INNES

SLATE106

Installation guide

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Product information

The conception and specifications of the product may change without prior notice, and this applies to hardware, embedded software and this guide. Consumable items accessories may slightly differ than herein described as INNES is depending on the evolutions of its suppliers.
This document contains confidential information; it can't be disclosed to any third parties without prior written authorization of INNES.

Safety instructions

Please read carefully the following instructions before switching the product on:

- WARNING! Correct fitting and installation is of the utmost importance. Incorrect fitting and/or installation may result in personal injury or loss. INNES disclaims all liability, of whatever kind, if the product is assembled, fitted and/or installed in an incorrect manner.
- Do not use the product near a water supply.
- Do not pour anything on the product, like flammable liquids or material.
- Do not expose the product to direct sun, near a heating source or a dust nor vibrations.
- Do not obstruct holes, to be sure that air flows freely around the product.
- Switch off the product during a storm.
- Do not open the product in any circumstances.
- Keep this guide, preciously.

Safety instructions, guarantee terms

INNES products are eligible for a warranty to cover genuine manufacturing defect for 3 years.
Product failure occurring as the result of factors that do not constitute genuine manufacturing defect are not covered under the terms of the warranty and any repairs of this nature would be chargeable.
For example:
Inappropriate maintenance action, a non-authorized modification, a not specified environment utilization (see 'Safety instructions'), or if the product has been damaged after an impact, a fall, a bad manipulation or a storm consequence, an insufficient protection against heat, moisture or frost.

This warranty is not transferrable. In addition, any repairs carried out by non-authorized personnel will invalidate the warranty.

This symbol means that your end of life equipment must not be disposed of with household waste but must be deposited at a collection point for waste electrical and electronic equipment. This will benefit the environment. In this context, a system for collecting and recycling has been implemented by the European Union

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1 Getting started

This installation guide explains how to install SLATE106 and how to use it.

1.1 Recommendations and warnings

Batteries:

- The SLATE106 is designed to work with CR2430 batteries (4 units). Innes has chosen a battery model having the best performances for SLATE106 using. Please refer to the batteries replacement chapter to know how to replace them.
- Lifetime is estimated to 3 years when configured with a usage of four display content updates per day with Bluetooth Low Energy synchronization and connected to a SMH300 device. Lifetime can be increased or decreased when the usage is modified.
- In case of batteries replacement, the four batteries need to be changed at the same time.
- The batteries must be changed by a qualified person, who is knowing perfectly the batteries replacement procedure. Batteries must be recycled according to your country's regulations.
- Warranty does not cover the batteries.

1.2 Packing list

Articles	Model – function
Device	SLATE106
Batteries	4 CR2430 batteries with plastic holder
Wall mount	Wall mount support
Screws	2 M2.5x25 screws
Adhesive	3M double-sided tape (W x H x D): 65 x 19 x 0.5 mm

1.3 Installation

1.3.1 Batteries

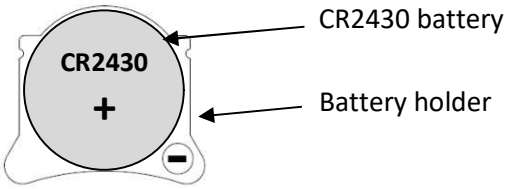
1.3.1.1 Specifications

The SLATE106 devices are delivered with 4 CR2430 Lithium coin batteries. The main batteries features are described below. Use the same reference to expect the best lifetime. However an equivalent reference may be used.

Type	CR2430
Nominal Voltage	3V
Typical Capacity	290mAh
Chemical System	Lithium Manganese Dioxide
Reference	2430/CR2430 VP-1 ENERGIZER LITHIUM [Energizer]

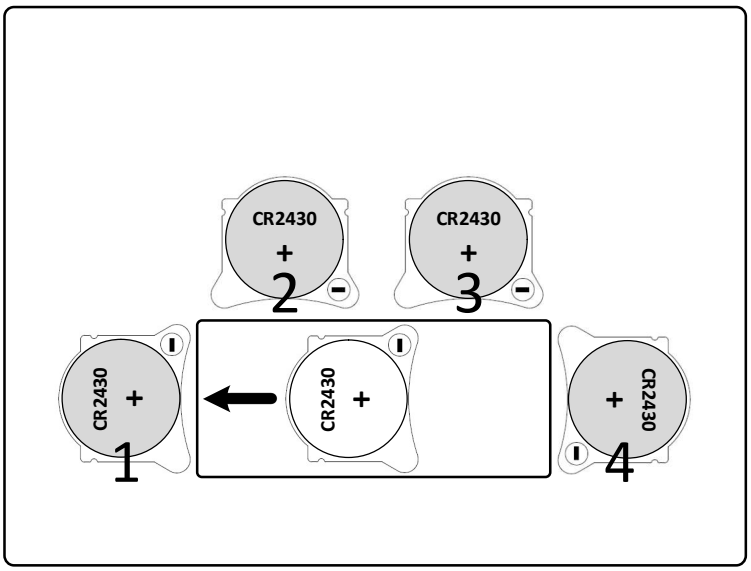
1.3.1.2 Installation

1. Refer to Pictureframe application chapter, to determine if you need to install batteries into your SLATE106 (few use cases can run without battery).
2. Place the SLATE106, with the back face in front of you.
3. Take on the box a battery by keeping its plastic holder:



(in case the battery is not delivered with its holder, call Innes support)

4. Glide the battery <u>with its holder</u> into its place using your finger or a screwdriver to push the plastic of holder part until you feel a clip, meaning that the battery is properly installed:

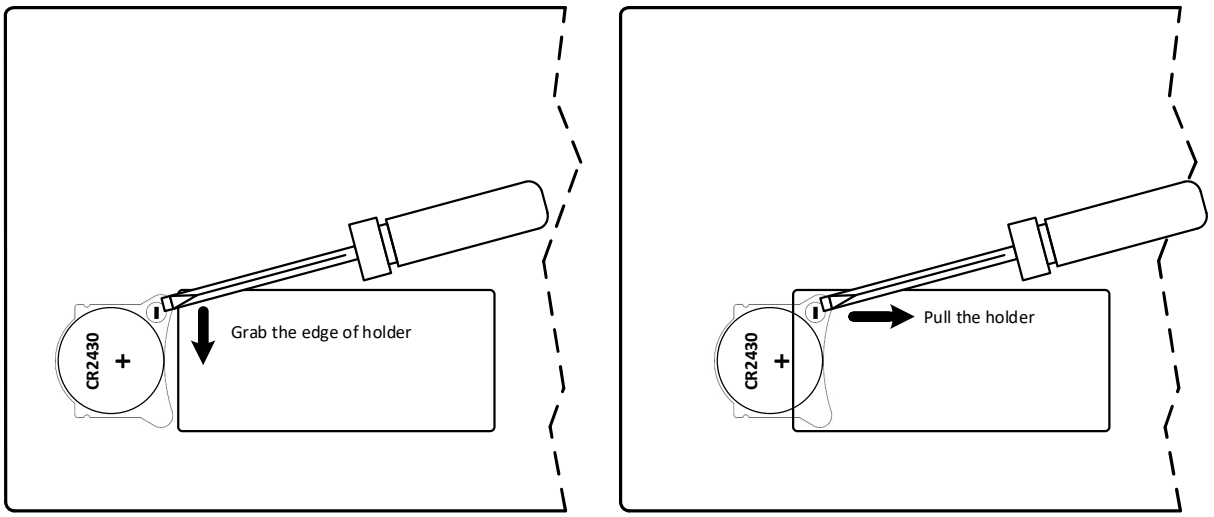


Back of the SLATE106

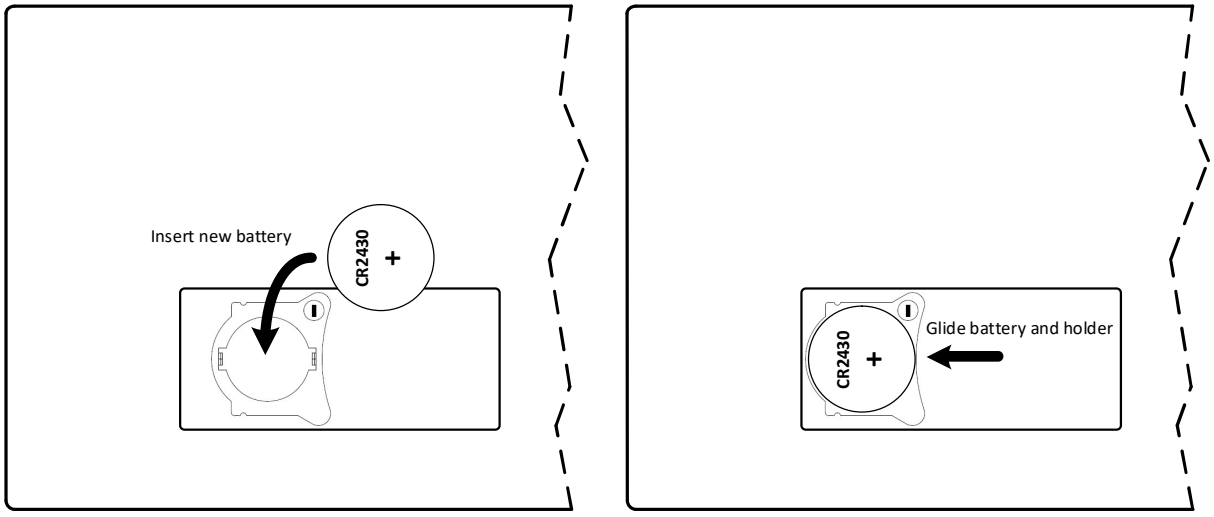
5. Repeat step 2 & 3 for each battery by following the specific orientation for each place like shown above.
   Once installed, the batteries are all hidden.

1.3.1.3 Replacement

1. Remove each battery with holder, using a little slotted screwdriver. Grab and then pull the edge of the plastic holder, remove the old battery from the holder.



2. Insert the new battery with the positive side facing up. Glide the battery with holder into place using your finger or screwdriver pushing into the plastic of holder part: you must feel a clip when the battery is installed.



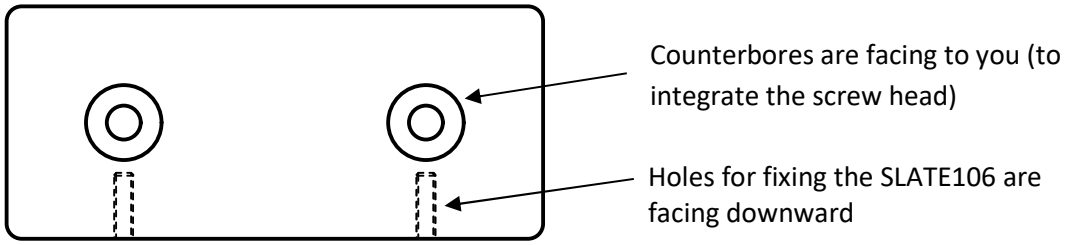
3. Repeat operation 1 and 2 for each battery.

1.3.2 Wall mount

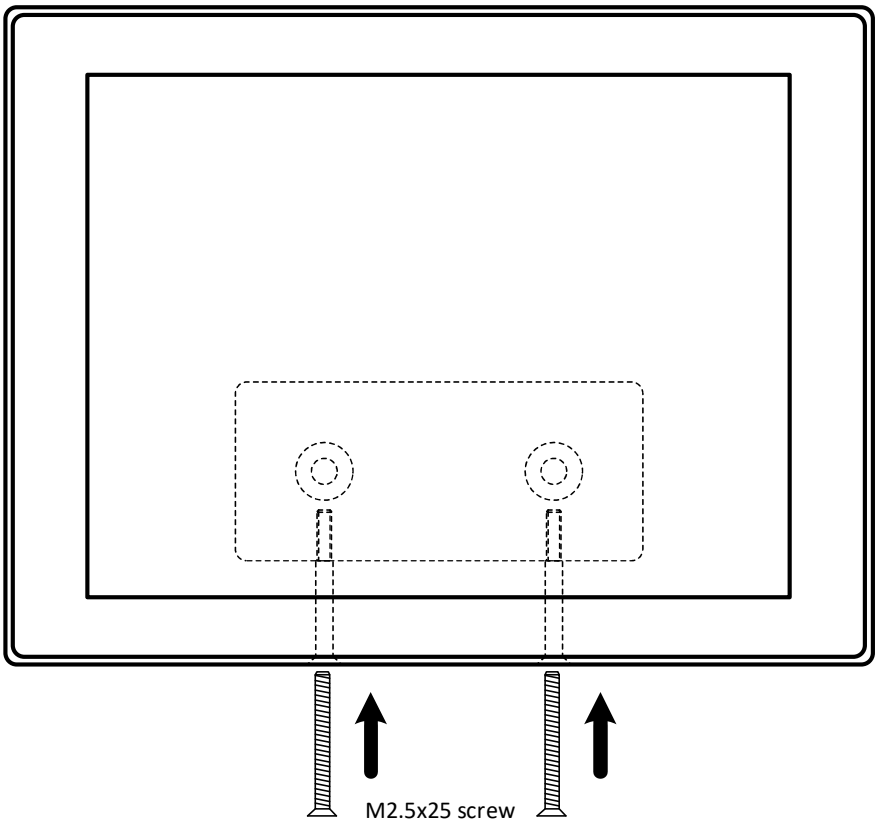
The SLATE106 device must be used indoor and can be installed using the provided wall mount. This support can be fixed by:

- using screws (not delivered with product and dependent on your wall type) or
- using the provided double-sided tape (more particularly for mounting on smooth surface like glass).

1. Fix the wall mount using the drill pattern document (ref '**DS-SLATE106DRP-A.pdf'**, available on the website http://www.innes.pro/fr/support/index.php?SLATE106/PictureFrame for a proper placement of the support. Be careful that the wall mount has a right orientation:

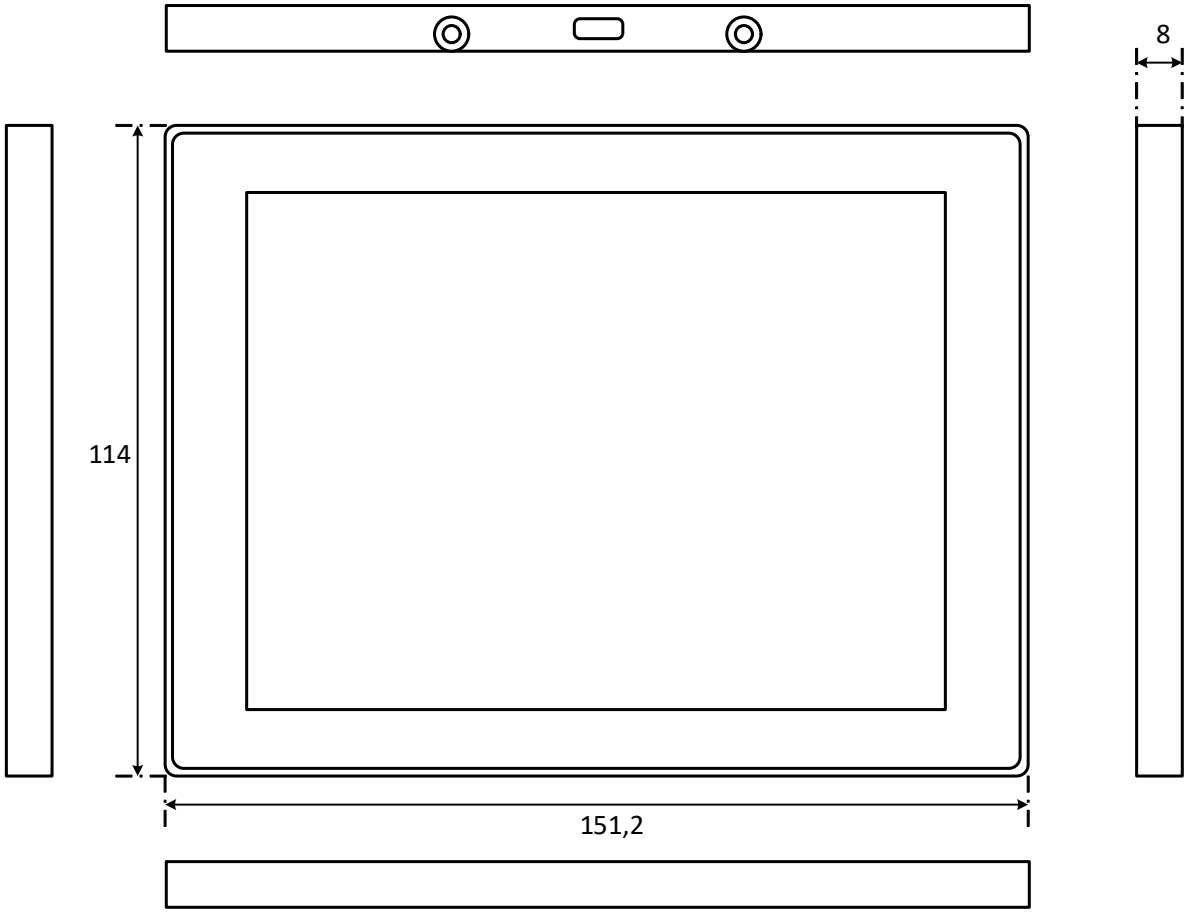


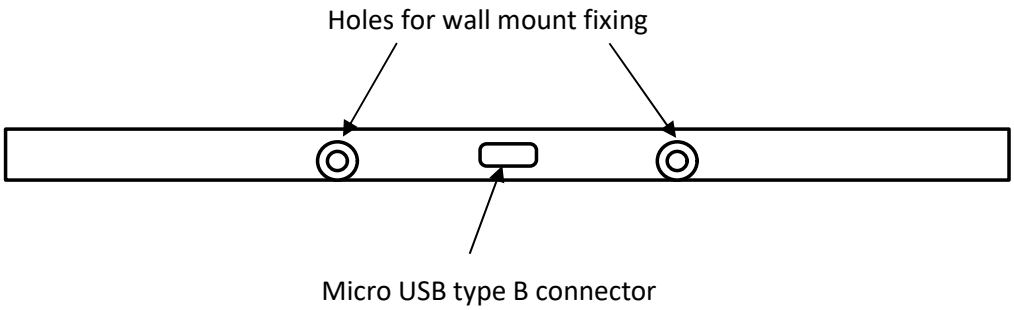
2. Once the wall support is fixed with screw or adhesive, place SLATE106 face to the support and insert the SLATE106 into it. Hold the SLATE106 into place and put the 2 M2.5x25 screws provided using a little slotted screwdriver.



1.4 Block diagram

(Dimension in mm)



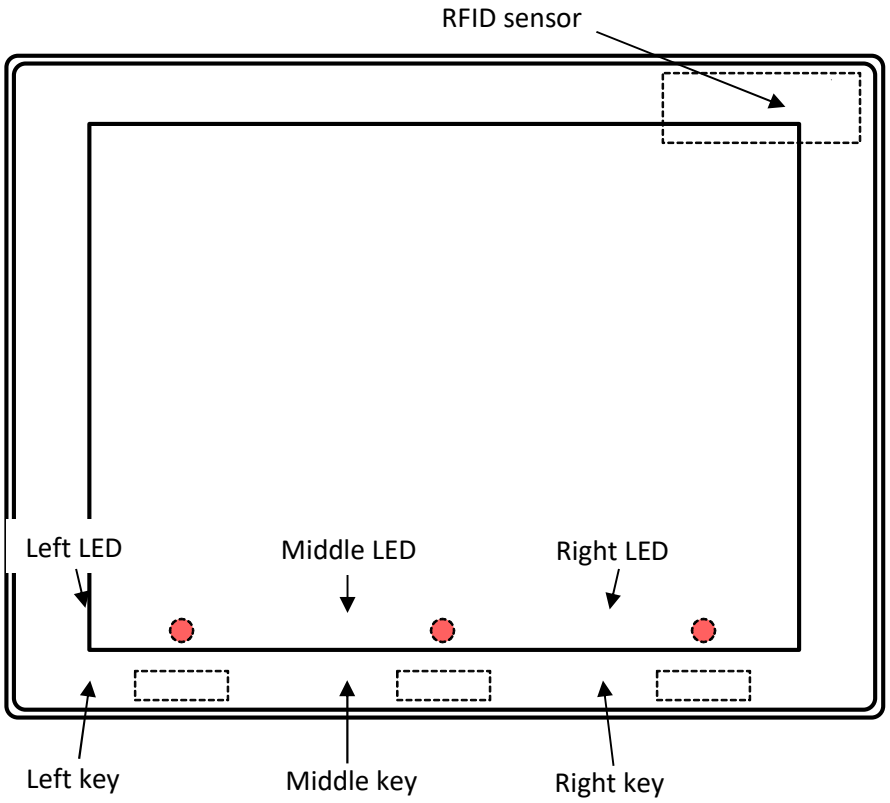


1.5 Peripherals positioning

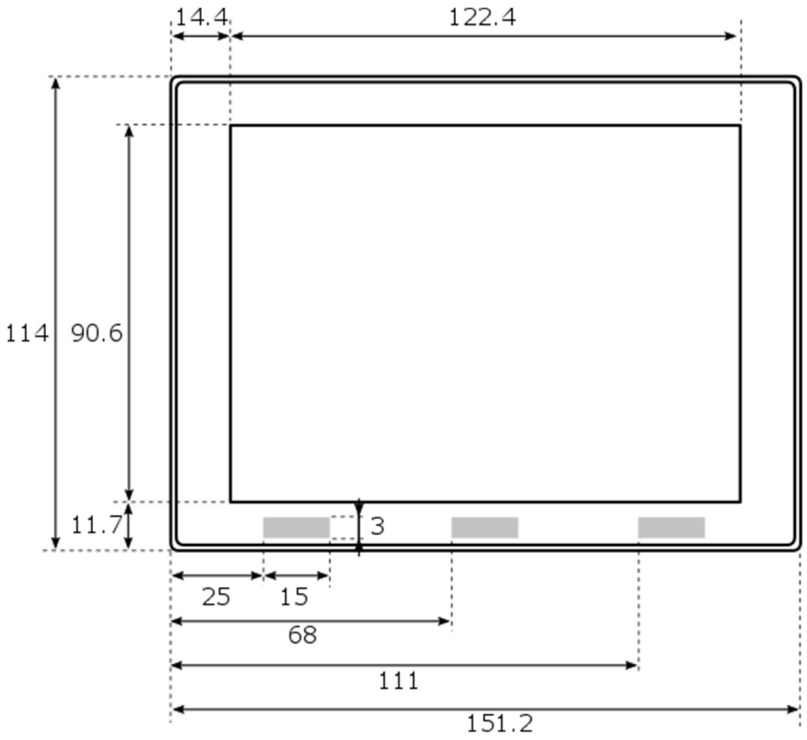
For interactivity, the SLATE106 device has

- 3 touch sensing keys
- 3 red LEDs
- 1 RFID sensor

Please find below location of each peripheral:



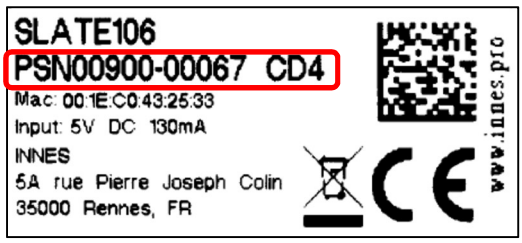
Detailled positions (mm):



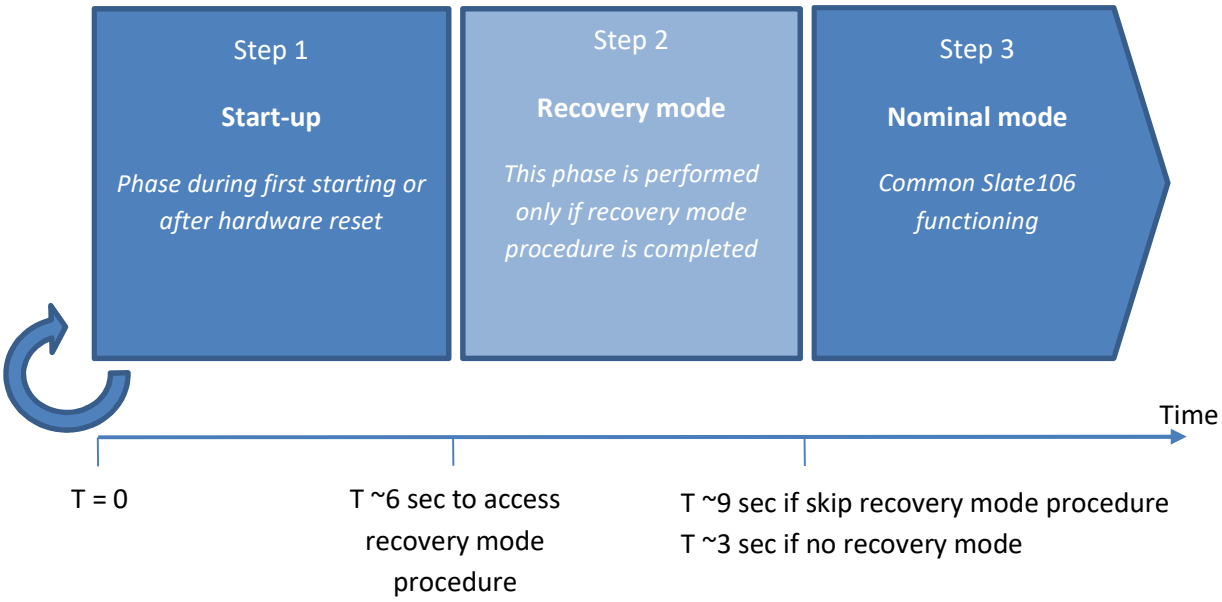
2 Identification with serial number

The SLATE106 devices works with a proprietary Innes software.
A stamp permits to show the device information like its PSN and its MAC address.

Note: In case technical support is requested, the serial number (starting with 'PSN') could be required to go ahead on technical analysis:



3 Different device phases at start-up



4 LED behavior

The LEDs behavior is depending on these SLATE106 application steps:

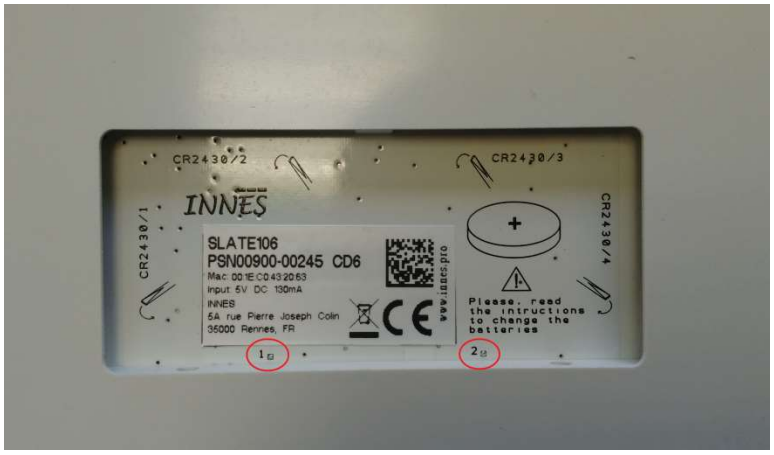
	LEDs behavior	Information
Step 1 Start-up	Off	Nominal: no important user information to return
	The 3 LEDs are blinking 1 time	Start-up
	The left LED is blinking 5 times	Phase 1 to enter in recovery mode (*1)
	The right LED is blinking 5 times	Phase 2 to enter in recovery mode (*1)
	The left LED is blinking	Release in progress. The duration of the release process depends on the size of the release, and is around 1 minute.
	The 3 LEDs are blinking 1 time slowly	There is no more valid software on Slate: going into sleep mode, and then in recovery mode when an USB cable will be connected
	The 3 LEDs are blinking continuously and slowly	Error (*2)
Step 2 Recovery Mode	The left LED, and the right LED are turned on	Recovery mode activated
	The middle LED is blinking	File copying in USB on Slate
	The 3 LEDs are blinking continuously and slowly	Error (*2)
Step 3 Nominal mode	Off	Nominal: no important user information to return
	The left LED and the right LED are blinking 1 time	Enter in nominal mode
	3 LEDs are blinking continuously and slowly	Error (*2)

(*1) Phases to enter in recovery mode exist only if a USB cable is connected.
(*2) Error condition has 2 behaviors: 1) If an USB cable is connected, the 3 LEDs are blinking slowly – when the cable is removed, the SLATE106 device is rebooting. 2) If no USB cable is connected, the SLATE106 device is rebooting. If the problem persists, contact INNES technical support.

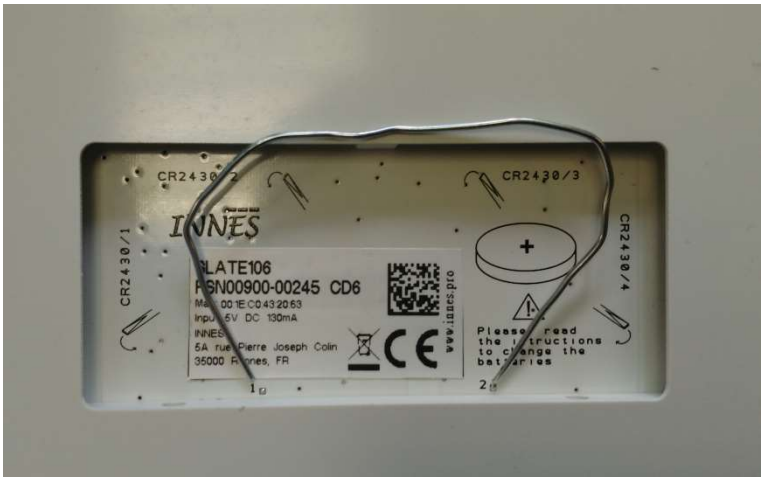
5 Hardware reset

In some case (for example software failure), a hardware reset can be performed to repair the device. In this case, these are the steps to follow:

1. Remove the SLATE106 device from the wall mount.
2. Place the SLATE106 device, with the back face in front of you.
3. Use an electrical wire (or by example a paperclip) to make a short circuit between the pin ‘1’ and the pin ‘2’.
4. Once done, turn around the SLATE106 device as fast as possible, you should notice that the device is entering in nominal mode with the left LED and right LED blinking once meaning that the SLATE106 device has reset successfully.



Position of the pin ‘1’ and the pin ‘2’



Short circuit with an electrical wire (or a paperclip):

6 Recovery mode

The recovery mode allows the (re)installation of a new SLATE106 software. Be aware that in recovery mode, the whole file system will be erased, and will have to be formatted again by the user.
To perform this operation, you need:

- To remove the SLATE106 device from its wall mount
- A Micro USB type B to USB cable (like standard charging smartphone cable)
- A Paperclip
- A computer to link to the SLATE106

1. Place the SLATE106, with the back face in front of you.
2. Connect the USB cable between your computer and the SLATE106 device (no recovery mode without USB connected).
3. Use an electrical wire (or a paperclip) and make a short circuit between the pin 1 and the pin 2. That will perform a hardware reset.
4. Turn around the SLATE106, the 3 LEDs will blink shortly (you may not have time to see this LED blinking).
5. Few seconds after, the left LED is blinking 5 times

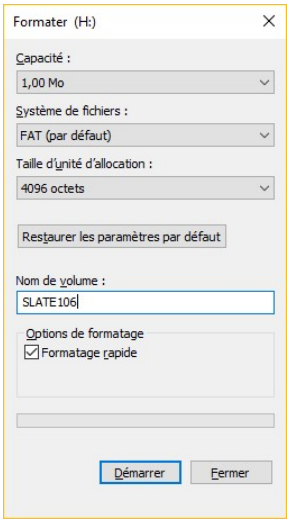
➔ **Press now the left key** after this LED blinking
(you have 2 seconds to perform this operation, otherwise software is launched normally and you should return to step 3 to reach recovery mode).

6. After the left key is pressed, right LED is blinking 5 times

➔ **Press now the right key** after this LED blinking
(you have 2 seconds to perform this operation, otherwise software is launch and you should return to step 3 to reach recovery mode).

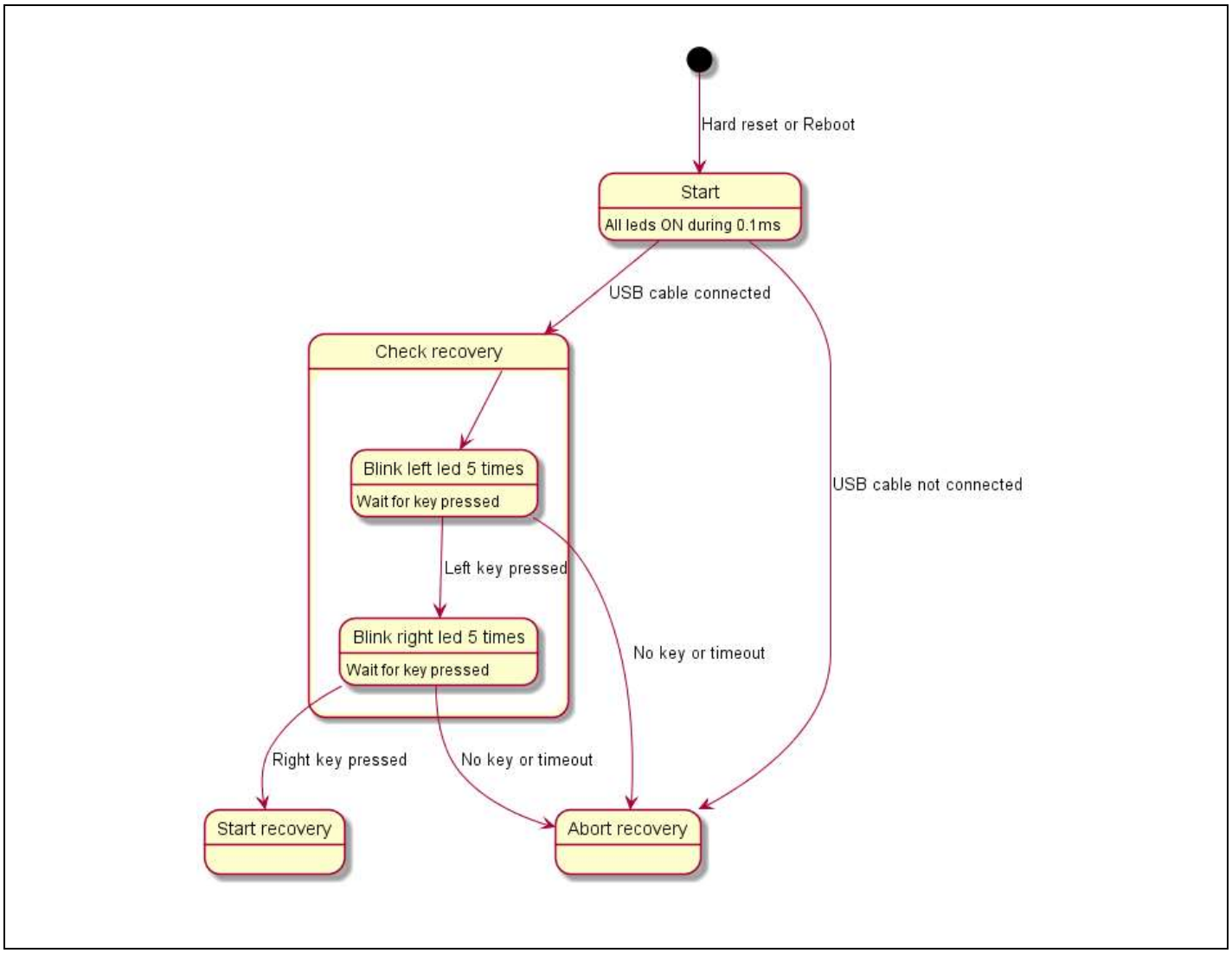
7. The left LED and the right LEDs are turned on, you are now in **recovery mode**. The file system is automatically erased.
8. The mass storage should be detected on your computer, and it should be asked for starting a format operation. Select **FAT** file system for SLATE106 (only FAT partition is supported) and press START.

   After few seconds, the format is completed; Your volume should appear like a mass storage.



9. copy a new firmware on the SLATE106 device
10. Eject the mass storage.

This is the state diagram of the recovery mode activation with a SLATE106 device hardware reset:

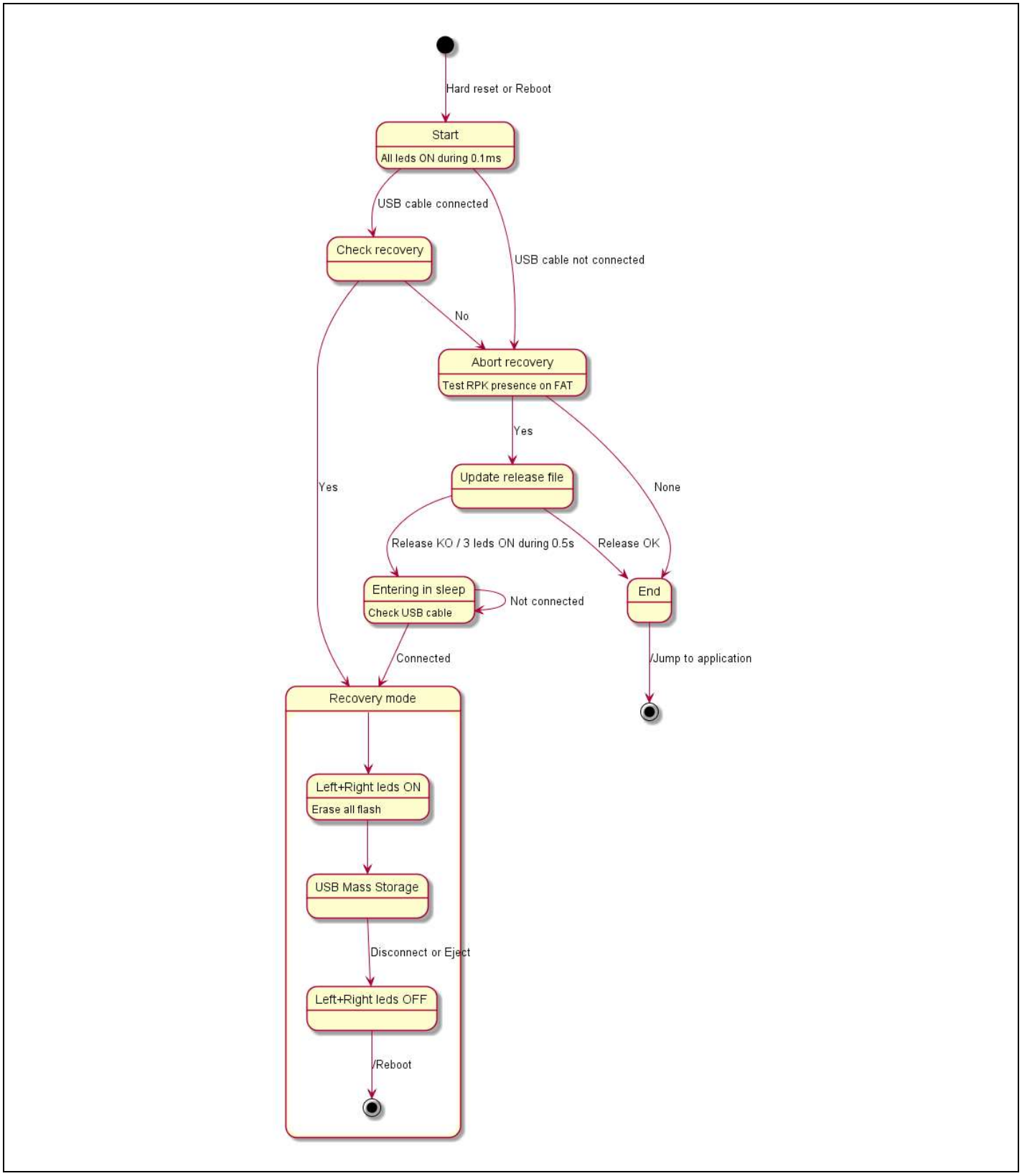


7 Start-up

The start-up process (bootloader) does two main operations:

- Manage recovery mode
- Update the application in case a firmware file already exists.

This is the simplified state diagram of the start-up process:



8 Pictureframe application

The SLATE106 device with embedded **Pictureframe** application can be used in 2 ways:

- With a central hub, like SMH300
- With **spe desktop** software or (**spe mobile** software).

The factory default mode permits to use both the **spe desktop** software and a central hub SMH300:

- Once **Pictureframe** has been configured to be used with a central hub SMH300, the **spe desktop** software cannot be used anymore (without any specific operation).
- Once **spe desktop** has been used, it is still possible to configure **Pictureframe** to be used with a central hub

To go back to factory default, you must erase the **Pictureframe** configuration file, by connecting the SLATE106 to a computer with a micro USB type B to USB cable. Once the mass storage is mounted, delete the configuration file 'APPLI.CFG' (or 'PF.CFG' for version < V1.10.12), and eject properly the USB device. Once the USB mass storage is mounted again, you can disconnect the cable.

8.1 Spe desktop

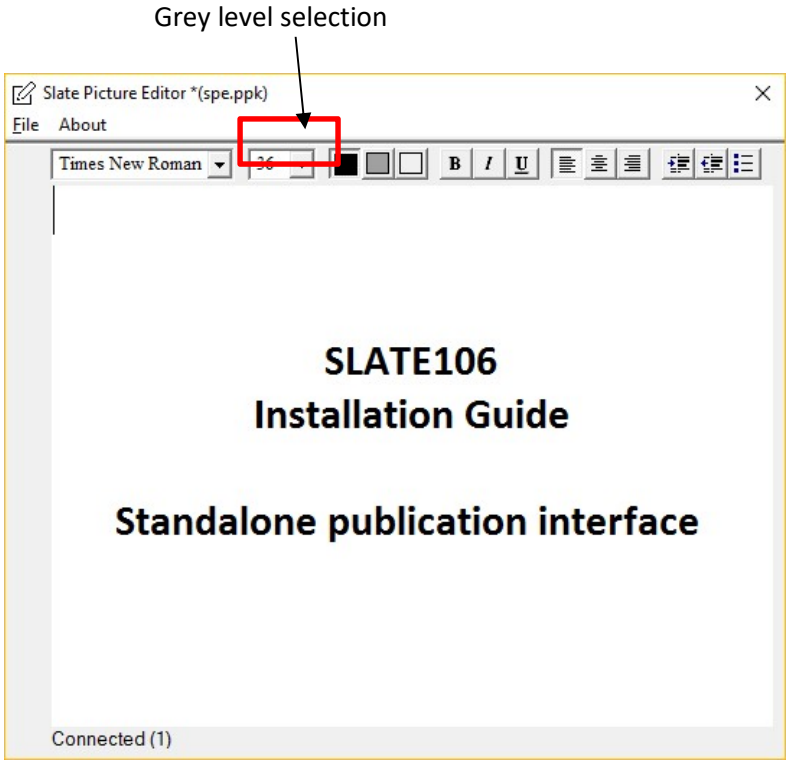
8.1.1 Operating

Spe desktop permits to use a SLATE106 device with a MS-Windows PC connected with a USB cable.
Connected to the PC, the SLATE106 device can work without batteries.
Spe desktop must be copied in the SLATE106 device ('spe.exe'). Visit the Innes Web site to get the latest **Spe Desktop** version: http://www.innes.pro/fr/support/index.php?Slate106/SPE_Desktop.

To copy **Spe desktop** on your SLATE106 device, you need:

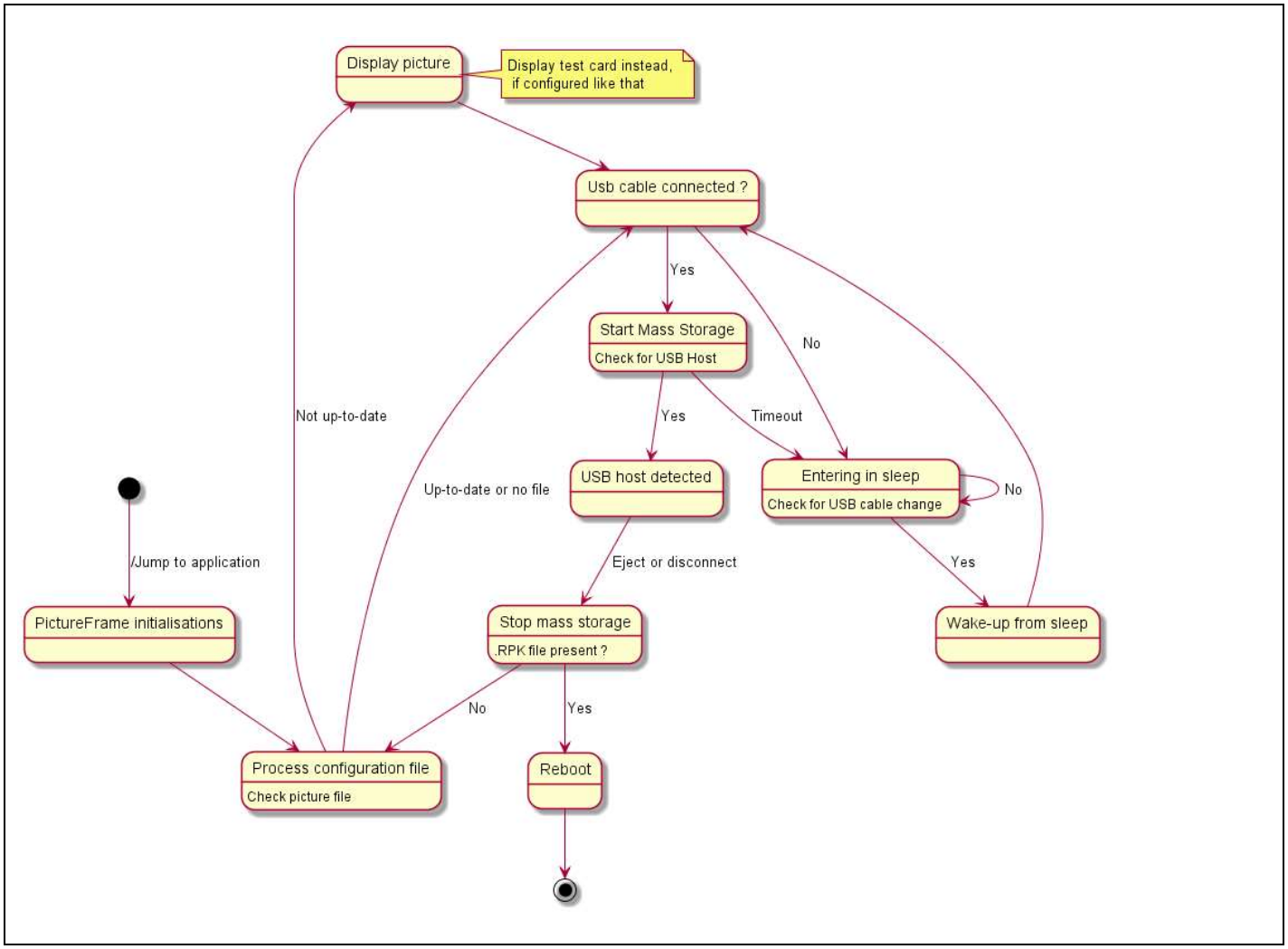
- a SLATE106 device
- a Micro USB type B to USB cable (like standard charging smartphone cable)
- A MS-Windows PC (linked to the SLATE106 device).

1. Connect USB cable between your computer and the SLATE106 device.
2. Wait for the SLATE106 device mounting as a mass storage in MS-Windows, and execute 'spe.exe' directly from SLATE106 disk.
3. Edit your text with **spe desktop** software like any text editor: enter your text, change size, select grey level, change font.
   *for specific font, copy the text with the specific from another editor and paste it in **spe desktop** editor*



4. When finished, use '**Save to Slate'** under the '**File**' menu. Your picture is saved automatically with the file name 'spe.ppk' on your SLATE106. Your content should be displayed on SLATE106.
5. Remove USB cable
   The SLATE106 will be remounted automatically as a mass storage until the USB cable is disconnected.

This is the simplified state diagram of **Pictureframe** application when used with **spe desktop**:



8.1.2 Test card

The test card replaces the previous image content, and should give information(1) about the SLATE106 device. The test card is activated by default with **Pictureframe.**

(1) until there, the test card is displaying a blank screen and is displaying no device information. It should be supported in a next version

You have 2 ways to inactivate the test card in **spe desktop** mode:

- Method n°1 (preferred one): Remove the configuration file if it exists, and generate an image with **spe desktop** ('spe.ppk'). Once these 2 conditions are filled, **pictureframe** is generating automatically a new configuration file with test card inactivated.
- Method n°2: If a configuration file exists, edit it, and change the key which is corresponding to test card.

You have 2 ways to activate the testcard in **spe desktop** mode:

- Method n°1 (preferred one): Remove the configuration file if it exists, and remove or rename the image 'spe.ppk'. It activates the test card as default factory state.
- Method n°2: If a configuration file exists, edit it, and change the key which is corresponding to test card.

8.1.3 Switch to Hub mode

To switch from **spe desktop** mode to **Hub** mode, you must declare and pair your SLATE106 device in the SMH300 hub (WebUI).

8.1.4 Release

To update your **pictureframe** software version:

1) connect a computer to your SLATE106 device with an USB cable.
2) Once mass storage is mounted, copy the release file '*.rpk'.
3) Eject properly your USB device.

Then the SLATE106 device

- reboots,
- upgrades its software (unless it is already to the new version) and
- removes the release file.

Once the mass storage is mounted again, your SLATE106 device is up-to-date.

8.2 Central hub

8.2.1 Operating

The SMH300 device is the central hub platform, able to work with up to 20 SLATE106 devices. The hub and the SLATE106 devices are communicating over the BLE protocol (Bluetooth Low Energy).

In this mode, the batteries must be kept inside the SLATE106.

Each SLATE106 device can have an identifier from 1 to 20.

The application **SignMeeting** (or **SignDoor**) which is running on the SMH300 device must know the identifiers of each SLATE106 device (from 1 to 20) to generate the appropriate images content to be displayed on each SLATE106 device.

Each SLATE106 device makes periodically a BLE connection with the central hub. In case the new image is different from its previous downloaded image, the new image is downloaded to be then displayed.

8.2.2 Configuration of SMH300 and SLATE106

Prerequisite: to pair properly your SLATE devices to your hub SMH300, associate to all of them:

- a **private internal identifier** ID (between 1 and 20) linked to
- a **hostname** (8 characters)

In case you are using several hub SMH300, prepare the same information level for all your hubs.

For example:

Hub SMH300 Building A **private internal identifier**	SLATE106 **Hostname**	corresponding to
1	“Sales”	Meeting Room “Sales”
9	“Project”	Meeting Room “Project”
11	“Cezam”	Meeting Room “Cezam”
19	“Berlioz”	Meeting Room “Berlioz”

Hub SMH300 Building B **private internal identifier**	SLATE106 **Hostname**	corresponding to
1	“Prod”	Meeting Room “Prod”
5	“Havana”	Meeting Room “Havana”
11	“Valley”	Meeting Room “Valley”
20	“Paris”	Meeting Room “Paris”

Pairing process:

- The SLATE106 device pairing is the process to link a SLATE106 device to a SMH300 device.
- A SLATE106 device can be paired to only one SMH300.
- If a 'new' SMH300 device tries to pair a SLATE which is already paired to another SMH300 device, the SLATE106 device will be paired to the new one and unpair automatically from the previous SMH300 one.
- To prevent from unexpected SLATE106 device pairing to another SMH300 by another user, a pin code authentication can be used. The PIN code can be changed only when a first pairing has been successful.
- To be detected by the SMH300 device (and be paired afterwards), the SLATE106 must advertise at least once.
- By default, a SLATE106 device is in sleep mode meaning
  - Low power mode (= no activity)
  - Wake-up every 15 minutes (making at that moment a BLE "advertising").

1) Connect to SMH300 WebUI, and in menu **Maintenance**, activate '**Slate pairing**' mode then wait until your SLATE106 devices are detected. When detected you should be able to see the PSN of your SLATE106 device.

*To activate the '**Slate pairing**' mode of your SMH300 refer to SMH300 installation guide and/or WebUI user manual.*

Warning: this mode **Slate pairing** must be used only for the installation, paring and configuration of your SLATE106 device. Indeed, in this mode, they can't upgrade their image content or upgrade their software.

2) Select the SLATE106 devices that need to be paired to this SMH300 in the left list, and drop it into the right list '**Paired Slates**'.
3) In the right list, assign each identifier to each SLATE106, by moving the position of each SLATE106 devices by a drag'n drop according to the association table you have done in your table above
4) Change
   - the **hostname**,
   - the **test card** activation/inactivation

   The '**State**' column informs whether the SLATE106 has properly taken its new configuration. Important:

5) Once your SMH300 configuration is completed, in device SMH300 WebUI:
   - deactivate the test card for all the SLATE106 and
   - deactivate '**Slate pairing**' mode of your SMH300 (to be able to upload again pictures on SLATE106 device.

6) In case you want to set a PIN code, once first paring has been successful, double click and change
   - the **authentication method** to pin code,
   - the 4 digits **PIN code** value

To avoid waiting 15 minutes until the SLATE106 advertises, you can connect 2 seconds to the SLATE106 device an USB cable connected to a computer (or an USB power bank) which is waking up the SLATE106 device so that it can advertise immediately

Don't forget to disconnect it immediately after the 2 seconds.

To evaluate the signal connection quality of a SLATE106 device, the SLATE106 must connect several times to SMH300 (n X 15 minutes). If you want to accelerate this evaluation, you can connect also an USB power bank to your SLATE106.
If the test card is activated, it prevents the SLATE106 from sleeping, and connects constantly to the SMH300.
Don't forget to disconnect the USB cable as soon as the signal is evaluated, because in this mode, it uses the whole available BLE bandwidth.

8.2.3 Configuration of SMH300 App

The **SignMeeting** App is most of time used to work on SMH300.

Your App has to be configured with a layout compatible with the solution SMH300/SLATE106 which is: **Room label** layout.

Your App must be configured also to send an image content according to identifier between 1 and 20 (refer to your association table defined in previous paragraph). The recap of the SLATE106 identifier is shown in the SMH300 WebUI, in the menu Configuration > Output.

8.2.4 Working range

The working range of your App must match the advertising working range of the SLATE106 devices: by example, if the SLATE106 device is active from Monday to Friday and from 08:00 AM to 06:00 PM, the App must update images inside of these intervals, else the image updating will be only effective only at the starting of the next time slot.

8.2.4.1 PictureFrame version 1.10.12 (and below)

The default SLATE106 device working configuration is:

Working configuration (version 1.10.12 and below)	
Working days	all week days
Working hours	all day long
Advertising periodicity	every 15 minutes

8.2.4.2 PictureFrame version 1.10.13 (and above)

The default SLATE106 device working configuration is:

Working configuration (version 1.10.13 and above)	
Working days	MO, TU, WE, TH, FR
Working hours	8h – 19h01
Advertising periodicity	every 15 minutes

Warning: in these versions, the SMH300 device has to be on time (year 2017 or above), else the SLATE106 cannot take the image content.

To increase batteries life time, it is possible to change the configuration to decrease working range configuration by changing value in file APPLI.CFG

APPLI.CFG parameters	
"pictureframe.wakeup.heartbeat.period"	- default value: **15** (wake up periodicity duration in minutes) - min: **15** minutes to - max: **1440** minutes
"pictureframe.wakeup.heartbeat.weekdays.mask"	- working days default mask value: **31** 1:MO + 2:TU + 4:WE + 8:TH + 16:FR - ex: all week mask value: **127** 1:MO + 2:TU +

	4:WE + 8:TH + 16:FR + 32:SA + 64:SU
"pictureframe.wakeup.heartbeat.mode"	- default value: "quarter": wakes up every quarter of an hour - "period": wakes up every "pictureframe.wakeup.heartbeat.period" value
"pictureframe.wakeup.heartbeat.day.interval"	- default value:"T0800/T1901": working range (in the example, from 8h00 to 19h01) - start time - min: T0000 - max: T2359 - end time - min: T0001 - max: T2400

Configuration script

It is possible to change the working range configuration for all your SLATE106 devices at a time by using a script JS (configuration-by-script). Please contact support@innes.fr for more information

Warning

Before changing configuration, take care that you are absolutely sure of your SLATE106 devices configuration to send, meaning hostnames, identifiers, PIN codes, and working range. Indeed, once this new configuration will be taken by your SLATE106 device, in case you need to return back to another configuration or anything else, they will be able to

- Take a possible new configuration file or
- Take a new image content or
- Take a current date and time upgrade or
- Take a firmware upgrade

Only when the current date and time is inside the new working range you have defined !!!!!

To avoid any problem, it is advised to not change the default working range configuration when installing SLATE106 devices and SMH300 for the first time in a building.

8.2.5 Test card

When activated, the test card content is replacing the image content issued from the App (ex: SignMeeting).

The test card gives information on the SLATE106 device.

The test card is activated by default with **Pictureframe**.

Note: In test card mode, the SLATE106 device does not display anymore the image from the hub even if it continues to download them.

You have 2 methods to inactivate the test card in central hub:

- Method n°1 (preferred):
  - Activate the '**Slate pairing**' mode of your SMH300,
  - Inactivate the test card for the SLATE106,
  - Then inactivate the '**Slate pairing**' mode of your SMH300 (back to nominal mode).
- Method n°2:
  - Connect an USB cable between the SLATE 106 and a computer
  - Edit the configuration file, and change the key which is corresponding to test card.
  - Then, eject properly the USB device with MS-Windows
  - When the test card disappears, disconnect the USB cable.

You have 2 methods to activate the test card central hub mode:

- Method n°1: (Preferred one):
  - Activate the '**Slate pairing'** mode of your SMH300,
  - Activate the **test card** for the SLATE106,
  - Inactivate the '**Slate pairing**' mode of your SMH300, (back to nominal mode).
- Method n°2:
  - Connect an USB cable between the SLATE106 device and a computer
  - Edit the configuration file, and change the key which is corresponding to test card.
  - Then, eject properly the USB device with MS-Windows
  - When the test card disappears, disconnect the USB cable.

8.2.6 Switch to spe desktop

Once a central hub configuration has been done, to go back to **spe desktop** mode,

- Connect a USB cable between a computer to your SLATE106 device
- Remove
  - the file .PAIRED
  - the configuration file APPLI.CFG.
  - the files ppk
    - hub.ppk
    - smh300.ppk
- Then, eject properly the USB device in MS-Windows, to go back to factory settings.

Warning: Don't forget to unpair your SLATE106 from your SMH300 else the SLATE106 device would be able to be paired again automatically to the SMH300 once the USB cable is disconnected.

8.2.7 Software release

The SLATE106 device software file is embedded into SMH300 firmware file.

So the paired SLATE106 devices upgrade their software release file automatically as soon as they are connecting to the SMH300.

Pre-requisite:

- Check that the pairing is effective
- Inactivate the 'Slate pairing' mode of the SMH300 (back to nominal mode)

8.2.8 SLATE106 device or SMH300 device replacement

In case of you must replace a SLATE106 device which was paired to a SMH300 device:

- Unpair the old SLATE106 from the SMH300 device
- Pair the new SLATE106 device to the SMH300 device by assigning the same identifier as the previous SLATE106 device

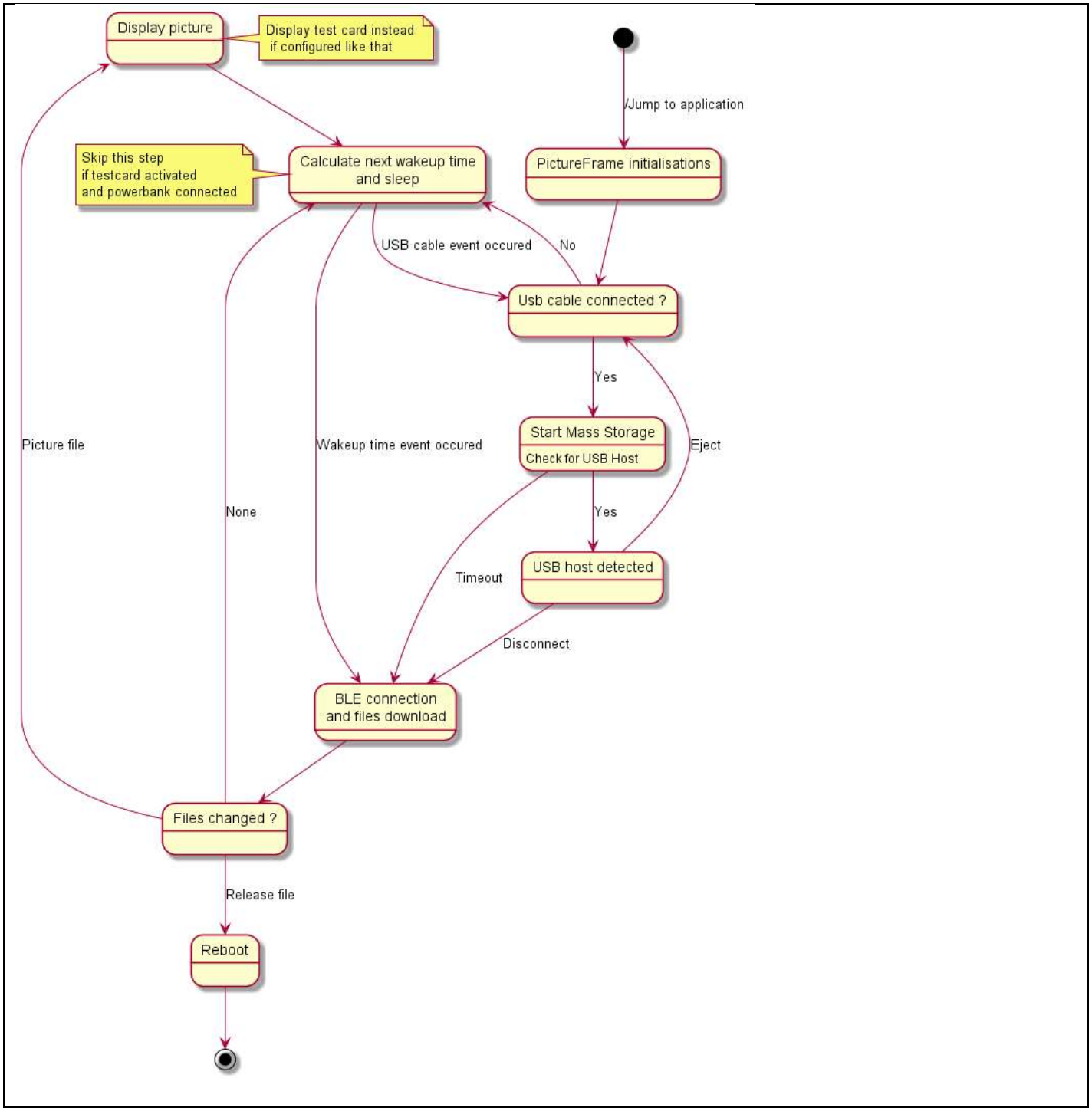
In case of you must replace a SMH300 device which was paired to several SLATE106 devices:

- Configure the new SMH300 device,
- Pair all the SLATE106 devices of the previous SMH300 device.
    - If PIN code was used, you must enter the appropriate PIN code

      Note: If you don't know the PIN code, to work around, you can connect the one after the other to all SLATE106 devices paired to the previous SMH300 device, to erase "manually" their configuration files, and then apply again the standard pairing procedure.

8.2.9 State diagram

This is the simplified state diagram of **pictureframe**, configured with a central hub:



9 RFID/NFC

The SLATE106 device is designed with RFID/NFC interface allowing reading 2 technologies cards:

- RFID
- NFC

The only supported frequency is 13.56MHz.

The Table below shows common card used. The last column indicates the compatibility or not with SLATE106.

Tag type	Modulation frequency (MHz)	Brand (Manufacturer)	Standard applicable	Data rate (kbps)	SLATE106 support
NFC type A	13.56	**Mifare** UltraLight* (NXP)	ISO 14443 typeA	106*, 212, 424	YES*
NFC type A	13.56	**Mifare** UltraLight C (NXP)	ISO 14443 typeA	106, 212, 424	YES
NFC type A	13.56	**Mifare** 1K/4K EV1* & mini ** (NXP)	ISO 14443 typeA	106*, 212, 424	YES*
NFC type A	13.56	**Mifare Plus** 2K/4K S/X ** (NXP)	ISO 14443 typeA	106, 212, 424	YES
NFC type A	13.56	**Mifare** DESFire D40 / EV1 2K/4K*/8K (NXP)	ISO 14443 typeA	106*, 212, 424	YES*
NFC type A	13.56	**Mifare** NTAG203*	ISO 14443 typeA	106*	YES*
NFC type A	13.56	**Jewel** (Innovision),	ISO 14443 typeA	106*	YES*
NFC type A	13.56	**Topaz 512** (BCM512)	ISO 14443 typeA	106*	YES*
NFC type A	13.56	**Kovio** (Kovio)	ISO 14443 typeA	106	TBD
NFC type A	13.56	**SLE66** (Infineon), **SmartMx** (NXP)	ISO 14443 typeA	106	TBD
NFC type B	13.56	Cartes de transport (Innovatron), **Calypso**	ISO 14443 typeB	106	YES
NFC type B	13.56	**Micropass** (Inside), **Vault** (Inside), **16RF** (ST), **SLE66** (Infineon)	ISO 14443 typeB	106	TBD
NFC type F	13.56	**Felica** (Sony)	JIS 6319, ISO 18092	212, 424	YES
RFID type V	13.56	**iclass** (Hid), **Icode** (NXP), **Tag-it** (TI), **LR** (ST)	ISO 15693	-	NO
RFID LF	125 KHz	**Hitag** (NXP), 125KHz **Prox** (HID)	ISO 18000-2, ISO11784/11785/ 14223	-	NO

** Configurations validated by INNES*

*** Don't totally respect ISO14443A standard*

10 Technical specifications

Type	Specifications
Processor	CPU: STM32
Peripherals	1x micro USB2.0 device 3x touch sensing keys 3x red LEDs
Storage	Internal Flash Memory: 1 MBytes
Operating System	Innes proprietary embedded software
Software compatibility	Screen Composer G3 with the App SignMeeting (or SignDoor) (requires a hub SMH300 device) Spe desktop (Simple Picture Editor) or Spe mobile
Constructor	Innes
Display	Electronic paper 6” with 4 grey level Resolution: 800x600 pixels
WPAN	Bluetooth Low Energy version 4.1 Frequency band: 2.402 to 2.480 GHz RF TX Power: +7.5 dBm
RFID/NFC Interface	Modulation 13.56 MHz (refer to the corresponding chapter)
Power supply	4x CR2430 Lithium batteries or USB power 5V with micro USB cable
Batteries lifetime	3 years with 4 daily display updates, use with a central hub
Environment	Working temperature: +0°C to +40°C Operating air moisture: Below 80°C Storage temperature: -20°C to +60°C Storage air moisture: Below 85%
Dimensions (W x H x D)	151,2 x 114 x 8 mm (SLATE106) 71 x 31 (wall mount support)
Weight	203g (SLATE106+wall mount support + batteries)
Enclosure flame rating	V0
Conformity	Conformity with the following European directives: - RED 2014/53/EU - LVD 2014/35/EU - EMC 2014/30/EU
Warranty	3 years