Driver Control4 – Ksenia lares IP
Installation and configuration manual
Driver Version 2.x

www.kseniasecurity.com

It is recommended to follow this manual step by step in order to make the driver work properly.

Legend:

Italic bold terms are labels as used on "basis" or "Composer" applications.

Main features:

- **2.8.0 Control4 version or next**
- **Correct Composer version to the Control4 controller**
- **lares version 1.6 build 1239 or next**
- **1.6 Ksenia basis version**
- **IP Ksenia lares Driver v2 (Available on marketplace https://www.houselogix.com)**

- **For the correct operation of the system it is recommended to install an uninterruptible power supply (UPS), capable of delivering power to the controller Control4® and to network devices (routers, switches, ...) even in the absence of mains power. The Panel lares have battery back-up and therefore do not require external UPS.**

This manual refers to the actions needed to integrate the Ksenia lares control panel with the Control4 system. It is assumed that lares configurations (zones, outputs, partitions, scenarios, codes, ...) have already been correctly performed.

Step 1 - lares IP (basis) - "Ethernet Parameters"

On the *Ethernet* page, verify and/or set the following parameters:

1. Configure network parameters (DHCP, IP address, ...) depending on the type of router used.
2. The *Enable Webserver* and *HTML digest authentication* options must be enabled.
3. In the webserver section, set *username* and *password* (required for the driver configuration in Control4) and leave the *port* to 80 (you can not set up the integration using other ports).
4. The *user code to use in the webserver* must be set for the driver to work properly.
5. Send the configuration to the lares control panel.

In *Phonebook:*

1. Add a *new IP Receiver contact*, and to identify it in the future set the *Receiver description* field "Control4".
2. Enter the value 1 in the *Receive ID number* and *Transport ID* fields
3. *IP Address:* Enter the Control4 controller address
4. *Port:* Choose a communication port from Ksenia to Control4
    a. It must also be included in the driver's properties
    b. It does not have to conflict with other ports used by other devices that communicate with Control4

5. Select the "CONTROL4" *Protocol*.
6. Enter the value 1 in the *Application ID* field
7. None of the other *options* must be selected or edited, and no associated events must be entered
8. Send the configuration to the lares control panel.

Open the project and install the "Ksenia lares IP v2" driver

The driver installation takes a bit of time considering that there are 20 partitions that for the new Control4 security interface are virtually 20 "sub-drivers".

As soon as installation is completed from *system design*, you can configure the driver entering the *Properties* section:

Advanced Properties

| Properties | Documentation | Actions | Lua |

Ks Lares Type	128IP
Ks IP Address	192.168.x.x
Ks WebServer User	admin
Ks WebServer Password	
Ks IP receiver port	1977
License Code	type your license code here
License Status	
Ks Last Config	Succes on 26/05/2017 10:59:33
Polling Time (min)	15
Ksenia's scenario for Panic button	
Log Level	6 - Tags
Log Mode	Off
Log hashTags	
Driver Version	20170430

Using the parameters set on the lares control panel, please do following steps:

1. Select the control panel model (**128IP, 48IP, 16IP**),
2. Set the IP address
3. Set the user and password of the webserver as done in point 1.3
4. Set the communication port as done in step 2.4
5. Enter the license code (obtained from the marketplace houselogix.com)

If all settings are correct and lares is reachable the properties *Ks Last Config notifies* that you can read the configuration, and the *Ks Last Config property* pops up with "Ksenia is connected, please read from panel".

Advanced Properties

| Properties | Documentation | Actions | Lua |

Ks Lares Type	128IP
Ks IP Address	192.168.1.77
Ks WebServer User	admin
Ks WebServer Password	
Ks IP receiver port	8077
License Code	type your license code here
License Status	
Ks Last Config	Set Properties and then Read from panel
Polling Time (min)	15
Ksenia's scenario for Panic button	read Ksenia Conf for list...
Log Level	6 - Tags
Log Mode	Print
Log hashTags	
Driver Version	Beta 2017-04-30

NOTE: Communication from lares to Control4 can only be verified when the driver is operating after reading the configuration of the lares control panel (see next step).

Step 4 - Control4 (Composer) - Read from panel

Using the button on the top right of the driver's properties, you can start reading the configuration of the lares control panel.

Properties

| Partitions | Zones |

#	Partition Name	Partition State	Arm Type	Enabled
1	Ksenia Partition 1	Unknown		True
2	Ksenia Partition 2	Unknown		True
3	Ksenia Partition 3	Unknown		True
4	Ksenia Partition 4	Unknown		True

Reading may take few minutes depending on the size of the connected control panel.

When successful, the properties named **Ks Last Config** show the date and time of reading.

NOTE: Unfortunately, the new Control4 security proxy does not allow you to write partition name updates after reading them from lares. Through the **actions** "Display Status", you can view and manually rename the partitions you are using.

Polling Time.

The **Polling Time property (min)** determines the time at which the Control4 controller will update the status of the lares control panel.

Polling is required in particular to update **Output** status (if changed not from the Control4 interface), **temperature** values and **SIM** credit. We recommend keeping this value as high as possible to reduce network traffic.

Ksenia's scenario for Panic button.

The Control4 User Interface provides an **Emergency** button that allows you to select a **Panic** function. Considering the "scenarios" logic of the lares central unit, you can associate this function with a specific **scenario**, whose actions are to be configured on a basis.
If no **Scenario** has been associated with this function if the Control4 interface is activated the function displays the following **Trouble** message: "No Panic Scenario Selected"

Interface and functionality in Composer

The driver allows following operation:
● Use the "new" Control4 security proxy interface released with version 2.8.0

● Use events, states, and functions provided by that proxy
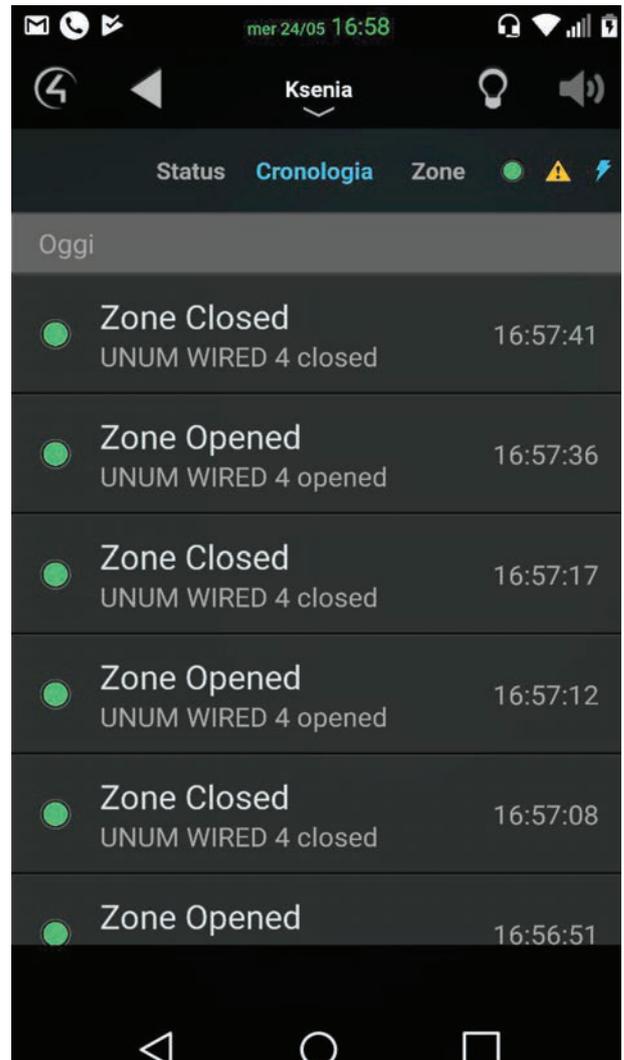
● Recall Ksenia *scenarios* using the custom keyboard of the interface, from which you can scroll through the scenarios with *Up* and *Down* keys, or quickly recall a scenario by typing the "PIN" + "scenario number"
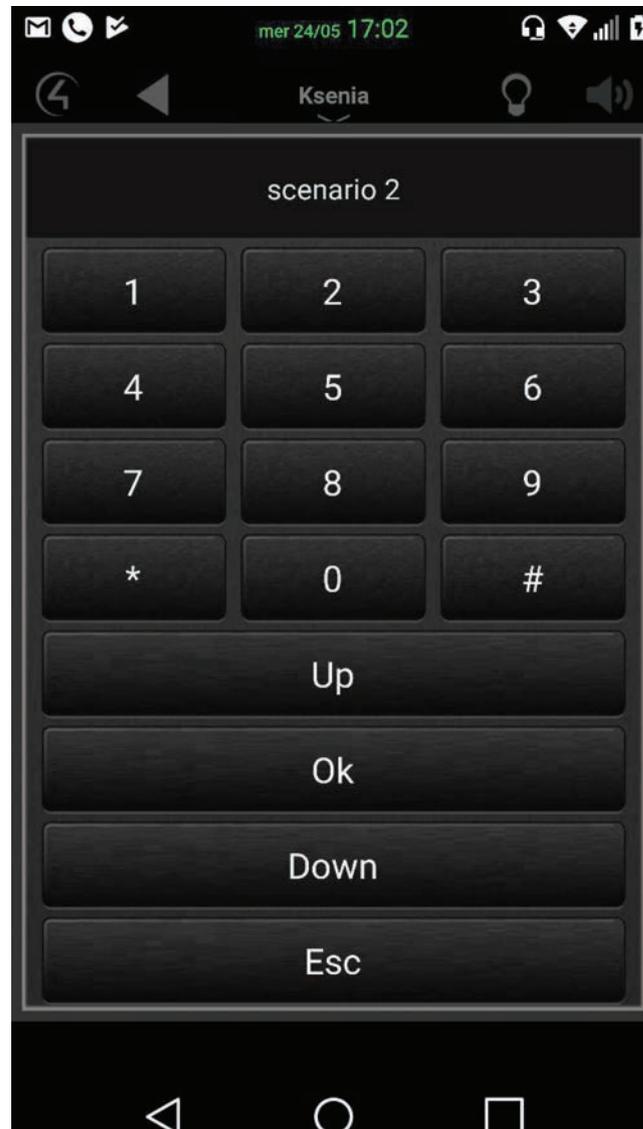
● See the status of the zones of the lares control panel:
    ○ In the driver *connections* as **CONTACT_SENSOR**
    ○ in *programming* as variables for both state management and *ByPass* status control (see Appendix 1)
    ○ In the Control4 UI as provided by the security interface
● See the status of the output of the lares control panel:
    ○ In the driver *connection* as *RELAY*
    ○ in *programming* as variables (see appendix 1)
● See the status of the partitions of the lares control panel:
    ○ in *programming* as variables (see appendix 1)

NOTE: The Control4 for *Mac* interface has several problems with the operation of the new security proxy, especially the custom keyboard. While waiting for Control4 to make a specific bug fix, it is not recommended to use it.

Data and Licence
It allows to print the date and re-appear in the "License Code" *property*, to be used in case of license and / or license-related changes (for example incorrectly typed value).

Print Log Tags
It allows to view all of the TAGs used to characterize debugged message consoles. Such messages and such TAGs are decided by the developers at the time of creating the driver. Choosing to characterize messages is intended to speed up possible debugging and erroneous settings of the two systems

Display Status
It Allows to view the status of the lares control panel read from the Driver in the console, this provides an overview of *zones*, *partitions*, *outputs* and *scenarios*, and lares control panel information such as internal and external temperature and SIM status.
It is useful to verify the status of Control4 / Ksenia communication and to check names and states of all lares system components.

Display C4 Variable
It allows to view in the console all the variables offered by the driver, their properties, and their status

Remove old Variable and Output
If you change the configuration of the lares control panel, you can use this action to remove all the variables and outputs that are no longer used.

NOTE: We recommend to use this feature at a time when other settings or readings are not being performed, in order to avoid misalignments and complete malfunctions.

Configuration

If the lares configuration is changed from the basis software, such as adding or deleting *zones*, *partitions*, *output*, you must re-read the configuration.
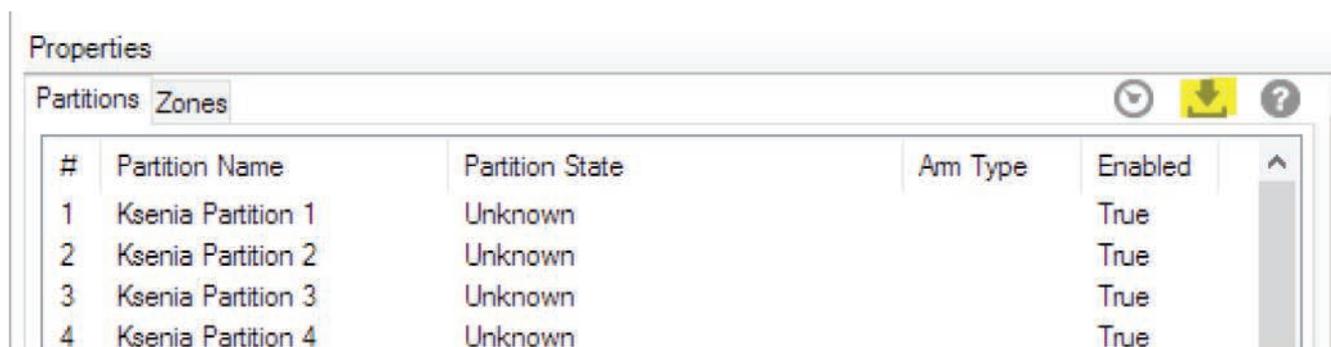
When an item is deleted, it is advisable, but not indispensable, to select the action "Remove old Variable and Output" after re-reading the configuration.

Driver

If you update the driver, you must reset the "Default User Code" for the partitions that are not stored.

Configuration mismatching lares/Control4

It is not expected that configuration mismatching will occur in normal use. This situation can only be created during configuration by re-reading the Composer because the Control4 security proxy in some cases has problems during interfaces updating.
If the "Display Status" action correctly displays all the elements configured on lares, but some of them are not displayed on Control4 interfaces, it is suggested that you try to fix it by performing a driver update. In any case, it is strongly advised to do the following:

1. Configure all lares parameters in the most definitive way possible.
2. Install the driver on Control4.
3. Read the configuration of the lares control panel.

Practice for testing and putting into production

If communication tests are carried out in a "test" configuration, it is good practice to switch from test to production by following the procedure below:

1. Delete the driver,
2. Refresh the interfaces,
3. Re-install the driver
4. Read the configuration of the lares control panel

WARNING: Deleting the driver always generate the loss of all connections and programming already done.

Events or Action (triggering in programming)

Proxy	Events or Action	when it happens
Security Panel Events	Trouble Start	A "trouble" message is sent
	Trouble Clear	The trouble message is cleared.it is automatic for messages managed by the driver, it is to be handle for messages sent with the variable "KS_TROUBLE_TEXT" described below
Security Panel Action	In Trouble	True (1) when the partition is displaying a trouble message, False (0) when the problem is cleared
Partition Panel	Alarm	when partition alarm occurs
	Alarm Clear	When the partition is disarmed, but it also activates when it restarts the alarm after a first Alarm event.
	Disarmed	when partition is disarmed
	Armed	when partition is armed
	Partition State Changed	when partition status changes
	Arm Failed	when a partition is not ready to arm
	Disarm Failed	not supported
	Emergency Triggered	when panic button is pressed
Partition Panel Action	Arm	Set the partition default user code
	Disarm	Set the partition default user code
	Emergency	A function must be set from the Ksenia's scenario for Panic button property drop-down menu
	Execute Function	Select one of the features available on the interface, SIM Data, Temperatures, DisarmAll. (Set the partition default user code)
	Arm All	Set the partition default user code
	Disarm All	Set the partition default user code

Security Panel - Device Variables

Variable	Type	Description	Readonly/ Writeable
TROUBLE_TYPE	String	Trouble message	R
KS_TROUBLE_TEXT	String	It sends a trouble message that remains in the UI until the variable is overwritten. To clean the display, set it to an empty string.	W
KS_LastZoneAlarmed	String	It contains the name of the last alarmed zone.	R
KS_PartitionsChanged	String	It contains the name of the last partition that has changed status and its status in format: "[Partition Name]> [Status]"	R
KS_PartitionsMask	String	List of ordered numbers representing the state of the partitions (updated at each variation). The states are so encoded: 0 = DISARMED_READY 1 = ARMED 2 = ALARM 3 = EXIT_DELAY 4= ENTRY_DELAY For example: 012 means that the first partition is DISARMED, the second is ARMED, the third is ALARMED	R
P_[nomePartizione]	String	Status of the single partition can assume the values: DISARMED_READY ARMED EXIT_DELAY ENTRY_DELAY DELAY states occur even if time is zero. They do not show if they use the "no delays" or "immediate alarm" options	R
P-N_[nomePartizione]	String	It contains the name of the partition to be used for any "communications" to the UI	R
Z_[nomeZona]	String	Status of a single zone: NORMAL ALARM MASK TAMPER	R
Z-BP_[nomeZona]	Bool	Set the bypass status of a zone: true = BYPASS false = UN_BYPASS Warning: The status of the bypassed zones is always NORMAL	W

Variable	Type	Description	Readonly/ Writeable
Z-N_[nomeZona]	String	It contains the name of the zone to be used for any "communications" to the UI	R
zA_[nomeZona]	Number	It contains the status of the analog zone at a value ranging from 1 to 5	R
O_[nomeOutput]	Bool	Sets the status of an Output: true = Closed/On false = Opened/Off	W
O-A_[nomeOutput]	Number	Sets the value of analog outputs from 0 to 255	W
GSM_operator	String	Contains GSM carrier name	R
Sim1_Credit	Number	It conteis the SIM 1 credit (integer)	R
Sim2_Credit	Number	It conteis the SIM 2 credit (integer)	R
Temp_Indoor	Number	Indoor temperature	R
Temp_Outdoor	Number	Outdooe temperature	R

Partitions

Variable	Type	Description	Readonly/ Writeable
~~HOME_STATE~~	~~Bool~~	~~NON utilizzata - Control4 documenta tale variabile come "deprecated".~~	~~R~~
~~AWAY_STATE~~	~~Bool~~	~~NON utilizzata - Control4 documenta tale variabile come "deprecated".~~	~~R~~
~~DISARMED_STATE~~	~~Bool~~	~~NON utilizzata - Control4 documenta tale variabile come "deprecated".~~	~~R~~
DISARMED_STATE	Bool	True (1) if disarmed otherwise it is False (0)	R
ALARM_STATE	Bool	True (1) if in alarm state, otherwise it is False (0)	R
DISPLAY_TEST	String	It contains the message displayed on the single partition	R
TROUBLE_TEST	String	Trouble message	R
IS_ACTIVE	Bool	True (1) if the partition is active and it can be used otherwise it is False (0)	R
PARTITION_STATE	String	Text representing the current state of the partition	R
DELAY_TIME_TOTAL	intero	it works on both Entry and Exit, it contains the total duration of the current delay. If I do not have a delay, it is 0	R
DELAY_TIME_REMAINING	intero	It contains the remaining time after the delay expires, if I do not have a delay it is 0	R
OPEN_ZONE_COUNT	intero	It is the number of open zones in the partition, usually it is useful when the arm status is DISARMED_NOT_READY.	R
ALARM_TYPE	string	It contains a description of the alarm condition if they are in alarm state, the possible alarm states are: Burglary and Panic. If it is not in Alarm it is empty	R
ARMED_TYPE	string	Last Date Fail To Close. Attention is never cleaned.	R
LAST_EMERGENCY	string	If Panic function is used this variable contains PANIC	R
LAST_ARM_FAILED	string	It contains Date f last Fail To Close. Attention is never cleaned.	R