



# **ZigBee™ Network Expander ZXPAND**

## **User Manual**



Revision: 1.0

Document: UM\_ZXPAND\_20110919\_001\_01\_00

## WARRANTY

The device supplied to the buyer and/or the recipient is guaranteed by CLEODE against any malfunctions originating from a design and/or manufacturing flaw, for a period of twelve (12) months following delivery. The buyer and/or recipient is (are) responsible for proving the existence of the said defects or flaws. This warranty is applicable in accordance with articles 1641 to 1648 of the French Civil Code and in compliance with the French statutory warranty. The warranty covers the replacement free of charge of devices and parts affected by a design and/or manufacturing flaw excluding conspicuous defects in the device that are covered by the buyer and/or the recipient.

In order to invoke the warranty, the buyer must immediately send written notice to CLEODE of the flaws that it attributes to the device. It must enable CLEODE to have access to the device to observe these defects and repair them. The warranty provided by CLEODE is strictly limited to the equipment provided and shall only have for effect the replacement or repair, at CLEODE's expense, on its own premises, of all devices or parts that are not functioning as a result of defects or flaws. CLEODE reserves the right to modify the devices in order to comply with the warranty.

The warranty does not apply to replacement or repairs that may result from normal wear and tear of devices, systems or products, damage or accidents resulting from negligence, failure to supervise or maintain, or incorrect use of the devices, systems and/or products.

The maintenance service is provided by CLEODE with all reasonable care possible and in compliance with the current state of the arts.

The exchange of parts or repairs performed under the warranty cannot result in extending the length of the warranty. In no event can the unavailability of the device due to servicing give rise to compensation for any reason whatsoever. The seller is released from all obligations relating to the warranty if the product or device has been modified without prior written consent, or if original parts have been replaced by parts which it has not manufactured without prior consent. If unforeseen damage is caused by the device, it is expressly agreed that the seller can only be liable for the reimbursement of monies received for the purchase of the device if it has been destroyed. Under no circumstances can the seller be held liable for indirect or contingent damage. The seller is released from any liability and the buyer waives any rights against it if an accident or direct or indirect damage is caused to the buyer following a defect, incorrect usage, incorrect maintenance or normal wear of the device sold.

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## TABLE OF REVISIONS

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Version	Authors(s)	Version description	Date
0.1	CLEODE	Initial version	19/09/2011
1.0	CLEODE	Validated document	22/09/2011

## REFERENCE DOCUMENTS

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N°	Document	Description
[1]	ZigBee_Cluster_Library_Public	Zigbee Cluster Library Specification
[2]	ZigBee_Home_Automation_Profile	Home Automation Profil Specification
[3]	ZigBee_Specification	ZigBee Specification

## I INTRODUCTION

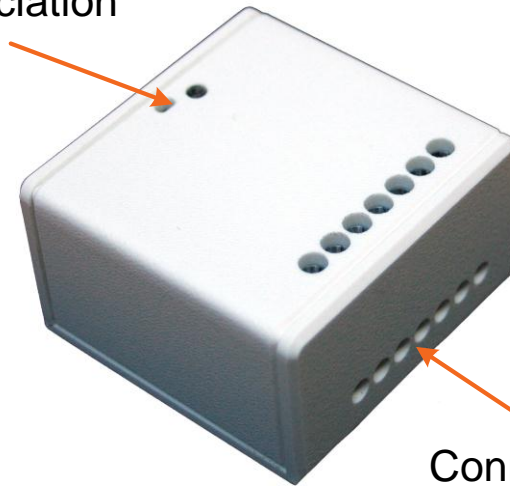
### I.1 ZXPAND PRESENTATION

The network expander ZXPAND allows expanding the range of a zigbee network.

The ZXPAND also integrates the function of router ZigBee™.

The ZXPAND has this form:

Button and light of  
association



Connecting



The module ZXpand works in conjunction with a Zigbee coordinator™ compatible stack pro 2007.

CLEODE also markets Coordinators Zigbee™.

Contact : support@cleode.com ou Web : [www.cleode.fr](http://www.cleode.fr) for more information

### I.2 COPYRIGHT

The CLEODE trademark and the CLEODE logo are properties of CLEODE SA, France. This document also refers to trademarks and other product names that are registered trademarks of their respective owners.

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## II ZXPAND DESCRIPTION

### II.1 ZIGBEE PRESENTATION

The network expander ZigBee™ contains application type *Range Extender* defined in the standard Home Automation (Cf. document [2]).

This node is fully compliant with the ZigBee™ PRO 2007 and Home Automation profile. For more detail on the data exchange between device and network, see documents [1], [2] and [3].

### II.2 APPLICATION

#### II.2.1 APPLICATION DESCRIPTION

- Device ID : Range Extender
- Endpoint number: 1
- Clusters :

Server	Client
Basic (0x0000)	/
Identify (0x0003)	/

## II.2.2 CLUSTERS DESCRIPTION

This is a terse description of clusters and attributes which are implemented in the ZXPAND. For more detail on these, see document [1].

- Basic cluster :

This cluster is used to determine basic information about the device.

Attribute	Attribute ID
ZCLVersion	0x0000
ApplicationVersion	0x0001
StackVersion	0x0002
HWVersion	0x0003
ManufacturerName	0x0004
ModelIdentifier	0x0005
DateCode	0x0006
PowerSource	0x0007
LocationDescription	0x0010
PhysicalEnvironment	0x0011
DeviceEnabled	0x0012
AlarmMask	0x0013

- Identify cluster :

This cluster is used to put a device into an identification mode. By writing the *IdentifyTime* attribute value, the user asks the device to blink the light, during a number of seconds specified by this value.

Attribute	Attribute ID
IdentifyTime	0x0000



## III INSTALLATION AND NETWORK ASSOCIATION

### III.1 INSTALLATION

#### III.1.1 DOUBLE-SIDED TAPE INSTALLATION

To mount the ZXPAND with a double-sided tape, follow this:

- 1) Stick a double-sided tape on the ZXPAND bottom
- 2) Dust the wall
- 3) Mount the ZXPAND on the wall

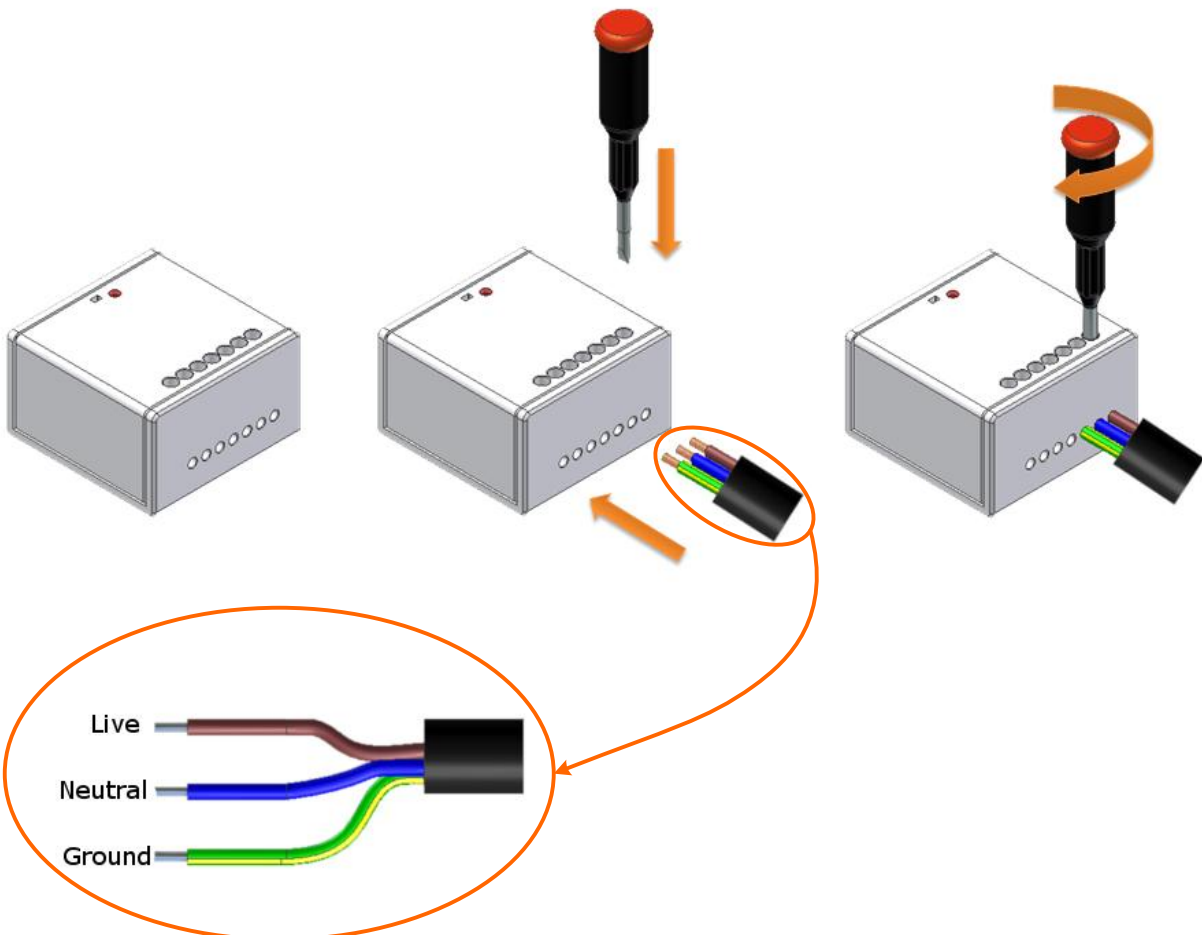
#### III.1.2 RACCORDEMENT

To connect the ZXPAND, follow the procedure this below.

Connect the supply of the ZXPAND s indicated below.

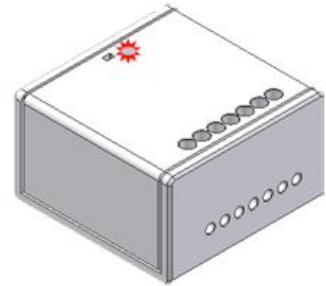


Attention: Shut down the power supply before any intervention and it till the end the manipulations.

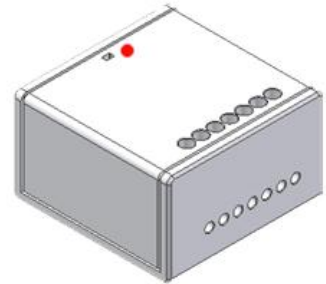


## III.2 STARTING UP ZXPAND

In the switched on of the object, it tries to join during about seconds and flashes twice.



If a coordinator is present and what it authorizes the ZXPAND to join the network, the light of the ZXPAND flashing during 2 seconds then turn off.

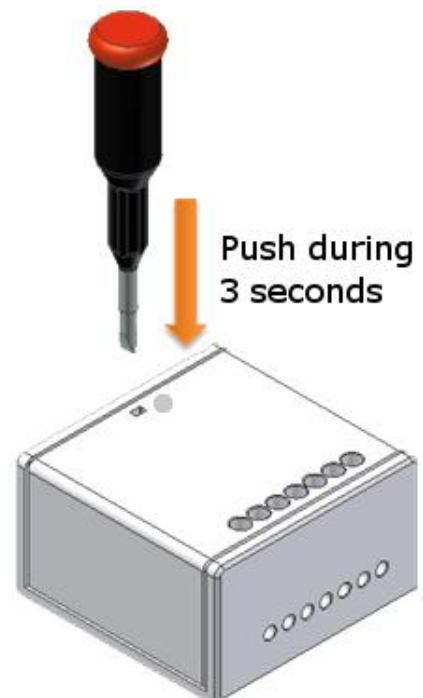


In the cases where the association is not possible, the object is going to put itself in sleep and to try automatically to join at the end of 15 minutes. This time will increase twofold in every new failure of the association.

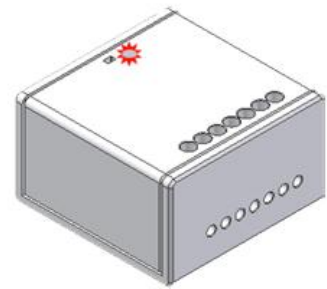
## III.3 RESTART OF THE ASSOCIATION PHASE

If the ZXPAND is not associated, the user can ask him at any time to join a network.

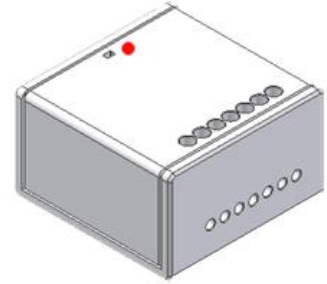
For this, the user has to press during 3 seconds on the button.



If the ZXPAND was not associated it begins flashing quickly during 20 seconds. The ZXPAND looks for a coordinator during this blinking.



If the association is success, the light of the ZXPAND flashing during 2 seconds and turn off.

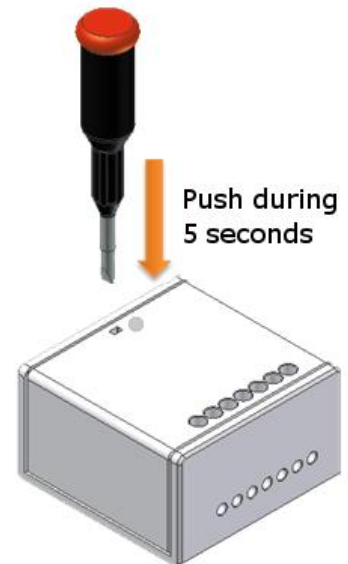


If the light of the ZXPAND does not flash after to have press on the button during 3 seconds, this means that he is already associated in a network.

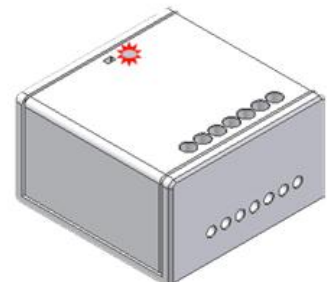
### III.4 RESET

If need, the user can reset of the ZXPAND.

For this, he has to press on the button during 5 seconds.



When the ZXPAND reset, the LED flashes twice and turn off.



## IV TECHNICAL FEATURES

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Weight	100 g
Power supply	85-263 V / 50-60 Hz
Measurement	54 x 52 x 32 mm
Transmission range	100 m outdoor 30 m indoor
Managed channels (frequency)	16 ZigBee™ channels (2.405 to 2.480 GHz)

## REPAIR AND MAINTENANCE

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Defective equipments shall be first reported to the CLEODE support team in order to be assigned an RMA number. Be prepared to state your name, company and the serial number of the defective item to the support personnel.

The item shall then be returned to CLEODE with the following documents:

- The RMA number
- A copy of the delivery slip
- A detailed description of the default and the test context

The maintenance period is typically four (4) weeks starting from the date of reception of the equipment at the CLEODE headquarters.



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