UM-ILINQRT

Daikin iLINQ Room Terminal
Installation & User Manual

This manual provides installation and operating instructions for the Daikin iLINQ Room Terminal field installed accessory.

WARNING

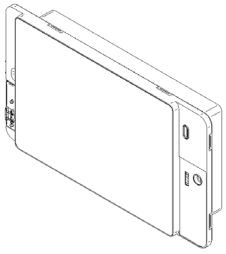
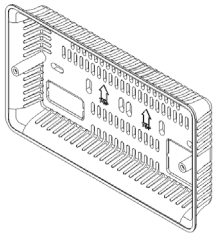
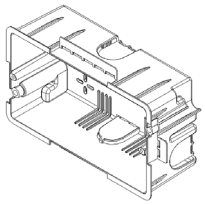
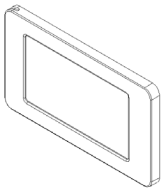
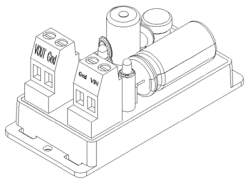
ONLY PERSONNEL THAT HAVE BEEN TRAINED TO INSTALL, ADJUST, SERVICE, MAINTENANCE OR REPAIR (HEREINAFTER, "SERVICE") THE EQUIPMENT SPECIFIED IN THIS MANUAL SHOULD SERVICE THE EQUIPMENT. THE MANUFACTURER WILL NOT BE RESPONSIBLE FOR ANY INJURY OR PROPERTY DAMAGE ARISING FROM IMPROPER SERVICE OR SERVICE PROCEDURES. IF YOU SERVICE THIS UNIT, YOU ASSUME RESPONSIBILITY FOR ANY INJURY OR PROPERTY DAMAGE WHICH MAY RESULT. IN ADDITION, IN JURISDICTIONS THAT REQUIRE ONE OR MORE LICENSES TO SERVICE THE EQUIPMENT SPECIFIED IN THIS MANUAL, ONLY LICENSED PERSONNEL SHOULD SERVICE THE EQUIPMENT. IMPROPER INSTALLATION, ADJUSTMENT, SERVICING, MAINTENANCE OR REPAIR OF THE EQUIPMENT SPECIFIED IN THIS MANUAL, OR ATTEMPTING TO INSTALL, ADJUST, SERVICE OR REPAIR THE EQUIPMENT SPECIFIED IN THIS MANUAL WITHOUT PROPER TRAINING MAY RESULT IN PRODUCT DAMAGE, PROPERTY DAMAGE, PERSONAL INJURY OR DEATH.

Table of Contents

1 Introduction

1.1 Room Terminal Components

The following table lists the main components included with the iLINQ room terminal. Other minor components such as wire ties, screws, wires, and supporting literature are included but not shown below.

Part Number	Name	Picture	Description
0130L00292	Room Terminal		Onboard temperature/ humidity sensor, touchscreen LCD, and Wi-Fi hotspot
0163L00300	Surface Mount		Mounting bracket for installing the room terminal on the surface of a wall
0163L00299	Flush Mount		Mounting bracket for installing the room terminal flush with the surface of the wall
0163L00301	Frame		Room terminal frame, vented to allow airflow for the onboard temperature/ humidity sensor
0130L00293	Power Supply		24 VAC to 24 VDC power supply

1.2 Room Terminal Kits

The room terminal can be ordered in two different wall mounting configurations. The following tables display the contents of each room terminal kit.

iLINQ Room Terminal Flush Mount - ILINQRTFM		
Part #	**Quantity**	**Description**
0130L00292	1	iLINQ Room Terminal
0163L00299	1	Flush Mount Enclosure
0163L00301	1	Frame
0130L00293	1	Power Supply
N/A	2	Wires - Fork Terminal & Stripped Terminal
B1096102	2	Wire Ties

iLINQ Room Terminal Surface Mount - ILINQRTSM		
Part #	**Quantity**	**Description**
0130L00292	1	iLINQ Room Terminal
0163L00300	1	Surface Mount Enclosure
0163L00301	1	Frame
0130L00293	1	Power Supply
N/A	2	Wires - Fork Terminal & Stripped Terminal
B1096102	2	Wire Ties

1.3 System Overview

The iLINQ Room Terminal application is designed to support single zone light commercial packaged rooftop units with iLINQ Controllers installed. The room terminal provides the following features.

- Touch screen user interface
- Onboard temperature and humidity sensor
- Space CO_2 monitoring using optional sensor
- Temperature setpoint adjust
- Occupancy override
- Onboard LED for unit status and alarm feedback
- Wi-Fi hotspot
- Live and historic trending
- iLINQ controller onboard LCD display emulator
- Monitoring of up to 10 iLINQ RTUs via iLINQ Network

The room terminal includes an onboard temperature and humidity sensor and is intended to serve as the iLINQ controller's source of space temperature and humidity. The room terminal transmits and receives data to and from the iLINQ controller via 3-wire serial communication. The space temperature and humidity is included in this data transmission. For this reason, the room terminal installation location should be carefully selected in the space served by the RTU. The iLINQ controller must be configured to use the space temperature and humidity from the room display. The iLINQ service password will be needed for this operation. If the Wi-Fi hotspot feature is utilized, an Ethernet connection between the room terminal and the iLINQ controller is required, otherwise, the connection can be omitted.

The power supply provided with the room terminal provides the 24VDC power circuit needed to operate the room terminal. The power supply is field installed in the RTU's control box and converts the existing 24VAC to 24VDC.

See Figure 1 for a simplified representation of a room terminal installation.

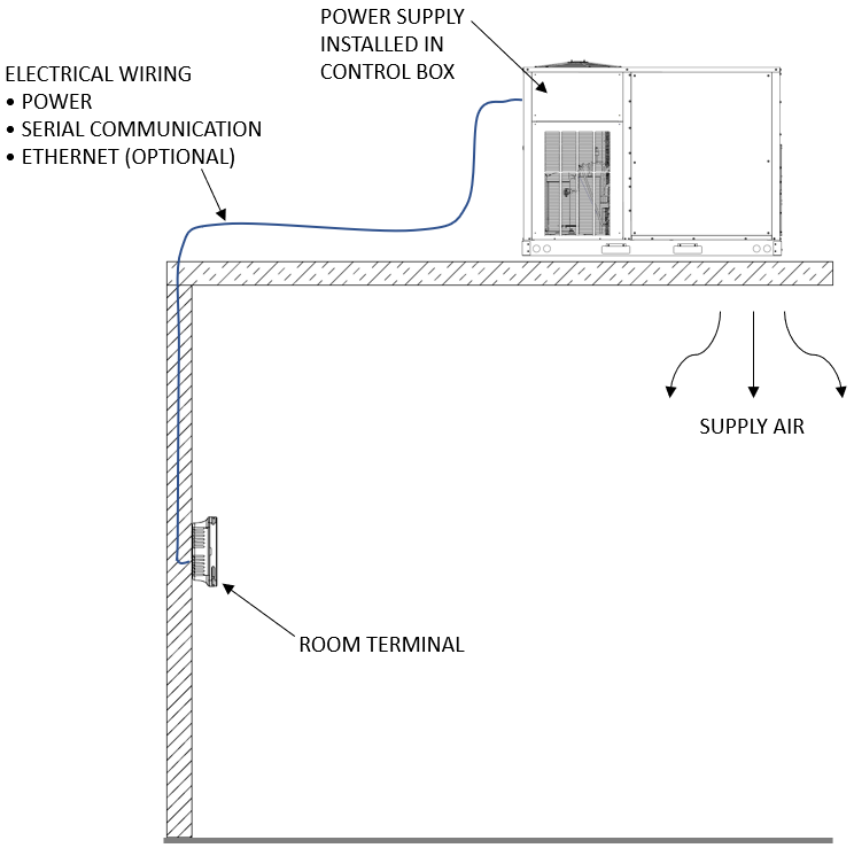


Figure 1 - Room Terminal Installation

1.4 Software Requirements

The iLINQ Room Terminal is only compatible with iLINQ Controllers with software revision 1.3 or greater. If the iLINQ Controller does not meet the software revision requirement, visit Daikin City (daikincity.com) for software upgrade files and review the iLINQ DDC User Guide for instructions on the upgrade procedure. If Daikin City login credentials are needed, contact the distributor for assistance.

2 Room Terminal Hardware

This section contains wiring details for the room terminal, power supply, and how each component connects to the RTU and iLINQ controller. For specific unit wiring details not pertaining to the room terminal accessory, the unit wiring diagram must be referenced.

2.1 Components and Specifications

The iLINQ Room Terminal application is designed specifically to function with the hardware described in this section.

2.1.1 Room Terminal 0130L00292

The room terminal has onboard space temperature and space humidity sensors, a touchscreen LCD, and LED sidebar. The room terminal serves as the iLINQ controller's source for space temperature and space humidity while providing an interactive user interface.

- **Supply Input Voltage:** 24 VDC (+/- 10%)
- **Power Absorption:** 7W (Max)
- **Installation:** Wall mounted, flush or surface
- **LCD Type:** LCD TFT
- **Resolution:** 480X272
- **Active Display Area:** 4.3" Diagonal
- **Temperature/Humidity Probe:** 32-122 deg F sensing range (+/- 1.8 deg F)
  20-80 % rh sensing range (+/- 5% rh)
- **Wi-Fi:** IEEE 802.11 b/g/n
- **Serial Port:** RS485 max 115.2 kB/s
- **Ethernet Port:** Auto-MDIX 10/100 Mbit
- **Physical Dimensions (inches) & Onboard Components:**

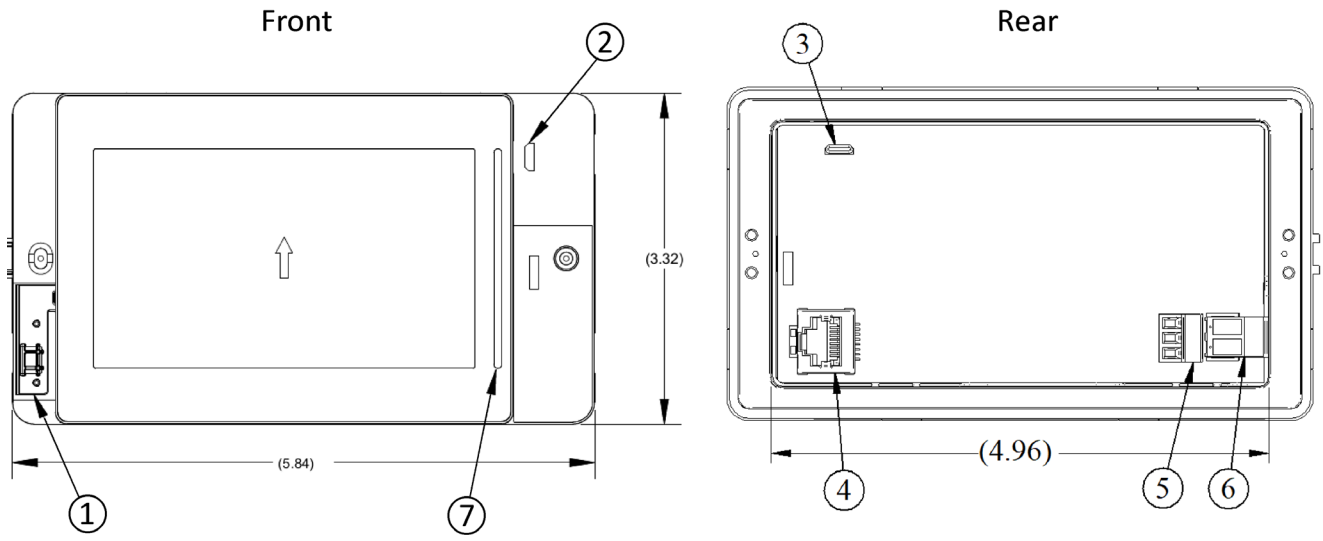


Figure 2 - Room Terminal Operations

Item	Description
①	Temperature & Humidity Probe
②	MicroUSB - Front
③	MicroUSB - Rear
④	Ethernet Port
⑤	Serial Port (RS485)
⑥	Power Supply Port
⑦	LED Sidebar

2.1.2 Power Supply 0130L00293

The power supply converts 24VAC to 24VDC. It is installed in the RTU's control box and uses the 24VAC from the factory installed control transformer as the input power. The 24VDC output is used to power the room terminal. The Power Supply output is factory set to 24VDC.

- **Output Voltage:** 5-24VDC (24VDC Default Setting)
- **Output Current:** 350mA (Max)
- **Input Voltage:** 24-28VAC
- **Input Power Consumption:** 16.7VA (Max)
- **Physical Dimensions (inches) & Onboard Components:**

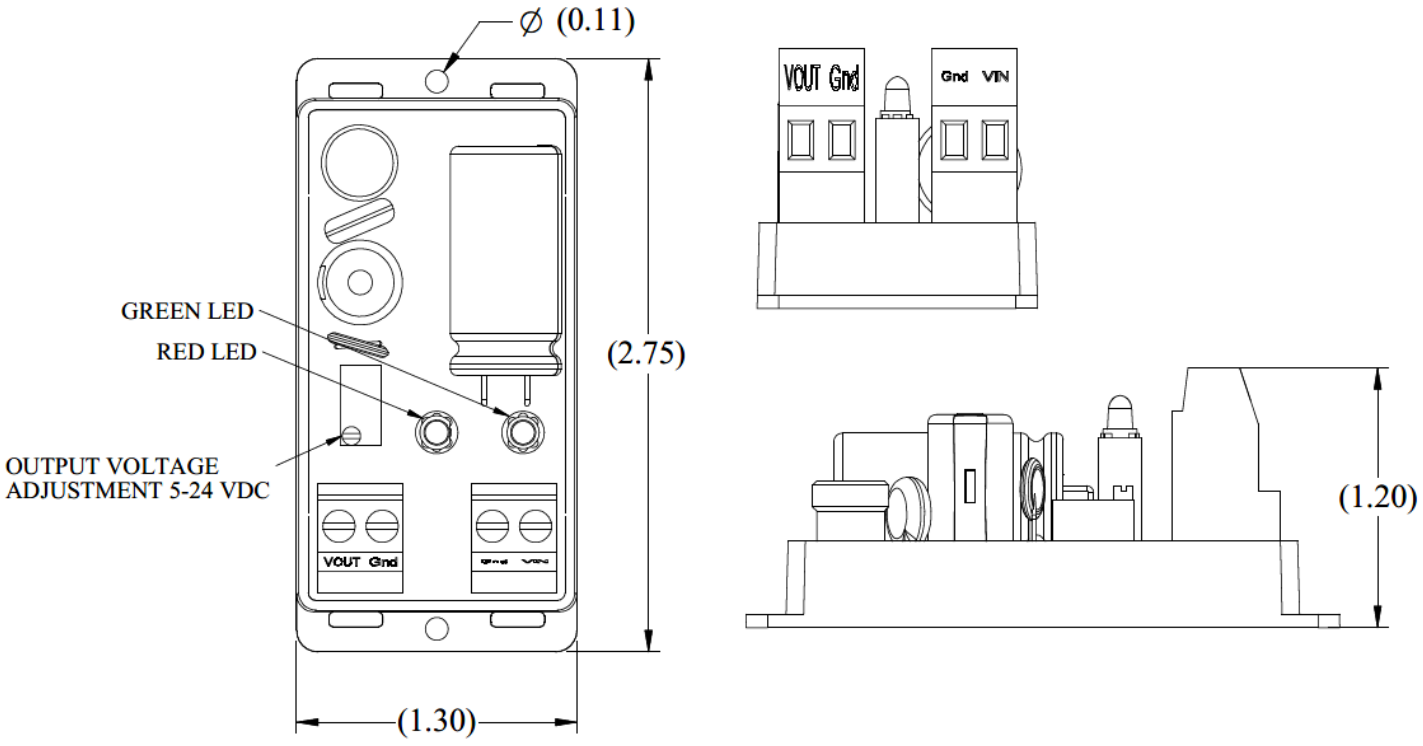


Figure 3 - Power Supply Dimensions

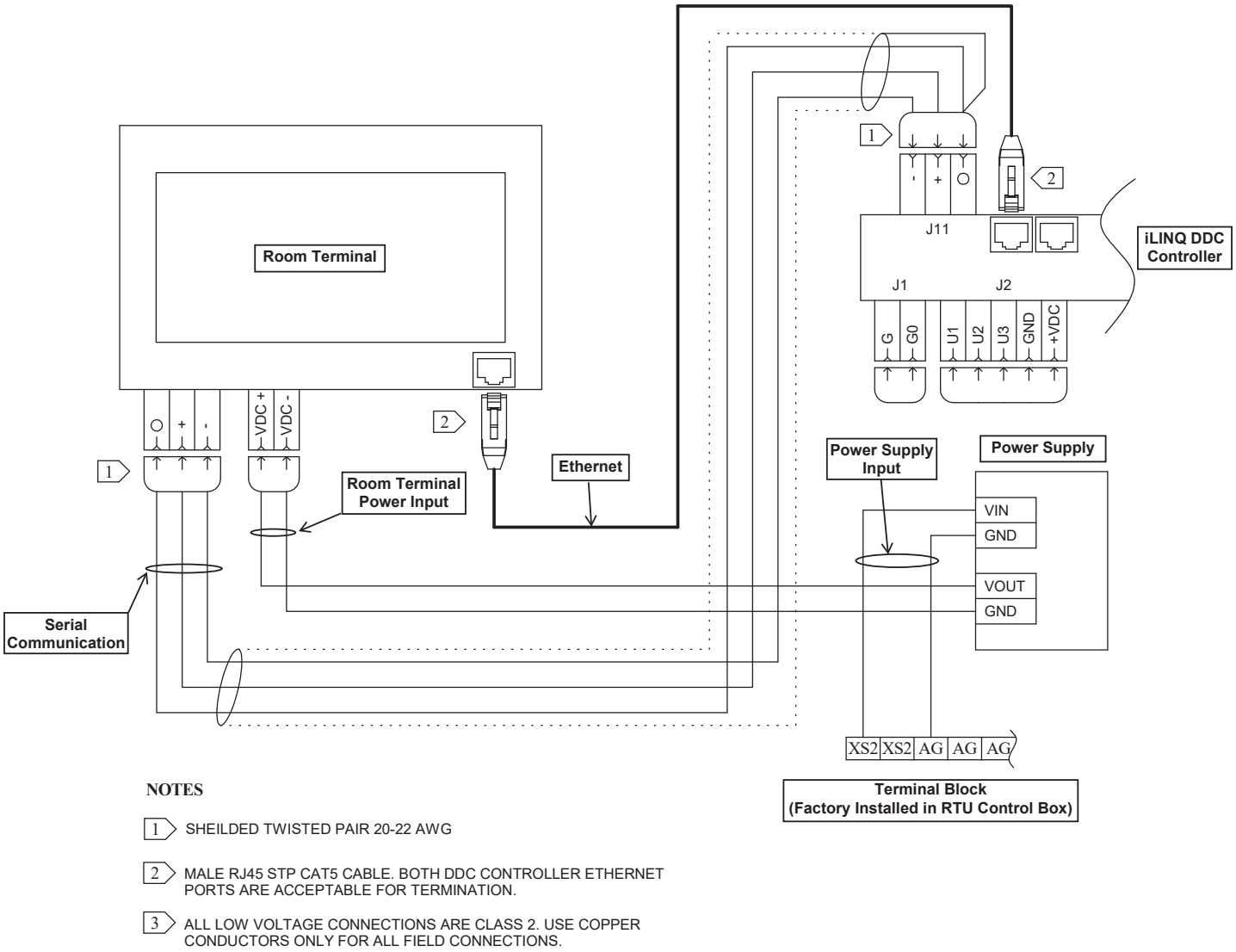
2.2 Wiring Specifications

WARNING

HIGH VOLTAGE!
DISCONNECT ALL POWER BEFORE SERVICING OR INSTALLING THIS UNIT. MULTIPLE POWER SOURCES MAY BE PRESENT. FAILURE TO DO SO MAY CAUSE PROPERTY DAMAGE, PERSONAL INJURY OR DEATH.

Component wiring specifications and point to point connections are described in this section. All wiring connecting the room terminal to the RTU is to be provided by the installer. Install wiring in accordance with all local electrical and NEC codes. A wire run of more than 164 feet between the room terminal and the DDC Controller is not supported.

- **Power Supply Power Input:** 24VAC, 18 AWG, Fork terminals, ¼" Strip Length (factory supplied wires)
- **Room Terminal Power Input:** 24 VDC, 16-20 AWG, ¼" Strip Length, torque screws to 7 lbf X in. (installer supplied wires)
- **Serial Communication:** Shielded Three Conductor, 20-22 AWG, ¼" Strip Length, Ground shield at iLINQ DDC J11 GND as shown, torque screws to 2.2 lbf X in. (installer supplied wires)
- **Ethernet:** RJ45, STP CAT 5 Cable, Required only if Wi-Fi hotspot is used (installer supplied wires)



NOTES

1. SHEILDED TWISTED PAIR 20-22 AWG
2. MALE RJ45 STP CAT5 CABLE. BOTH DDC CONTROLLER ETHERNET PORTS ARE ACCEPTABLE FOR TERMINATION.
3. ALL LOW VOLTAGE CONNECTIONS ARE CLASS 2. USE COPPER CONDUCTORS ONLY FOR ALL FIELD CONNECTIONS.

Figure 4 - Point to Point Wiring Diagram

3 Installation Instructions

WARNING

HIGH VOLTAGE!
DISCONNECT ALL POWER BEFORE SERVICING OR INSTALLING THIS UNIT. MULTIPLE POWER SOURCES MAY BE PRESENT. FAILURE TO DO SO MAY CAUSE PROPERTY DAMAGE, PERSONAL INJURY OR DEATH.

This section contains installation instructions for the iLINQ Room Terminal accessory.

3.1 Electrical Wiring

As illustrated in Figure 1, electrical wiring connections between the room terminal and the RTU are required for this accessory. In most installations this will require wiring to be routed through roofing, floors, and walls. All installation materials needed to route the wiring from the room terminal to the RTU are to be supplied by the installer. Use care to avoid routing field wiring near hazardous voltage circuits both inside the building and the RTU.

Install electrical wiring in accordance with all local electrical and NEC codes. Review the main unit IO manual for the location of the low voltage wire entrance. Wiring should be in place prior to component installation. Review Wiring Specifications section for additional detail and point to point connections. Use wire ties provided with kit to secure any excess field wiring.

3.2 Room Terminal Enclosures:

The room terminal serves as the RTU's source of space temperature and humidity. With that in mind, the installation of the room terminal enclosure must meet the following requirements:

- In the space served by the RTU
- In/On the wall approximately 4 feet above the finished floor
- Avoid heat sources such as radiators or direct sunlight
- Avoid installing near sources of air drafts such as HVAC supply vents
- Avoid installing in aggressive or polluting atmospheres (salt spray, sulfur/ammonia fumes, smoke)
- The length of power and communication wiring must not exceed the maximum distance outlined in the electrical wiring specifications

Surface Mount: Use two fasteners appropriate for the material of the wall to attach the mounting bracket to the wall. Remove the knockout if an Ethernet connection is required.

Flush Mount: Use the flush mount box as a template to trace the dimensions of the cutout needed. Cut wall opening, route wires through a knock out in the enclosure, and push enclosure into the wall. Tighten the screws until the enclosure is fastened securely to the wall.

3.3 Room Terminal

The room terminal is secured to the enclosure using the two screws provided with the room terminal. Once the wire terminations have been made in the last step of the installation, use the fastening screws to attach the room terminal to the mounting enclosure. The room terminal mounting orientation should be such that the LED side bar is on the right side and the temperature/humidity sensor is in the bottom left corner.

3.4 Frame

Install the frame by pressing it onto the face of the room terminal. The frame will snap into position when installed correctly.

3.5 Power Supply

The Power Supply is installed in the RTU's control box. Figures 5-8 show the suggested installation locations for various chassis sizes in the Daikin Light Commercial Packaged RTU product line. The actual control box in the field may vary in appearance but similar installation locations and mounting orientations should be followed. When possible, install the power supply on a horizontal surface near the low voltage terminal blocks. Make sure that there is a minimum of 0.25" of space between the power supply and other components. Peel the backing off the adhesive mounting tape and attach the power supply to the control box.

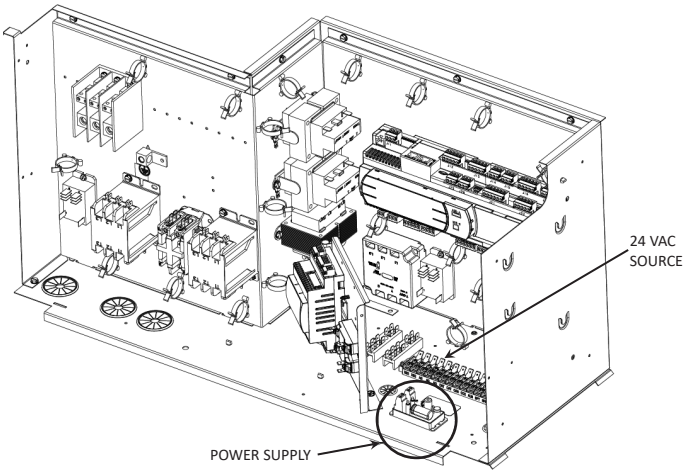


Figure 5 - Small Chassis

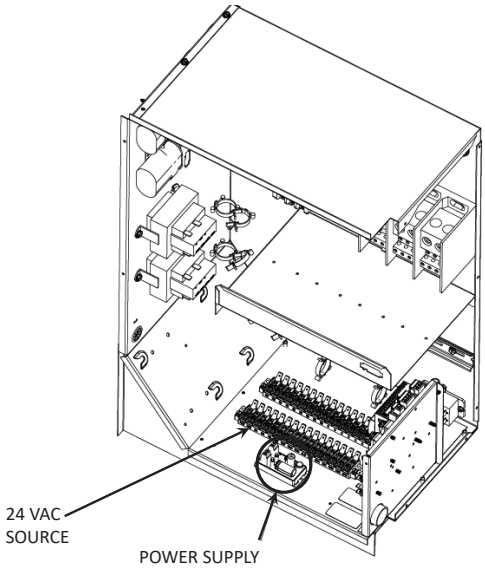


Figure 6 - Medium Chassis

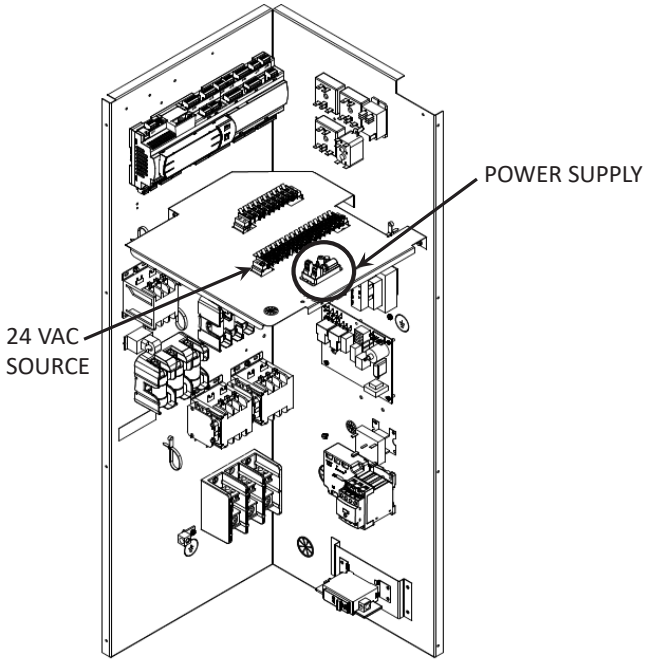


Figure 7 - Large Chassis

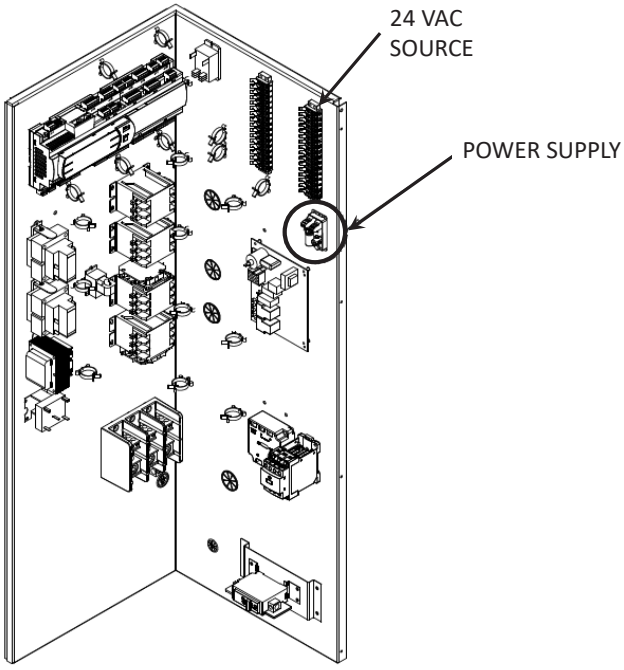


Figure 8 - DB 15-20 Ton Large Chassis

3.6 Wiring Terminations

Refer to the Electrical Wiring Specifications section for point to point connections for the room terminal, power supply, and the DDC controller. Use care when stripping and terminating wires to eliminate excess exposed copper at each termination. The ethernet cable connection is only required if the Wi-Fi hot spot feature is utilized.

4 iLINQ System Configuration

The iLINQ system must be configured to use the room terminal as its source of space temperature and humidity. The configuration change can be made via the room terminal, iLINQ web interface, or the iLINQ controller onboard LCD. The iLINQ controller's service password is required for this configuration change.

4.1 Space Temperature and Space Humidity Source - Room Terminal

This method assumes that the room terminal power and pLAN serial communication is connected. Press and hold the Daikin logo for 3 seconds. Tap the password field, use the keyboard to enter the Service Password (default Service Password = 1954), and tap the enter icon. Tap the controller display icon and follow the instructions in section 4.2.

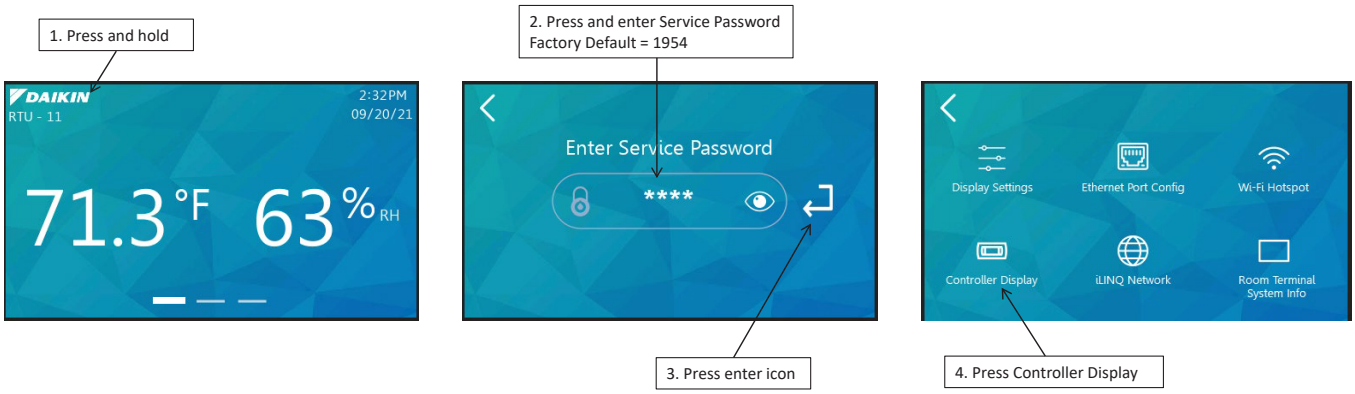


Figure 9 - Room Terminal Configuration

4.2 Space Temperature and Space Humidity Source - Onboard LCD

If needed, review the iLINQ DDC User Manual for basic operation of the onboard LCD. Login using the iLINQ service password, scroll to "Unit Config" and press enter. Press the up key and change "Space Temp Src" and "Space Hum Src" to "Trminal".

Figure 10 - iLINQ Controller Onboard LCD Configuration

4.3 Space Temperature and Space Humidity Source - Web Interface

If needed, review the iLINQ DDC User Manual for basic operation of the web interface. Login using the iLINQ service password(default Service Password = 1954), open the configuration page, and change the space temperature and space humidity sensor source to terminal.

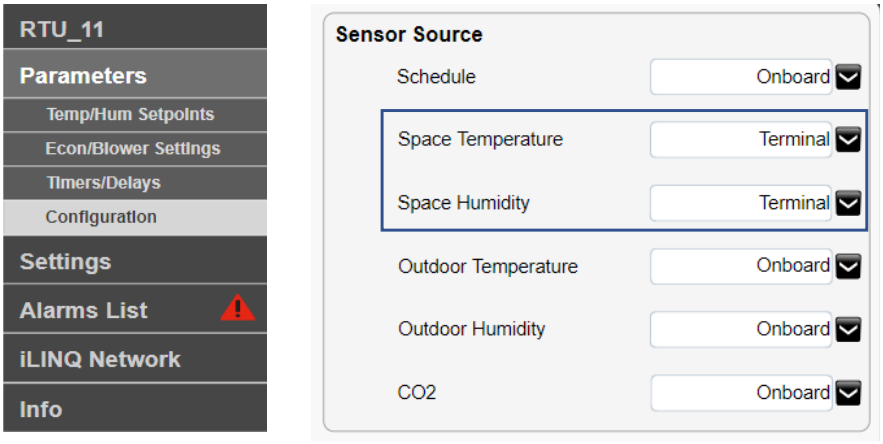


Figure 11 - iLINQ Controller Web Interface Configuration

5 Room Terminal User Interface

This section contains a guide to the touchscreen user interface of the iLINQ room terminal. The following sections contain references to the iLINQ controller and parameters. If needed, refer to the iLINQ User Manual for additional detail.

5.1 User Interface Navigation

The majority of the user interface is comprised of the following pages:

- Home Page
- Detail Page
- Live Trend Page

The user can load each page by swiping the screen or by pressing the page navigation tabs. The active page is indicated by the highlighted navigation tab. Reference Figure 12 for navigation instructions.

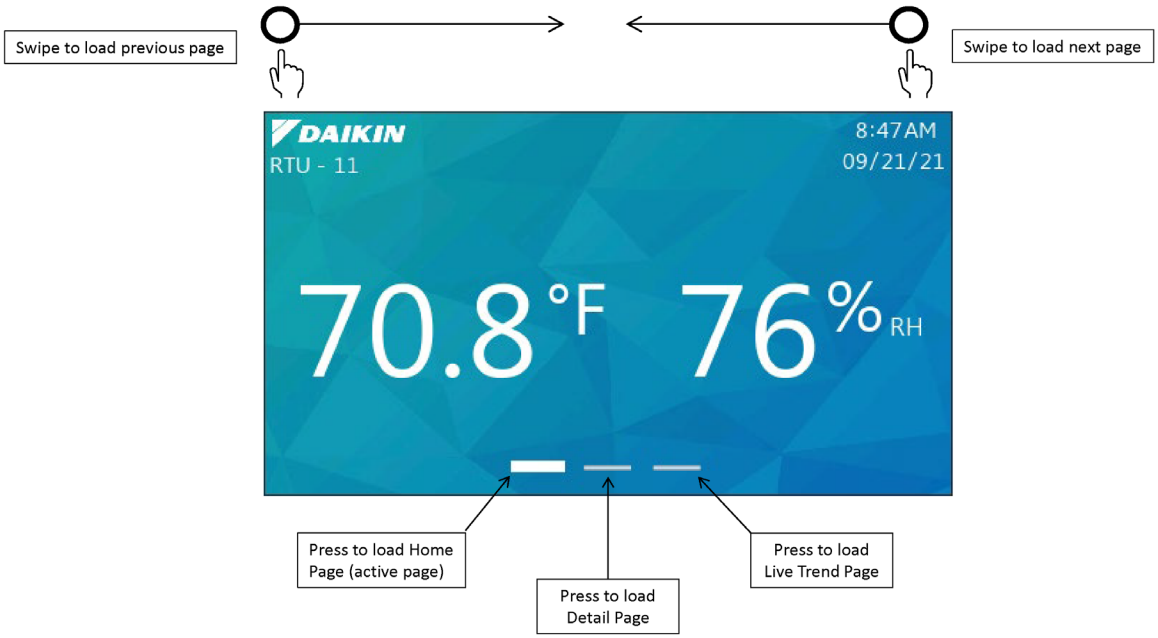


Figure 12 - UI Navigation

5.2 Home Page

The home page is the first page loaded when the room terminal is powered on and is the focal point of the user interface.

5.2.1 Layout

The layout of the home screen can be customized by the user via the display settings page. At a minimum, the home screen displays the current space temperature. Reference Figure 13 for screenshots of the factory default, show all, and hide all layouts of the home page. With the exception of the space temperature and the Daikin logo, the visibility of all other page attributes can be toggled individually. As a result, many different home page layouts are possible.

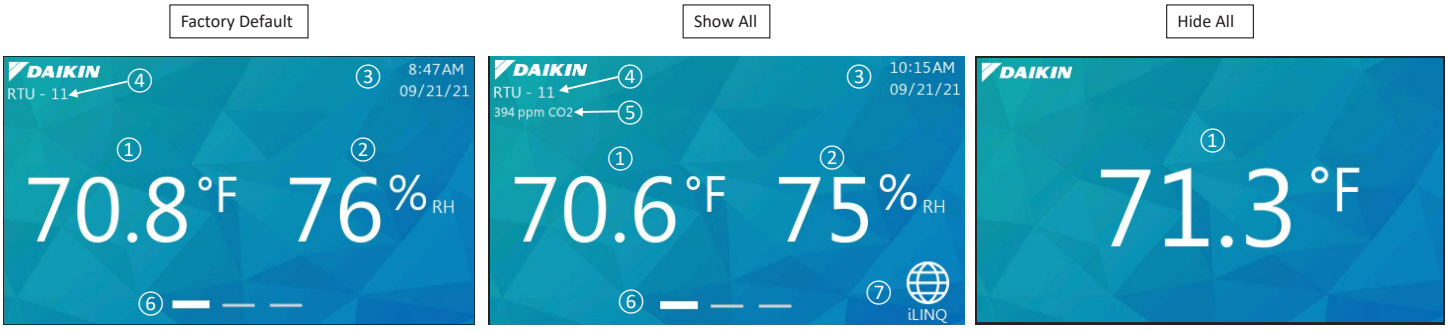


Figure 13 - Home Page Layouts

Item #	Item	Description
①	Space Temperature	Space temperature from iLINQ controller
②	Space Humidity	Space humidity from iLINQ controller
③	Date/Time	Date/Time from iLINQ controller
④	Unit Number	Unit number of iLINQ controller
⑤	Space CO2	CO2 value from iLINQ controller
⑥	Page Navigation Tabs	Shows active page and provides navigation to other pages
⑦	iLINQ Summary Pages	Link to iLINQ summary page(s)

***NOTE: Values from Items 1 and 2 are sent from the room terminal and are normalized by the iLINQ controller (i.e., Offsets, etc.).**

5.2.2 Occupancy Indication

The occupancy status of the iLINQ controller is conveyed by the color of the space temperature and space humidity values. The values will darken in appearance if the iLINQ controller schedule mode is unoccupied, holiday unoccupied, or force unoccupied. The values are white when the iLINQ controller schedule mode is occupied, holiday occupied, force occupied, or push button override.

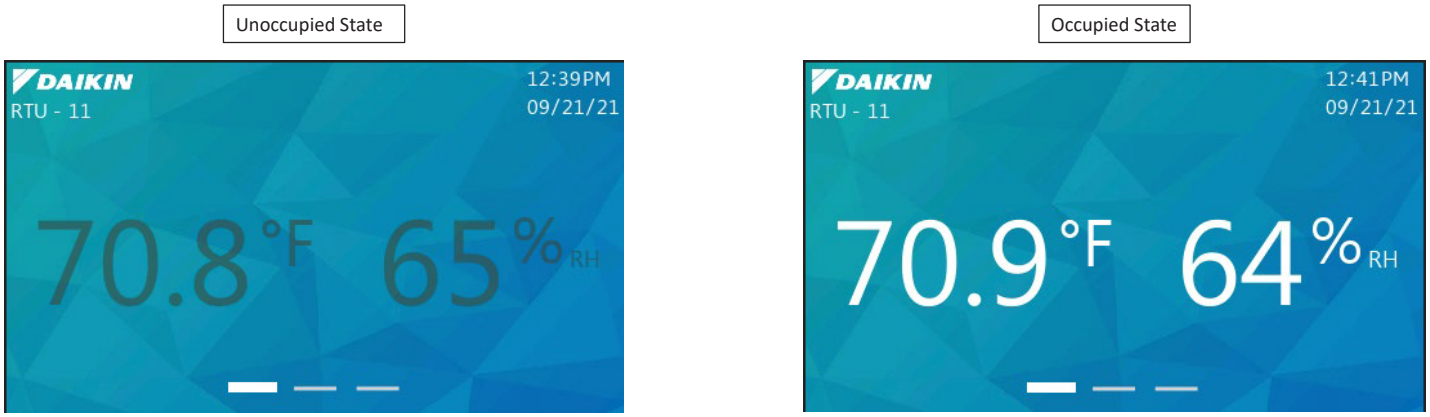


Figure 14 - Unoccupied vs Occupied RTU State

5.2.3 Occupancy Override

The iLINQ controller occupancy can be overridden from the home page if the following conditions are true:

- The current iLINQ controller schedule mode is unoccupied, force unoccupied, or holiday unoccupied.
- Push button override duration is set to a value greater than 0.

If the conditions above are true, the override icon is displayed on the home page. To override the occupancy, press and hold the icon. An option to password protect the occupancy override is available on the display settings page. If enabled, the user adjust password must be entered to override unit occupancy. Review the iLINQ DDC User Manual for details regarding occupancy override.

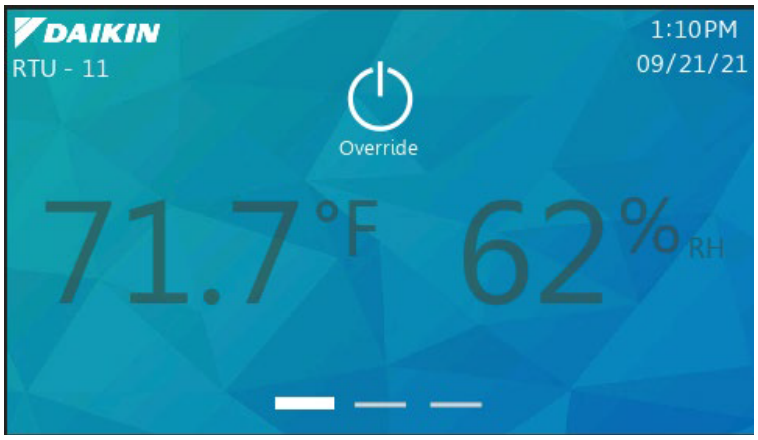


Figure 15 - Occupancy Override Icon

5.3 Detail Page

The detail page provides an expanded view of the iLINQ controller's current operating mode and outdoor conditions.

5.3.1 Overview

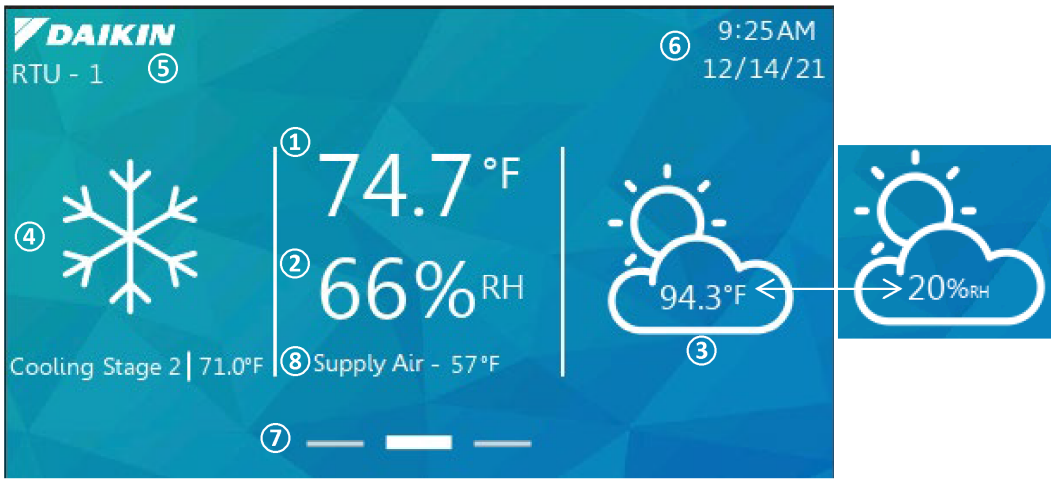


Figure 16 - Detail Page

Item #	Item	Description
①	Space Temperature	Space temperature from iLINQ controller
②	Space Humidity	Space humidity from iLINQ controller
③	Outdoor Temperature & Outdoor Humidity	Outdoor temperature and outdoor humidity (if installed) from iLINQ controller
④	RTU Status	Current operating mode of the iLINQ controller with target temperature (if applicable to the mode)
⑤	Unit Number	Unit Number of the iLINQ controller
⑥	Date/Time	Date/Time from iLINQ controller
⑦	Page Navigation	Shows active page and provides navigation to other pages
⑧	Supply Temperature	Supply temperature from ILINQ controller

***NOTE: Values from Items 1 and 2 are sent from the room terminal and are normalized by the iLINQ controller (i.e., Offsets, etc.).**

The outdoor temperature and outdoor humidity are displayed intermittently in a shared location on the page. The outdoor humidity is only displayed if the iLINQ controller is reading a valid value, otherwise, only the outdoor temperature is displayed. Similar to the home page, an option to display the space CO2 and iLINQ summary page link is available on the display settings page.

5.3.2 Mode of Operation

The current operating status of the iLINQ controller is displayed in the left pane. As the controller cycles through different modes and stages of operation, the information in the pane is updated. Icons that represent each mode of operation are displayed in Figure 17. In addition, the current setpoint is displayed if applicable to the mode of operation.

Figure 17 - Mode of Operation Icons

5.3.3 Detail Page Occupancy Indication

The occupancy indication is conveyed to the user in the same manner as described in the Home Page Occupancy Indication section.

5.4 Space Temperature Setpoint Adjust Page

The space temperature setpoint adjust page allows the user to add/subtract an adjustment value to the active cooling and active heating setpoints.

5.4.1 Page Access

The space temperature setpoint adjust page can be accessed by pressing and holding the space temperature value on the home page or detail page for 3 seconds. An option to password protect access to setpoint adjustment is available on the display settings page. If enabled, the user is prompted to enter the user adjust password.

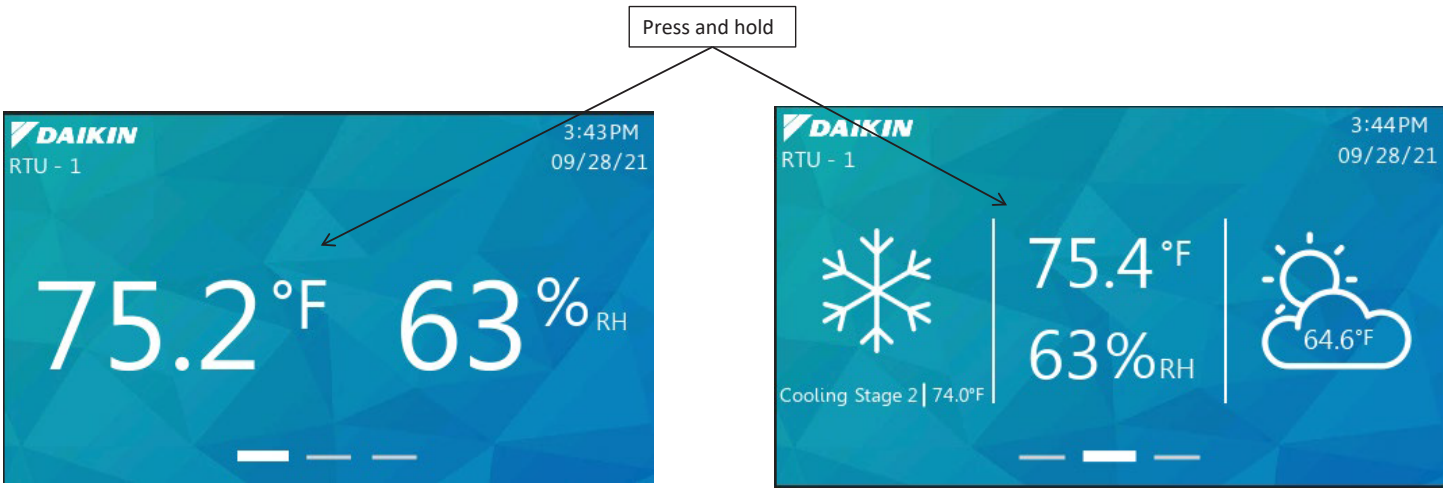


Figure 18 - Space Temperature Setpoint Adjust Page Access

5.4.2 Overview

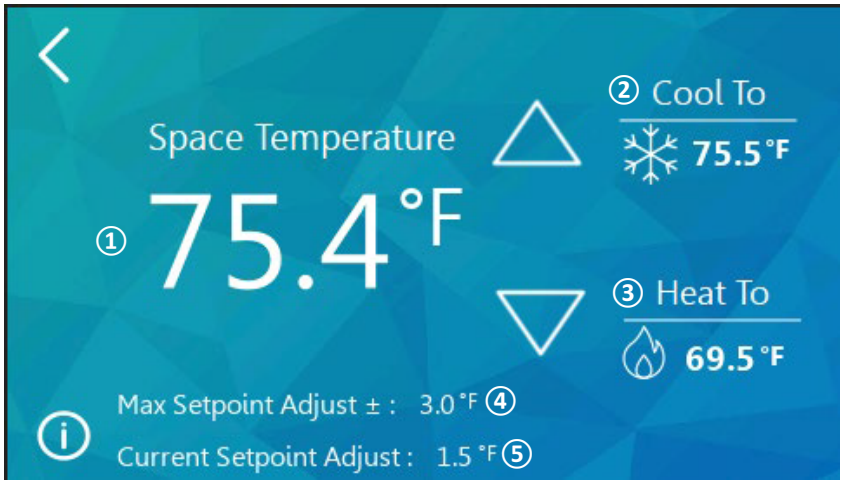


Figure 19 - Space Temperature Setpoint Adjust Page

Item #	Item	Description
①	Space Temperature	Space Temperature from the iLINQ controller
②	Target Cooling Temperature	Active cooling setpoint from the iLINQ controller
③	Target Heating Temperature	Active heating setpoint from the iLINQ controller
④	Maximum Setpoint Adjust Limit	Upper and lower limit for space temperature setpoint adjust value
⑤	Space Temperature	Adjustable value that is added/subtracted to the active cooling and active heating setpoints

***NOTE: Value from Item 1 is sent from the room terminal and is normalized by the iLINQ controller (i.e., Offsets, etc.).**

When the up/down arrows are pressed the space temperature setpoint adjust value is increased/decreased. Pressing the up button will result in warmer space conditions, while pressing the down button, will result in cooler space conditions. The space temperature setpoint adjust value is incremented by 0.5 with each press. The maximum setpoint adjust value is the upper and lower limit of the space temperature setpoint adjust. The user cannot change the space temperature setpoint adjust value beyond this value. If the maximum setpoint adjust value is set to 0, the space temperature setpoint adjust value is set to 0 and cannot be changed. To toggle the visibility of the space temperature setpoint adjust and maximum setpoint adjust values, press the information icon in the bottom.

5.5 Live Trend Page

The live trend page is intended for temporary monitoring of the iLINQ controller's operation and space conditions. The live trend page generates a line graph of the following variables:

- Space Temperature
- Space Humidity
- Cooling Setpoint
- Heating Setpoint
- Supply Temperature

5.5.1 Overview

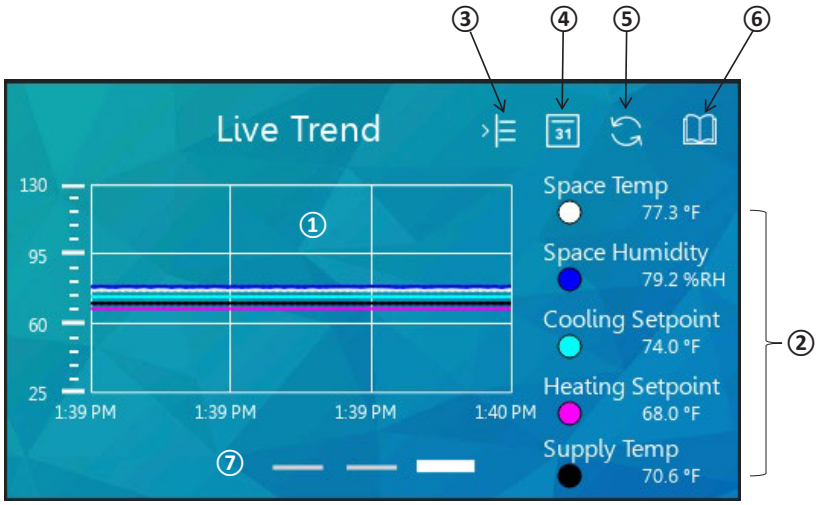


Figure 20 - Live Trend Page

Item #	Item	Description
①	Graphing Window	Area of the page where the variables are plotted
②	Legend	List of variables and their current values that are plotted in the graphing window
③	Show/Hide Legend	Expands the graphing window and hides the legend
④	Graph Duration	Displays menu with the following selectable options for the range of the X-axis: 1 min, 5 min, 10 min
⑤	Refresh	Reset line graph and variable visibility
⑥	Historical Trend	Link to historical trend page
⑦	Page Navigation Tabs	Shows active page and provides navigation to other pages

5.5.2 Graphing Window

When the live trend page loads, the line plots for each variable begin. The current time is shown in the bottom left corner and serves as the starting point of the live trend. As time accumulates, the line plots continue until they fill the graphing window. To view line plots beyond the limits of the graphing window, press and drag in the area of graphing window. To reset the limits of the graphing window to the current time and original range, tap the refresh icon.

To change the default graph duration of 1 minute, tap the graph duration icon and select a new duration from the scrollable list. Live trending starts when the live trend page is loaded. For this reason, if the value of the selected graph duration is greater than the time that the live trend page has been loaded, some of the line plots may appear to be cut off or missing because no data is stored for a portion of the newly selected plot duration.

5.5.3 Legend

The legend displays the name, current value, and line plot color of the variables plotted in the graphing window. Tap the variable to show/hide its line plot in the graphing window. To toggle the visibility of the legend, tap the show/hide legend icon.

5.6 Historical Trend Page

The historical trend page is intended for long term monitoring of the iLINQ controller's operation and space conditions. The iLINQ room terminal stores 44640 samples at 60 second intervals (31 days) for the following variables.

- Space Temperature
- Space Humidity
- Cooling Setpoint
- Heating Setpoint
- Supply Temperature

5.6.1 Page Access

The historical trend page is accessed from the live trend page as shown in Figure 21.

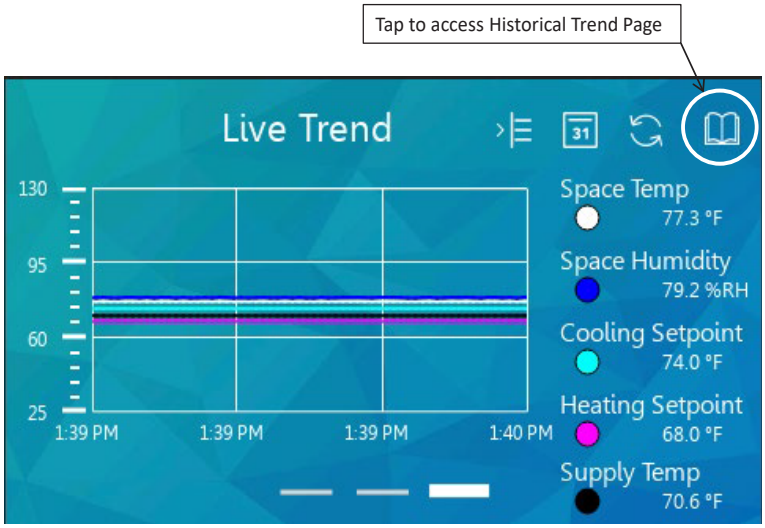


Figure 21 - Historical Trend Page Access

5.6.2 Overview

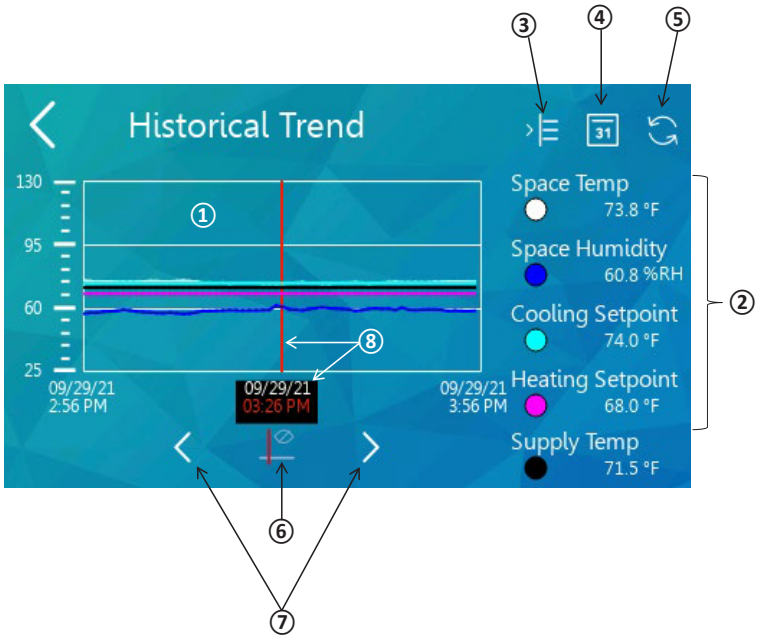


Figure 22 - Historical Trend Page

Item #	Item	Description
①	Graphing Window	Area of the page where variables are plotted
②	Legend	List of variables and their values at the cursor timestamp that are plotted in the graphing window
③	Show/Hide Legend	Expands the graphing window and hides the legend
④	Graphing Duration	Displays menu with the following selectable options for the range of the x-axis: 1 min, 5 min, 10 min, 30 min, 1 hour, 2 hours, 4 hours, 8 hours, 12 hours, 1 day, 2 days, 5 days, 1 week, 2 weeks, 4 weeks
⑤	Refresh	Reset line graph and variable visibility
⑥	Show/Hide Cursor	Toggle visibility of cursor
⑦	Cursor Position	Adjusts position of the cursor
⑧	Cursor & Timestamp	Cursor represents the position of the time stamp in the graphing window

5.6.3 Graphing Window

When the historical trend page loads, the historical line plots for each variable populate the graphing window. The current time is shown in the bottom right corner and serves as the ending point of the historical trend. As new trend intervals are recorded, the graphing window is updated. To reset the limits of the graphing window to the current time and original range, tap the refresh icon.

To change the default graph duration of 1 hour, tap the graph duration icon and select a new duration from the scrollable list.

5.6.4 Cursor and Timestamp

Tap the show/hide cursor icon to toggle the visibility of the cursor and timestamp. The values of the variables displayed in the legend correspond to the timestamp shown below the graphing window. Tap the cursor position arrows to move the cursor. As the cursor moves, the timestamp and variable values are updated.

5.7 LED Sidebar

The LED sidebar is intended to give the user feedback on the iLINQ controller's operation when the LCD display backlight is off. The behavior of the LED sidebar is customizable via the display settings page.

The LED sidebar is capable of indicating the current HVAC mode of operation and alarm state of the iLINQ controller. The full range of LED behavior is shown in the following table.

HVAC Mode	Alarm State	Display Settings Page Configurations		LED State
		HVAC Mode LED	Alarm Indicator LED	
Off	No Alarm	Enabled	Enabled or Disabled	Off
Ventilation	No Alarm	Enabled	Enabled or Disabled	White
Cooling	No Alarm	Enabled	Enabled or Disabled	Light Blue
Economizer Cooling	No Alarm	Enabled	Enabled or Disabled	Green
Heating	No Alarm	Enabled	Enabled or Disabled	Magenta
Dehumidification	No Alarm	Enabled	Enabled or Disabled	Blue
Force	No Alarm	Enabled	Enabled or Disabled	Yellow
Off	Alarm	Enabled	Enabled	Flashing Red
Ventilation	Alarm	Enabled	Enabled	Flashing White
Cooling	Alarm	Enabled	Enabled	Flashing Light Blue
Economizer Cooling	Alarm	Enabled	Enabled	Flashing Green
Heating	Alarm	Enabled	Enabled	Flashing Magenta
Dehumidification	Alarm	Enabled	Enabled	Flashing Blue
Force	Alarm	Enabled	Enabled	Flashing Yellow
Off	Alarm	Enabled	Disabled	Off
Ventilation	Alarm	Enabled	Disabled	White
Cooling	Alarm	Enabled	Disabled	Light Blue
Economizer Cooling	Alarm	Enabled	Disabled	Green
Heating	Alarm	Enabled	Disabled	Magenta
Dehumidification	Alarm	Enabled	Disabled	Blue
Force	Alarm	Enabled	Disabled	Yellow
N/A	N/A	Disabled	Disabled	Off

5.8 Service Menu Page

The service menu page provides access to configuration pages and an emulator of the iLINQ controller's onboard LCD.

5.8.1 Access

To access the service menu page, press and hold the Daikin logo on the home page or detail page for 3 seconds.

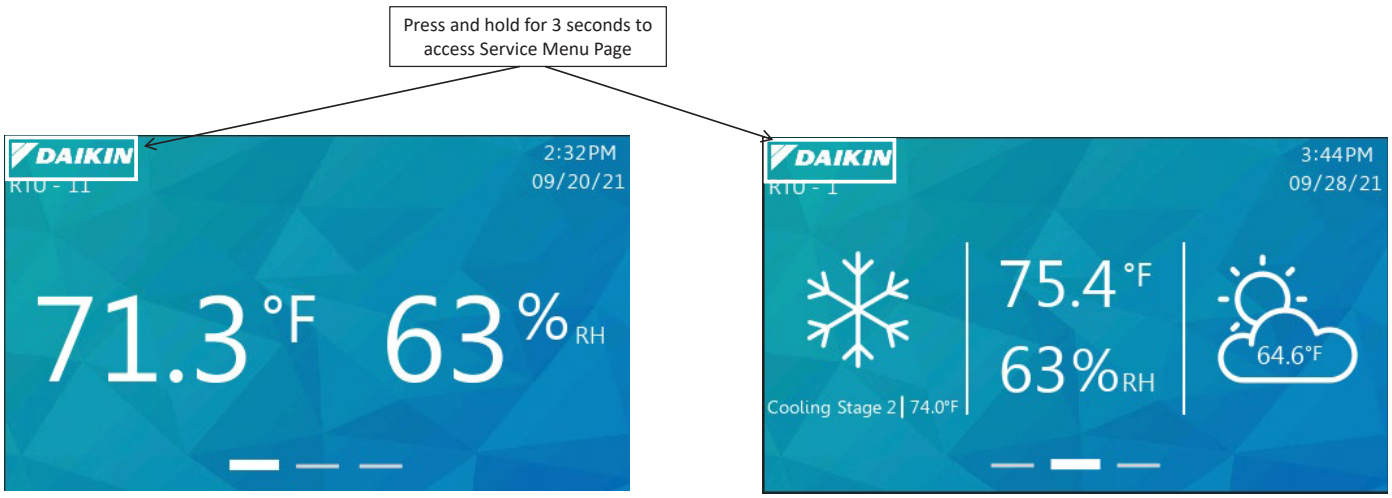


Figure 23 - Service Menu Page Access

The iLINQ service password is needed to access to the service page. Tap the password field, enter the iLINQ service password, and tap the check mark to confirm the entered password. If needed, tap the eye icon to view the current password entered. Tap enter to continue to the service menu page. If the wrong password is entered, an error prompt is displayed.

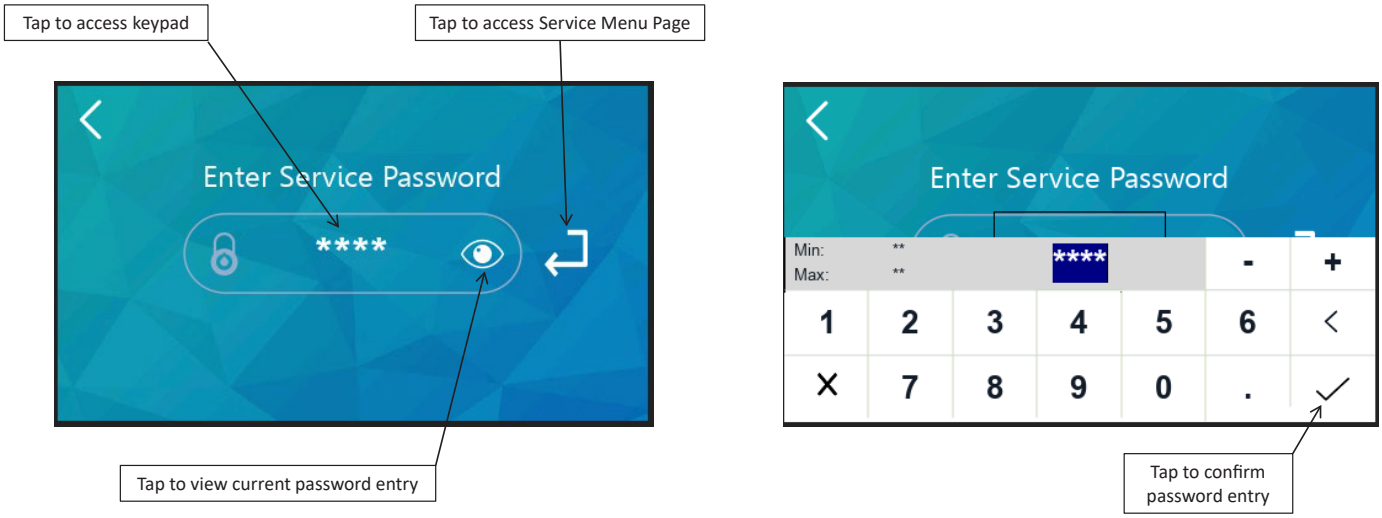


Figure 24 - Password Entry

5.8.2 Overview

The service menu page provides links to various iLINQ room terminal configuration pages and an emulator for the iLINQ controller's onboard LCD.

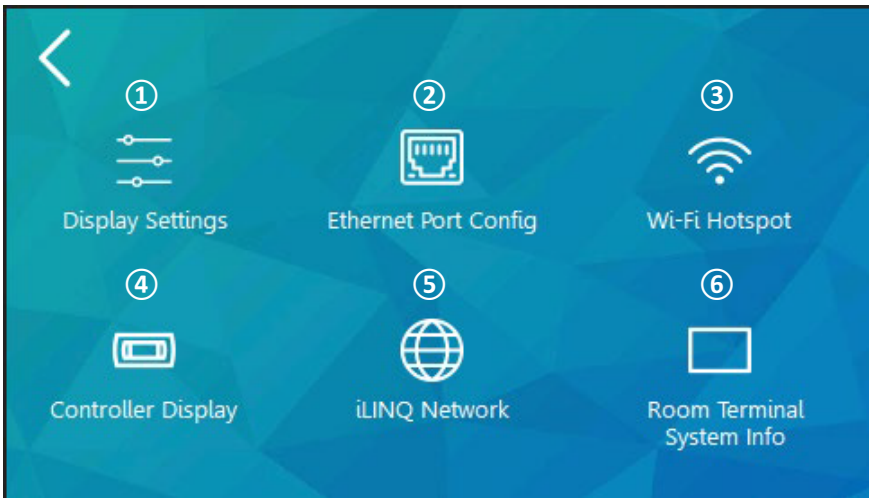


Figure 25 - Service Menu Page

Item #	Item	Page Description
①	Display Settings Page Link	Configure page appearances, display timeout, display brightness, password protections, and LED behavior
②	Ethernet Port Config Page Link	Configure network properties of the iLINQ room terminal's Ethernet port
③	Wi-Fi Hotspot Page Link	Enable/Disable and configure Wi-Fi hotspot
④	Controller Display Page Link	Emulator of the iLINQ controller's onboard LCD
⑤	iLINQ Network Page Link	iLINQ network configuration page
⑥	Room Terminal System Info Page Link	View system information

5.9 Display Settings Page

The display settings page provides configuration options for page appearance, LCD display timeout and brightness, password protections, and LED behavior.

5.9.1 Overview

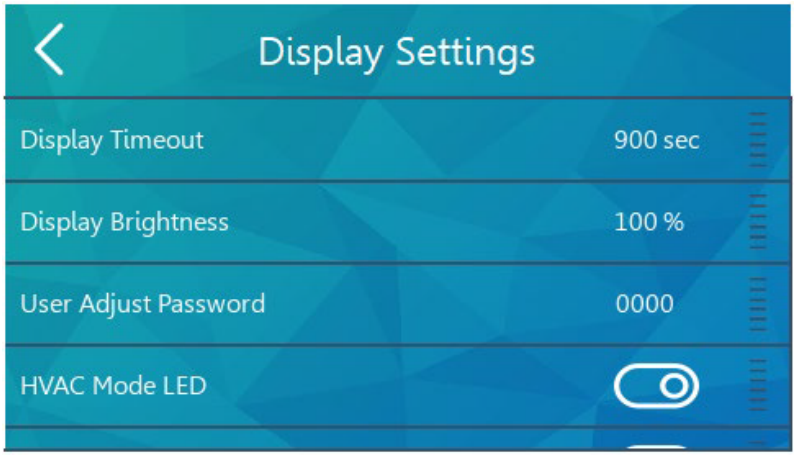


Figure 26 - Display Settings Page

The configuration settings are organized in a scrollable table. Press and drag in the table area to scroll through the options.

5.9.2 Page Appearance Settings

The page appearance settings are configured via toggle switches and are described in the following table.

Setting	Default State	Description
Display CO2	Disabled	Toggles the visibility of the CO2 value on the home and detail pages
Display Humidity	Enabled	Toggles the visibility of the space humidity value on the home page
Display iLINQ	Disabled	Toggles the visibility of the link to the iLINQ summary pages
Display Date/Time	Enabled	Toggles the visibility of the date/time on the home and detail pages
Display Unit #	Enabled	Toggles the visibility of the unit number on the home and detail pages
Page Navigation Lockout	Disabled	Toggles the visibility of the page navigation tabs on the home page. Restricts access to the detail and live trend pages.

5.9.3 LCD Display Settings

The LCD display settings are configured via keypad and are described in the following table.

Setting	Range	Default Value	Description
Display Timeout	0, 60-10, 020 seconds (rounds up to next highest multiple of 60)	900 seconds	LCD backlight delay off timer (in seconds) Timer resets when the screen is touched If off, the LCD backlight turns on when screen is touched If set to 0, the backlight remains on with no timeout (not recommended)
Display Brightness	0-100%	100%	Controls the brightness of the LCD backlight

5.9.4 Password Protection Settings

The password protection settings are configured via a keypad/toggle switch and are described in the following table.

Setting	Range	Default State	Description
User Adjust Password	0000-9999	0000	Password that is required to access the space temperature setpoint adjust page If this password = 0000, access to the space temperature setpoint adjust page is not password protected
Occupancy Override Password Protect	N/A	Disabled	When enabled, the user is required to enter the user adjust password to override the controller's occupancy If the user adjust password = 0000, the occupancy override password protect row is hidden

5.9.5 LED Behavior Settings

The LED sidebar settings are configured via toggle switches and are described in the following table.

Setting	Default State	Description
HVAC Mode LED	Enabled	Enables the LED sidebar to indicate current HVAC mode of operation via color
Alarm Indicator LED	Enabled (optional, only if HVAC Mode LED is enabled)	Enables the LED sidebar to indicate current HVAC alarm state via flashing

5.10 Ethernet Port Configuration Page

The Ethernet port configuration page provides configuration options for the iLINQ room terminal's onboard Ethernet port.

5.10.1 Overview

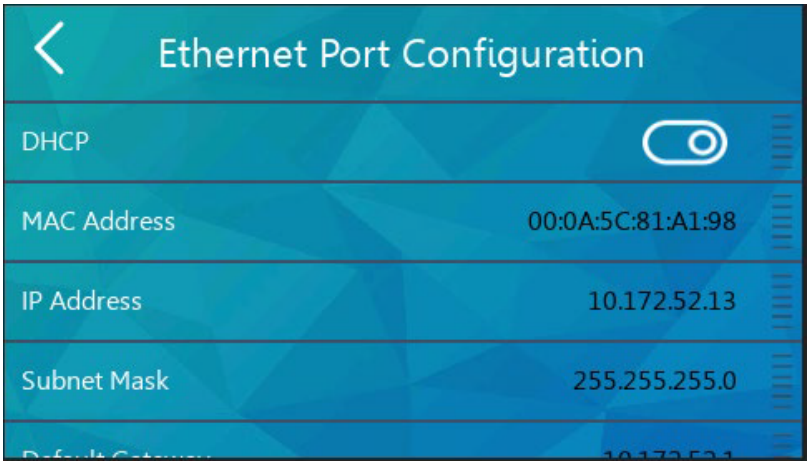


Figure 27 - Ethernet Configuration Page

The Ethernet port settings are organized in a scrollable table. Press and drag in the table area to scroll through the options. Once configuration changes are finalized, tap the save button. It is recommended to assign a static IP address to the room terminal. DHCP mode can be used to pull an IP address from the DHCP server. Once an IP address is assigned to the room terminal by the DHCP server, disable DCHP and tap the save button to set the IP address as static.

Setting	Range	Default State	Description
DHCP	N/A	Enabled	If enabled, the IP settings are assigned to the room terminal automatically by a DHCP server If disabled, the IP settings must be configured manually
MAC Address	N/A	N/A	Media access control address (read only)
IP Address	0.0.0.0 - 255.255.255.255	Assgined by DHCP server	IP address of room terminal Ethernet interface DHCP enabled: IP address assigned by the server (read only) DHCP disabled: IP address must be manually assigned using keypad
Subnet Mask	0.0.0.0 - 255.255.255.255	Assgined by DHCP server	Subnet mask of room terminal Ethernet interface DHCP enabled: subnet mask assigned by the server (read only) DHCP disabled: subnet mask must be manually assigned using keypad
Default Gateway	0.0.0.0 - 255.255.255.255	Assgined by DHCP server	Default gateway of room terminal Ethernet interface DHCP enabled: default gateway assigned by the server (read only) DHCP disabled: default gateway must be manually assigned using keypad
Save Icon	N/A	N/A	Tap save icon to save Ethernet port configuration

5.11 Wi-Fi Hotspot Page

The Wi-Fi hotspot page is described in the iLINQ network guide section of this document.

5.12 Controller Display Emulator Page

The controller display page is an emulator of the iLINQ controller's onboard LCD. This page can be used to make advanced parameter adjustments, change the unit schedule, etc. While the controller display page is active, the space temperature and humidity are not transmitted to the controller. For this reason, the controller display page should not be used for an extended amount of time during occupied hours. Refer to the iLINQ DDC User Manual for additional information about the onboard LCD.

5.12.1 Overview

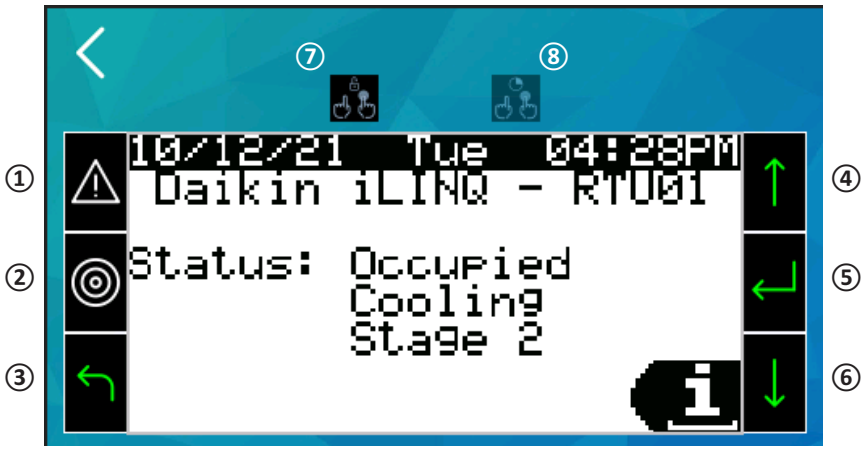


Figure 28 - Controller Display Page

Item #	Item	Description
①	Alarm	Tap to view active alarms Indicates unit alarm status by blinking red
②	Menu	Tap to navigate to the main menu screen
③	Escape	Tap to return to the previous screen
④	Up	Tap to scroll through menu screens, or modify selected values
⑤	Enter	Tap to select a highlighted option or apply a modified value
⑥	Down	Tap to scroll through menu screens, or modify selected values
⑦	Select Multiple	Tap to select multiple LCD keys
⑧	Hold	Once multiple LCD keys are selected, tap to simulate a press and hold

5.13 iLINQ Network Page

The iLINQ network page is described in the iLINQ network guide section of this document.

5.14 Room Terminal System Information Page

The room terminal system information page displays room terminal software and operational information. The system information is organized in a scrollable table. Press and drag in the table area to scroll through the data.

5.14.1 Overview

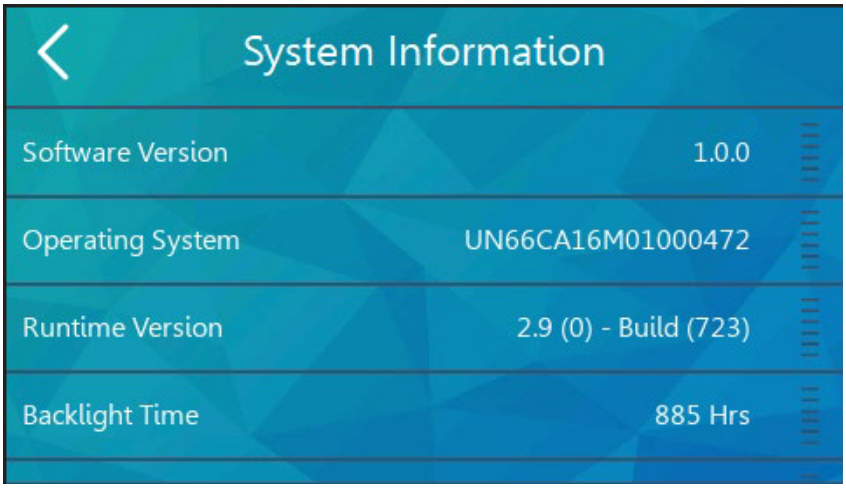


Figure 29 - Room Terminal System Information Page

Item	Description
Software Version	Daikin software application version
Operating System	Manufacturer's operating system version
Runtime Version	Manufacturer's runtime version
Backlight Time	Cumulative operating time of LCD backlight
Operating Time	Cumulative operating time of the room terminal
Communication Error Count	Communication error count Tap the refresh icon to clear the count

6 iLINQ Network Guide

The iLINQ network feature allows the networking of up to 10 iLINQ controllers together on a TCP/IP network. This feature makes it possible to monitor key data points via summary pages for each networked iLINQ controller.

6.1 iLINQ Network Settings & Terminology

Figure 30 provides an overview of the settings and terminology associated with the iLINQ network. The most important distinction being local and remote iLINQ controllers. The local controller receives the space temperature and space humidity from the room terminal via serial pLAN communication. The remote controllers are networked via Ethernet cabling and are not connected to the room terminal via serial pLAN communication. When configured, data points from the remote controllers are shared with the local controller via the Ethernet TCP/IP connection. The iLINQ summary data is transferred from the local iLINQ controller to the room via the pLAN serial communication.

For successful implementation of the iLINQ network, the room terminal and iLINQ controllers must be assigned unique static IP addresses on the same network. Refer to Figure 30 for an example of iLINQ network architecture. The IP settings are for example only and are subject to change to meet installation requirements.

For controller identification purposes, it is recommended that each iLINQ DDC Controller is assigned a unique Unit Number. The Unit Number can be assigned by pressing the enter key twice on the homescreen of each controllers onboard LCD.

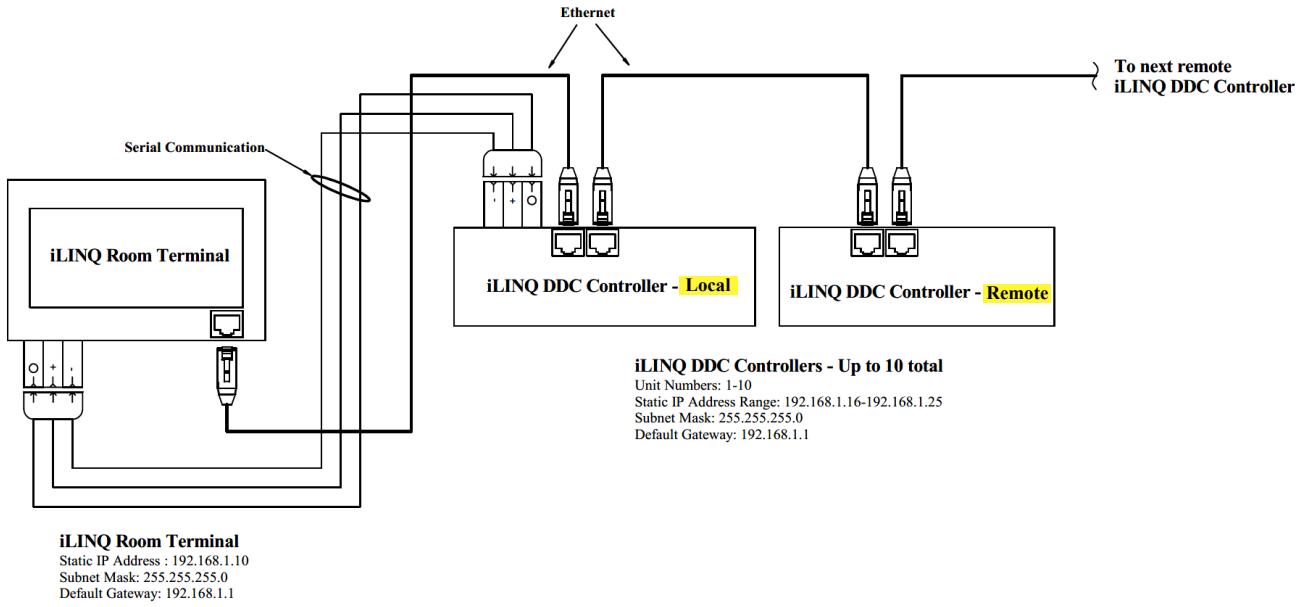


Figure 30 - Room Terminal System Information Page

6.2 iLINQ Network Configuration

The iLINQ configuration process involves entering the IP addresses of remote controllers into the local controller. The iLINQ network can be configured via the room terminal, the local controller's web interface, or the local controller's onboard LCD. For web interface and onboard LCD instructions, refer to the iLINQ DDC User Manual.

To configure the iLINQ network via the room terminal, tap the iLINQ network icon on the service menu page. Data for the iLINQ Network Configuration Page is organized in a scrollable table. With the exception of the first row, each row represents a node address on the iLINQ network. The first row displays the IP address of the local controller. Once an IP address of a remote controller is entered into a blank node address row, tap the enable toggle switch and wait for the status to update. If successful communication is established the status will appear as "Online". If not, the status will appear as "Error" and the network settings should be verified.

Figure 31 - iLINQ Network Configuration Page

Item #	Item	Description
①	Local Controller	IP address of the local controller
②	Configured Remote Controller	A configured remote controller that has been enabled on the iLINQ network with no communication error
③	Unconfigured Remote Controller	An unconfigured remote controller slot
④	iLINQ Network Node Address	iLINQ network addresses, 1-9. The node address determines the order of the iLINQ summary pages

6.3 iLINQ Network Summary Pages

The iLINQ network summary pages display key data points for each remote controller enabled on the iLINQ network configuration page. To access the iLINQ network summary pages, first, enable the “Display iLINQ” item on the display settings page. The summary pages can then be accessed by tapping the iLINQ icon on the home page or detail page.

The first iLINQ summary page displayed belongs to the local controller. The following summary pages belong to the remote controllers and are populated in order by iLINQ network node address. The number of summary pages available is indicated by the number of navigation tabs on the bottom of the summary page and corresponds to the number of node addresses configured and enabled on the iLINQ network configuration page. To navigate between summary pages, swipe in either direction on the screen or use the page navigation tabs at the bottom of the screen. All sensor values are displayed on the iLINQ network summary pages. If a sensor is not installed, dashes are shown in place of a valid sensor value.

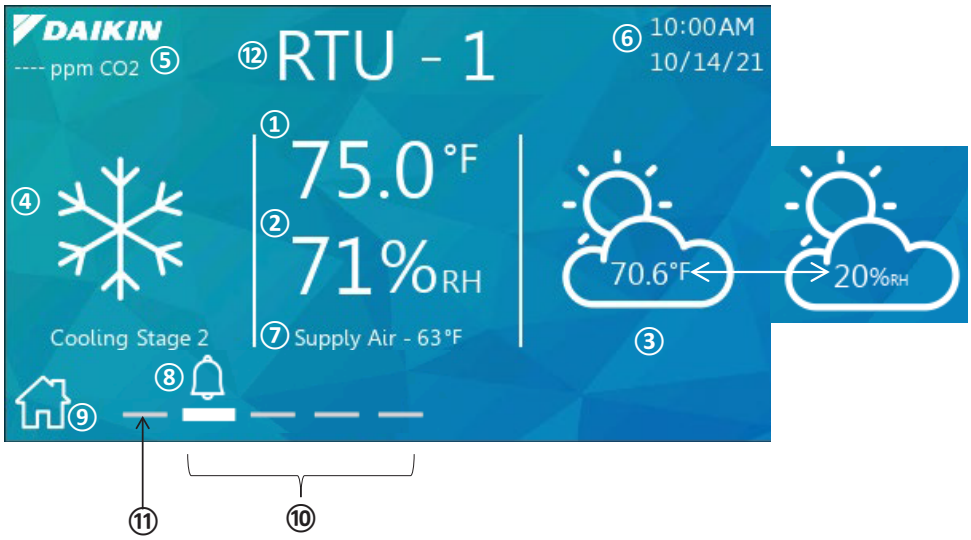


Figure 32 - iLINQ Network Summary Pages

Item #	Item	Description
①	Space Temperature	Value of the space temperature from remote iLINQ controller
②	Space Humidity	Value of the space humidity from remote iLINQ controller
③	Outdoor Conditions	Value from outdoor temperature and outdoor humidity sensors from remote iLINQ controller
④	RTU Status	Current operating mode of remote iLINQ controller
⑤	CO2	Value of space CO2 from remote iLINQ controller
⑥	Date/Time	Date/Time from the local controller
⑦	Supply Temperature	value of the supply temperature sensor from the remote iLINQ controller
⑧	Alarm	Unit alarm indicator; flashes when an alarm is active for the remote iLINQ controller
⑨	Home Page	Link to home page
⑩	Page Navigation	Navigation tabs for remote iLINQ controllers
⑪	Page Navigation	Navigation tab for local iLINQ controller
⑫	Unit Number	Unit number of remote iLINQ controller

***Note: Values from Items 1 and 2 are from the iLINQ space sensors.**

7 Wi-Fi Hotspot Guide

The room terminal's Wi-Fi hotspot feature generates a local area wireless network that can be used to access the web interface of each connected iLINQ controller. A web interface guide can be found in the iLINQ DDC User Manual.

7.1 Wi-Fi Local Area Network (WLAN) Architecture

To successfully configure and access the Wi-Fi hotspot, the room terminal and all controllers must be on the same subnet and assigned unique IP addresses. Also, it is required that each iLINQ controller is assigned a unique unit number. The unit number can be assigned by pressing the enter key twice on the homescreen of each controllers onboard LCD. The Wi-Fi hotspot provides a DHCP service that assigns IP Addresses to it's clients in the range of 172.27.72.100 to 172.27.72.199. Refer to Figure 33 for an example of proper network settings. The IP settings are for example only and are subject to change to meet installation requirements.

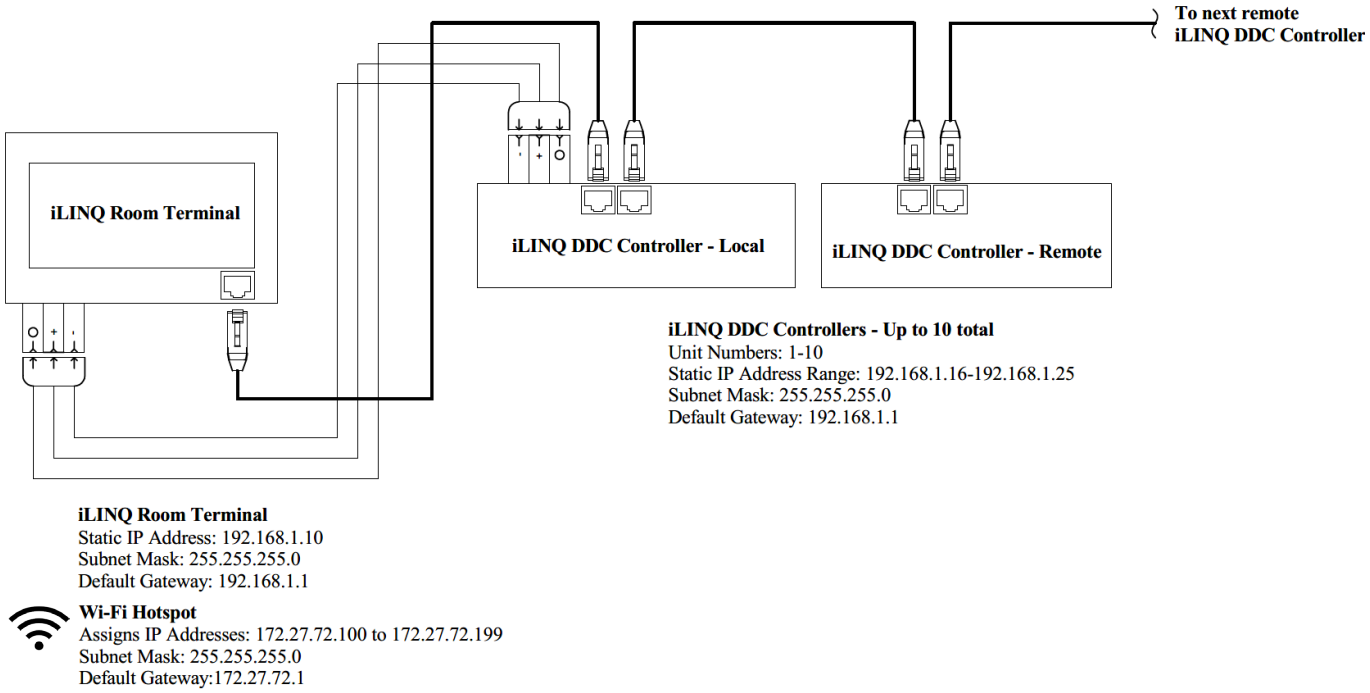


Figure 33 - iLINQ Room Terminal Wi-Fi Hotspot Network Architecture

7.2 Wi-FI Hotspot Settings

To access the Wi-Fi hotspot page, tap the Wi-Fi hotspot icon on the service menu page. The Wi-Fi hotspot settings are organized in a scrollable table. Press and drag in the table area to scroll through the options.

To enable or disable an existing Wi-Fi hotspot configuration, tap the Wi-Fi enable toggle switch. If setting up the Wi-Fi hotspot for the first time, or making a configuration change, tap the save icon to apply the new Wi-Fi hotspot settings.

The Wi-Fi hotspot retains all configuration settings when disabled. For security purposes, the current password cannot be viewed after saving.

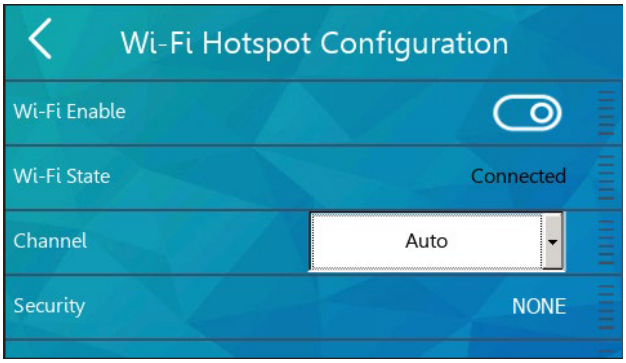


Figure 34 - Wi-Fi Hotspot Configuration Page

Setting	Range	Default State	Description
Wi-Fi Enable	N/A	Disabled	If Enabled, the Wi-Fi hotspot is enabled with the current active Wi-Fi settings If Disabled, the Wi-Fi hotspot is disabled (Wi-Fi settings are retained)
Wi-Fi State	Not Connected Connecting Connected Error	Not Connected	Current State of the Wi-Fi interface
Channel	Auto 1 (2412 MHz) 2 (2417 MHz) 3 (2422 MHz) 4 (2427 MHz) 5 (2432 MHz) 6 (2437 MHz) 7 (2442 MHz) 8 (2447 MHz) 9 (2452 MHz) 10 (2457 MHz) 11 (2462 MHz)	Auto	2.4 GHz Wi-Fi channel frequencys
Security	None WPA-PSK	NONE	None: no access protection for Wi-Fi hotspot WPA-PSK: Wi-Fi Protected Access Pre-Shared Key needed to access the Wi-Fi hotspot
Password	Minimum 8 Characters	12345678	Password required to connect to the Wi-Fi Hotspot when the Security setting is set to WPA-PSK
Network Name	Minimum 1 Character Maximum 32 Characters (Special characters not recommended)	No Selected Network	Wi-Fi Hotspot SSID
Save Icon			Tap save icon to save Wi-Fi Hotspot configuration. This is required on initial configuration of the Wi-Fi hotspot, or if the Channel, Security, or Password settings are changed. After initial configuration of Wi-Fi Hotspot, the Wi-Fi Enable toggle switch is used to enable/disable the Wi-Fi Hotspot with the previously configured Wi-Fi settings.

7.3 Connecting to the Wi-Fi Hotspot

Prior to attempting to connect to the Wi-Fi hotspot, make sure the Wi-Fi is enabled and the Wi-Fi status is “Connected”. If security is set to WPA-PSK, the password is needed to connect. Using a Wi-Fi capable device, browse the available Wi-Fi connections and select the SSID that matches the network name set on the Wi-Fi hotspot page. If required, enter the password that was defined when configuring the current active Wi-Fi Hotspot.

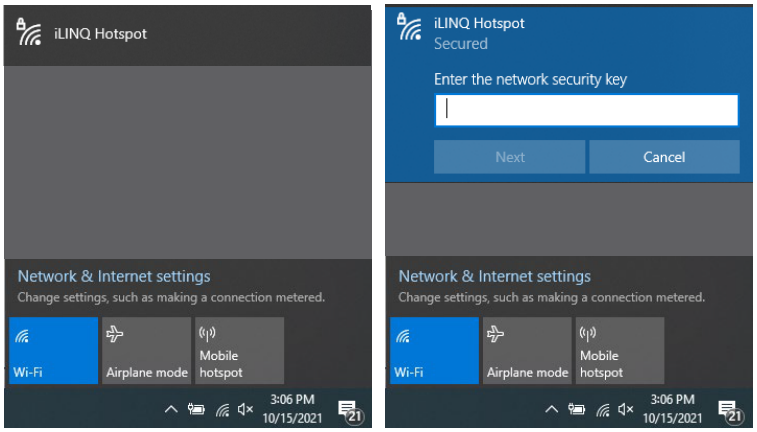


Figure 35 - Wi-Fi SSID

Once connected to the Wi-Fi hotspot, enter 172.27.72.1 in the address bar of an internet browser to view the device discovery page. The device discovery page lists each iLINQ controller connected to the room terminal. The device name is listed in the third column and can be used to distinguish iLINQ controllers from each other. The unit number of the iLINQ controller is the numerical portion of the device name. To access an iLINQ controller’s web interface, click the corresponding row or enter it’s IP address into the address bar of the web browser.

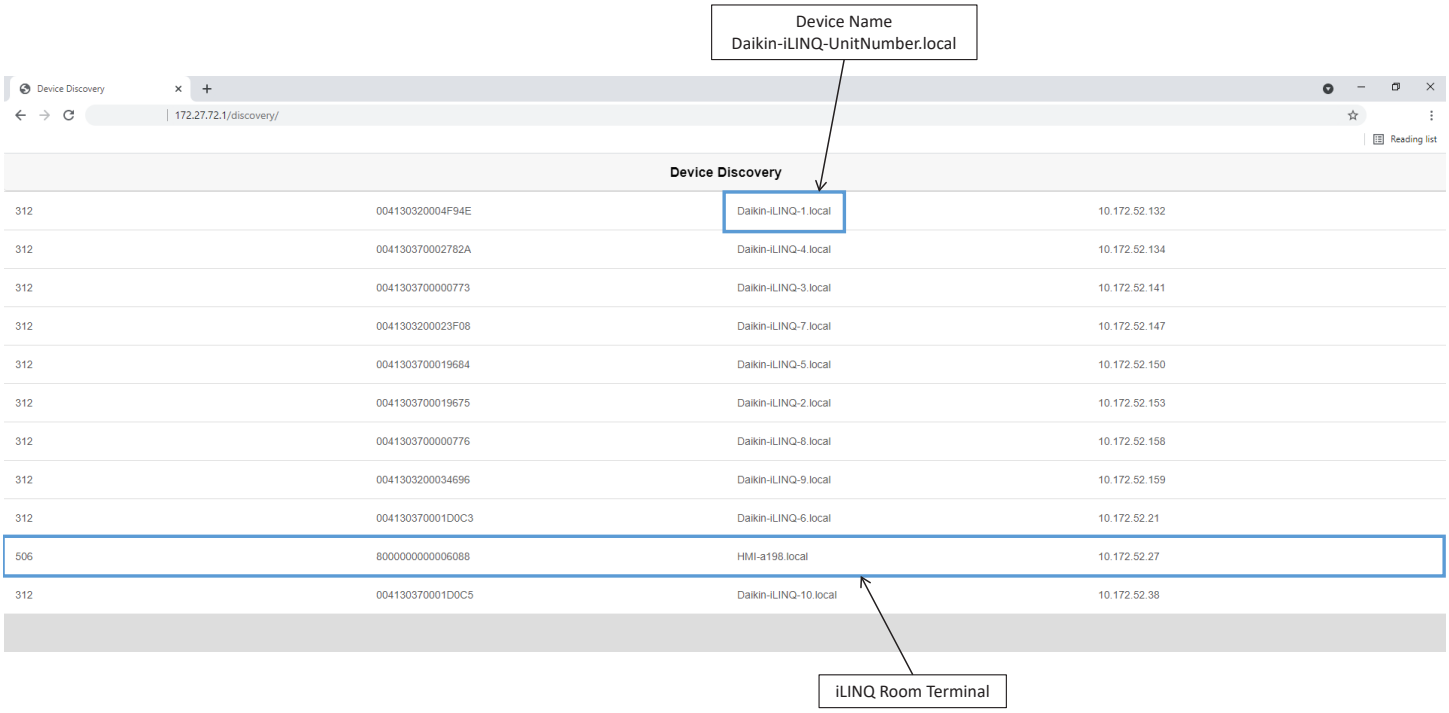


Figure 36 - Device Discovery

8 Room Terminal Use Cases

Figure 37 below shows a sample building layout with each unit operating independently of the others. Occupants in the space served by RTU-01 and RTU-04 can use the room terminal to make space temperature setpoint adjustments and view unit status information. Service personnel can use the room terminal to make unit configuration changes for the connected unit.

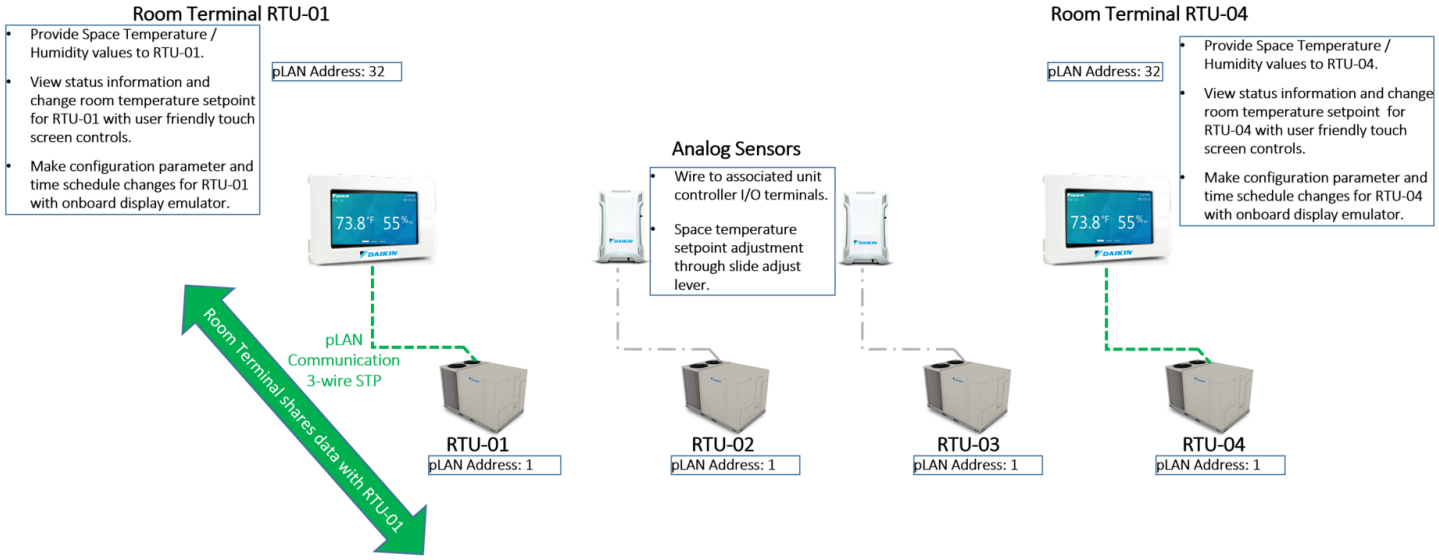


Figure 37 - Device Discovery

Figure 38 shows a sample building layout utilizing the iLINQ Network and room terminals on RTU-01 and RTU-04. A user at the RTU-01 room terminal may view/change settings in RTU-01 and can view status information for the other units configured in the iLINQ Network settings for RTU-01.

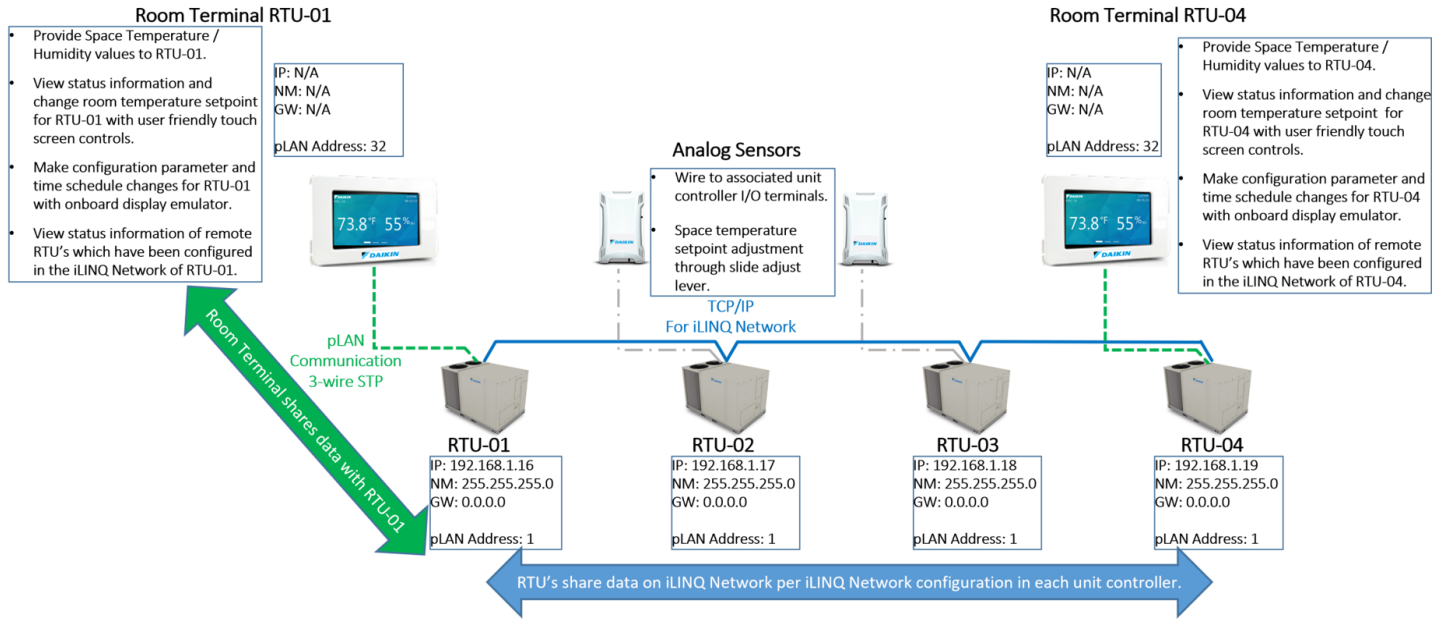


Figure 38 - Device Discovery

Figure 39 shows a sample building layout which also includes an Ethernet cable connection between RTU-01 and the room terminal. This allows users to connect to the WiFi network created by the room terminal and access the web interface for each individual iLINQ DDC controller on the iLINQ Network by typing the IP address of the unit controller in a web browser. Enter the IP address 172.27.72.1 to access a device discovery page that lists each connected iLINQ DDC controller.

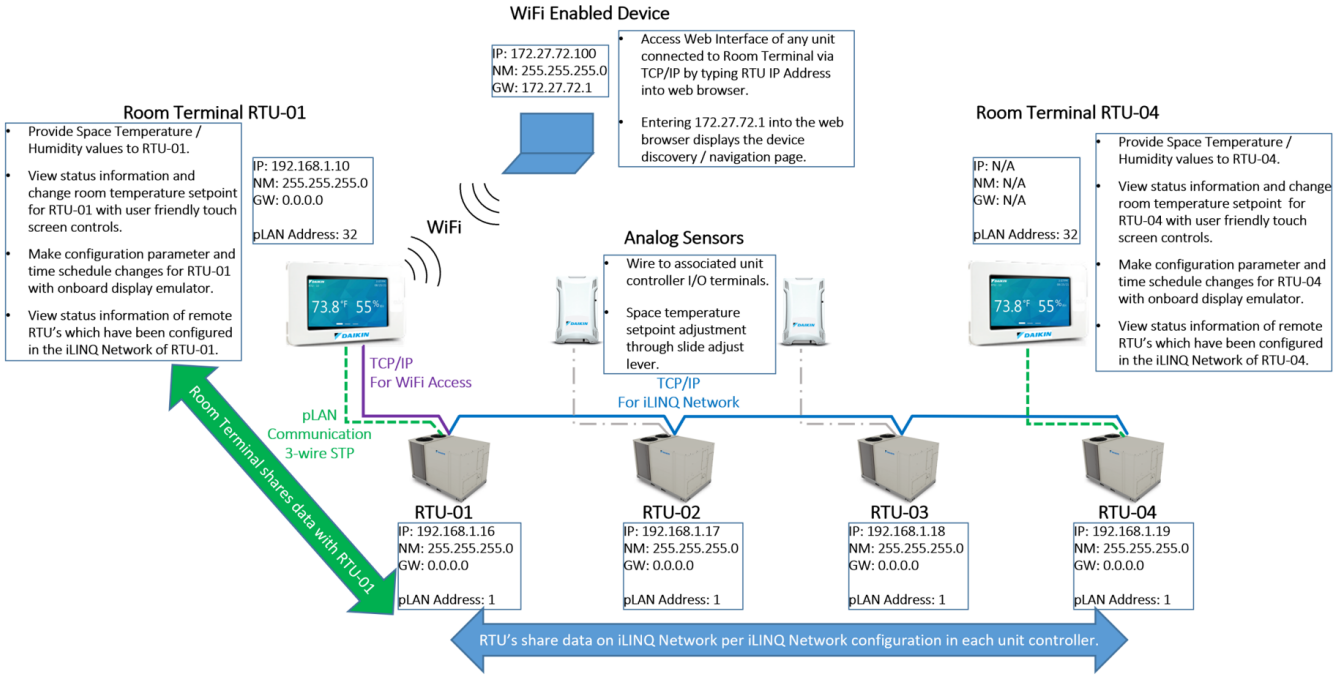
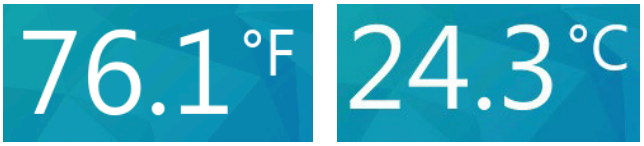


Figure 39 - Device Discovery

9 General UI instructions

The following section contains common UI features and how to interact with them.

UI Feature	Feature Appearance	Description
Back Button		Tap to return to previous page
Keypad		Tap to enter a string of characters, tap check mark to apply
Toggle Switch	 Enabled  Disabled	Tap to enable/disable settings
Units		Room terminal unit of measure is determined by the value of the onboard HMI unit of measure
Drop Down Menu		Tap to view available values, tap a new value to apply

10 Troubleshooting

The following section contains troubleshooting instructions for the iLINQ Room Terminal system.

The room terminal does not power on.

- Verify 24VDC is present at the room terminal.
- Verify 24VDC is present at the power supply output. If voltage is low, try to increase voltage by turning the VOUT adjustment screw clockwise.
- Verify 24VAC is present at the power supply input.
- Review power supply LED fault codes.

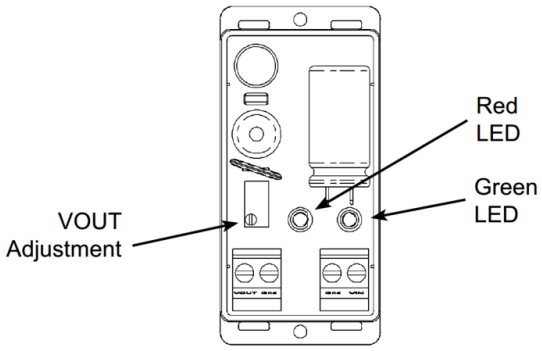


Figure 40 - Power Supply

Red LED	Green LED	Condition
OFF	ON	Normal Operation
ON	ON	Excessive load on the output
OFF	OFF	No input power
ON	OFF	Output shorted to ground

There is a communication error prompt on the room terminal display.

- Verify serial communication polarity and connection are correct per the diagram in the wiring specifications section
- Verify iLINQ controller's software version is 1.3 or greater

The space temperature and space humidity displayed on the room terminal is not accurate or invalid.

- Verify the iLINQ controller's space temperature and space humidity sensor sources are set to terminal
- Verify there is no offset in the iLINQ controller for space temperature and space humidity

The Wi-Fi password is not working.

- The Wi-Fi password displayed is reset to "12345678" each time the Wi-Fi hotspot page is loaded. The current Wi-Fi hotspot password is the last password that was saved. Create a new password and tap save to apply. This password is saved but not displayed on the Wi-Fi hotspot Page for security purposes.