



# **Rinnai N-BW2 Networker Bridge Driver**

## **Installation and Usage Guide**

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## Document Revision History

Revision	Date	Details	Author
1.3	23/01/2020	<ul style="list-style-type: none"><li>- Added notes for updated Evaporative System control following driver update to version 20191211</li><li>- Updated Driver Central Project creation and licencing steps</li><li>- General formatting update</li></ul>	DB
1.2	17/06/2019	<ul style="list-style-type: none"><li>- Added special notes for NC-3 systems and the non-broadcasting of temperatures over the Brivis bus to the N-BW2.</li><li>- Added special notes for NC-6 systems and the non-broadcasting of temperatures over the Brivis bus to the N-BW2 when in STSP operation.</li></ul>	DB
1.1	11/06/2019	Original Document release.	AC / DB



## Overview

The Rinnai N-BW2 Networker Bridge Driver provides integration between Control4 and compatible Brivis networker-based HVAC systems through Wi-Fi based IP communications.

Purchased within the Rinnai Touch Wi-Fi Kit, the N-BW2 Networker Bridge is compatible with Brivis Ducted Gas Heating, Dual Comfort or Evaporative Cooling systems with existing NC-3, NC-6 or NC-7 Wired Networker Controllers.

## Driver Features

- Support for Gas Heating, Add-on Cooling & Evaporative Cooling systems.
- Single Setpoint / Multi Setpoint system compatibility
- Automatic discovery of a single N-BW2 Network Bridge on the Wi-Fi network
- Self-healing - if IP address changes, the driver will automatically rediscover the unit.
- Auto configuration of available HVAC Modes from Networker.
- Auto configuration of available Fan Speeds from Networker.
- Auto naming of zones
- Multi-zone control
- Temperature Feedback
- Setpoint control
- Fan speed control
- Built in Scheduling
- Built in Presets
- HVAC System Error detection and feedback
- N-BW2 offline/online events

## Driver Support

This driver is developed by Argus Technologies and is supported by driverCentral. Please submit a ticket through <http://help.drivercentral.io> for support.

## Disclaimer

This driver is designed to be used with Brivis home comfort systems that support a single Rinnai N-BW2 Networker Bridge. Argus Technologies is not responsible should the driver not be compatible with the hardware installed. Please ensure that the N-BW2 Networker bridge is installed and working correctly with the existing Brivis Comfort System and has been tested with the Rinnai Touch app over the homes existing Wi-Fi network prior to the purchase of this driver.



## Change Log

### Version #20191211 - 11-DEC-2019

- Updates to Evaporative System control for OS3 operation. Evaporative System control is now limited to only setting a perceived “Comfort Level” – akin to when Brivis operates evaporative cooling in AUTO mode. As such there is no ability to manually control pump or fan speed.
- Display of “0” deg C temperature as default for Brivis NC-3 and NC-6 (STSP) controllers that do not publish the measured temperature over the Brivis bus.

### Version #20181030 - 30-OCT-2018

- Initial Release

## HVAC System Compatibility

The N-BW2 is compatible with Brivis NC-3, NC-6, NC-7 Wired Networker Controllers. Please contact Brivis for any installation and compatibility queries.

## N-BW2 Purchase

The N-BW2 can only be purchased and installed through authorised Brivis dealers. Please contact a Brivis HVAC installer to arrange this.

## Hardware Installation

A summary of the Electrical Control Wiring is as follows. For full installation details please refer to the Rinnai Touch Wi-Fi Kit N-BW2 Installation Manual.

### NC-3 & NC-6 Type Networkers

The N-BW2 must be powered by its own 12VDC plug-pack and connected to the system – See Figure 1

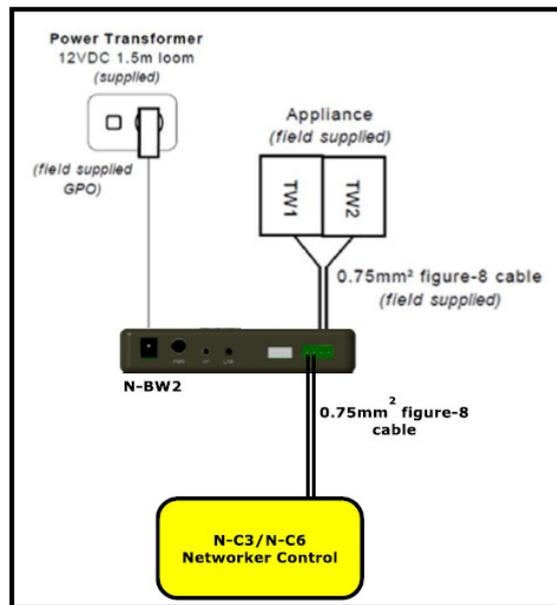


Figure 1: N-BW2 Connection to NC-3 or NC-6

#### Special notes for NC-3 based systems

Rinnai have advised that for older NC-3 based systems, Brivis systems are unable to broadcast the measured zone temperature to the N-BW2. As of driver version 20191211 a default temperature of “0” deg C will be displayed in Control4 user interfaces as a result.

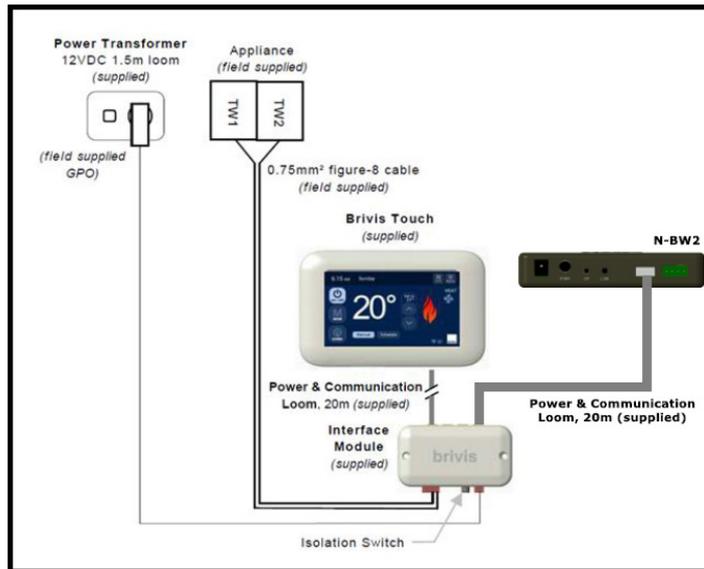
#### Special notes for NC-6 based systems

Rinnai have advised that for NC-6 based systems that have been configured for STSP (Single Temperature Set Point) operation, Brivis systems will not broadcast the measured zone temperature to the N-BW2. As of driver version 20191211 a default temperature of “0” deg C will be displayed in Control4 user interfaces.

By having a Brivis installer configure the NC-6 controller for MTSP (Multi Temperature Set Point) operation will however enable the measured temperature to be broadcast to the N-BW2, and in turn Control4. Rinnai have advised that future NC-6 firmware modification will broadcast these measured zone temperatures when in STSP operation.

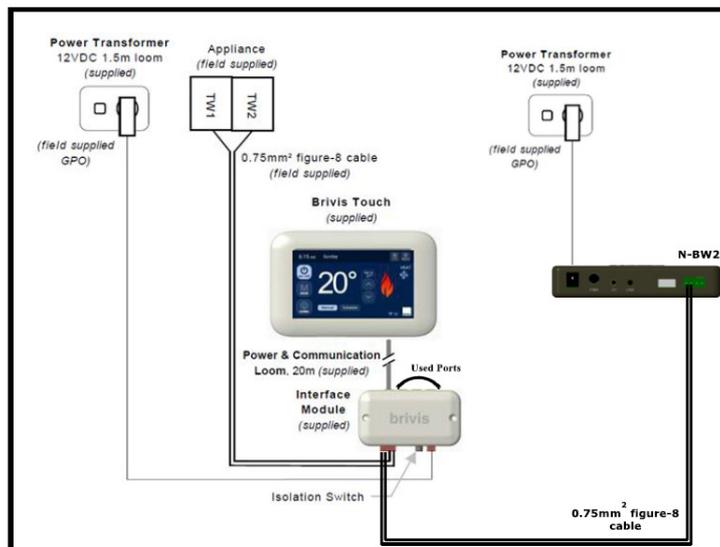
## Brivis Touch (NC-7) Type Networker

When a spare port is available on the Brivis Touch Interface Module this port can be used to connect the N-BW2 as it is pin-to-pin compatible with the corresponding connector on the N-BW2. In this case the 12VDC plug-pack is not needed to power the N-BW2 – See **Figure 2**



**Figure 2: N-BW2 Connection to Brivis NC-7 Touch System**

When no spare port is available on the Brivis Touch Interface Module then the N-BW2 must be powered by its own 12VDC plug-pack and connected to the system as illustrated in **Figure 3**



**Figure 3 - N-BW2 Connection to Brivis NC-7 Touch System**

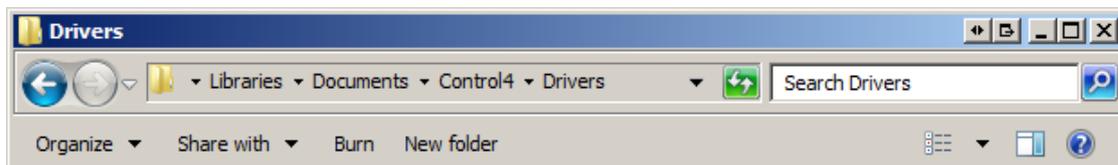


### Driver Installation

1. The driver you have downloaded will be in a zip file. Double click on this file to open it in your preferred zip program (WinZip, WinRar, etc.).



2. Extract the c4i file to the My Documents\Control4\Drivers directory. If you are using Windows 7 or 8 this will be extracted to the Libraries\Documents\Control4\Drivers directory.



3. You are now ready to add and configure the driver via the Composer Pro software.



## Adding the driver

**IMPORTANT** – Before undertaking the installation of the driver please follow the licencing steps outlined at the end of this document.

1. Launch the Control4 Composer Pro application and connect to your project
2. In the ‘System Design’ page select the ‘Search’ tab on the right-hand side.
3. Type in ‘Rinnai’ in the search bar and press Enter on the keyboard

rinnai

Local  Online  Certified Only [Clear Search](#)

Category:  
-- All Categories --

Type:  
-- All Types --

Manufacturer:  
-- All Manufacturers --

Control Method: All Methods Sort: Relevance

Rinnai N-BW2 (Zone)	Rinnai	Local
Rinnai N-BW2 (Master)	Rinnai	Local

4. Double click on the ‘Rinnai N-BW2 (Master)’ driver to add it to your project.
5. For each HVAC zone double click on the ‘Rinnai N-BW2 (Zone)’ driver to add it to your project.
6. Highlight the ‘Rinnai N-BW2 (Master)’ driver on the left-hand side.
7. The driver should automatically discover the N-BW2 Networker Bridge – if it’s connected via Wi-Fi to the same local network as your Control4 system. If it’s not, please make sure multicast / broadcast routing is enabled on your wireless access point and switch.



IP Address	172.16.16.251
Port	27847
Connection Status	CONNECTED

8. The driver will provide you with useful information which will help you with your setup and troubleshooting.

EG – The screenshot below shows that the Common Zone is not installed, Zone A is installed, named Master bedroom and is currently OFF.

N-BW2 Firmware Version	0173
Zone Common Installed	NO
Zone Common Power	OFF
Zone A Installed	YES
Zone A Name	Master bedroom
Zone A Power	OFF

9. Click on the Connections tab.

10. Highlight the 'Rinnai N-BW2 (Master)' driver

11. Bind each Zone to a 'Rinnai N-BW2 (Zone)' driver.

Name	Type	Connection	Input/Output	Connected To
<b>Control Outputs</b>				
Zone A	Control	RINNAI_ZONE	Output	Master bedroom->Rinnai Zone
Zone B	Control	RINNAI_ZONE	Output	Rinnai Zone 2->Rinnai Zone
Zone C	Control	RINNAI_ZONE	Output	Living area->Rinnai Zone
Zone D	Control	RINNAI_ZONE	Output	Rinnai Zone 4->Rinnai Zone
Common Zone	Control	RINNAI_ZONE	Output	

12. The driver will automatically rename the zones to the names obtained from the Networker. Note, this is only done upon initial binding. You can rename it to something more suitable afterwards if you wish. Once the zones are named, set the "Import Zone Names" property in the driver to False.

Import Zone Names	False
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13. Refresh Navigator

14. Congratulations you have successfully setup the Rinnai N-BM2 driver.

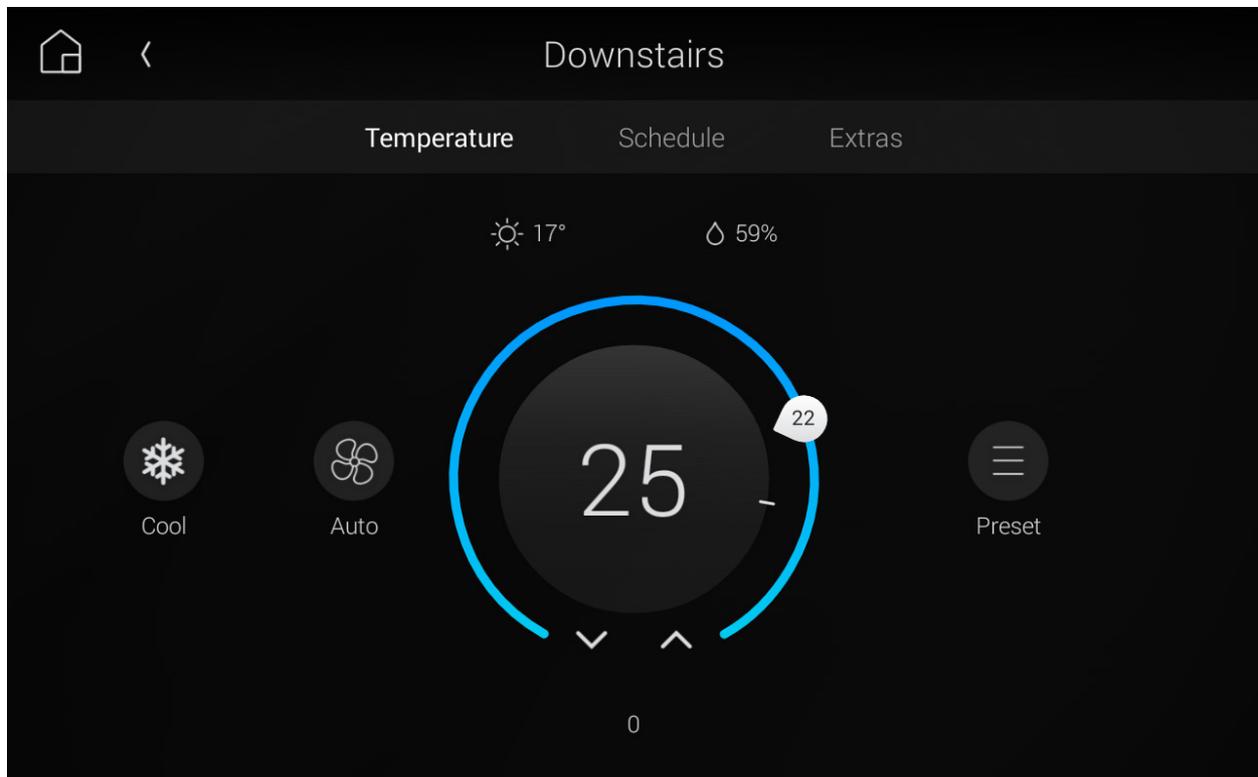
## Usage

The N-BW2 can be controlled through the Comfort icon within Control4's user interface.

## Temperature

The Temperature tab allows you to control the following.

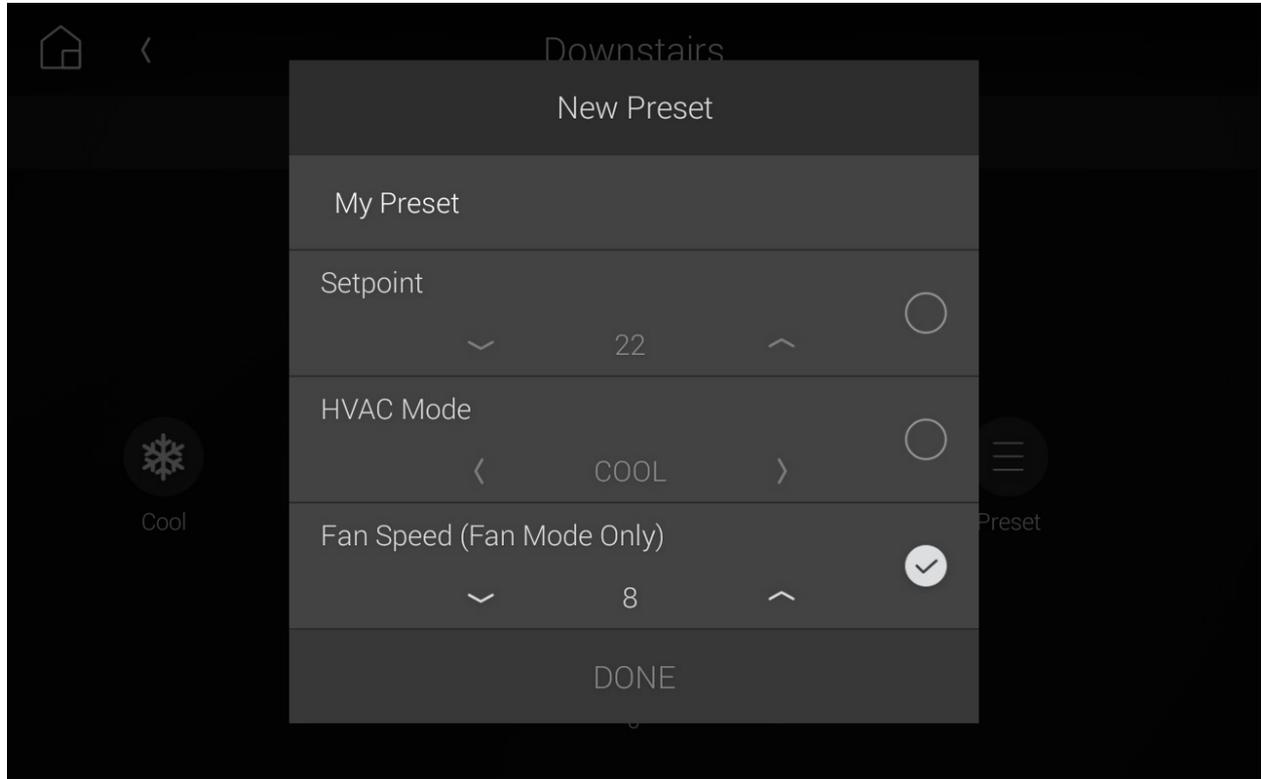
- **MODE** – OFF, HEAT, COOL, FAN (note not all modes are available and is dependent on the HVAC system)
- **FAN** – AUTO, ON, 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16 (note not all speeds may be available and are dependent on the HVAC system)
- **SETPOINT** – min-max degrees Celsius (single setpoint – min and max are dependent on the HVAC system)
- **PRESETS** – This is used to save your favourite preset so you can recall it at any time or set it in a schedule





## Presets

Presets under the Temperature tab can be used to save and recall your favorite HVAC preset.

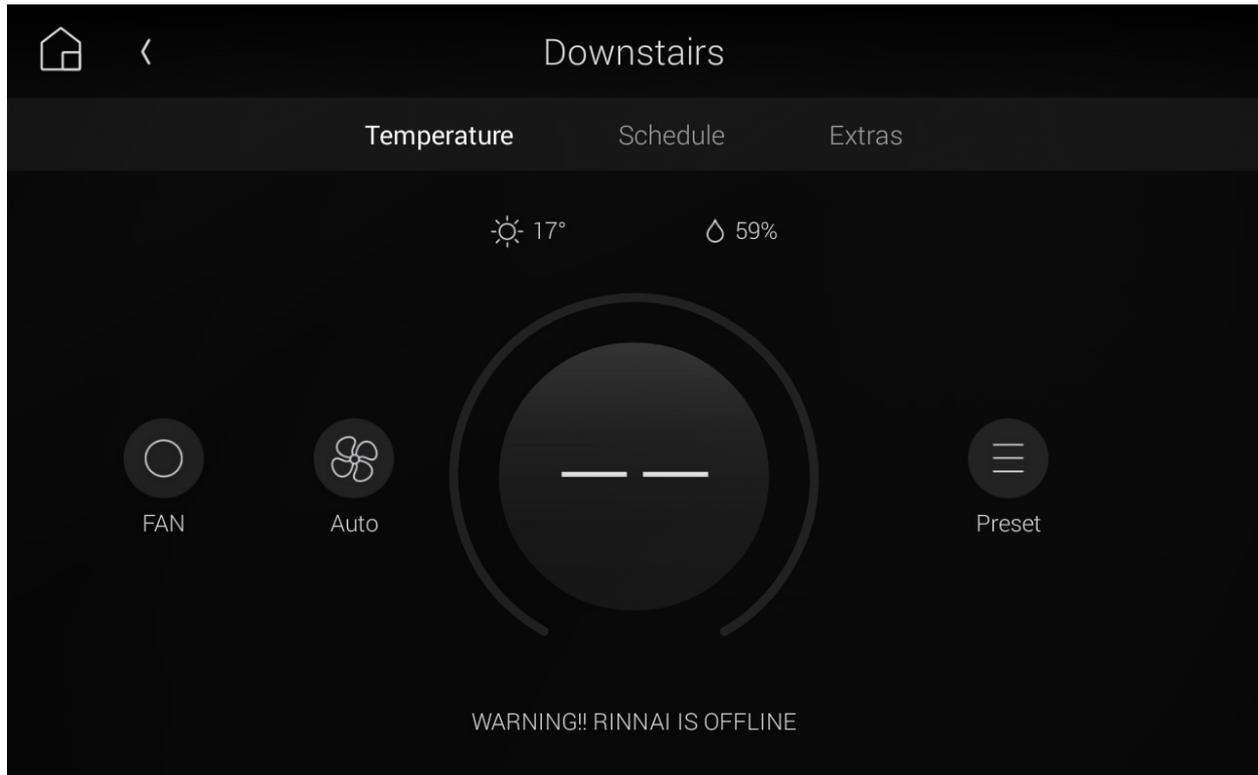




## Errors

The Temperature tab will also provide the following feedback on errors.

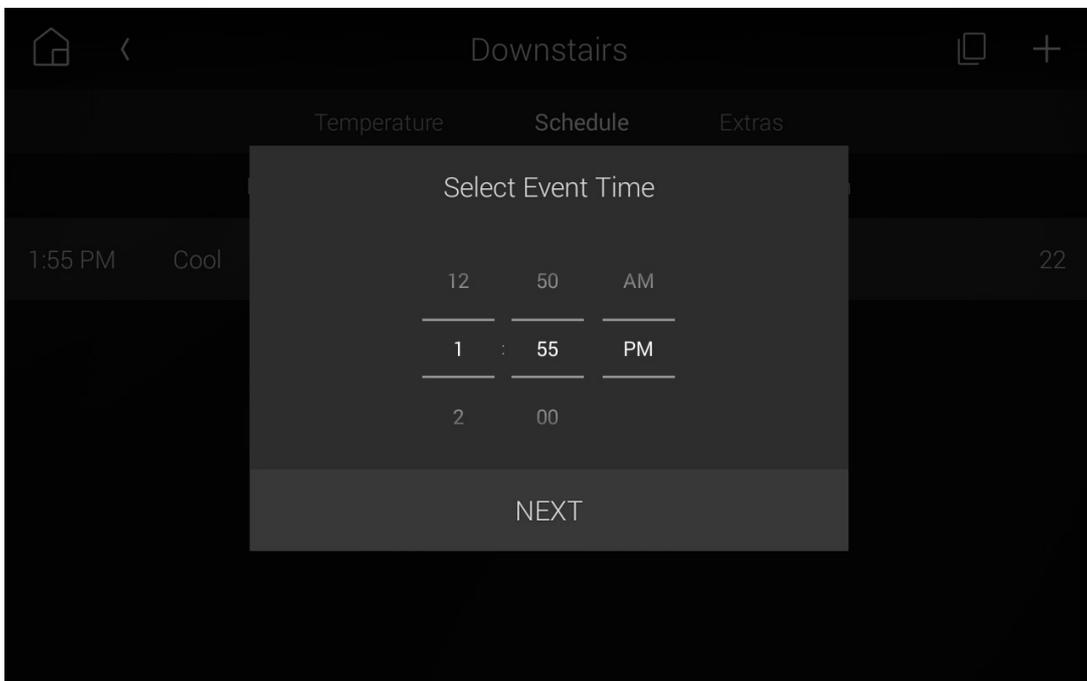
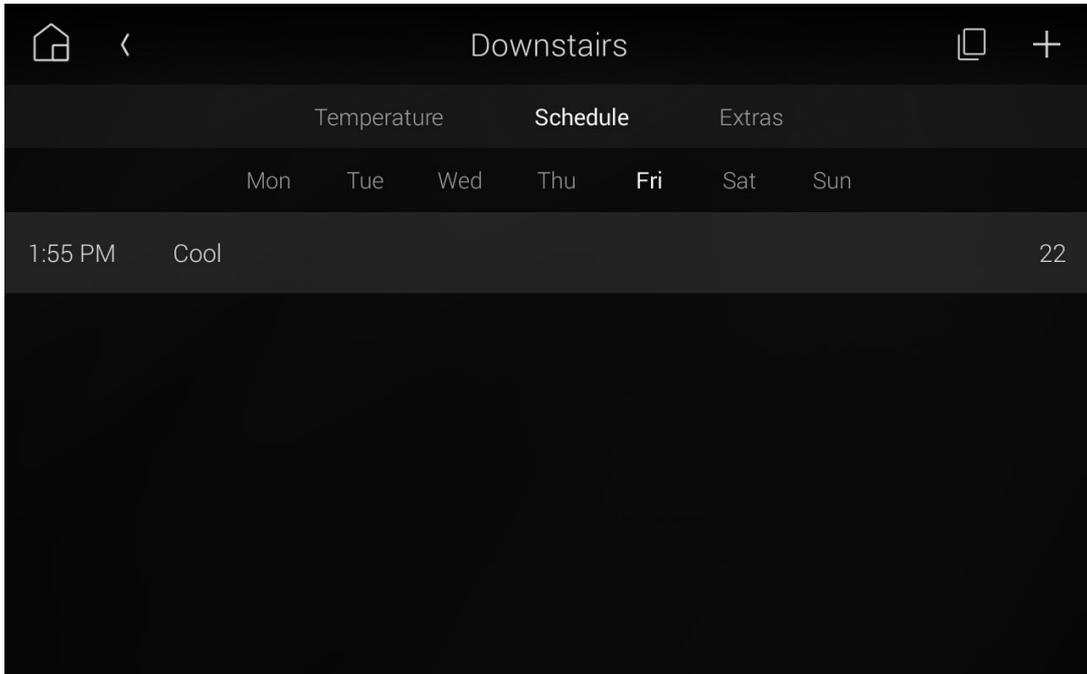
- RINNAI OFFLINE (if the driver fails to communicate to the N-BW2)
- ERROR CODE (If there is a fault with the Networker hardware or part of the HVAC system).





## Schedule

The Schedule tab is used to add/remove schedules in Control4 which are tied to the presets we setup earlier in the Temperature tab.



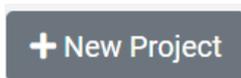


## Licensing

Argus Technologies drivers require a valid licence to use the driver. Drivers can be purchased from our distributor [driverCentral](#) however all Argus Technologies drivers come with a 7-day trial. We recommend that prior to purchasing a driver that you test the driver out to ensure that it will work with your hardware and will meet your requirements. The licencing procedure is broken down into 4 steps.

### STEP 1 - Creating your project on driverCentral

1. Visit <http://www.drivercentral.io> and login to your Driver Central dealer account.
2. Visit the Project Portal and click on the *+ New Project* button



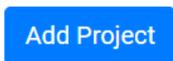
3. The "Add New Project" dialog will be displayed. Type in a meaningful name for your customers project.

**Add New Project** ✕

Project Name

Close Add Project

4. Click on *Add Project* button



The newly created project will be displayed within the table of projects.

Project	Status	Created
Rob's House	Unassigned Project	2020-01-21 20:05:01



5. Click on the newly created project to expand the project details.

Take note of the Project Token as this will be used in STEP 3 on installing the driverCentral Cloud driver. An example of token is shown below.

The screenshot shows a project details window titled "Rob's House" with a close button (X) in the top right corner. The window contains the following information:

- Project Token:** 421F79EF76 (highlighted with a red arrow)
- MAC:** (empty field)
- IP:** (empty field)
- Connection Status:** Offline (indicated by a red pill)
- Last Seen:** (empty field)
- Actions:** +, gear, link, trash icons

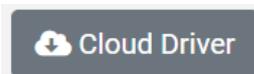
A light blue message box states: "There are no drivers attached to this project." A "Close" button is located in the bottom right corner of the window.



## STEP 2 – Install and activate the driverCentral cloud driver

**PLEASE NOTE:** Only one instance of the DriverCentral cloud driver is required per Control4 project. Do not install additional cloud drivers.

1. Visit <http://www.drivercentral.io> and login to your Driver Central dealer account.
2. Visit the Project Portal and click on the Download *Cloud Driver* button



3. Copy the driverCentral-Cloud.c4z driver to My Documents\Control4\Drivers directory.
4. Add the driver to your Control4 project.
5. Click on the cloud driver to view its properties
6. Type in the project token you took note of in STEP 1 and press the Set button

Properties	Documentation	Lua
Cloud Status	Please enter cloud project token below...	
Project Information	(0) Total, (0) Licensed, (0) Trials, (0) Expired, (0) Updates.	
Driver Version	1015	
Project Token	<input type="text"/>	
	Project token from driverCentral.io project portal	
Driver Actions	<input type="button" value="Set"/>	

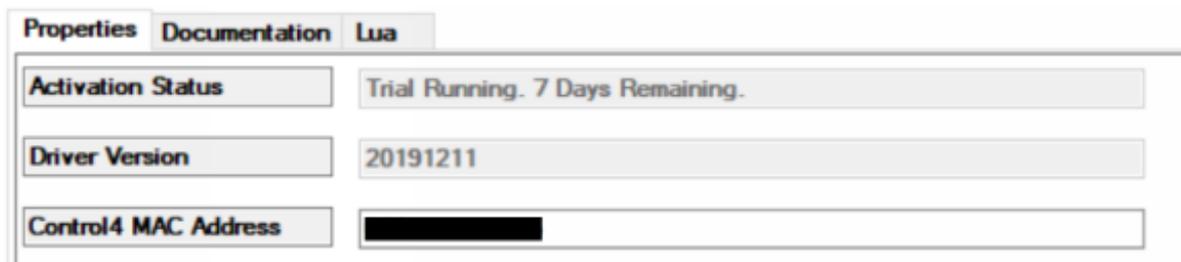
7. Click on the Driver Actions Property, choose (1) *Check Drivers* then press the Set button. The driverCentral Cloud driver will link and check-in to the driverCentral project created in STEP 1.

Properties	Documentation	Lua
Cloud Status	Check-in Success, Last Check-in: Thu Jan 23 14:32:46 2020	
Project Information	(0) Total, (0) Licensed, (0) Trials, (0) Expired, (0) Updates.	
Driver Version	1015	
Project Token	<input type="text" value="*****"/>	
	Project token from driverCentral.io project portal	
Driver Actions	<input type="button" value="Set"/>	



### STEP 3 – Install the Argus Technologies N-BW2 driver

1. Install the Argus Technologies Rinnai N-BW2 driver as per **Adding the driver** instructions detailed earlier in this guide.
2. Once installed and linked to your DriverCentral project, the *Activation Status* field within the properties tab of the Rinnai N-BW2 (Master) driver will reflect the current status of the driver.



A driver that does not have a purchased licence will run with an indicated trial period until it expires. Note, there is no way to reactivate the trial so please enable and use wisely!

3. If you do not see a status, then press the Check Drivers action in the driverCentral Cloud driver again.
4. Once you and your customer have evaluated and are happy with the driver’s functionality you can purchase a driver licence, as per the instructions in STEP 4. Should a licence not be purchased, the driver will enter an “Expired” state following the trial period and become inactive.

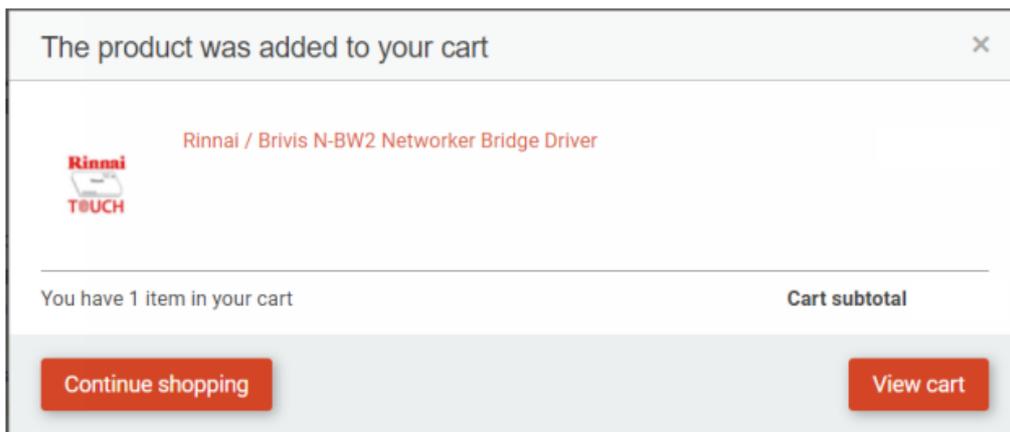


## STEP 4 -Purchase driver licence

1. Visit <https://www.drivercentral.io/> and find the Rinnai N-BW2 Networker you want to purchase a licence for.
2. Click on the *Add To Cart* button

A red rectangular button with the text "ADD TO CART" in white, uppercase letters.

3. When the dialog below is displayed click on View Cart



4. Confirm that your order is correct and click on the Proceed to checkout button

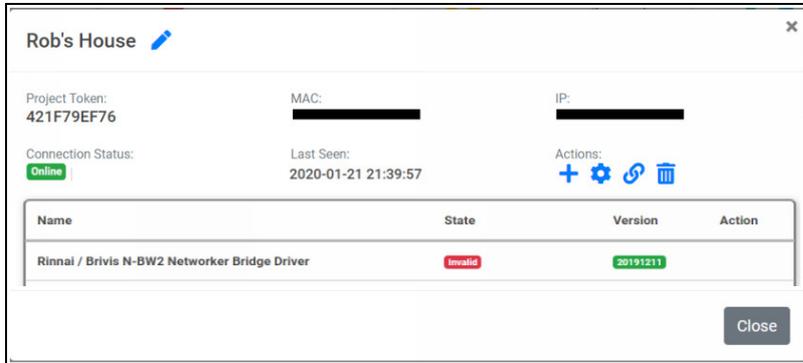
A red rectangular button with the text "Proceed to checkout" in white, uppercase letters.

5. Follow the checkout prompts and click on the *Place order* button

A red rectangular button with the text "Place order" in white, uppercase letters.

6. This will take you to PayPal for payment.
7. Pay via PayPal. It will automatically return you to DriverCentral when the purchase is confirmed.

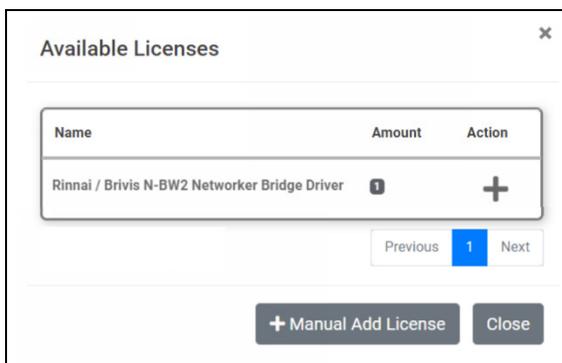
8. To assign the licence, choose the project from within the Portal as was created in STEP 1.



9. Choose the Add Licence action



10. Select the Rinnai N-BW2 Networker Bridge Driver from the list of available licences by pressing the + Action.



11. The licence will then become linked to the project and its state change to "Activated"

