SNMP and Web monitoring/management of server room environments

Monitors Threats: Temperature • Humidity Intrusion TTTTT Water Leakage Vibration Smoke

ENVIROMUX-SEMS-16 (Front and Back)

Features & Applications

The ENVIROMUX® Server Environment Monitoring System monitors critical environmental conditions, such as temperature, humidity, liquid water presence, motion, intrusion, and vibration. When a sensor goes out of range of a configurable threshold, the system will notify you via email, LEDs, alarm beacon, siren, web page, network management (SNMP), voice phone calls (via Automatic Voice Dialer System), and SMS messages (via external GSM modem).

The system includes three internal sensors: temperature, humidity and power. It also supports 16 external configurable sensors and eight digital input sensors.

- Monitor and manage server room environmental and security conditions over IP.
- Create alarm signals with customized input parameters.
- Four output relays for control of external devices.
 - Relays activate upon alarm or via the user interface.
- Supports IP network video camera.
 - Live view of a facility from anywhere, anytime.
 - One integrated view see different Web cameras side-by-side with physical and environmental parameters.
- Monitor (ping) up to 64 IP network devices.
 - · Alerts are sent if devices are not responding.
- Integrates with various Open Source monitoring packages Nagios and MRTG.
- Provides power supply for all sensors.
- Internal battery backup.
 - Alerts are sent when there is a power outage and when power returns.

- Available sensors include: temperature, humidity, smoke, water, glass break, motion, vibration, 4-20mA converter, voltage detector, and more.
- Available with optional dual power for connection to two separate power sources.
- Available with optional 48VDC or 24 VDC power.
- Up to four units can be used together to increase the number of sensors connected.
 - Connect the units using CAT5 expansion cables.
 - Uses a single Web interface for all systems connected.
- 1RU rack mount case is standard.

Internal Humidity Sensor

Internal Power Sensor

Back-up Battery

Environmental

RH.

Warranty

between 32°F to 104°F (0°C to 40°C).

Accurate to within $\pm 5\%$ relative humidity.

Measures mains voltage: 0 to 255 VAC.

Measures battery voltage: 0 to 20 VDC

Rechargable sealed lead-acid battery.

Provides back-up for one hour.

- Use in data centers, co-lo sites, web hosting facilities, telecom switching sites, POP sites, server closets, or any unmanned area that needs to be monitored.
- Optional intuitive graphical software provides an easy-to-use, unified interface for both monitoring and configuring up to 3,000 ENVIROMUX-SEMS-16 units and all connected sensors.

Applications from 20% to 80% relative humidity at temperatures

Alerts are sent when there is a power outage and when power returns.

Operating and Storage Relative Humidity: 17 to 90% non-condensing

Specifications

Protocols

- HTTP, SNMP V1/V2c, SMTP, TCP/IP, Syslog, SNTP, DHCP, SSL
- Operates and configures via HTTP/HTTPS web page, Telnet or RS232 interface.
- Alerts are sent using email, SMS messages and/or SNMP traps when any monitored environmental condition exceeds a user-specified range.
 - Alerts are posted in message log, which is accessible through Web user interface. The log can be downloaded as a tab delimited plain text file.
 - Sends notifications of alerts to a maximum of 17 email addresses, SNMP addresses and/or cell phone numbers.
 - SNMP traps have unique OID's (Object Identifiers) for each sensor.

Internal Temperature Sensor

- Applications from 32°F to 104°F (0°C to 40°C).
- Accurate to within $\pm 1.35^{\circ}F$ ($\pm 0.75^{\circ}C$).

Dimensions

WxDxH (mm): 483x231x44

Regulatory Approvals

CE. RoHS







Operating temperature: 32°F to 100°F (0°C to 38°C).

Storage temperature: -22°F to 140°F (-30°C to 60°C).

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ENVIROMUX®



Automatic Voice Dialer System



Terminal

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Network Managen

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Control Methods

Web Interface

- Full configuration via Webpage.
- Support for Extended ASCII characters.
- Configure sensor thresholds and timing, alarm methods, alert formats and system data log.
- View current sensor values and alert status.
 - All sensors connected to the ENVIROMUX-SEMS-16 can be viewed on one summary page.
 - "Simulate"/"Clear" buttons for each sensor to test alert settings.
- View entries stored in the system data log.
 - The log can be downloaded as a tab-delimited plain text file.
- Configure IP information (address, subnet mask, default gateway, DNS, etc.) and user administrative settings.
- Administrate up to 16 users plus a root administrator.
- Permissions, schedule and alert methods are configurable for each user.
- Up to 8 users can access the web page at one time.

Telnet

- Similar functions as RS232 Control.
- Security is ensured by password.

Optional Management Software

- Intuitive graphical software provides an easy-to-use, unified interface for both monitoring and configuring up to 3,000
 - ENVIROMUX-SEMS-16 units and all connected sensors.
- Units may be monitored and configured individually or in a group.
- Display values and status for individual sensors or list of sensors.
- Client/server architecture
 - Server application actively polls all units for status information as well as listen for alerts from all units.
 - Client application communicates with the server to read statuses and to deploy configuration changes.
- Support Windows 2000/XP/Vista/Server 2000/2003/2008, Solaris, Linux, FreeBSD, and MAC OS 9/10.
- Requires Java Runtime Environment 1.5 or later.

Network Operation

- SNMP support; allows integration into network management platforms.
- Update system firmware.

RS232 Control

- Display and configure network settings (IP address, subnet mask, default gateway, DNS, SMTP, etc.), Enterprise settings, and time settings.
- View current values and alert statuses for sensors/digital inputs/IP devices.
- Configure SNMP
- Serial baud rate: 9,600 to 115,200bps.
- Data format: 1 start bit, 8 data bits, no parity, 1 stop bit.

Front Panel LED Indicators

- "INT ALERT" internal sensor goes out of range of a configurable threshold.
- "EXT ALERT" external sensor goes out of range of a configurable threshold.
- "LOW BAT" backup battery is low.
- "CHECK LOG" message is posted to the log.
- "PWR" indicates device is powered.

efault Project	Didg A Server Room 2: Server Room Temperature	o 5
Weaking A Server Room 1 Weaking A Server Room 2 Windows R	73.2°F	
	Status:Normal Bibly A. Server Room 2 : Server Room Temperature of ID	1
	Type Temportains Season RUH Connector. 7 Description: Stream Room Type: Group RT Hismann Level. 4 Hismann Level. 4 Gradier alerts for Bias sensor	
	Thresholds Minimum Threshold: (0) Maximum Threshold: (9)	
	Sampling Sampling Period: 2 Sec Add Reading to Log File Every: 5 Intervent	
	Altert Settings Altert Delays: 50 Sec V Hotily again after: 50 Har V Hotily when refurs to normal V Automatically acknowledge altert when coedition chems	
	Aller Honflications Aller Honflications Exable Status Exable Status It Status Exable Status Exable Status	
	Outputs Associate Output: Tone On after Open	
	Save	

Screen Shot of the NTI ENVIROMUX-MS-SEMS Management Software.







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- Maximum cable length: 305 meters
- Powered by ENVIROMUX-SEMS-16.
- Regulatory approvals: CE, RoHS

SNMP and Web monitoring/management of server room environments

Motion/Intrusion/Vibration Sensors (Continued) Infrared Motion Detector, Ceiling Mount Access Control Digital Keypad Two relay outputs controlled by two Detects movement across the detection groups of independent user codes. field Normally closed and normally open dry 360° detection pattern. contacts for both output relays. 113° conical detection angle from ceiling. Terminal block for external connections. 11 m diameter protection when mounted 6 5 8 9 Single lock or inter-lock operation. 3.7 m high. 0 # -Operate with fail-safe or fail-secure Provides substantial immunity to locking device. false alarms caused by environmental Non-volatile memory disturbances. Duress output. Pulse count or single shot triggering. -ENVIROMUX-ACK Powered by ENVIROMUX-SEMS-16. Good RFI protection -Regulatory approvals: CE, RoHS **ENVIROMUX-IMD-CM** Screw terminal Maximum cable length: 305 meters Powered by ENVIROMUX-SEMS-16. Regulatory approvals: CE, RoHS Mounting Bracket for Infrared Motion Detector **Electric Strike** Fail-Safe Electric Strike (ENVIROMUX-Mounting bracket for installing the infrared motion sensors to a ceiling or EDR-SF) The door is locked with power ON, wall. 360° Angle Adjustment and unlocked with power OFF. For Fire/Emergency door or Escape For use with the ENVIROMUX-IMD. door installations. Fail-Secure Electric Strike ENVIROMUX-IMD-CM, and **ENVIROMUX-MB-IMD** ENVIROMUX-IMD-MW (ENVIROMUX-EDR-SCR) • The door is locked with power OFF, motion detectors. and unlocked with power ON. For Entrance door installation. Powered by ENVIROMUX-SEMS-16. ENVIROMUX-EDR-SCR ENVIROMUX-EDR-SF Regulatory approvals: CE **Emergency / Panic Button** Light Intensity Sensor Detects and measures the luminous Sends activation signal when button is intensity of light. pressed. Ideal for monitoring unmanned closets, For normally closed or normally open telecom rooms, remote data rooms, or other circuit connections. low traffic facilities. 2-wire interface. -Applications from 0 to 128,000 lux. Screw terminal. Human eye response (540nm peak **ENVIROMUX-EBS** Maximum cable length: 305 meters sensitivity). Dimensions WxDxH (mm): -IR and UV rejection 10.16x22.86x76.2 RJ45 connector. Regulatory approvals: RoHS **ENVIROMUX-LIS**

- Supports CAT5/5e/6 cable up to 305 meters. (not included).
- Powered by ENVIROMUX-SEMS-16.
- . Regulatory approvals: CE, RoHS
- Compatible with ENVIROMUX-SEMS-16.







330.562.7070 International calls



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www.networktechinc.com/enviro-rems.htm

Alert/Communications Accessories

Alarm Beacon

- Emits flashing red light when activated.
- Flash Rate: 90 per minute.
- Screw terminal.
- 2-wire interface.

Automatic Voice/Pager Dialer System

- Maximum cable length: 30 meters
- Regulatory approvals: RoHS



ENVIROMUX-SRN-M

Siren

- Emits ear-piercing sound to deter intruders
 - Output Level: 108 dB
- Dimensions WxDxH (mm): 38.1x43.18x60.96
- Screw terminal.
- 2-wire interface.
- Maximum cable length: 30 meters
- Regulatory approvals: RoHS

Sends SMS text messages to a pager or

cell phone when a sensor goes out of

GSM modem with antenna built into

Convenient push-push SIM card holder

Mini SIM card supporting SMS

messaging required (not included)

range of a configurable threshold.

GSM Modem

system.



- Protocols: AT commands
- Supports one configurable authorized phone number for sending SMS text messages.
- Auto PIN feature, no need to enter SIM card PIN after restart
- Powered by ENVIROMUX-SEMS-16.
- Quad band: 850/900/1800/1900 MHz
- SMS: Text mode

ENVIROMUX-AVDS Program up to 4 separate input channels with individual enable/disable, entry/



ENVIROMUX-BCN-R

ENVIROMUX-AVDS ENVIROMUX-AVDS LC

- exit delay and activation options. Calls up to 8 telephones, pagers, or cell phones when a sensor goes out of range
- Stores up to 4 outgoing voice messages. Create a message for 4 different types of alarms.
- Listen in on the area being

communication, or initiate a two-way conversation to detail the emergency condition.

- ENVIROMUX-AVDS-LC
 - Program one input channel.
 - Calls up to 4 telephones, pagers, or cell phones when a sensor goes out of range of a configurable threshold.
 - Deliver a recorded voice message of up to 30 seconds or a numeric code for pager messaging.
- For normally closed or normally open circuit connections.
- Interfaces with the ENVIROMUX-SEMS-16 via the Output Relay connections.
- Dimensions WxDxH (mm): 152x102x1.8

Power Relays & Sensors

DC Voltage Detector

5-position



- **ENVIROMUX-S60VDC**
- meters (not included)
- Includes mounting hardware

~ 0VDC or 0VDC ~ 60VDC

Connector: Screw Terminal,

Monitors up to two DC voltages: -60VDC

Supports CAT5/5e/6 cable up to 305

Regulatory approvals: RoHS

AC Voltage Detector

Normal.

50 to 250 VAC.



ENVIROMUX-ACVD-515 ENVIROMUX-ACVD-C14

Attached 0.9 meter power cord. • ENVIROMUX-ACVD-515: Standard US 120V 15A NEMA 5-15 plug

Measurement indication: Alarm or

ENVIROMUX-ACVD-C14:

Measurement range: detects voltage from

Sensor type: open/closed contact switch.

Universal 250V IEC C14 socket Regulatory approvals: CE, RoHS



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ENVIROMUX-GSM





monitored during outgoing message

- Regulatory approvals: FCC

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Power Relays & Sensors (Continued)

AC Power Monitor with Relay

- Reports AC Voltage, Frequency, Power, and Current to the ENVIROMUX-SEMS-16
 - Monitors Power from one AC inlet to one AC outlet, between 50~250VAC and 47~63Hz.
 - Monitors the number of swells, sags, and spikes.
- Includes Relay with configurable disconnect settings: threshold reboot, or manual reboot.
- ENVIROMUX-ACLM-P8 Outlet Max load rating:
 - ENVIROMUX-ACLM-P12 (US/ Canada):
 - 12A rated load, 15A maximum. ENVIROMUX-ACLM-P8 (Euro/UK): 8A rated load, 10A maximum.
- Capable of measuring current surges to 60A.
- User defined minimum and maximum voltage and power thresholds.
- Capable of detecting user selected spike events with a peak greater than 50V, 250V, 500V, or 1KV.
- Supports CAT5/5e/6 cable up to 305 meters. (not included).
- Regulatory approvals: RoHS

ENVIROMUX-ACLM-P12

AC Dual Voltage Monitor

- Reports AC Voltage and Frequency to the ENVIROMUX-SEMS-16.
 - Monitors AC voltage and frequency on two AC inlets between 50~250VAC and 47~63Hz
 - Monitors the number of swells, sags, and spikes.
- User defined minimum and maximum voltage thresholds.
- Capable of detecting user selected spike events with a peak greater than 50V, 250V, 500V. or 1KV.
- Supports CAT5/5e/6 cable up to 305 meters. (not included).
- Regulatory approvals: RoHS

Remote Controlled Power Relay

A

ENVIROMUX-ACLM-V

ENVIROMUX-PWR-RLY-20A

- Use with ENVIROMUX-SEMS-16 to remotely turn off the power of an AC powered device.
 - Remotely reboot non-responsive computer systems.
- Two AC power receptacles.
- Load capacity:
 - ENVIROMUX-PWR-RLY-15A: 15A at 120VAC.
 - ENVIROMUX-PWR-RLY-20A: 20A at 120VAC.
- Dimensions WxDxH (mm): 96.5x50.8x139.7
 - The baseplate is 133 mm square.
 - Regulatory approvals: TÜV

Sensor Accessories

4-20mA Sensor Converter

- External RJ45 device monitors up to two 4-20mA analog sensors.
- Supports ISA Type 2, ISA Type 3, and ISA Type 4 sensors.
- Provides 18VDC, 25mA for each sensor.
- Connector: Screw Terminal, 8-position.
- Supports CAT5/5e/6 cable up to 305 meters (not included)
- Includes Mounting Hardware
- Powered by ENVIROMUX-SEMS-16.
- Regulatory approvals: RoHS.
- Compatible with ENVIROMUX-SEMS-16 only.





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Sensor Cables

- 2-wire sensor cable.
- Use to connect dry contact sensors to the ENVIROMUX-SEMS-16.
- Available lengths (m): .9/1.8/3/7.6/15.2/30.5
- Regulatory approvals: RoHS, UL



ENVIROMUX-PWR-RLY-15A •













- ENVIROMUX-S420MA



ENVIROMUX-2W-xx





