ADEO CONTROL SGDD-C4-4

SERVER GATEWAY DMX & DALI

for Control4 integrations

INSTALLATION AND USER MANUAL

V1.6

July 2022

Summary

1. Application

The new Adeo Server Gateway SGDD-C4-4 is a multi-output device that operates at the network level and allows data packets to be routed to fieldbus communication systems such as DMX512A and DALI to provide advanced lighting control. Once the IP address is assigned on the Composer Pro, the SGDD-C4-4, through specific drivers, is able to manage the individual channel or RGB through DMX or DALI. Communication is bidirectional, so from the Control4 interface we will always have the updated status of the lights. Moreover, the MODBUS port can become a second DMX port to be connected, for example, to external light control units.

The SGDD-C4-4 device stores information from the configured receiver buses in a buffer and transmits it to the configured transmitter buses. In the default configuration, a single buffer, corresponding to a DMX universe, is managed and controlled via the Ethernet interface. On the DMX bus, all of the 512 channels of the buffer are transmitted; on the DALI bus, the first 64 channels of the buffer (64 short addresses) are transmitted according to an algorithm that updates the fastest changing channels more frequently. This default configuration allows a total of 512 levels of light intensity to be managed through any control unit with an Ethernet connection, and to control different devices without the need to know in detail how the relevant protocols (DMX or DALI) work.

Specifically, DMX/DALI conversion is possible in installations where DMX and DALI are used simultaneously. The supply voltage is between 12 and 48V DC and is fitted with DALI short-circuit and overload protection.

The SGDD-C4-4 provides, via its incorporated flash memory, a Web Server interface on which a standard application is loaded that allows real-time data setting or monitoring from a PC, Tablet or SmartPhone. With the SGDD-C4-4, advanced lighting control is possible at network level, with the advantage of intelligent communication through different communication buses. Indeed, SGDD-C4-4 manages the data and bus interface in a transparent way, allowing easier system configuration.

2. Technical Notes

Installation:

•Installation and maintenance must only be carried out by qualified personnel in accordance with the regulations in force.

•The product must be installed inside a surge-protected electrical cabinet.

•The product must be installed in a vertical or horizontal position with the front cover/label upwards or vertically; no other position is permitted; a bottom-up position (with the front cover/label downwards) is not permitted.

•Keep 230V (LV) and non-SELV circuits separate from safety extra-low voltage (SELV) circuits and all connections of this product. It is absolutely forbidden to connect, for any reason, directly or indirectly, the 230V mains voltage to the bus or other parts of the circuit.

Power supply:

•Use only SELV-type power supplies with limited current and short-circuit protection and appropriately sized power for the power supply. In the case of power supply units equipped with earth terminals, it is mandatory to connect ALL protection earth points (PE = Protection Earth) to a professionally installed and certified earth installation.

•The connecting cables between the extra-low voltage power source and the product must be correctly sized and must be isolated from any wiring or non-SELV voltage parts. Use double-insulated wires.

Commands:

•The length of the connecting cables between the local controls (Push Button, 0-10V, 1-10V, Potentiometer, or other) and the product must be less than 10m; the cables must be correctly sized and must be isolated from any wiring or non-SELV voltage parts. Use double-insulated shielded and twisted cables.

•The length and type of connection cables to the buses (DMX512, Modbus, DALI, Ethernet or other) must comply with the specifications of the respective protocols and current standards; they must be isolated from any wiring or non-SELV voltage parts. Use double-insulated shielded and twisted cables.

•All devices and control signals connected to buses (DMX512, Modbus, DALI, Ethernet or other) and local controls (Push Button, 0-10V, 1-10V, Potentiometer, or other) must be SELV (connected devices must be SELV or in any case provide a SELV signal).

In addition

•The device routes the DALI devices

•It supports DALI DT4, DT6 and DT8 protocols

•The Gateway feeds the communication bus and cannot coexist with other controllers

•The gateway can only receive commands via IP (Control4) and re-route them to the available 512 channels, regardless of the bus type

3. Characteristics

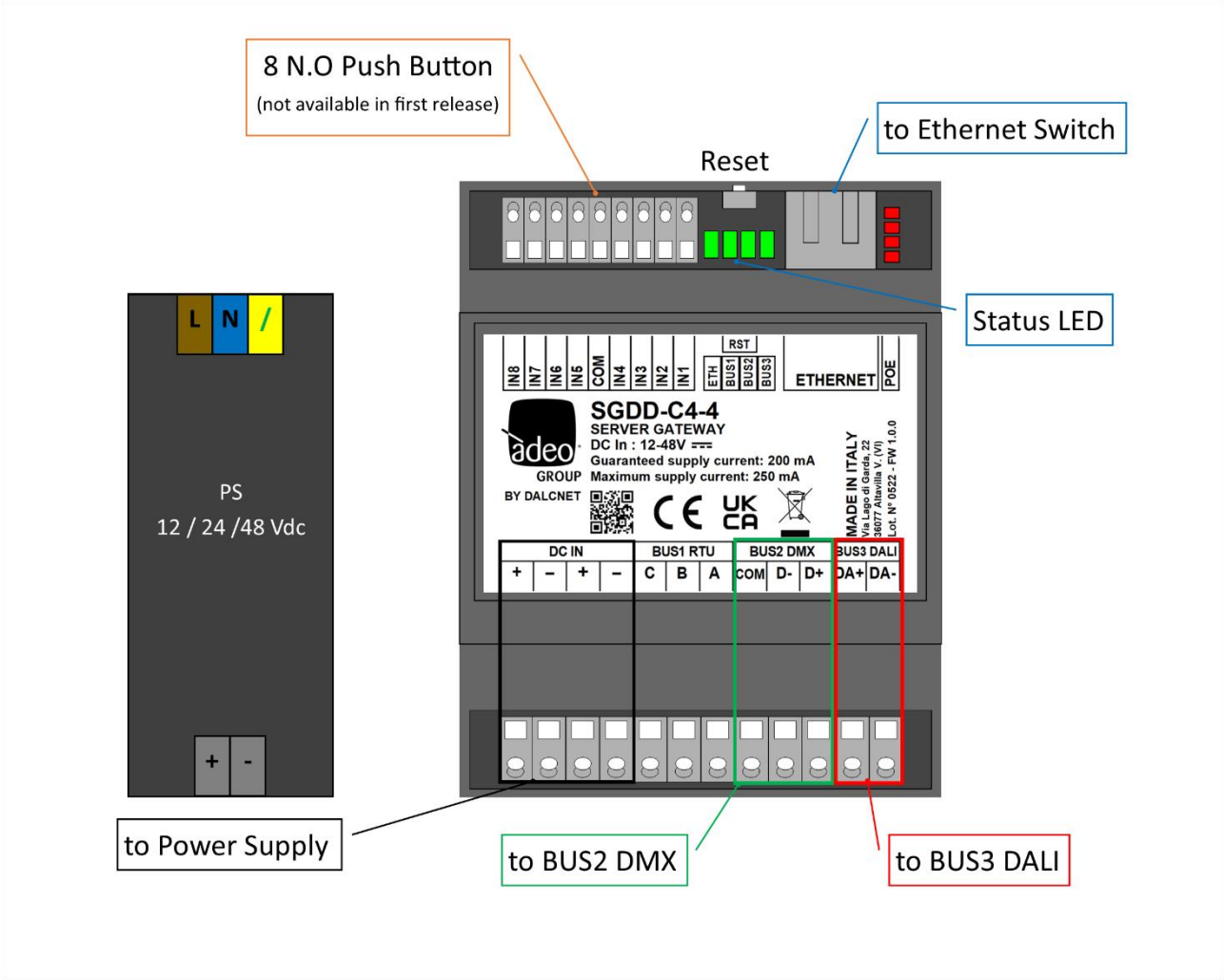
<table>
<tr><td>Tensione di alimentazione - Supply Voltage</td><td>12 / 24 / 48 Vdc</td></tr>
<tr><td>Corrente assorbita - Input Current</td><td>
<table>
<tr><th>voltage</th><th>min</th><th>Typ*</th><th>max</th></tr>
<tr><td>@ 12Vdc</td><td>110mA (1,2W)</td><td>320mA (3,84W)</td><td rowspan="3">500mA</td></tr>
<tr><td>@ 24Vdc</td><td>60mA (1,44W)</td><td>160mA (3,84W)</td></tr>
<tr><td>@ 48Vdc</td><td>40mA (1,92W)</td><td>80mA (3,84W)</td></tr>
</table>
*ethernet and all bus at full load
</td></tr>
<tr><td>Temperatura di stoccaggio - Storage temperature</td><td>min: -40 max: +60 °C</td></tr>
<tr><td>Temperatura di esercizio - Working temperature</td><td>min: -40 max: +40 °C</td></tr>
<tr><td>Grado di protezione - Protection Grade</td><td>PLASTIC BOX IP10</td></tr>
<tr><td>Peso - Weigth</td><td>ALUMINIUM BOX: 230g - PLASTIC BOX 125g</td></tr>
<tr><td>Dimensioni Meccaniche - Mechanical dimensions</td><td>ALUMINIUM BOX: 105x70x47 - PLASTIC BOX: DIN RAIL 4mod.</td></tr>
<tr><td>ETHERNET</td><td>10/100 Mbit baseT FULL DUPLEX AUTO NEGOTIATION</td></tr>
<tr><td>DMX</td><td>Max 512 ch (dipende dal cablaggio) open fail safe - short fail safe</td></tr>
<tr><td>DALI</td><td>Max 64 ch, alimentatore min 200mA – max 250mA integrato</td></tr>
<tr><td>Dimensioni meccaniche</td><td>72 x 92 x 62 mm</td></tr>
</table>

4. Reference Standards

EN 55015	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment
EN 61547	Equipment for general lighting purposes – EMC immunity requirements
EN 61347-1	Lamp controlgear – Part 1: General and safety requirements
IEC 62386-101 ED.2	Digital addressable lighting interface – Part 101: General requirement – System components
IEC 62386-103 ED.2	Digital addressable lighting interface – Part 103: General requirements – Control devices
IEC 62386-205 ED.2[1]	Digital addressable lighting interface – Part 205: Particular requirements for control gear – Supply voltage controller for incandescent lamps (device type 4)
IEC 62386-207 ED.2[2]	Digital addressable lighting interface – Part 207: Particular requirements for control gear – LED modules (device type 6)
IEC 62386-209 ED.2[3]	Digital addressable lighting interface – Part 209: Particular requirements for control gear – Colour control (device type 8)
ANSI E1.11	Entertainment Technology – USITT DMX512-A Asynchronous Serial Digital Data Transmission Standard for Controlling Lighting Equipment and Accessories

[1] L'SGDD-C4-4 provides commands for the DT4 control gears, compatible with IEC 62386-205
[2] L'SGDD-C4-4 provides commands for the DT6 control gears, compatible with IEC 62386-207
[3] L'SGDD-C4-4 provides commands for the DT8 control gears, compatible to IEC 62386-208 (colour type Tc, colour type RGBWAF)

5. Connections



RST BUTTON:

If the reset button is pressed for less than 2 seconds, the device can be restarted, with the status LEDs lighting up, starting with the first one on the right in a progressive manner.

If the button is pressed for longer than 2 seconds and all four status LEDs light up, the system resets to the factory settings

6. Status LED

	LED1(left)	LED2	LED3	LED4(right)
Function	Ethernet	BUS1(DMX/RTU)	BUS2(DMX/RTU)	BUS DALI
ON	Connected with Ethernet communication	Connected with communication	Connected with communication	Connected with communication
Flashing	Ethernet cable connection	Connected without communication (only RTU)	Connected without communication (only RTU)	Connected without communication
OFF	Not connected	Not connected	Not connected	Not enabled (without power supply DALI)

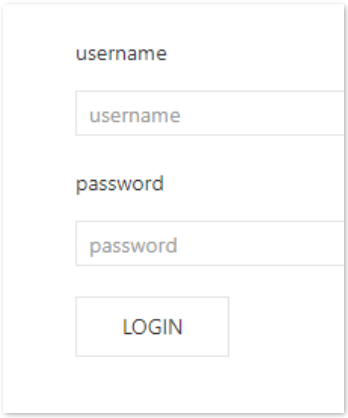
The same status LEDs are also visible at the top right of the web interface, with these statuses:

- **GREEN:** permanently lit: active;
- **FLASHING YELLOW:** no communication or not enabled

7. Local Button

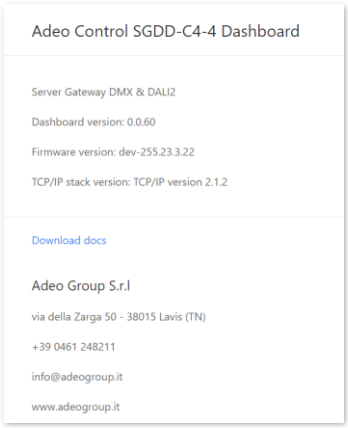
The device is equipped with 8 local contacts that cannot be used at present. Future updates are planned.

8. Web Server (Ethernet)



Dafault Address 192.168.1.4

1. Access your operating system browser (Google Chrome recommended) and access the local gateway address after connecting the Ethernet cable to the local network.
2. Enter the credentials in the username and password fields for the two modes present **ADMIN** and **USER**.
   a. In **ADMIN** mode, you have full access to system settings and the default values are username = admin, password = admin.
   b. Instead, **USER** mode allows only Channels to be displayed and the default values are username = user, password =user.
3. Press LOGIN.

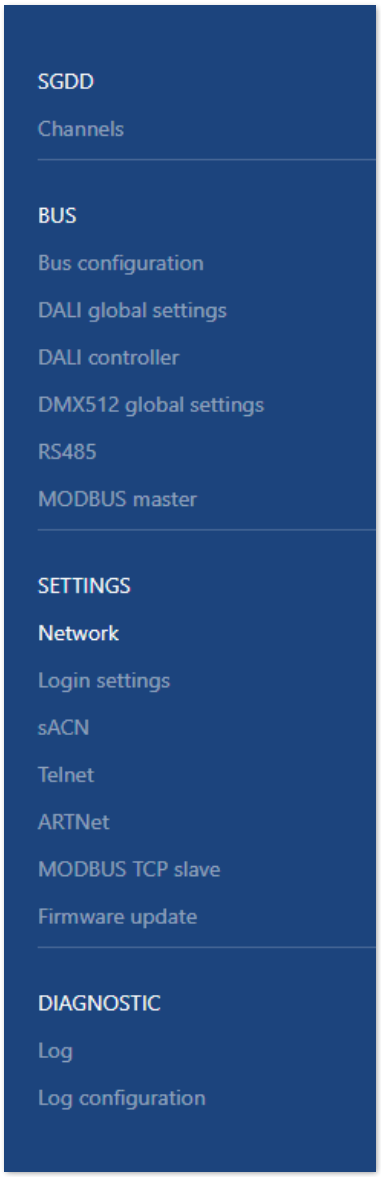


After logging in, the landing page shows the **Device Info** (always visible by pressing the logo at the top left of the interface).
The following functions/sections can be found on this page:

- **LOGOUT** return to the main **LOGIN** page by pressing at top right.
- The following are displayed in the centre and in this order:
  - **Dashboard version**, version of the web pages
  - **Firmware version**, version of the fw present in the gateway
  - **TCP/IP stack version**, version of the TCP/IP protocol
  - **Download docs**, you can download all documentation from the Adeo Group website

Finally, the page shows the data of the developer company. The product is manufactured by Dalcnet Srl (Italy).

9. Configuration menu



Channels: complete list of channels with relative control (not visible if in DALI CONFIG mode)

Bus Configuration: configurations for every single physical bus present on the gateway

DALI global settings: settings for the DALI bus (only editable if in DALI CONFIG mode)

DALI controller: all addressed DALI devices and relative groups (not visible if in DALI CONFIG mode)

DMX512 global settings: settings for DMX512 timing (not visible if in DALI CONFIG mode or if DMX is not enabled)

RS485: at present not used (not visible if in DALI CONFIG mode or if not enabled)

MODBUS master: at present not used (not visible if in DALI CONFIG mode or if not enabled)

Network: settings to modify and manage IP address, Netmask and MAC Address

Login settings: settings to modify and manage LOGIN USER and PASSWORD

sACN: settings to enable or disable the protocol

Telnet: settings to enable or disable the protocol and sending times

ARTNET: settings to enable or disable the protocol

Modbus TCP Slave: settings to enable or disable the protocol

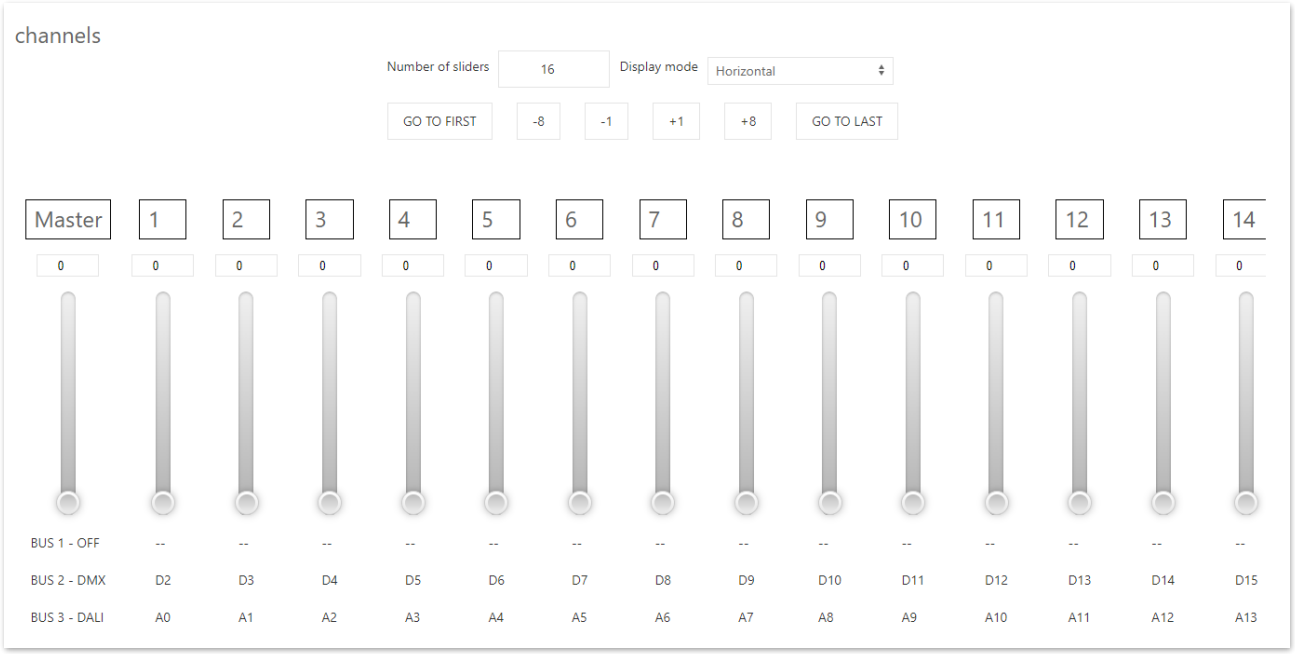
Firmware Update: update mode of the device Firmware

Log: relative logs to receive remote assistance

Log Configuration: settings to manage LOGs

BUS

10. Channells



The gateway has a WebApp to supervise and set up all available channels by choosing from the **Channels** pop-up menu, which can be used from any recent device with a compatible browser (see below).

A window is displayed with 16 channels visible by default, you can scroll through all other channels with the +/- 8 and +/-1 buttons.

In addition, through **Number of Sliders** it is possible to choose how many channels to watch together (no more than 200).

Also in the **Display mode** selection menu, it is possible to set whether the sliders are visible horizontally or vertically.

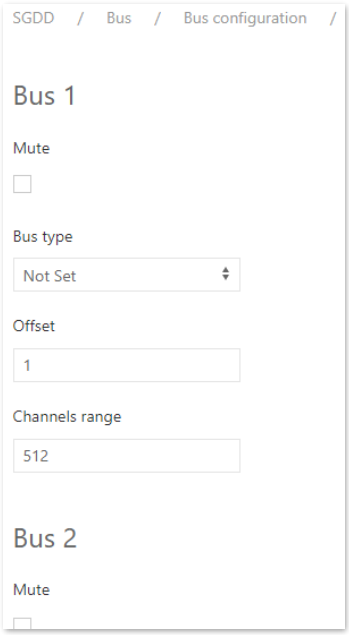
It is possible to move all channels with the **Master channel**.

Below each channel there is an indication of whether or not it belongs to one of the three available buses with the relative set offset and range (see **Bus Configuration**).

NOTE: To use the available services and applications correctly, it is necessary to use a compatible browser: CSS-3, JS, XHR, CORS, JSON, ArrayBuffer.

Compatible browsers are: Microsoft Edge v. 16, Google Chrome v. 66, Mozilla Firefox v. 57, Safari v. 12.1, Opera v. 53 or higher.

11. Bus Configuration



Bus 1 and 2 are related to the first and second RS-485 ports.

The BUS can be disabled via the "**Mute**" flag.

Bus type

"**Not Set**" disable the bus.

The integration with Control4 does not currently require the use of the MODBUS configuration (both master and slave).

Typically, the **DMX512 master** type is used.

Offset

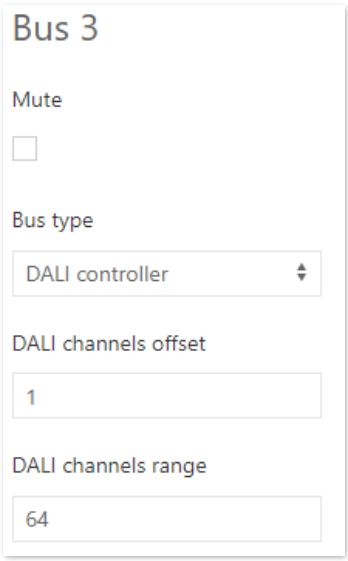
In this menu you can assign an "offset" (minimum 1).

Channels Range

Specifies the number of channels used.

Bus 3 is relative to the third port and belongs to the only DALI bus

The BUS can be disabled via the "**Mute**" flag.



Bus type

"**Not Set**" disables and removes the power to the bus.

"**DALI controller**" allows communication between Control4 and the DALI bus

"**DALI config**" after selecting from the drop-down menu and clicking on **Apply** (top right) you can direct the DALI nodes, from the **DALI config** section

It will also not be possible to see the **Channels** menu.

Offset

In this menu you can assign an "offset" (minimum 1).

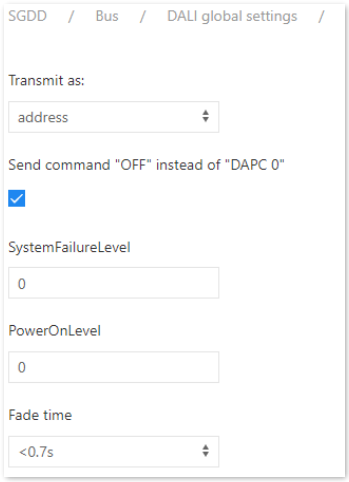
Channels Range

Specifies the number of channels used.

NOTE: When addressing DALI devices in DALI **config** mode it is recommended to put the range to 64 (maximum value) and only after directing the devices change the range to the desired value in **DALI Controller** mode.

After changing the settings, click on the **'APPLY'** button at the top right, otherwise the changes will be lost.

12. DALI global settings



Only in **Dali config** mode (page 11) is it possible to change the parameters to be sent to the BUS DALI, which are:

Transmit as

"**address**" Send address commands

"**group**" Send group commands

"**broadcast**" Send broadcast commands

Send command "OFF" instead of"DAPC 0"

Send a DALI command of OFF instead of the DAPC command to 0.

SystemFailureLevel

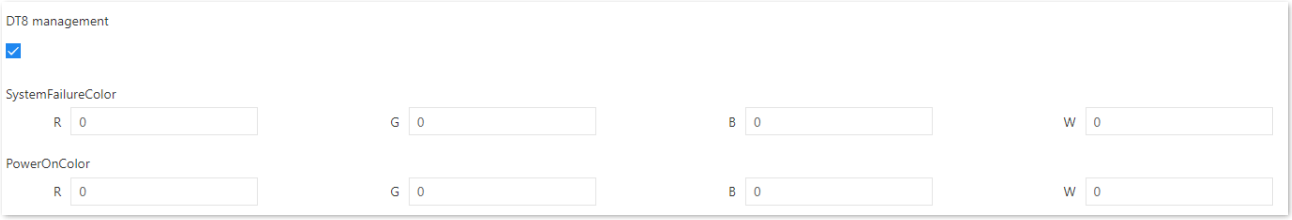
Send System Failure Level command in broadcast.

PowerOnLevel

Send Power On Level command in broadcast.

Fade time

Send Set fade time command in broadcast



DT8 management Enable management of devices that support DT8.

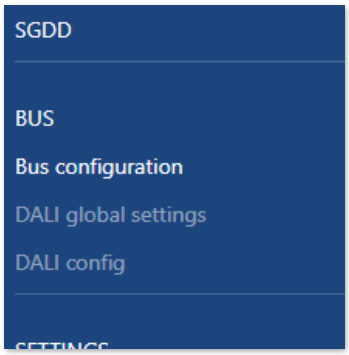
SystemFailureColor Send System failure Color command for RGBW components.

PowerOnColor Send Power On Color command for RGBW components.

After changing the settings click on the top right button "APPLY" otherwise the changes will be lost.

ATTENTION: Integration with Control4 can currently only function in the 3 distinct modes (address, group or broadcast). There is no mixed mode (e.g. both address and group). For this reason, it is recommended to carefully consider which mode to use from the start, depending on the project.

13. DALI config



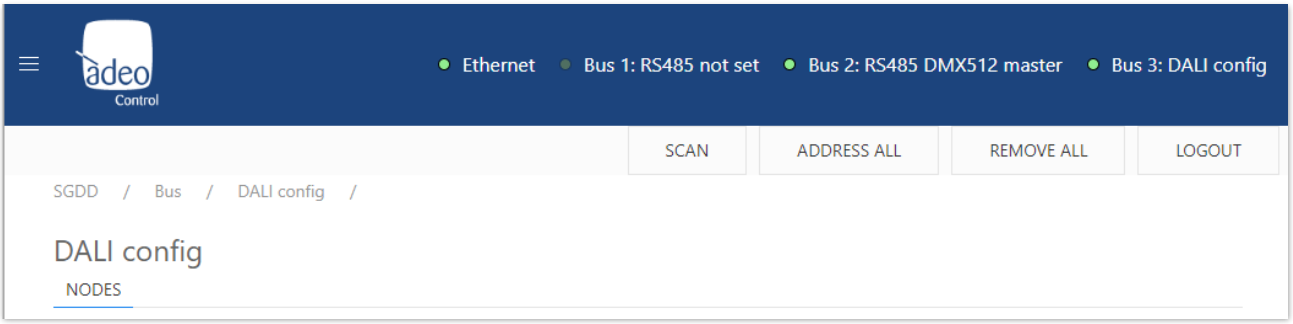
After enabling **DALI config** from the **Bus type** menu under **BUS 3** in **Bus configuration** (p. 12), the configuration menu changes appearance, allowing addressing by **DALI config** , which takes the place of **DALI Controller** (required instead for communication with Control4).

The other menus are also disabled to highlight addressing activity. It is now possible to edit **DALI global settings.**

14. Addressing

NOTE: Before addressing and configuring DALI devices, **BUS 3** must be set to **DALI Config** mode. (see **Bus Configuration** Section page 12)

By clicking on **DALI config** on the pop-up menu, we enter the DALI device addressing interface:



In the top right-hand corner there are the following commands:

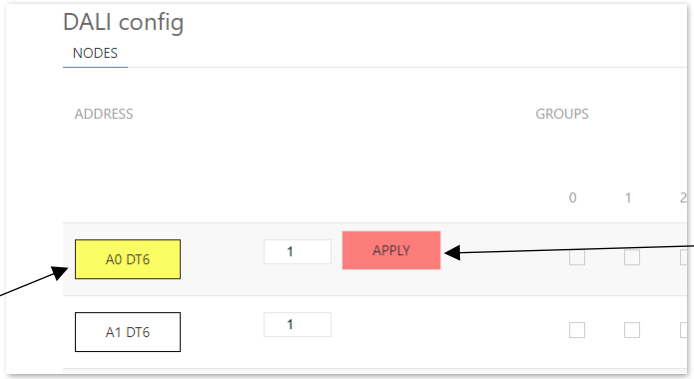
- **SCAN**: perform acquisition of previously addressed DALI nodes; this may take a few minutes;
- **ADDRESS ALL**: performs addressing of all DALI nodes; this may take several minutes;
- **REMOVE ALL**: removes all addressed DALI nodes.

NOTE: before performing a complete addressing of the system, it is necessary to send a "**REMOVE ALL**" command and then press "**ADDRESS ALL**" to perform a complete addressing of the DALI system.

ATTENTION: The numbering in Composer goes from 1 to 64. It is best to use the **AskForType** function in Actions (see page 25) after addressing and before making **Connections**.

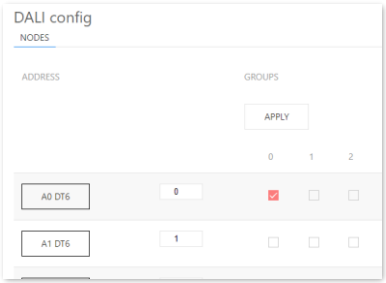
Visual identification of addressed devices

It is possible to make the addressed node flash to be able to visually identify the associated lighting body. Just click on the label of the address'



Change address

Enter the desired node number (0 to 63) and click on "**APPLY**" on the right. "

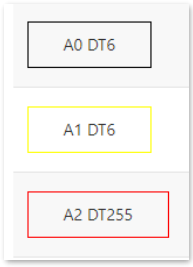


DALI groups

By clicking on one of the 16 available groups (0 to 15), it is possible to send the add command to the relevant group on the boxes to the right of the individual node. Then click on the **'APPLY'** button immediately above. Immediately afterwards, the command is sent to the DALI BUS.

N.B.: the DALI commands are sent only by pressing **'APPLY'**, and turn blue afterwards.

ATTENTION: Currently only work in 3 modes separate (address, group or broadcast). There is no mixed mode (e.g. both address and group). See DALI global settings on p. 13. For this reason, it is advisable to assess well, depending on the project, which mode to use from the outset.



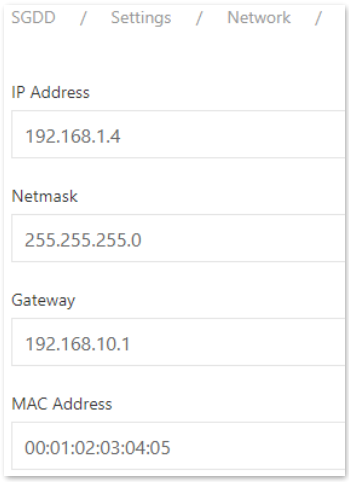
DALI node status

Feedback on the status of the DALI node is possible:

- **Black**: node present and off
- **Yellow**: node present and lit
- **Orange**: node present but not responding correctly (**LAMP FAILURE**)

SETTINGS

15. Network



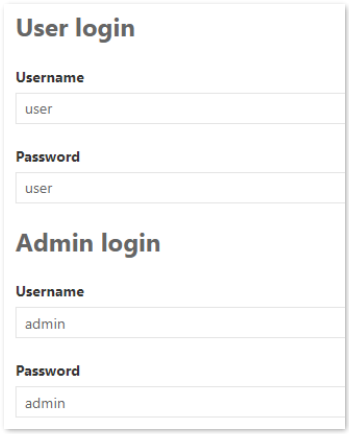
The gateway uses the Ethernet port via IPv4 protocol.

The default IP address is: 192.168.1.4

The same address must be entered in **Composer Pro** in the **Connections/Network** section

After changing the settings, click on the top right button **'APPLY'** otherwise the changes will be lost.

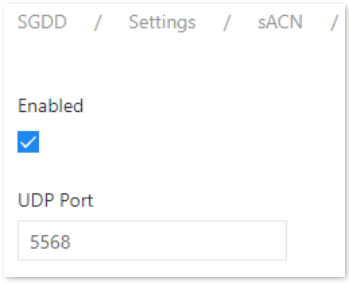
16. Login settings



After logging in as **ADMIN**, you can change your username and password by clicking on **Login Settings**.

After changing the settings, click on the top right button "**APPLY**" otherwise the changes will be lost.

17. sACN



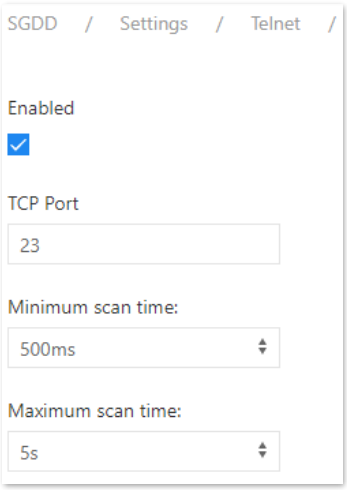
The gateway implements the sACN protocol and can be used as a gateway by the main lighting software and controllers:

- sACN ⟶ DMX
- sACN ⟶ DALI

The port used is there UDP 5568.

After changing the settings click on the top right button "**APPLY**" otherwise the changes will be lost.

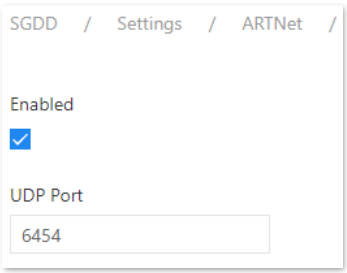
18. Telnet



The gateway has a Telnet server that can receive and/or transmit a DMX512A/DALI/MODBUS RTU universe from/to other devices via TCP protocol, in our case to the Control4 driver.
Communication takes place by establishing a connection on **TCP port 23** (Do not change).
The minimum interval that can be set for sending the response strings is defined as **Minimum scan time**.
If no changes are detected, the interval at which the string is periodically sent is defined with the value set to Maximum scan time. A value of zero disables periodic transmission.

The tests were carried out on the basis of the default settings. The variation may lead to changes in the integration behavior.

19. ARTNet



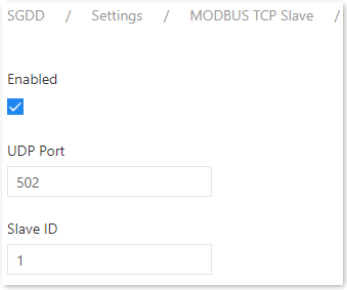
The gateway implements the Art-Net 4 protocol and can be used as a gateway by the main software and lighting control systems:

- Art-Net ⟶ DMX
- Art-Net ⟶ DALI

The port used is there UDP 6454.

After changing the settings, click on the top right button "**APPLY**" otherwise the changes will be lost.

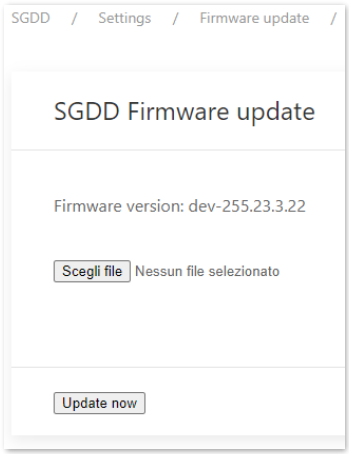
20. MODUBUS TCP Slave



The gateway has a **MODBUS TCP/IP** server capable of receiving and/or transmitting a DMX512A universe to one or more Modbus devices on an Ethernet network. 512 registers are available, with Modbus address from 0 to 511 and value from 0 to 255.
The port used is **UDP 502**, the **Slave ID** is not taken into account.

After changing the settings click on the top right button "**APPLY**" otherwise the changes will be lost.

21. Firmware update



The firmware update is not automatic and can only be carried out if you are in possession of the *.upf file provided through the Adeo Group's channels.

From here, simply click **Choose file** and indicate the location of the file in your system.
Click on **Update now** and follow the on-screen prompts. When finished, the **Reboot** button will appear.

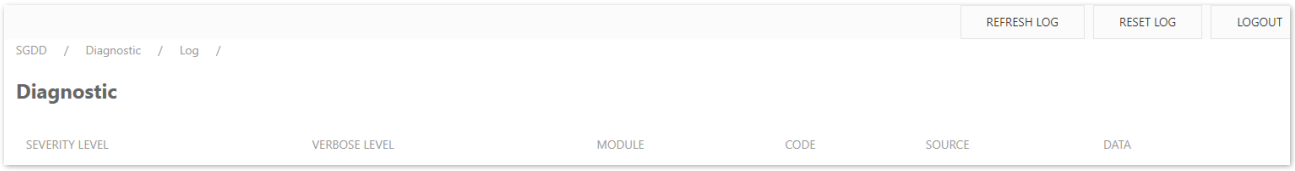
When restarting, the two side status LEDs **LED 1** and **LED 4** will start flashing (p. 7).
If the device subsequently returns to flashing in standard mode, the firmware update was not completed. If the update is valid and after the one already loaded, the right LED (LED 4) will remain lit and will then change three more times to different LEDs.

After the firmware update, the device flashes again in standard mode and the web page will display the new version in the information.

NOTE: NEVER SWITCH OFF THE POWER FROM THE GATEWAY UNTIL THE UPDATE IS COMPLETED

DIAGNOSTIC

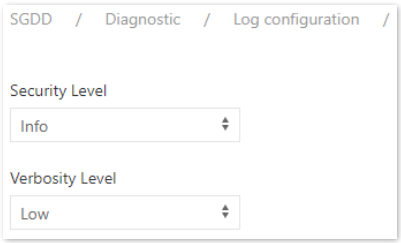
22. Log



Technical support can be provided remotely through the **DIAGNOSTIC** web page in the **LOG** section.

To configure the diagnostics part according to remote assistance requests, select **Log Configuration**.

23. Log configuration



Security Level

Set the type of information you want to display on the **Log**:

"**Info**" information on the system that does not denote any type of problem;

"**Warning**" information that denotes that the system is functioning correctly but that may affect the functioning of the system;

"**Fault**" causing a real impact on the system

Verbosity level

This denotes the level of the information we have above and is:

"**Low**" low level;

"**Medium**" medium level;

"**High**" high level.

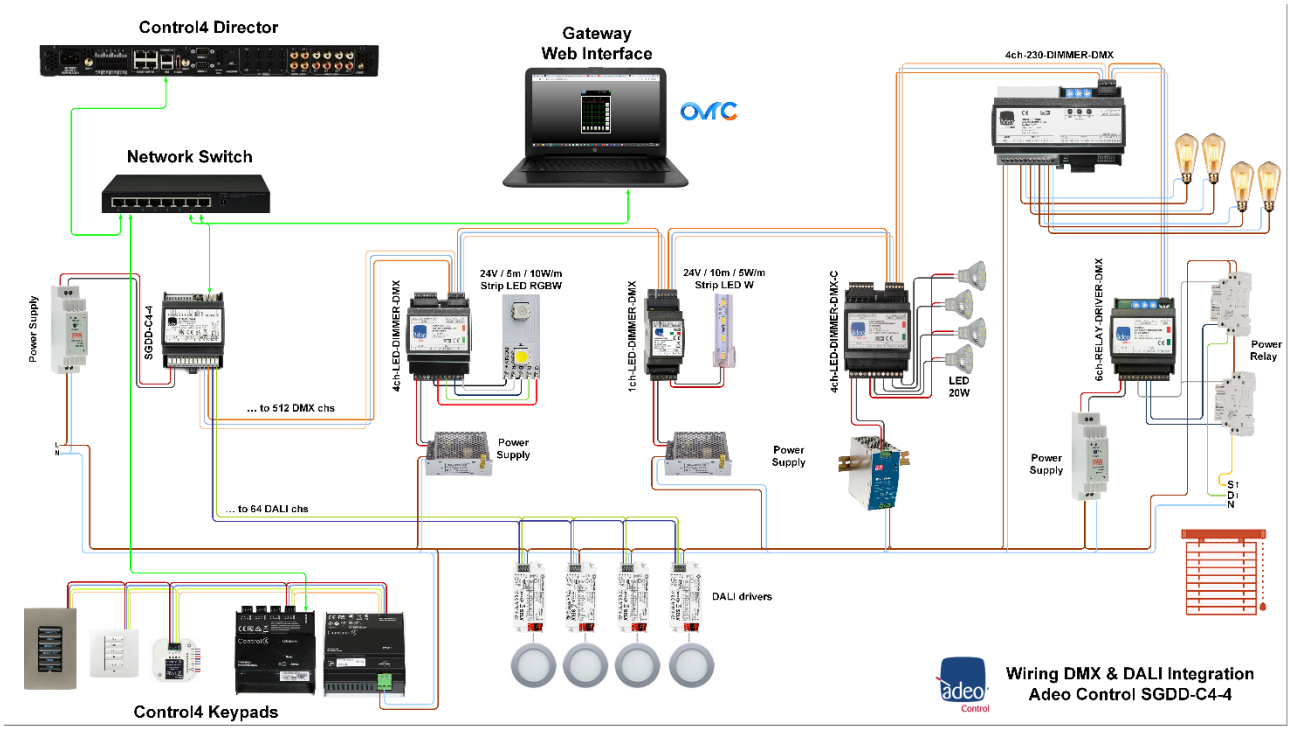
24. Integration with Control4

- The gateway comes with a free driver and only works with the SGDD-C4-4.
- The gateway manages DMX and DALI buses simultaneously, showing 512 channels in Connections.
- The gateway supports RampToLevel directly via hardware.
- The 512 channels are combined with the light/relay drivers in Connections.
- Broadcast commands can be sent directly from the gateway driver.
- The light drivers support the Advanced Lighting.
- The drivers support the OS3 and soon the OS3.3 too.
- Through specific drivers the gateway can control DALI type devices:
  - DT4, Control gear for phase dimmers
  - DT6, Control gear for LEDs
  - DT8, Control gear for colour converters
  - DT255[4], Multi-device types

Updated drivers can be downloaded free of charge from
https://drivercentral.io/platforms/control4-drivers/lighting/adeo-control-server-gateway-DALI-and-dmx-driver-suite/

[4] Device Type 255: Multi-device type. They include at least two types of devices, in our case just think that they can be configured in DT6 or DT8 depending on practical use. The gateway will always find the device as DT255, just know how the DALI driver is configured.

25. DALI and DMX integration example



26. Difference between DALI Type 6 and DALI Type 8

DT6, 'Single-Channel' commands use a single address to control a single channel. DALI type 6 multi-channel commands use X number of addresses to control X number of channels.
For example, if we need to control an RGB LED strip, we will use 3 addresses (out of 64) to control the 3 colours individually. If the device provides for it, we could also control the intensity (Master), so we will have to provide an additional address.

DT8 commands use one address to control two or more channels.
For example, if we need to control a Tunable White (or Dynamic White) LED strip, we can use a single address (out of 64) and send many more commands, which obviously include controlling the intensity and temperature of the light.

27. DALI & DMX Comparison

Design considerations for a DALI ecosystem

N°	Fixture	DALI Type	DALI Address	N° SGDD-C4-4
10	RGB	DT6	(10x3) 30	1 (30/64)
20	RGBW	DT6	(20x4) 80	2 (80/128)
40	TW	DT6	(40x2) 80	2 (80/128)
10	RGB	DT8	10	1 (10/64)
20	RGBW	DT8	20	1 (20/64)
40	TW	DT8	40	1 (40/64)

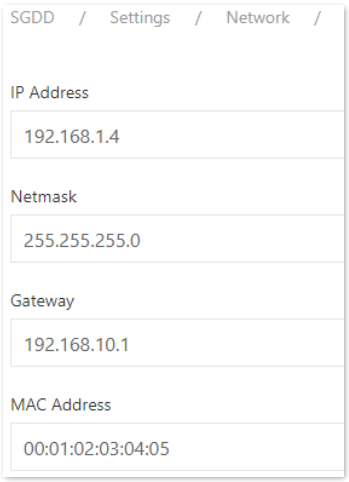
Design considerations for a DMX ecosystem

N°	Fixture	DMX Address	N° SGDD-C4-3
512	White	512	1
170	RGB	(170x3) 510	1
128	RGBW	(128x4) 512	1
128	TW	(120x2) 252	1

It goes without saying that the technology best suited to the purpose is the one that best meets the performance/price ratio. It is not a given, however, for the market:

	DALI	DMX
BUS speed	-	+
Ease of wiring	+	-
Market availability	+	-
Versatility	-	+
Know How	+	-
Address/Channels	-	+

28. Before programming

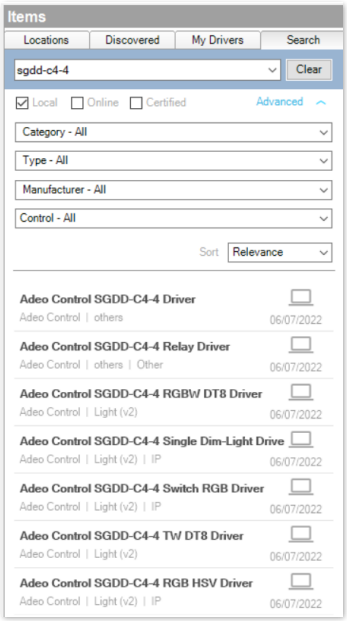


Check that the Network settings are correct.

Note down the IP Address, which is required for settings in Composer.

Also check the communication between the gateway and the field buses, DMX and/or DALI, from **Channels**. In the case of DALI, ensure that all addresses are correctly assigned.

29. Driver (OS 3.2.4)



The drivers are free of charge and were developed by Kiwifarm for Adeo Group.

The entire driver suite can be downloaded free of charge at:

https://drivercentral.io/platforms/control4-drivers/lighting/adeo-control-sgddc44-server-gateway-dali2-and-dmx-driver-suite/

The Drivers are:

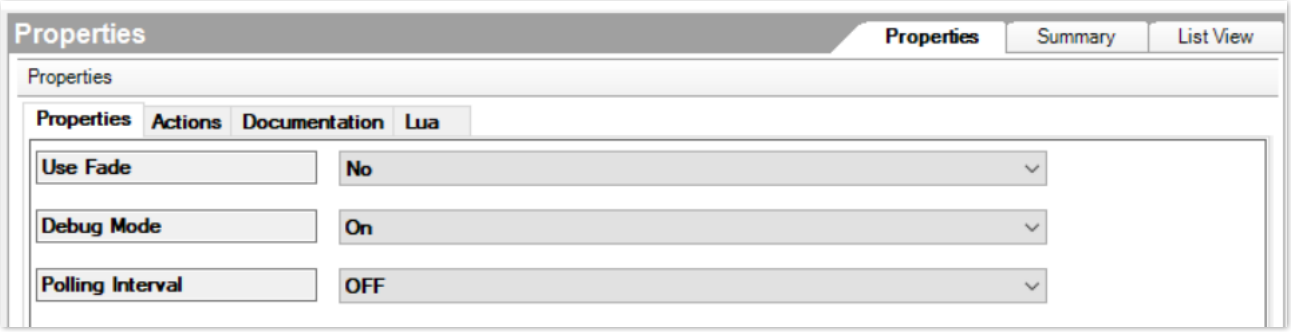
Name	Device File
Adeo Control SGDD-C4-4 Driver	Adeo_Control_SGDD-C4-4_Gateway.c4z
Adeo Control SGDD-C4-4 RGBW DT8 Driver	Adeo_Control_SGDD-C4-4_RGBW-DT8.c4z
Adeo Control SGDD-C4-4 TW DT8 Driver	Adeo_Control_SGDD-C4-4_TW-DT8.c4z
Adeo Control SGDD-C4-4 Single Dim-Light Driver	Adeo_Control_SGDD-C4-4_Single_Dimmable_Light.c4z
Adeo Control SGDD-C4-4 RGB HSV Driver	Adeo_Control_SGDD-C4-4_RGB_HSV.c4z
Adeo Control SGDD-C4-4 Switch RGB Driver	Adeo_Control_SGDD-C4-4_SW_RGB.c4z
Adeo Control SGDD-C4-4 Relay Driver	Adeo_Control_SGDD-C4-4_Relay.c4z

Copy drivers to folder Documents/Control4/Drivers created by Composer Pro. Using the 'Search' tab in System Design, add the drivers to the device list in your project. Flag 'Local'

Latest Version: 1000

30. Adeo Control SGDD-C4-4 Driver (Adeo_Control_SGDD-C4-4_Gateway.c4z)

System Design



USE FADE

The need to introduce the direct 'set' command, without the use of a ramp, was necessary because some devices do not support the reception of continuous commands, typical of fade/ramping variations. Specifically, if such devices receive unsupported commands, they have uncontrolled behaviour and provide incorrect feedback to the physical gateway.
This property affects the communication protocol used between the Control4 driver-gateway and the SGDD-C4-3:

- yes: all commands sent from the driver to the physical gateway are fade/ramping commands with a minimum time of 100 ms.
- no: the driver sends 'set' commands (without fade/ramping) to the physical gateway

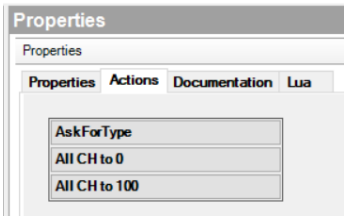
Debug Mode

Enable or disable debugging in Lua

Polling Interval

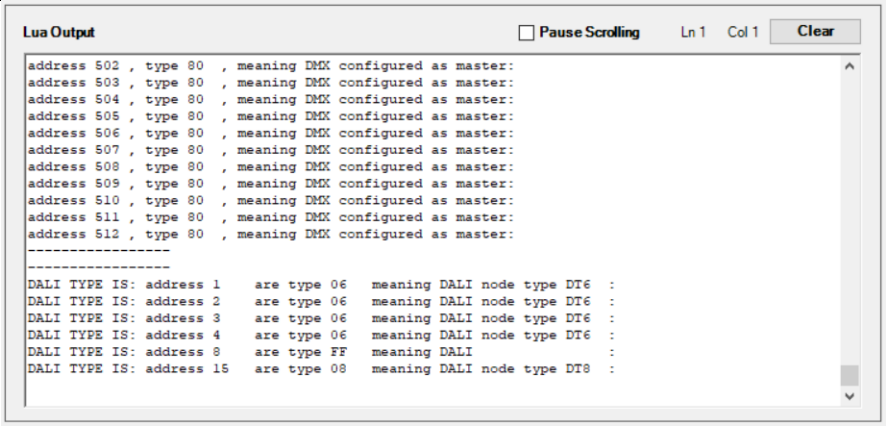
"**OFF**, **10** or **60**" sets the time in seconds for polling, i.e. to receive information from the gateway. The recommended value is always OFF, in order not to overload the communication channel.

Actions



AskForType

If **'Debug Mode'** is set to **'On'**, the driver asks the gateway for the type and channels 'addressed' on all available channels (512) The Gateway responds in the Lua tab with a list of useful information.
At the end of the list, the driver generates a report with the information about the identified/addressed channels.
Let us give an example:



In this case we have channels 1, 2, 3 and 4 assigned to a DT6 device, in fact, the hw is a 4-channel dimmer connected to an RGBW LED strip. Channels 5, 6 and 7 were not assigned. Channel 8 is assigned to a DT255 device (see page 19). We know that this dimmer is set in DT8 mode and is connected to an RGBW LED strip. Channel 15 is exclusively DT8 and connected to a Tuanble White LED strip.

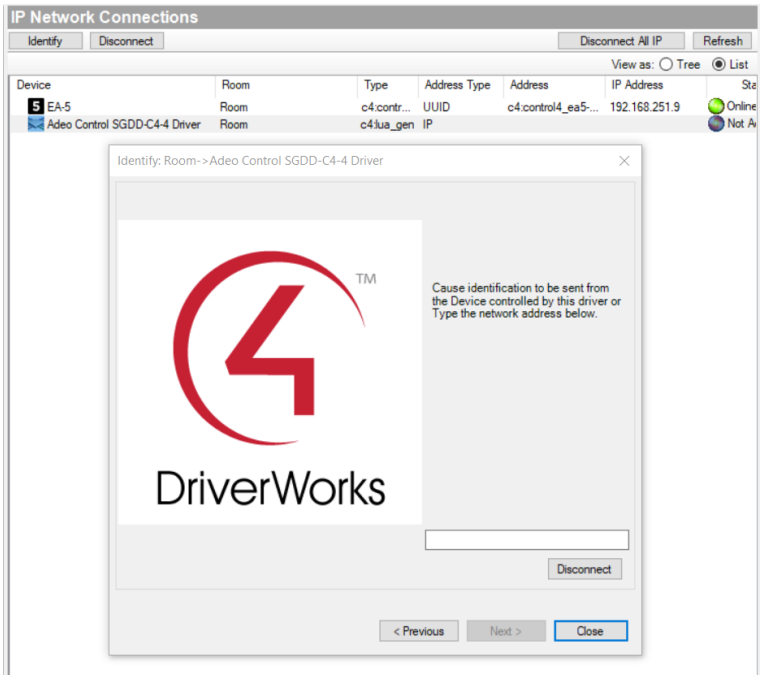
All CH to 0

The driver sends a broadcast-type command to all channels to set them to 0. It serves as a communication check between Control4 and the gateway.

All CH to 100

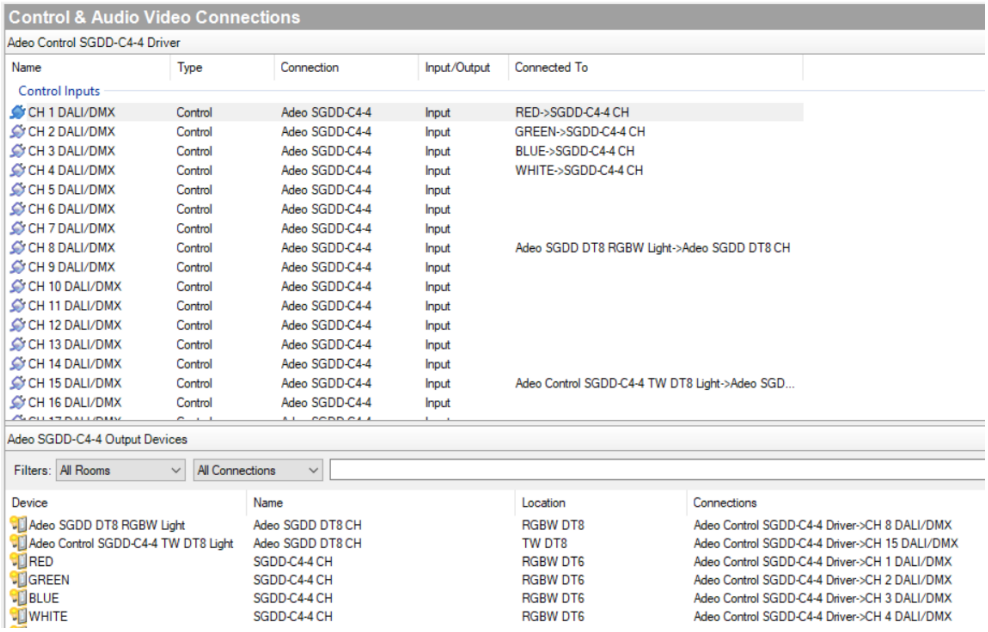
The driver sends a broadcast-type command to all channels to set them to 100. It serves as a communication check between Control4 and the gateway.

IP Network Connections



Enter the IP address of the gateway and click **Close**. **Status** will change to **Online**.

Control & Audio Video Connections



Gateway driver shows all available 512 channels. Assign channels to the Light Drivers (drag and drop).

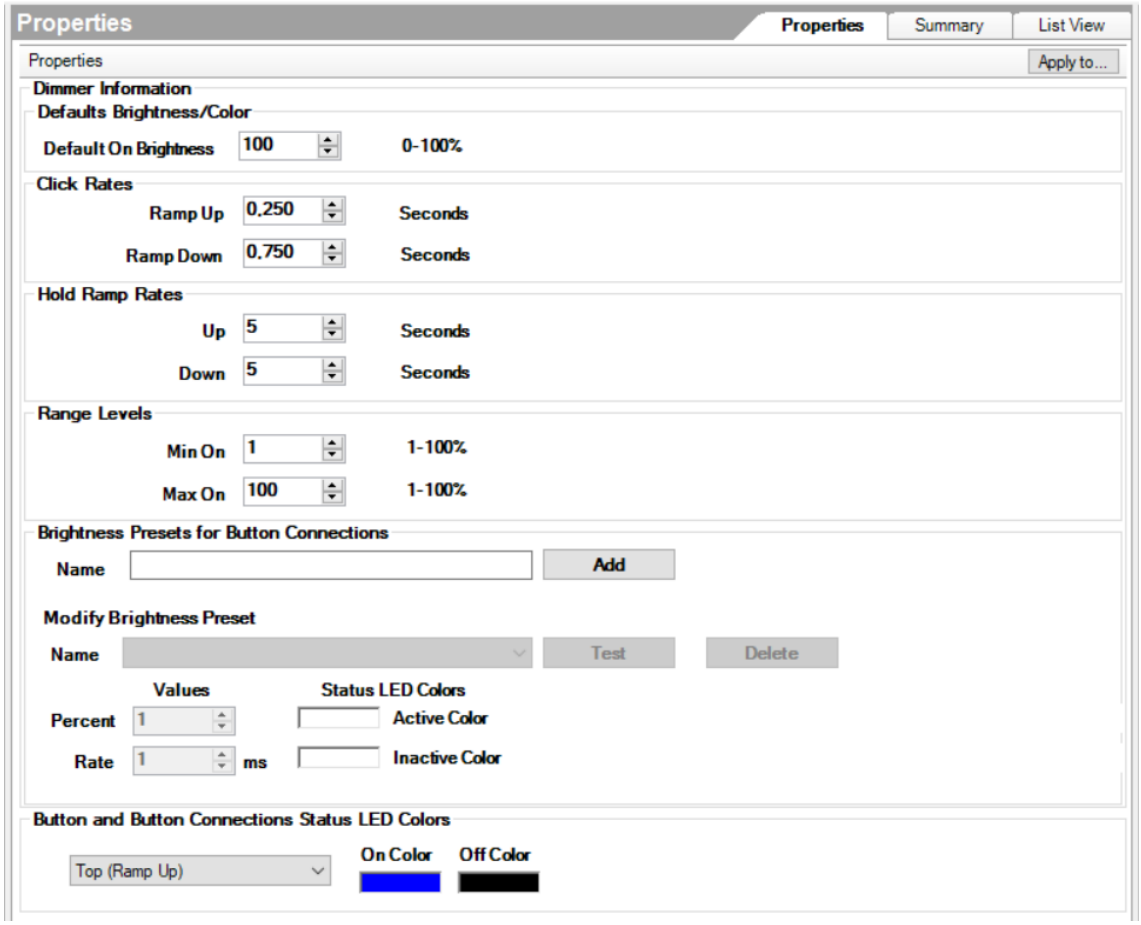
The first 64 channels can be DALI/DMX. From 65 -> 512 DMX only.

See example on p. 24.

31. Dimmer Driver with light_v2 Proxy

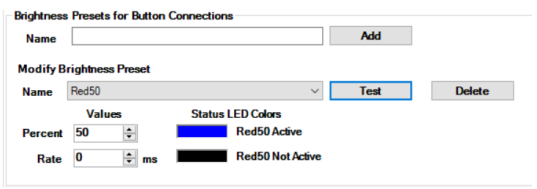
All these drivers share the same (standard) **Properties** in **System Design**

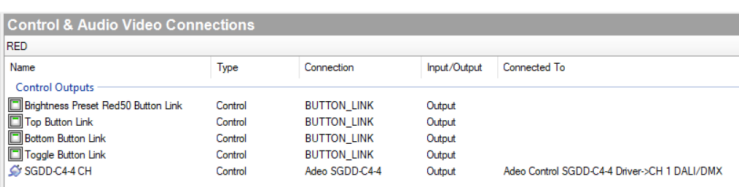
Name	Device File
Adeo Control SGDD-C4-4 RGBW DT8 Driver	Adeo_Control_SGDD-C4-4_RGBW-DT8.c4z
Adeo Control SGDD-C4-4 TW DT8 Driver	Adeo_Control_SGDD-C4-4_TW-DT8.c4z
Adeo Control SGDD-C4-4 Single Dim-Light Driver	Adeo_Control_SGDD-C4-4_Single_Dimmable_Light.c4z
Adeo Control SGDD-C4-4 RGB HSV Driver	Adeo_Control_SGDD-C4-4_RGB_HSV.c4z



Used as a dimmable V2 light driver. Supports **Advanced Lighting** and **Keypad** command assignment.

It should be noted that the driver also supports **Brightness Presets for Button Connections**, for the creation of presets that can then be called up directly in **Connections**.





32. Adeo Control SGDD-C4-4 RGBW DT8 Driver (Adeo_Control_SGDD-C4-4_RGBW-DT8.c4z)

Introduction

With the introduction of DT8 management, specific drivers had to be developed. They expose a single connection in **Connections**, just as the DT8 protocol provides a single channel for RGBW management.

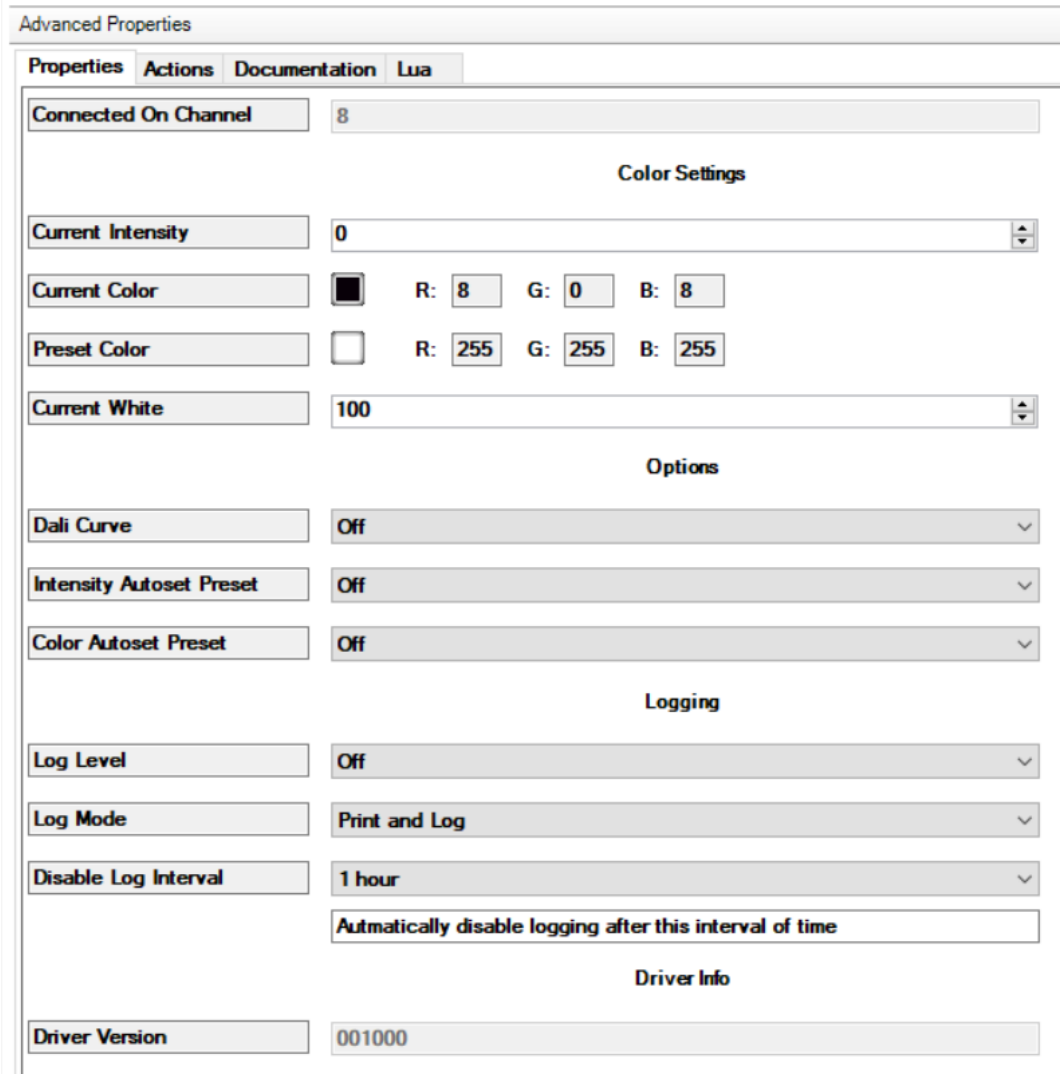
This Driver, once imported into the project, automatically adds 5 Light Drivers (1+4):

Main -> Intensity

Slave -> Red, Green, Blue, White

In this way, we will have 5 drivers/sliders in the Control4 GUI. With OS 3.3, a new driver will be released that will have only one driver/slider.

System Design – Advanced Properties



Connected On Channel	It automatically shows the channel assigned in **Connections**

Color Settings

Current Intensity	Send and receives the intensity value. Click Set to send the value
Current Color	Send and receive the colour value. Click on Set to send the value
Preset Color	Set the colour preset at switch-on
Current White	Sends and receives the value of White. Click on Set to send the value

Options

DALI Curve	**Off** to maintain linear dimming (DMX type)
	On to take advantage of the logarithmic dimming of DALI
Intensity Auto Preset	**Off** to exclude the storage of the last light status before switch-off
	On to store the last state of the light before switch-off
Color Autoset Preset	**Off** to exclude the storage of the last color state before switch-off
	On to store the last color status before switch-off

Logging

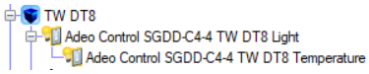
Log Level	**Off** to disable logging in Lua
	5 - Debug, 4 - Trace, 3 - Info, 2 - Warning, 1 - Error, 0 – Alert set the Log Level.
	The remote assistance requires **5 - Debug**
Log Mode	**Print, Log** and **Print and Log**
Disable Log Interval	it is possible to set an interval within which to disable logging, so as to save processing

Driver Info

Driver Version	Show Driver Version

33. Adeo Control SGDD-C4-4 TW DT8 Driver (Adeo_Control_SGDD-C4-4_TW-DT8.c4z)

Introduction



With the introduction of DT8 management, specific drivers had to be developed. These have a single connection in Connections, just as the DT8 protocol has a single channel for tunable white (TW) management.

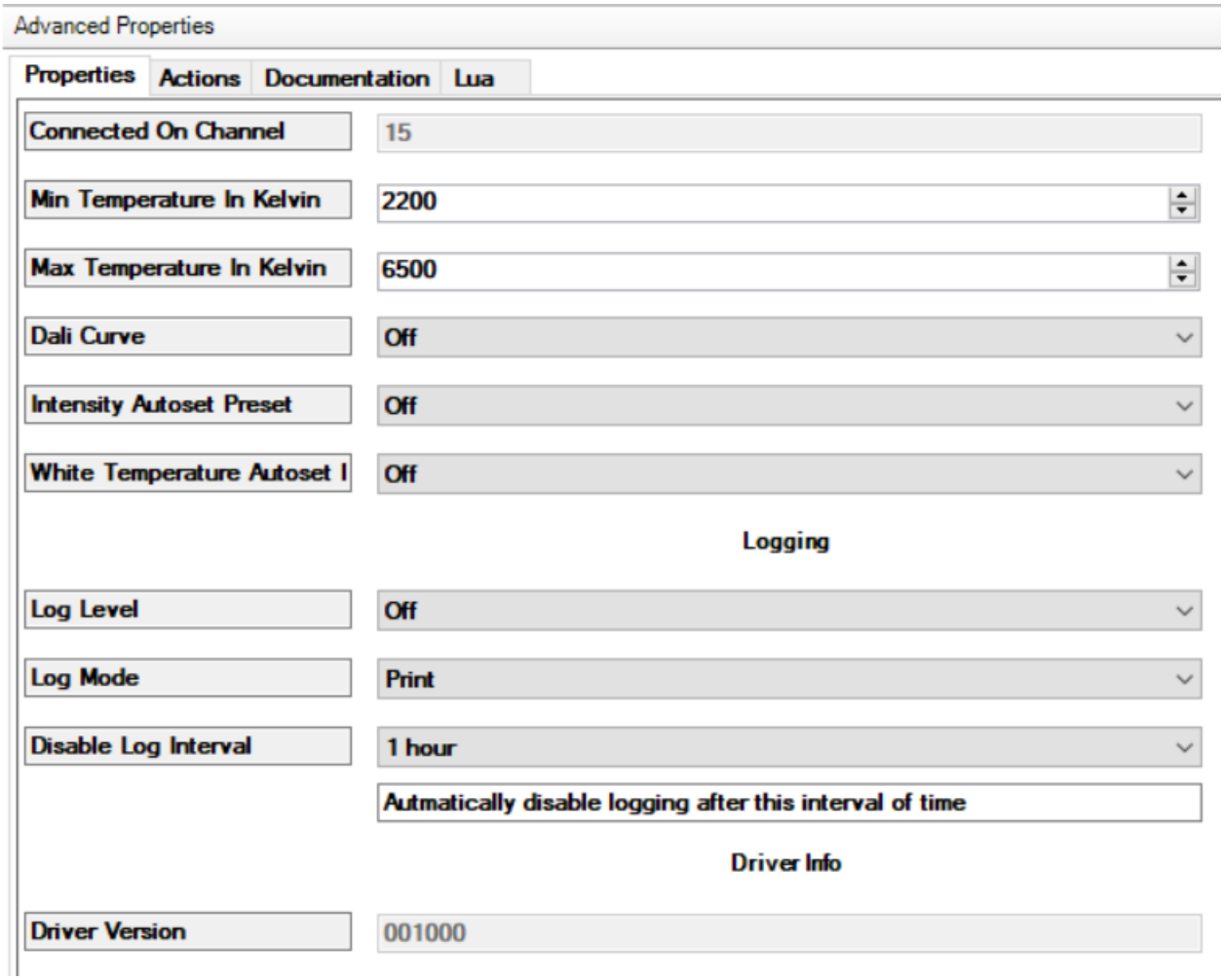
This Driver, once imported into the project, automatically adds 2 Light Drivers (1+1):

Main -> Intensity

Slave -> Temperature

In this way, we will have 2 drivers/sliders in the Control4 GUI. With OS 3.3, a new driver will be released that will have only one driver/slider.

System Design – Advanced Properties



Connected On Channel	Automatically shows the channel assigned in **Connections**
Min Temperature In Kelvin	Set the minimum value in Kelvin
Max Temperature In Kelvin	Set the maximum value in Kelvin
DALI Curve	**Off** to maintain a linear dimming (DMX type)
	On to use the logarithmic dimming of DALI
Intensity Auto Preset	**Off** to exclude the storage of the last light status before switch-off
	On to store the last light status before switch-off
White Temperature Autoset	**Off** to exclude the storage of the last temperature status before switch-off
	On to store the last temperature status before switch-off

Logging

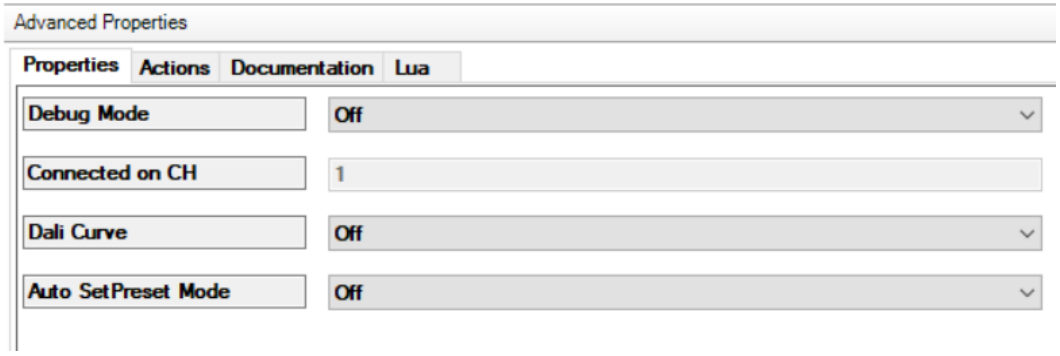
Log Level	**Off** to disable logging in Lua
	5 - Debug, 4 - Trace, 3 - Info, 2 - Warning, 1 - Error, 0 – Alert set the Log Level.
	The remote assistance requires **5 - Debug**
Log Mode	**Print, Log** and **Print and Log**
Disable Log Interval	it is possible to set an interval within which to disable logging, so as to save processing

Driver Info

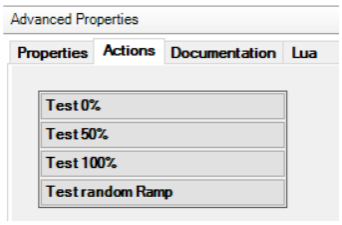
Driver Version	Show Driver Version

34. Adeo Control SGDD-C4-4 Single Dim-Light Driver *(Adeo_Control_SGDD-C4-4_Single_Dimmable_Light.c4z)*

System Design – Advanced Properties



Debug Mode	Turn Debugging on or off in Lua
Connected on CH	Automatically shows the channel assigned in **Connections**
DALI Curve	**Off** to maintain a linear dimming (DMX type)
	On to use the logarithmic dimming of DALI
Auto SetPreset Mode	**Off** to exclude the storage of the last light status before switch-off
	On to store the last light status before switch-of



In **Actions** you can test the connection and the correct response of the associated channel.

35. Adeo Control SGDD-C4-4 RGB HSV Driver (Adeo_Control_SGDD-C4_RGB_HSV.c4z)

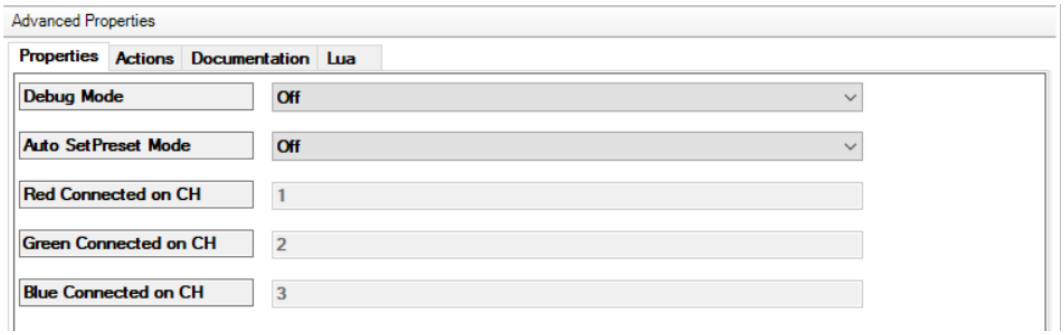
Introduction

The Driver allows you to have the RGB color variation on a single slider. This image should simulate the behavior from 0% to 100% of an RGB strip, where at 0% we will have dark, at 1% we will have red and at 100% red again

.

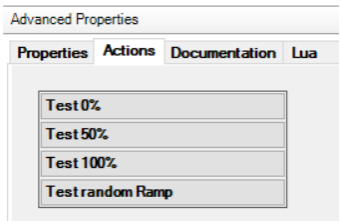
1%		50%	
17%		67%	
33%		83%	

System Design – Advanced Properties



Debug Mode	Turn Debugging on or off in Lua
Auto SetPreset Mode	**Off** to exclude the storage of the last light status before switch-off
	On to store the last light status before switch-of
XXX Connected on CH	Automatically shows the channel assigned in **Connections**

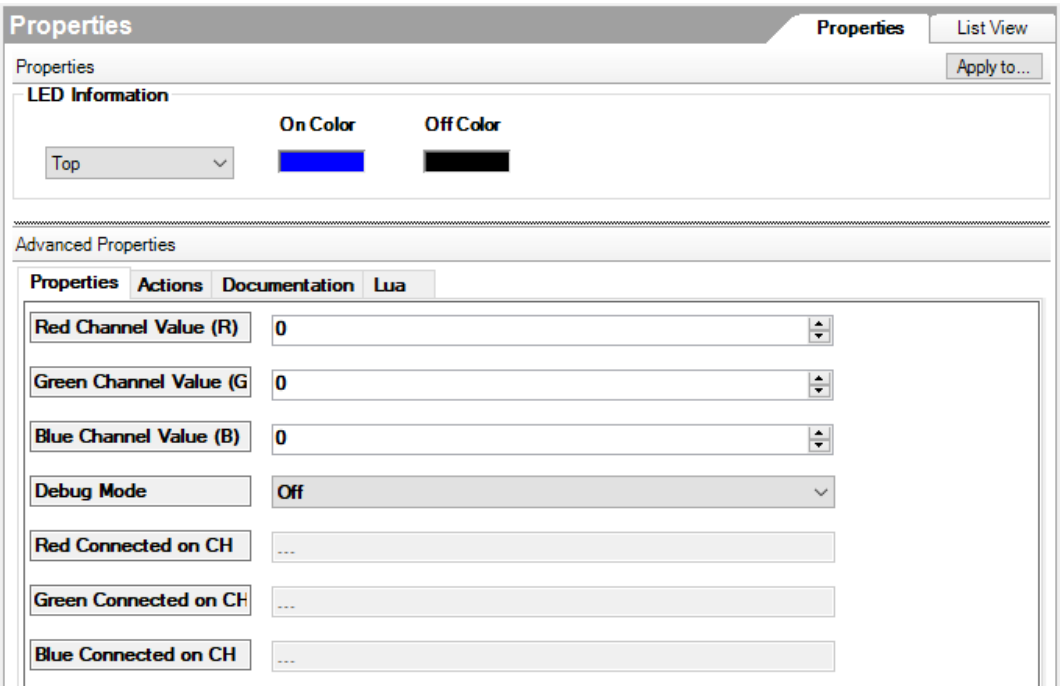
Actions



In **Actions** you can test the connection and the correct response of the associated channel.

36. Adeo Control SGDD-C4-4 Switch RGB Driver (Adeo_Control_SGDD-C4-4_SW_RGB.c4z)

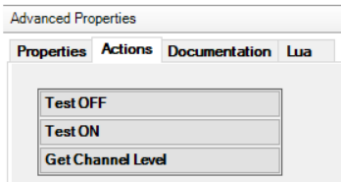
System Design



Used as a **non-dimmable light V2 driver**. Supports **Advanced Lighting** and **Keypad** Command Assignment.

XXX Channel Value	Select the combination of values to obtain the desired RGB color
Debug Mode	Turn Debugging on or off in Lua
XXX Connected on CH	Automatically shows the channel assigned in **Connections**

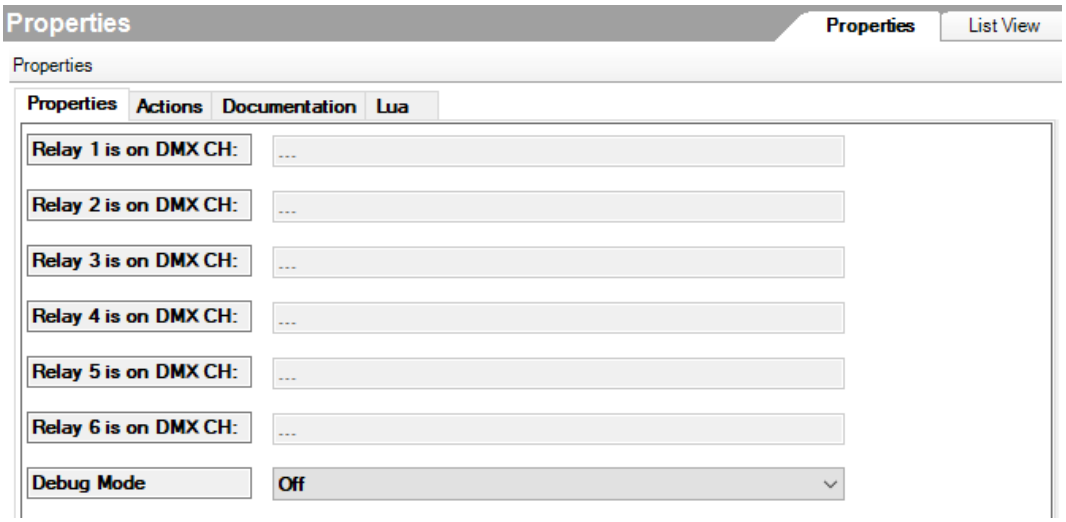
Actions



In **Actions** you can test the connection and the correct response of the associated channel.

37. Adeo Control SGDD-C4-4 Relay Driver (Adeo_Control_SGDD-C4-4_Relay.c4z)

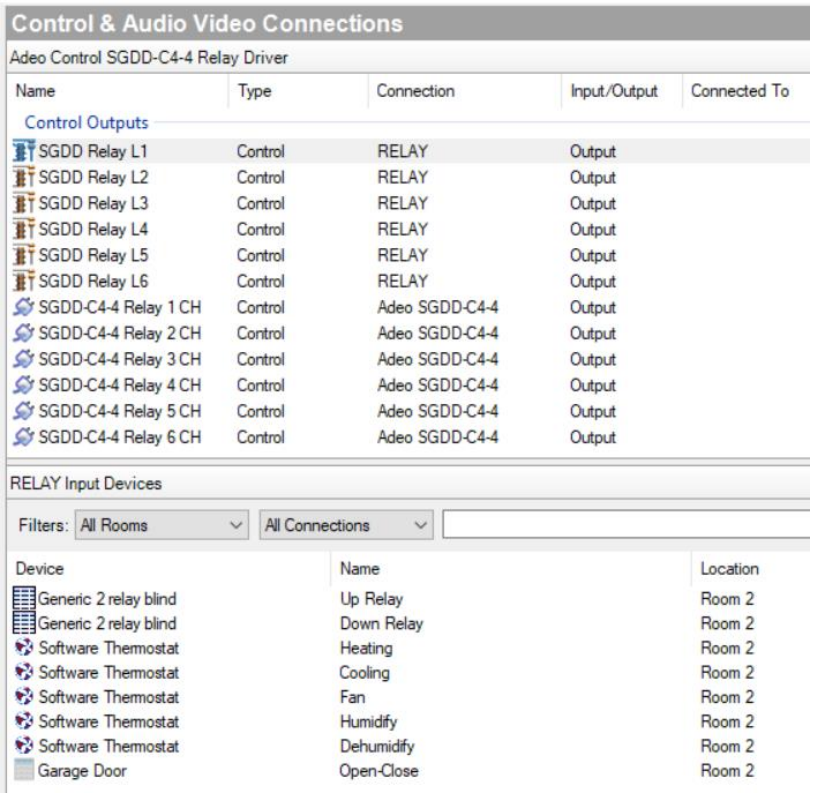
System Design



XXX Connected on CH	Automatically shows the channel assigned in **Connections**
Debug Mode	Turn Debugging on or off in Lua

Connections

Assign channels and then connect Drag and Drop Relay Output to the motorizations.



38. Best Practice

a. Before integration with the Control4, it must be ensured that the lighting system is working properly. Wiring errors or hardware malfunctions can affect driver programming and usage.

b. Using a diagram or a lighting project is always very useful to then reproduce in System Design the system to be controlled.

c. We recommend that you never use a single gateway to control all 64 DALI devices provided. Due to the excessive consumption of energy, of individual DALI devices on the bus, it may happen that there is no proper communication. This is because the integrated power supply fails to meet the energy demand of all 64 devices. It's best to provide multiple gateways.

d. It is important to understand what kind of lighting fixtures and the behavior they will have to have. If we have to carry out a control on a tunable white type lighting fixture (or dynamic white or white light temperature) we will have several options in front of us:

iv. **DALI DT6**, unlikely but feasible. The addressing will take away two channels associated with 2 **Adeo Control SGDD-C4-4 Single Dim-Light Driver**

v. **DALI DT8**, more plausible. The addressing will take away only one channel associated with the **Adeo Control SGDD-C4-4 TW DT8 Driver**

vi. **DMX**, recommended even if implausible. The addressing will take away two channels associated with 2 **Adeo Control SGDD-C4-4 Single Dim-Light Driver.** In this case we have 512 channels available. We recommend the use of the **ADEO CONTROL 4CH-LED-DIMMER-DMX.**

e. It is always recommended to deal with those who are in charge of providing the lighting control devices.

f. It is important to decide right away how to operate (see **DALI global settings** at pag. 13):

iv. **Address,** in this case we will have 64 **"Connections"** available in **Composer**

v. **Group,** in this case we will have 16 **"Connections"** available in **Composer**

vi. **Broadcast,** in this case we will have 1 **"Connections"** available in **Composer**

g. We invite you to use the Drivers in conjunction with the**Agent Advanced Lighting**

For more info

www.adeogroup.it

info@adeogroup.it