

# Clipsal C-Bus® Interface

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This driver helps to control the Clipsal C-Bus lighting control system Via RS232 or TCP/IP. It will allow you to control any application on the default network address of 254, but at present 2-way feedback via variables are only provided for the default lighting application 56 (38h), 48, 49 and 95. Events are supported for applications 48, 49, 56 and 95.

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This driver is provided free of charge and as such we will not accept liability of any kind. If this is unacceptable please uninstall the driver immediately.

## **Note:**

Serial Control:

The Clipsal C-Bus PC interface (5500PC) requires a straight through connection to one of the eight bi-directional RS232 ports on the XP-8 (2-2 3-3 5-5). While the 5500PC has 3 physical RS232 connections on it (1x DB9 and 2 x RJ45), it will only support one serial connection at a time as the 3 connections are internally wired in parallel so don't try to use it as a programming port while an XP-8 is connected to it.

TCP/IP:

The Clipsal C-Bus Ethernet interface (5500CN) allows for TCP/IP control of the C-Bus system. You will need to give it an IP address on the same subnet as the XP-8 using either the Clipsal or Lantronix installer tools. The default port the CNI talks on is 10001 if you change this in the CNI you will also need to ensure the XP-8 has the same port declared in the driver settings. The CNI only supports one TCP/IP connection at a time so if you are having trouble getting the XP-8 to communicate to it ensure that there are no other devices already connected to it like the C-Bus Toolkit software.

Please report any bugs found to [bugs@mydevice.com.au](mailto:bugs@mydevice.com.au). Include driver version number and steps to reproduce the issue where possible.

## **Contents**

Clipsal C-Bus® Interface .....	1
Note: .....	1
Driver Configuration Settings:.....	3
Functions:.....	3
Lighting Commands: .....	3
Group On.....	3
Group Off .....	3

Group Toggle.....	3
Group Ramp .....	3
Group Pulse .....	3
Group Nudge Up/Down .....	4
Group Label.....	4
Enable Control Commands: .....	4
Set Network Variable .....	4
Group Pulse.....	4
Trigger Control Commands: .....	4
Set Network Variable .....	4
Group Pulse.....	4
Variables: .....	5
Button Text .....	5
Reversed State .....	5
Inactive State .....	5
Visible State.....	5
Graph Data Source .....	5
Toggle Button Data Source .....	5
Image List Data Source.....	5
Item List Data Source .....	5
Dynamic Image.....	5
Events:.....	6
Examples: .....	6
Running a system macro when a group is On or Off. ....	6
Contact Details: .....	7

## Driver Configuration Settings:

**Connection Type** – Two connection methods are available, XP-8 Serial Port or Network (TCP).

### TCP Settings

TCP Address: Enter the IP address of the 5500CN

TCP Port: Enter the port the 5500CN communicates on (default is 10001)

### Serial Settings

Serial Port: Select the XP-8 serial port the 5500PC is connected to.

Baud Rate: You should not have to change this as all 5500PC's come set to 9600 but if for some reason you change the baud rate in the 5500PC you will need to change the rate here as well.

## Functions:

### *Lighting Commands:*

These commands talk to the default lighting application (56). You will notice when you click on any of these commands you will have the option to enter a different application address. This can be any application you wish - simply enter the decimal value of the application you want to control in the "Application" field. In the group field enter the decimal value of the group address you wish to control 0 – 255. Currently the driver only supports 2-way feed back from application 56.

### Group On

This command will turn the group address you have selected to its maximum value.

### Group Off

This command will turn the group address you have selected to its minimum value.

### Group Toggle

This command toggles the state of the selected group address between On and Off.

### Group Ramp

This command allows you to ramp a group address to a level 0-100 and add a ramp/fade time with the "Ramp Rate" drop down.

### Group Pulse

This command is essentially the same as a "Bell Press" command in C-Bus but allows you to set the length of time the group address is held on for. Enter the time you want the group on for in the "Pulse Length" field the value is to be entered in milliseconds. (1000 is equal to 1 second).

## **Group Nudge Up/Down**

These commands allow you to create fade up and fade down control of a group address similar to what you would expect from volume controls. These commands are not native in the C-Bus protocol and were created in code and as such do not support correct feed back. (We hope to have this resolved in a future version of the driver) I would recommend you set the sustain rate of this driver command to 450ms to ensure a smooth fade time.

## **Group Label**

This command allows you to change the text label on a DLT button. In the label string field enter what you want the new label to say being mindful that a label only supports a limited number of letters depending on the use of capitals and certain characters.

## ***Enable Control Commands:***

### **Set Network Variable**

This command allows you to set a group address on the "Enable Control" application (App 203) to an action selector value 0-255.

### **Group Pulse**

This command is essentially the same as a "Bell Press" command in C-Bus but allows you to set the length of time the group address is held on for. Enter the time you want the group on for in the "Pulse Length" field the value is to be entered in milliseconds. (1000 is equal to 1 second).

## ***Trigger Control Commands:***

### **Set Network Variable**

This command allows you to set a group address on the "Trigger Control" application (App 202) to an action selector value 0-255.

### **Group Pulse**

This command is essentially the same as a "Bell Press" command in C-Bus but allows you to set the length of time the group address is held on for. Enter the time you want the group on for in the "Pulse Length" field the value is to be entered in milliseconds. (1000 is equal to 1 second).

## **Variables:**

Variables are provided for every group address (GA) 0-255 on application 48, 49, 56 (lighting) & 95 (dali). Each number in the list represents the decimal value of a group address on the applicable application.

### **Button Text**

This variable will allow you to display the level of a GA in a 0-100 text string. Alternatively you could drag the variable onto any piece of text and create a string index based on the level the GA is presently at.

### **Reversed State**

This variable will allow you to drag the variable of the GA you are working with onto a dual state button and when the GA is at a level greater than zero it will change the button to its reversed/active state. If your button is single state you could use the active/normal text colours to signify that the GA is on.

### **Inactive State**

This variable will allow you to make a button inactive when ever the GA of that variable is equal to greater than zero.

### **Visible State**

This variable will allow you to make a button/graphic visible when the GA of that variable is equal to greater than zero.

### **Graph Data Source**

This variable will allow you to display the level of a GA in a scale of 0-100 in a bar graph or a slider.

### **Toggle Button Data Source**

This variable will allow you to create feed back to a "Toggle" Style button as found in the RTI Oasis bitmap library. If the GA is equal to greater than zero the toggle button will show its ON state and if equal to zero it will show the OFF state.

### **Image List Data Source**

Not used in this driver.

### **Item List Data Source**

Not used in this driver.

### **Dynamic Image**

Not used in this driver.

## Events:

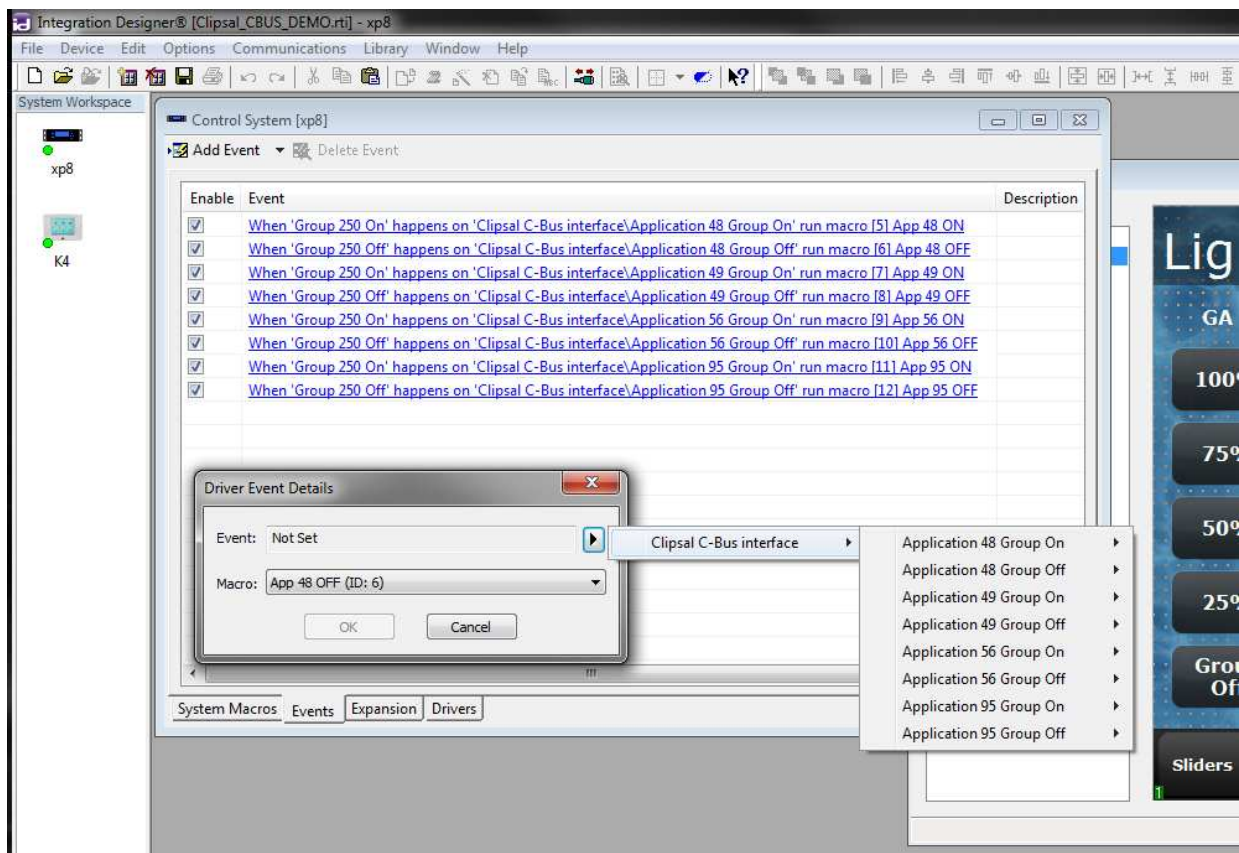
Events allow you to run a system macro based on whether a group from application 48, 49, 56 or 95 is ON or OFF. An example of this feature is in the demo file and below is step by step guide of how to set up an event.

## Examples:

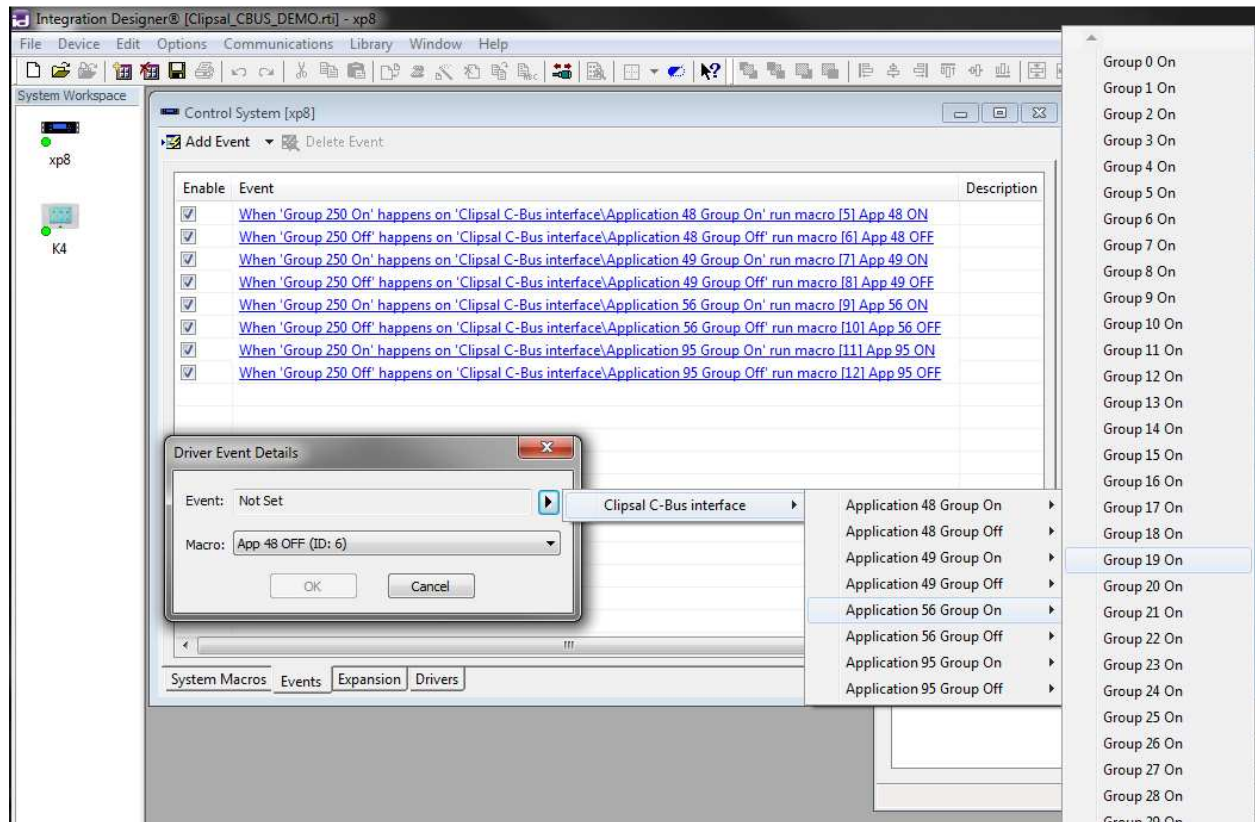
### *Running a system macro when a group is On or Off.*

This example will walk you through creating an event that runs a system macro when a group address turns On or Off.

Start by going to the events tab of the XP-8 and click on “Add Event”.



In the event section select the Clipsal C-Bus Interface. You will be presented with 4 different applications 48, 49, 56 and 95 and each will have an option to run the event based on the group being on or off. Select the application and on or off. Within on or off you will be presented with GA 0 – 255, select the GA you wish to use.



Once you have selected your GA you just need to select the macro drop down and choose the system macro you wish to run.

## Contact Details:

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It's my device...