

SERVER ENVIRONMENT MONITORING SYSTEM

Monitor and manage server room environmental conditions over IP
Provides early warnings before critical events turn into disaster

NEW



ENVIROMUX-REMS (Front & Back)

Monitors Threats:

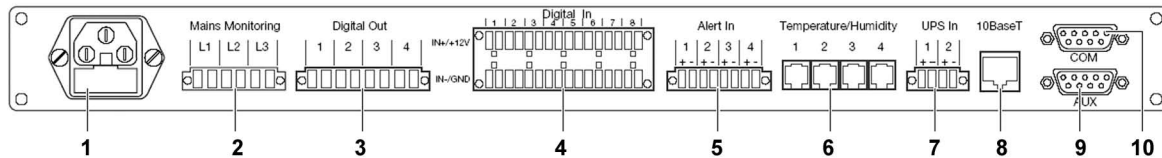
- **High Temperature**
- **Low Humidity**
- **Intrusion**
- **Water Leakage**
- **Vibration**

Features & Applications

The ENVIROMUX™ server environment monitoring system monitors critical conditions (such as high temperature, low humidity, water leakage, intrusion and vibration) that could destroy network components in your server room. When a sensor exceeds a user-defined threshold, the system will notify you via email, LED, buzzer, LCD and network management (SNMP).

- ▶ Monitor and manage server room environmental and security conditions over IP.
- ▶ Create alarm signals with customized input parameters.
- ▶ Operates and configures via SNMP, HTTP, TELNET or V.24 terminals.
- ▶ Internal power supply for all sensors.
 - Access Authorization System requires an external power supply (included).
- ▶ Supports SMTP protocol.
- ▶ Alerts are sent using email and SNMP traps when any monitored environmental condition exceeds a user-specified range.
 - Alerts are posted in a message log, which is accessible through RS232 and Web user interface.
 - Sends email notifications of alerts to a maximum of eight email addresses.
- ▶ Generates syslog messages.
- ▶ 1RU rackmount case is standard.

Specifications



1. Power Port

- 110 or 220 VAC at 50 or 60 Hz via IEC connector.
- Connection for Earth Ground.
- Fuse protection.

2. AC Voltage Monitoring Connections

- Three screw terminal pairs for connecting three AC voltages.
- Potential-free, no common ground reference.
- Input voltage: 50-255 VAC.

3. Digital Outputs

- Four screw terminal pairs.
- Potential-free relay switch contacts.
- Maximum switching load: 1.5 A at 230 VAC, 2 A at 30 V DC.
- Individually fuse protected.

4. Digital Inputs

- Eight screw terminal groups (of four terminals) for connecting dry contact devices.
- Potential-free.
- Input voltage: +5 V DC to +25 V DC.
- With auxiliary +12 V DC supply, maximum current draw of 200 mA.
- Fuse protection.

5. Alert Inputs

- Four screw terminal pairs for connecting four signals or dry contact devices.
- Maximum drawable alarm current approximately 20 mA.

6. Digital Inputs Temperature/Humidity

- Four RJ11 modular jacks for connecting temperature sensors, humidity sensors and/or combined temperature/humidity sensors.

7. UPS Input

- Two screw terminal pairs for connecting UPS switching outputs.
- Input voltage: +5 V DC to +25 V DC.

8. Ethernet Port

- One 10 Base-T Ethernet port with RJ45 Ethernet connector.

9. AUX Port

- One male DB9 RS232 serial port for controlling and monitoring external equipment, such as the Access Authorization System or an air conditioner.

10. COM Port

- One male DB9 RS232 serial port for terminal access.

Protocols

- ▶ Telnet, HTTP, SNMP, SMTP

Dimensions

- ▶ WxDxH (in.): 19x9.1x1.75

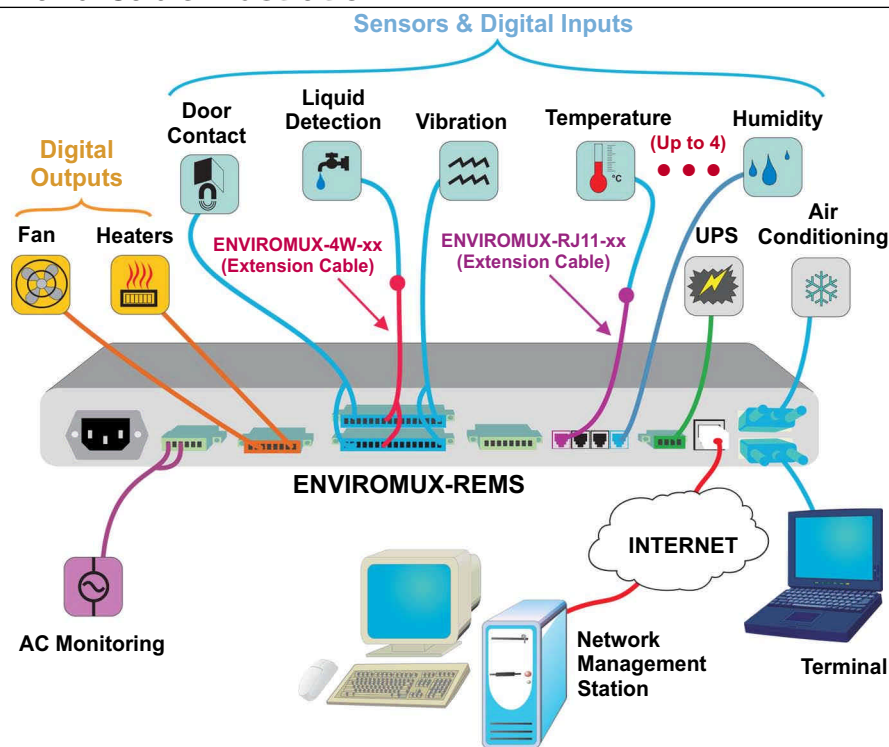
Regulatory Approval

- ▶ CE

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Configuration and Cable Illustration



Control Methods

- ▶ Configuration can be done using the front panel interface, through direct connection to the serial port (RS232), or over the Internet/LAN via Web page or Telnet.

Front Panel Interface

- ▶ Use front panel buttons to move through LCD screens and execute actions.
- ▶ LEDs indicate the following:
 - “Fault” (red) lights up in connection with Reset, Overload or a serious system fault.
 - “Warning” (yellow) lights up if a sensor exceeds a threshold, when booting and in connection with Reset.
 - “Power” (green) lights up when the device is supplied with voltage.
- ▶ One RJ11 communication socket for connection to a PC or terminal (male RJ11 to female 9-pin RS232 serial communication cable included).

RS232 Control

- ▶ Serial baud rate: 9600bps.
- ▶ Data format: 8 data bits without parity, 1 stop bit.
- ▶ Software handshake.

Telnet

- ▶ Simple parameter configuration and evaluation of equipment data using Telnet.
- ▶ Security is ensured by password.

Web Interface

- ▶ Set thresholds for warning and alarm conditions.
- ▶ View sensor status.
- ▶ View message log.
- ▶ Up to 99 users can access the web page at one time.

Administrative Controls

- ▶ “Read-Only” or “Read/Write” privileges can be assigned to each user.
- ▶ View and/or modify user passwords and parameters.
- ▶ Change/disconnect users, administrators, passwords, etc.
- ▶ A maximum of 99 users can be created.

Network Configuration

- ▶ When the system is integrated into a local network, the following functions are available:
 - SNMP support, allowing integration into network management platforms.
 - Log book functional capabilities (syslog service).
 - Loading and saving the system configuration (TFTP).
 - Updating the system (TFTP).



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ENVIROMUX™

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Sensors

Temperature Sensor



ENVIROMUX-TS

- ▶ Applications from 0°C to 65°C.
- ▶ High resistance to external influences on the cable due to digital output signal.
- ▶ Accurate to within +/- 0.7°C.
- ▶ Re-calibration is not necessary after initial set-up.
- ▶ Cable length: 4 m.
- ▶ Includes mounting hardware.

Humidity Sensor



ENVIROMUX-HS

- ▶ Applications from 10% to 90% relative humidity at temperatures between 0°C and 65°C.
- ▶ High resistance to external influences on the cable due to digital output signal.
- ▶ Accurate to within +/- 3% RH.
- ▶ Re-calibration is not necessary after initial set-up.
- ▶ Cable length: 4 m.
- ▶ Includes mounting hardware.

Temperature/Humidity Combination Sensor



ENVIROMUX-THS

- ▶ Applications from 10% to 90% relative humidity and from 0°C to 65°C.
- ▶ High resistance to external influences on the cable due to digital output signal.
- ▶ Accurate to within +/- 0.7°C. and +/- 3% RH.
- ▶ Re-calibration is not necessary after initial set-up.
- ▶ Cable length: 4 m.
- ▶ Includes mounting hardware.

Shock Sensor



ENVIROMUX-VS

- ▶ For registering movement and shocks.
- ▶ Adjustable sensitivity.
- ▶ Condition display via LED.
- ▶ Cable length: 4 m.
- ▶ Includes mounting hardware.

Door Contact Sensor



ENVIROMUX-DCS

- ▶ Monitors access with a magnetic bridge sensor, which responds to any magnetic material (no special inserts necessary).
- ▶ Can also be used for monitoring side wall and covers.
- ▶ Cable length: 4 m.
- ▶ Includes mounting hardware.
- ▶ CE approved.

Infrared Motion Sensor



ENVIROMUX-IMS

- ▶ Registers movement in the area covered (maximum 15 m).
- ▶ Anti-sabotage device for unauthorized tampering of the housing.
- ▶ Condition display via LED.
- ▶ Cable length: 4 m.
- ▶ Includes mounting hardware.
- ▶ CE approved.

Liquid Detection Sensor



ENVIROMUX-WDS

- ▶ For warning of flooding.
- ▶ Detects liquid depth of 1mm.
- ▶ 100% waterproof electronics.
- ▶ Detects any conductive liquid.
- ▶ Cable length: 5 m.
- ▶ CE approved.

Cable Clamp Bracket with Cover

ENVIROMUX-CBC

- ▶ Securely guides all connecting cables.
- ▶ Includes cover.



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Sensors (Continued)

Temperature and Humidity Sensor Extension Cable



- ▶ RJ11 cable for temperature or humidity sensors.
- ▶ Available lengths: 5 m, 10 m, 15 m, 20 m.

ENVIROMUX-RJ11-xx

Sensor Extension Cables



- ▶ 4-core sensor cable.
- ▶ Compatible with all sensors, except temperature and humidity (RJ11).
- ▶ Available lengths: 5 m, 10 m, 15 m, 20 m.

ENVIROMUX-4W-xx

Access Authorization System



ENVIROMUX-AAS and ENVIROMUX-AAS-CC

- ▶ Allows access to cabinets using chip cards (ENVIROMUX-AAS-CC).
- ▶ Increased security using an electronic lock.
- ▶ User identification is stored in the Remote Environment Monitoring System.
- ▶ Administrator can opt whether the door is automatically locked or unlocked in case of power failure.
- ▶ Cabinet door can be opened remotely.
- ▶ Unauthorized card attempts are logged in the syslog or sent to the SNMP program.
- ▶ CE approved.
- ▶ Includes chip card reader with four meter cable, electronic lock with four meter cable, and power supply.

Available Monitoring System, Sensors, & Extension Cables

NTI Part#	Description
ENVIROMUX-REMS	Server Environment Monitoring System
ENVIROMUX-TS	Temperature Sensor
ENVIROMUX-HS	Humidity Sensor
ENVIROMUX-THS	Temperature/Humidity Combination Sensor
ENVIROMUX-WDS	Liquid Detection Sensor
ENVIROMUX-DCS	Door Contact Sensor
ENVIROMUX-IMS	Infrared Motion Sensor
ENVIROMUX-VS	Shock Sensor
ENVIROMUX-CBC	Cable Clamp Bracket
ENVIROMUX-AAS	Access Authorization System
ENVIROMUX-AAS-CC	Access Authorization System Chip Cards
ENVIROMUX-RJ11-xx	Temperature and Humidity Sensor Extension Cables (RJ11)
ENVIROMUX-4W-xx	Sensor Extension Cables (4-core sensor cable)

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