

Internet Managed Thermostat (IMT) Configuration Guide (IMT550c and IMT550w)

Release 1.0



P R O L I P H I X

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Preface

The *Internet Managed Thermostat Configuration Guide* describes how to control and configure your IMT550 thermostat using a standard web browser such as Firefox or Internet Explorer.

Audience

This guide is intended for managers and/or facilities managers or those responsible for managing multiple devices remotely in small or medium size buildings, multiple buildings, or corporate environments.

As a reader of this guide, you should be familiar with the use of an Internet browser (for example Internet Explorer or Firefox) and have a working knowledge of general data networking principles. You should have prior experience with establishing a local area network (LAN) in either a home or office.

Conventions

This guide uses the following conventions, when applicable:

Description	Convention and Example
Commands or keywords, file or path names	Boldface font
Variable parameters for which you supply values	<i><courier italics></i>
Options and arguments for which you supply values	[]
Information that the user must enter	Courier Bold font
Screen messages or system output	Courier Regular font
Selecting a menu item	Menu => Option
Book titles, new terms, and emphasized text	<i>Italics</i>



Note

Additional information that may apply to the subject text.



Caution

Proceed carefully to avoid possible equipment damage or data loss.



Warning

Proceed carefully to avoid possible personal injury.



Tip

Provide helpful suggestions.

Technical Publications

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Overview

This chapter gives an overview of the Proliphix Internet Managed Thermostats (IMT) Series Network Thermostats, as well as how to access the IMT550 using a Web browser.

The IMT550 series of thermostats are powered by either Proliphix Ethernet Power Adapters, Power over Ethernet, or via 24Vac from the HVAC system, and include the following features:

Table 1-1 IMT550 Features

Model	Wired Ethernet	802.11 b/g wireless	Humidity Sensing	Aux Relays (2)	Power Method(s)
IMT550c	X		X	X	<ul style="list-style-type: none"> ■ EPA ■ PoE ■ HVAC
IMT550w		X	X	X	<ul style="list-style-type: none"> ■ HPA ■ HVAC

DHCP Assigned IP Addresses

The IMT550c and IMT550w thermostat ship directly from the factory enabled to perform as a Dynamic Host Configuration Protocol (DHCP) client. DHCP is an established standard used to assign IP addresses automatically after each network device is inserted into the network or when the device experiences a power cycle. DHCP allows devices on your local network to receive their Internet Protocol (IP) addresses automatically from an attached DHCP server typically located within a local router.

If your file server or router supports DHCP, then your Proliphix thermostat automatically retrieves an IP Address, Gateway Address, Subnet Mask, and DNS server address from the DHCP server on your network.

**Note**

Proliphix strongly recommends that a DHCP server be installed and operational in your network prior to installing the thermostat.

If a DHCP server is unavailable on your network, your thermostat will default to the 169.254.111.111 IP address. Note that this address is not unique to your network if more than one thermostat is installed on a network without a DHCP server. That is, there will be multiple thermostats on the network with the same IP address (i.e. 169.254.111.111). Addressing conflicts will exist and most of the thermostats will be inaccessible. You can use the lcd interface to set the IMT550 to a static IP address if no DHCP server is available.

Connecting the Thermostat to the Local Network

This section describes how to connect your IMT550c and IMT550w thermostats to your local data network. This connection enables you to conveniently and efficiently configure your thermostat using a browser on your laptop or desktop personal computer. If a broadband connection is available on your local network, you can also remotely manage and configure your thermostat via the Internet.

To connect the thermostat to your local network:

- For the IMT550c, use a standard Ethernet patch cable and complete the connection of your thermostat(s) to the local switch or router. Your thermostat(s) should automatically communicate with the local DHCP server and be assigned a unique IP address.
- For the IMT550w, use the lcd interface and configure the wireless settings to match your local wireless network.

Remote Management

You can manage the IMT550c and IMT550w thermostats using a web browser on a local area network (LAN) or remotely though the Internet after proper authentication at the Proliphix Web Site (www.proliphix.com).

Determining the IMT550 IP Address

Your Proliphix IMT550 ships from the factory capable to support the DHCP mode for assigning an IP address to your thermostat. See the [DHCP Assigned IP Addresses \(page 1-1\)](#) for more information.

Before you access and control your Proliphix IMT550 through either the lcd screen or more comprehensively through the Web browser, you must know the IP address of the thermostat.

To retrieve the IP address on the lcd screen on the front of the thermostat:

- 1 Press the Proliphix logo on the bottom right side of the lcd screen.

- 2 Press **Network**.
- 3 Press **IP Address**.

The IP Address screen displays the **Address Method** and **URL (IP Address)**.

Accessing the Web Interface

To access the initial Web page of the thermostat, enter the unique IP address initially assigned via DHCP in your browser window. For example:

http://192.168.0.247

Where 192.168.0.247 is a unique IP address initially assigned via DHCP.

Most of the Web pages conform to a standard format which is maintained for both local and remote thermostat access. A banner at the top of each page contains the following information for each thermostat:

- Current date and time
- Host name of the thermostat
- Model number

Each thermostat page also includes tabs which enable direct access to all other Web pages on the thermostat. The Web browser displays each page in a table format. Each feature table is organized by rows of functions, in a left to right direction as follows:

- Field name
- Function status
- Function control (text boxes and drop-down selections)

Logging In to the Thermostat

The IMT550 Series thermostats require password authentication prior to accessing the Web pages that enable you to control or manage the thermostats. The username and password is as follows:

Username: **admin**

Password: **admin** (default)



Tip

You can change each of these passwords within each account after the initial authentication. For more information, see [Password Settings \(page 2-47\)](#).

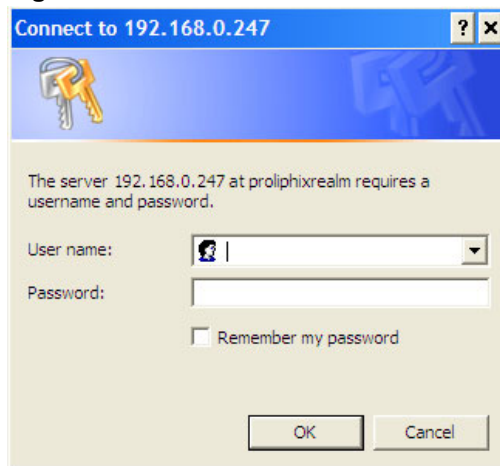
To log in to the thermostat and access the Web pages:

- 1 Open a Web browser.
- 2 Enter the IP address of the thermostat. For example:

http://192.168.0.247

The login window appears. (See [Figure 1-1](#).) Proper authentication is required before you can access any other thermostat Web pages.

Figure 1-1 Administrator Authentication Window



- 3 Enter the default username **admin** and password **admin** for the admin account.



Note

You can change passwords for each account using the [Password Settings](#). See [Password Settings \(page 2-47\)](#).

- 4 Click **OK**.

The default **Control - HVAC** page appears. See [Figure 2-1 on page 2-2](#).



Note

*In each Web page, you must click **Submit** to apply all changes made in the Control column. Click **Refresh** to update the status.*

Continue with the [Control Page \(page 2-2\)](#).

Configuring the Thermostat Using the Web Interface

This chapter describes how to configure and monitor the thermostat through the web browser using the IMT550 Web interface.

Control Page

The **Control** page displays tabs for the HVAC, AUX Relays, and Usage Statistics pages.

HVAC

The **Control - HVAC** page displays the HVAC zone status, schedule, and settings, for example.

Figure 2-1 Control - HVAC Page

Lobby
IMT550c

Control Schedules Alarms Sensors Advanced Network Admin

HVAC AUX Relays Usage Statistics

Zone Status

Zone Temperature	77.6°F	
Local Temperature	77.5°F	
Zone Humidity	46%	
RS1: Basement	-	▲ Low Temperature Alert!
RS2: Main Door	Inactive	
RS3: Walk-in Refrigerator	-	
Heat Setting	60°F	60 °F
Cool Setting	85°F	85 °F
Fan Filter Change	▼ Required	

Current Schedule

Daily Profile	Profile1	
Event	Night	
Heat Setting	60°F	
Cool Setting	85°F	

Overrides

Hold	Off	Off ▼
------	-----	-------

HVAC Settings

HVAC State	Off	
HVAC Delay State	None	
HVAC Mode	Auto	Auto ▼
Fan State	On	
Fan Mode	On	On ▼

Refresh Submit

Use [Table 2-1](#) to configure the **Control - HVAC** fields.

Table 2-1 Control - HVAC Field Descriptions





Field	Description
Temperature	
Zone Temperature	<p>Displays the current temperature of the zone if temperature averaging is disabled.</p> <p>Average temperature of any combination of Local, Remote Sensor #1 (RS #1), Remote Sensor #2 (RS #2), or Remote Sensor #3 (RS# 3) if temperature averaging is enabled. (See Advanced Page (page 2-27).)</p> <p>In a range of -30°F(-34°C) to 199°F(95°C)</p> <p>Also displays the current status of the Zone Temperature alarm. If an alarm occurs, you must repair the condition which caused the alarm before resetting the alarm. (See Alarms Page (page 2-20).)</p> <ul style="list-style-type: none"> ■ This field is blank if no Zone Temperature alarm exists. ■  Low Temperature Alert! – The temperature monitored within the thermostat has dropped below the pre-set temperature threshold. ■  High Temperature Alert! – The temperature monitored within the thermostat has risen above the pre-set temperature threshold.
Local Temperature	<p>Displays the current temperature of the local sensor. This field is disabled if the local thermostat sensor is not included in temperature averaging.</p> <p>In a range of 40°F(4.5°C) to 110°F(43.5°C)</p>
Zone Humidity	<p>Displays the current Zone Humidity.</p> <p>In a range of 0% to 95%</p> <ul style="list-style-type: none"> ■  Low Humidity Alert! – The humidity level monitored within the thermostat has dropped below the pre-set humidity threshold. ■  High Humidity Alert! – The humidity level monitored within the thermostat has risen above the pre-set humidity threshold.
Heat Setting	<p>Displays the current temperature programmed for the heating system. This field is disabled if the HVAC mode is set to Cool or Off. (See HVAC Mode (page 2-5).) This field is not visible if the thermostat is configured to be a cool-only controlling device. (See Advanced Page (page 2-27).)</p> <p>To modify this field, use the drop-down menu to select a Heat Setting.</p> <p>40°F(4.5°C) to 110°F(43.5°C)</p>
Cool Setting	<p>Displays the current temperature programmed for the cooling (A/C) system. This field is disabled if the HVAC mode is set to Heat or Off. (See HVAC Mode (page 2-5).) This field is not visible if the thermostat is configured to be a heat-only controlling device. (See Advanced Page (page 2-27).)</p> <p>To modify this field, use the drop-down menu to select a Cool Setting.</p> <p>40°F(4.5°C) to 110°F(43.5°C)</p>

Table 2-1 Control - HVAC Field Descriptions (Continued)


Field	Description
Fan Filter Change	<p>Displays a reminder that the time interval between HVAC filter changes has expired. The air filter(s) should be cleaned or replaced. You should change the filter and then reset this timer. (See Alarms Page (page 2-20).)</p> <ul style="list-style-type: none"> ■ This field is left blank if no filter change is required. ■  Required! – The HVAC filters require changing or cleaning.
Current Schedule	
Daily Profile	Displays the current active scheduled Profile .
Event	<p>Displays the current active Event.</p> <ul style="list-style-type: none"> ■ Morning ■ Day ■ Evening ■ Night
Heat Setting	<p>Displays the current Heat temperature setting as set within the current schedule.</p> <p>40°F(4.5°C) to 110°F(43.5°C)</p>
Cool Setting	<p>Displays the current Cool temperature setting as set within the current schedule.</p> <p>40°F(4.5°C) to 110°F(43.5°C)</p>
Overrides	
Hold/Occupancy Override	<p>Displays the current state for both the Heat and Cool Setting. To “Hold” the current settings indefinitely or for a prescribed period of time as set on the Override Settings (page 2-35), use the drop-down menu and choose:</p> <ul style="list-style-type: none"> ■ Enabled – Hold mode is enabled. ■ Off (default) – Hold mode is disabled. <p>Note: When Occupancy Override is visible, it displays the current state of an active “OBO” button activation.</p>
HVAC Settings	
HVAC State	<p>Displays the current state of the heating or cooling system. If a state change is made while viewing this page, click Refresh to update the status.</p> <ul style="list-style-type: none"> ■ Heat – First stage heat is actively heating. ■ Heat2 – First stage and second stage heat are actively heating. ■ Aux Ht – First stage, second stage, and auxiliary heat are actively heating. (Heat Pump) ■ Emergency Ht - Emergency heat source is heating. ■ Cool – First stage A/C is actively cooling. ■ Cool2 – First stage and second stage A/C are actively cooling. ■ Off – Neither the heating system or cooling system is active (i.e. on).

Table 2-1 Control - HVAC Field Descriptions (Continued)

Field	Description
HVAC Delay State	Displays the HVAC delay state. Delay can be in effect if the interstage delay is set or if the compressor has been turned off within the last <i>n</i> minutes, where <i>n</i> is the set time from the Compressor Delay on the Advanced/HVAC page.
HVAC Mode	<p>Displays and controls the current mode setting for the HVAC system. The thermostat can be configured to control the heat system only, cool system only, automatically change over between heating and cooling systems, or control neither system.</p> <ul style="list-style-type: none"> ■ Off – The thermostat is disabled from controlling either the heating or cooling system. ■ Heat – Heating system only. ■ Cool – Cooling system only. ■ Auto – Automatic changeover between heating and cooling systems. ■ Emergency Heat - Forces the activation of an alternative heat source for heat pumps.
Fan State	<p>Displays the current state of the HVAC fan.</p> <ul style="list-style-type: none"> ■ Off – The operation of the fan is off. ■ On – The fan is operating.
Fan Mode	<p>Displays and controls the current state setting for the HVAC fan.</p> <ul style="list-style-type: none"> ■ Auto – Heating or cooling system controls the operation of the fan. ■ On – User forces the fan to the on state independent of the operation of the HVAC system. ■ Scheduled – The operation of the fan adheres to a schedule as defined by the user on the schedule pages with the schedule profile definition. <i>Note: When in Scheduled mode, the fan continues to work in Auto mode as well.</i>

AUX Relays

The **Control - AUX Relays** page displays the AUX Relay 1 and AUX Relay 2 state information.

Figure 2-2 Control - AUX Relays Page - Relay State Inactive

The screenshot shows a web interface for configuring AUX Relays. At the top, there is a logo and the location 'Lobby IMT550c'. Below this is a navigation menu with 'Control' selected, and other options like 'Schedules', 'Alarms', 'Sensors', 'Advanced', 'Network', and 'Admin'. Under 'Control', there are sub-menus for 'HVAC', 'AUX Relays', and 'Usage Statistics'. The main content area is divided into two sections, one for 'AUX Relay 1' and one for 'AUX Relay 2'. Each section contains a table for 'Current Relay State', 'Current Schedule', and 'General Settings'. At the bottom right, there are 'Refresh' and 'Submit' buttons.

AUX Relay 1		
Current Relay State	Inactive	
Configured Relay State	Scheduled	Scheduled ▾
Current Schedule		
Daily Profile	Profile2	
Event	Morn	
Relay State	Inactive	
General Settings		
Name	Aux Relay 1	Aux Relay 1
Output Polarity	Closed	Closed ▾
Include Relay In OBO	Disabled	Disabled ▾
AUX Relay 2		
Current Relay State	Inactive	
Configured Relay State	Scheduled	Scheduled ▾
Current Schedule		
Daily Profile	Profile2	
Event	Morn	
Relay State	Inactive	
General Settings		
Name	Aux Relay 2	Aux Relay 2
Output Polarity	Closed	Closed ▾
Include Relay In OBO	Disabled	Disabled ▾

Refresh Submit

Figure 2-3 Control - AUX Relays Page - Relay Manually Active

Lobby
IMT550c

Control Schedules Alarms Sensors Advanced Network Admin

HVAC **AUX Relays** Usage Statistics

AUX Relay 1

Override Type	User Override	
Current Relay State	Active	
Configured Relay State	Active	Active

General Settings

Name	Aux Relay 1	Aux Relay 1
Output Polarity	Closed	Closed
Include Relay In OBO	Disabled	Disabled

Figure 2-4 Control - AUX Relays Page - Relay Manually Inactive

Lobby
IMT550c

Control Schedules Alarms Sensors Advanced Network Admin

HVAC **AUX Relays** Usage Statistics

AUX Relay 1

Override Type	User Override	
Current Relay State	Inactive	
Configured Relay State	Inactive	Inactive

General Settings

Name	Aux Relay 1	Aux Relay 1
Output Polarity	Closed	Closed
Include Relay In OBO	Disabled	Disabled

Figure 2-5 Control - AUX Relays Page - Externally Triggered

Lobby
IMT550c

Control Schedules Alarms Sensors Advanced Network Admin

HVAC **AUX Relays** Usage Statistics

AUX Relay 1

Current Relay State	Inactive	
Configured Relay State	Externally Triggered	Externally Triggered

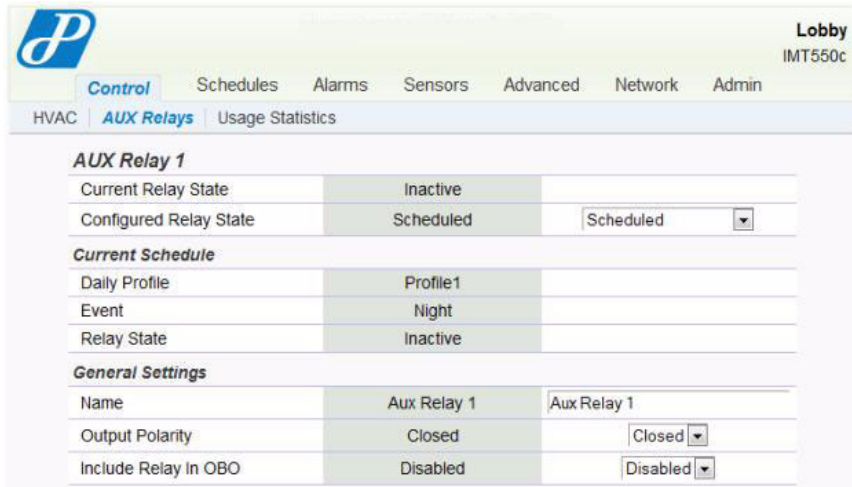
External Relay Trigger

External Trigger	Below Zone Humidity	Below Zone Humidity
Threshold	0%	0 %
Relay State	Active	Active
Activate HVAC Fan	Disabled	Disabled

General Settings

Name	Aux Relay 1	Aux Relay 1
Output Polarity	Closed	Closed

Figure 2-6 Control - AUX Relays Page - Scheduled



Use [Table 2-2](#) to configure the **Control - AUX Relays** fields.

Table 2-2 Control - AUX Relays Field Descriptions

Field	Description
AUX Relay 1 and 2	
Current Relay State	Displays the current relay state of Active or Inactive .
Configured Relay State	<ul style="list-style-type: none"> ■ Active - Forces relay to its active state. ■ Inactive - Forces relay to its inactive state. ■ Externally Triggered - Enables choice of activation trigger as either above/below Zone Humidity or above/below Zone Temperature. ■ Scheduled - Activated by time-of-day schedule as established on the Schedules tab.
Current Schedule	
Daily Profile	Displays the current active scheduled Profile .
Event	Displays the current Event definition. <ul style="list-style-type: none"> ■ Morning ■ Day ■ Evening ■ Night Note: This field is for Scheduled control.
Relay State	Displays the relay state of Active or Inactive .
General Settings	
Name	

Field	Description
Output Polarity	<ul style="list-style-type: none"> ■ Closed - Normally closed output. ■ Open - Normally open output.
Include Relay in OBO	Displays when OBO is activated if the associated relays using this function are to be activated as well. <ul style="list-style-type: none"> ■ Disabled ■ Enabled

Usage Statistics

The **Control - Usage Statistics** page displays the usage information.

Figure 2-7 Control - Usage Statistics Page

The screenshot shows the 'Control - Usage Statistics' page for a 'Lobby IMT550c' unit. The page has a navigation bar with 'Control' selected, and sub-menus for 'HVAC', 'AUX Relays', and 'Usage Statistics'. The main content area is titled 'Usage Counters' and contains four tables:

Heating				Cooling			
	Days	Hrs	Mins		Days	Hrs	Mins
Heat 1	0	0	0	Cool 1	0	6	55
Heat 2	0	0	0	Cool 2	0	2	13

Fan/Filter				Auxiliary Relays			
	Days	Hrs	Mins		Days	Hrs	Mins
Time On	0	6	56	AUX Relay 1	0	0	0
				AUX Relay 2	0	0	0

Below the tables is a 'Counter Status and Control' section with a table:

	Increment	
Increment fan on heat	Increment	Increment ▼
Last counter reset		Check box to reset counters <input type="checkbox"/>

At the bottom right, there are 'Refresh' and 'Submit' buttons.

Use [Table 2-3](#) to configure the **Control - Usage Statistics** fields.

Table 2-3 Control - Usage Statistics Field Descriptions

Field	Description
Usage Counters	
Heating	Displays the Heat1 and Heat 2 relay minute activity counter. The Admin account user can reset this field by checking the Last counter reset box.
Fan/Filter	Displays the Fan/Filter relay minute activity counter, which is the number of days, hours, and minutes since the Last counter reset box was checked and submitted. The Admin account user can reset this field by checking the Last counter reset box.

Field	Description
Cooling	Displays the Cool 1 and Cool 2 relay minute activity counter, which is the number of days, hours, and minutes since the Last counter reset box was checked. The Admin account user can reset this field by checking the Last counter reset box.
Auxiliary Relays	Displays the AUX Relay 1 and AUX Relay 2 relay minute activity counter, which is the number of days, hours, and minutes since the Last counter reset box was checked.. The Admin account user can reset this field by checking the Last counter reset box.
Counter Status and Control	
Increment fan on heat	Displays whether to include heating cycle run time in systems where the fan is used to deliver heat, for example, forced hot air systems. <ul style="list-style-type: none"> ■ Increment – Include heating cycle run time. ■ Off – Do not include heating cycle run time.
Last counter reset	Check to return the Usage Counters to zero value (except Fan/Filter) after clicking Submit.

Schedules Page

The **Schedules** page displays tabs for the HVAC, AUX Relay 1, and AUX Relay 2 pages.

HVAC

The **Schedules - HVAC** settings page displays the schedule information.

Schedule Settings

The **Schedule Settings** page displays the default daily **Profiles** and weekly schedule.

Figure 2-8 Schedules - HVAC - Schedule Settings Page

The screenshot shows the HVAC Schedule Settings page for a device named 'Lobby IMT550c'. The page has a navigation bar with tabs for 'Control', 'Schedules', 'Alarms', 'Sensors', 'Advanced', 'Network', and 'Admin'. Under 'Schedules', there are sub-tabs for 'HVAC', 'AUX Relay 1', and 'AUX Relay 2'. The 'Schedule Settings' sub-tab is active, with 'Calendar' and 'Special Days' also visible.

Daily Profile Definitions

A dropdown menu shows 'Sunday' is selected. Below it is a table for the Sunday profile:

Sunday		Color		
Event	Start Time	Heat	Cool	Fan Schedule
Morning	7 : 00 AM	68 °F	80 °F	0 Min
Day	9 : 00 AM	72 °F	78 °F	0 Min
Evening	5 : 00 PM	68 °F	80 °F	0 Min
Night	6 : 00 PM	60 °F	85 °F	0 Min

Default Weekly Schedule

Sunday	<input type="checkbox"/> Sunday	Sunday
Monday	<input type="checkbox"/> Monday	Monday
Tuesday	<input type="checkbox"/> Tuesday	Tuesday
Wednesday	<input type="checkbox"/> Wednesday	Wednesday
Thursday	<input type="checkbox"/> Thursday	Thursday
Friday	<input type="checkbox"/> Friday	Friday
Saturday	<input type="checkbox"/> Saturday	Saturday

Buttons for 'Refresh' and 'Submit' are located at the bottom right of the form.

Daily Profile Definitions

The thermostat scheduling feature is organized in a hierarchy. You use **Profiles** (up to 12) to classify the types of days that are used in the schedule. Each **Profile** is divided into four events, each of which supports temperature settings for both heating and cooling, and fan scheduling to provide periodic air flow.

Each **Profile** supports the following four non-overlapping events of time (within 24 hour period) in which you can independently specify heat, cool, and fan schedules.

- **Morning** (for example, pre-business hours)
- **Day** (for example, business hours)
- **Evening** (for example, after hours)
- **Night** (for example, unoccupied hours)

Figure 2-8 on page 2-11 displays the **Profile** table. The Web page displays the **Event** period and **Start Time** within each row of the table. The Web page also displays the heat and cool settings for each **Event** period in each **Profile**. Although the thermostat ships from the factory with pre-set **Event** settings, you can change these settings by selecting the appropriate definition from the drop-down menu.

Use Table 2-4 to configure the **Daily Profile Definitions**.

Table 2-4 Schedules-Daily Profile Definitions Field Descriptions

Field	Description
Daily Profile Definitions	
Profile Name	Use the drop-down menu to select the appropriate profile. The profile name displays in the header. Click Color and select a color to color-code the profile for easy recognition.
Event	Displays one of four time periods of the 24-hour day.
Start Time	Use the drop-down menu to modify the time period in 5-minute increments. Includes AM/PM indicator.
Heat	Use the drop-down menu to select a heat temperature setback setting between 40°F(4.5°C) to 110°F(43.5°C)
Cool	Use the drop-down menu to select a cool temperature setback setting between 40°F(4.5°C) to 110°F(43.5°C)
Fan Schedule	Select the time in minutes for each hour of the Event in which the fan will be On . The schedule begins on the hour and advances for the duration specified. Note that within the hour of each Event but outside the schedule interval, the fan reverts to AUTO mode to ensure proper operation for either a heating or cooling call to the HVAC system. Select one of the following options: <ul style="list-style-type: none"> ■ Always Off ■ 5 On / 15 Off ■ 10 On / 10 Off ■ 15 On / 5 Off ■ Always On

Default Weekly Schedule

In [Figure 2-8 on page 2-11](#), the **Default Weekly Schedule** table provides a template that you can use to apply the **Profiles** to each day of the week. The Web page applies this weekly template to every week in each month that is visible in the **Calendar View** at the bottom of the [Calendar \(page 2-13\)](#) page.

To edit the **Default Weekly Schedule**, use the drop-down menu and select the appropriate **Profile**.

Calendar

The **Calendar View** table displays the **Profile** settings for each day of the month.

Figure 2-9 Schedules - HVAC - Calendar Page

The screenshot displays the HVAC Schedules - Calendar Page. At the top, there is a navigation bar with 'Schedules' selected, and a sub-menu with 'Calendar' selected. Below this is a 'Default Week' table showing days of the week with corresponding profile colors. The main section is 'Calendar View' showing four monthly calendars for June, July, August, and September 2010. A legend on the right identifies the colors for each day of the week: Sunday (light blue), Monday (orange), Tuesday (grey), Wednesday (dark blue), Thursday (medium blue), and Friday (yellow-green). A 'Today' button is at the bottom left.

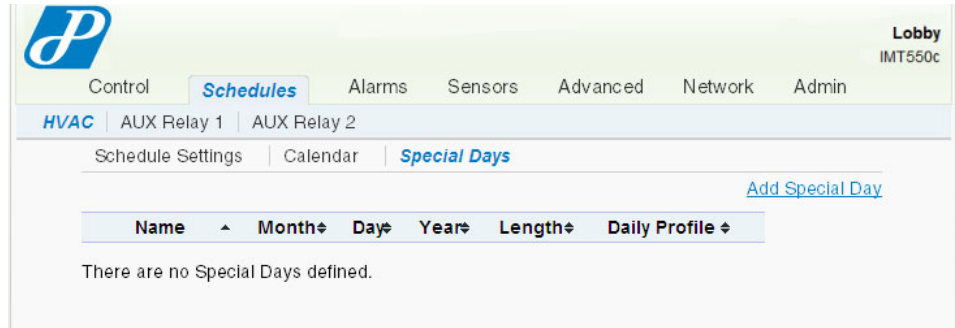
You can modify any day in the **Calendar View** table using either of the following methods:

- Click the **date** within the calendar and continue with [Adding Special Days \(page 2-14\)](#).
- Click [Special Days](#) and continue with [Special Days \(page 2-14\)](#).

Special Days

Special Days entries are organized as rows in the **Special Days** table. The Web page supports 30 **Special Days** table entries, each comprised of a start date entered in the **Month**, **Day**, and **Year** fields. In each row, you can enter one or more days as a duration for that entry. Durations cannot exceed 60 days.

Figure 2-10 Schedule - HVAC - Special Days Page



To add a special day(s), click **Add Special Day** and continue with [Adding Special Days](#).

Adding Special Days

From the **Add Special Days Schedule** page, you can select any day(s) of the current or future month, modify the information, and assign a **Profile** different from what is specified in the [Default Weekly Schedule \(page 2-13\)](#).

Figure 2-11 Add Special Days Schedule

To add a special day(s):

- 1 Enter a **Name** for the special day(s).
- 2 Specify the **Month**, **Day**, and **Year**.

- 3 Enter the appropriate day(s) duration.
- 4 Select the appropriate **Daily Profile to Use**.
- 5 Click **Submit**.

Modifying Special Days




- 1 From the [Special Days](#) page, click the pencil icon  on the appropriate line to display the **Edit Special Day Schedule** page.

Figure 2-12 Edit Special Day Schedule

Edit Special Day Schedule

Name

Schedule


	Month	Day	Year	
Start Date	<input type="text" value="July"/>	<input type="text" value="5"/>	<input type="text" value="2010"/>	
End Date	<input type="text" value="July"/>	<input type="text" value="5"/>	<input type="text" value="2010"/>	

Duration (days)

Daily Profile To Use

- 2 Edit the fields as necessary.
- 3 Click **Submit**.

Deleting Special Days

- 1 From the [Special Days](#) page, click the delete icon  on the appropriate line. A message displays confirming you want to delete the special day(s).
- 2 Click **OK to delete** the special day(s) or **Cancel** to cancel the operation.

Special Days Examples

This section describes some examples of adding **Special Days** to the thermostat.

Example 1

Figure 2-13 shows an example of changing the July 5, 2010 from a **Profile 1** to a **holiday** profile. This represents a change to the default weekly schedule for July 5, 2010 and requires a single **Special Day** entry in the **Special Days** table.

Figure 2-13 Special Days - Example 1A

You can enter this information in the **Special Days** table using either of the following methods:

- Configure the Profile (see [Daily Profile Definitions \(page 2-11\)](#)) to reflect the desired settings. Click directly on the **date** on the **Calendar**. The **Add Special Day Schedule** page appears and automatically populates the **Start Date** and **End Date**. **One** day is the default duration, but you can change this field to any number of days less than the 60 day maximum. Modify the fields as necessary. Click **Submit**. The **Special Day** displays on the **Special Days** table and **Calendar**.
- Configure the Profile (see [Daily Profile Definitions \(page 2-11\)](#)) to reflect the desired settings. From the **Special Days** page, click **Add Special Days**. The **Add Special Days Schedule** appears. Modify the fields as necessary. Click **Submit**. The **Special Day** displays on the **Special Days** table and **Calendar**.

Figure 2-14 Special Days - Example 1B

Name	Month	Day	Year	Length	Daily Profile
July 5	Every	1	Every	1 Day	holiday

Figure 2-15 Special Days - Example 1C

The screenshot shows a web-based thermostat control interface. At the top, there is a navigation menu with 'Schedules' selected. Below this, there are tabs for 'HVAC', 'AUX Relay 1', and 'AUX Relay 2'. The main content area is titled 'Special Days' and includes a 'Default Week' section with color-coded bars for Sunday through Saturday. Below that is a 'Calendar View' showing a grid of months from June to September 2010. In the July 2010 calendar, the number '5' is circled in red and labeled 'Special Day (1)' with an arrow. A legend on the right side of the calendar view identifies the colors for each day of the week: Sunday (light blue), Monday (brown), Tuesday (grey), Wednesday (dark blue), Thursday (medium blue), and Friday (yellow-green).

Example 2

Figure 2-16 shows an example of adding additional **Special Days** to the thermostat schedule of a week-long period from July 12, 2010 through July 16, 2010.

Figure 2-16 Special Days - Example 2A

The screenshot shows a form titled 'Add Special Day Schedule'. The form contains the following fields:

- Name:** July 12-16
- Schedule:**
 - Start Date:** Month: July, Day: 12, Year: 2010
 - End Date:** Month: July, Day: 16, Year: 2010
 - Duration (days):** 5
- Daily Profile To Use:** holiday

 At the bottom of the form are 'Cancel' and 'Submit' buttons.

- 1 From the [Special Days](#) page (see [Special Days \(page 2-14\)](#)), click **Add Special Day**.

- 2 Enter a **Name** and **Schedule** information for the special day(s).
- 3 Select the appropriate **Daily Profile** to Use.
- 4 Click **Submit**.

The **Special Day** entry (for 5 days total) displays on the [Special Days](#) and [Calendar](#) pages.

Figure 2-17 Special Days - Example 2B

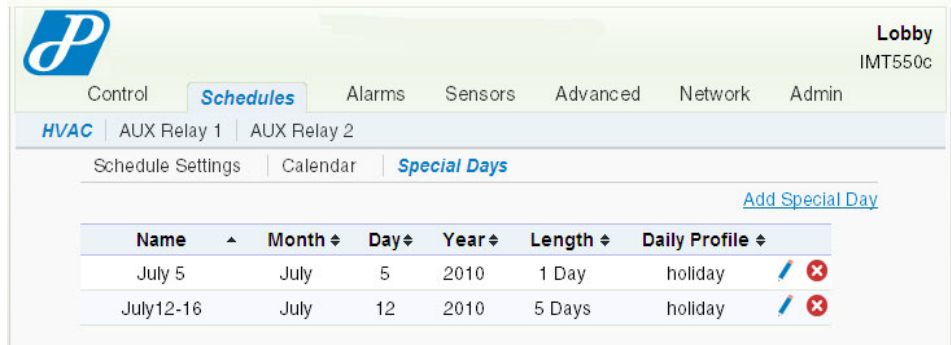
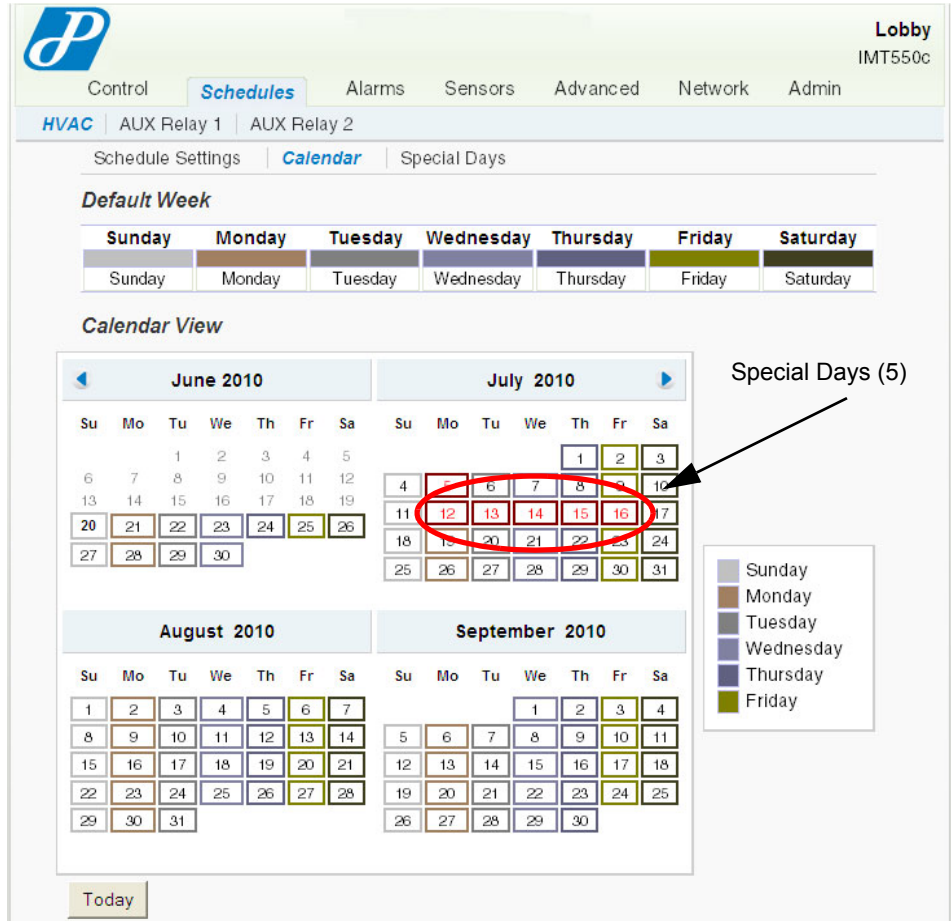


Figure 2-18 Special Days - Example 2C



AUX Relay 1 and AUX Relay 2

Use to configure AUX Relay 1 and AUX Relay 2. See HVAC (page 2-11).

Figure 2-19 Schedules - Aux Relay Page

The screenshot displays the configuration page for the AUX Relay 1 schedule. At the top, there is a navigation bar with tabs for 'Control', 'Schedules', 'Alarms', 'Sensors', 'Advanced', 'Network', and 'Admin'. The current page is 'Schedules', and the specific configuration is for 'AUX Relay 1' under the 'HVAC' section. The page title is 'Lobby IMT550c'.

Under the 'Schedule Settings' tab, the 'Daily Profile Definitions' section is active. A dropdown menu shows 'Sunday' is selected. Below this is a table with columns for 'Event', 'Start Time', and 'Relay'. The table contains four rows of event definitions for Sunday:

Event	Start Time	Relay
Morning	7 : 00 AM	Inactive
Day	9 : 00 AM	Inactive
Evening	5 : 00 PM	Inactive
Night	6 : 00 PM	Inactive

Below the event definitions is the 'Default Weekly Schedule' section, which is a table listing the days of the week and their corresponding relay settings:

Day	Color	Relay
Sunday	Sunday	Sunday
Monday	Monday	Monday
Tuesday	Tuesday	Tuesday
Wednesday	Wednesday	Wednesday
Thursday	Thursday	Thursday
Friday	Friday	Friday
Saturday	Saturday	Saturday

At the bottom right of the page, there are 'Refresh' and 'Submit' buttons.

Alarms Page

The Alarms page displays tabs for the **Zone** and **Wired Sensors** pages.

Zone

The **Alarms - Zone** page displays the zone temperature, humidity, and filter change reminder.

Figure 2-20 Alarms - Zone Page

The screenshot shows the 'Alarms - Zone Page' web interface. At the top, there is a logo and the text 'Lobby IMT550c'. Below this is a navigation menu with tabs for 'Control', 'Schedules', 'Alarms', 'Sensors', 'Advanced', 'Network', and 'Admin'. The 'Alarms' tab is selected. Below the navigation menu, there are two sub-tabs: 'Zone' and 'Wired Sensors'. The 'Zone' sub-tab is selected. The main content area is divided into three sections: 'Zone Temperature Alarms', 'Zone Humidity Alarms', and 'Fan Filter Change'. Each section contains a table of settings.

Zone Temperature Alarms		
Low Temperature Limit	Disabled	Disabled ▾ °F
High Temperature Limit	Disabled	Disabled ▾ °F
Zone Humidity Alarms		
Low Humidity Limit	Disabled	Disabled ▾ %
High Humidity Limit	Disabled	Disabled ▾ %
Fan Filter Change		
Fan Filter Change Reminder	Enabled	Enabled ▾
Change Interval (runtime hours)	1 Hour	1 Hours
Usage To Date	00:51	
Last Replaced	Dec 31, 2009 8:16 PM	<input type="checkbox"/> Fan Filter replaced

At the bottom right of the form, there are two buttons: 'Refresh' and 'Submit'.

Use [Table 2-5](#) to configure the **Alarms - Zone** page fields.

Table 2-5 Alarms - Zone Field Descriptions

Field	Description
Zone Temperature Alarms	
Low Temperature Limit	<p>Select a value or Disabled to indicate the low temperature threshold detection status.</p> <p>The value set by this parameter is monitored by the thermostat and compared against the current Zone Temperature. If the current Zone Temperature falls below this value, an alarm condition is set and the status is displayed on the HVAC (page 2-2) page. In addition, this alarm is sent to the Proliphix web site to trigger an e-mail notification, if the function is enabled, and may also be sent as e-mail from this thermostat if configured on Network - Notification Settings page. See E-mail configuration on Network Notification Settings (page 2-42).</p> <ul style="list-style-type: none"> ■ Disabled (default) – No low temperature limit is set. ■ -30°F(-34.5°C) to 200°F(93°C) <p>This is a major (red) alarm condition.</p>
Present for	<p>Enter how long the condition must be in effect before the alarm is triggered. Note that the default is 0 minutes and the maximum time allowed is 240 minutes.</p>
High Temperature Limit	<p>Select a value or Disabled to indicate the high temperature threshold detection status.</p> <p>The value set by this parameter is monitored by the thermostat and compared against the current Zone Temperature. If the current Zone Temperature rises above this value, an alarm condition is set and the status is displayed on the HVAC (page 2-2) page. In addition, this alarm is sent to the Proliphix web site to trigger an e-mail notification, if the function is enabled, and may also be sent as e-mail from this thermostat if configured on Network - Notification Settings page. See E-mail configuration on Network Notification Settings (page 2-42).</p> <ul style="list-style-type: none"> ■ Disabled (default) – No high temperature limit is set. ■ -30°F(-34.5°C) to 200°F(93°C) <p>This is a major (red) alarm condition.</p>
Present for	<p>Enter how long the condition must be in effect before the alarm is triggered. Note that the default is 0 minutes and the maximum time allowed is 240 minutes.</p>

Table 2-5 Alarms - Zone Field Descriptions (Continued)

Field	Description
Zone Humidity Alarms	
Low Humidity Limit	<p>Select a value or Disabled to indicate the low humidity threshold detection status.</p> <p>This value is monitored by the thermostat and compared against the current Relative Humidity. If the current Relative Humidity rises above this value, an alarm condition is set and the status is displayed on the HVAC (page 2-2) page. In addition, this alarm is sent to the Proliphix web site to trigger an e-mail notification, if the function is enabled, and may also be sent as e-mail from this thermostat if configured on Network - Notification Settings page. See E-mail configuration on Network Notification Settings (page 2-42).</p> <ul style="list-style-type: none"> ■ Disabled (default) – No high humidity limit is set. ■ 0%RH to 95%RH – High Humidity Limit in 5% increments. <p>This is a major (red) alarm condition.</p>
High Humidity Limit	<p>Select a value or Disabled to indicate the high humidity threshold detection status.</p> <p>This value is monitored by the thermostat and compared against the current Relative Humidity. If the current Relative Humidity rises above this value, an alarm condition is set and the status is displayed on the HVAC (page 2-2) page. In addition, this alarm is sent to the Proliphix web site to trigger an e-mail notification, if the function is enabled, and may also be sent as e-mail from this thermostat if configured on Network - Notification Settings page. See E-mail configuration on Network Notification Settings (page 2-42).</p> <ul style="list-style-type: none"> ■ Disabled (default) – No high humidity limit is set. ■ 0%RH to 95%RH – High Humidity Limit in 5% increments. <p>This is a major (red) alarm condition.</p>
Filter Change Reminder	
Change Interval (runtime hours)	<p>Select an interval in hours to remind you that the HVAC system requires maintenance. This feature allows you to set time intervals between changing and/or cleaning the HVAC air filter. If enabled, an alarm condition is set after the pre-set interval has expired, and is displayed on the HVAC (page 2-2) page. In addition, this alarm is sent to the Proliphix web site to trigger an e-mail notification, if the function is enabled, and may also be sent as e-mail from this thermostat if configured on Network - Notification Settings page. See E-mail configuration on Network Notification Settings (page 2-42).</p> <p>This is a minor (yellow) alarm condition.</p>

Table 2-5 Alarms - Zone Field Descriptions (Continued)

Field	Description
Usage to Date	Displays a running tally of hours and minutes which have elapsed since the previous Last Replaced date. If this value is greater than the preset hours, it is displayed in red and an alarm is generated indicating that the Change Interval has expired.
Last Replaced	Displays the date and time the Filter replaced box was checked and restarts the interval set within the Change Interval field.

Wired Sensors

The **Alarms - Wired Sensors** page displays if any of the three remote sensors are configured.

Figure 2-21 Alarms - Wired Sensors Page

The screenshot shows the 'Alarms' section of the thermostat interface for 'Lobby IMT550c'. The 'Wired Sensors' tab is active, showing three sensor configurations:

- RS1: Basement**
 - Low Temperature Limit: 45°F (dropdown), Present For: 0 Minutes
 - Alarm generated at: Dec 31, 2009 9:14 PM (red text), Condition repaired:
 - High Temperature Limit: 100°F (dropdown), Present For: 0 Minutes
- RS2: Main Door**
 - Alarm on Contact: Active (dropdown), Present For: 10 Minutes
- RS3: Walk-in Refrigerator**
 - Low Temperature Limit: 37°F (dropdown), Present For: 45 Minutes
 - High Temperature Limit: 42°F (dropdown), Present For: 45 Minutes

Buttons for 'Refresh' and 'Submit' are located at the bottom right of the sensor configuration area.

Use [Table 2-6](#) to configure the **Alarms - Wired Sensors** page fields.

Table 2-6 Alarms - Wired Sensors Field Descriptions

Field	Description
RS1:, RS2:, and RS3:	
Low Temperature Limit	<p>Select a value or Disabled to indicate the low temperature threshold detection status.</p> <p>The value set by this parameter is monitored by the thermostat and compared against the current Zone Temperature. If the current Zone Temperature falls below this value, an alarm condition is set and the status is displayed on the HVAC (page 2-2) page. In addition, this alarm is sent to the Proliphix web site to trigger an e-mail notification, if the function is enabled, and may also be sent as e-mail from this thermostat if configured on Network: Notification Settings page. See E-mail configuration on Network Notification Settings (page 2-42).</p> <ul style="list-style-type: none"> ■ Disabled (default) – No low temperature limit is set. ■ -30° F(-34.5° C) to 200° F(93° C) <p>This is a major (red) alarm condition.</p>
Present for	Enter how long the condition must be in effect before the alarm is triggered. Note that the default is 0 minutes and the maximum time allowed is 240 minutes.
Alarm generated at	The time the the alarm was generated.
High Temperature Limit	<p>Select a value or Disabled to indicate the high temperature threshold detection status.</p> <p>The value set by this parameter is monitored by the thermostat and compared against the current Zone Temperature. If the current Zone Temperature rises above this value, an alarm condition is set and the status is displayed on the HVAC (page 2-2) page. In addition, this alarm is sent to the Proliphix web site to trigger an e-mail notification, if the function is enabled, and may also be sent as e-mail from this thermostat if configured on Network: Notification Settings page. See E-mail configuration on Network Notification Settings (page 2-42).</p> <ul style="list-style-type: none"> ■ Disabled (default) – No high temperature limit is set. ■ -30° F(-34.5° C) to 200° F(93° C) <p>This is a major (red) alarm condition.</p>
Present for	Enter how long the condition must be in effect before the alarm is triggered. Note that the default is 0 minutes and the maximum time allowed is 240 minutes.

Sensors Page

The **Sensors** page displays the local temperature and remote sensor name/type.

Figure 2-22 Sensors Page

Lobby
IMT550c

Control Schedules Alarms **Sensors** Advanced Network Admin

Local and Wired Sensors

Local Temperature

Current Reading	76.1°F	
Sensor Correction	0.0°F	0 °F

Remote Sensor 1

Sensor Name	Basement	Basement
Type	Thermistor	Thermistor
State	Enabled	Enabled
Group	Outdoor Temp	Outdoor Temp
Current Reading	-	
Sensor Correction	0.0°F	0 °F

Remote Sensor 2

Sensor Name	Main Door	Main Door
Type	Contact	Contact
State	Enabled	Enabled
Current Reading	Inactive	

Remote Sensor 3

Sensor Name	Walk-in Refrigerator	Walk-in Refrigerator
Type	Thermistor	Thermistor
State	Enabled	Enabled
Group	Indoor Temp	Indoor Temp
Current Reading	-	
Sensor Correction	0.0°F	0 °F

Refresh Submit

Use [Table 2-7](#) to complete the **Sensors** page fields.

Table 2-7 Sensors Field Descriptions

Field	Description
Local Temperature	
Current Reading	Displays the current local temperature.
Sensor Correction	Indicate the calibration or temperature offset compensation for this remote thermal sensor. Offset adjustments are added or subtracted from the actual temperature read from this sensor and displayed as the apparent temperature. -10°F (-5.5 °C) through +10°F (5.5C) The default is 0.

Table 2-7 Sensors Field Descriptions (Continued)

Field	Description
Remote Sensor 1, 2, and 3	
Sensor Name	Displays the Name (15 characters) for the external thermal sensor #1/#2/#3. RS1 / RS2 / RS3 The default is RS1, RS2, RS3 .
Type	Select the remote sensor type: thermistor or contact to determine whether or not a temperature sensor or dry contact closure source is connected to this sensor. (Consult the Proliphix web site for a list of sensors available in either type.) <ul style="list-style-type: none"> ■ Thermistor – Thermistor-based thermal sensors. ■ Contact – Contact-based connections. The Contact closure option can be used to sense if a door is open or closed for greater than the number of minutes set on the Alarms page and then notify you via an alert e-mail. For example, this option is often used in food service applications but can be used for any situation where you need to monitor a Contact closure. ■ Unconfigured (default) ■ Motion Sensor
State	
Group	Specifies if the sensor is assigned to Indoor Temp or Outdoor Temp . Note: If one ore more of the remote sensors are configured as witin the Outdoor Temp group, only the first (that is, RS1 then RS2 then RS3, in that order) are displayed on the thermsotat’s LCD screen.
Current Reading	Displays the current local temperature.
Sensor Correction	Indicate the calibration or temperature offset compensation for this remote thermal sensor. Offset adjustments are added or subtracted from the actual temperature read from this sensor and displayed as the apparent temperature. -10°F (-5.5 °C) through +10°F (5.5C) The default is 0 .

Advanced Page

The **Advanced** page displays tabs for the HVAC Settings, Thermostat Settings, and Override Settings pages.

HVAC Settings

The **Advanced - HVAC Settings** page displays the HVAC system information, compressor/interstage delay, and maximum cycles per hour, for example.

Figure 2-23 Advanced - HVAC Settings Page - Fuel Burner

The screenshot shows the 'Advanced' configuration page for a 'Fuel Burner' system. The page is titled 'Lobby IMT550c' and has several navigation tabs: Control, Schedules, Alarms, Sensors, **Advanced**, Network, and Admin. Under the 'Advanced' tab, there are three sub-tabs: **HVAC Settings**, Thermostat Settings, and Override Settings.

The main content area is divided into several sections:

- HVAC Configuration:**
 - HVAC System Type: Fuel Burner (dropdown menu)
 - Heat Control: 2H (dropdown menu)
 - Second Stage Offset: - 2.0°F (input field)
 - Cool Control: 2C (dropdown menu)
 - Second Stage Offset: + 2.0°F (input field)
- Stage Delays:**
 - Compressor Delay: 3 Minutes (dropdown menu)
 - Interstage Delay: None (dropdown menu)
- Maximum Cycles:**
 - Maximum Cool Cycles/Hour: Disabled (dropdown menu)
 - Maximum Heat Cycles/Hour: Disabled (dropdown menu)
- A/C Humidity Control:**
 - A/C Humidity Control when humidity is above: Enabled (dropdown menu)
 - 50 (input field)
- Zone Temperature Averaging:**
 - Local Temperature Select: Include (dropdown menu)
 - RS1 Temperature Select: Include (dropdown menu)
 - RS3 Temperature Select: Exclude (dropdown menu)

At the bottom right of the configuration area, there are 'Refresh' and 'Submit' buttons.

Figure 2-24 Advanced - HVAC Settings Page - Heat Pump

The screenshot shows the 'Advanced' settings page for a thermostat. The top navigation bar includes 'Control', 'Schedules', 'Alarms', 'Sensors', 'Advanced' (selected), 'Network', and 'Admin'. Below this is a sub-navigation bar with 'HVAC Settings', 'Thermostat Settings', and 'Override Settings'. The main content area is titled 'HVAC Configuration' and contains several sections:

- HVAC Configuration:** A table with three columns: Field, Value, and Control. Fields include HVAC System Type (Heat Pump), Reverse Valve Polarity (B - Reverse for Heat), Auxiliary Heat (Enabled), Aux Heat Offset (-2.0°F), Heat Control (2H), Second Stage Offset (-2.0°F), Cool Control (2C), and Second Stage Offset (+2.0°F).
- Stage Delays:** A table with three columns: Field, Value, and Control. Fields include Compressor Delay (3 Minutes), Interstage Delay (None), and Aux Heat Delay (None).
- Maximum Cycles:** A table with three columns: Field, Value, and Control. Fields include Maximum Cool Cycles/Hour (Disabled) and Maximum Heat Cycles/Hour (Disabled).
- A/C Humidity Control:** A table with three columns: Field, Value, and Control. Fields include A/C Humidity Control when humidity is above (Enabled) and a value of 50.
- Zone Temperature Averaging:** A table with three columns: Field, Value, and Control. Fields include Local Temperature Select (Include), RS1 Temperature Select (Include), and RS3 Temperature Select (Exclude).

At the bottom right of the form are 'Refresh' and 'Submit' buttons.

Use [Table 2-8](#) to configure the **Advanced Settings** fields.

Table 2-8 Advanced Settings Fields - HVAC Field Descriptions

Field	Description
HVAC System Type	Select the type of HVAC system, either Fuel Burner (default) or Heat Pump HVAC systems as follows: <ul style="list-style-type: none"> ■ Fuel Burner (default) – The HVAC system burns fossil fuels (e.g. gas or oil). Typically the system includes either an oil or gas fired boiler or furnace. See Figure 2-23 on page 2-27 and continue with If Your HVAC System is a Fuel Burner (page 2-29). ■ Heat Pump – Specifies that the HVAC system is based on an electric compressor. See Figure 2-24 on page 2-28 and continue with If Your HVAC System is a Heat Pump (page 2-30).

Table 2-8 Advanced Settings Fields - HVAC Field Descriptions (Continued)

Field	Description
<i>If Your HVAC System is a Fuel Burner</i>	
Heat Control	<p>Select the HVAC control for this thermostat. This parameter describes the thermostat capability to control a single stage or dual stage heating system. The thermostat can also be disabled from controlling a heating system and instead operate as a cool-only thermostat.</p> <ul style="list-style-type: none"> ■ Disable – No heating system exists. (A/C only thermostat.) ■ 1H – Enables the heating system as a standard single stage system. ■ 2H (default) – Enables the heating system as a dual stage system.
Second Stage Offset	<p>Specify the second stage heat set point temperature referenced to the first stage heat set point temperature. This parameter is only enabled when 2H Heat Control is selected, otherwise it is disabled. (e.g. If the first stage temperature set point is set to 70°F, and this parameter were set to -3°F, the second stage heat would activate at or below 67°F). Temperatures include:</p> <p>0, -1, -2, -3, -4, -5, -6°F (0, -.25, -.5, -.75, -1, -1.25, -1.5, -1.75, -2, -2.25, -2.5, -2.75, -3, -3.25, -3.5°C) – Second stage heat temperature offset from first stage heat set point temperature.</p>
Cool Control	<p>Specify the HVAC control of this thermostat. This parameter describes the thermostat's capability to control a single stage or dual stage cooling system. The thermostat can also be disabled from controlling a cooling system and instead operate as a heat-only thermostat. (See Heat Control (page 2-29).)</p> <ul style="list-style-type: none"> ■ Disable – Specifies that there is no cooling system present. (heat-only thermostat.) ■ 1C – Enables the cooling system as a standard single stage system. ■ 2C (default) – Enables the cooling system as a dual stage system.
Second Stage Offset	<p>Specifies the second stage cool set point temperature referenced to the first stage cool set point temperature. This parameter is only enabled when 2H Cool Control is selected, otherwise it is disabled. (e.g. If the first stage temperature set point is set to 72°F, and this parameter were set to 3°F, the second stage A/C would activate at or above 75°F). Temperatures include:</p> <p>0, +1, +2, +3, +4, +5, +6°F (0, -.25, -.5, -.75, -1, -1.25, -1.5, -1.75, -2, -2.25, -2.5, -2.75, -3, -3.25, -3.5°C) – Second stage A/C temperature offset from first stage A/C set point temperature.</p>

Table 2-8 Advanced Settings Fields - HVAC Field Descriptions (Continued)

Field	Description
<i>If Your HVAC System is a Heat Pump</i>	
Reverse Valve Polarity	<p>Enables you to control the direction of the heating and cooling modes.</p> <ul style="list-style-type: none"> ■ O - Reverse for Cool – Indicates that the heat pump normally runs in heat mode and when the reversing valve is activated then the heat pump will run in cooling mode. ■ B - Reverse for Heat – Indicates that the heat pump normally runs in cool mode and when the reversing valve is activated then the heat pump will run in heating mode.
Auxiliary Heat	<p>Specifies a secondary source of heat outside the heat pump system, for example, electric baseboard or a gas furnace.</p> <p>Note: In a dual stage heat pump, Auxilliary Heat is available only after the 2nd stage is active.</p> <ul style="list-style-type: none"> ■ Disabled – Disables Auxiliary Heat. ■ Enabled – Auxilliary Heat can be used while the heat pump compressor is active. ■ Enabled without Compressor – Disables the compressor when Auxiliary Heat is active.
Heat Control	<p>Specifies the HVAC control of this thermostat. This parameter describes the thermostat’s capability to control a heat pump system. The thermostat can also be disabled from controlling a heating system and instead operate as a cool-only thermostat.</p> <ul style="list-style-type: none"> ■ Disabled – Specifies that there is no heating system present. (A/C only thermostat.) ■ 1H – Enables the heat pump as a standard single stage heating system. ■ 2H (default) – Enables the heat pump as a dual stage heating system. There are two separate compressor wires from the heat pump connected to the thermostat.
Second Stage Offset	<p>This parameter is only enabled when 2H Heat Control is selected, otherwise it is disabled.</p> <p>0,-1, -2, -3, -4, -5, -6°F (0,-.25,-.5,-.75,-1,-1.25,-1.5,-1.75,-2,-2.25,-2.5,-2.75,-3,-3.25,-3.5°C)</p>

Table 2-8 Advanced Settings Fields - HVAC Field Descriptions (Continued)

Field	Description
Cool Control	<p>Specifies the HVAC control of this thermostat. This parameter describes the thermostat's capability to control a heat pump system. The thermostat can also be disabled from controlling a cooling system and instead operate as a heat-only thermostat.</p> <ul style="list-style-type: none"> ■ Disable – Specifies that there is no cooling system present. (Heat only thermostat.) ■ 1C – Enables the heat pump as a standard single stage cooling system. ■ 2C – Enables the heat pump as a standard dual stage cooling system. There are two separate compressor wires from the heat pump connected to the thermostat.
Second Stage Offset	<p>Specifies a secondary source of cool air outside the heat pump system, for example, electric baseboard or a gas furnace.</p> <p>This parameter is only enabled when 2C Cool Control is enabled, otherwise it is disabled.</p> <p>+0, +2, +3, +4, +5, +6°F (0, -25, -.5, -.75, -1, -1.25, -1.5, -1.75, -2, -2.25, -2.5, -2.75, -3, -3.25, -3.5°C)</p>
Stage Delays	
Compressor Delay	<p>Specify the minimum time (in minutes) between successive heating, cooling or heat to cool and cool to heat cycles in heat pump applications. This parameter ensures a safe heat pump compressor delay or off time guaranteed between cycles. This parameter may also be used in fuel burner mode, whereby this parameter ensures a safe A/C compressor delay or off time guaranteed between A/C cycles.</p> <ul style="list-style-type: none"> ■ 0 – Enables the cooling system to cycle immediately upon completion of the previous cycle. This is a diagnostic feature and should not be left in this state or compressor short cycling and subsequent damage may occur to the compressor. ■ 3 through 10 – Time in minutes required between the completion of a cooling cycle and the next subsequent cooling cycle. The default delay is 3 minutes.
Interstage Delay	<p>Specifies the delay between the 1st stage activation and 2nd stage activation.</p> <p>0, 15, 30, 45, 60, 90 - Time in minutes</p>
Aux Heat Delay	<p>Specifies the delay between the active heat pump cycle (either single or dual stage) and activation of the Auxiliary Heat source.</p> <p>Note: In a dual stage heat pump, Aux Heat is available only after the 2nd stage is active.</p>

Table 2-8 Advanced Settings Fields - HVAC Field Descriptions (Continued)

Field	Description
Maximum Cycles	
Maximum Cool Cycles/Hour	<p>Limits the number of cooling cycles every hour. If this value is 3 (default) for example, a cooling cycle can be invoked once in each of the three 20-minute hourly intervals. In this example, a subsequent call for cool after the initial cool call in a 20-minute interval is deferred until the start of the next 20-minute interval. This feature can be defeated by the user if changes are made to override the setpoint settings, either at the thermostat or via the Web page. This feature only applies to scheduled temperature settings.</p> <ul style="list-style-type: none"> ■ Disabled – This feature is disabled and unlimited cooling cycles are allowed. ■ 1-6, 10, 12 – The allowable number of cooling cycles per hour.
Maximum Heat Cycles/Hour	<p>Limits the number of heating cycles every hour. If this value is 5 (default) for example, a cooling cycle can be invoked once in each of the five 12-minute hourly intervals. In this example, a subsequent call for heat after the initial heat call in a 12-minute interval is deferred until the start of the next 12 minute interval. This feature can be defeated by the user if changes are made to override the setpoint settings, either at the thermostat or via the Web page. This feature only applies to scheduled temperature settings.</p> <ul style="list-style-type: none"> ■ Disabled – This feature is disabled and unlimited heating cycles are allowed. ■ 1-6, 10, 12 – The allowable number of heating cycles per hour.
A/C Humidity Control	
A/C Humidity Control	<p>Select a relative humidity value from 10% to 90%. when Enabled. When the measured RH rises above a preset threshold, the HVAC cooling cycle is initiated. The cycle continues until the humidity level falls 5% below the trigger level or until a heat setpoint is encountered. When a heat setpoint is encountered, the HVAC heating cycle is invoked. After the heat setpoint has been satisfied, the HVAC cooling cycle (to satisfy humidity requirements) is delayed for 5 minutes. Humidity control is intended for moderate moisture control. High humidity environments should also include secondary dehumidification equipment.</p> <ul style="list-style-type: none"> ■ Disabled – This feature is disabled and the A/C system may not be used to reduce humidity. ■ Enabled – 10% – 90% - Humidity threshold expressed in 5% increments.

Table 2-8 Advanced Settings Fields - HVAC Field Descriptions (Continued)

Field	Description
Zone Temperature Averaging	
Local Temperature Select	Remote Sensors that are configured as Thermistors are displayed on this page under the Zone Temperature Averaging field so that they can be used in determining the zone average temperature. They are either Included in or Excluded from the zone temperature average.
RS1, RS2, or RS3 Temperature Select	Remote Sensors that are configured as Thermistors are displayed on this page under the Zone Temperature Averaging field so that they can be used in determining the zone average temperature. Select to Included in or Excluded from the zone temperature average.

Thermostat Settings

The **Advanced - Thermostat Settings** page displays the HVAC system information, compressor/interstage delay, and maximum cycles per hour, for example.

Figure 2-25 Advanced - Thermostat Settings Page

Use [Table 2-9](#) to configure the **Thermostat Settings** fields.

Table 2-9 Advanced - Thermostat Settings Field Descriptions

Field	Description
General Thermostat Settings	
Temperature Scale	Select either the Fahrenheit or Celsius temperature scales. <ul style="list-style-type: none"> ■ Fahrenheit (default) – All thermostat temperature readings and reporting are displayed in the Fahrenheit temperature scale (°F). ■ Celsius – All thermostat temperature readings and reporting are displayed in the Celsius temperature scale (°C).
Fan on Heat	Controls the fan state during heating cycles. In most HVAC applications the hvac system will wait for the air to warm up before turning on the fan to circulated the air and the thermostat does not energize the fan (G) relay. There are some systems with independent heat sources like electric coils in ducts that rely on the thermostat to turn on the fan to circulate the air. In this case you would need to enabel "Fan on Heat." <ul style="list-style-type: none"> ■ Enabled – The fan is forced ‘on’ during heat cycles. ■ Disabled – The fan is <i>not</i> forced on during heat cycles.

Table 2-9 Advanced - Thermostat Settings Field Descriptions (Continued)

Field	Description
Setpoint Deadband	Establishes the temperature limits above and below the established setpoint, within which the heating or cooling cycle is activated and maintained. The anticipator algorithm operates within this differential range about the setpoint. Optimal comfort is achieved when this differential is set to 2 (default) or +/- 1°F about the setpoint. Reduced cycle time is achieved with a larger differential setting (e.g. 4) or +/- 2 °F about the setpoint. 0,1,2,3,4,5,6,7,8,9,10°F (0,1,2,3,4,5°C)
LCD Button Lockout	
Button Lockout	When enabled, this feature prevents a user from directly altering the settings of the thermostat from the thermostat's button interface. The button lockout icon appears on the thermostat LCD screen. <ul style="list-style-type: none"> ■ Disabled (default) – Allows normal thermostat button activity. ■ Enabled – Prevents unwanted user access at the thermostat button interface except for limited or no temperature adjustments.
Setpoint Override	

Override Settings

The **Advanced - Override Settings** page displays the override cool, heat, and AUX Relay settings, for example.

Figure 2-26 Advanced - Override Settings Page

Lobby
IMT550c

Control Schedules Alarms Sensors **Advanced** Network Admin

HVAC Settings Thermostat Settings **Override Settings**

Hold

Allow Hold	Enabled	Enabled ▾
Hold Mode Duration	3 Hours	3 Hrs ▾

General Occupancy Override Settings

Cool Setting	78°F	78 ▾ °F
Heat Setting	72°F	72 ▾ °F
Fan Schedule	Off	0 ▾ Minutes
AUX Relay 1	Inactive	Inactive ▾
AUX Relay 2	Inactive	Inactive ▾

One Button Override (OBO) Settings

Duration	1 Hour	1 Hr ▾
----------	--------	--------

Refresh Submit

Use [Table 2-10](#) to configure the **Override Settings** fields.

Table 2-10 Advanced - Override Settings Field Descriptions

Field	Description
Hold	
Allow Hold	<p>Indicates if thermostat temperature setting are held independent of schedule changes due to Event or Daily Profiles advancements.</p> <ul style="list-style-type: none"> ■ Enabled - Allow the temperature settings to be held for the duration shown below. ■ Disabled - Do not allow the temperature settings to be held.
Hold Mode Duration	<p>Specifies the time interval in which the thermostat temperature setting are held independent of schedule changes due to Event or Daily Profile advancements.</p> <ul style="list-style-type: none"> ■ Perm – The Hold period is indefinite and the temperature setting are “held” until the user removes this condition. ■ 1, 2, 3, 8, 12, 24 Hrs –The amount of time in hours in which the current temperature setting are “held” and inhibited from change. The default interval is 3 Hrs. <p>Note: These durations are observed across Event boundaries.</p>
General Occupancy Override Settings	
Cool Setting	<p>Displays the cool setpoint to be used while One Button Override (OBO) is active.</p> <p>40°F(4.5°C) to 110°F(43.5°C)</p>
Heat Setting	<p>Displays the current temperature programmed for the heating system.</p> <p>40°F(4.5°C) to 110°F(43.5°C)</p>
Fan Schedule	<p>Specifies the time in minutes of each hour of the Event in which the fan will be On. The schedule begins on the hour and advances for the duration specified. Note that within the hour of each Event but outside the schedule interval, the fan behaves the same as AUTO mode to ensure proper operation for either a heating or cooling call to the HVAC system. Select one of the following options:</p> <ul style="list-style-type: none"> ■ Always Off ■ 5 On / 15 Off ■ 10 On / 10 Off ■ 15 On / 5 Off ■ Always On

Table 2-10 Advanced - Override Settings Field Descriptions (Continued)

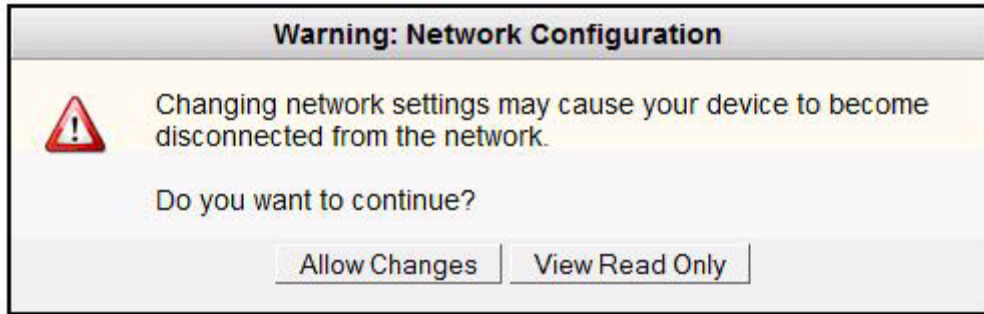
Field	Description
AUX Relay 1	<ul style="list-style-type: none"> ■ Active - Activate relay when override is activated. ■ Inactive - Inactivate relay when override is activated. ■ No Change ■ Alarm Managed
AUX Relay 2	<ul style="list-style-type: none"> ■ Active - Activate relay when override is activated. ■ Inactive - Inactivate relay when override is activated. ■ No Change ■ Alarm Managed
One Button Override (OBO) Settings	
Duration	<ul style="list-style-type: none"> ■ Until Cancel ■ 1, 2, 3, 8, 12, 24 Hrs

Network Page

The **Network** page displays tabs for the General, Remote Access, Notification Settings, and Statistics pages.

Figure 2-27 displays when you access the **Network** page.

Figure 2-27 Network - Warning: Network Configuration

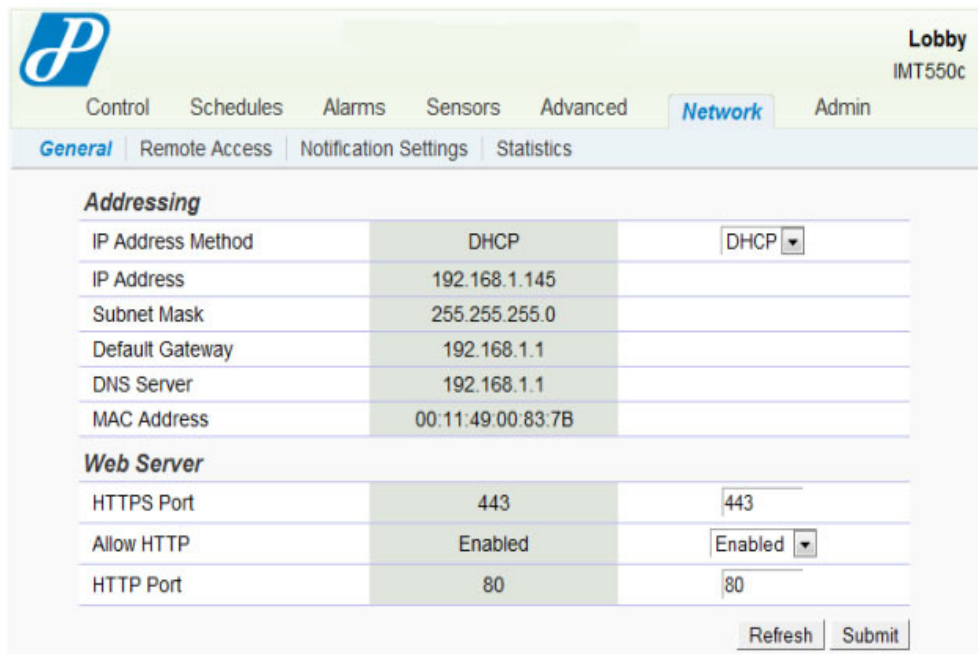


To configure the **Network** page or view as read only, click the appropriate button.

General

The **Network - General** page displays IP address, firewall, and web server information.

Figure 2-28 Network - General Page



Use [Table 2-11](#) to configure the **General** fields.

Table 2-11 Network - General Field Descriptions

Field	Description
IP Addressing	
IP Address Method	Select the method by which the thermostat receives the unique Internet Protocol address for the local network. IP addressing can be either automatically assigned via a local DHCP server or manually (Static) assigned by the user. <ul style="list-style-type: none"> ■ DHCP (default) – IP addressing method is DHCP assigned. ■ Static – IP address is manually assigned by the user.
IP Address	Displays the unique Internet Protocol address either assigned statically or by DHCP. (See IP Address Method .) (You must click Submit after changing this parameter to invoke a software reset to set the new value.) <p>A.B.C.D – Four field standard dot notation for IP address designation.</p>
Subnet Mask	Displays the IP subnet on which the thermostat IP address is assigned.
Default Gateway	Displays the IP address of the router which acts as a gateway for the thermostats to communicate to other devices in another subnet.
DNS Server	Displays the IP address of the Domain Name Server.
MAC Address	Displays a factory assigned value installed in the thermostat which uniquely identifies the thermostat on the local network for transmitting and receiving network information. <p>The system displays the MAC address in the format of 00:19:88:AB:CD:EF for IMT550w and 00:11:49:AB:CD:EF for IMT550c, where AB:CD:EF is a unique value for each thermostat.</p>
Web Server	
HTTPS Port	Enter the IP port number of the Web server within the thermostat. <p>xyz – Four digit (max) standard IP port number designation for HTTP access. The default port number is 443.</p>
Allow HTTP	<ul style="list-style-type: none"> ■ Disabled ■ Enabled
HTTP Port	The default is port 80 .

Remote Access

The **Network - Remote Access** page displays the remote access information.

Figure 2-29 Network - Remote Access Page

The screenshot shows a web interface for configuring a thermostat. At the top, there is a navigation menu with options: Control, Schedules, Alarms, Sensors, Advanced, **Network**, and Admin. Below this is a sub-menu with options: General, **Remote Access**, Notification Settings, and Statistics. The main content area is divided into two sections: **Software Update Source** and **Remote Server Configuration**. The Software Update Source section has two rows: Server Address (value: uem.proliphix.com) and Port Number (value: 85). The Remote Server Configuration section has ten rows: Remote Access (value: Enabled), Server Address (value: uem.proliphix.com), Interval (value: 1 Hour), Last Attempt (value: Never), Callhome Attempt State (value: In Progress), Push Server State (value: Starting Connection), Last Success (value: Never), Last Change Upload (value: Never), and Last Observation Upload (value: Dec 31, 2009 6:56 PM). At the bottom right of the form are buttons for Refresh and Submit.

Use [Table 2-12](#) to configure the **Remote Access** fields.

Table 2-12 Network - Remote Access Field Descriptions

Field	Description
Software Update Source	
Server Address	Enter the IP address of the Remote Server for software updates. Note that this field is pre-configured at the factory with uem.proliphix.com.
Port Number	Enter the outgoing IP port number which is used to communicate to the remote server. <i>This field is pre-configured at the factory with the IP port number of the Proliphix Web Server. Do not change this value.</i> 85 – (default) Port number of the remote server.

Table 2-12 Network - Remote Access Field Descriptions (Continued)

Field	Description
Remote Server Configuration	
Remote Access	<p>Controls whether the Remote Server service is enabled. Remote access is the term used to describe the management and control of the thermostat from networks outside the local subnet on which the thermostat resides. Remote access provides the thermostat with the ability to be controlled from across the Internet (with the Proliphix UEM).</p> <ul style="list-style-type: none"> ■ Disabled (default) – Remote Server function is disabled. ■ Enabled – The thermostat is enabled to participate with the Proliphix UEM server.
Server Address	Displays the IP address or DNS name of the remote server.
Interval	Specifies the frequency of thermostat “calling home” to the Proliphix server.
Last Attempt	<p>Clicking Call Home forces the intercommunication between the thermostat and the remote server.</p> <ul style="list-style-type: none"> ■ mm.dd.yyyy – Date of last attempt to access the remote server. ■ hh.mm.ss – Time since last attempt to access the remote server.
Callhome Attempt State	Displays the status (Success or Fail) of last attempt to initiate the communication to the remote server.
Push Server State	
Last Success	Displays the date and time of last successful communication with the remote server.
Last Change Upload	Displays the date and time the last change was made to the thermostat configuration.
Last Observation Upload	

Network Notification Settings



Note

This page is most often used only if the thermostat is not connected to the UEM. An IT resource would typically use this page to work with their corporate email servers.

The **Network - Notification Settings** page displays the e-mail information.

Figure 2-30 Network - Notification Settings Page

Email Configuration		
Mode	Enabled	Enabled ▾
SMTP Server	192.168.111.7	192.168.111.7
SMTP Port	25	25
SMTP Username (optional)		
SMTP Password (optional)	- Not Shown -	
Password (re-enter to confirm)	- Not Shown -	
From Address	Lobby_Stat@proliphix.com	Lobby_Stat@proliphix.com
To Address	support@proliphix.com	support@proliphix.com
Email Status		
Last Send Status	In Progress	
Last Attempt	Dec 31, 2009 9:57 PM	

Use [Table 2-13](#) to configure the **Notification Settings** fields.

Table 2-13 Network - Notification Settings Field Descriptions

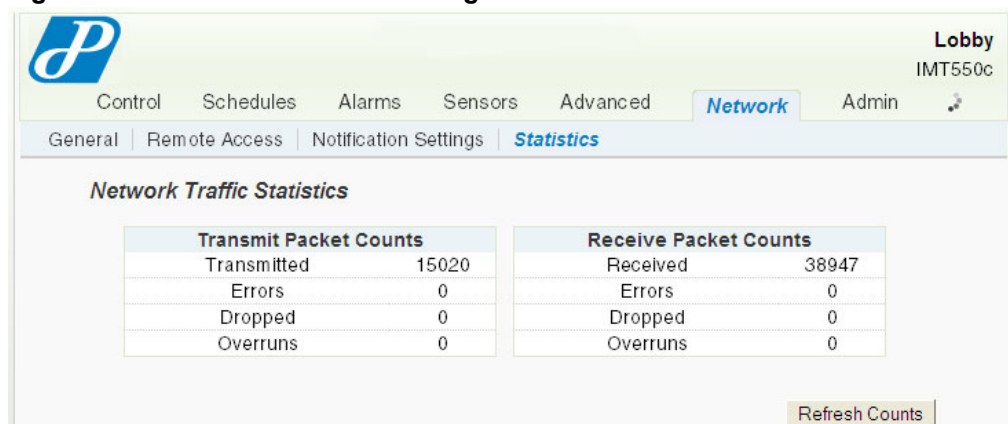
Field	Description
Email Configuration	
Mode	Select to Enable or Disable e-mail notification.
SMTP Server	Specifies the designated e-mail server address or DNS name through which e-mails are sent.
SMTP Port	
SMTP Username	Specifies the server authentication username field.
SMTP Password	Specifies the server authentication password field.
Password	

Table 2-13 Network - Notification Settings Field Descriptions (Continued)

Field	Description
From Address	Specifies the address of source of notification.
To Address	Specifies the address of destination for notifications. Up to 8 e-mail recipients can be identified, separated by semicolons.
E-mail Status	
Last Send Status	
Last Attempt	

Statistics

The **Network - Statistics** page displays the network traffic information.

Figure 2-31 Network - Statistics Page

Admin Page

The **Admin** page displays tabs for the General, Date and Time, Installer Information, Password Settings, Restart, and Software Update pages.

General

The **Admin - General** page displays the device name, serial number, LCD information, for example.

Figure 2-32 Admin - General Page

Use [Table 2-14](#) to configure the **General** fields.

Table 2-14 Admin - General Field Descriptions

Field	Description
Zone	
Device Name	Enter a unique 15 character identifier for the thermostat. You can use the thermostat location in this field (i.e. Main Lobby). This identifier is known as the host name within the data network.
Thermostat	
Serial Number	Displays an eight digit alpha-numeric thermostat serial number (e.g. 8438F399).
Software Version	Displays the current software version.
Software Build Date	Displays the date and time the current version of software.
Hardware Revision	Displays the hardware revision.

Table 2-14 Admin - General Field Descriptions (Continued)

Field	Description
LCD Settings	
LCD Unlock Keycode	
Backlight	<p>Select the LCD backlight control.</p> <ul style="list-style-type: none"> ■ Delay (default) – The backlight is illuminated when you click a button and remains illuminated for 16 seconds after the last button is clicked. ■ On – The backlight is enabled. ■ Off – The backlight is disabled from activation. A low level ambient backlight remains visible.

Date and Time

The **Admin - Set Date and Time** page displays the network time and time zone information.

Figure 2-33 Admin - Date and Time Page

The screenshot shows the 'Admin - Date and Time' page for a thermostat. The page header includes a logo and navigation tabs: Control, Schedules, Alarms, Sensors, Advanced, Network, and Admin (selected). Below the header are sub-tabs: General, Date and Time (selected), Installer Information, Password Settings, Restart, and Software Update. The main content area is titled 'Current Thermostat Date and Time' and displays 'December 31, 2009 7:12:29 PM' with a note 'Synchronized with the UniVista Energy Manager'. Below this is the 'Thermostat Timezone' section, which includes a 'Timezone' dropdown menu set to '(GMT-08:00) Pacific Time (US & Canada)', an 'Observe DST' checkbox that is checked, and a 'Manually Set Date and Time' section. The manual settings include 'New Date' (June 23, 2010), 'New Time' (10:48 PM), and a 'Use web browser date and time' checkbox that is unchecked. At the bottom right are 'Refresh' and 'Submit' buttons.

Use [Table 2-15](#) to configure the **Admin - Date and Time** fields.

Table 2-15 Admin - Date and Time Field Descriptions

Field	Description
Network Time Synchronization	
Network Time Protocol (NTP)	<ul style="list-style-type: none"> ■ Enabled ■ Disabled
NTP Timeserver	
Thermostat Timezone	
Timezone of Thermostat	Displays the current timezone.
Observe DST	Click to adjust the time for Daylight Savings Time.
Manually Set Date and Time	
New Date	Enter a new date.
New Time	Enter a new time.
Use web browser date and time	Click to use configure date and time using browser date and time.

Installer Information

The **Installer Information** page contains contact information for the installer. Enter the information as necessary.

Figure 2-34 Admin - Installer Information Page

The screenshot shows the web interface for the thermostat configuration. At the top right, it says 'Lobby IMT550c'. The navigation menu includes 'Control', 'Schedules', 'Alarms', 'Sensors', 'Advanced', 'Network', and 'Admin' (which is highlighted). Below the navigation menu, there are tabs for 'General', 'Date and Time', 'Installer Information' (which is selected), 'Password Settings', 'Restart', and 'Software Update'. The main content area is titled 'Installer Contact Information' and contains a form with the following fields: Name, Address 1, Address 2, City, State/Province, Zip/Postal Code, Phone, and Email. At the bottom right of the form, there are 'Refresh' and 'Submit' buttons.

Password Settings

The **Admin - Password Settings** page enables you to modify the Admin password.

Figure 2-35 Admin - Password Settings Page

Use [Table 2-16](#) to configure the **Admin - Password Settings** page.

Table 2-16 Admin - Password Settings Field Descriptions

Field	Description
Change Admin Password	
New Password	Enter an alpha-numeric password for the Administrator (admin) account. The password is case sensitive and limited to 15 alpha-numeric characters. The default password is admin .
Re-enter Password to Confirm	Re-enter your password.

Restart

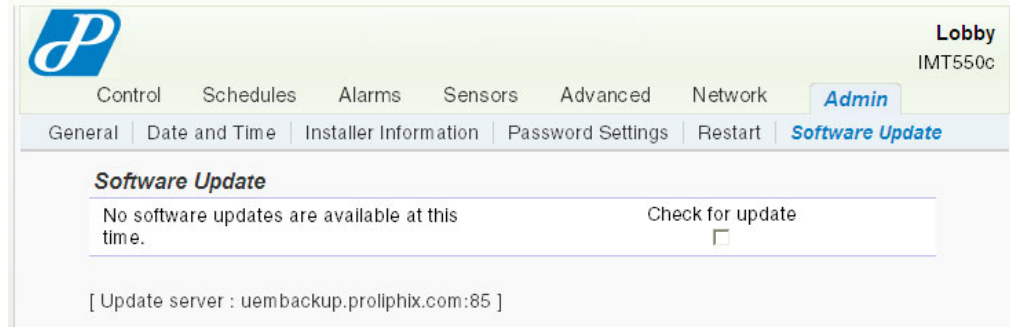
The **Admin - Restart** page enables you to restart the thermostat.

Figure 2-36 Admin - Restart Page

Software Update

The **Admin - Software Update** page enables you to check for and download any updates to the thermostat. Check the box and click **Submit**.

Figure 2-37 Admin - Software Update Page



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