



New version with  
light sensor



**CASAMBI  
INSIDE**



## ■ Description

CAS-24V-ZHAGA-4P-80-DA-LX controller enables easy autonomous control and dimming of DALI devices (drivers, electronic ballasts, etc.). There is no need to use hubs, master devices or complex computer programs.

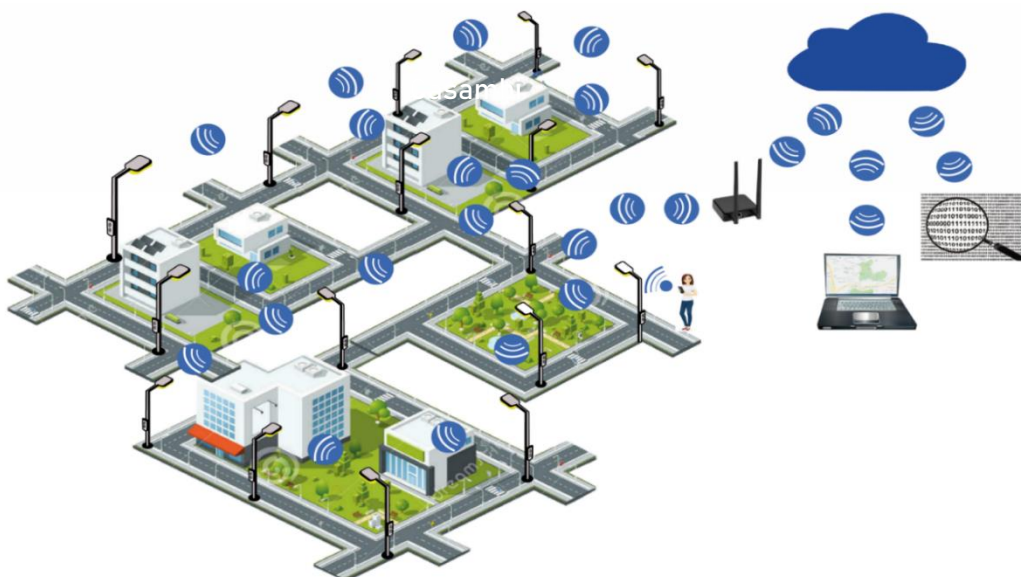
Communication is achieved by a meshed Bluetooth network.

Each control unit stores information about its own configuration and also the configuration of the rest of controls installed in the same network. This provides the system with a high robustness level and also simplifies replacement of control units as programming them is not required.

Configuration and control can be done from a mobile phone or tablet using the free CASAMBI APP (available for iOS and Android). The networks work autonomously once configured. Remote control of the installation is also possible through the cloud by use of an internet connected device with Casambi App set up as gateway.

Main use is control of outdoor lighting applications. It is provided with an IP66 UV resistant enclosure. Hydrophobic vent is incorporated to prevent condensation.

Electrical connection and mechanical fixing are done through a standard ZHAGA Book 18 compatible socket by twist and lock, without tools.



## ■ Operation

By use of CASAMBI APP it is possible to group the luminaires by streets or areas, set dimming levels based on the time, schedule special events for specific dates, etc.

Communication range between controllers is up to 200m (Long range Optimum net mode) or 300m (Long range Max. net mode), outdoors with no obstacles. Adding the controllers to a net must be done with a mobile phone or tablet within range of each unit. For further installation setup and programming it is only necessary to be within the range of one of the controllers. Because it is a mesh type network, controllers communicate with each other until the information reaches the controller for which it is intended, even if it is located far away.

Communication security is provided by encrypted messages. It is possible to set different levels of access and configuration permissions. Network configuration information can optionally be stored in CASAMBI cloud and recovered if necessary. Several restoration points can be created. When a controller receives a firmware update, it will automatically be retransmitted to the other controllers.

Each network can support up to 250 controllers. One installation can have unlimited number of networks which can be grouped together in one Site. Through the sites we can control different networks simultaneously, each network must have access to Internet through a Casambi router.

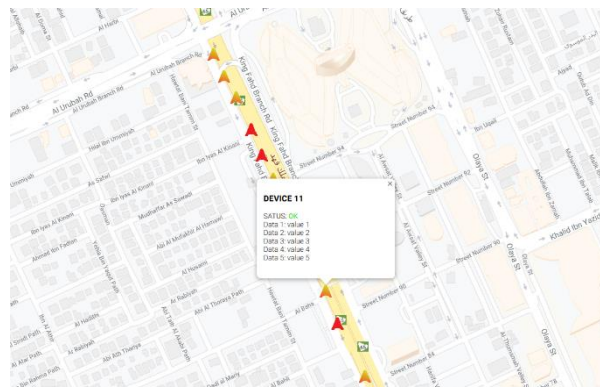
Diverse operating modes are possible (on/off, dimming 0-100%, circadian control, tunable white, etc.).

Different DALI profiles are available to match the driver and luminaire requirements (see profile list).


It is compatible with any other devices from other manufacturers which also incorporate CASAMBI inside and CASAMBI Ready products like luminaires, motion sensors, relays, actuators, push buttons, etc.

CAS-24V-ZHAGA-4P-80-DA-LX features a light sensor which can be configured in Casambi App to set specific illuminance levels for energy saving, or used in daylight controlled basic scenes for switching the lights on/off. Also an external DALI2 motion/light sensor can be connected to the DALI bus and will appear as a Casambi sensor in the App (with some specific profiles). Internal temperature can also be monitored.

CAS-24V-ZHAGA-4P-80-DA-LX is IoT ready. It can receive information provided by a DALI D4i driver or ballast (power consumption, working hours, accumulated energy consumption, temperature, etc.) which can be sent to Casambi cloud through a Gateway device with internet connection and Casambi App set up as gateway. Access to this big data to exploit this information is possible through API and JSON protocol.



## ■ Technical data

<b>Nominal input voltage</b>	24 VDC SELV
<b>Input voltage range</b>	18-30 VDC SELV
<b>Input current consumption standby</b>	25mA + DALI output Current
<b>Input current consumption pulsed (*)</b>	75mA@24VDC
<b>Power consumption standby</b>	<0,6W@24VDC (One DALI device connected)
<b>Power consumption Pulsed (*)</b>	<1,8W@24VDC
<b>Output control interface</b>	DALI/DALI2
<b>Integrated DALI BUS voltage source</b>	16VDC
<b>DALI nominal output current</b>	45mA
<b>DALI maximum output current (**)</b>	60mA
<b>Dimming range</b>	0-100%
<b>Light sensor range</b>	20-1500Lx
<b>RF communication interface</b>	Bluetooth 4.0 or 5.0 Low energy (BLE)
<b>RF communication protocol</b>	Casambi
<b>RF spectrum</b>	2402-2483 MHz
<b>RF network</b>	Self-healing, frequency-hopping, spread spectrum mesh technology
<b>Maximum transmission power</b>	+8 dBm
<b>Wireless class</b>	Class 2
<b>Data security</b>	AES128 bit encryption + elliptical cryptography
<b>Firmware update</b>	OTA (Over the air)
<b>Time/date update</b>	Internal counter. Updatable from APP or by use of external timer after power disconnection or through Casambi gateway
<b>Protections</b>	Over temperature.
<b>Temperature monitoring</b>	Internal temperature is displayed in Casambi App
<b>Operating temperature range</b>	-40° to +80°C
<b>Dimensions</b>	Diameter 80mm. Height 50mm
<b>Weight</b>	110gr. (Carton box included)
<b>Enclosure material</b>	PC with anti-UV treatment
<b>Enclosure isolation type</b>	Reinforced isolation 
<b>IP</b>	66
<b>IK</b>	09
<b>Connector</b>	ZHAGA Book 18
<b>Standards</b>	EN 61347-1:2016, EN 61347-2-11:2003, EN 55015:2013, EN 61547:2011, EN 61000-3-2, EN 61000-3-3, EN 301489-1, EN 301489-17.
<b>DALI standards</b>	IEC 62386 part 101, 103, 351
<b>Directives</b>	(LVD) 2014/35/UE, (EMC) 2014/30/UE, (RED) 2014/53/UE, (RoHS) 2011/65/UE, (REACH) 1907/2006.

(\*) DALI communication causes a pulsed type input current and power consumption. Data provided for dimensioning of the 24VDC power supply.

(\*\*) The maximum bus power supply current provided by other components in the luminaire shall be at most 190mA.

## ■ Standard Profiles

PROFILE	DESCRIPTION
<b>DALI Lin* Broadcast</b>	<b>DALI Broadcast.</b> Linear dimming curve.
<b>DALI Log Broadcast</b>	<b>DALI Broadcast.</b> Logarithmic dimming curve.
<b>DALI Lin* (4xGroup)</b>	<b>Control of 4 DALI Groups.</b> Linear dimming curve. Controls DALI groups G0-G3.
<b>DALI Lin* (6xGroup)</b>	<b>Control of 6 DALI Groups.</b> Linear dimming curve. Controls DALI groups G0-G5.
<b>DALI Lin* BC +Ext. Sensors</b>	<b>DALI Broadcast.</b> Linear dimming curve. A compatible <b>External DALI2 motion and light sensor</b> connected to the DALI bus will appear as a Casambi sensor in the App. The Internal light sensor of the node is disabled.
<b>DALI Lin* BC +Ext. Presence</b>	<b>DALI Broadcast.</b> Linear dimming curve. A compatible <b>External DALI2 motion sensor</b> connected to the DALI bus will appear as a Casambi sensor in the App.
<b>DALI Lin* DT6 TW 3-5K SA</b>	<b>DALI Tunable white. DT6 Short addresses A0, A1. 3000K-5000K.</b> Linear dimming curve. Automatic DALI addressing.
<b>DALI Lin* DT6 TW Warm-Cool SA</b>	<b>DALI Tunable white. DT6 Short addresses A0, A1.</b> Linear dimming curve. TW slider only indicates "Warm/ Cool" (no CCT value data). Automatic DALI addressing.
<b>DALI Lin* DT6 RGB SA</b>	<b>DALI RGB. DT6 Short addresses A0-A2.</b> Linear dimming curve. Automatic DALI addressing.
<b>DALI Lin* DT6 RGB/W SA</b>	<b>DALI RGB/W. DT6 Short addresses A0-A3.</b> Linear dimming curve. Dedicated slider for white channel. Automatic DALI addressing.
<b>DALI Lin* DT6 RGB/W+W SA</b>	<b>DALI RGB/W with additional W channel. DT6 Short addresses A0-A4.</b> Linear dimming curve. Dedicated sliders for white channels. Automatic DALI addressing.
<b>DALI Lin* DT8 TW 3-5K BC</b>	<b>DALI2 DT8 Tunable white Broadcast. 3000K-5000K.</b> Linear dimming curve.
<b>DALI Lin* DT8 TW 2.7-6K BC</b>	<b>DALI2 DT8 Tunable white Broadcast. 2700K-6000K.</b> Linear dimming curve.
<b>DALI Lin* DT8 RGB/W BC</b>	<b>DALI2 DT8 RGB/W Broadcast.</b> Linear dimming curve. Dedicated slider for white channel.
<b>DALI Lin* 1xDIM SA</b>	<b>DALI 1xDimmer. DT6 Short address A0.</b> Linear dimming curve. Automatic DALI addressing. Dimmed by sliding on the App icon.
<b>DALI Lin* 2xDIM SA</b>	<b>DALI 2xDimmers. DT6 Short addresses A0, A1.</b> Linear dimming curve. Automatic DALI addressing. Individual slider levels are overwritten when dimmed by sliding on the App icon.
<b>DALI Lin* 3xDIM SA</b>	<b>DALI 3xDimmers. DT6 Short Addresses A0-A2.</b> Linear dimming curve. Automatic DALI addressing. Individual slider levels are overwritten when dimmed by sliding on the App icon.
<b>DALI Lin* 4xDIM SA</b>	<b>DALI 4xDimmers. DT6 Short Addresses A0-A3.</b> Linear dimming curve. Automatic DALI addressing. Individual slider levels are overwritten when dimmed by sliding on the App icon.
<b>DALI Lin* 5xDIM SA</b>	<b>DALI 5xDimmers. DT6 Short Addresses A0-A4.</b> Linear dimming curve. Automatic DALI addressing. Individual slider levels are overwritten when dimmed by sliding on the App icon.
<b>DALI Lin* 6xDIM SA</b>	<b>DALI 6xDimmers. DT6 Short Addresses A0-A5.</b> Linear dimming curve. DALI addressing. Individual slider levels are overwritten when dimmed by sliding on the App icon.
<b>DALI Lin* 7xDIM SA</b>	<b>DALI 7xDimmers. DT6 Short Addresses A0-A6.</b> Linear dimming curve. Automatic DALI addressing. Individual slider levels are overwritten when dimmed by sliding on the App icon.
<b>DALI Lin* 8xDIM SA</b>	<b>DALI 8xDimmers. DT6 Short Addresses A0-A7.</b> Linear dimming curve. Automatic DALI addressing. Individual slider levels are overwritten when dimmed by sliding on the App icon.

Other profiles available on request, please contact us.

## ■ Wiring diagram

