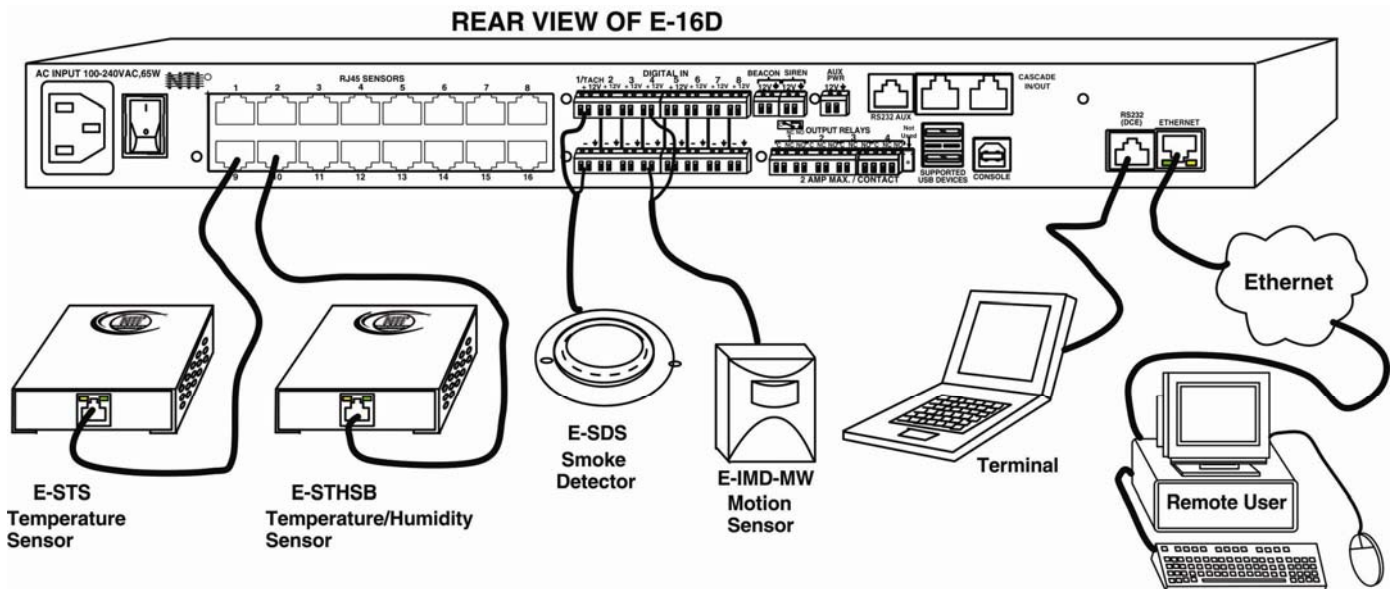# ENVIROMUX® Series

E-16D

Quick Installation Guide

The E-16D Server Environment Monitoring System (ENVIROMUX) is designed to monitor, from a remote location, the critical environmental conditions in cabinets and rooms containing servers, hubs, switches and other network components. The E-16D monitors the internal temperature and humidity of the unit, giving readings that can be used as an estimate for the conditions of other nearby rack components. Additionally, it is capable of monitoring a maximum of 16 external sensors (available from NTI) and up to 8 additional contact-type sensors (often called open-collector, contact-closure, relay-style, normal-open, or normal-closed). Specifically, the external sensors sold by NTI will monitor temperature and humidity, and detect smoke, motion, vibration, glass breaking, a door opening, and detect the presence of water on a flat surface (such as the floor). The temperature and humidity sensors will provide current readings as well as alerts when thresholds are exceeded. The remainder of the sensors will simply provide alerts.

Remote monitoring is provided via a 10/100BaseT Ethernet web interface. The user is able to specify parameters for all monitored signals. When a sensor exceeds the configured threshold, the unit will signal an alert. Alert methods include email, SNMP traps, web-page alerts, and visual indicators (LEDs). Support for text messaging (with the connection of an external GSM modem) is also provided.

Installation

1. Mount the ENVIROMUX to a rack.
2. Connect the ENVIROMUX to the Ethernet for maximum remote system management using the "ETHERNET" port and CAT5/5e/6 patch cable.
3. For limited local system control via RS232 connect a terminal to the "Console" port using the USB Male Type A-to-Male Type B cable provided.   (Install drivers as instructed on page 24 of the manual.)
4. Connect the power cord and power ON the ENVIROMUX.

Typical Application

Setup

1. Use the Device Discovery Tool (found at http://www.networktechinc.com/download/d-environment-monitor-16.html) to locate the ENVIROMUX on the network.   Update the IP address, Mask, and Gateway as needed to connect to the local network. Click on *Submit* to update the ENVIROMUX.

Note: The Device Discovery Tool requires the Java Runtime Environment to operate. Here is a link to the web page from which Java can be downloaded and installed.

Note: The computer using the Device Discovery Tool and the ENVIROMUX must be connected to the same physical network in order for the Device Discovery Tool to work.
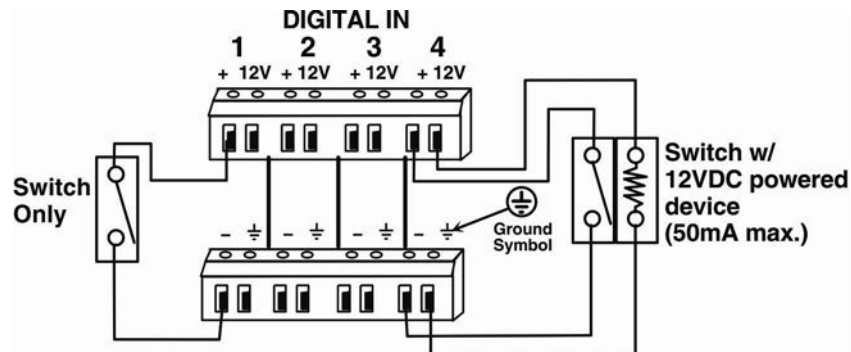
If there are more than one ENVIROMUX connected, the Device Discovery Tool can isolate the unit for IP address assignment.   By pressing the "Blink LED" button associated with the unit in question, the "Pwr" LED on that ENVIROMUX will blink rapidly.

2. Type the updated IP address into the browser address bar.
3. Log in to the web interface as the administrator **-   username = root   password= nti** (letters are case sensitive**)**
4. Configure Network and SMTP server settings (**Administration->Network**).
5. Set the date and time.
6. Configure SNMP settings. This may require rebooting the ENVIROMUX. (Power OFF ENVIROMUX, wait until all LEDs power OFF, then power ON.)
7. Add users (**Administration->Users->Add New User)** and specify email address, contact methods, etc. as needed.
8. Temperature and Humidity sensors will be automatically detected. External contact sensors and sensors connected to "Digital Inputs" must be added manually through the web interface before configuring them.
9. Configure sensors (**Monitoring->Sensors->click on Edit link for sensor)** as desired for thresholds, sampling, alert notification methods, etc.
10. Configure the log settings (**Log->Log Settings)** for log record overflow action and contact methods.
11. To access ENVIROMUX using a terminal locally connected to the "Console" port (shown in drawing above), set port on terminal at 115200bps, 8-N-1, no flow.

> Press **<Enter>**,
> At the logiin prompt type "**root**"
> Press **<Enter>**,
> Type "**nti**" for the password,
> Press **<Enter>** again to access the main menu.

Sensor and Device Connection

1. Connect each of the sensors (purchased separately) to the ENVIROMUX.
    A. Connect any RS485 sensors (i.e. E-STS temperature sensor, E-SHS humidity sensor, E-STHS temperature + humidity sensor, E-LDS liquid detection sensor, E-VSSB vibration sensor) to the "RJ45 Sensors" ports using CAT5/5e/6 patch cable.
    B. Connect contact sensors (i.e. E-GBS glass break sensor, E-SDS smoke detection sensor, and others) to the terminal blocks labeled "Digital In". If sensors require a 12VDC power source to operate, 12VDC (50mA max.) and ground terminals have been provided for each set of terminals.   Connect each two-wire or four-wire contact sensor using 16-26 AWG wire.

2. For control over additional devices using relay contacts (30VDC/1A, 100VAC/500mA max.) connect devices to terminal blocks labeled "Output Relays".   Relay contacts will work as a switch to either open or close a circuit.

For more details, specifications, and troubleshooting tips,   see the Installation and Operation Manual or go to http://www.networktechinc.com/environment-monitor-16.html). .