

# Qeedji

User manual

**NAPOE109kt**

**1.10.12 005A**



## Legal notice

### NAPOE109kt 1.10.12 (005A\_en)

© 2021 Qeedji

#### Rights and Responsibilities

All rights reserved. No part of this manual may be reproduced in any form or by any means whatsoever, or by any means whatsoever without the written permission of the publisher. The products and services mentioned herein may be trademarks and/or service marks of the publisher, or trademarks of their respective owners. The publisher and the author do not claim any rights to these Marks.

Although every precaution has been taken in the preparation of this document, the publisher and the author assume no liability for errors or omissions, or for damages resulting from the use of the information contained in this document or the use of programs and source code that can go with it. Under no circumstances can the publisher and the author be held responsible for any loss of profits or any other commercial prejudice caused or alleged to have been caused directly or indirectly by this document.

#### Product information

Product design and specifications are subject to change at any time and 'Qeedji' reserves the right to modify them without notice. This includes the hardware, the embedded software and this manual, which should be considered as a general guide to the product. The accessories supplied with the product may differ slightly from those described in this manual, depending on the developments of the various suppliers.

#### Precautions for use

Please read and heed the following warnings before turning on the power: - installation and maintenance must be carried out by professionals. - do not use the device near water. - do not place anything on top of the device, including liquids (beverages) or flammable materials (fabrics, paper). - do not expose the device to direct sunlight, near a heat source, or in a place susceptible to dust, vibration or shock.

#### Warranty clauses

The 'Qeedji' device is guaranteed against material and manufacturing defects for a certain duration. Check the device warranty duration value at the end of the document. These warranty conditions do not apply if the failure is the result of improper use of the device, inappropriate maintenance, unauthorized modification, operation in an unspecified environment (see operating precautions at the beginning of the manual) or if the device has been damaged by shock or fall, incorrect operation, improper connection, lightning, insufficient protection against heat, humidity or frost.

#### WEEE Directive



This symbol means that your appliance at the end of its service life must not be disposed of with household waste, but must be taken to a collection point for waste electrical and electronic equipment or returned to your dealer. Your action will protect the environment. In this context, a collection and recycling system has been set up by the European Union.

# Table of contents

## Part I : Description and installation

Introduction	1.1
Faces	1.2
Device dimensions	1.3
Labelling	1.4
Connectors	1.5
KRONE connector crimping	1.6
Device fixture	1.7
Device uninstallation	1.8
KRONE connector removing	1.9
KRONE connector insertion	1.10

## Part II : Technical information

Technical specifications	2.1
Conformities	2.2

## Part III : Contacts

Contacts	3.1
----------	-----

## Part IV : Appendix

Appendix: Type B or type A RJ45 cable PIN out	4.1
---	-----

# **Part I**

**Description and installation**

## 1.1 Introduction

The NAPOE109kt device is a dual role data Ethernet to POGO adapter suitable for TAB10s device. Once connected to a Ethernet cable supporting PoE, it can provide power supply and IP network connectivity to a TAB10s device.

The NAPOE109kt device is intended to be crimped through a KRONE connector, on an Ethernet multi-stranded cable supporting PoE IEEE802.3af then to be fixed inside a wall flush-mounted box.

This manual explains how to install the NAPOE109kt device:

- on a partition wall with screw-in dowels or
- on a glass wall with adhesive tapes.

## Recommendations and warnings

This device is designed for indoor use only.

 In the nominal mode, it is normal that the device is hot. It is advised to take precaution before handling the device with your hand.

## Package Contents

Items	Description	Quantity
Device	NAPOE109kt device	1
KRONE connector	Removable connector to be crimped on a network cable	1
Cable clamp	Clamp to tighten the network cable on the NAPOE109kt device	1
Serrated washers	Ensure the tightness of the NAPOE109kt device on the wall flush-mounted box Internal Ø: 3.2 mm (0.118 "), external Ø: 6 mm (0.236 "), thickness: 2 mm (0.078 ")	2

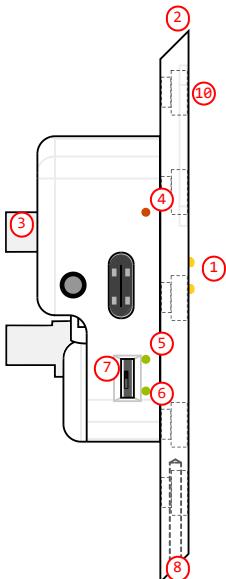
 When coming straight from factory, the KRONE connector is already plugged on the NAPOE109kt device.

 In this documentation, the unit of measurement for dimensions is done in millimeters followed by its equivalent value in inches.

## 1.2 Faces

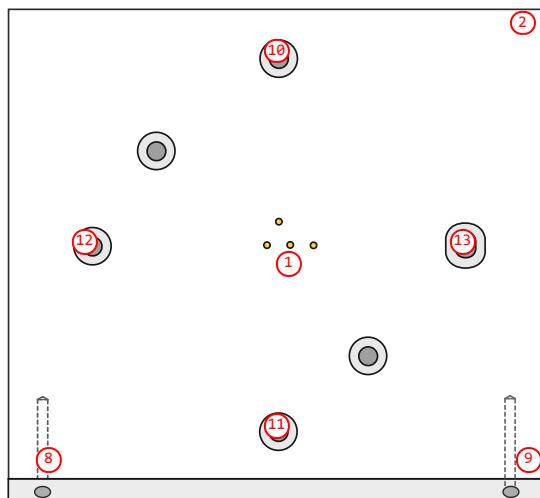
### Side face

- **①** electrical pads supporting data and power delivery,
- **②** bevelled support to hang the TAB10s device,
- **③** removable KRONE connector ,
- **④** power red LED,
- **⑤** status green LED for network gigabit connection ,
- **⑥** status green LED for network activity,
- **⑦** dipswitch allowing to:
  - activate or inactivate the LED lightening,
  - activate or deactivate the data and power connectivity on the POGO connector or on the USB-C connector,
- **⑧** holes to host screws to lock the TAB10s device on the NAPOE109kt device,
- **⑩** holes to fix the device on the wall flush-mounted box.



### Front face

- **①** electrical pads supporting data and power delivery,
- **②** bevelled support to hang the TAB10s device,
- **⑩** **⑪** **⑫** **⑬**<sup>1</sup> holes to fix the device on a wall flush-mounted box.
- **⑧** **⑨** holes hosting screws to lock the TAB10s device on the support.<sup>2</sup>



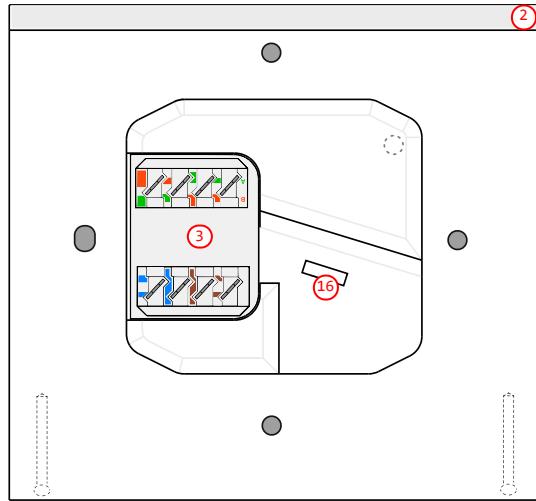
<sup>1</sup> It is advised to mount the wall flush-mounted box with a specific orientation. For further information, refer to the chapter § [Device fixture](#).

<sup>2</sup> The suitable screws are provided with the TAB10s device.

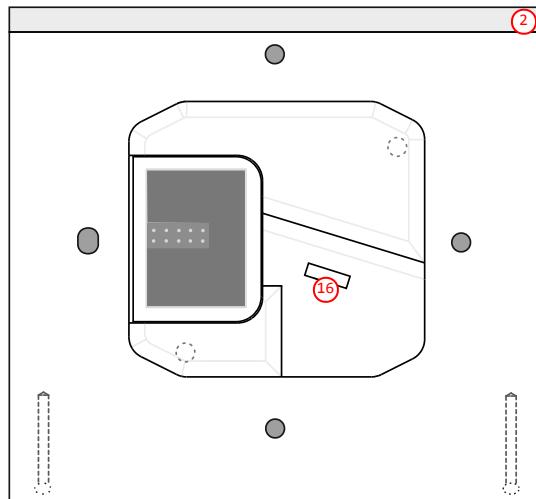
## Rear face

- **(2)** bevelled support to hang the TAB10s device.
- **(3)** removable KRONE connector ,
- **(16)** ring to tighten the Ethernet multi-stranded cable,

Rear face with the KRONE connector:



Rear face without the KRONE connector:

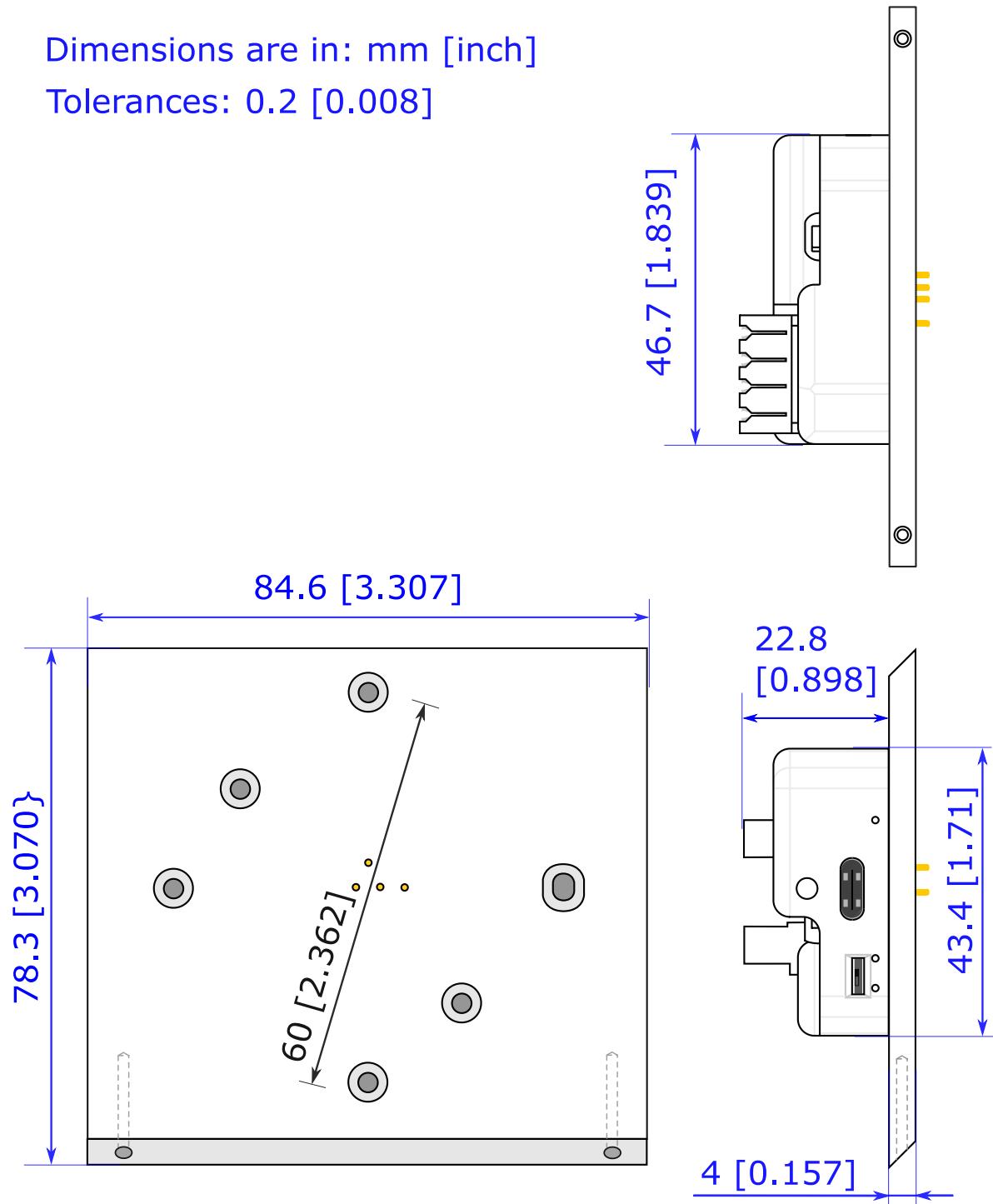


☞ The crimping procedure is explained in the chapter § [KRONE connector crimping](#).

### 1.3 Device dimensions

Dimensions are in: mm [inch]

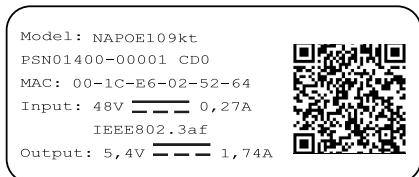
Tolerances: 0.2 [0.008]



## 1.4 Labelling

### Product label

The model of the device, the power supply characteristics, the serial number (PSN) and the MAC address are written on a label stuck on the case.



☞ The QR code on the product label is corresponding to the product identification URL, for example:  
[i.qeedji.tech?model=NAPOE109kt&sn=01400-00001&mac.Lan1=00-1C-E6-02-52-64](https://i.qeedji.tech?model=NAPOE109kt&sn=01400-00001&mac.Lan1=00-1C-E6-02-52-64).

☞ FCC certification in pending.

### Packingbox label

This is the label stuck also on the packingbox. It is showing:

- the device model,
- the product serial number (PSN) (embedded also in the QR code),
- the manufacturer Website.



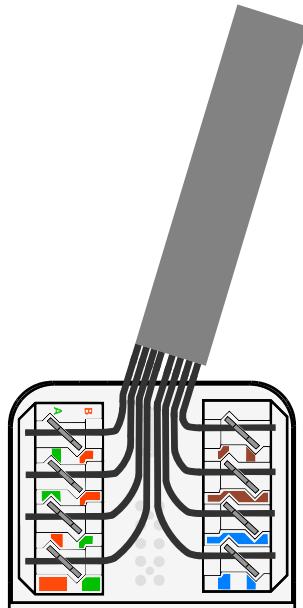
☞ The QR code on the packingbox label is corresponding to the product PSN, for example:  
[PSN01400-00001\\_CDO](https://i.qeedji.tech?model=NAPOE109kt&sn=01400-00001_CDO).

☞ The serial number of the device could be requested in case of technical support.

## 1.5 Connectors

### KRONE connector

The KRONE connector needs to be crimped on a Ethernet multi-stranded cable. For further information, refer to the chapter § [KRONE connector crimping](#).



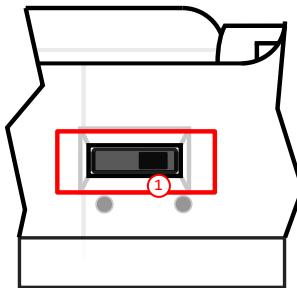
### Dipswitch

In the default factory configuration, the dipswitch is configured in `nominal` mode ①.

In the nominal mode, dual role data and power delivery are supported over the electric pad of the POGO connector,

If a external power supply is detected over the USB type C connector, this power supply is used and the one coming from the PoE cable is not used.

 In the `nominal` mode, the LEDs lightening is deactivated.



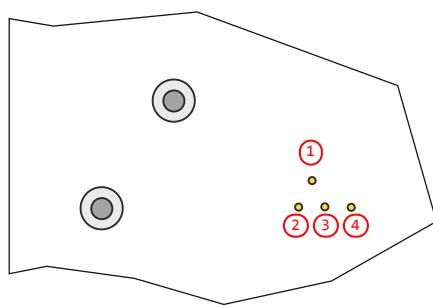
## USB-C connector

 *The USB-C connector is reserved for future use.*

## POGO connector

The electric pad of the POGO connector supports data and power delivery. This is the POGO connector pinout.

PIN	Information
①	VCC
②	DATA-
③	DATA+
④	GND



## 1.6 KRONE connector crimping

The NAPOE109kt device is hosting a KRONE connector which has to be crimped by a qualified person on a Ethernet multi-stranded cable supporting PoE IEEE802.3af (5E category minimum).

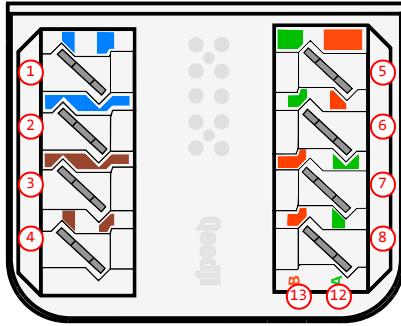
**☞** The NAPOE109kt device is delivered straight from factory with the KRONE connector already plugged on the device.

**⚠** The crimping step must be done by using a crimping pliers for RJ11, RJ12, RJ45 cable, standard tool used by electricians, to ensure that the wires are properly crimped on the KRONE connector.

**⚠** Before crimping the KRONE connector, check that the Ethernet cable cross the wall flush-mounted box. For further information, refer to the chapter § [Device fixture](#).

**⚠** Before crimping the KRONE connector, check whether the Ethernet cable is type A or type B. That defines the RJ45 cable crimping PIN out. For further information, refer to chapter § [Appendix: Type B or type A RJ45 cable PIN out](#).

### KRONE connector PIN out



The PIN from 1 to 4 of the KRONE connector are always plugged to the same color. For the PIN 5 to 8, you need to know the type of the RJ45 cable used.

**☞** The A letter (12) and B letter (13) are helping electricians to crimp appropriate wires of the type A or type B RJ45 cable on the KRONE connector.

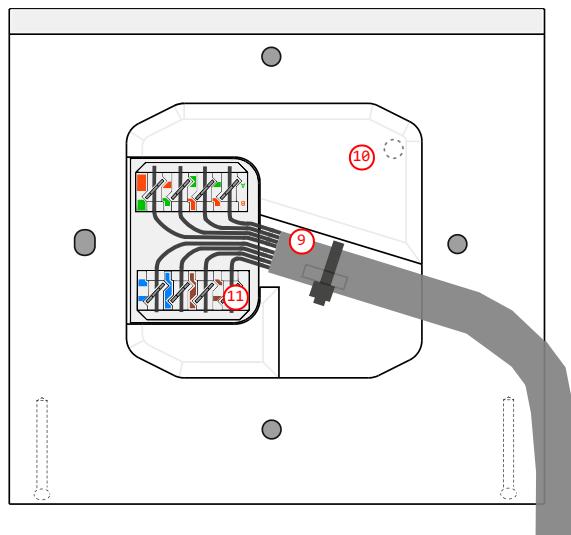
Location	Type B RJ45 wire color	Required for 10/100 Mbps	Required for 10/100/1000 Mbps
①	white + blue	no <sup>1</sup>	yes
②	blue	no <sup>1</sup>	yes
③	brown	no <sup>1</sup>	yes
④	white + brown	no <sup>1</sup>	yes
⑤	green	yes	yes
⑥	white + green	yes	yes
⑦	orange	yes	yes
⑧	white + orange	yes	yes

Location	Type A RJ45 wire color	Required for 10/100 Mbps	Required for 10/100/1000 Mbps
①	white + blue	no <sup>1</sup>	yes
②	blue	no <sup>1</sup>	yes
③	brown	no <sup>1</sup>	yes
④	white + brown	no <sup>1</sup>	yes
⑤	orange	yes	yes
⑥	white + orange	yes	yes
⑦	green	yes	yes
⑧	white + green	yes	yes

<sup>1</sup> When hosting a TAB10 device, the data connectivity is transmitted through the electronic pad supporting USB 2.0. Consequently, the crimping of these wires is not required because with the USB 2.0 norm, the bandwidth stays limited to 100 Mbps.

**⚠** The provided cable clamp ⑩ needs to be tightened over the cable jacket using the ring on the top face. So before crimping the wires, ensure that the cable jacket extremity ⑨ is as close as possible to the KRONE connector ⑪. It is advised that the colored wires before crimping have 50 mm length.

**⚠** The cable clamp must clamp the unstripped part of the wires, not the core of the wires directly, otherwise the core of the wire may be broken prematurely.



### KRONE connector uncrimping

It is possible to uncrimp the KRONE connector from the Ethernet multi-stranded cable. It is advised to use a pliers to remove the wished wires.

**☞** The crimping pliers often support a tool to uncrimp wires.

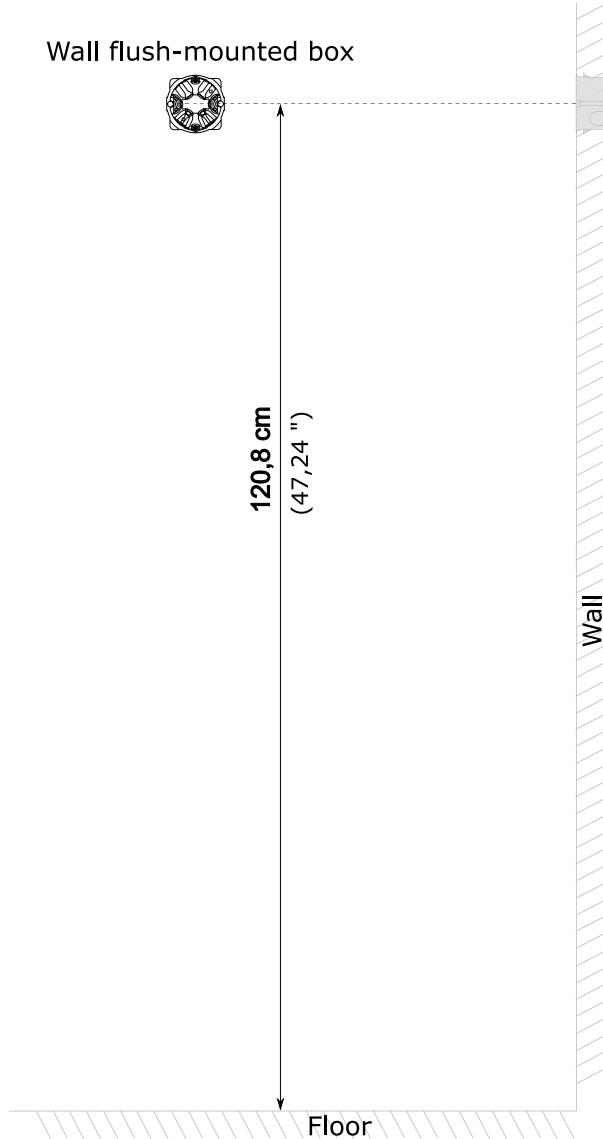
## 1.7 Device fixture

### Wall flush-mounted box features and installation

The hole allowing to host the wall flush-mounted box must be done with an hole saw having the appropriate diameter. Then the wall flush-mounted box has to be fixed in the hole by a qualified person.

**⚠** To know the NAPOE109kt device fixture height, refer to the legislation in force in your country, related to the accessibility to disabled persons of establishments open to the public during their construction and of facilities open to the public during their development.

**⚠** The legislation in force in France implies to install the top of the screen area at 130 cm (or 51,18") maximum far from the floor. Remove 9.2 cm (or 3.54") to this height to determine the height of the hole center to insert the wall flush-mounted box. For example, for the France country, the hole center should be drilled at  $(130 - 9.2) = 120.8 \text{ cm (47,24")}$  far from the floor.

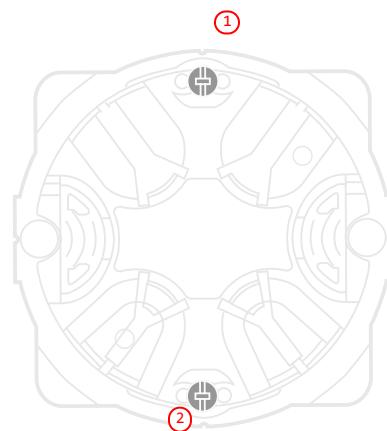
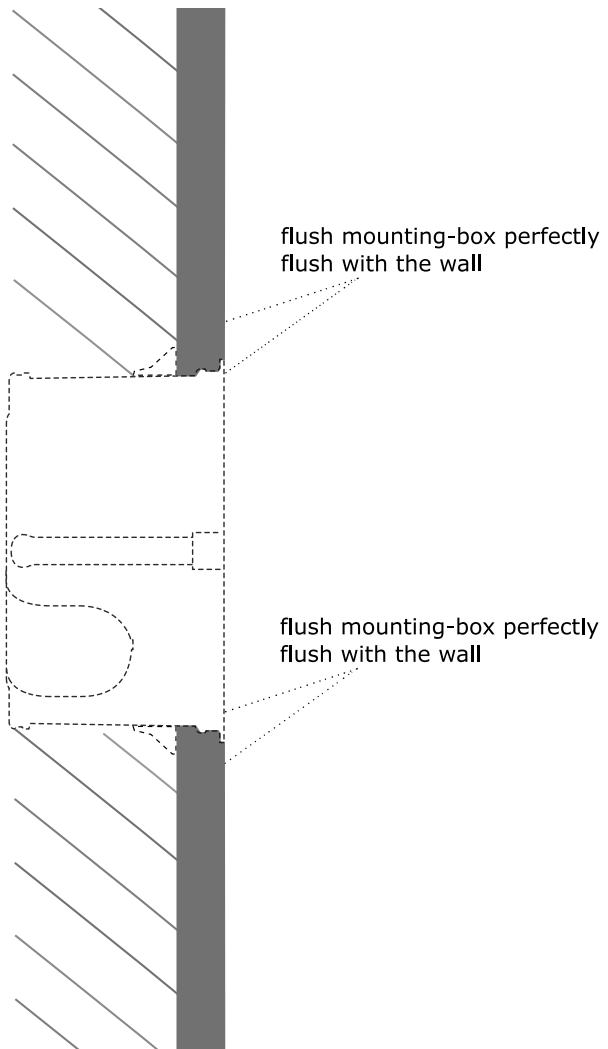


The wall flush-mounted box type is depending on the wall material. Consequently it is not provided in the packing box.

It is common for the hole saw diameter to be 68 mm (2.67") to make the hole for your flush-mounted box. However, to confirm the actual drilling diameter, refer to the drilling requirements of your flush-mounted box.

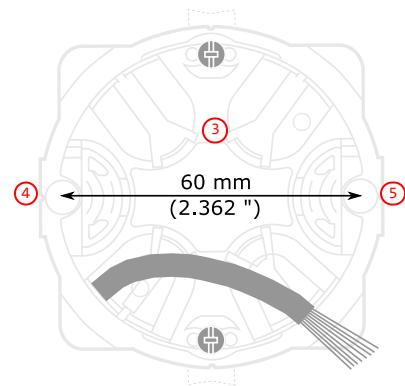
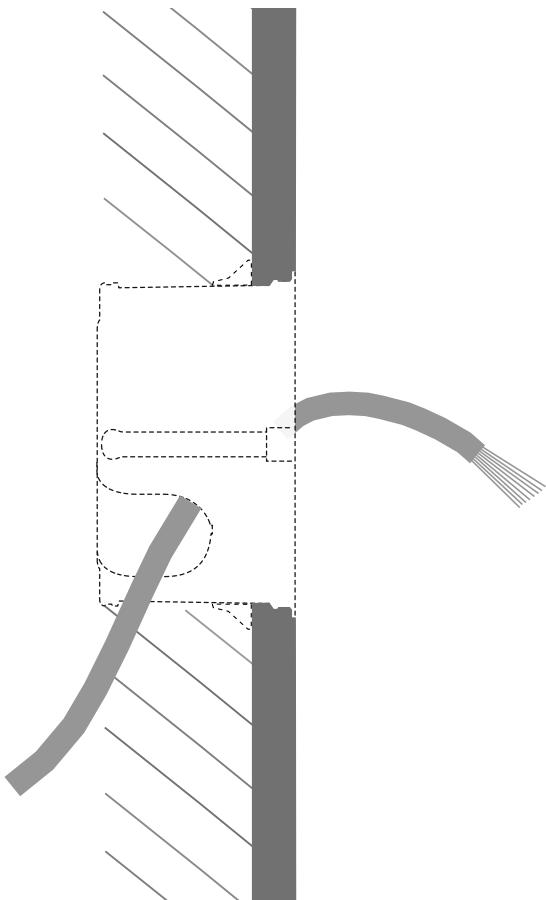
**⚠** It is recommended to install the wall flush-mounted box with the following orientation, with its clamping claws up ① and down ②.

**⚠** The wall flush-mounted box must be perfectly flush with the wall. Indeed the slightest shift on one side, meaning electrical box more recessed on one side than the other, will prevent the proper installation of the products. The box should not protrude from the wall either. If this requirement is not met, unexpected TAB10s device restart should be noticed. Consequently, it is highly recommended to correct the trouble before locking the tablet on the NAPOE109kt device.



The wall flush-mounted box must have a sufficient volume to host the NAPOE109kt device. The distance ③ between the screws must be 60 mm (2.362").

Then the NAPOE109kt device will be tightened with the left screw ④ and the right screw ⑤.

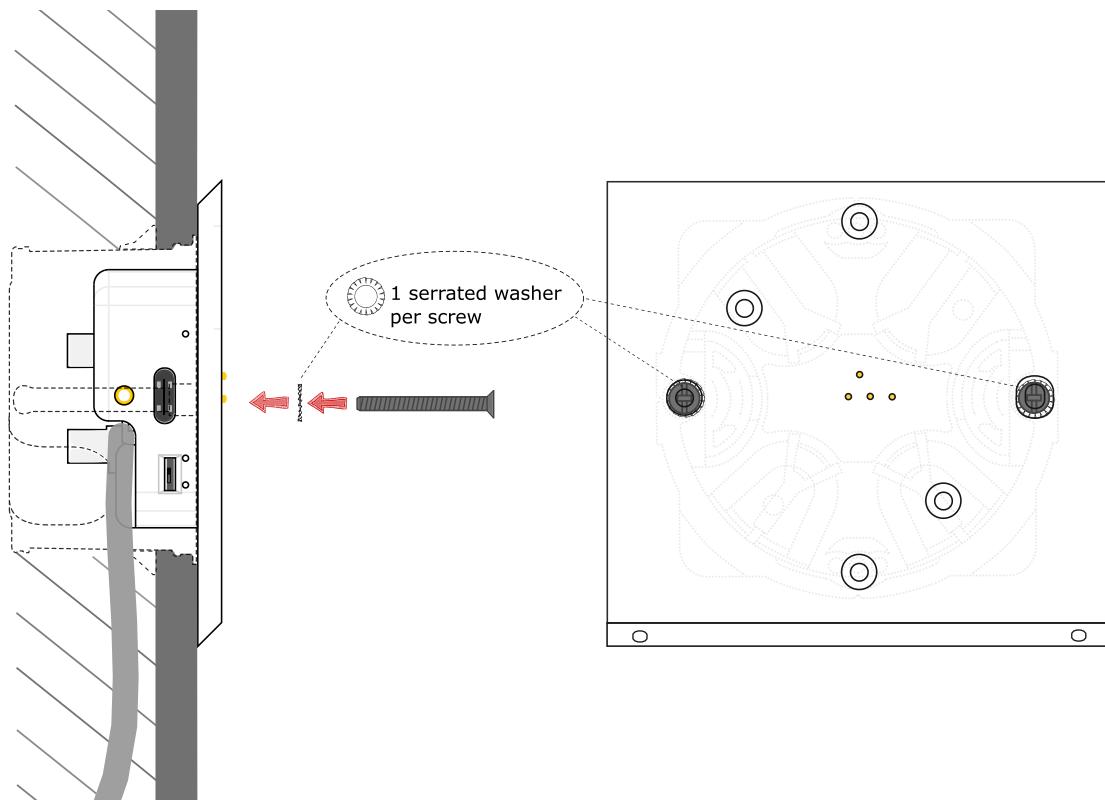


**⚠** Before to be fixed, the NAPOE109kt must be properly crimped on a Ethernet multi-stranded cable. For further information, refer to the chapter § [KRONE connector crimping](#).

**⚠** The length of the network cable coming out of the wall flush-mounted box must be 10 cm at minimum in order to install the NAPOE109kt properly.

**⚠** If the cable arrives on the right side of the wall flush-mounted box, try to have it arrive on the left side if possible, to avoid bending the cord 180° and risking breaking it.

Untighten the left and right screw of the wall flush-mounted box to add the provided serrated washers.



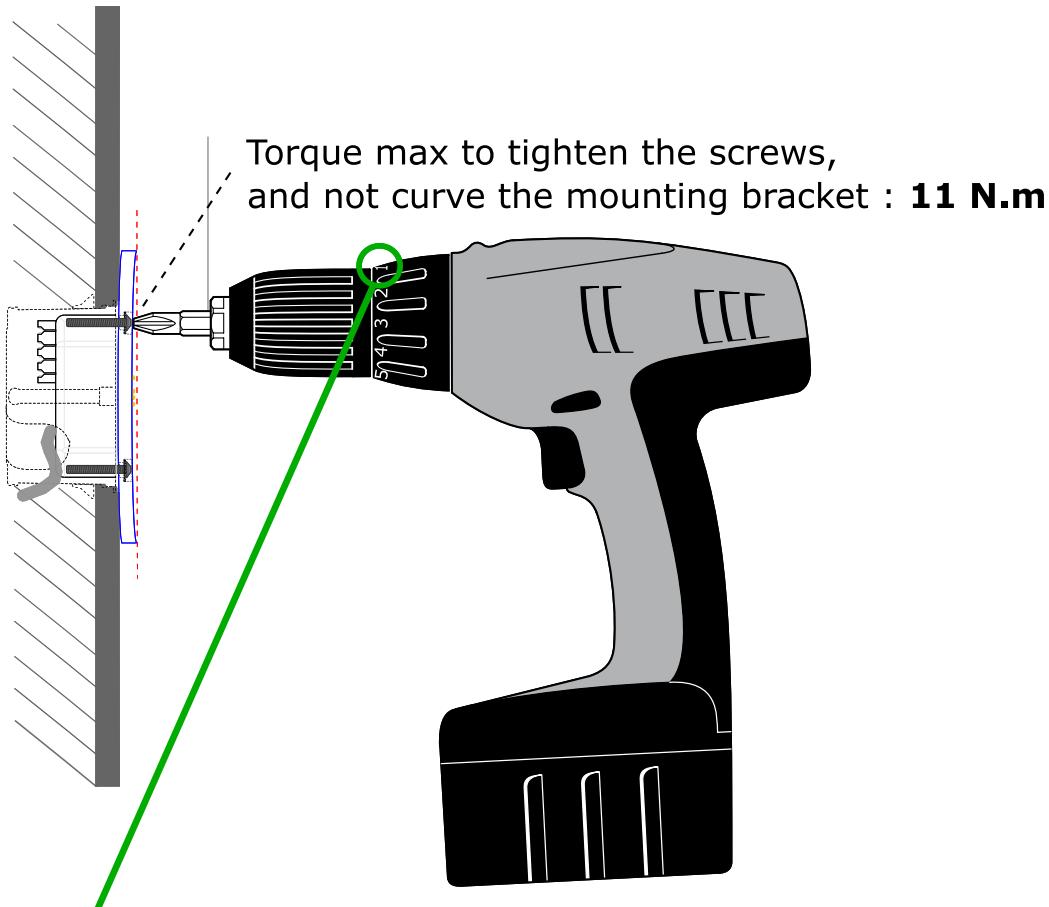
**⚠** The NAPOE109kt must be installed by a qualified person on the wall flush-mounted box.

Add the provided serrated washers to the screws of the wall flush-mounted box.  
Stand the NAPOE109kt device properly in front of the wall flush-mounted box. Tighten back now the left and right screw on the wall flush-mounted box with a torque of 11 n.m.

**⚠** Once tightened, use a spirit level to check that the upper edge of the NAPOE109kt device is strictly horizontal. Check also with your hand that the NAPOE109kt device is properly fixed and cannot move inside the flush-mounted box.

**⚠** The flush-mounted box must be installed strictly aligned with the wall. If not, a too powerful torque may create an unexpected curve which would lead to power supply trouble or LAN network connectivity trouble. After having tightened the screws, check at its top that the mounting bracket is not curved.

**⚠** When using an electric screwdriver, ensure that the torque is limited to a 11 N.m maximum to not curve the mounting bracket. This torque value is often corresponding to the weakest value of those supported by your electric screwdrivers.



*The torque value of 11 N.m is rather close to the weakest value of your electric screw driver.  
Check the datasheet of your screw driver to know whether this torque is supported.  
If not, use rather a screw driver.*

The TAB10s device can be then hung properly on the NAPOE109kt device. For further information, refer to the TAB10s user manual.

## 1.8 Device uninstallation

To uninstall the NAPOE109kt device:

- untighten the locking screw below the TAB10s device,
- remove the TAB10s from the NAPOE109kt device,
- untighten the screws from the NAPOE109kt device,
- cut the cable clamp,
- unplug the KRONE connector from NAPOE109kt device.

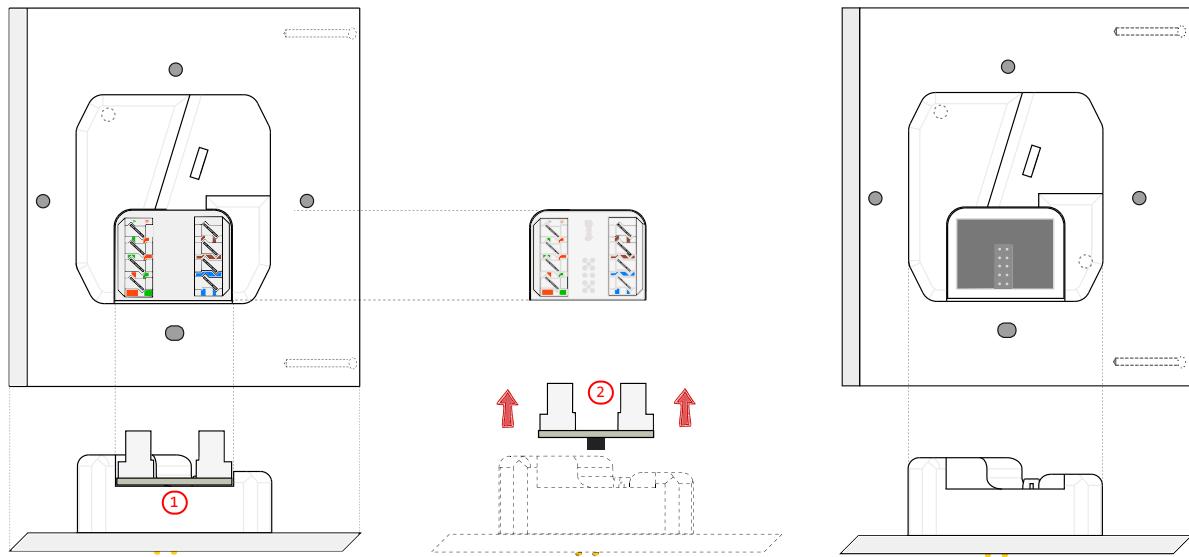
For further information, refer to the chapter § [KRONE connector removing](#).

*In case you had to install the device in another location, you have to uncrimp the current KRONE connector from the Ethernet multi-stranded cable. For further information, refer to the chapter § [KRONE connector crimping](#).*

## 1.9 KRONE connector removing

To remove the KRONE connector:

- stand the device with the electric pads of the POGO connector facing the bottom like explained ① and hold the device with your hand,
- hold the KRONE connector with your other hand and remove it vertically ②.

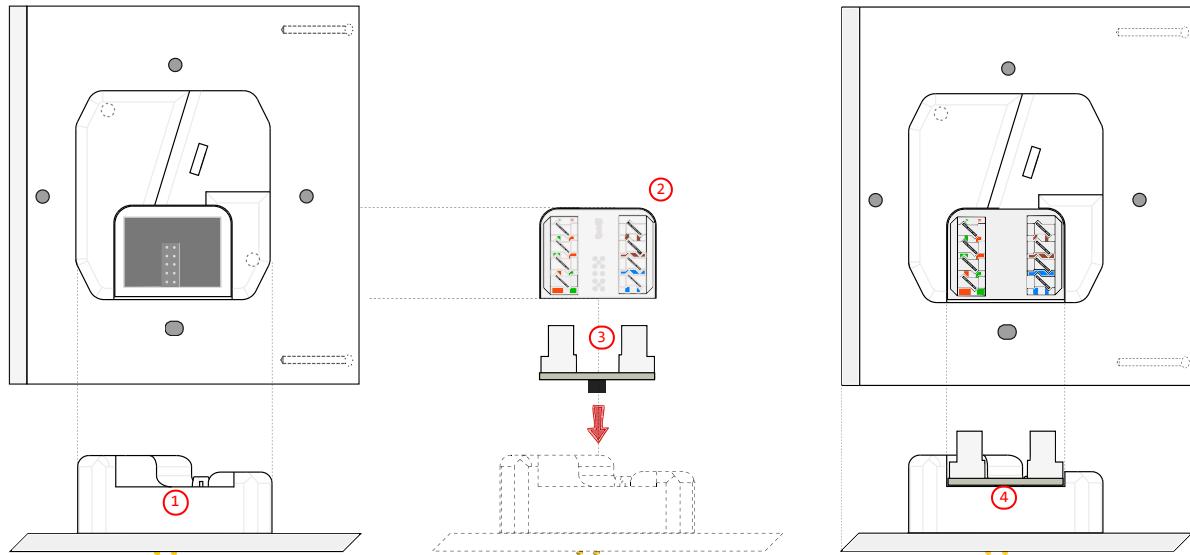


## 1.10 KRONE connector insertion

To insert the KRONE connector:

- stand the device with the electric pads of the POGO connector to the bottom like explained ① and hold it with your hand,
- hold the KRONE connector with your other hand and turn it in the right sense ② (round corners turned towards the clamping ring and insert it vertically ③).

When it is properly installed, the KRONE connector is completely stuck on device case ④.



# **Part II**

**Technical information**

## 2.1 Technical specifications

<b>Model</b>	<b>Manufacturer</b>
NAPOE109kt	Qeedji
<b>Power supply</b>	<b>Information</b>
PoE IEEE802.3af	POE power supply input: ES1 / PS2 (48 V – 0.27 A)
<b>Network</b>	<b>Other information</b>
KRONE connector	10/100 Base T
<b>Data</b>	<b>Information</b>
POGO connector	USB 2.0
<b>Power delivery</b>	<b>Information</b>
POGO connector	Output power supply: 5.15 V – 1.45 A typ. Max. absolute values: 5.47 V max., 1.92 A max., 9.4 W max.
<b>Operating temperature</b>	<b>Storage temperature</b>
+0 °C to +35 °C	-20 °C to +60 °C
+32 °F to +95 °F	-4 °F to +140 °F
<b>Operating humidity</b>	<b>Storage humidity</b>
< 80 %	< 85 %
<b>Weight</b>	<b>Dimensions (W x H x D)</b>
71 g	84,6 mm x 78,3 mm x 26,8 mm
0,156 lb	3.307 " x 3.070 " x 1.023 "
<b>Plastic enclosure flame rating</b>	
UL 94 V-0	
<b>Warranty</b>	
1 year	

## **2.2 Conformities**

### **EUROPE**

In conformity with the following European directives:

- LVD 2014/35/EU
- EMC 2014/30/EU
- RED 2014/53/EU

# **Part III**

---

**Contacts**

### 3.1 Contacts

For further information, please contact us:

- **Technical support:** [support@qeedji.tech](mailto:support@qeedji.tech),
- **Sales department:** [sales@qeedji.tech](mailto:sales@qeedji.tech).

Refer to the Qeedji Website for FAQ, application notes, and software downloads: <https://www.qeedji.tech/>

Qeedji FRANCE  
INNES SA  
5A rue Pierre Joseph Colin  
35700 RENNES

Tel: +33 (0)2 23 20 01 62  
Fax: +33 (0)2 23 20 22 59

# **Part IV**

---

**Appendix**

#### 4.1 Appendix: Type B or type A RJ45 cable PIN out

Type B (T568B) RJ45 connector PIN out:



PIN	wire color
①	white + orange
②	orange
③	white + green
④	blue
⑤	white + blue
⑥	green
⑦	white + brown
⑧	brown

Type A (T568A) RJ45 connector PIN out:



PIN	wire color
①	white + green
②	green
③	white + orange
④	blue
⑤	white + blue
⑥	orange
⑦	white + brown
⑧	brown