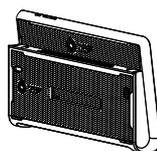
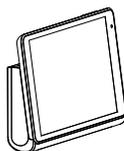




### APPLICATION

The 75F Central Control Unit (CCU) is the interface for the 75F System. With the help of cloud computing and other 75F products, the CCU optimizes the efficiency of existing HVAC equipment while keeping occupants comfortable, healthy, and productive.



### PRECAUTIONS

- Failure to wire devices with the correct polarity when using a shared transformer may result in damage to any device powered by the shared transformer
- Remove power before installing. Never connect or disconnect wiring with the power applied.
- Do not run the low voltage wiring in any conduit with line voltage.

### FEATURES

- Intuitive interface
- Centralized control of zone temperatures
- Comprehensive scheduling control
- Communicates information to the cloud for remote access and control of system information and configuration
- Multiple levels of security

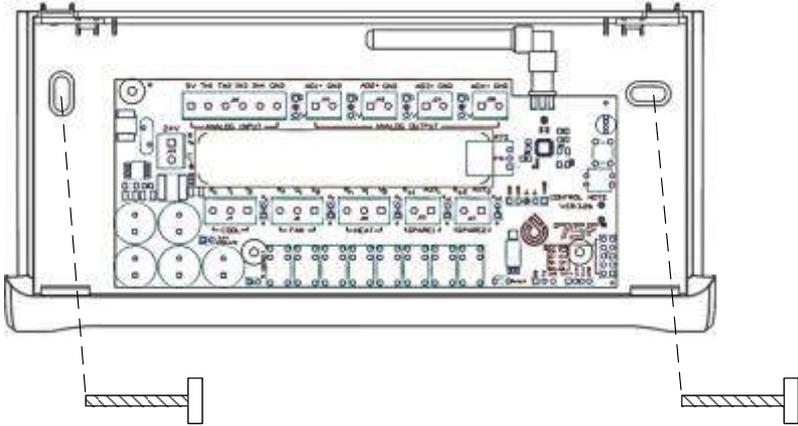
### SPECIFICATIONS

#### 75F Central Control Unit

- Input Voltage: 24VAC
- Output Voltage: 5VDC
- Analog Inputs:
- Operating Environment: 32 – 144<sup>o</sup>F
- Dimensions: 8.25" x 5.5" x 1.5"

## MOUNTING

*Mount the Control Mote (CM)* About five feet above floor level and mark the screw holes. Ensure markings are level. When using drywall anchors, drill a 5/16" drill bit and insert the provided anchors. Screw the CM into place using the provided #6-32 1" screws.



*Control Mote Mounting*

*Mount the 75F Tablet.* Be sure the power and volume buttons are facing upward. Two slots on the bottom of the tablet match two tabs on the CM plastics. Align the tabs to the slots and then push back on the tablet until it clicks into place. If power is supplied to the CM and the tablet is powered on, you will see a USB icon in the upper left status bar of the tablet. The blue outline of a cloud signifies that data is being transferred correctly.

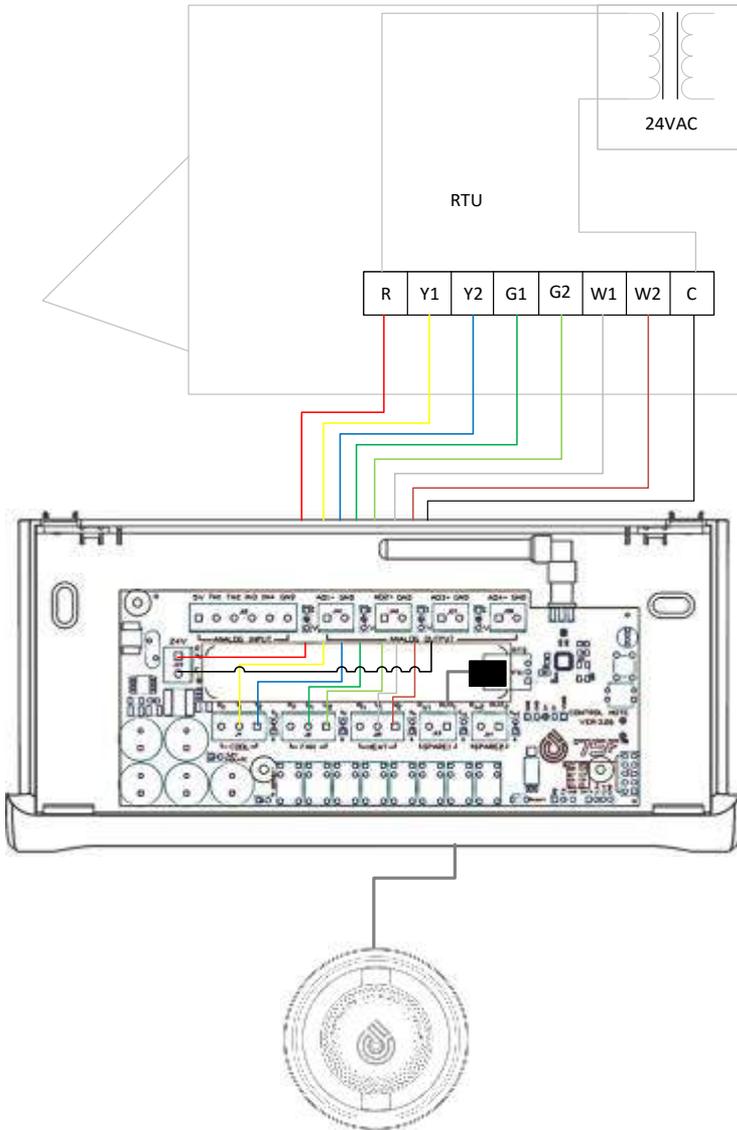


Cloud Connected



900MHz Connected

## WIRING



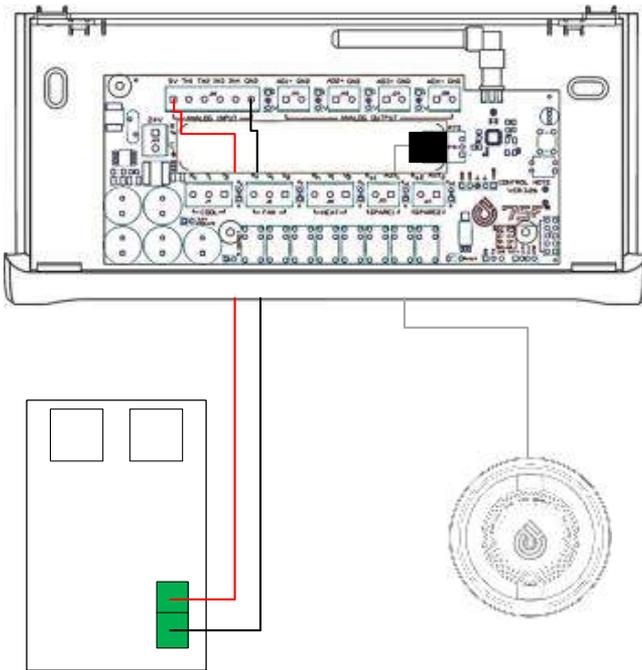
Connect Power and Thermostat Wires on the CM, connect the power and common wires to the two terminals on the left side of the opening. Terminals for Cool, Fan, and Heat are located along the bottom of the opening. Each block has three terminals. From left to right, these are Power (internally jumpered – generally not used), Stage 1, and Stage 2.

Connect the thermostat wires to their respective terminals.

Connect the Remote Temperature Sensor (RTS) using the provided grey harness. Connect one end of the gray RTS cable to the port on the right side of the opening and connect the other to the back of the RTS.

### Powering a WRM With No Damper

In certain installations, it will be necessary to power a WRM from the CCU. The WRM requires 5VDC, which is provided on the CM. On the top left of the CM's opening, there is a terminal block with six terminals. The left terminal provides 5VDC; the right terminal is the 5VDC ground. We recommend using a length of 18/2 thermostat wire run from here to the power terminals of the WRM.



After wiring of the CCU is completed, please be sure to mount the tablet.

## SETUP & CONFIGURATION

If the CCU has not come pre-configured, the system will give a series of prompts upon startup. If you need additional information to fill out any of the fields, please contact the facility manager, or 75 Support at 888.590.8995 x2.

If the CCU did come pre-configured, please skip to “Preconfigured Setup.”

## MANUAL CONFIGURATION:

1. Welcome Screen: press “Get Started” in bottom right corner.
2. Select the preferred wireless network from the list and enter the password, if any. If you are connecting to a hidden network, select the “+” in the upper right corner, and enter the appropriate information. It may be necessary to contact the facility manager or the IT department for this information. Once successful, “Connected” will be displayed below the selected network. Select the right arrow to continue.
3. Select Registration Type. NOTE: This section assumes you are performing a Standard Install
  - a. Standard Install – Use this option if you are registering the first tablet in a new building
  - b. Add CCU to existing building – Use this option if you are registering a tablet in a building that has one or more tablets already associated with it.
  - c. Pre-Configured – Use this option if you have a six-digit configuration code provided by 75F
  - d. Replace Existing CCU – Use this option if the existing tablet in an already installed building is damaged and needs to be replaced

Select the right arrow to continue

4. Account Setup
  - a. Email: enter the email of the Facility Manager
  - b. Installer Email Address: enter the email of the lead installer
  - c. CCU Name: Enter a unique identifier for the CCU and the equipment it controls (e.g. West Wing, RTU 4, Exterior offices)
  - d. Building Name: Enter the name of the building
  - e. Address: Enter the street address of the building

Once complete, select “Register.” If this is the first building associated with the Facility Manager’s email address, they will be sent an email with a password. Otherwise, the password must be provided. Once registered, select the right arrow to continue.

5. Product Options: select all options that will be installed in this system. These options can be edited later. Once finished, select the right arrow to continue.
6. Installer Options

- a. WRM Pairing Start Address: Drop-down menu specifying the address for components paired to this CCU. This field will automatically select the next available option for the building. If you prefer, you can select the address yourself. This can be useful to match CCUs to their controlled units (e.g. RTU 7 can have a start address of 7000).
- b. Use Celsius: select to show temperatures in Celsius instead of Fahrenheit
- c. Use Military Time: Select to show times and schedules using a 00:00 – 23:59 clock instead of a 12-hour AM / PM clock
- d. Use Same Occu Temp for All Days: selecting this will force all scheduled “occupied” times to have the same setpoint.
- e. Follow Schedule for Auto Mode: Selecting this allows the user to set times of year that prevent the use of either Cooling or Heating modes
- f. Use Outside Temperature Lockout: Selecting this allows the user to prevent the use of either Cooling or Heating modes based on the Outdoor Temperature
- g. Use Instant Gratification Mode: **Selecting this does nothing and is strongly discouraged, you naughty boy.**

Once finished, select the right arrow to continue.

7. Passwords: this page allows you to set up passwords to access Settings and Setup. This can be accessed and changed later. It is recommended to skip this for now, as configuration will take less time without it. Once finished, select the right arrow to continue.
8. System Profile: Select the type of system on which the CCU is being installed.
  - a. Drop-down menu
    - i. Dx-Unit: select this if the controlled unit uses mechanical cooling and gas or electric heat in a split system or package unit
    - ii. VAV with Reheat: select this if the controlled unit uses a VAV system with hot water coils at the terminals
  - b. Check Boxes: select the stages that are available for use

Once finished, select the right arrow to continue.
9. Floor Plan and Configuration: This page allows setup for floors and rooms as well as pairing devices to those rooms. This page

can be accessed and modified later. For pre-configured setups, there is an option of using the Floor Plan View, which is a visual method of pairing devices. Once finished, select the right arrow to continue.

10. System Settings: This page allows you to change settings that will change how the system operates
  - a. Conditioning Mode: Determines which modes the system can use. "Status" will list the stages of equipment that are currently in use.
  - b. Use DX for Overnight Dehumidification: selecting this option will run mechanical cooling during unoccupied hours with the goal of reducing the relative humidity to the setpoint, which can be changed in the adjacent drop-down menu.
  - c. Compensate for Humidity: selecting this option will control the space temperature based on the total enthalpy of the air, instead of just the dry-bulb temperature. For example, in very humid situations, the system will cool the space below the setpoint. This will make it so it "feels like" setpoint has been achieved.
  - d. Stage 1 Fan Always ON: selecting this option will run Stage 1 Fan, even during unoccupied times.
  - e. Schedule
    - i. Drop-down Menu: Allows for selection of System Schedule (editable locally) or a Named Schedule (editable by Facility Manager)
    - ii. Pencil Symbol **insert pencil symbol here:** Allows for editing of the System Schedule
    - iii. Status: Displays the System Status
  - f. Vacation: allows for the scheduling of Vacations, during which the system will ignore the set schedules and run in Unoccupied Mode

When Finished, select the right arrow to continue.

11. CONGRATULATIONS! You have finished configuring the CCU. You may review your selections on this page. Press the left arrow to make changes, or press finish if you are satisfied.

## PRE-CONFIGURED SETUP

1. Welcome Screen: press "Get Started" in bottom right corner.
2. Select the preferred wireless network from the list and enter the password, if any. If you are connecting to a hidden network, select the "+" in the upper right corner, and enter the appropriate

information. It may be necessary to contact the facility manager or the IT department for this information. Once successful, “Connected” will be displayed below the selected network. Select the right arrow to continue.

3. Select Registration Type: Select “Pre-Configured.” Select the right arrow to continue
4. Enter Registration code provided by 75F. Select “Verify.”
5. Select “Register.” Once prompted, confirm the desired building. You may need to consult the Facility Manager to obtain their password. Once finished, select the right arrow to continue.
6. The next four pages (Product Options, Installer Options, Passwords, and System Profile) have been filled out, but it is recommended that you double-check the settings.
7. On the Floor Plan page, you may pair modules to their respective Rooms and Floors. Once the appropriate floor and room is highlighted, select the Module you would like to pair, and follow the on-screen instructions. This page can also be visited and modified later.
8. The next page, System Settings, has also been filled out for you. Double-check the selections, and select the right arrow to continue.
9. CONGRATULATIONS! You have finished configuring the CCU. You may review your selections on this page. Press the left arrow to make changes, or press finish if you are satisfied.

## Troubleshooting

### *Troubleshooting*

<p>Tablet will not charge</p> <p>OR</p> <p>USB trident will not appear</p>	<p>Check for 24VAC at R and C terminals.</p> <p>Check for 5VDC at GND and VUSB (pogo pin strip). If 24VAC is supplied but there is no 5VDC, check for proper positioning of the pogo pin board on its standoffs. Check that the 5.2V Isolate jumper is in place (located below the COOL terminals).</p> <p>Check for 3VDC at GND and D+ (pogo pin strip).</p> <p>Under certain conditions, the board may become slightly warped during installations. Check that the screws holding the CM to its plastics are tight. Check that the mounting screws are not twisting the plastics. In very rare occasions, it may be necessary to install a spacer between the plastics and the mounting surface</p>
<p>Will not pair</p>	<p>Check that the tablet is connected to the CM (USB trident).</p> <p>If the CCU app restarts during pairing (75F logo will flash), it may be necessary to change screens briefly and return before pairing will work.</p>
<p>Cannot register CCU or edit building information</p>	<p>Check for Wi-Fi connection</p> <p>If the CCU app restarts during registration (75F logo will flash), it may be necessary to change screens briefly and return before pairing will work.</p> <p>During registration, it is occasionally necessary to return to the “Get Started” screen before the “register” button will work. Tap the left arrow, and then select “Get Started” again. Information you have already entered will be saved.</p>

<p>CCU calls for heat/cool/fan but controlled unit does not respond</p>	<p>Under Setup -&gt; Settings -&gt; HVAC Equipment, ensure that the proper stages have been selected.</p> <p>Ensure that the selected conditioning mode is not preventing the desired action.</p> <p>When in Auto Mode, average current temperature must be greater than two degrees different than setpoint to change from HEAT to COOL, or from COOL to HEAT. The differential may be greater, depending on the Economy/Comfort slider and the Auto Mode Changeover Multiplier tuner.</p> <p>Check that jumpers are in place next to the terminal blocks of the affected equipment. If none of the equipment is running on a call, check the jumper labeled "R Connect" located along the bottom of the CM between the capacitors and the relays.</p>
<p>No Connection to Cloud <b>insert cloud incommunicado symbol</b></p>	<p>Check for Wi-Fi connectivity. It may be necessary to contact the IT department to confirm access to some networks.</p>
<p>Lorem</p>	<p>Ipsum</p>
<p>Lorem</p>	<p>Ipsum</p>
<p>Lorem</p>	<p>Ipsum</p>
<p>Asdf</p>	<p>Ipsum</p>

## 75F TECHNICAL SUPPORT

If you need more information, please visit [www.75f.io/support](http://www.75f.io/support). A site specifically for our installers, you will find instructional videos, manuals and more. You can also call 888.590.8995 x2 if you need technical support.

### TO ADD:

Troubleshooting: Cannot Adjust temp (user limits/ ignore change)

Profiles (for Pairing; Matt B. has made pairing procedure, but profiles options and descriptions need to be made)

Edit Registration

Description of Interface (tabs, setup, etc.)