

Bond Bridge URC Integration Guide



Version: 1.1.2
Date: Tuesday, July 16, 2024
Authors: Richard Mullins



Contents

Overview.....	3
Features.....	4
Installation.....	5
Import TCM.....	5
Add the module to your project.....	6
Install Module.....	6
Network Settings.....	7
Bond Startup and Token.....	8
Get the token on power up.....	8
Get the token with the account code and pin.....	8
System Parameters.....	9
LICENCE.....	9
FAN_LOW, FAN_MED, FAN_HIGH.....	9
FLAME_LOW, FLAME_MED, FLAME_HIGH.....	10
ACCOUNT.....	10
PIN.....	10
DEBUG.....	10
Two Way Commands.....	11
Fan Control.....	12
Fireplace Control.....	13
Shade Control.....	14
Generic Device Control.....	15
Custom Action.....	16

Overview

Bond Bridge lets you connect your existing remote controlled ceiling fans, fireplaces or blinds to your smart devices. This Wifi based device can be placed anywhere there is WiFi coverage making it easy to control IR/RF devices that are in locations that are hard to run cable.

Integration into URC allows you to activate, control fan speeds, open/close shades, turn on lights and more all from a single point using URC's touchscreens, mobile applications, keypads, handheld remote controls and more.

Bond can be purchased directly from Bond Home, through Home Depot, Best Buy or via Amazon and is easily the cheapest and easiest way to integrate Somfy RTS Shades and other RF based products.

There are also certain fans with 'smart by bond' technology built in. These fans can be controlled by the driver without any additional hardware. If you encounter a fan that has no IR, no IR nor has 'smart by bond' built in you can retrofit 'smart by bond' by using the universal smart wi-fi 4 speed ceiling fan remote controller.



Features

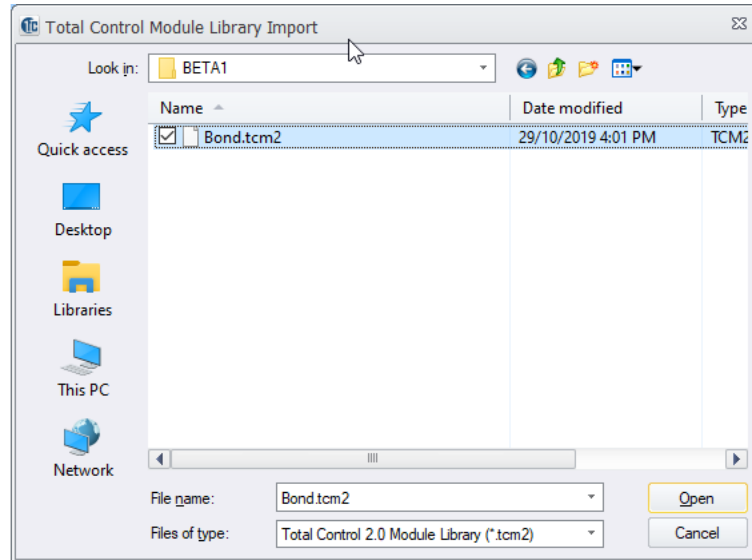
- Supported Devices
 - Smart by Bond fans
 - Fan On/Off
 - Fan Speeds
 - Light On/Off
 - Light Level
 - Fan Speed Controller
 - Fan On/Off
 - Fan Speeds
 - Light On/Off
 - Light Level
 - IR / RF based fans (including built in lights)
 - Fan On/Off
 - Fan speeds
 - Light On/Off
 - IR / RF based fireplaces
 - Flame up action
 - Flame down action
 - Flame levels action
 - Fan speeds action
 - Power On/Off
 - Blinds (including Somfy RTS)
 - Open
 - Close
 - Stop

Installation

To install the module, you will need to do the following

Import TCM

From the file menu, Import TCM Files



Add the module to your project

In Step 4. Add Other Drivers. You will need to

Install Module

Step 1 - select a room for the module

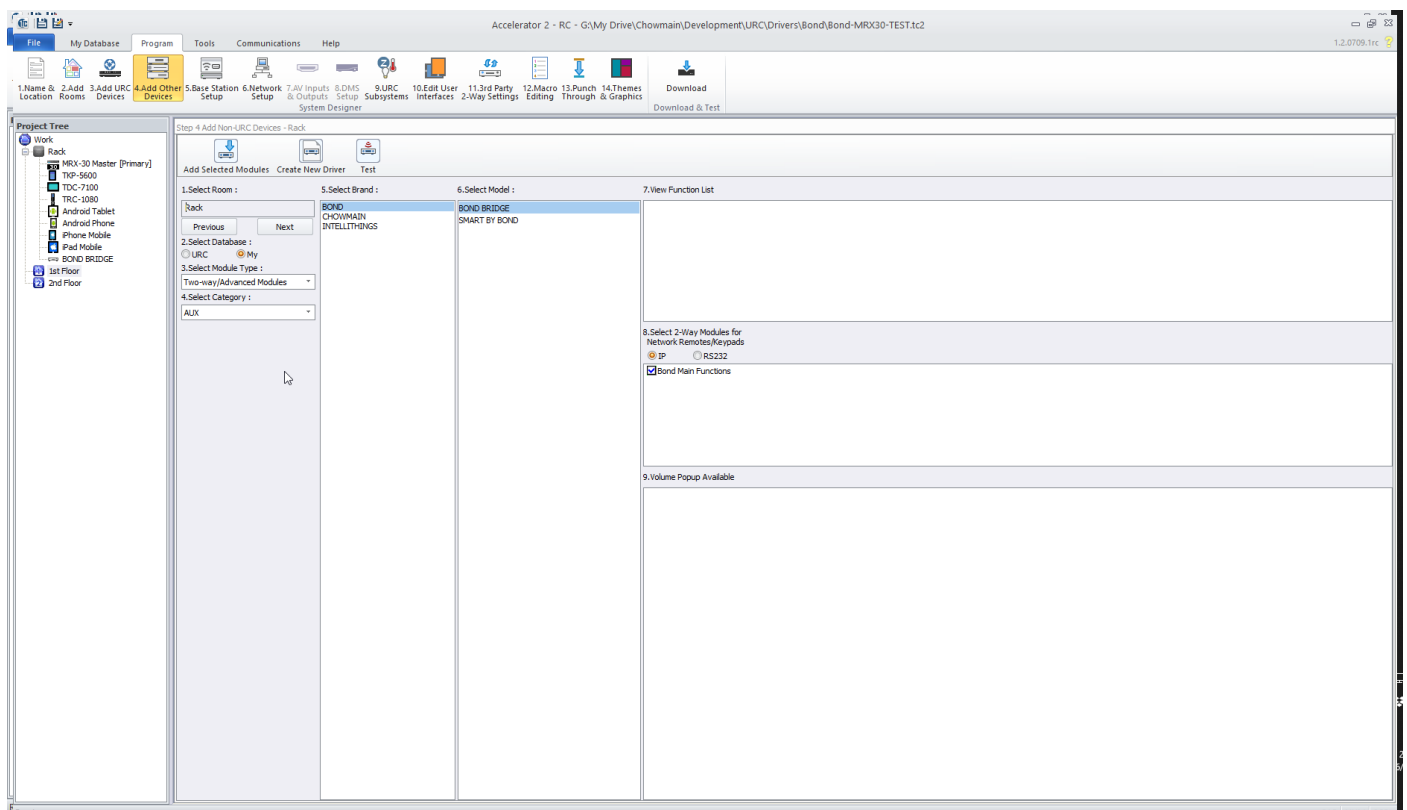
Step 2 - select My

Step 3 - select Two-way/Advanced Modules

Step 4 - select AUX

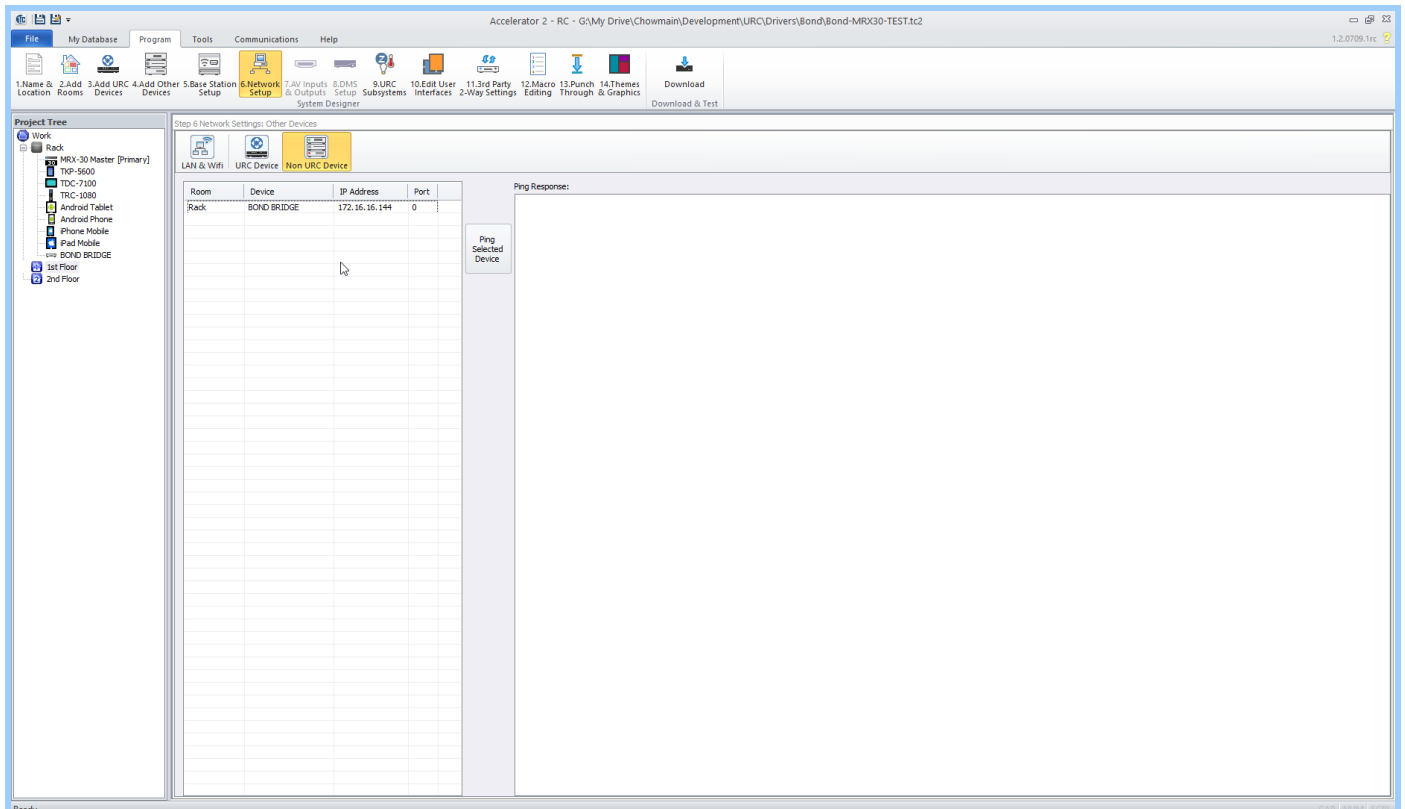
Step 5 - select BOND

Step 6 - BOND BRIDGE (double click)



Network Settings

Finally go to Step 6. Network Settings and Choose Non URC Devices. In the IP Address field enter the IP address for the Bond Bridge. Optionally you can enter a value for the port (if you've require something different from the default) or just leave it on the default - 0.



Bond Startup and Token

When you first connect to the bond a token is required for communication. you can get a new token in two ways.

Get the token on power up

The token is only available for the first 10 minutes after the bond unit is powered on. For this reason we recommend uploading your project first, then power on the bond. The module will continually check for a token until it can find one, and once it does it will save the token on to the processor. If you reload or restart your project it will first look for this saved token.

The module is also capable of resetting the token as requesting a new one. If you are having difficulty or can't control a device, try reloading your project - this will cause the module to reset and fetch a new token using this method.

So step by step to get a new Bond connected, try the following steps.

1. Configure the bond using its app, name and test the devices you are trying to control and confirm the commands you have learnt
2. Power down the Bond unit
3. Upload your URC project
4. Power on the Bond unit

Get the token with the account code and pin

As an alternative to getting the token on power up you can include the account and pin in your system parameters which will allow the module to fetch the token at any time.

The account code is available in the Bond app under Settings, Account Info. It needs to be entered without the spaces

eg:

ACCOUNT=1234ABCD0987FEDC

The Pin can be found on the base of the Bond device itself. It is a four digit number.

System Parameters

The Bond module only requires one parameter but there are some optional ones that have been detailed below.

All system parameters are entered in the following format

KEY=VALUE

The following table details the system parameters that work with this module.

Parameter	Description
LICENCE	The licence key you obtained when buying the module
FAN_LOW	Set an alternate level for the fan low speed
FAN_MED	Set an alternate level for the fan medium speed
FAN_HIGH	Set an alternate level for the fan high speed
FLAME_LOW	Set an alternate level for the flame low speed
FLAME_MED	Set an alternate level for the flame medium speed
FLAME_HIGH	Set an alternate level for the flame high speed
ACCOUNT	Your Bond account number
PIN	Your Bond device pin
DEBUG	Puts the module into it's debug mode

LICENCE

The licence parameter is where you enter the licence key obtained when buying the module. If this is left blank the module will automatically enter a trial period (the default is 90 days).

FAN_LOW, FAN_MED, FAN_HIGH

The FAN_LOW, FAN_MED, FAN_HIGH parameters let you set the levels for these commands. The default levels are

Level	Percentage
Low	20
Medium	60

Level	Percentage
-------	------------

High	100
------	-----

FLAME_LOW, FLAME_MED, FLAME_HIGH

The FLAME_LOW, FLAME_MED, FLAME_HIGH parameters let you set the levels for these commands. The default levels are

Level	Percentage
-------	------------

Low	20
-----	----

Medium	60
--------	----

High	100
------	-----

ACCOUNT

The Account number is used to get the Token for communicating with the Bond and relies on also using the PIN parameter - they work together.

The account number can be found in the bond app by going to Settings, Account Info. It will be displayed as 4 four character codes but needs to be entered without any spaces.

eg.

ACCOUNT=1234ABCD0987FEDC

PIN

The PIN parameter needs to be used in conjunction with the ACCOUNT parameter - both are required for fetching the Token. The pin can be found on the base of the Bond device itself as a four digit number.

eg

PIN=9182

DEBUG

If the DEBUG parameter is present and set to ON (DEBUG=ON) then detailed log files will be written to the base station. The log files can be retrieved remotely, but this option can affect performance so do not turn this on unless you've been asked to do so by support.

Two Way Commands

The Bond Bridge module uses Two Way commands exclusively for control. Each Bond device needs to have its own driver installed, so if you have two Bond devices you will need two instance of the driver installed. Control of the physical devices is done by name - the name you have given the device in the app.

All of the available commands are accessible through the Two Way Commands dialog, but the unit will only respond to the commands you have programmed in. If you try to use a command that is not available in the app the module will not do anything.

In each case you need to provide the name of the device, and it must match the name you've given that device in the Bond app exactly - if the names don't match you will have no control.

Each set of commands is described below.

The screenshot shows the '2-Way Module Command' dialog box. It is divided into several sections:

- Name :** A text input field containing 'Fan ON'.
- Available Devices :** A dropdown menu showing 'BOND BRIDGE [Rack]'.
- Available Command :** A list box with the following items: 'Fan Control', 'Fireplace Control', 'Shade Control', 'Shade Cycle Control', 'Generic Device Control', and 'Custom Action'. 'Fan Control' is currently selected.
- Parameters :** A section containing:
 - Name :** A dropdown menu showing 'Bedroom Fan'.
 - Command :** A dropdown menu showing 'Power Toggle'.
- Result :** A section containing:
 - A checkbox labeled 'Save the result : int'.
 - A dropdown menu labeled 'Variable :'.
 - A 'Create Variable' button.

At the bottom of the dialog are 'OK' and 'Cancel' buttons.

Fan Control

The fan control commands allow for powering the fan, setting speed, controlling the direction and control of the lights. Only functions you have learnt into the Bond app will function, so choose the functions that match the name of the command in Bond.

2-Way Module Command

Name :
Fan ON

Available Devices :
BOND BRIDGE [Rack]

Available Command :
Fan Control

Parameters

Name
Bedroom Fan

Command
Power Toggle
Power ON
Power OFF
Speed 1
Speed 2
Speed 3
Speed 4
Speed 5
Speed 6
Increase Speed
Decrease Speed
Reverse Speed
Summer
Winter
Light Toggle
Light ON
Light OFF
Top Light Toggle
Top Light ON
Top Light OFF
Bottom Light Toggle
Bottom Light ON
Bottom Light OFF

Result
☐ Save the result : int
Variable :
Create
OK

Fireplace Control

The fireplace control commands allow for powering the fireplace, controlling the flame, controlling the fan and controlling the lights. As with all the commands they will only work if they have been programmed in to the Bond app first and the name for the room matches the name given in the app exactly.

2-Way Module Command

Name :
Fan ON

Available Devices :
BOND BRIDGE [Rack]

Available Command :
Fireplace Control

Parameters

Name
Lounge Fireplace

Command
Power Toggle
Power ON
Power OFF
Up
Down
Low Flame
Medium Flame
High Flame
Fan OFF
Fan ON
Fan Low
Fan Medium
Fan High
Light Toggle
Light ON
Light OFF

Result
☐ Save the result : int
Variable :
Create Variable

OK Cancel

Shade Control

The shade control commands allow for sending the blind Up, Down or stopping its motion. On some supported blinds you can also use the toggle command to send the blind in the opposite direction to the last one it travelled in.

2-Way Module Command

Name :
Fan ON

Available Devices :
BOND BRIDGE [Rack]

Available Command :
Shade Control

Parameters

Name
Kitchen Blind

Command
Up
Up
Stop
Down
Toggle

Prev Next

Result

☐ Save the result : int

Variable :
Create Variable

OK Cancel

Generic Device Control

The generic device control commands allow for sending the controlled device Up, Down or stopping its motion. This might be a garage door, a non supported but generic blind, or really any device that allows you to learn the RF codes. The commands must match the ones you have learnt into the Bond app.

2-Way Module Command

Name :
Fan ON

Available Devices :
BOND BRIDGE [Rack]

Available Command :
Generic Device Control

Parameters

Name
Devicee

Command
Up
Up
Stop
Down

Prev Next

Result

☐ Save the result : int

Variable :

Create Variable

OK Cancel

Custom Action

The custom action Two Way command has been included to support future actions that might come along. The command works in the same way as the other Two Way commands, requiring you to enter the Device name exactly as you have in the Bond App, but it allows you to enter a custom action name - the name you have learnt the code into in the Bond app. This allows you to use a command that wasn't present during the development of the module.

2-Way Module Command

Name :
Fan ON

Available Devices :
BOND BRIDGE [Rack]

Available Command :
Custom Action

Parameters

Name
Device

Command
Power

Prev Next

Result

☐ Save the result : int

Variable :

Create Variable

OK Cancel