing costs. Multiple users will have an enterprise view from any location.

In addition to the enterprise level monitoring that the IMS-4000 system provides, it also includes an assortment of advanced features not found in the IMS-1000. All environmental and IP alarms can be scheduled so that they are only monitored for alarms during certain hours, or certain days of the week. The alarm notification is more powerful with the phone modem and custom voice messages are standard feature on the 4000. It can also provide alarm messages to fax machines and pagers. More notification flexibility comes with the addition of time scheduling for users, and even alarm grouping for different groups of users. The IMS-4000 will make sure that only the appropriate users will be notified for each alarm condition.

Controlling outlets is another feature that the IMS-4000 products can perform. Using the optional PowerGate products, outlets can be switched on or off by the network of Hosts and Nodes. Outlets can be controlled either manually, or even automatically in response to specific alarm conditions. You can automatically reboot network equipment when it stops responding.

Up to 128 network cameras can be integrated into the IMS-4000 system. Multiple images can be viewed from the Console View software, and snapshots can be sent attached to e-mails when alarms occur. The IMS-4000 solution provides comprehensive monitoring for your complete enterprise.

IMS Comparison Chart

IMS-1000 is the perfect monitoring solution for small to medium single room applications. The IMS-4000 provides additional expansion, the ability to monitor multiple locations and an assortment of features not found on the IMS-1000. Use the chart below to see the specific differences between the two Solutions.

Product Features	Sensaphone IMS-1000	Sensaphone IMS-4000
Enterprise Hardware Expansion	No	Yes
Enterprise Software Console	No	Yes
Power Failure Monitoring	Yes	Yes
Built-In Battery Backup	Yes	Yes
High Sound Level Alarm	No	Yes
External Sensors	Up to 8	8 per Host/Node, 256 total
Automatic Sensor Identification and Setup	Yes	Yes
Sensor Supervision	Yes	Yes
Cat5 Wiring for Sensor Extensions	Yes	Yes
IP Monitoring	16 Devices or Servers	64 per Host/Node, 2048 total
Alarm Notification User Profiles	16	64
E-mail Notification	Yes	Yes
Pager Notification	Yes	Yes
Voice Phone Call Notification	Optional	Yes
Customizable Voice Messages	Optional	Yes
Remote Listen-In Over Telephone	No	Yes
SNMP Traps	Yes	Yes
SNMP Manageable	Yes	Yes
Built-In Web Server	Yes	Yes
Cameras	32 External	128 External
Camera Interface	One at a time	Enterprise Multi-View
Alarm Triggered Image Capture	Yes	Yes
Scheduling for Alarms and Notification	No	Yes
User Grouping For Alarm Types	No	Yes
Outlet Control	No	Optional
Built-In RAS Server	No	Yes
Two-Way E-mail Command Responder	No	Yes
Data Logging and Event Logging	Yes	Yes
Software Pop-Up When Alarms Occur	No	Yes

IMS Products

IMS-1000 Series

IMS-1001 - Infrastructure monitoring system for single room applications.

IMS-1002 - Same as IMS-1001 but with phone modem and voice communications.

IMS-4000 Series

IMS-4001 - Host device for Enterprise level Infrastructure Monitoring.

IMS-4002 - Node device for local or wide area expansion of an IMS-4000 system.

IMS-4301 - PowerGate for switching 8 low current outlets automatically or manually.

IMS-4302 - PowerGate2 for switching 8 high current outlets automatically or manually.

IMS Accessories

Temperature
IMS-4810

Mounts on wall or any flat surface to measure temperature in the room.

Temperature w/ Display
IMS-4811

Wall mount temperature sensor with the addition of a local temperature display.

Mini Temperature
IMS-4812

Used to measure temperature in a small space, inside cabinets or even directly on the surface of a piece of equipment.

Humidity
IMS-4820

Mounts on a wall to measure relative humidity in a room.

Humidity w/ Display
IMS-4821

Wall mount humidity sensor with the addition of a local display.

Water Detection
IMS-4830

Used to detect the presence of water on a floor. Includes 10 feet of water sensing rope which can be extended with additional 10 foot sections.

Power Failure
IMS-4840

Additional power failure monitoring can be added with one or more of these sensors. Actual AC Voltage is measured and used for alarming.

15A Current Sensor 100-250 VAC 50/60Hz, IEC320 C14 inlet/C13 outlet - IMS-4841

Connects in series with your servers or other network equipment to monitor how much current is being used.

20A Current Sensor, 100-250VAC 50/60Hz, IEC320 C20 inlet/C19 Outlet - IMS-4842

Monitors up to 20 Amps of current.

Dry Contact
IMS-4850

Allows any dry contact to be interfaced with any of the IMS systems.

4-20mA Bridge
IMS-4851

Allows any 4-20mA analog transducer to be interfaced with any of the IMS systems.

Magnetic Reed Switch
IMS-4860

Used to monitor a door to a room, or even a cabinet door for unauthorized activity.

Motion Sensor
IMS-4861

Physical security motion detector to detect unauthorized access.

Smoke Detector
IMS-4862

Detect smoke and/or fire independently from your primary fire alarm system.

Axis 206 Network Camera
IMS-4420

Panasonic BL-C10A Network camera with pan and tilt
IMS-4421

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