



URC &
COOLAUTOMATION
LIVE WEBINAR:
**HVAC
INTEGRATION
MADE EASY**

PRESENTERS – CoolAutomation <> URC



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COOLAUTOMATION

FOUNDED
2009

SOLUTIONS
FOR VRF
INTEGRATION,
CONTROL,
MANAGEMENT
AND SERVICE

BASED
IN
ISRAEL

PRIVATELY
HELD & FUNDED

WORLDWIDE
PRESENCE
100+
COUNTRIES

5000 SITES
ADDED ANNUALLY
100,000+
SYSTEMS
WORLDWIDE

- 50+ Distributors worldwide
- Local offices in North America, LATAM, EMEA, Australia and Asia



Agenda

1. HVAC Systems – A quick overview
2. CoolAutomation Range of Solutions
3. CoolAutomation Compatibility & Connectivity Highlights
4. URC Configuration Details
5. HVAC Integration: The Solution Design
6. Use Cases and Q & A

HVAC SYSTEMS - OVERVIEW



Unitary / DX Split
Systems



Minisplit / Multizone
Systems



VRF
Systems

HVAC SYSTEMS - APPLICATIONS



SMALL SCALE
Residential Sector



MEDIUM SCALE
Commercial Sector



LARGE SCALE
Large-Commercial Sector



Multi-Split (multi-zone)
(Inverter / Non-Inverter)



Chillers



Mini-Split (single zone)
(Inverter)



Fan Coils (FCU)



mini VRF Systems
(Inverter, up to 32 zones)



Rooftop + Custom



Radiant Floor Heating
(Hydronic or Electric)



VRF Systems
(Inverter, up to 256 zones)



INTEGRATION OPTIONS

HVAC



CoolMaster



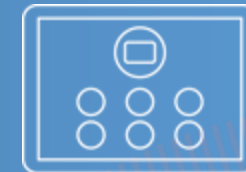
CoolPlug



CoolLinkBridge



URC TOTAL CONTROL



VRF SYSTEMS - COOLMASTER

Simple-to-Commission Universal VRF Integration



- Support for all VRF manufacturers
- Plug & Play solution for on-site integration
- Auto-discovery of all connected indoor units
- Remote Access for Support
- User-friendly Touch Screen

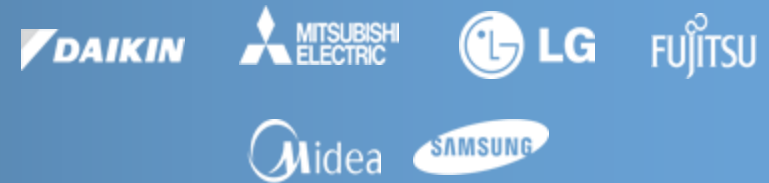


Split/Multi Split - COOLPLUGS & COOLINKHUB

Cost-effective mini-split and multi-split HVAC integration



- Support for virtually all mini-split manufacturers
- Comprehensive solutions for on-site integration
- Wired & Wireless networking options
- Remote Access for Support



Conventional/Unitary - CoolLinkBridge

Connecting all non inverter (Legacy) HVAC, underfloor heating



- Connect traditional HVAC systems
- Connect underfloor heating systems
- Connect environmental sensors
- Same plug and play integration process



TOUCH-SCREEN, WALL MOUNTED CONTROLLER - GS-SMT-131

Main Functions

TFT touch screen interface

On/Off, Setpoint, Fan speed control

Onboard temperature sensor for Room temperature reading

Modbus RTU network interface

24VAC power and control

And more

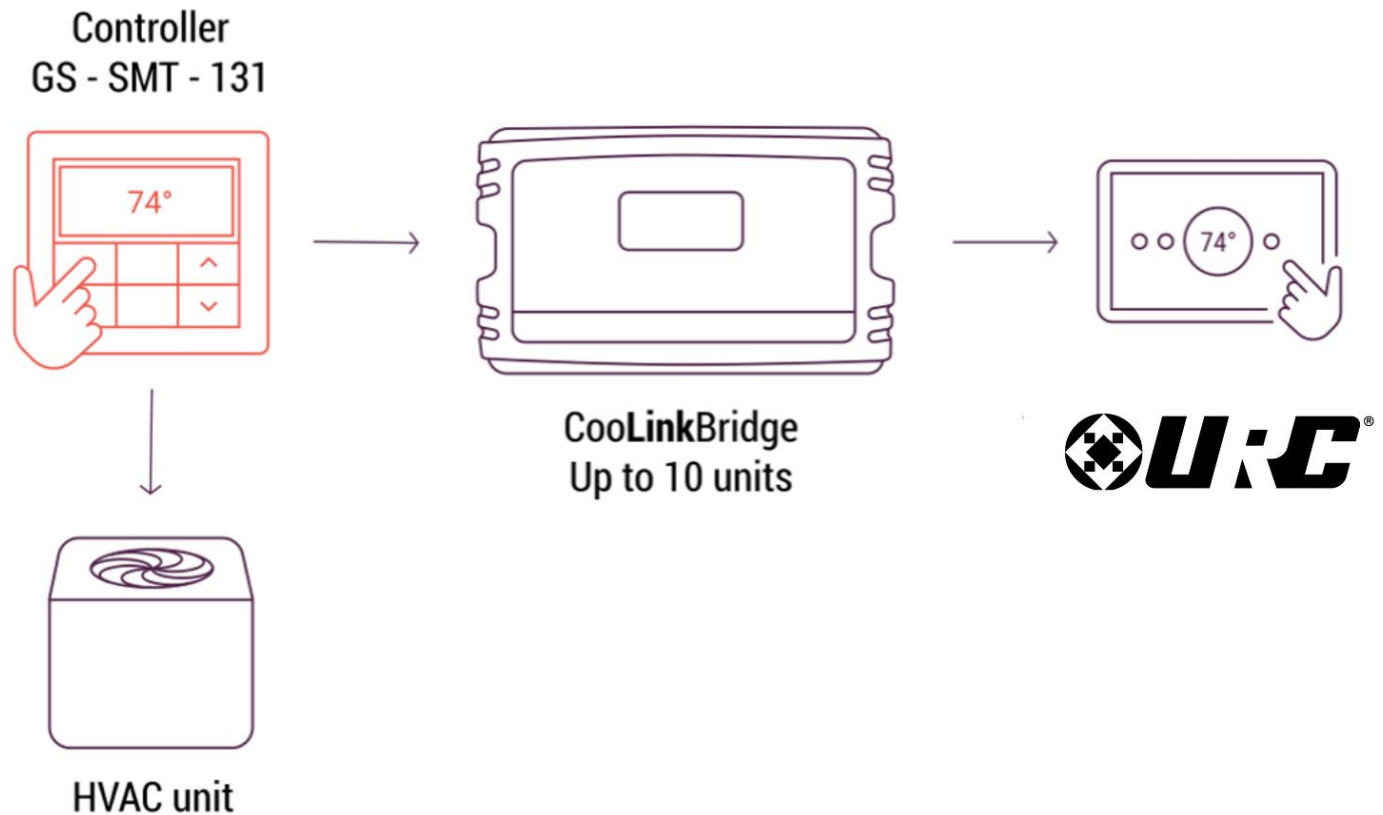
Technical info

Up to 10 units per CoolLinkBridge

Up to 48 units per CoolMasterNet line

Power Input: 24Vac

Size: 113 x 103 x 25mm



UNDERFLOOR HEATING CONTROLLER - GS-SMT-HOA

Main Functions

Read Zone Temp from an external (included) sensor

Each zone is separately displayed/controlled in Cloud Apps

8 separate loops – each with Temp sensor, Setpoint, Output

Technical info

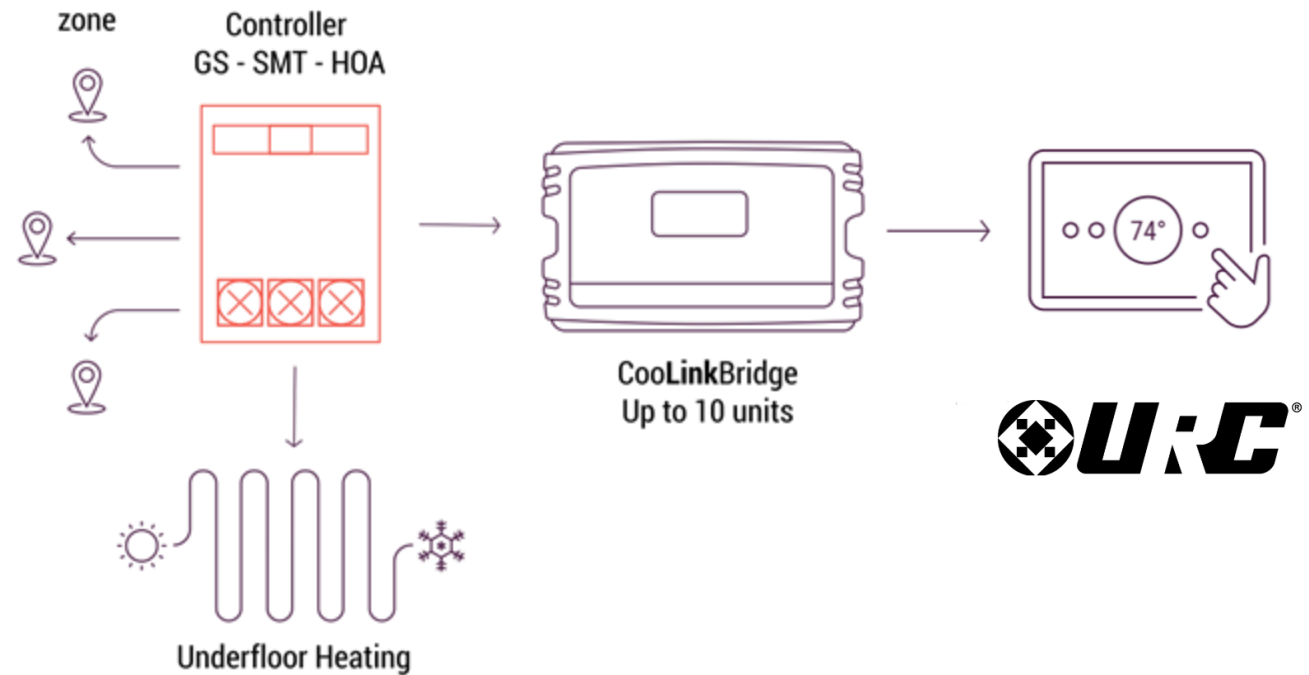
8 x 10K Temperature sensors

8 Relay Outputs, 5Amp

Up to 4 Controllers (total 32 zones) connected with CoolLinkBridge

Up to 10 Controllers (total 80 zones) connected with CoolMasterNet

Power Input: 24Vdc, 0.5A



URC CONFIGURATION STEPS



URC and CoolMaster - INTEGRATION

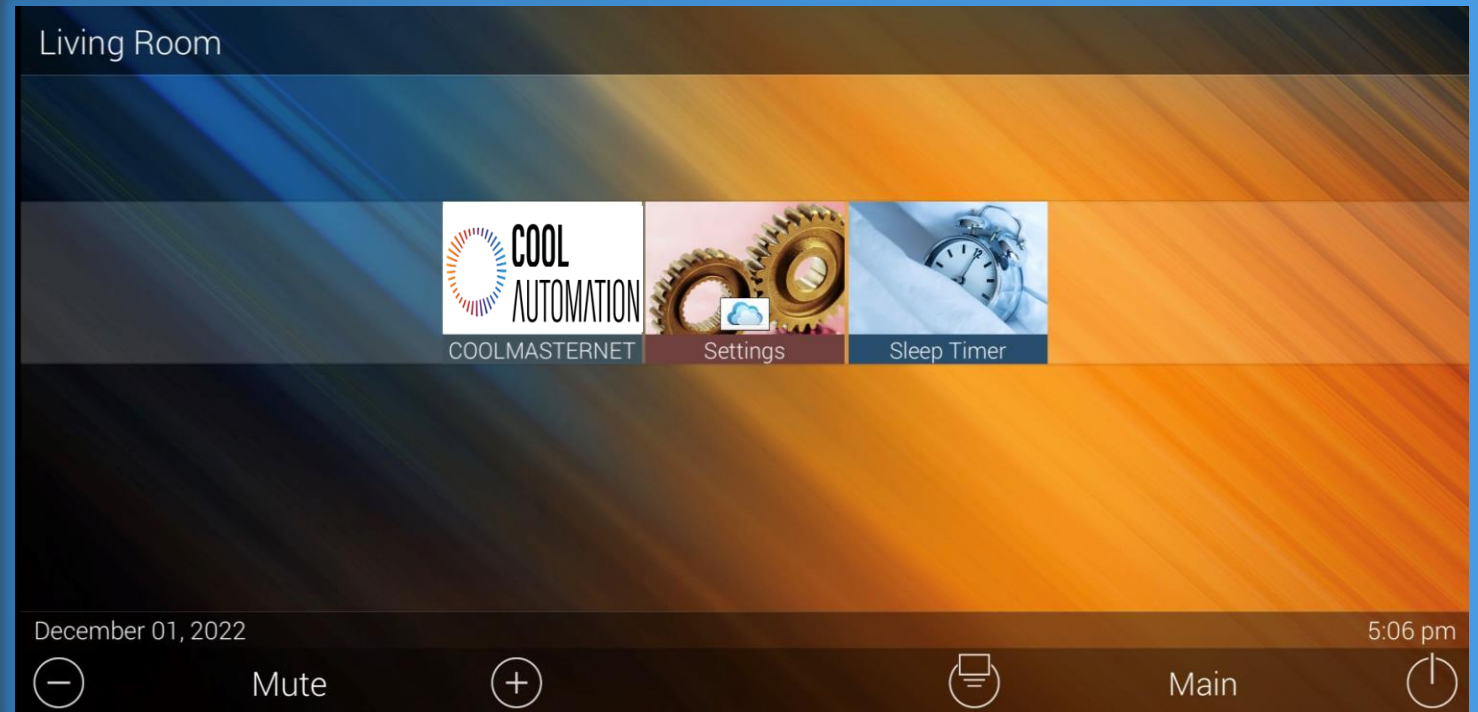
The CoolMaster Module

seamlessly integrates with the

CoolMaster Bridge

with

URC's Total Control system



Works with all CoolMaster products

URC and CoolMaster - INTEGRATION

Supported Features:

- **Control** multiple units
- **Change** Thermostat Modes, Fan Modes and Louver Positions
- **Rename** HVAC units
- **Group** view of thermostats
- **Direct** commands available (*in macros*) for any/all the above



URC and CoolMaster – FINDING THE MODULE



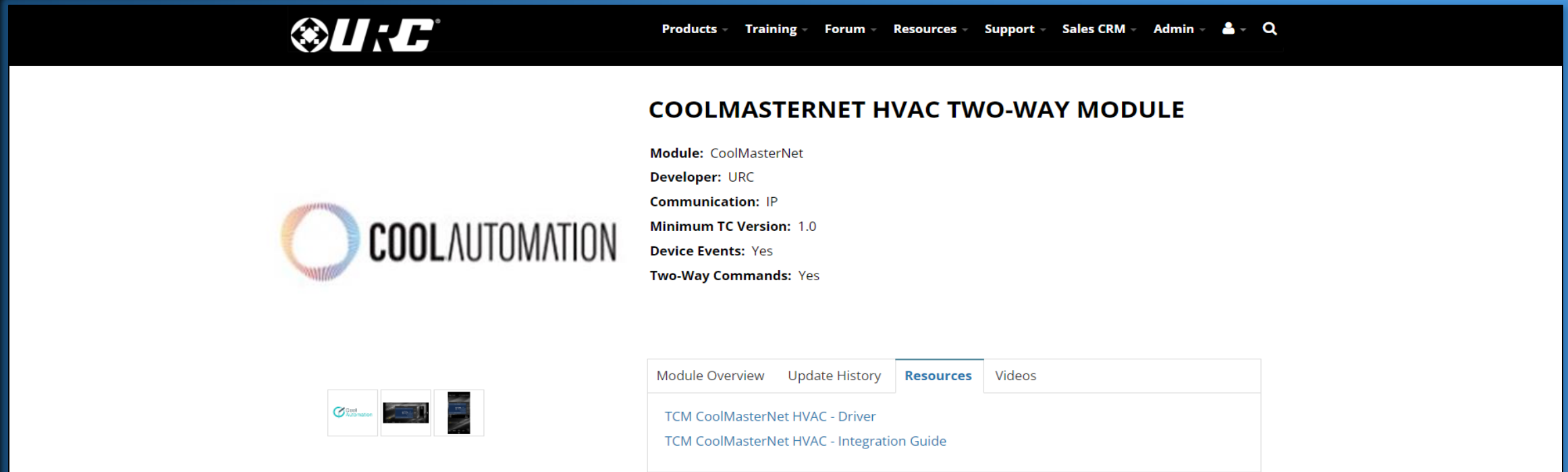
BROWSE to our Total Control Modules in the Resources section on the Dealer Portal.
www.urcportal.com

URC and CoolMaster – FINDING THE MODULE

The screenshot shows the URC website interface. At the top, there is a navigation bar with the URC logo on the left and a menu of links: Products, Training, Forum, Resources, Support, Sales CRM, Admin, and a search icon. Below the navigation bar, the page title is "Total Control™ Two-Way Modules". A search bar on the left contains the text "cool". Below the search bar, there are two filter options: "Search" (selected) and "Clear all filters". The search results display the "COOLAUTOMATION" logo and a product listing for "COOLMASTERNET HVAC TWO-WAY MOD..". A "View" button is located below the product listing.

SEARCH for CoolMaster.

URC and CoolMaster – FINDING THE MODULE



The screenshot shows the URC website interface. At the top, there is a navigation bar with the URC logo on the left and a menu of links: Products, Training, Forum, Resources, Support, Sales CRM, Admin, a user icon, and a search icon. The main content area features the CoolAutomation logo on the left and the title "COOLMASTERNET HVAC TWO-WAY MODULE" on the right. Below the title, technical specifications are listed: Module: CoolMasterNet, Developer: URC, Communication: IP, Minimum TC Version: 1.0, Device Events: Yes, and Two-Way Commands: Yes. A tabbed interface below the specifications has four tabs: "Module Overview", "Update History", "Resources" (which is active), and "Videos". Under the "Resources" tab, two links are visible: "TCM CoolMasterNet HVAC - Driver" and "TCM CoolMasterNet HVAC - Integration Guide". On the left side of the page, there are three small thumbnail images, the first of which is the CoolAutomation logo.

DOWNLOAD the TCM CoolMasterNet HVAC - Driver.

URC and CoolMaster – FINDING THE MODULE

The screenshot shows the URC website interface. At the top, there is a navigation bar with the URC logo and a menu containing: Products, Training, Forum, Resources, Support, Sales CRM, Admin, a user icon, and a search icon. The main content area is titled "COOLMASTERNET HVAC TWO-WAY MODULE". Below the title, there is a list of specifications: Module: CoolMasterNet, Developer: URC, Communication: IP, Minimum TC Version: 1.0, Device Events: Yes, and Two-Way Commands: Yes. To the left of these specifications is the CoolAutomation logo. Below the specifications, there is a tabbed interface with four tabs: "Module Overview", "Update History", "Resources", and "Videos". The "Resources" tab is active and contains two links: "TCM CoolMasterNet HVAC - Driver" and "TCM CoolMasterNet HVAC - Integration Guide". An orange arrow points to the "Integration Guide" link. To the left of the tabs, there are three small thumbnail images representing different documents or videos.

CoolMasterNet Integration Guide available for download

URC and CoolMaster – IMPORTING THE MODULE

Go to **File > Import TCM Files** and select the downloaded CoolMaster TCM file.

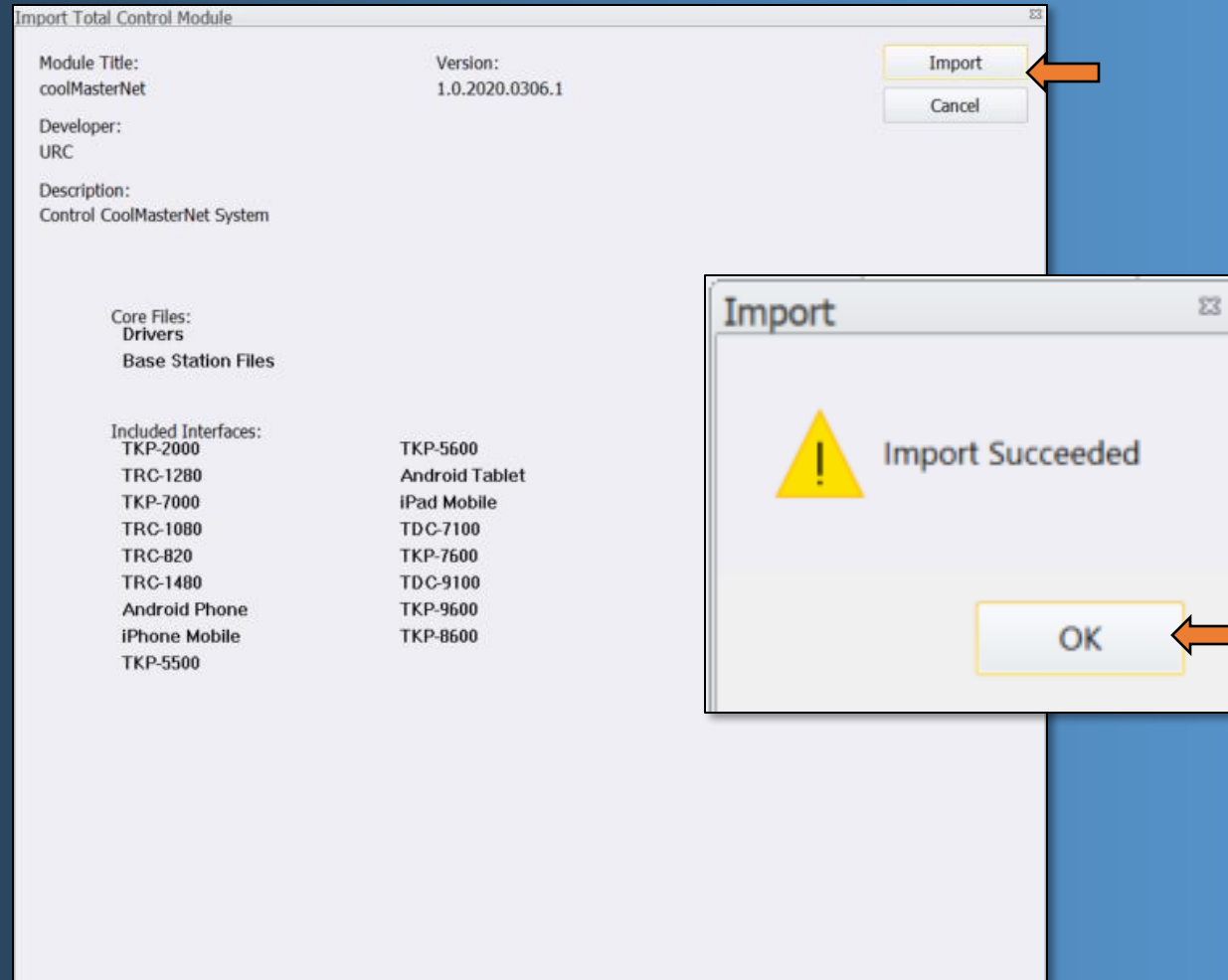
The screenshot shows the Accelerator 3 software interface. The 'File' menu is open, and the 'Import TCM Files' option is highlighted with a red arrow. The 'Recent Documents' list is visible, showing several files. The main workspace displays a table of device configurations for a 'Dining Room'.

Base Stations	Remotes/Keypads	DMS	HDA System
MRX-2	TRC-1480	DMS-1200	HDA-8100
MRX-5	TRC-1080	DMS-100	HDA-4100
MRX-8	TRC-820	DMS-IN	HDA-1600-70V
MRX-10	TKP-100	DMS-OUT	HDA-130
MRX-12	TKP-5500		HDA-IO (input)
MRX-15	TKP-5600		HDA-IO (output)
MRX-30	TKP-7600		HDA-SW5
MRX-4IR	TKP-8600		
MRX-4SEN2	TKP-9600		
TRF-ZW	TDC-7100		
TRF-ZW10	TDC-9100		
MFS-8	Android Tablet		
MFSPOE-8	Android Phone		
	iPhone Mobile		
	iPad Mobile		

URC and CoolMaster – IMPORTING THE MODULE

Click on **Import**.

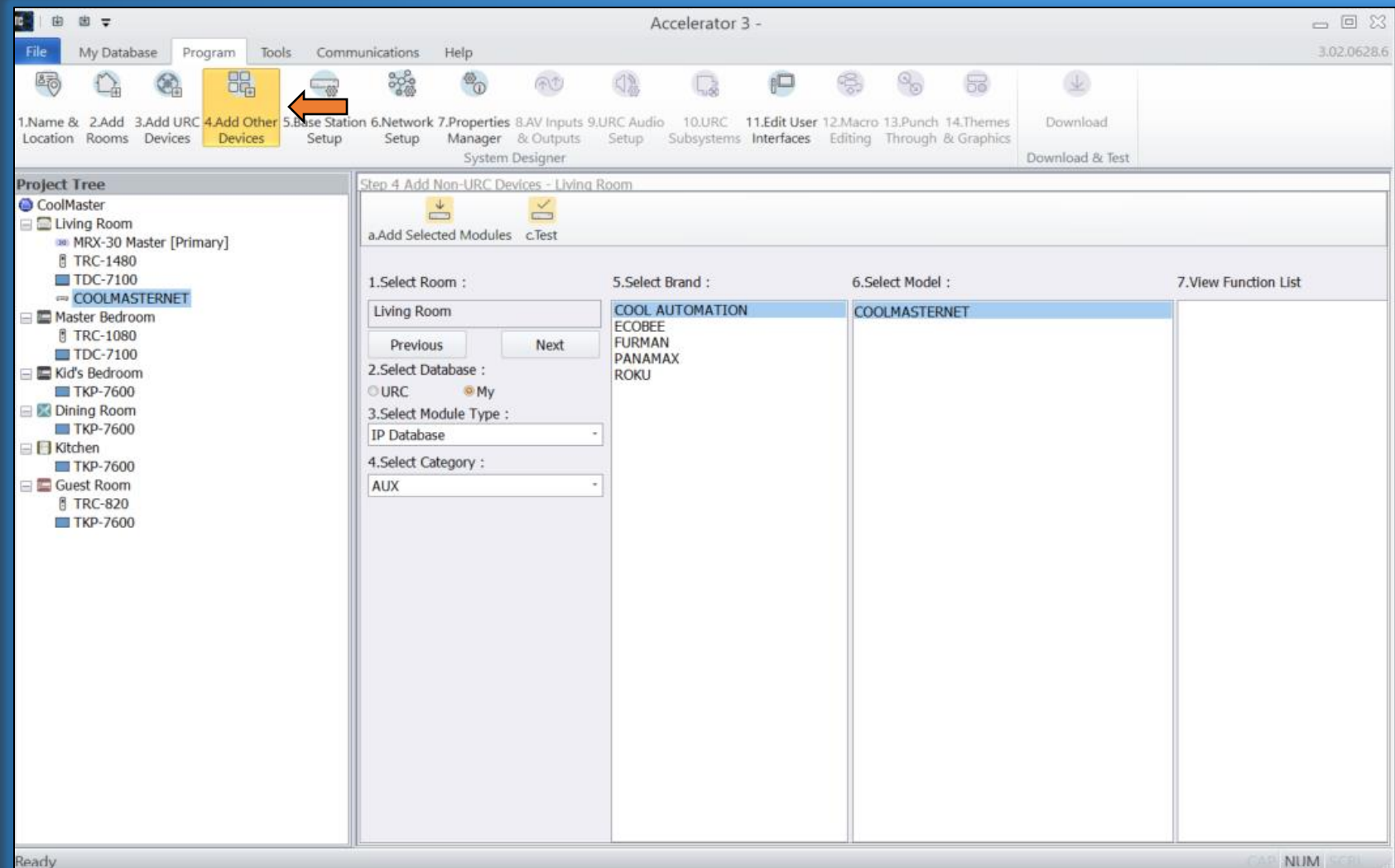
Click on **OK**.



URC and CoolMaster – ADDING TO THE PROJECT

Step 4. Add Other Devices

- *My Database*
- *IP*
- *Aux*



URC and CoolMaster – ADDING TO THE PROJECT

Step 6. Network Setup *Enter IP Address*

Accelerator 3 - - C:\Users\rhaynes\Desktop\CoolMaster\CoolMaster.tc3

File My Database Program Tools Communications Help

1.Name & Location 2.Add Rooms 3.Add URC Devices 4.Add Other Devices 5.Base Station Setup 6.Network Setup 7.Manager & Outputs 8.AV Inputs & Outputs Setup 9.URC Audio Subsystems 10.URC Interfaces 11.Edit User Editing 12.Macro Through & Graphics 13.Punch 14.Themes Download Download & Test

Project Tree

- CoolMaster
 - Living Room
 - MRX-10 Master [Primary]
 - TRC-1480
 - TDC-7100
 - COOLMASTERNET
 - IOS Mobile (URC Trainer)
 - Master Bedroom
 - TRC-1080
 - TDC-7100
 - Kid's Bedroom
 - TKP-7600
 - Dining Room
 - TKP-7600
 - Kitchen
 - TKP-7600
 - Guest Room
 - TRC-820
 - TKP-7600

Step 6 Network Settings: Other Devices

Room	Device	IP Address	Port
Living Room	COOLMASTERNET	192.168.29.34	10102

Ping Response:

Pinging [192.168.29.34] with 32 bytes of data:

Reply from 192.168.29.34: bytes=32 time=10ms TTL=255
Reply from 192.168.29.34: bytes=32 time=12ms TTL=255
Reply from 192.168.29.34: bytes=32 time=11ms TTL=255
Reply from 192.168.29.34: bytes=32 time=13ms TTL=255

Ping statistics for 192.168.29.34:
Packets: Sent = 4, Received = 4, Lost = 0 (0 % loss)
Ping Done

Ready

URC and CoolMaster – ADDING TO THE PROJECT

Step 11. Edit User Interfaces and hit Accelerate!

Accelerator 3 -- C:\Users\rhaynes\Desktop\CoolMaster\CoolMaster.t3

File My Database Program Tools Communications Help

1.Name & Location 2.Add Rooms 3.Add URC Devices 4.Add Other Devices 5.Base Station Setup 6.Network Setup 7.Properties Manager System Designer 8.AV Inputs & Outputs 9.URC Audio Setup 10.URC Subsystems 11.Edit User Interfaces 12.Editors 13.Punch Through & Graphics 14.Themes & Graphics Download Download & Test

Project Tree

- CoolMaster
 - Living Room
 - MRX-10 Master [Primary]
 - TRC-1480
 - TDC-7100
 - COOLMASTERNET
 - iOS Mobile (URC Trainer)
 - Master Bedroom
 - TRC-1080
 - TDC-7100
 - Kid's Bedroom
 - TKP-7600
 - Dining Room
 - TKP-7600
 - Kitchen
 - TKP-7600
 - Guest Room
 - TRC-820
 - TKP-7600

Step 11 Main Menus/Layouts: Edit Programming Options

a.Generate Menus & Devices b.Edit Menu by Room c.Edit Device Layouts

Included Submenus

Entertainment : Yes No

Music : Yes No

Lights : Yes No

Comfort : Yes No

Security : Yes No

Info : Yes No

Settings : Yes No

Multiple Displays : Yes No ?

Timer : Yes No

Submenu System Options

Submenus are only created if there will be buttons present. Empty submenus are not generated.

If a submenu is set "No", any button that would normally be there will instead be generated on the main menu.

Timers Items

Select an item and a jump to it will be created in the appropriate menu for each room

- Sleep Timer
- Event Timer
- Alarm Clock
- Vacation Mode

Music Menu Options

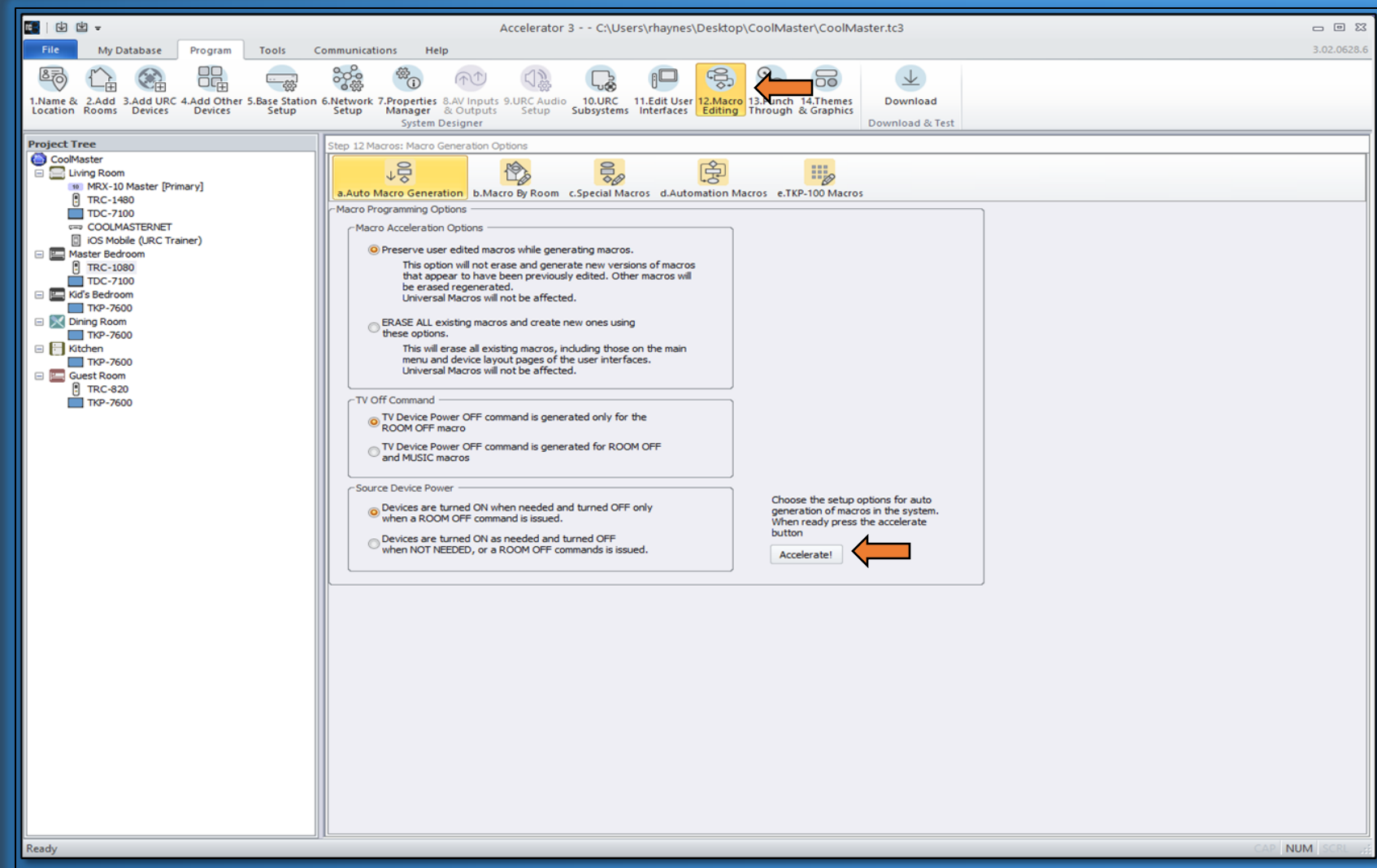
- Use dedicated Multi-Room Music submenu
- Use combined Music submenu

Choose the setup options for the User Interfaces in the system. When ready press the Accelerate Button

Accelerate!

URC and CoolMaster – ADDING TO THE PROJECT

Step 12. Macro Editing
and hit Accelerate!



URC and CoolMaster – ADDING TO THE PROJECT

Download

The screenshot shows the Accelerator 3 software interface. The 'Download' dialog box is open, displaying a table of device configurations. The table has columns for Model, Room, Download..., IP Address, and MAC ID #. The 'Download to Selected Devices (Direct)' button is highlighted with an orange arrow.

Model	Room	Download ...	IP Address:	MAC ID #
<input checked="" type="checkbox"/> MRX-10 Master	Living Room	Network	192.168.28.246(DHCP)	00:1F:88:2A:26:E7
<input type="checkbox"/> TRC-1480	Living Room	Network	(DHCP)	00:00:00:00:00:00
<input type="checkbox"/> TDC-7100	Living Room	Network	192.168.28.250(DHCP)	00:1F:88:31:03:95
<input type="checkbox"/> TRC-1080	Master Bedroom	Network	192.168.28.239(Static)	00:1F:88:20:30:64
<input type="checkbox"/> TDC-7100	Master Bedroom	Network	(DHCP)	00:00:00:00:00:00
<input type="checkbox"/> TKP-7600	Kid's Bedroom	Network	192.168.28.245(DHCP)	00:1F:88:30:01:36
<input type="checkbox"/> TKP-7600	Dining Room	Network	(DHCP)	00:00:00:00:00:00
<input type="checkbox"/> TKP-7600	Kitchen	Network	(DHCP)	00:00:00:00:00:00
<input type="checkbox"/> TRC-820	Guest Room	Network	(DHCP)	00:00:00:00:00:00
<input type="checkbox"/> TKP-7600	Guest Room	Network	(DHCP)	00:00:00:00:00:00

Download System Configuration

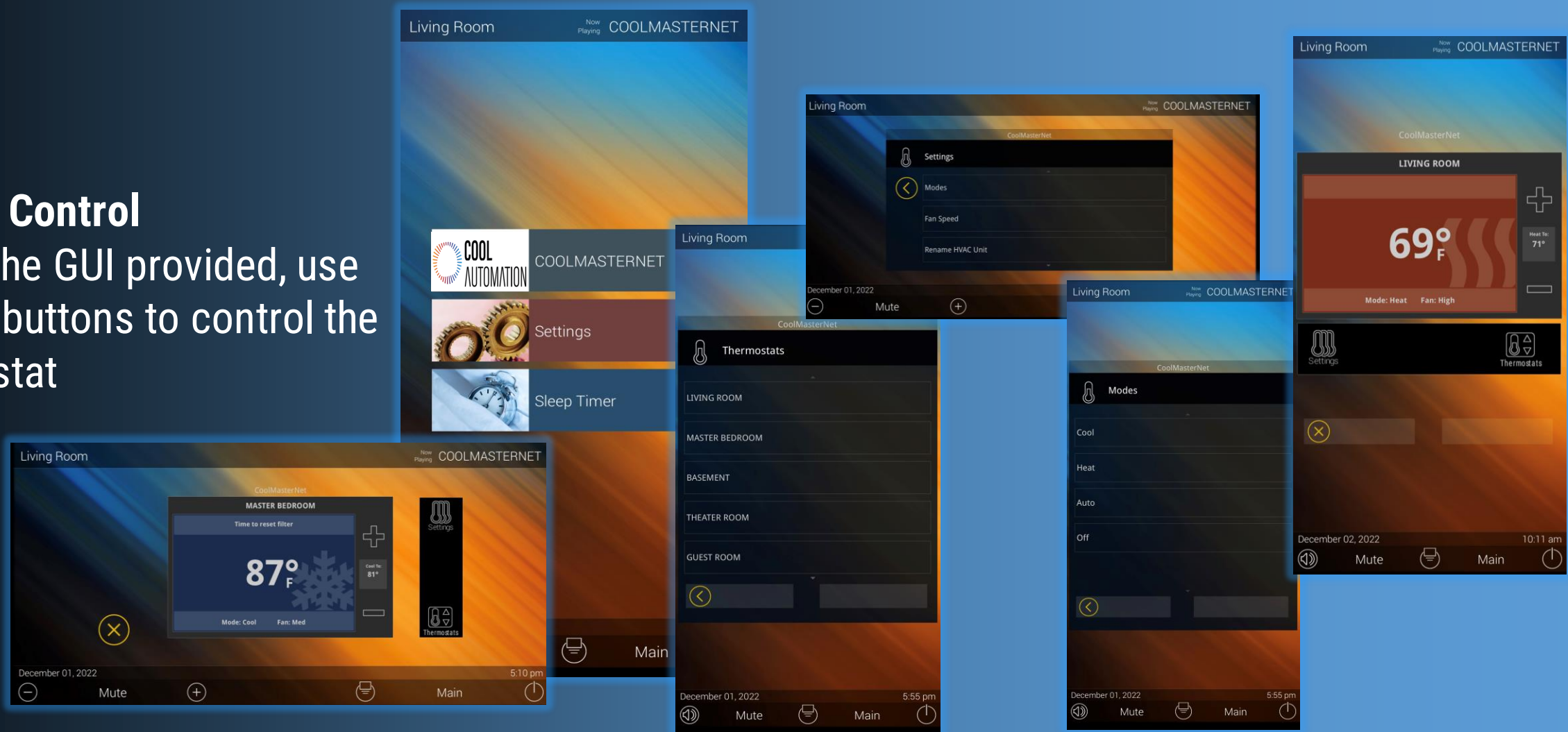
Enable Offsite Programming Download USB devices first Use Parallel Download

Close
Select All
Clear All
Download to Selected Devices (Direct)

URC and CoolMaster – MODULE CONTROL

Module Control

Within the GUI provided, use sliders/buttons to control the thermostat

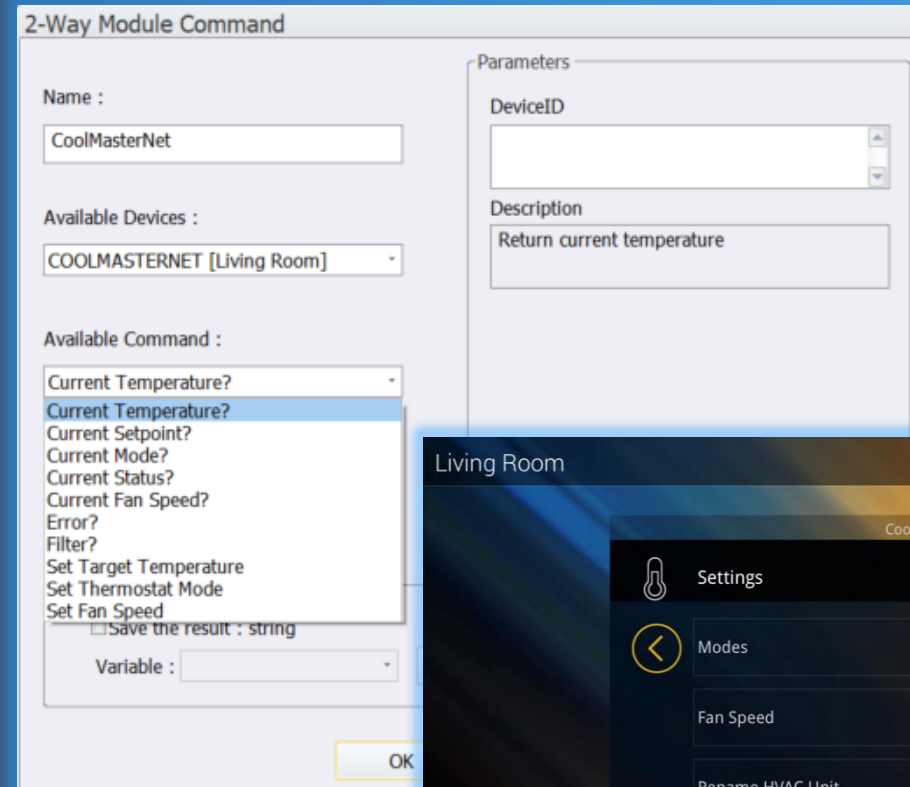


URC and CoolMaster – CONTROLLING COOLMASTERNET

Macro Control

Ability to create a “button” that can control any/all of the following:

- Setpoint
- Thermostat Mode (Heat/Cool/Auto/Off)
- Fan Speed (Low/Med/High/Auto)



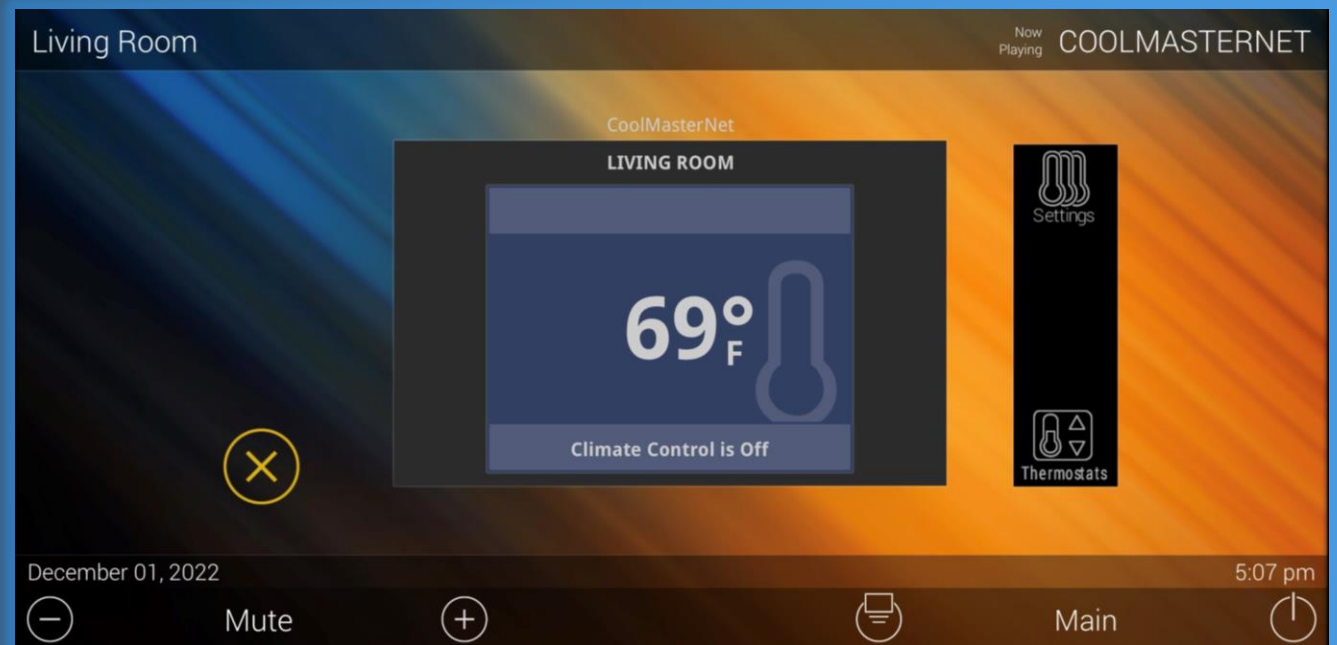
URC and CoolMaster – Summary

Adding The Module To Accelerator

- Download The Module
- Install the Module

Adding The Module To Project

- Add device
- Add IP address
- Accelerate/Download



URC CONFIGURATION STEPS COMPLETED



HVAC INTEGRATIONS: SOLUTION DESIGN PROCESS

STEP
1

What is the type and brand of the required HVAC?



Get the exact HVAC equipment list

- Mechanical Drawings
- Equipment Scope

STEP
2

How many indoors/zones need to be integrated?



Share the list with your local CoolAutomation Pre-Sale and Solution Design team

STEP
3

Device Selection
CoolAutomation provides advise on right device + connection instructions



STEP
4

Complete Driver Integration into the URC Total Control System



COMMONLY ASKED QUESTIONS

- Can the original vendor's thermostats/central controllers be removed, or should they remain?
- Where is the temperature measured on the HVAC side if wired remotes are removed?
- Can the CoolMaster work with different systems simultaneously?
- Are there any additional components required from the HVAC Vendors for integration with CA and URC Total Control? BACnet Adapters? 24VAC Thermostat Adapters? etc
- How to control every indoor individually?
- What to do, if HVAC contractor left the job and/or doesn't support the equipment anymore?

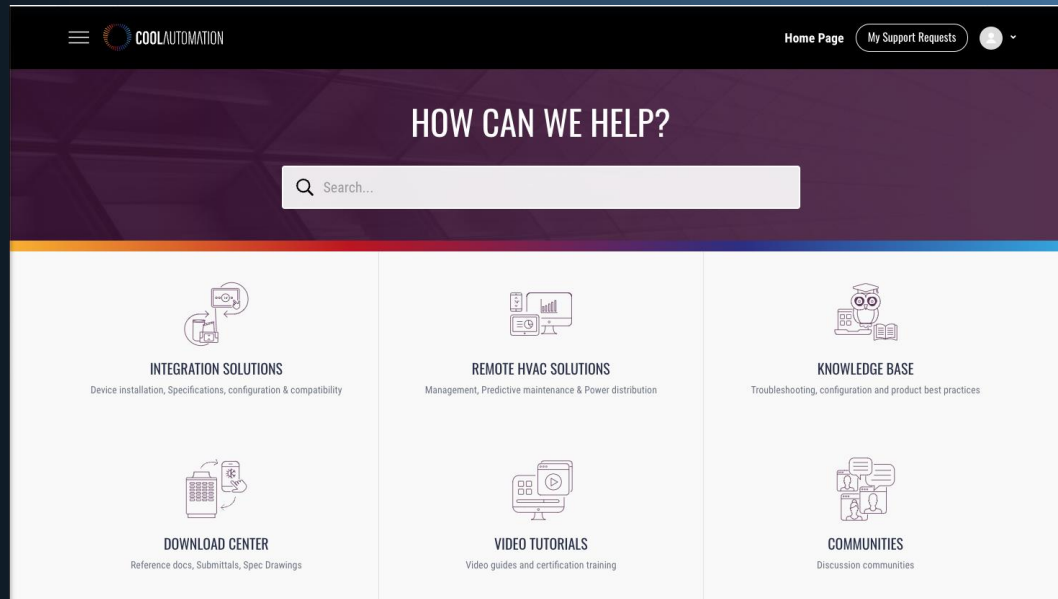
WHY WORK WITH COOLAUTOMATION?

- Leverage CoolAutomation's Expertise in Complex HVAC Connections and closed-up Protocols
- Plug & Play – auto detects all connected HVAC units for all brands and manufacturers
- Bi-directional communication with HVAC systems for passing commands, reading errors and all technical service data
- Built in Support for the major Industrial protocols/platforms on a single device – BACnet, Modbus
- Open ASCII protocol and REST API for easy integration with any other control system
- URC <> CoolAutomation Partnership: Native driver for direct integration into URC Total Control Systems
- Superior Support with Remote Support and Remote Service Capabilities
- Ready for connectivity to all available CoolAutomation Cloud Solutions for Multi-site Management

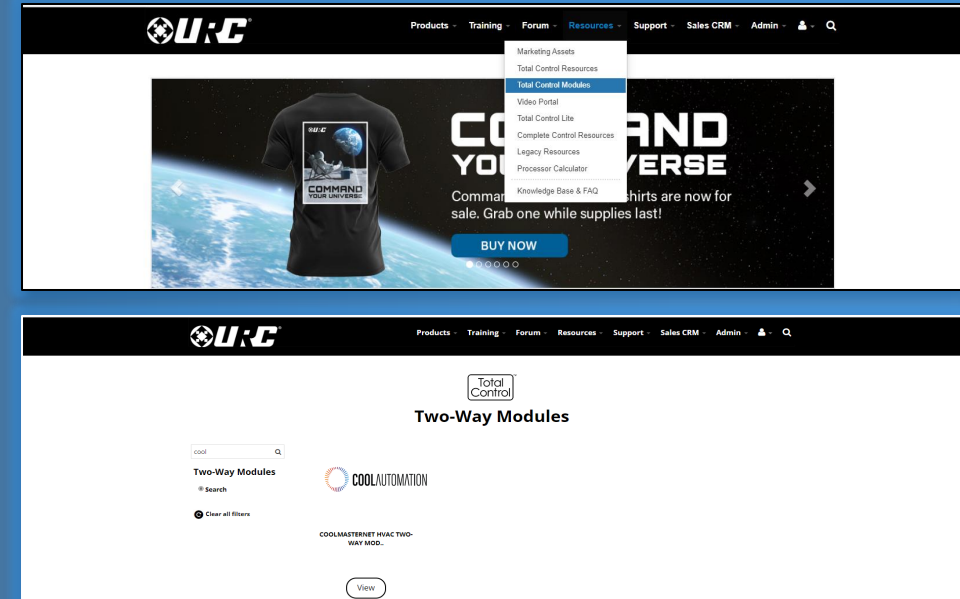
Resources

CoolAutomation

URC



Online Support Center
Installation Guides, Video Tutorials, Software
Configuration Tool Downloads, etc
www.coolautomation.com/support



BROWSE to Total Control Modules in the
Resources section on the Dealer Portal.
www.urcportal.com

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WhatsApp 1.505.439.4849 ([Click to Chat](#))

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Thank you!



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