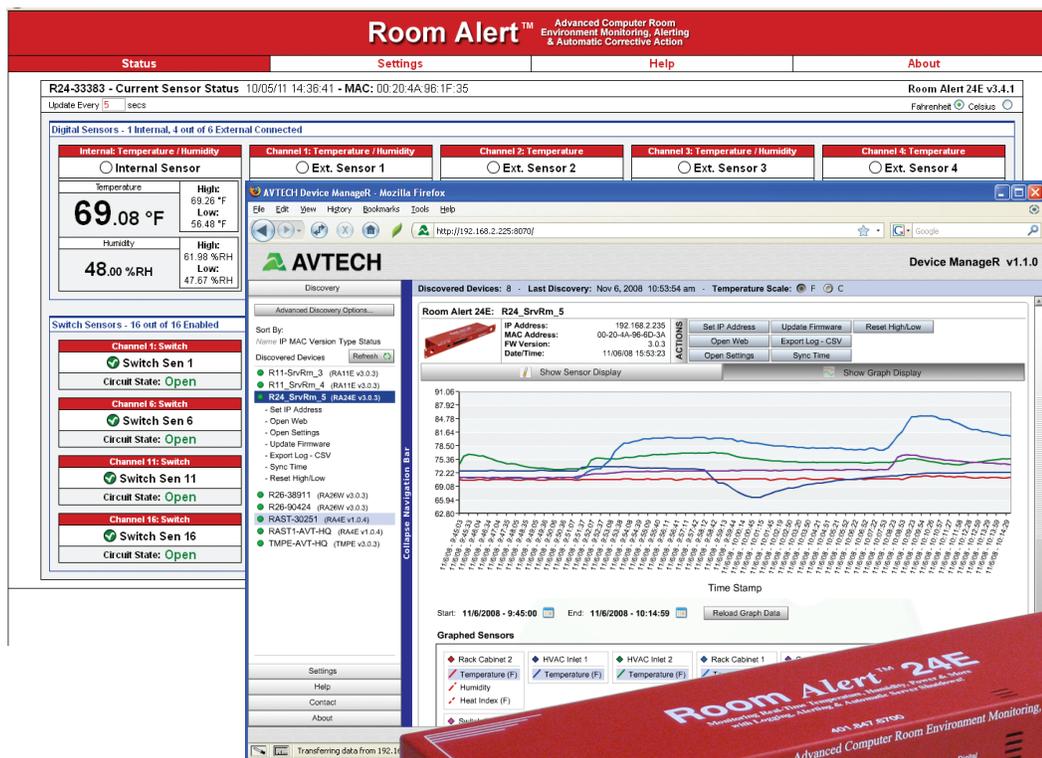


Room Alert[®] 24E

Monitoring Real-Time Temperature, Humidity, Power & More
with Logging, Alerting & Automatic Corrective Action!



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User's Guide &
Reference Manual

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Special Thanks

We would like to recognize field test participants, our inhouse sales and support staff, and the entire software & hardware development teams for their contributions and assistance in completing this manual.

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Introduction

What Room Alert 24E Is

Room Alert 24E is the AVTECH Software (AVTECH) solution for ‘*Monitoring Real-Time Temperature, Humidity & More with Logging, Alerting & Automatic Actions!*’ It is designed specifically to monitor up to 24+ digital and switch sensors that can be distributed throughout a room or department up to 900 feet (274 meters) away. The Room Alert 24E includes built-in sensors for digital temperature and digital humidity, with additional external sensors (in the base package) for power, room entry and digital temperature. External ports are built-in for direct connection of 6 digital sensors, 16 switch sensors and an expansion box. Room Alert 24E attaches directly to the network via Ethernet.

Room Alert 24E monitors in real-time and allows alert notifications to be sent via email and email-to-SMS to devices like computers, phones, pagers and PDAs. Users can set up thresholds for temperature and humidity that are rising or falling. Status of internal and attached sensors for power, flood, smoke, air flow, room entry and more, is viewed in real-time through Room Alert 24E’s web interface and your favorite web browser.

Room Alert 24E is designed to work easily with AVTECH’s Device ManageR (included) software, which will significantly enhance the alert notification capabilities to allow notification to individuals, groups, hierarchies, different people for different sensors/locations, and different people for different times of the day, etc. With Device ManageR, alert notification methods can be expanded to include email, email-to-SMS, modem dialout and much more. Additional functionality is available via plugins to shutdown servers, dial out alert with voice or GSM, and more when issues or events occur across the network.

AVTECH’s Device ManageR software is included FREE and is designed to set up, monitor and manage unlimited numbers of Room Alert and/or TemPageR units across your network. Device ManageR allows data logging, advanced alerting, graphing, pings, firmware updating and much more. Because each Room Alert 24E ID box is SNMP enabled, they can also be easily monitored via SNMP savvy applications like *OpenView, Tivoli, Unicenter, PageR Enterprise, Big Brother, What’s Up Gold, Nagios* and others.

Room Alert 24E is a member of AVTECH’s Room Alert product line. There are several powerful Room Alert models designed to monitor IT environmental conditions in any type or size computer room, data center or other facility. All Room Alert models come with a license to run AVTECH’s Device ManageR software.

To learn more about Device ManageR, Room Alert, TemPageR or any AVTECH product, please visit AVTECH’s primary websites at AVTECH.com, RoomAlert.com and TemPageR.com. To order AVTECH products, visit EnvironmentMonitor.com or call 888.220.6700 / 401.628.1600. AVTECH products are available direct, online and through your favorite reseller.

Benefits Of Using Room Alert 24E

Know immediately when important or critical temperature and humidity changes and extremes occur within a computer room, data center or other facility, as well as power loss or other conditions that could lead to expensive down time, damaged equipment, lost worker productivity or denied server access. Provide early warnings, allowing staff and management to take actions that can avoid or minimize an event's impact on servers, the network, users, insurance, the IT budget and the entire organization.

Give the IT staff and management 'peace of mind' by keeping them fully informed of critical IT environmental changes regardless of where they are, the time of day or day of the week. Temperature extremes place an enormous stress on computer hardware and are normally caused by failure of the main air conditioning system or a loss of power. Extremes for even a short time can create major problems.

Room Alert 24E provides dynamic, real-time temperature, humidity, power and room entry monitoring of the computer room, data center or other facility. Monitoring of digital temperature and humidity is possible at up to seven (7) locations and as far as 100 feet (30 meters) away from the Room Alert 24E monitor. Monitoring of switch sensors such as main/UPS power, flood/water, smoke/fire, motion, room entry, air flow, panic buttons and more is possible as far as 900 feet (274 meters) away from Room Alert 24E.

Notification to an unlimited number of individuals or groups, at an unlimited number of temperature (between -67° to 257° F or -55° to 125° C) and humidity (between 0% to 100% relative humidity) thresholds (rising too high, or falling too low), and by notification to each users' device of choice, is possible when Room Alert 24E is used with the bundled Device ManageR software.

Room Alert 24E can log sensor data when used with Device ManageR for historical tracking or for identification of critical times where environment conditions have previously changed to cause problems. This can be useful for justification of new air conditioning equipment, modification of the data center layout or justifying changes like the location of primary servers or the data center itself. This data can be graphed within Device ManageR to show trends or exported to Excel and other applications.

Users interested in 'security monitoring' with network IP cameras should note that Device ManageR allows monitoring of all Axis IP cameras located anywhere network-wide. There is no requirement (limitation) to connect any camera directly to our hardware. Built-in motion sensors on Axis cameras can trigger alerts and Device ManageR can email the image snapshot to various staff members. Device ManageR can also email image snapshots from Axis cameras when other alerts have been detected such as high temperature, flooding, motion, fire, room entry and more. Recipients can click on a link within the Device ManageR alert (if configured) to view live real-time video through the Axis camera on their laptop or smart phone. The combination is very powerful for security conscious organizations and just a sample of how Device ManageR extends the value of any Room Alert monitor.

Installation

The initial installation of the Room Alert 24E can be completed quickly and easily provided the instructions below are followed with detail and care. Before beginning, please lay out the contents of the Room Alert 24E package so that the components can all be located and accessed with ease.

Package Contents

The main components included with the standard (default) Room Alert 24E package include:

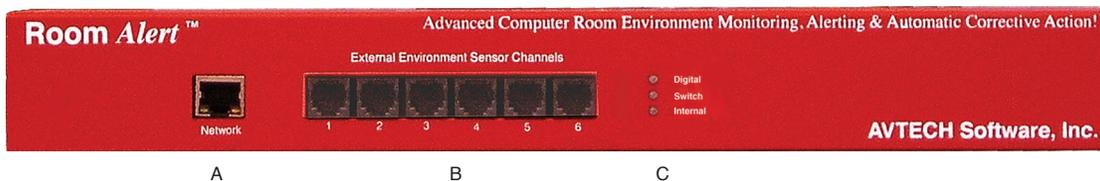
- One (1) Room Alert 24E monitor (with built-in temperature & humidity)
 - One (1) Ethernet Cable (10' length, red)
 - One (1) AVTECH 5v 1A Power Adapter (110-240v, 50-60Hz)
 - One (1) Digital Temperature Sensor
 - One (1) Power Sensor
 - One (1) Room Entry Sensor
 - One (1) *Room Alert 24E User's Guide & Reference Manual* (you're reading it now)
 - One (1) Package Of Literature & Additional Information
- * All Firmware, Software & MIBs are downloaded from AVTECH.com. There is no CD provided.

NOTE: Some of the components arriving with this package may be individually wrapped and contain additional supporting components. Please remember to keep these components together as they will be required for proper setup. If you received additional components (i.e. like additional sensors) that are not mentioned above, instructional material explaining the proper setup of that component should be included with it. If you cannot find the proper instructional materials, check the 'Support' and 'Downloads' sections of the AVTECH.com website for any appropriate installation or application note that will instruct you on the proper installation and use of that component. Install those components after the Room Alert 24E setup is completed.

Room Alert 24E Monitor

The graphics below identify the primary components of the Room Alert 24E monitor that are visible on the front and rear panels. Descriptions are provided for the identification of key items.

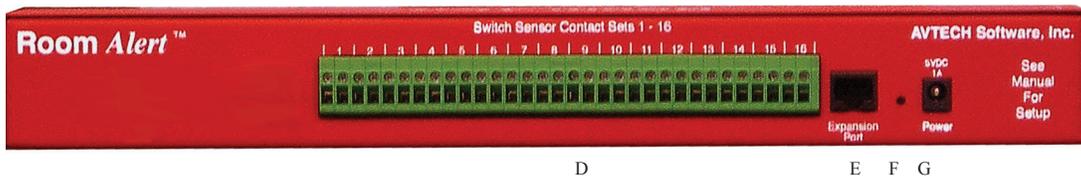
Front View (shown here without rack mounting brackets)



- A. **Network Port** — Attach the Room Alert 24E unit to the network by plugging the Ethernet cable into this RJ-45 port and then connecting the other end to the network. The left LED below the 'Network' port indicates Link status and should light up and remain a solid green or orange color. The right LED below the 'Network' port indicates Activity status and should blink with network activity on the port. The color of this LED can be green or orange as well. When the device reboots, the Link LED will turn on and off several times. If the Link LED remains unlit and the Activity LED is blinking orange, please refer to the 'Performing Firmware Recovery' section of the 'Advanced Topics' chapter and follow the instructions there.

- B. **External Environment Sensor Channels (digital sensor channels)** — Sensors such as AVTECH’s Digital Temperature Sensor, Digital Outdoor Temperature Sensor, Digital Fluid Temperature Sensor and Digital Temperature & Humidity Sensor can be connected to these RJ-11 ports.
- C. **Digital, Switch & Internal Alarm Indicators** — These three LEDs indicate the current alarm status of sensors connected to each of these three corresponding types of sensor ports or channels. If the LED is green, then there are currently no sensors in an alarm state for that type of sensor. If the LED is red, then one or more sensors of that type are in an alarm state and the web interface for Room Alert 24E should be reviewed for more insight as to specific alarm condition(s).

Back View (shown here without rack mounting brackets)



- D. **Switch Sensor Contact Sets** — Connect any AVTECH switch-based environment sensor to a set of sensor contacts for monitoring by the Room Alert 24E unit. Any switch sensor device with a set of voltage-free dry contacts can be attached to a set of sensor contacts. AVTECH offers switch sensors for monitoring all primary environment conditions. Third party switch sensors can also be used to monitor for unique applications or special conditions.
- E. **Expansion Port** — This port exists for future expansion. Do not connect any sensors or cables to this port until AVTECH releases or approves devices that are specifically designed to utilize this port.
- F. **Reset Button** — Press this button to reboot the Room Alert 24E monitor. If the button is pressed and held for 10 seconds or more, the unit will reset to the factory default settings and reboot.
- NOTE: Resetting the Room Alert monitor to factory default settings will lose all custom settings previously configured.**
- G. **Main Power Port** — Connect the ‘AVTECH 5v 1A Power Adapter’ to this port to power the Room Alert 24E monitor. Do not use any other power adapter with Room Alert 24E or it could damage the unit and void the warranty (look for the AVTECH logo and 5v 1A power adapter rating).

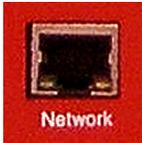
Step 1: Install AVTECH Device Manager

Before you can start taking advantage of the monitoring capabilities of your new Room Alert 24E monitor, you will need to discover it on the network. To accomplish this, AVTECH includes Device Manager with your purchase. Device Manager runs on a Windows platform and can be accessed from anywhere on the network or across the internet via a web browser.

Device Manager is used to initially discover the Room Alert 24E monitor, after it is connected to your network. Device Manager can then be used as a central management console for monitoring an unlimited number of Room Alert, TemPageR and Axis Camera devices across your network. It has many additional features and enhances the monitoring capacity of your Room Alert 24E with advanced alerting, logging, graphing and more. Optional Plugins are available for automatic corrective actions, reporting and more.

Device ManageR is included FREE with your purchase of any Room Alert or TemPageR monitor and can be accessed from the ‘Downloads’ section of the AVTECH.com website. Access to new and updated versions of Device ManageR are only available while annual ‘Maintenance Support & Update Service’ (MSUS) is active. Install Device ManageR now and we will come back to the discovery process in a later step.

Step 2: Install The Room Alert 24E Monitor



The Room Alert 24E monitor must be connected in the following order for initial configuration and discovery on the network to be successful. Locate the Ethernet cable included with your package and connect one end to the ‘Network’ port on the front of the Room Alert 24E unit. Connect the other end of the Ethernet cable to an open port on the hub, switch or router that will give the Room Alert 24E monitor access to your network.

IMPORTANT NOTE: DO NOT CONNECT POWER to the Room Alert 24E monitor during the initial setup UNTIL AFTER you have connected it to your network as described above or it will cause problems automatically assigning the initial IP address.



Locate the ‘AVTECH 5V 1A Power Adapter’ and plug it into a surge protected power source. Next, attach the other end of the power adapter to the ‘Power’ port on the Room Alert 24E monitor only if the Room Alert 24E monitor is already connected to the network. Be sure to remove the sticker over the ‘Power’ port before attaching the ‘AVTECH 5V 1A Power Adapter’ to the Room Alert 24E monitor.

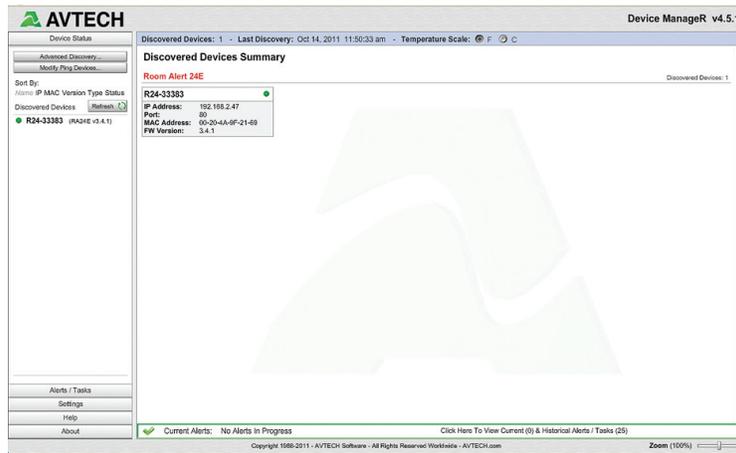


Once the network and power connections have been completed in that specific order, verify that the LED located on the bottom-left side of the network jack lights up indicating power and network connectivity.

Step 3: Discovery And Network Settings - Device ManageR

Once the Room Alert 24E monitor has been properly installed according to Step 2 above, you can begin the discovery process. When using Device ManageR, the Room Alert 24E monitor should be discovered automatically and populate under the ‘Device Status’ tab on the left hand side of the web interface within 15 seconds. Automatic discovery is the default method of discovery for Device ManageR and is accomplished using a UDP broadcast over port 30718.

The Room Alert 24E monitor is set to obtain an IP address automatically using DHCP. If you do not have DHCP on your network, please go ahead to the ‘Static-Only Networks’ section below. If the Room Alert 24E name is displayed as (Unknown) and the IP address is on the 169.254.x.x range, or if the Room Alert 24E is not found, see the ‘Device Not Found Or Invalid IP Address’ subsection below before continuing.



Once the Room Alert 24E monitor is listed or displayed in the ‘Device Status’ section, further actions can be performed after selecting the desired device. These actions can be performed via the links displayed below the device name in the ‘Device Status’ section or by the matching ‘Actions’ buttons displayed to the right of the Room Alert 24E details, on the ‘Sensor Display’ tab. Selecting more than one unit by holding down the CTRL key while selecting devices will allow you to view multiple devices at the same time and perform actions on the group of selected devices.



The ‘Set IP Address’ feature is used to configure a static IP address, Gateway IP address, Subnet Mask, DNS server IP Address or to set the Room Alert 24E to obtain IP settings automatically via DHCP. Click the ‘Set IP Address’ and ‘Use DHCP’ check boxes to configure the unit and obtain an IP address automatically. To assign static IP settings, enter the valid IP settings for your network in the ‘IP Address’, ‘Gateway IP Address’, ‘Subnet Mask’ and ‘DNS Server IP Address’. Once you have the settings configured as desired, click the ‘Update IP Settings...’ button. You will see a confirmation window explaining that the unit is rebooting and the updates will be applied.

The ‘Open Web’ feature allows you to quickly navigate to the ‘Status’ page on the default web browser of the selected Room Alert 24E monitor by clicking the link or button. The ‘Status’ screen shows the current sensor data and alarm status of each sensor.



The ‘Open Settings’ feature opens the default web browser and displays the ‘Settings’ screen for the Room Alert 24E web interface. The ‘Settings’ screen allows configuration for alerts, email, SNMP and other settings. The Room Alert 24E is a standalone device that does not require any additional software or equipment to function. However, you can optionally configure Email Notifications and Actions from Device Manager which offers important advantages in flexibility and control over alerting. This will significantly increase the monitoring power

of your Room Alert 24E and allow monitoring of unlimited Room Alert, TemPageR and Axis Cameras through a single IP address.

NOTE: The Room Alert 24E does not ship with a username or password assigned so you should be able to access the 'Settings' screen by leaving the username and password fields blank and clicking the 'OK' button.

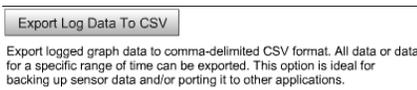
The 'Update Firmware' feature is used to initiate the firmware upgrade process using Device Manager. Please see the 'Upgrading Firmware' section of the 'Advanced Topics' chapter for important instructions on the firmware update procedure.



The 'Reset High/Low' feature is used to clear the current High and Low historical values for the digital temperature and humidity sensors on the 'Status' page of the Room Alert 24E monitor. These values are normally stored until the unit reboots, at which time they reset automatically. You can manually reset them if you wish by clicking the 'Reset High/Low' link or button.

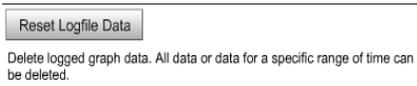


The 'Advanced' feature is used to perform additional functions which are accessible via a menu once you click the link or button.



The 'Export Log Data To CSV' button allows you to export the logged data from the Device Manager database to comma-delimited CSV

format. You can select from a list of monitors to export data for a single monitor or you can export the logged data for all current devices. You can export all of the logged data by selecting the 'All Log Data' radio button and you also have the option of specifying a date range to export from by selecting the 'Date Range' radio button. When selecting the date range, simply click the calendar button next to the 'Start:' header to specify the start date and time and the accompanying calendar button next to the 'End:' header to select the end date and time for the export.



The 'Reset Logfile Data' button allows logged sensor data for selected device(s) to be reset or deleted. The logfile should be periodically reset on a regular basis (perhaps monthly, quarterly or annually) to ensure smooth operation and performance of Device Manager. We recommend that you save a copy of the logged data for your own records before resetting or deleting the logged data. Use the 'Export Log Data To CSV' feature to save a copy of the logged data. You can reset the logfile data on all devices by selecting the 'All Devices' radio button or you can specify a single device to clear logfile data on by selecting the 'Specific Device' radio button and selecting the desired monitor. In addition, you can reset all of the logfile data for the device (s) or opt to delete only data from specific date ranges. Click the 'All Log Data' radio button to clear all of the log data or the 'Date Range' radio button to specify a date range to delete from. When specifying a date range, click the calendar button next to the 'Start:' header to select a start date and time and then click the calendar button next to the 'End:' header to select an end date and time for the delete range. Click the 'Reset Logfile Data' button to complete the logfile reset process.



The 'Sync Time On Selected Device' instructs the Room Alert 24E to

synchronize with the time server specified in the ‘Time Server IP’ field on the ‘Advanced’ tab of the ‘Settings’ page. The time displayed on the Room Alert 24E ‘Status’ page and included in email alert notifications can only be updated by linking with a network time server (NTP) on UDP port 123. If a time server is not available on your network and access to a time server on the internet is not possible, AVTECH has various help files available that explain how to configure a computer on the local network to act as a time server for other devices. Visit AVTECH’s Frequently Asked Questions (FAQs) at the ‘Support’ section of AVTECH.com to learn more on this and other common questions and issues.

Block Device IP Address

Block the IP address assigned to the selected device from automatic discovery. If this is done in error, the IP address can be unblocked using the ‘Blacklist’ in ‘Settings’.

The ‘Block Device IP Address’ allows you to block the IP address assigned to selected monitors from automatic discovery. If a monitor is blocked in error, it can always be unblocked by deleting its IP address from the ‘Blacklist’ list in the ‘Settings’ section of Device ManageR.

Static-Only Networks

If the network that the Room Alert 24E monitor will be connected to does not have DHCP enabled, the Room Alert 24E monitor will default to a 169.254.xxx.xxx IP address. Device ManageR may or may not be able to discover the unit when it has obtained a 169.254.xxx.xxx IP address, depending on various network conditions. Follow the steps below to assign an IP address to the Room Alert 24E monitor that will be appropriate for your network.

1. Click the ‘Advanced Discovery...’ button under the ‘Device Status’ section.
2. In the Advanced Discovery Options configuration window, click the ‘Set IP Via MAC Address’ button.
3. Enter the MAC Address of the monitor in the ‘MAC Address:’ field. Be sure to use all capital letters. The MAC address for the Room Alert 24E is listed on the label attached to the bottom of the hardware unit. If assigning the monitor a static IP, enter the IP address in the ‘IP Address:’ field. (You can mark the ‘Use DHCP:’ check box if you would like the monitor to obtain an IP address via DHCP instead).

NOTE: If the Room Alert 24E monitor is later relocated outside of the current subnet, you will need to reset the IP address in order to see and work with the Room Alert 24E monitor at the new network location.

If the Room Alert 24E monitor is still not discovered or the IP address is not updated, continue working through steps 4-6.

4. Locate a cross-over Ethernet cable, or spare hub or switch and connect it to the computer being used. Connect the Room Alert 24E directly to the other end of the cross-over Ethernet cable or to the hub or switch.
5. Assign a static IP setting to the computer being used. Click the ‘Refresh’ button under the ‘Device Status’ section to force a search by Device ManageR. If the Room Alert 24E is not discovered, be sure there are no applications on the computer being used that are blocking traffic sent to or from the Device ManageR software (i.e. software firewalls, anti-virus, local security applications, etc).

6. Repeat steps 1-3 above, entering a static IP address in step 3 that has the same first three octets as the static IP address assigned to the computer (i.e. IP address of computer: 192.168.2.3, IP address of Room Alert 24E: 192.168.2.4).

If the IP address of the Room Alert 24E monitor is still not discovered, continue with steps 7-9.

7. Assign static IP settings to the computer being used that match the IP address of the Room Alert 24E unit (i.e. IP address of Room Alert 24E: 169.254.10.122, IP address of computer: 169.254.10.123).
8. Click the 'Refresh' button under the 'Device Status' section to force a search by Device Manager and select the Room Alert 24E monitor when discovered.
9. Click the 'Set IP Address' link displayed under the Room Alert 24E monitor and enter a valid IP address for the location on the network where the Room Alert 24E monitor will be installed. If the IP address does not update, access the 'Settings' page of the unit by clicking the 'Open Settings' link displayed under the Room Alert 24E monitor and enter the desired IP settings on the 'Network' tab. After doing so, click the 'Accept Changes' button at the bottom of the page, then the 'Save Settings' button on the left menu. Allow the Room Alert 24E monitor to reboot and the updated IP settings to be applied. Then reattach your Room Alert 24E to the network.

NOTE: If the Room Alert 24E monitor is later relocated outside of the current subnet, you will need to reset the IP address on the unit in order to see and work with the Room Alert 24E monitor at the new network location.

In the event that the Room Alert 24E is not discovered by Device Manager, the network may be blocking UDP broadcast packets on port 30718. Even if the Room Alert 24E obtains a valid IP address, this can prevent the Room Alert 24E monitor from being discovered by Device Manager. To resolve this issue, check the DHCP server for the MAC address listed on the label located on the bottom of the Room Alert 24E hardware. If you are able to locate the IP address or you know what range the unit has taken an IP address from, you can manually add the Room Alert 24E. To do so, follow the steps below.

1. Click the 'Advanced Discovery...' button under the 'Device Status' section.
2. In the configuration window that pops up, click the 'Manually Add Device/s Via IP Address' button.
3. In the next window, choose the appropriate radio button. Select 'Single IP Address' for an individual device, then enter the IP address in the 'IP Address:' field. Select the 'Range Of IP Addresses' radio button if you will be adding multiple devices or are adding an unknown IP address that you know is within the specified range. Enter the beginning IP address of the range in the 'Start IP:' field and the ending IP address in the 'End IP:' field.
4. Once you have the desired IP address settings entered, click the 'Begin Scan' button. Device Manager will begin scanning and attempt to discover any Room Alert, TemPageR or Axis camera unit within the configured range of IP addresses. When the scan is complete, Device Manager will display a list of successfully discovered devices viewable in the 'Device Status' section. Click the 'Close Window' button to return to the Device Manager web interface.

NOTE: Manual discovery occurs over TCP port 30718. Please ensure this port is open and not blocked on your network.

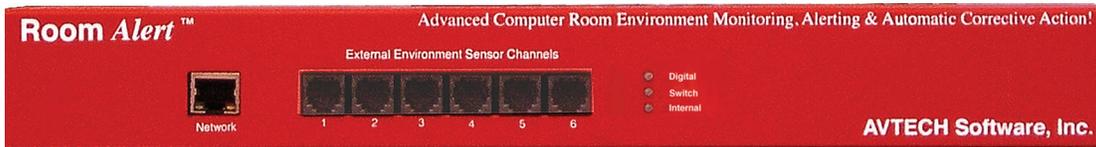
If manual discovery is not possible or if there is not an entry in the DHCP server, follow the instructions listed under the ‘Static-Only Networks’ subsection above.

If the Room Alert 24E unit is discovered although has a 169.254.xxx.xxx IP address, the Room Alert 24E unit may not have been connected properly or DHCP assignment may currently be getting blocked. In either case, follow the instructions listed in the ‘Static-Only Networks’ subsection above.

NOTE: If the above instructions do not allow discovery of the Room Alert 24E monitor, please initiate a Live Chat technical support request on AVTECH.com or send an email support request to Support@AVTECH.com. There are some scenarios that will call for special procedures which cannot be accomplished with Device Manager. In these unusual events, you will need the AVTECH Device Discovery Utility. This utility is also available from the ‘Downloads’ section of our website. In the unlikely event you find yourself in one of the following situations, the AVTECH Device Discovery Utility will be needed to resolve your issue. These situations would be a case where you cannot discover the Room Alert 24E with Device Manager using either automatic or manual discovery. For more information, please see the Advanced Topics section of this manual.

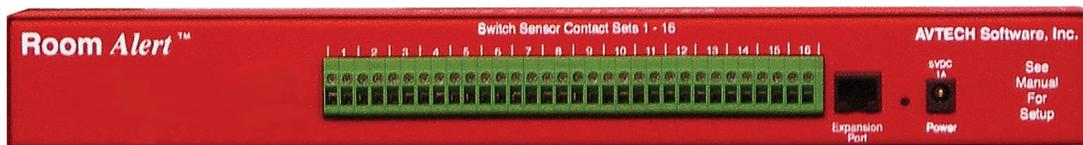
Step 4: Connect Included Sensors And Accessories

The graphics below identify the connection ports and channels of the Room Alert 24E monitor ID box that are visible on the front and rear panels. Use these to connect the included sensors and accessories.



A

- A. **Digital Temperature Sensor** — Connect the included AVTECH Digital Temperature Sensor to one of the External Environment Sensor Channels shown above (A). The Digital Temperature Sensor provides a real-time digital temperature reading at the location of the temperature probe. Position the sensor in the desired location, running the sensor cable back to the Room Alert 24E ID box. DO NOT remove the red plastic cap from the tip of the sensor.



B

- B. **Room Entry Sensor** — Connect the AVTECH Room Entry Sensor to one of the Switch Sensor Contact Sets 1-16 (C). Position the sensor in the desired location, typically the frame of a door or window to show if the door is open or closed.



- B. **Main Power Sensor** — Connect the included AVTECH Main Power Sensor to one of the Switch Sensor Contact Sets 1-16 (C) and plug the sensor in where desired. The Main Power Sensor allows a real-time notification of main or UPS power status change (i.e. power going on or off).



Step 4: Check Room Alert 24E Firmware Version

Browse to the ‘Device Status’ section on the left side of the web interface for Device ManagerR and locate your Room Alert 24E monitor. Select it and click the ‘open web’ link button. If your Room Alert 24E is not discovered due to blocked UDP broadcasts on your network, you can manually add the Room Alert 24E to the ‘Device Status’ section using the ‘Advanced Discovery...’ button or simply type the IP address of the Room Alert 24E unit in the address bar of a web browser.

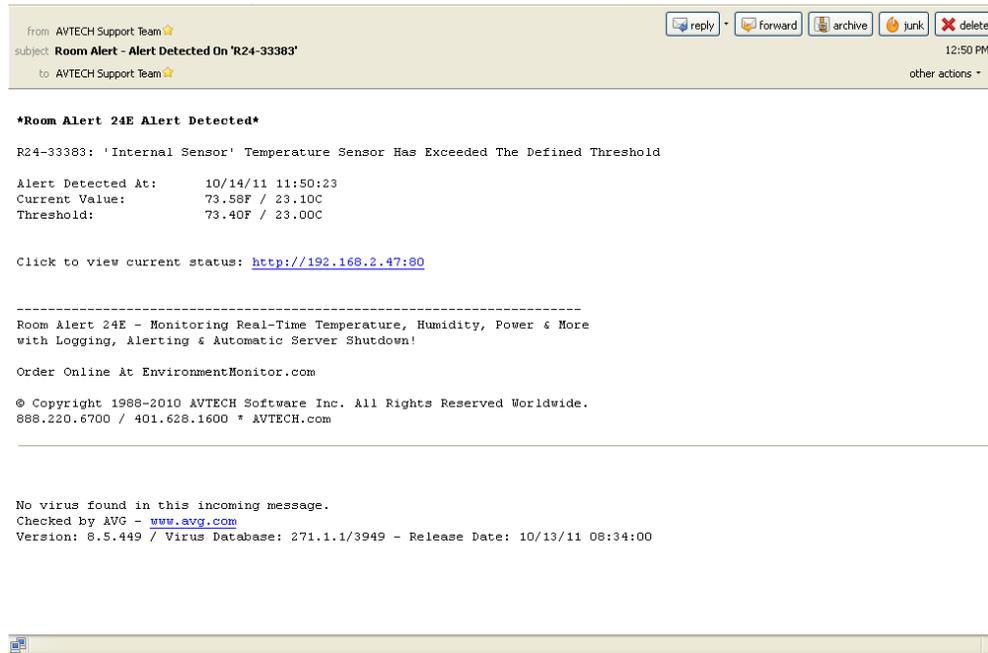
NOTE: If the ‘Status’ screen does not load sensor data, be sure that a proxy or Microsoft ISA (Internet Security and Acceleration) server is not blocking traffic to or from the Room Alert 24E monitor.

After the ‘Status’ screen has loaded and is fully displayed, click the ‘Room Alert 24E vX.X.X’ link in the top right hand corner. If the pop-up that loads says a more current version is available, then follow the instructions in the ‘Upgrading Firmware’ section of the ‘Advanced Topics’ chapter of this manual to properly download and install the latest version of the Room Alert 24E firmware. This is important because network security and performance requirements, as well as operating systems, change over time and make it necessary to periodically adjust firmware for access, performance and security.

Configuration And Setup Screens

Alert Methods

The Room Alert 24E monitor can send alert notifications via email and email-to-SMS using anonymous SMTP relay. The Room Alert 24E monitor is fully SNMP compliant and can send SNMP Traps and/or be accessed by any monitoring application that can issue a SNMP Query or Get request.



Email

Email alert notifications are configured in the Room Alert 24E web interface on the 'Email' tab of the 'Settings' screen. Email alert notifications from the Room Alert 24E monitor are sent using anonymous SMTP relay. Be sure the mail server being used is configured to allow this type of connection.

The screenshot shows the 'Room Alert 24E' configuration interface. The top navigation bar includes 'Status', 'Settings', 'Help', and 'About'. The 'Settings' tab is active, and the 'SMTP Email' sub-tab is selected. The interface displays various configuration fields for email settings, including checkboxes for 'Email Enabled', 'Email Footer Enabled', and 'Use SMS'. Text input fields are provided for 'Mail Server Port', 'Mail Server', 'Return Address (From)', 'Display URL', 'Username', and 'Password'. A 'Send Test Email' button and an 'Accept Changes' button are located at the bottom of the form.

Status	Settings	Help	About
MAC Address: 00-20-4A-96-1F-35	Version: V0.3.4.1		
Email Settings			
<ul style="list-style-type: none"> Network SMTP Email SNMP Sensors Security Advanced 	<p>Email Enabled <input checked="" type="checkbox"/></p> <p>Email Footer Enabled <input checked="" type="checkbox"/></p> <p>Use SMS <input type="checkbox"/></p> <p>Mail Server Port: <input type="text" value="25"/> Timeout: <input type="text" value="5"/></p> <p>Mail Server: <input type="text" value="AVTECHAlert.com"/> * Domain Name or IP</p> <p>Return Address (From): <input type="text" value="RoomAlert24E@AVTECHAlert.com"/></p> <p>Display URL: <input type="text" value="192.168.2.214:80"/></p> <hr/> <p>Authentication (optional)</p> <p>Enable Authentication <input checked="" type="checkbox"/></p> <p>Username: <input type="text" value="RoomAlert24E@AVTECHAlert.com"/></p> <p>Password: <input type="password" value="*****"/> * Max 11 Characters</p> <hr/> <p>Email Recipients (Separated By Comma)</p> <p>Email Addresses: <input type="text" value="HelpDesk@AVTECHALERT.com,1234567891@vtext.com"/></p> <p style="text-align: center;"> <input type="button" value="Send Test Email"/> <input type="button" value="Accept Changes"/> </p>		

Initial Email Setup

First, check the 'Email Enabled' checkbox and enter the domain name or IP address of the mail server being used in the 'Mail Server' field on the 'SMTP Email' tab. Next, enter an email address in the 'Return Address (From)' field for an account that resides on the mail server being used. If SMTP authentication is required, check the 'Enable Authentication' checkbox and enter a valid username and password for the mail server. Finally, enter the email addresses to be alerted when alarms occur in the 'Email Addresses' field. If more than one email address is entered, use a comma (,) as the separator. Once all SMTP Email settings are configured, click the 'Accept Changes' button, then 'Save Settings'.

NOTE: If a domain name is entered in the 'Mail Server Address' field, the Room Alert 24E unit must be assigned static IP settings and have a DNS server IP address set.

A number of optional settings are available that control how email is sent and displayed. The 'Email Footer Enabled' checkbox controls whether the email footer with AVTECH contact information is included in email messages, while the 'Use SMS' checkbox will send a shorter email with a reduced character count. Both of these options allow shorter email messages optimized for mobile devices. The 'Display URL' field configures the link that is displayed in email messages. This defaults to the local IP address and port, although can be modified if desired.

Testing

A test email can be sent using the 'Send Test Email' button on the 'SMTP Email' tab. This button will automatically save any changes made to the 'SMTP Email' tab before sending a test email message. If the test email is not received, check with the mail server administrator in regards to the current SMTP relay settings. If anonymous SMTP relay messages are blocked, a mail server can usually be configured to allow anonymous SMTP relay messages from the IP address of the Room Alert 24E monitor.

Email-To-SMS

Email alert notifications can be sent via Short Message Service (SMS) to computers, mobile phones, alphanumeric pagers and PDAs using SMS text messaging in addition to regular email. This functionality is widely supported by current mobile device service providers and accomplished by sending email to an email address, formatted in a way defined by the service provider being used for the target mobile device.

For example, Verizon’s email address format for sending an email alert to a mobile device using SMS text messaging is ‘<10 digit mobile device number>@vtext.com’ with ‘<10 digit mobile device number>’ being replaced by the area code and phone number of the mobile device without dashes, spaces or a ‘1’ in front of the area code.

If the specific format for your service provider is unknown, AVTECH provides a database in the ‘Support’ section of the AVTECH.com website that contains the email-to-SMS format for many available service providers. This is the largest database of this type on the web. However, if your service provider is not listed, please contact them by phone for the proper format and be sure that the mobile device being used has text messaging capability enabled. If you learn of a new or changed format, please email this with your contact information to Support@AVTECH.com so we may confirm it and post it online for the benefit and convenience of other users. Thank you in advance.

Popular Email-To-SMS Address Formats

Carrier:	Address:
AT&T	<10-digit-number>@mms.att.net; <10-digit-number>@txt.att.net; <10-digit-number>@mobile.att.net
Verizon PCS	<10-digit-number>@vtext.com; <10-digit-number>@myvzw.com
T-Mobile	<10-digit-number>@tmomail.net; <10-digit-number>@voicestream.net
Sprint PCS	<10-digit-number>@messaging.sprintpcs.com
Unicel	<10-digit-number>@utext.com
Orange	<10-digit-number>@orange.net

* Visit the Downloads Section of the AVTECH.com website for a more complete Email-To-SMS database.

SNMP

The Room Alert 24E monitor is fully SNMP compliant and can be monitored by applications capable of performing an SNMP Query or Get request. The Room Alert 24E monitor can also be configured to send SNMP Traps to as many as three separate IP addresses when thresholds are exceeded. If another application is used to monitor the Room Alert 24E monitor, be sure to obtain the MIB files for the Room Alert 24E from the ‘Downloads’ section of the AVTECH.com.

Room Alert™ Advanced Computer Room Environment Monitoring, Alerting & Automatic Corrective Action

Status Settings Help About

MAC Address: 00-20-4A-96-1F-35 Version: V0.3.4.1

SNMP Settings

SNMP Sending Configuration

Community Name

Trap Send IP 1

Trap Send IP 2

Trap Send IP 3

Use 2 digit SNMP

SNMP Queries (SNMP Get)

SNMP Queries or Get requests are performed by a SNMP enabled software application to retrieve specific information from an SNMP compliant device on the network. The query or request will be sent to the IP address of the target Room Alert 24E monitor using a SNMP community name on UDP port 161. The SNMP community name in use for that device or network must match the name in the SNMP read 'Community Name' field on the 'SNMP' tab of the 'Settings' screen. If use of a third party application is desired, the SNMP protocol used must be version 1 and the MIB files for the Room Alert 24E monitor must be loaded properly in the software application in order to retrieve the SNMP MIB Objects that will return sensor data from the Room Alert 24E monitor to the monitoring software.

SNMP Traps

SNMP Traps are sent from an SNMP compliant device (i.e. Room Alert 24E) on the network and received by an SNMP enabled software application capable of receiving SNMP Traps. To configure the Room Alert 24E to send SNMP Traps to a specific IP address, enter the IP address in one of the three 'SNMP Send IP' fields on the 'SNMP' tab. SNMP Traps sent from the Room Alert 24E monitor are sent using an SNMP community name of 'public'. If use of a third party application is desired, be sure to load the Room Alert 24E MIB file or the information received in the SNMP Trap will not be translated properly.

Monitoring With Device Manager

AVTECH's Device Manager is a software application that is included with your Room Alert 24E monitor. Designed to enhance the monitoring capacity of your Room Alert and/or TemPageR monitor(s), Device Manager gives you an 'at a glance' view of an unlimited number of Room Alert and TemPageR monitors, as well as Axis cameras installed on your network. Device Manager includes powerful features that allow for a much greater degree of flexibility and control over when alert notifications are sent and who receives them. These include: unlimited sending of customizable Alert and Alert Clear notifications to individuals

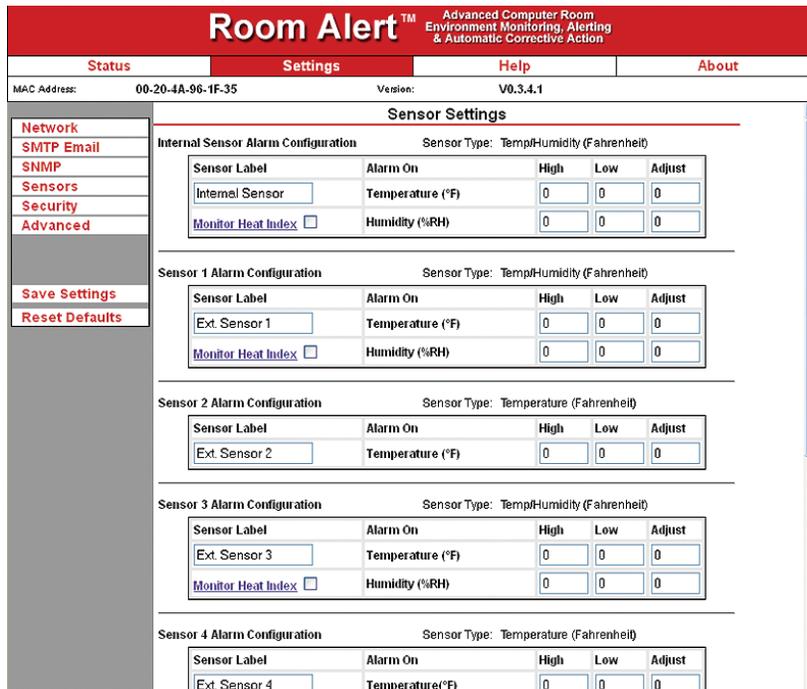
and groups, hierarchies, dependencies and schedules. It also allows for Actions on Alert and Alert Clear conditions, can send web URL requests, screenshots from Axis cameras and more. Additional features include logging data from your monitors to an embedded or external database, graphing this data over time, and the ability to export logged data in .csv format. All this is possible from a single installation of Device ManageR, with no rules and no agents. Device ManageR is a significant component of the overall Room Alert 24E solution. It can be used as your primary monitoring tool or in conjunction with other monitoring applications that may already be in use.

Alert Thresholds

In order for alert notifications to be sent via email or SNMP Trap, alert thresholds must be configured for the internal and/or external sensors attached to the Room Alert 24E. Alert thresholds are configured on the 'Sensors' tab of the 'Settings' screens. Current sensor status will be displayed on the 'Status' screen of the Room Alert 24E web interface. The status icon displayed will be a gray circle '○' if a sensor is connected although an alert threshold is not set. If an alert threshold is set for a connected sensor and the sensor is not in an alarm state, the status icon displayed will be a green check '✔'. If the connected sensor is in an alarm state, the status icon displayed will be a red X '✖'.

Internal Temperature & Humidity Sensors

The internal temperature and humidity sensors are managed on the 'Sensors' tab. The field below the 'Internal Sensor Alarm Configuration' label can be used to change the sensor label of the internal Temperature & Humidity Sensor. The high and low threshold values for both the temperature and humidity readings from the internal Temperature & Humidity Sensor are entered respectively in the 'High' and 'Low' columns. The proper temperature thresholds to enter will depend on the current temperature scale selected on the 'Advanced' tab. The humidity thresholds should be entered as a percentage of Relative Humidity (%RH). If the temperature or humidity reading from the internal Temperature & Humidity Sensor differs from a known temperature or humidity at that location, the readings from the internal Temperature & Humidity Sensor can be calibrated using the 'Adjust' field. Humidity adjustments must be made as a percentage of Relative Humidity (%RH).



Digital Sensors

The alert thresholds for Digital sensors are entered in the ‘Sensor # Alarm Configuration’ sections with ‘#’ representing the digital port number the sensor is connected to. The sensor label for that corresponding sensor can be updated in the field below the ‘Sensor Label’. High and low thresholds for the temperature or humidity are entered in the ‘High’ and ‘Low’ columns. Temperature thresholds must be entered in the temperature scale (i.e. Fahrenheit or Celsius) selected on the ‘Advanced’ tab. Humidity adjustments must be made as a percentage of ‘Relative Humidity’ (%RH) non-condensing . If the sensor readings differ from a known value at that location, the display value can be calibrated using the ‘Adjust’ column.

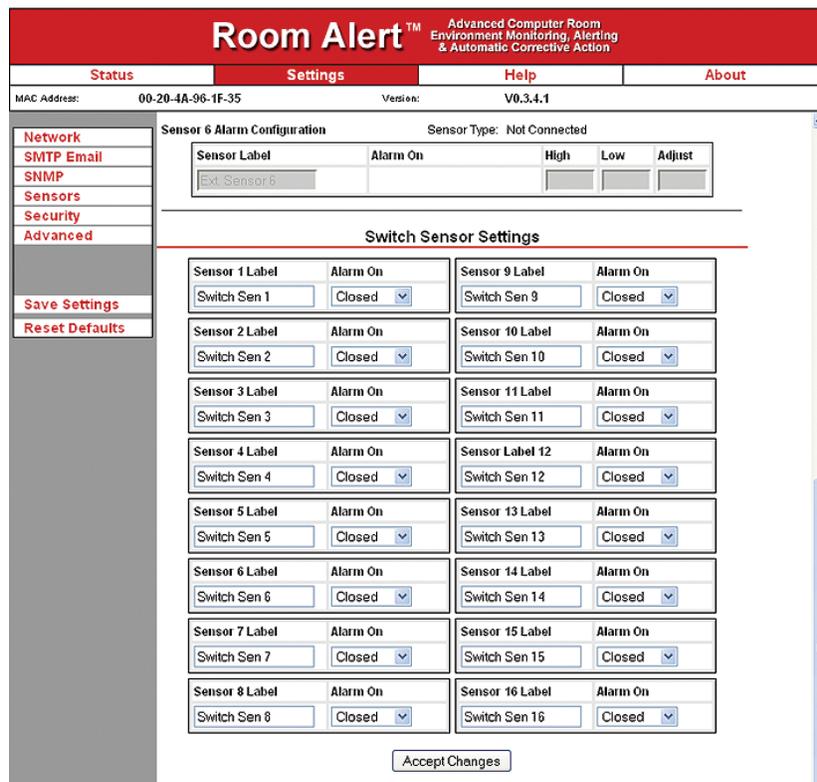
Digital sensors provide real-time variable status values that can be used to obtain a more definitive understanding of a current sensor’s status, allowing products like Device ManageR and other monitoring software to monitor at multiple thresholds and be logged for historical reference. These values are included within alert messages for a clearer understanding by recipients and used for trending or manipulation into graphs or charts via other applications. These sensors attach to various AVTECH monitors to the External Environment Sensor Channels via an RJ-11 connection. Current sensors providing real-time values include the Digital Temperature Sensor, Digital Outdoor Temperature Sensor, Digital Fluid Temperature Sensor and Digital Temperature & Humidity Sensor.

Switch Sensors

Switch sensor alert thresholds (i.e. open or closed) are set on the ‘Sensors’ tab. The appropriate sensor number to configure will be determined by the numbered set of sensor contacts on the back of the Room

Alert 24E unit that the corresponding sensor is connected to. The circuit or sensor state selected in the 'Alarm On' drop-down menu should be the circuit state that you want alert notifications to be sent at (i.e. opposite of the normal state). To determine the proper sensor state, connect the sensor to the Room Alert 24E monitor and determine the current circuit state displayed on the 'Status' screen for that sensor. Enter the opposite sensor state in the 'Alarm On' drop-down menu for that sensor. If there is no sensor connected to a specific sensor channel, choose 'Disabled' from the 'Alarm On' drop-down menu to avoid confusion or false alerts to staff.

Switch sensors provide real-time status information showing whether a sensor is 'in' or 'out' of an alert state. These sensors have an internal switch that is monitored to see if the switch is open/closed, on/off, make/break, etc. Sensor status can be logged for historical reference although this type of sensor does not allow threshold monitoring like digital sensors. Users can still turn the logged status information into graphs or charts via other applications. The most important historical benefit when tracking switch sensors is knowing what percentage of time a sensor is in or out of an alert state, as well as what part of the day or year the alert conditions are most often experienced. The most popular switch sensors from AVTECH are presented in the following External Sensor Options section. Additional sensors can be found online at AVTECH.com.



External Sensor Options

Digital Temperature Sensor (TMP-SDT-SEN)



The AVTECH Digital Temperature Sensor provides a real-time digital temperature reading at the location of the temperature probe. The temperature range is from -67° to 257° Fahrenheit and/or -55° to 125° Celsius. Accuracy is within +/- 0.5 degrees. This is an instant 'plug & play' sensor that connects to one of the external Environment Sensor Channels via an RJ-11 port.

Digital Outdoor Temperature Sensor (TMP-DOT-SEN)



The AVTECH Digital Outdoor Temperature Sensor allows real-time temperature values from -67 to 257 degrees Fahrenheit and/or -55 to 125 degrees Celsius. Accuracy is within +/- 0.5 degrees. The external silicon coating makes the Digital Outdoor Temperature Sensor resilient enough for temperature monitoring outdoors or in other harsh environments. This is an instant 'plug & play' sensor that connects to one of the external Environment Sensor Channels via an RJ-11 port.

Digital Fluid Temperature Sensor (TMP-DFT-SEN)



The AVTECH Digital Fluid Temperature Sensor allows real-time temperature values from -67 to 257 degrees Fahrenheit and/or -55 to 125 degrees Celsius. Accuracy is within +/- 0.5 degrees. Its non-conductive casing makes it a perfect sensor for monitoring the temperature of fluids in extreme environments, walk-in coolers, lab refrigerators or freezers. This is an instant 'plug & play' sensor that connects to one of the external Environment Sensor Channels via an RJ-11 port.

Digital Temperature & Humidity Sensor (RMA-DTH-SEN)



The AVTECH Digital Temperature & Humidity Sensor provides a real-time digital temperature and digital humidity reading at the location of the sensor probe. The temperature range is from -67° to 257° Fahrenheit and/or -55° to 125° Celsius. Accuracy is within +/- 0.5 degrees. The relative humidity range is from 5% to 95% percent (%RH) non-condensing with an accuracy within +/- 3.5%. This sensor will also provide the Heat Index or 'Feels Like' temperature. This is an instant 'plug & play' sensor that connects to one of the external Environment Sensor Channels via an RJ-11 port.

Power Sensor (RMA-PS1-SEN)



The AVTECH Power Sensor allows a real-time notification of main or UPS power status change (i.e. power going on or off). This is an instant 'plug & play' sensor that connects to one of the Switch Sensor Contact Sets via a low voltage 2-wire cable.

Mini UPS & Power Sensor (RMA-MUPS-SEN)



The AVTECH Mini UPS & Power Sensor is a sensor/UPS combination that detects loss of main power while providing seamless battery backup power for approximately fifteen (15) minutes or more beyond loss of power. This is an instant ‘plug & play’ sensor that connects to one of the Switch Sensor Contact Sets via a low voltage 2-wire cable.

Flood Sensor w/8’ Flood Cable (RMA-F008-SEN)



The AVTECH Flood Sensor with 8’ flood sensor cable allows real-time notification of flood/water leakage wherever the attached sensor cable is located. Water can be detected anywhere along the orange cable. This is an instant ‘plug & play’ sensor that connects to one of the Switch Sensor Contact Sets via a low voltage 2-wire cable.

Flood Sensor w/24’ Flood Cable (RMA-F024-SEN)



The AVTECH Flood Sensor with 24’ flood sensor cable allows real-time notification of flood/water leakage wherever the attached sensor cable is located. Water can be detected anywhere along the orange cable. This is an instant ‘plug & play’ sensor that connects to one of the Switch Sensor Contact Sets via a low voltage 2-wire cable.

Flood Sensor (Spot) (RMA-FS2-SEN)



The AVTECH Flood Sensor allows real-time notification of flood/water. It is powered by a 9v Alkaline battery (included). This is an instant ‘plug & play’ sensor that connects to one of the Switch Sensor Contact Sets via a low voltage 2-wire cable.

Smoke Sensor w/ Escape Light (RMA-SS1-SEN)



The AVTECH Smoke Sensor allows a real-time notification of the presence of smoke or fire. It is powered by a 9v Alkaline battery (included). This is an instant ‘plug & play’ sensor that connects to one of the Switch Sensor Contact Sets via a low voltage 2-wire cable.

Motion Sensor (RMA-MOT2-SEN)



The AVTECH Motion Sensor allows a real-time notification of movement through a zone or across a path. This is an instant ‘plug & play’ sensor that connects to one of the Switch Sensor Contact Sets via a low voltage 2-wire cable.

Room Entry Sensor (RMA-RE1-SEN)



The AVTECH Room Entry Sensor allows a real-time notification of door or window status (i.e. door open or closed). This is an instant ‘plug & play’ sensor that connects to one of the Switch Sensor Contact Sets via a low voltage 2-wire cable.

Sound, Light & Entry Sensor (RMA-SLE-SEN)



The AVTECH Sound, Light & Entry Sensor allows real-time monitoring for sound and light at the location of the sensor. Sound and light sensitivity can be adjusted. This sensor also includes a set of switch sensor contacts and an AVTECH Room Entry Sensor. Each sensor can be monitored independently or an 'any sensor' contact set allows all sensors to be monitored as a 'general alarm' via a single cable. Any switch sensor can be attached to the switch sensor contacts. This is an instant 'plug & play' sensor that connects to one of the Switch Sensor Contact Sets via a low voltage 2-wire cable.

Panic Button 1 (RMA-PB1-SEN)



The AVTECH Panic Button 1 (large palm / foot size) provides the ability to initiate a real-time notification to others via the push of a button. This is an instant 'plug & play' sensor that connects to one of the Switch Sensor Contact Sets via a low voltage 2-wire cable.

Panic Button 2 (RMA-PB2-SEN)



The AVTECH Panic Button 2 (medium palm size) provides the ability to initiate a real-time notification to others via the push of a button. This is an instant 'plug & play' sensor that connects to one of the Switch Sensor Contact Sets via a low voltage 2-wire cable.

Powered Wireless Sensor Hub (P-WiSH) (RMA-PWSH-HUB)



The AVTECH Powered Wireless Sensor Hub (P-WiSH) is used exclusively to transmit sensor data from internal and connected sensors back to the Room Alert 32W or 26W. It can be located anywhere monitoring is desired up to almost 250' (in the ideal environment) from the main unit without running cables. Compatible with Room Alert 32W and 26W ONLY.

Wireless Sensor Hub & Powered Relay (WiSPR) (RMA-WSPR-HUB)



The AVTECH Wireless Sensor Hub & Powered Relay (WiSPR) is a wireless hub that is used to relay sensor data between WiSH/WiSPR sensors and the Room Alert 32W or 26W, allowing users to extend the length of their wireless monitoring. It can be located anywhere monitoring is desired up to almost 350' (in the ideal environment) from the main unit without running cables. Compatible with Room Alert 32W and 26W ONLY.

NOTE: Visit AVTECH.com to learn more about these or other AVTECH manufactured sensors.

Dry Contacts

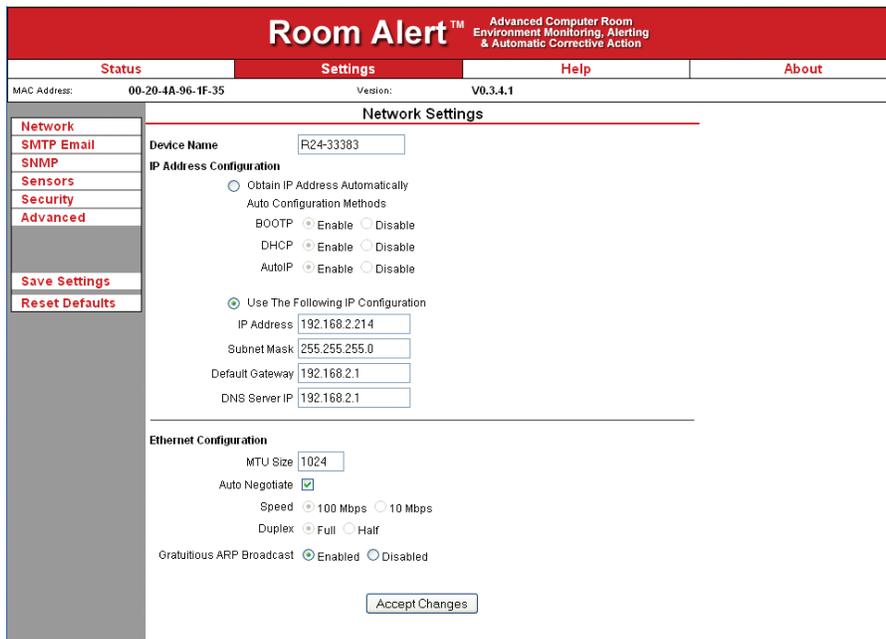
Any non-voltage, dry contact or switch sensor can be connected to provide an immediate alert when the sensor or device changes status to go on/off, make/break, open/close. Connect these to one of the switch sensor contact sets via a low voltage 2-wire cable.

Additional Screens And Interfaces

Network

The ‘Network’ tab of the Room Alert 24E ‘Settings’ screen is used to update the network settings of the Room Alert 24E monitor. The network settings can also be updated using AVTECH’s Device ManageR software. To configure the Room Alert 24E monitor to obtain an IP address automatically using DHCP, select the ‘Obtain IP Address Automatically’ radio button and click ‘Accept Changes’, then the ‘Save Settings’ button. To configure the unit with a static IP address, select the ‘Use The Following IP Configuration’ radio button, enter the new static IP address, gateway IP address, DNS server IP address, and subnet mask in the appropriate fields. When finished, click the ‘Accept Changes’ button, then ‘Save Settings’.

NOTE: If configuring static IP settings on the Room Alert 24E monitor, be sure that the settings assigned are valid for the current location of the Room Alert 24E and that there are no other devices assigned to the same IP address. **DO NOT** set an IP address that is outside of your subnet or you may not be able to see or discover the Room Alert 24E unit. The ‘MTU Size’ allows configuration of the size of packets the unit transmits. This may be useful when connecting the unit to a managed switch. The ‘Auto Negotiate’ checkbox allows you to configure the unit with a hard coded speed or let it auto negotiate the network speed.

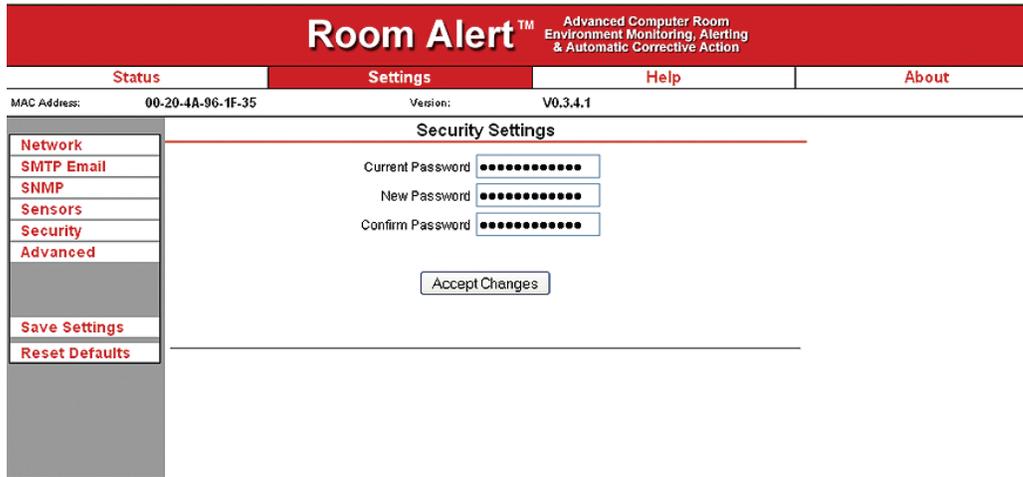


Security

The ‘Security’ tab of the Room Alert 24E ‘Settings’ screen is used to configure a username and password for entry to the Room Alert 24E ‘Settings’ screen. Be sure that the username and password entered contains only alphanumeric characters, special characters are not supported. Enter the password again in the second field for verification and click the ‘Accept Change’ button, then ‘Save Settings’.

NOTE: The unit **DOES NOT** ship with a default password. On initial setup you will be able to click ‘OK’ without entering any information. If the password is lost or forgotten, you can reset the unit to its default setting by using the reset button, located on the

back of the unit. Please see the ‘Reset Factory Default Settings’ in the ‘Advanced Topics’ section of this manual for more information. Resetting the unit will lose all configuration settings so consider this fully before completing the reset process.

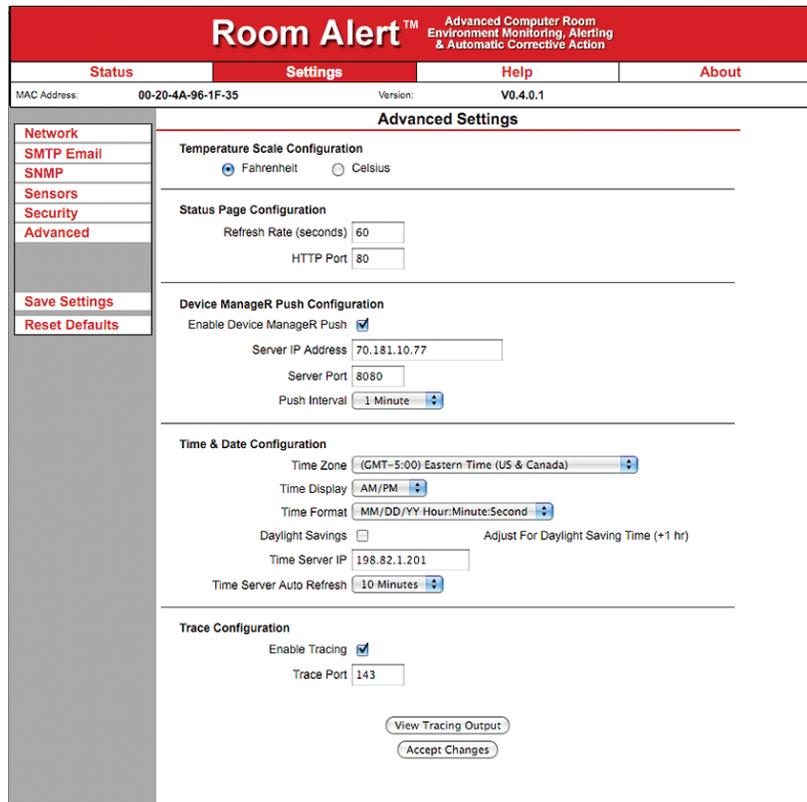


Advanced

The ‘Advanced’ tab of the Room Alert 24E ‘Settings’ screen is used to configure the temperature scale (i.e. Fahrenheit or Celsius), time zone, time display, daylight savings time setting, time server IP address and trace configuration options. The temperature scale selected in the ‘Temperature Scale’ button will be the default temperature scale used when entering alert thresholds and displayed on the ‘Status’ screen. The ‘Time Server IP’ field, if modified, must contain the IP address of an accessible NTP time server.

The ‘Refresh Rate (seconds)’ field allows you to set the default rate at which the ‘Status’ page refreshes. The ‘HTTP Port’ field allows you to configure a specific port for port-forwarding when viewing your Room Alert monitor externally across the network or internet.

The ‘Device Manager Push Configuration’ fields allow you to set the default rate at which the Room Alert 24E monitor sends alert notifications and sensor information to Device Manager.



Using Trace Output

Trace output is very useful for technical support troubleshooting the sending of SMTP email and other issues. The trace output will show the communication between Room Alert and the configured mail server to show what might be preventing email from being sent. It will also show other information including the current version number, IP address, MAC address, requests to the web pages and more.

To configure trace output in Room Alert, click ‘Settings’ and then ‘Advanced’. Select the ‘Enable Tracing’ checkbox and enter the desired port number in the ‘Trace Port’ field. Save the settings by clicking the ‘Accept Changes’ button, then ‘Save Settings’. To view the trace output, click ‘Settings’ and then ‘Advanced’. Click ‘View Tracing Output’ to open a trace window. When the trace window loads, click ‘Connect’ to begin viewing the live trace output. Once trace is running, try to replicate any issues that are occurring so they are captured in the trace output. If having issues sending email, send a test email while viewing the trace output. Once the details for an issue or event are captured, copy and paste the trace output into a text editor to save the contents of the trace.

Help

The Room Alert 24E ‘Help’ screen provides links to online support and information resources for the Room Alert 24E as well as information regarding phone and email support. Directly below the ‘Room Alert 24E

Help’ heading will be the current firmware version that is installed on the Room Alert 24E monitor and its release date. The link entitled ‘Click Here To Check For Updates’ can be used to check if the firmware version installed on the Room Alert 24E monitor is the most current (this requires internet access). The additional support information provided on this screen is presented in the order that it should be followed in the event that you have a technical question regarding the Room Alert 24E or if you are experiencing a situation where technical assistance is desired.

Room Alert 24E Help

Room Alert 24E
 Firmware v3.4.1
 Released 23 August 2010
[Click Here To Check For Updates](#)

Support Resources [User's Guide & Reference Manual](#)
[Monitor With PageR Enterprise](#)
[Frequently Asked Questions](#)
[Application Notes](#)
[Support Center](#)
[Downloads](#)

Live Chat 

Email Support Support@AVTECH.com

Phone Support 888.220.6700 (USA & Canada)
 401.628.1600 (International)
Mon-Fri 9 AM - 5 PM EST

About

The Room Alert 24E ‘About’ screen provides general links and contact information for AVTECH sales, support and websites. The firmware version that is currently installed on the Room Alert 24E monitor will also be listed with the date released directly below. The link entitled ‘Click Here To Check For Updates’ can be used to check if the firmware version installed on the Room Alert 24E monitor is the most current (this requires internet access).

Room Alert 24E About

Room Alert 24E
 Firmware v3.4.1
 Released 23 August 2010
[Click Here To Check For Updates](#)

Sales [Order Online](#)
[Quote Request](#)
Sales@AVTECH.com
 888.220.6700 (USA & Canada)
 401.628.1600 (International)



Support [Support Home](#)
[User's Guide & Reference Manual](#)
[Monitor With PageR Enterprise](#)
Support@AVTECH.com
 888.220.6700 (USA & Canada)
 401.628.1600 (International)

Website AVTECH.com
RoomAlert.com
EnvironmentMonitor.com

Web Interface

The Room Alert 24E web interface can be used to view current sensor status on the Room Alert 24E monitor. The web interface is accessed by selecting the desired Room Alert 24E in the Device Manager software and clicking the 'Open Web' button or by typing the IP address of the Room Alert 24E monitor in the location bar of a web browser, once it has been installed properly on your network.

The screenshot displays the Room Alert 24E web interface. At the top, there is a red header with the product name and logo. Below the header is a navigation bar with tabs for Status, Settings, Help, and About. The main content area is divided into several sections:

- Status:** Shows the device ID (R24-33383), current sensor status, date and time (10/05/11 14:36:41), MAC address (00:20:4A:96:1F:35), and firmware version (Room Alert 24E v3.4.1). It also includes an update interval (5 secs) and a temperature unit selector (Fahrenheit/Celsius).
- Digital Sensors:** A section titled "1 Internal, 4 out of 6 External Connected" containing five sensor panels:
 - Internal Sensor:** Temperature 69.08 °F, Humidity 48.00 %RH.
 - Channel 1: Temperature / Humidity (Ext. Sensor 1):** Temperature 72.14 °F, Humidity 68.48 %RH.
 - Channel 2: Temperature (Ext. Sensor 2):** Temperature 71.92 °F.
 - Channel 3: Temperature / Humidity (Ext. Sensor 3):** Temperature 71.78 °F, Humidity 63.93 %RH.
 - Channel 4: Temperature (Ext. Sensor 4):** Temperature 72.15 °F.
- Switch Sensors:** A section titled "16 out of 16 Enabled" containing 16 individual switch panels (Switch Sen 1 through Switch Sen 16). Each panel shows a green checkmark icon and the text "Circuit State: Open".

At the bottom of the interface, there is a footer with the following text: "Room Alert 24E - Monitoring Real-Time Temperature, Humidity, Power & More with Logging, Alerting & Automatic Server Shutdown", a link to "Order Additional Room Alert Units Online At EnvironmentMonitor.com", and copyright information for AVTECH Software Inc. (1998-2010).

NOTE: If the 'Loading Sensor Data' indicator remains on the page, be sure that you do not have a proxy or Microsoft ISA server soliciting traffic and requests from the Room Alert 24E monitor.

Directly below the Room Alert 24E menu bar, on the left, is the DHCP name, date and time display.

NOTE: If the date displayed is '2/14/36', the Room Alert 24E is currently unable to connect to a time server. Please verify that the network has a connection to the internet and that NTP requests on UDP port 123 are not blocked. If the network does not have a connection to the internet or use of a local time server is desired, an IP address for a valid NTP time server can be entered in the 'Time Server IP' field on the 'Advanced' tab of the 'Settings' screen.

To the right of the date and time is the Room Alert mac address, model name and firmware version number. This acts as a link that can be used to determine if the firmware version installed on the Room Alert 24E monitor is the most current version. An internet connection is required to complete the firmware version check. The firmware is always current at the time of shipment from AVTECH so there is seldom a need to upgrade firmware shortly after purchase of any Room Alert product. The exception

would be those occasions where a new version of the firmware has just been released after shipment. This will occur by chance to a very small percentage of AVTECH customers.

The next row contains a field that can be used to modify the refresh interval of the 'Status' screen and a pair of radio buttons for toggling between Fahrenheit and Celsius temperature displays. By default, the refresh interval for the 'Status' screen is set to every 60 seconds. To temporarily change this refresh interval, enter a number of seconds in the 'Update Every' field and commit the change by clicking outside of the field. The default temperature scale displayed will correspond with the Fahrenheit or Celsius scale selected on the 'Advanced' tab of the 'Settings' screen.

Below these two rows is the sensor display area. The sections displayed from top to bottom are, 'Internal Sensors', 'Digital Sensors', and 'Switch Sensors'. Next to the sensor block name will be text indicating the number of sensors currently connected. The display for each sensor within the sensor block will contain the corresponding sensor label for that sensor, as well as a status icon indicating the current alert status and then various other data. The status icon displayed will be a gray circle '○' if a sensor is connected although an alert threshold is not set. If an alert threshold is set for a connected sensor and the sensor is not in an alarm state, the status icon displayed will be a green check '✔'. If the connected sensor is in an alarm state, the status icon displayed will be a red X '✘'.

Advanced Topics

Upgrading Firmware

The Room Alert 24E firmware is upgraded using AVTECH's Device ManageR software and the Room Alert 24E Firmware Update file accessible to licensed and currently supported customers via the AVTECH.com 'Downloads' section. Before downloading the latest firmware update file for your Room Alert 24E monitor, verify that you have the latest version of Device ManageR.

NOTE: When saving the Room Alert 24E Firmware Update file to the computer, it may be saved with either a '.zip' or '.upd'. file extension. If the extension is '.zip', DO NOT EXTRACT the Room Alert 24E Firmware Update file.

After verifying that you are running the most current version of Device ManageR and obtaining the latest version of firmware for your Room Alert 24E, be sure that you can access the unit using Device ManageR.

NOTE: Be sure that there are NO WEB BROWSERS accessing the Room Alert 24E monitor from anywhere on your network before uploading the firmware as this could cause the firmware update to be incomplete or become corrupted.

Save the firmware file in an easily accessible location on your system. Select the target Room Alert 24E monitor from the 'Device Status' section and then click the 'Update Firmware' button. Click the 'Browse' button and navigate to the location where the firmware update file was saved. Select the firmware update file and click the 'Open' button. The firmware file should now be displayed in the 'Update Firmware' dialog box. Click the 'Update' button to perform the firmware update.

Reset Factory Default Settings

There are two primary methods for returning a Room Alert monitor to the factory default settings. This can be useful if the unit is assigned invalid network settings and is no longer accessible or if the unit will be moved to a new location and will be reconfigured. If the unit is accessible on the network and the 'Settings' screen can be accessed, clicking the 'Reset Defaults' button on the left menu of the 'Settings' screen will restore the factory default settings to the monitor. If the unit is not accessible on the network, the reset button on the back of the monitor can be used to reset the factory default settings. With the unit connected to the network and powered on, press and hold the reset button approximately 5-10 seconds until the left LED over the network jack turns off then on again. Once the settings have been reset to default settings, the monitor will automatically reboot and attempt to obtain a new DHCP IP address.

There are some instances that will call for special procedures which might require the AVTECH Device Discovery Utility. This utility is available from the 'Downloads' section of AVTECH.com. In the unlikely event that you find yourself in one of the following situations, the AVTECH Device Discovery Utility will be needed to resolve your issue. These situations include not being able to discover your monitor with Device ManageR using either automatic or manual discovery, when needing to update the firmware, or in the rare instance where you need to perform a firmware recovery on your Room Alert 24E.

Unit Accessible Although Not Discoverable

In the event that the network blocks UDP broadcast packets on port 30718, AVTECH Device Manager will not be able to locate the Room Alert 24E monitor even though it is accessible via a web browser. As long as the Room Alert 24E monitor can be accessed via a web browser, you should still be able to update the firmware on it. To do so, click the 'Upgrade' button in Device Manager without any Room Alert monitor selected. Enter the IP address of the target Room Alert 24E monitor to be upgraded and click the 'Ok' button. Navigate to the location where the Room Alert 24E Firmware Update file was saved, select it and then click the 'Upload' button. A dialog will then load asking for confirmation of the firmware upload. Click 'Ok' to upload the Room Alert 24E Firmware Update file to the selected Room Alert 24E monitor.

Performing A Firmware Recovery

If the Room Alert 24E unit is not accessible on the network, the Link LED (left LED on the network adapter) is unlit and the Activity LED (right LED on the network adapter) is blinking orange, the Room Alert 24E monitor is currently requesting a firmware recovery. The AVTECH Device Discovery Utility is capable of performing a firmware recovery in the event that this occurs. To begin the firmware recovery process, please complete the following steps:

1. Install the AVTECH Device Discovery Utility on a computer with a single Ethernet adapter.
2. Download the most current version of the Room Alert 24E Firmware Update file from the 'Downloads' section of the AVTECH.com website.
3. Connect the Room Alert 24E monitor to this computer using a cross-over Ethernet cable and then power on the Room Alert 24E monitor.
4. Assign a static IP address to the computer being used and close or disable all software firewalls, anti-virus applications, and/or pop-up blockers.
5. Open the AVTECH Device Discovery Utility and press the reset button (the button next to power port on back of the Room Alert 24E monitor).
6. A dialog will load explaining that a unit is requesting firmware recovery. Click 'Ok' and enter the MAC address printed on the label on the underside of the Room Alert 24E monitor.
7. Follow the instructions that lead to completing the firmware recovery process.

NOTE: If the Room Alert 24E monitor is found to be in need of a firmware recovery, please notify AVTECH Support by Live Chat or email for a quick consultation. This may save you valuable time and effort or help you to determine what caused the situation so that it can be avoided in the future.



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