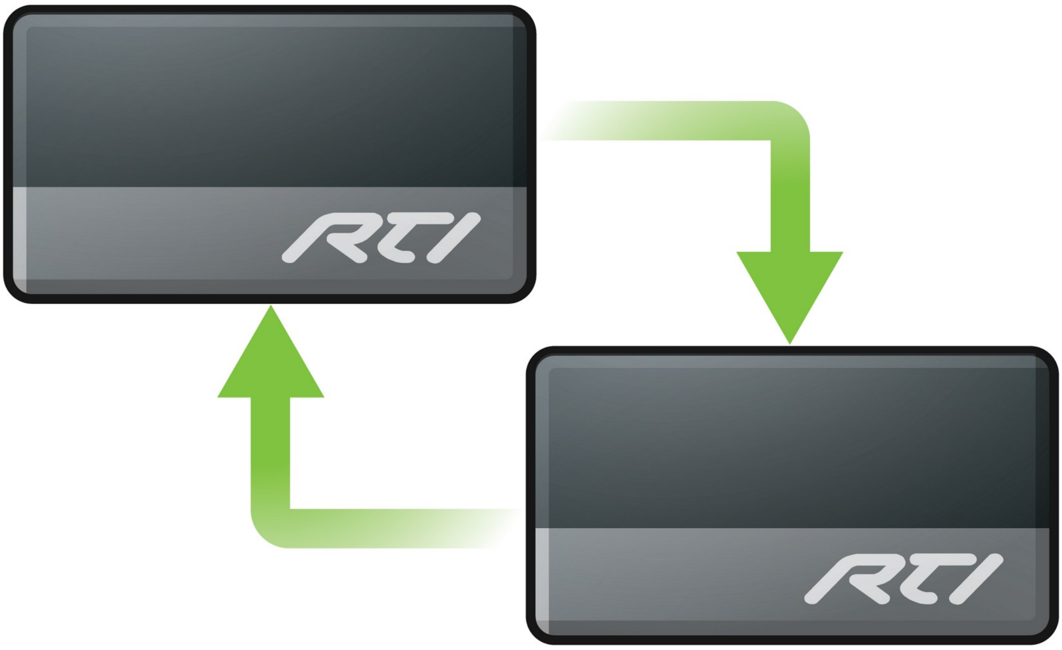
System To System Installation and Usage Guide



Version: **1.0**
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Contents

Overview

The System To System module has been designed to join to RTI systems from different projects together. The typical use case for this driver is a multi unit development that has shared areas. In this case the shared areas would be controlled by a separate processor running its own project, but the unit processors still need to communicate with the shared area processor for security, lighting, etc.

The System To System driver allows you to send Booleans, Integers or Strings to the remote processor by using local functions. On the remote processor the matching System To System driver will expose those as variables. You can also trigger events from the boolean variables you define.

Features

- Send Booleans to remote processor
- Send Integers to remote processor
- Send Strings to remote processor
- Send Events to remote processor
- Receive Booleans from remote processor
- Receive Integers from remote processor
- Receive Strings from remote processor
- Receive Events from remote processor
- Arrange your signals into zones to allow for multiple remote processors or for easier room or zone control
- Supports up to 20 booleans, integers and strings per zone
- Supports up to 10 zones
- Name all your variables and events for easier programming

Installation

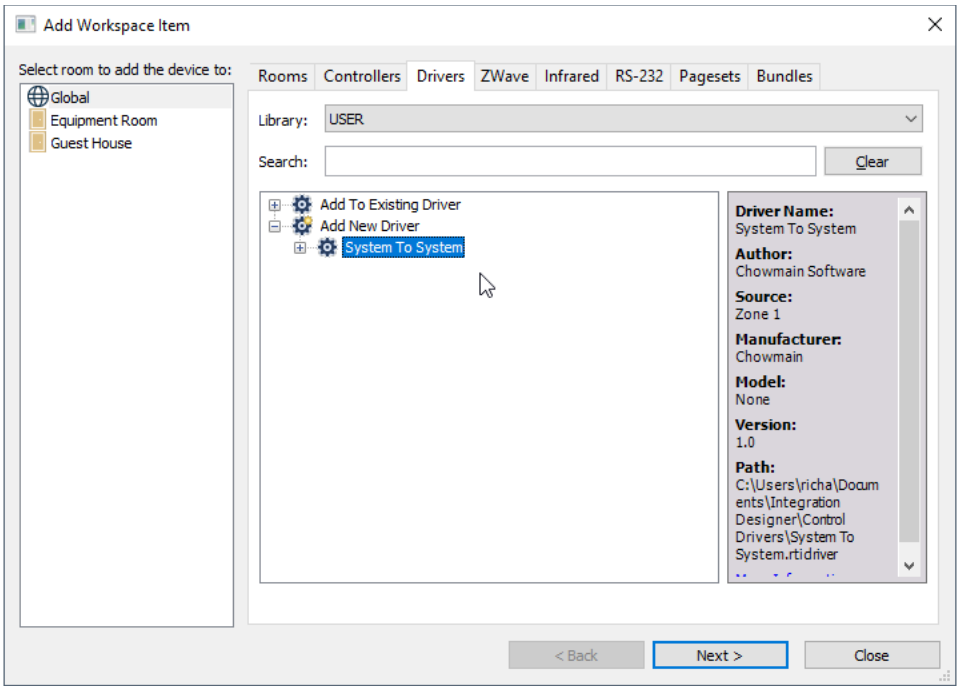
The zip file that included this documentation has the rtidriver file you will need to add. The first step is to download and extract the driver from the zip file. The default location is Documents\Integration Designer\Control Drivers

This driver is designed to work with a remote processor, so to make effective use of it you will need two copies of the driver, one for each processor. Each driver will need its own licence, so make sure you have ordered at least two licences before you start.

Add the driver

Click on to the Drivers tab at the top of the Add Workspace Item window. For ID11 make sure to choose the USER library,. Select the appropriate room to install the driver into and click Next. If required change the driver name and when your done click Add Device. If you have more than one driver to add repeat the process.

The driver is now ready to configure or use.



Library: USER

Driver Name:
System To System
Author:
Chowmain Software
Source:
Zone 1
Manufacturer:
Chowmain
Model:
None
Version:
1.0
Path:
C:\Users\richa\Documents\Integration Designer\Control Drivers\System To System.rtidriver

Usage

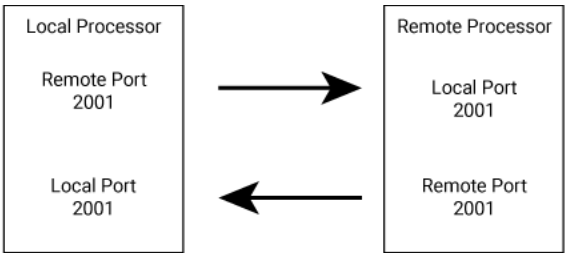
This is a very flexible driver and can be used in many different configurations but, due to that flexibility, it can be a little confusing to get started. Some of the more common uses cases are detailed below to help you get started.

One To One

The most straightforward configuration is simply connecting two processors together. This could be for a bigger job that uses separate projects to keep maintenance easy or perhaps for remote monitoring. In this case it is simply a matter of installing the driver on each processor (they will also need separate licences) and making sure the configuration is set correctly.

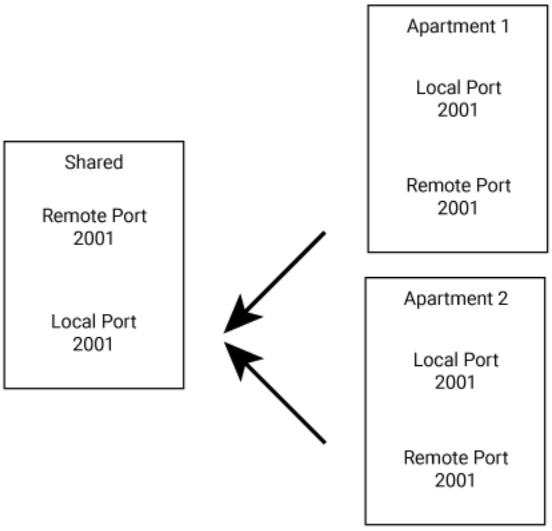
The driver needs to know the remote systems IP address and port. On the remote processor, the port it makes available is the local port. This will allow you to send any values to the appear on the remote processor as variables. If you want the remote processor to be able to send values back, then you would also need to set the remote processor driver with an IP and port for the local processor as shown in the image below.

Note: if you don't need any feedback from the remote processor you can leave its IP and remote processor port settings as the defaults.



One To Many (inbound)

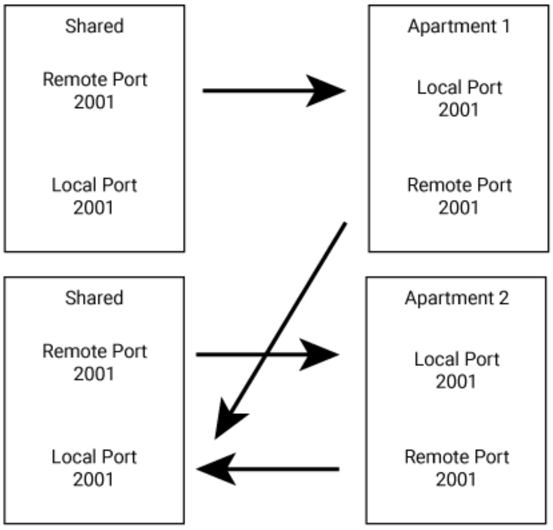
In a more complex setup you may want to have multiple processors having values sent to them from a central processor. Lets say you have two apartments with a common area that has shared door locks. In this case you may want to give each apartment control of the lock. For this setup you would set the shared processor up as the local processor and configure the modules in each apartment to the shared processor IP and local port as shown in the image below.



Many To Many (outbound)

In a more complex setup you may want to have multiple processors having values sent to them from a central processor. Lets say you have two apartments with a common area that has shared lights and shared locks. In this case you may want to have each apartment have the state of the lights and locks available, as well as being able to control them.

In this case the shared area processor has two instances of the driver with the remote IP address set to each of the apartment processors (the ports need to match too). With the return data you want to make sure it all comes to one of the shared module drivers so they are both controlling the same thing. The diagram below shows how to make the connections.



Driver Commands

Zone x Boolean Commands

Up to 20 functions will be available in the boolean commands section. The name of each command will match the name you provided in the configuration. The valid options are True or False.

Zone x Integer Commands

Up to 20 functions will be available in the integer commands section. The name of each command will match the name you provided in the configuration. The valid values are any integer value.

Zone x String Commands

Up to 20 functions will be available in the string commands section. The name of each command will match the name you provided in the configuration. The valid options are ang string up to 256 characters in length.

Driver State

The Driver state sections has one function, Get State. This function is used for diagnostics and should not be included in your project unless you are asked to do so by support.

Driver Variables

Zone x Boolean Variables [boolean]

Up to 20 variables will be available in the boolean variables section. The name of each command will match the name you provided in the configuration. The valid options are True or False.

Zone x Integer Variables [string]

Up to 20 variables will be available in the integer variables section. The name of each command will match the name you provided in the configuration. The valid values are any integer value.

Zone x String Variables [string]

Up to 20 variables will be available in the string variables section. The name of each command will match the name you provided in the configuration. The valid options are ang string up to 256 characters in length.

Driver Events

Connection State Events

When the module connects to the remote copy of the driver it will trigger these events.

Connected

The connected event will trigger when the driver connects to the remote instance

Disconnected

The connected event will trigger when the driver disconnects from the remote instance

Zone x Boolean Events

When you define a boolean variable in the driver, along with being able to access the value as a boolean variable, it will add an event. The events will be named the same as the variable for easy programming. When the variable is set to true the event will fire.