

ingenico

**AXIUM SX7000**

**AXIUM SX5000**

Integration Guide



**HDMI™**  
HIGH-DEFINITION MULTIMEDIA INTERFACE

[www.ingenico.com](http://www.ingenico.com)

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# Preliminary

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## **These guidelines apply to all integrator and/or manufacturer partners to which the INGENICO Group supplies an AXIUM SX7000/5000 product.**

AXIUM SX7000/5000 are a cashless payment solution comprising both hardware and software components, designed by INGENICO to integrate payment functionality into self-service devices or terminals, such as EV charging, car wash, vending, micro market, autonomous stores, bill payment kiosk and others self-service verticals. (hereinafter the "Terminal(s)").

The AXIUM SX7000/5000 product is only intended to be installed in Terminals by manufacturers or integrators responsible for the complete assembly of such devices (hereinafter the "Partner(s)").

INGENICO Partners, who are qualified professionals specializing in their area of activity, have specific know-how and a high level of technical knowledge as regards integrating cashless payment solutions into their Terminals.

These guidelines are intended as a reminder of good practice and set out the rules applicable to all our Partners about integrating the AXIUM SX7000/5000 into their Terminals.

## **1. Integrating AXIUM SX7000/5000 into each Terminal**

Partners bear sole responsibility for integrating each AXIUM SX7000/5000 product into their Terminal and must comply with:

- (i) local standards and regulations.
- (ii) the integration rules set out in this guide.
- (iii) the state of technology and current industry practices in effect in terms of design, manufacturing, integration, and maintenance of Terminals.
- (iv) good engineering practices, the highest quality criteria in effect in the profession and the corresponding standards.

To support its Partners in the integration process, INGENICO has introduced the following services (Partners are invited to contact their local INGENICO sales representative to find out more about the terms applicable to each service):

- (i) Partners carrying out their first AXIUM SX7000/5000 integration must attend a technical training course run by technical experts to help them to comply with the requirements outlined above and strict integration rules;
- (ii) In addition, INGENICO can also offer a technical assistance service for AXIUM SX7000/5000 integration to any Partner who requests it.

Considering the information above, INGENICO cannot be held responsible for any AXIUM SX7000/5000 integration that is not compliant with the criteria above, into a Terminal by one of its Partners.

## **2. Compliance of AXIUM SX7000/5000 and the Terminal with the legislation/regulations in effect**

### **2.1 AXIUM SX7000/5000 compliance**

The AXIUM SX7000/5000 products are designed by INGENICO to comply with the applicable international and/or local standards in effect, particularly in environmental (CE, FCC, CSA, etc.) and security (EMV, PCI, etc.)

terms. Documents confirming compliance with these standards can be made available to INGENICO Partners on request. They can also be viewed directly on the websites of the official organizations that issue them (Bureau Veritas, PCI, etc.). If necessary, test reports can also be viewed, at the Partner's request only, at INGENICO's offices at the address shown.

## 2.2 Terminal compliance

As stated above, the Partner is responsible for the complete assembly of the Terminal, which will comprise other third-party components, materials, and solutions (hereinafter the "**Components**") as well as the cashless payment solution.

The Terminal assembled by the Partner must undergo subsequent checks in accordance with the local, European and/or international legislation/regulations applicable (hereinafter the "**Certification(s)**").

For example, about electromagnetic compatibility:

- **For the European Union:** commissioning and market release of the Terminal are subject to it receiving its CE declaration of compliance in accordance with RE Directive 2014/53/EU of April 16<sup>th</sup>, 2014.

- **In the United States and Canada:** control and evaluation rules on the compliance of the Terminal have been implemented by the FCC (Federal Communications Commission) and the ISED (Innovation, Science and Economic Development Canada). It should be noted that the fact that the AXIUM products and each of the Components in the Terminal are compliant with the applicable standards may not be sufficient to obtain the Certifications. For example,

INGENICO is aware of the importance of the quality of design of the electrical circuit (e.g., input filtering) and cabling (including earthing of components) for compliance with rules on electrical radiation. Considering the above, INGENICO cannot be held responsible for any non-compliance of the Terminal of any kind. INGENICO's recommendations as outlined in these guidelines are intended to help with obtaining Certifications but may not be sufficient in themselves.

The scope of this document is to assist third party integrators when dealing with Ingenico Unattended products such as AXIUM SX7000/5000. It offers all information needed for a successful integration of this products into unattended kiosk machines.

For any sales information, please refer to your Ingenico contact into the region.

## Updates table

Version	Date	Nature of modifications	Author	Visa
0.1	09/02/2024	First Draft	L.ROBICHON	
0.2	18/07/2024	Installation Instructions update	H.BLANC	
0.3	13/08/2024	updates	L.ROBICHON	
1.0	26/09/2024	reviewed	L.ROBICHON	



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# 1. General

## 1.1 Definition of acronyms

CL	ContactLess
CVM	Cardholder Verification Method
EMC	Electro Magnetic Compatibility
EMV	European Mastercard Visa - Card Specifications for Payment Systems
EPS	Electronic Payment Specification of the EVA
EVA	European Vending & Coffee Service Association
GND	Ground
GPRS	General Packet Radio Service
GSM	Global System for Mobile Communication
LCD	Liquid Crystal Display
LLT	Local Loading Tool
MDB	Multi Drop Bus
PCI – PTS	Payment Card Industry - PIN Transaction Security
RAM	Random Access Memory
RS232	Recommended Standard 232. A standard for serial binary communications
SCR	Smart Card Reader
SMA	Sub-Miniature version A
USB	Universal Serial Bus
VMC	Vending Machine Controller

## 1.2 Payment solution presentation

The AXIUM SX7000 and SX5000 are unattended devices meeting the needs of EV charging, car wash, vending, micro market, autonomous stores, bill payment kiosk and others self-service verticals.

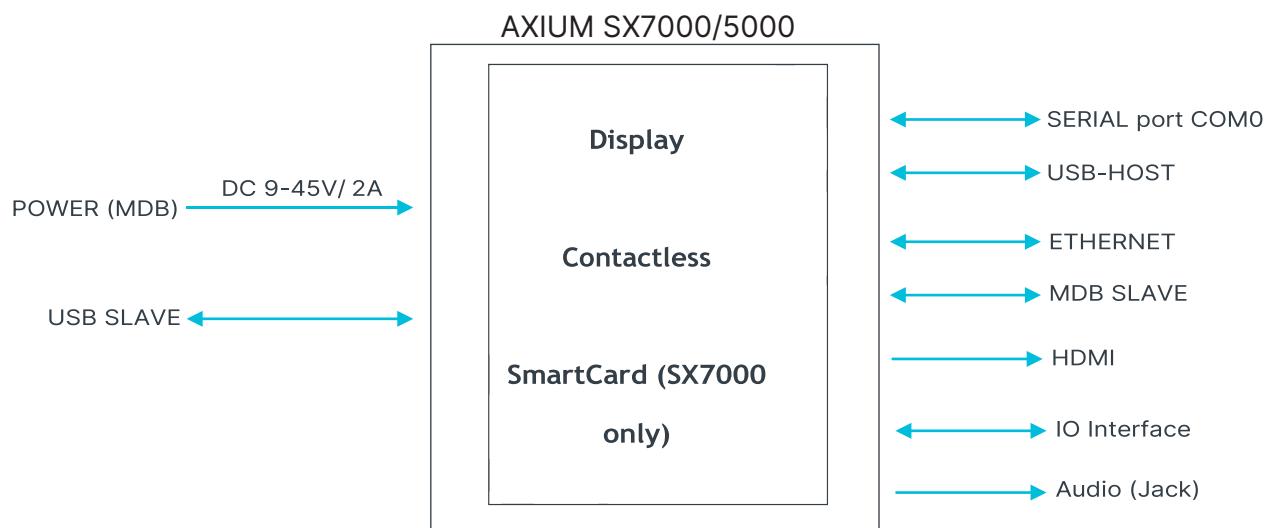
AXIUM SX7000 and SX5000 have 4G optional module for radio communication.

AXIUM SX product is robust, and resistant to harsh environments. Can be implemented indoors.

Ergonomic design makes it intuitive and user-friendly. It is easy to integrate thanks to multiple connectivity options and a low depth inside the kiosk.

The AXIUM SX5000 is a ContactLess only payment terminal while the AXIUM SX7000 is equipped with a contact card reader. Highest security level and vending requirements compliance.

### 1.2.1 Connectivity and communications diagrams



## 1.2.2 Services

Training

Please find all the information through the link below  
<https://showme.ingenico.com/>

Support

Hot line support  
Technical assistance

After-Sales Service

Fixed cost repair of AXIUM Series products

Downloading server centre

User licence  
Installation  
User training  
Hot line support  
Technical assistance

Software / Licences

Android  
User licence for applications software  
Licence for software signature tool,  
SAT Licence for "EMV Level 2 package  
...

## 1.3 Professional installation requirement

Ingenico sells its products only to qualified partners and integrators. They are overseeing professional resell, integrate, and install of those products inside complete solution for end customers.

Those end customers solution can be:

- Vending machine operator.
- EV chargers.
- Car wash.
- Other.

Thus, the non-partners or non-integrator cannot purchase Ingenico hardware or software.

Partners, resellers, and Integrators must have qualified electronics engineers to be able to install or integrate our products. Furthermore, they must follow a specific technical training conducted by Ingenico technical experts.

In addition, installation must follow Ingenico recommendations, as describe in this document, to respect:

- Local regulations for Electrical Safety and Radio emission levels.
- Ferrite beam installation if any.

Our field support & maintenance engineers are available for follow up.

### WARNING

To prevent unwanted Voltage across the AXIUM SX7000 or SX5000, the main DC power source must be located within the same Kiosk and associated cables must be shorter than 4m. The connection to protective earth can be at the source of the DC main power source or at the AXIUM SX7000/5000 location, or both.



## 1.4 Device Description

### 1.4.1 AXIUM SX7000 Device views



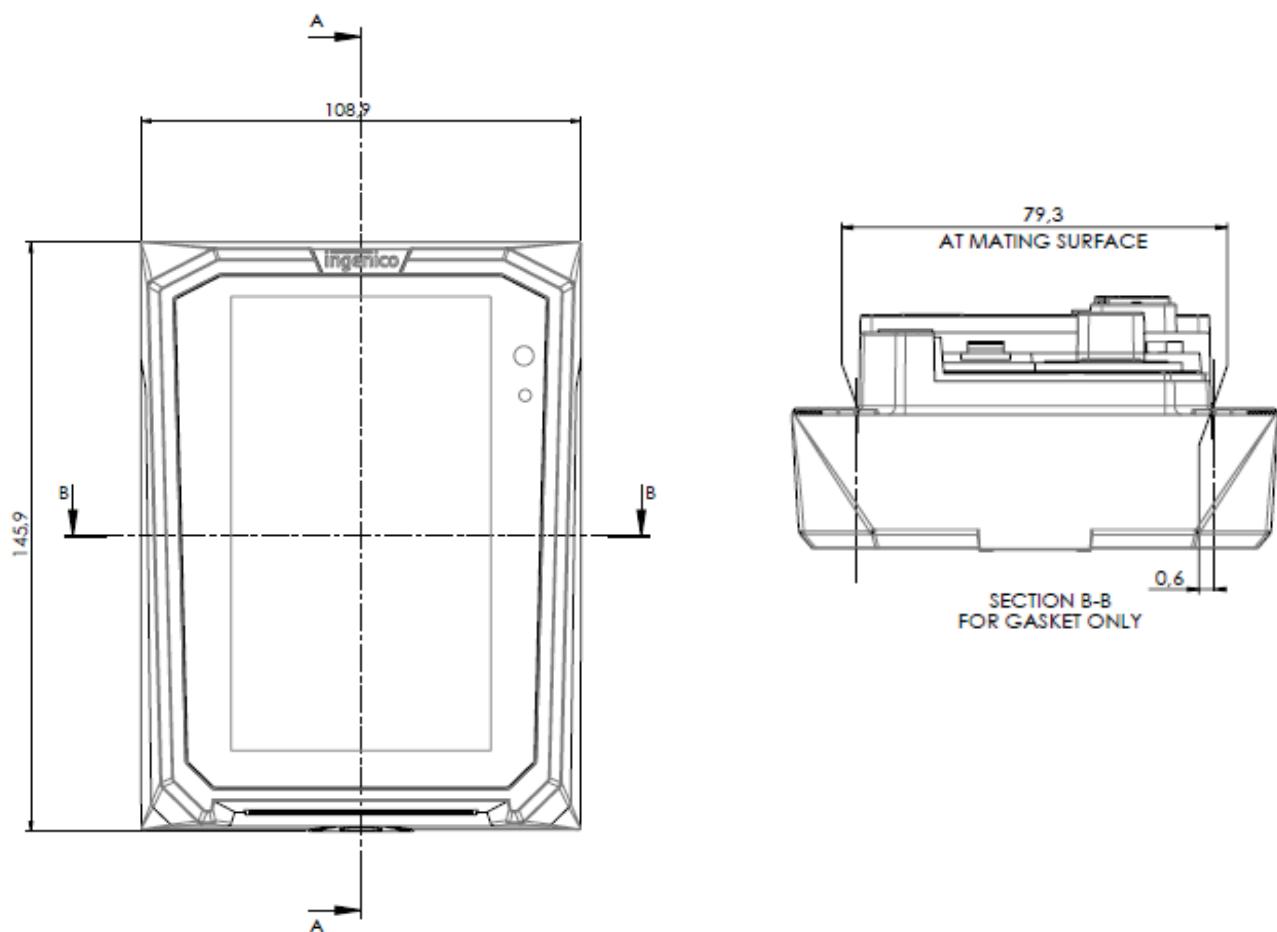
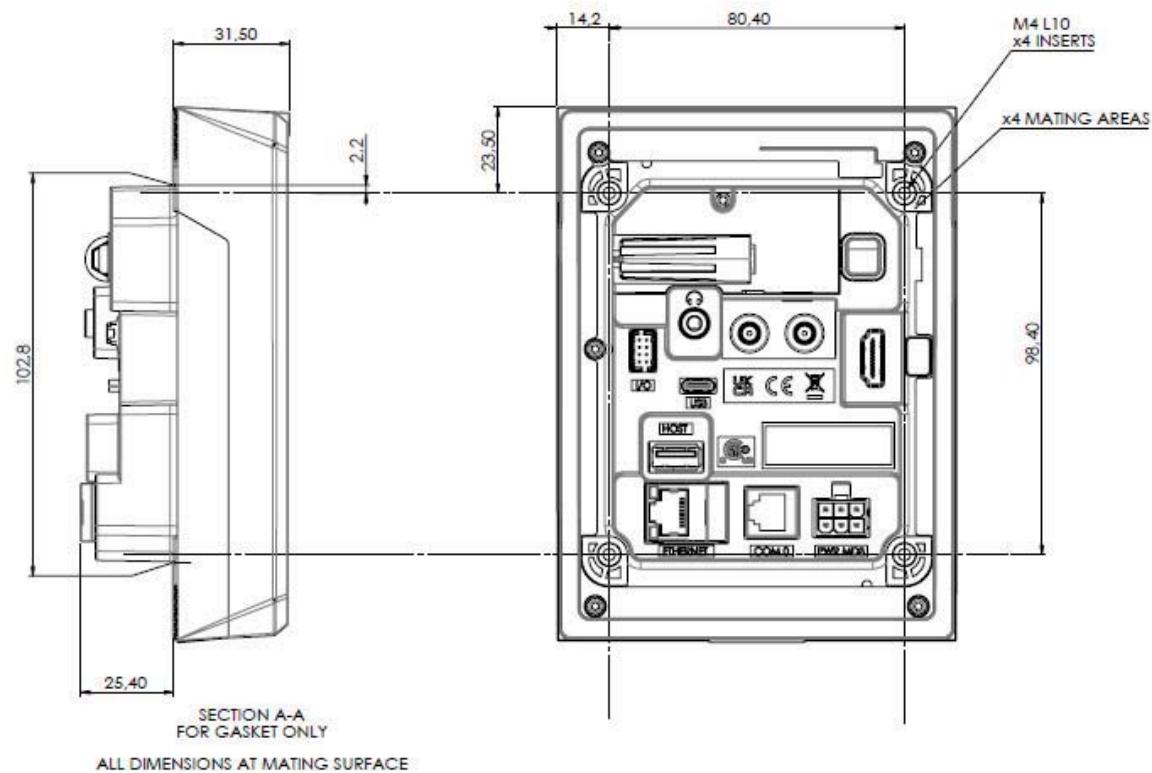
## 1.4.2 AXIUM SX5000 product views



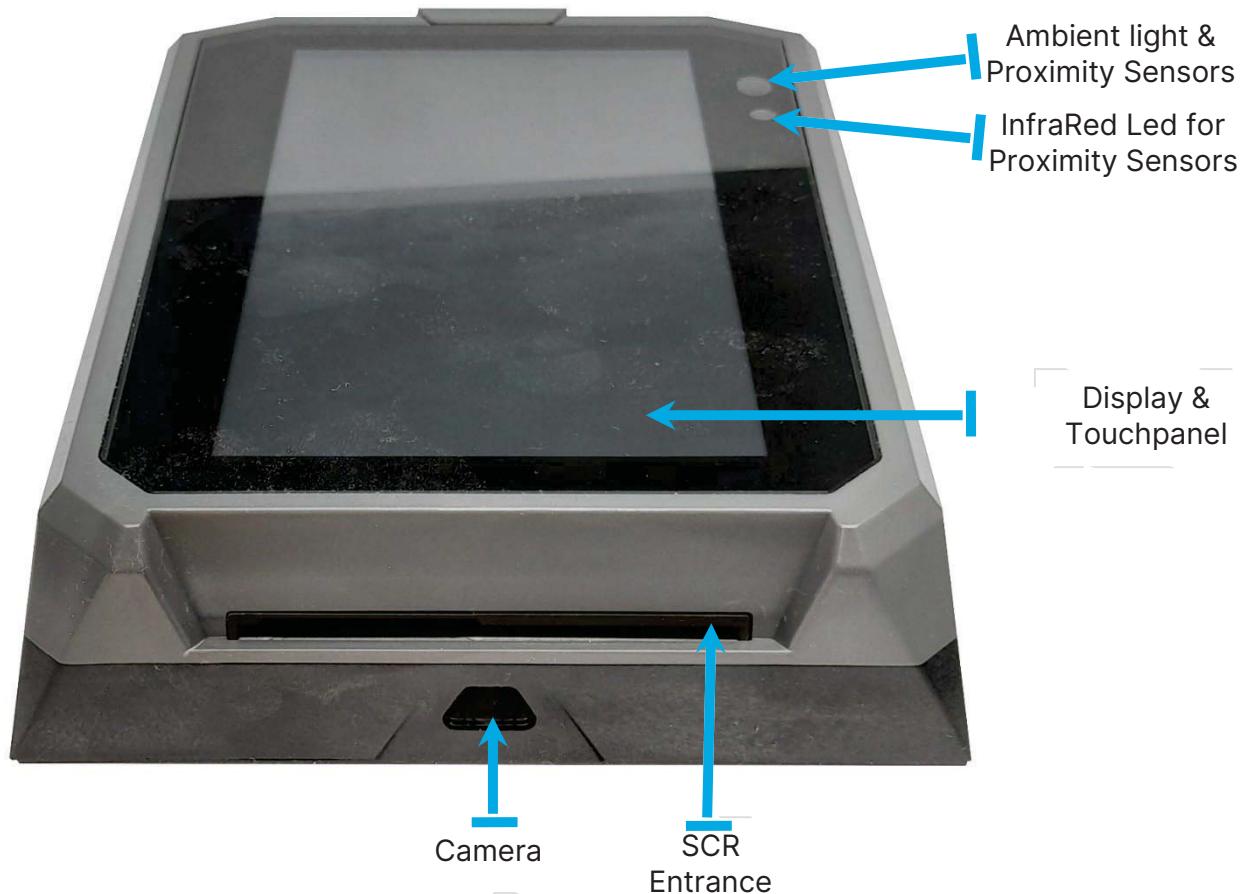
### 1.4.3 Technical Hardware characteristics

Mass	AXIUM SX7000 without 4G: 535g, with 4G: 547g AXIUM SX5000 without 4G: 517g, with 4G: 529g
Dimensions	145.9mm x 108.9mm x 31.5mm x 25.4mm height x width x depth outside the kiosk x depth inside the kiosk (panel thickness not considered)
Power Supply	DC 9V – 45V / 2A
Platform	Android OS (AXIUM)
Link	1x USB device (USB-C) 1x RS232 (RJ11) 1x MDB Slave (Molex 6 pins) 1x USB host (USB-A) 1x Ethernet (RJ45) 2x Cellular Antenna connection (SMA) – optional 1x Audio Jack 1x HDMI (for second display) 1x IO interface
Functionality	Buzzer Contactless cards reader 5" display (720*1280) with touchscreen 1x Maintenance Button Wake-up mechanism on RS232 connectors / touchscreen (single Tap) / SCR card insertion

#### 1.4.4 Device Dimensions



#### 1.4.5 Front Interfaces description

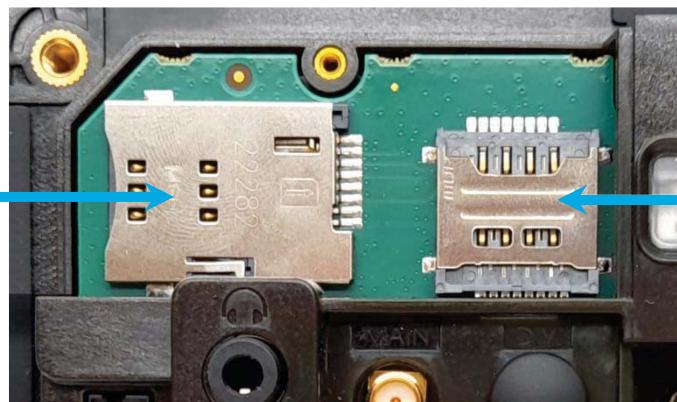


#### 1.4.6 Internal Antenna Location



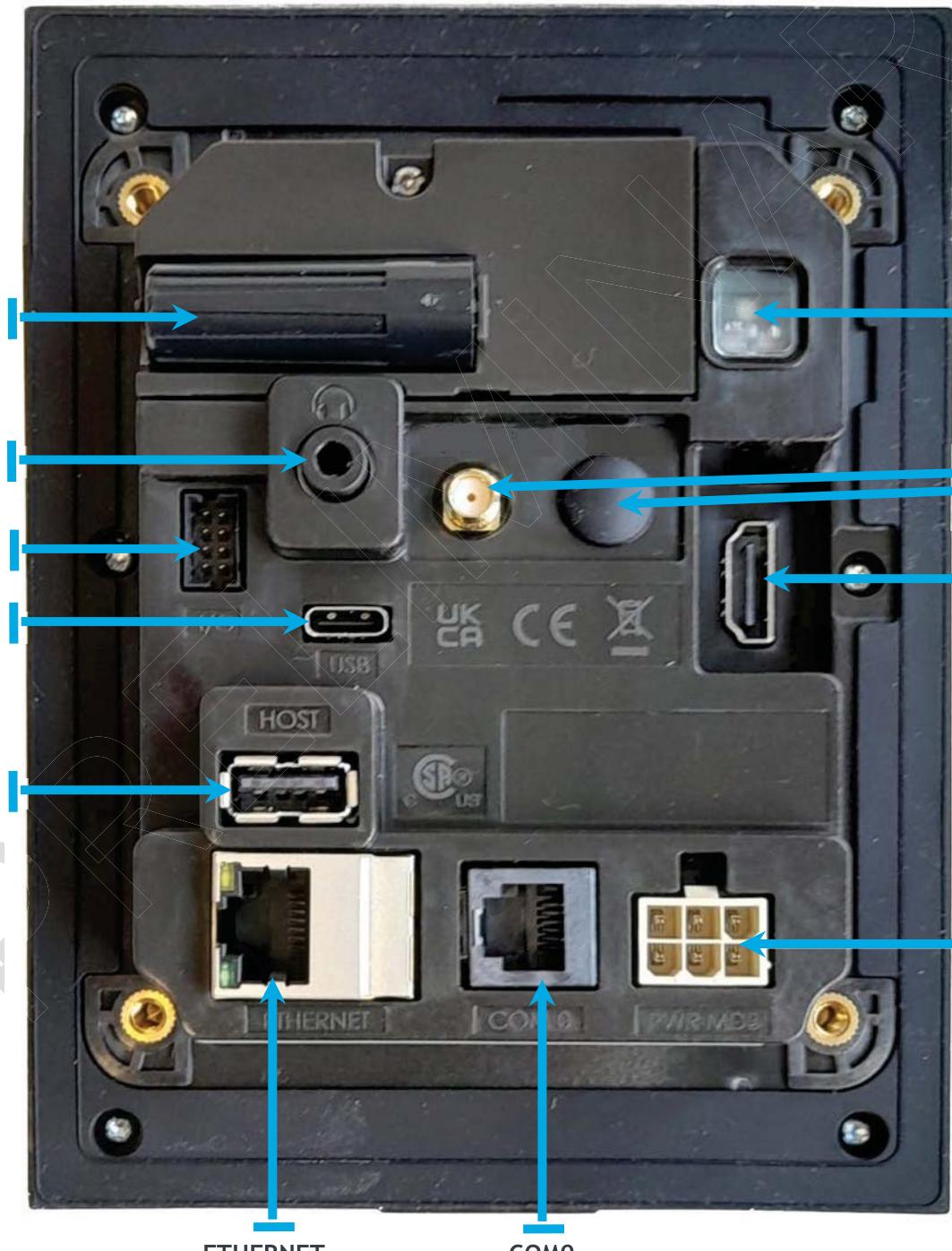
#### 1.4.7 Rear Interfaces description

CELLULAR SIM  
(Optional)



Dual SAM

ANTENNA SCREWING TOOL  
(Optional)



MAINTENANCE BUTTON & LED

AUDIO

CELLULAR RF CONNECTOR  
(Optional)

IO CONNECTOR

HDMI

USB SLAVE

USB HOST

POWER & MDB

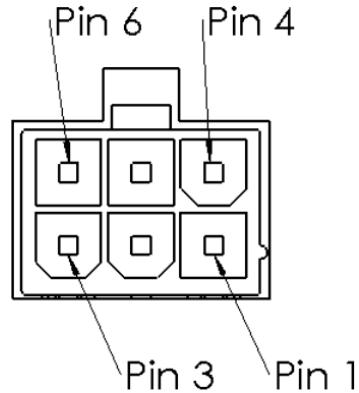
ETHERNET

COM0

#### 1.4.7.1 MDB 6 points

The 6 points connector include the DC Power input (Vin/GND) and the MDB slave only

Pin N°	Function
1	Vin
2	GND
3	Not used
4	Slave_RXD
5	Slave_TXD
6	Slave_COMMUN



The DC power input must be within 9V and 45V and can supply minimum 2A current.

#### 1.4.7.2 USB Slave (USB-C)

The Device has a type C USB cable for a slave USB 2.0 interface only. Cable length should not exceed 5m and USB2.0 compliant.

#### 1.4.7.3 USB Host (USB-A)

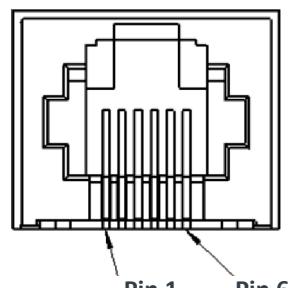
The Device has a type A USB cable for a Host USB 2.0 interface only. Max USB current at 500mA/5V (Hardware limitation). Under fault conditions, the rated output current of USB is about 3A to meet the requirements of 62368-3. Cable length should not exceed 5m and USB2.0 compliant.

The touchscreen part from the second Display/touchscreen can be connected to this USB interface, it required to support USB HID.

#### 1.4.7.4 COM0 (RJ11)

The Device has a serial port COM0 (RS232 electrical standard for the signals RXD/TXD/CTS/RTS). The connector type is RJ12 (6P6C).

Pin N°	Function
1	GND
2	Wake-up (Input/Output)
3	RXD (Input)
4	TXD (Output)
5	CTS (Input)
6	RTS (Output)



For the Wake-up function, refer to the chapter "1.5 Wake-up function".

#### 1.4.7.5 Ethernet (RJ45)

The device has an ethernet 10/100 base T interface

Connector RJ45 (8P/8C) type 10/100 base T

Pin N°	Function
1	ETH_TX+
2	ETH_TX-
3	ETH_RX+
4	Not used
5	Not used
6	ETH_RX-
7	Not used
8	Not used

#### 1.4.7.6 Audio (Jack)

The Audio jack connector is a female 3.5 mating plug.

only the Stereo speaker Left and Right are connected (no Microphone connection).

Possible connection on it:

- Jack cable extension to provide Jack connector on Kiosk (no microphone)
- External speaker (required an Audio amplifier inside the kiosk)

#### 1.4.7.7 IO Interface (2 lines of 4 contacts)

2x Inputs and 2x Outputs ISOlated for general purpose.

CONNECTOR reference: MOLEX ref 87831-5551

Pin N°	>< Function
1	VDD_ISO; input power; max=5.5V; min=2.25V;
2	Max input current consumption: Iccmax = 28mA Must be provided by the external interface.
3	ISO_IN_A; min=GND_ISO; max=VDD_ISO;
4	ISO_IN_B; min=GND_ISO; max=VDD_ISO;
5	ISO_OUT_A; min=GND_ISO; max=VDD_ISO;
6	ISO_OUT_B; min=GND_ISO; max=VDD_ISO;
7	GND_ISO
8	



Max Output Current (ISO\_OUT): 4mA(VDD\_ISO :5V), 2mA(VDD\_ISO :3.3V), 1mA(VDD\_ISO :2.5V).

Input voltage threshold (ISO\_IN) :  $V_{ih} = 0.7 \times VDD\_ISO$ ,  $V_{il} = 0.3 \times VDD\_ISO$

Max Input current (ISO\_IN) : 10 $\mu$ A.

#### 1.4.7.8 HDMI



HDMI connector for a second display.

fully compliant with HDMI and support those resolutions:

- 1920x1080p@30Hz,
- 1280x720p@60Hz,
- 720x480p@60Hz.

#### 1.4.7.9 Maintenance Button and LED

The device has a maintenance button and Leds at the back.

#### 1.4.7.10 SAM cards

2 slots are available for ID-000 SAM Type.



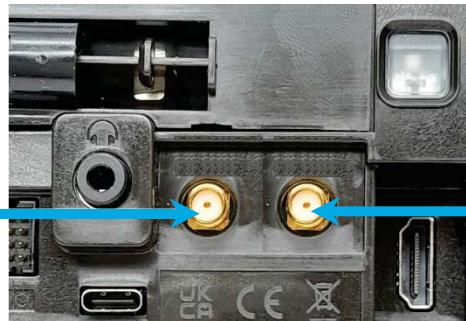
#### 1.4.7.11 Cellular RF (2x SMA) (Optional)

Worldwide 4G/3G/2G module version:

spec

Antenna  
(Main)

Antenna  
(Diversity)



#### 1.4.7.12 Antenna Screwing Tool (optional)

Refer to chapter “5.4 Antenna mounting” for tool usage.

#### 1.4.7.13 SIM cards (optional)

Single SIM card handling

### 1.4.8 Other Functions

#### 1.4.8.1 Buzzer

The buzzer is controlled by application. The frequency depends on software.

#### 1.4.8.2 Contactless LEDs & Contactless Logo

Contactless LEDs & Contactless Logo are displayed on the screen.

## 1.5 Wake-up function

### 1.5.1 Wake-up mechanism

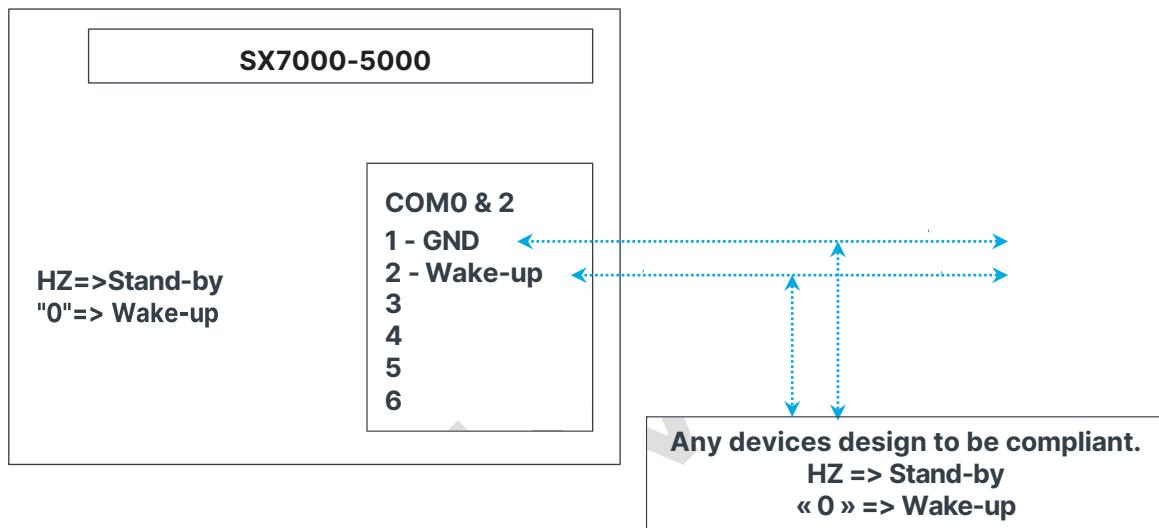
Device is designed to save power thanks to a "stand-by mode".  
If the stand-by mode is used, use Wake-up mechanism:

- with Pin 2 of COM0 link.

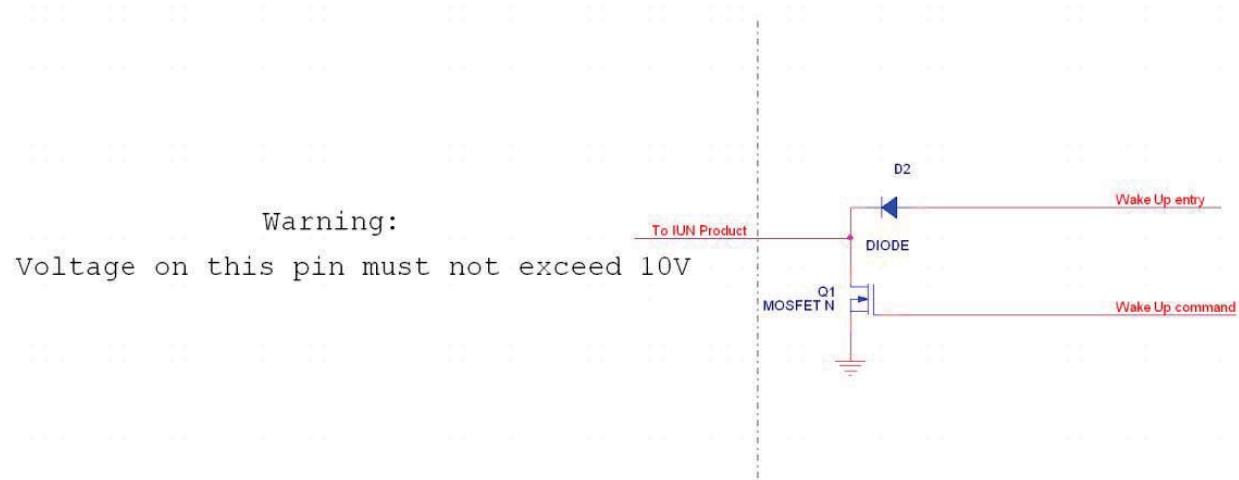


The Wake-up pin is drive to "0" by the device asking the wake-up.

This pin could be driven by AXIUM SX7000/5000, or any devices designed to be compliant (Host device...).



### 1.5.2 Recommended circuit implementation



The wake-up pin must be high impedance. Do not directly connect any voltage on this pin. The devices are 10 volts tolerant on this pin, but it is recommended to be High impedance. The voltage on this pin must not exceed 10 volts in any case.

As the pin is high impedance in standby mode, any current leakage can wake-up the product, so be careful to choose component with ultralow leakage current for wake-up circuit.

## 2. Installation Requirements

Note: It is required to use ESD-protective clothing while handling these devices.

### 2.1 Security requirement

Your device fulfills current applicable PCI PTS security requirements. Upon receipt of your Device, you should check for signs of tampering of the equipment. It is strongly advised that these checks are performed regularly after receipt. You should check, for example: that the reader is firmly in place; that there is no evidence of unusual wires that have been connected to any ports on your Device or associated equipment, the chip card reader, or any other part of your Device.

Such checks would provide warning of any unauthorized modifications to your Device, and other suspicious behavior of individuals that have access to your Device. Your Device detects any "tampered state". In this state the Device will display the message "Caution : terminal is locked, payment transaction forbidden" and further use of the Device will not be possible. If you observe the "Warning Detected", you should contact the Device helpdesk immediately.

You are strongly advised to ensure that privileged access to your Device is only granted to staff that have been independently verified as being trustworthy.

The Device must never be put in or left at a location where it could be stolen or replaced by another device. You are strongly advised to perform regular checks on the chip card reader.



#### CAUTION

Positioning of the Device on the kiosk must be in such a way to make cardholder PIN (Personal Identification Number) spying infeasible.

NEVER ask the customer to divulge their PIN Code. Customers should be advised to ensure that they are not being overlooked when entering their PIN Code.

### 2.2 General installation recommendations

Installation requirements:

- Ensure that you have enough free space for installation, operational and maintenance needs.
- Be aware of the safety regulations.
- Particular attention needs to be paid to mount the AXIUM SX7000/5000 in a vertical position. It is essential for waterproofness and to prevent water from accumulating in the card reader.
- Carefully consider the ergonomic aspects and the local regulations or recommendations concerning disabled and visually impaired people.
- See environmental specification and especially in case of very cold or humid weather, take steps to ensure that the internal temperature is at least -20°C.
- Confidentiality when entering the PIN code must be preserved.
- Don't hesitate to contact our support team for advice and validation of planned integration.

## 2.3 White Color Device Integration requirements

Direct sunlight on plastic has visual impact on the color, this impact is more visible on white color. The impact is purely aesthetic, robustness and resistance are not impacted.

a sample of the white plastics was sent to an environmental test lab to get tested following ISO 4892-2.

test cycle: 102mn of light without water spray, 18mn of light with water spray.

Duration: 1344 Hours

The sample color has change from white to light yellow. This test doesn't provide a real duration to get this color change. It depends on exposition, localization.

In parallel, a real test in south of France was perform, and the color didn't change after 1 year.



It's recommended to protect it from the direct sunlight (UV) with

1. a Sun Visor or
2. install it in a recess or
3. select the kiosk orientation to north.

## 2.4 Kiosk mechanical requirements

The kiosk panel can be metallic or plastic.

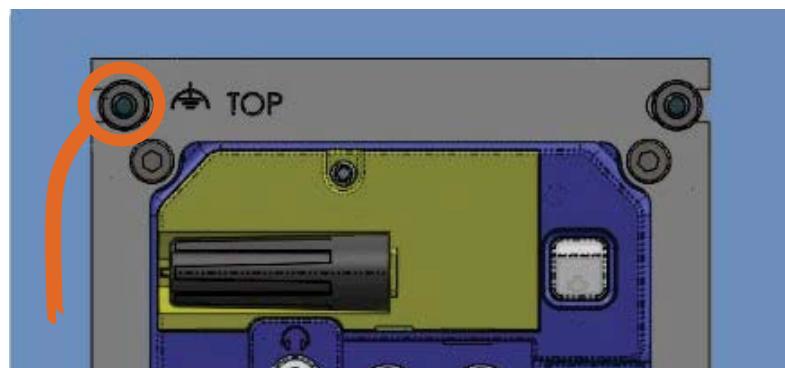
The kiosk panel thickness must be maximum 7mm (or 4mm with Ingenico EVA plate).

The kiosk panel can be coated with painting but grounding of AXIUM SX7000/5000 Devices and EVA plate must be ensured.

The kiosk panel surface used to mount the product must be planar and stiff to meet IP requirements.

## 2.5 ESD Recommendations

Metallic kiosk must be grounded to earth to protect the electronic devices they embed, such as AXIUM SX7000/5000. Regularly in contact with end user during smart card insertion or swipe sliding, a rugged resistance to ESD must be guaranteed.



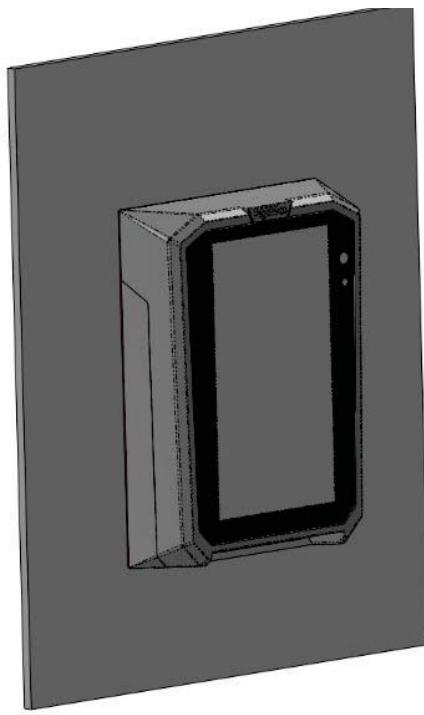
if an **EVA plate is used** to fix the AXIUM SX7000/5000 device on a **non**-metallic kiosk, please use one of the dedicated areas to connect the EVA plate to the ground.

## 2.6 ContactLess

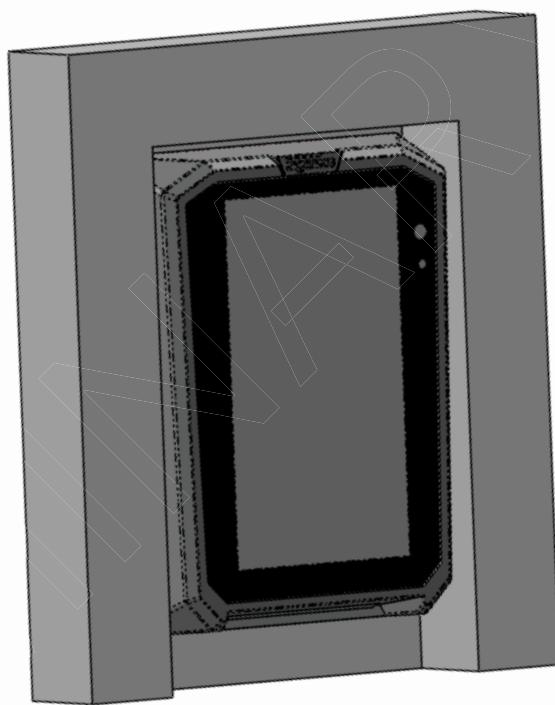
AXIUM SX7000/5000 devices have been tested fitted vertically on a metallic kiosk (3 mm thickness), with and without EVA plate. EMVCo standard performances are guaranteed for a 'plan integration' but NOT if AXIUM SX7000/5000 is in a recess of the kiosk with metallic part around.

With metal parts near the Contactless antenna (upper half of the display), the contactless performance must be reevaluated.

The CLESS Logo is displayed on the screen. CLESS Logo must not be hidden during a transaction.



Recommended integration with metal kiosk

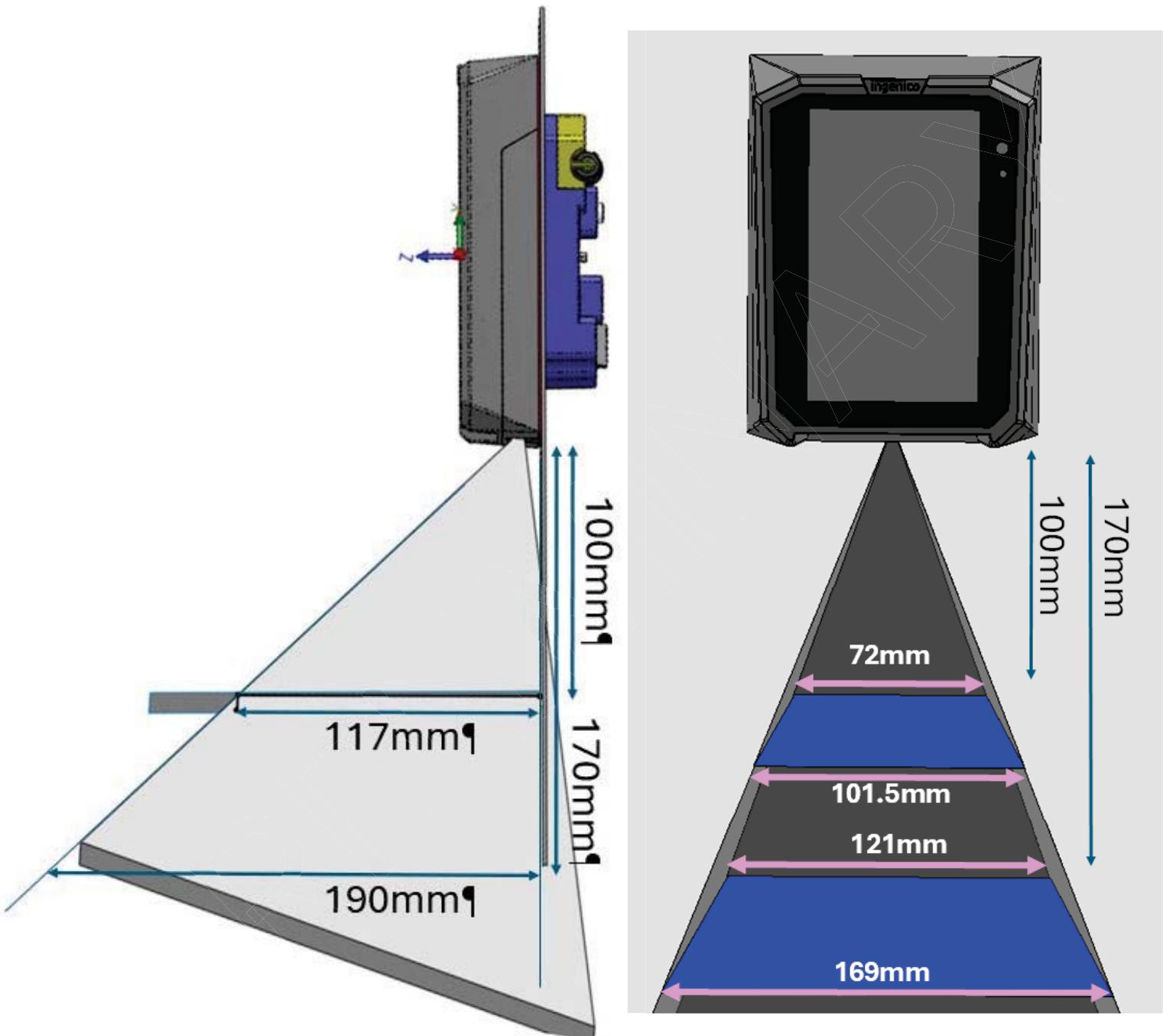


Not recommended integration with metal kiosk

## 2.7 Camera

### VGA Camera Specification

- VGA 640\*480
- Fix Focus distance: 10cm
- Focusing Range: 6.4cm to 22.7cm



# 3. Device installation on Kiosk

The label with PCI Hardware Version Number must be visible once the device is installed.  
The centerline of operating controls or input and output components shall be located above 400 mm from the floor.

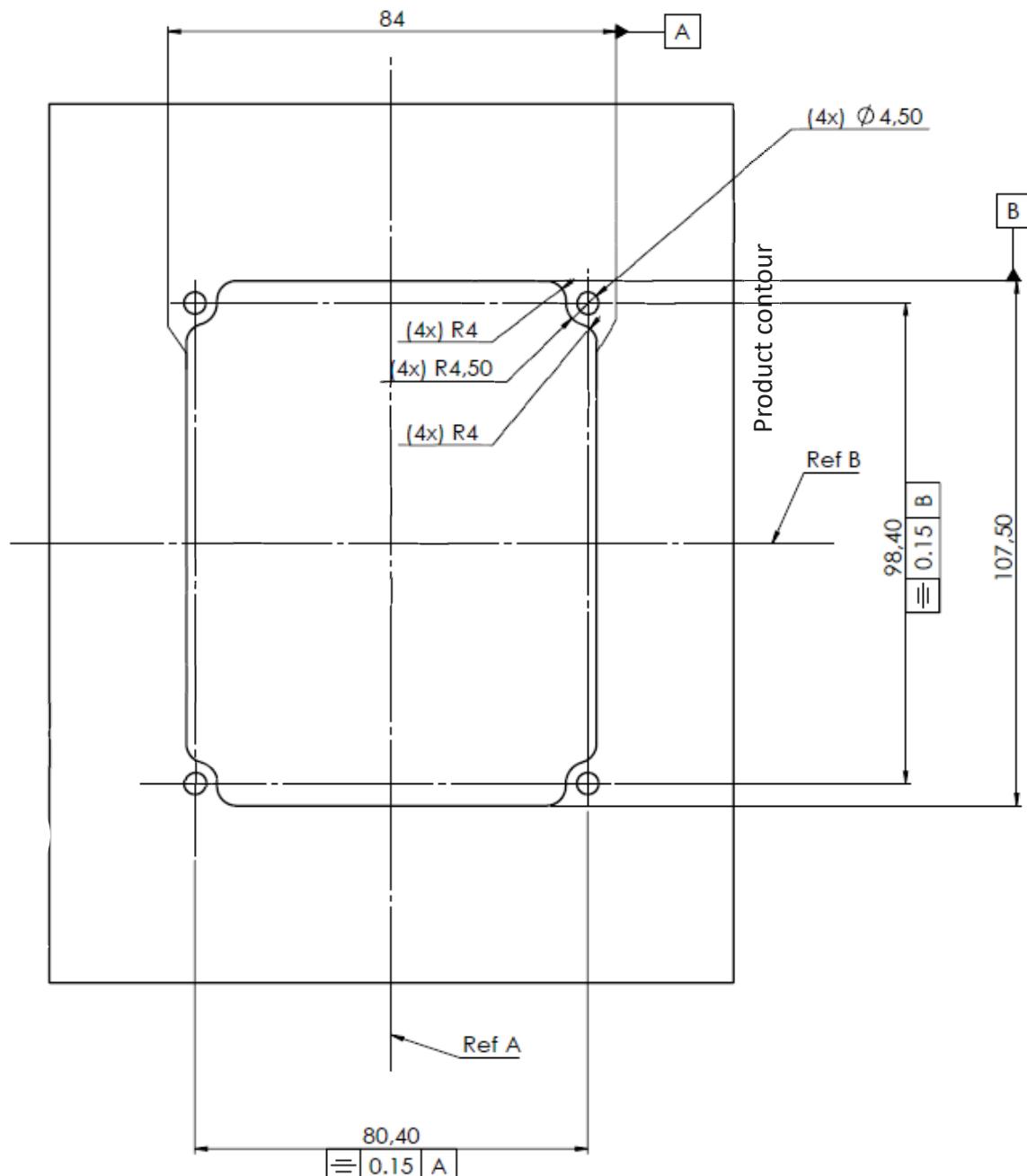
The AXIUM SX7000/SX5000 are mounted only from indoor.

## 3.1 Product mounted on kiosk panel (Custom cut-out)

### 3.1.1 Kiosk Preparation

Products can be mounted directly on kiosk panel. It requires a cut out in the kiosk to the dimensions detailed in the diagram below (all dimensions are in millimeters).

Please note that the Diagram is viewed from the Device side, the front side of the kiosk

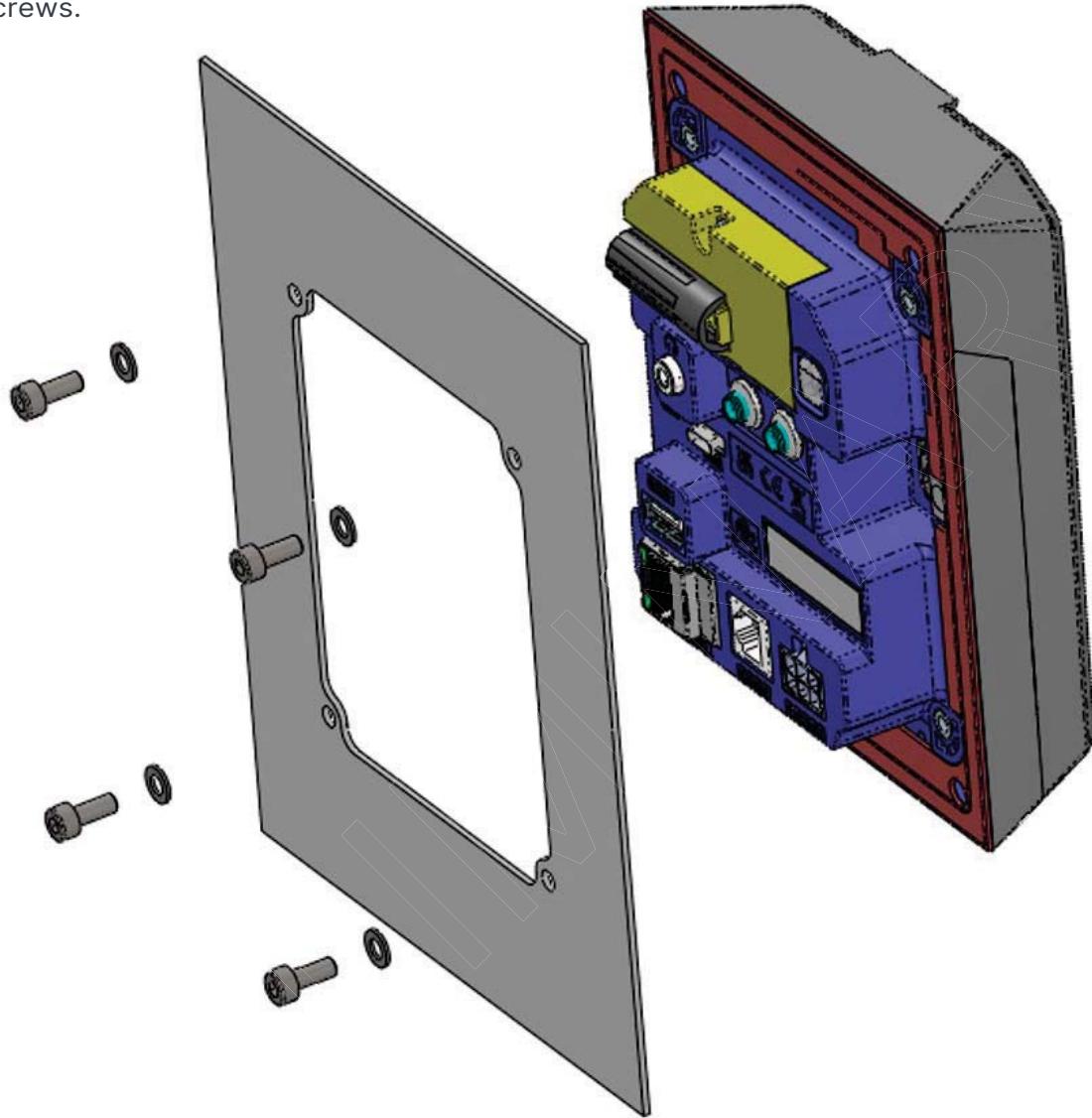


View from Device side: front side Kiosk

### 3.1.2 Installing the product from outside

Screw the 4 screws M4 at 1.2 Nm  $\pm 0.2$  torque. It is recommended to use washers.

in high-vibration environments (e.g., streetcar or train platforms, side of roads/ highways, next to elevators, etc.), the use of Threadlocker (medium strength) is recommended, to secure the mounting nuts/ screws.

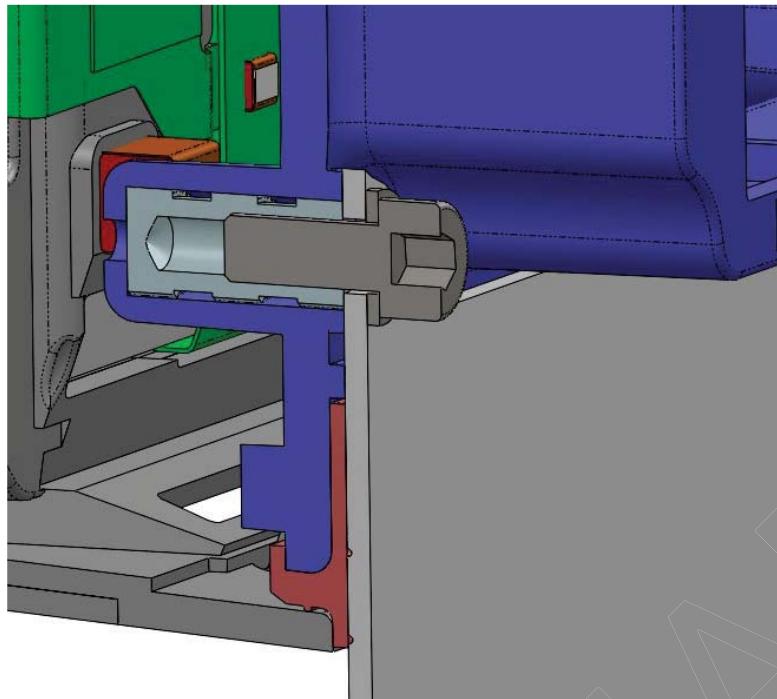


Kiosk Front panel



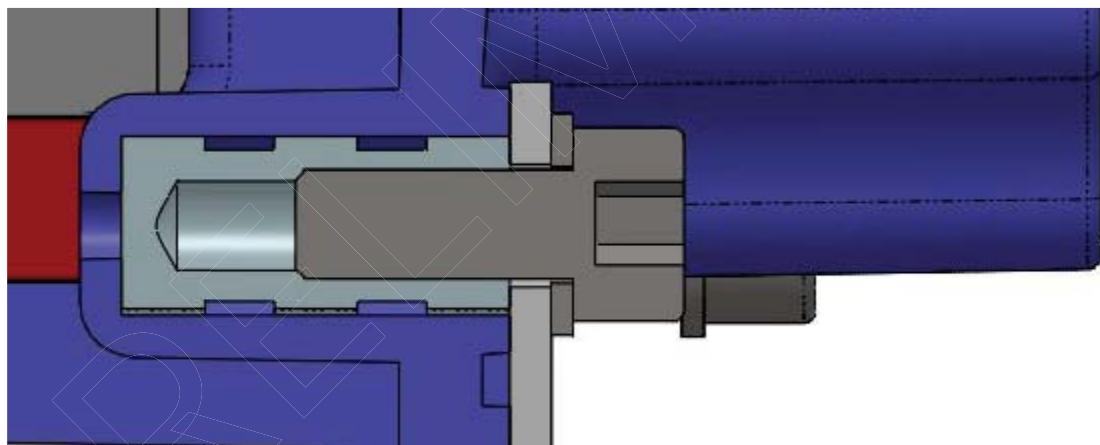
#### CAUTION

It is important that the device footprint surface on the kiosk must be flat, stiff and cleared of any holes and burrs to prevent from dust and water penetration in the kiosk. Rubber at the rear of the product guarantees waterproofness between kiosk panel and product. 3D step files are also available upon request.



Thread depth in product (including gasket): from 4 mm to 8.0 mm.

Length of screw = 8mm (+0/-1 mm) + thickness of the equipment front face + Washer thickness.  
Eg: For a front face of 3mm and a Washer of 1mm thickness. The screw length can be 8 mm to 12mm.



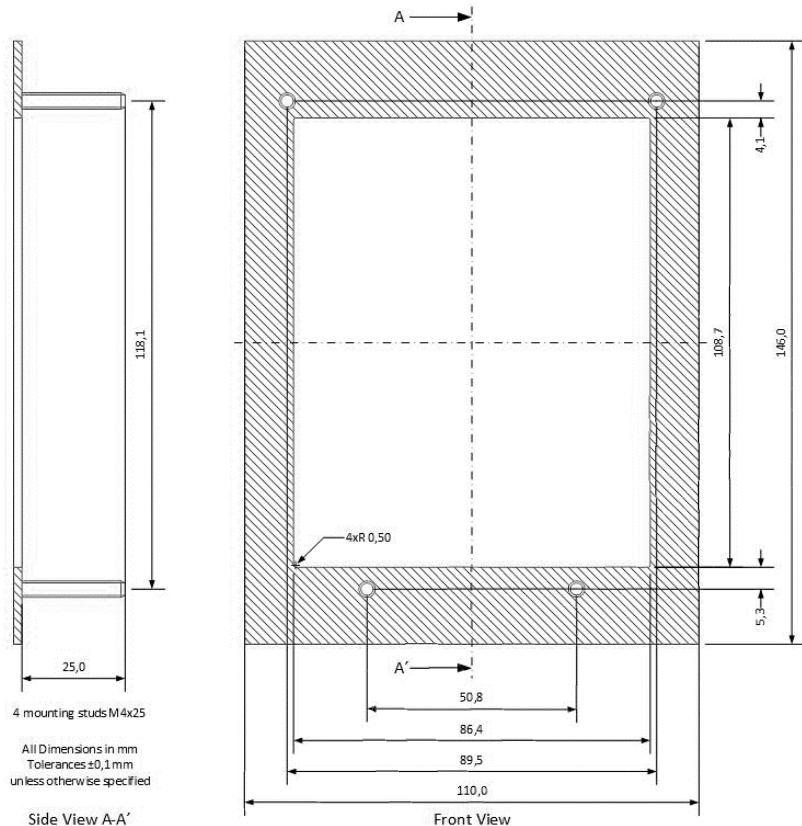
- The minimum depth of the screw threaded part inside the terminal is x mm. If it is less, the terminal is not safely mounted.
- The maximum depth of the screw threaded part inside the terminal is x mm. If it is longer than this, it will penetrate and damage the terminal.

## 3.2 Product mounted on kiosk panel (EVA cut out)

### 3.2.1 Kiosk Preparation for EVA plate

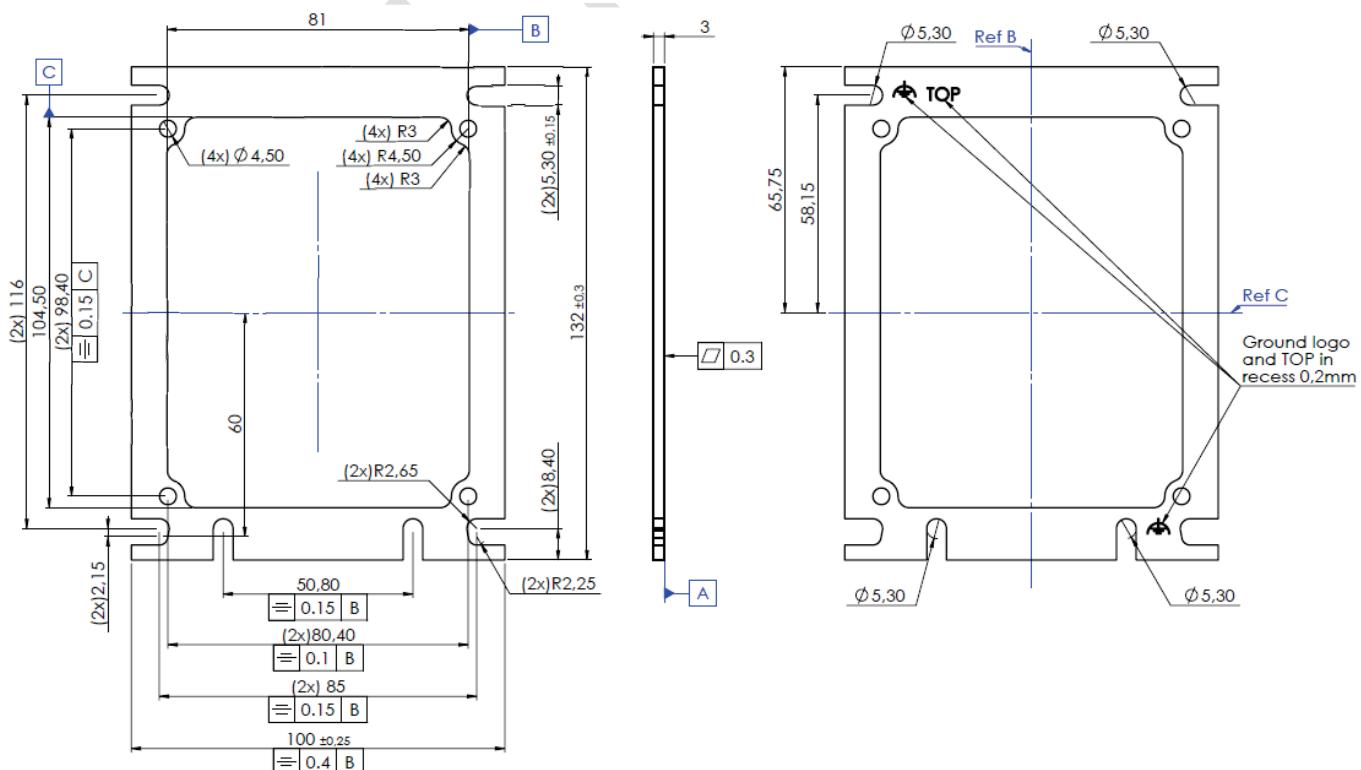
Products can be mounted with an EVA plate on the kiosk panel. It requires a cut out in the kiosk to the dimensions detailed in below diagram below (all dimensions are in millimeters).

Extract from the EVA EPS Standard Version 2.1 (Standard Door Module):



### 3.2.2 EVA Mounting plate

the reference is available in the accessories chapter.



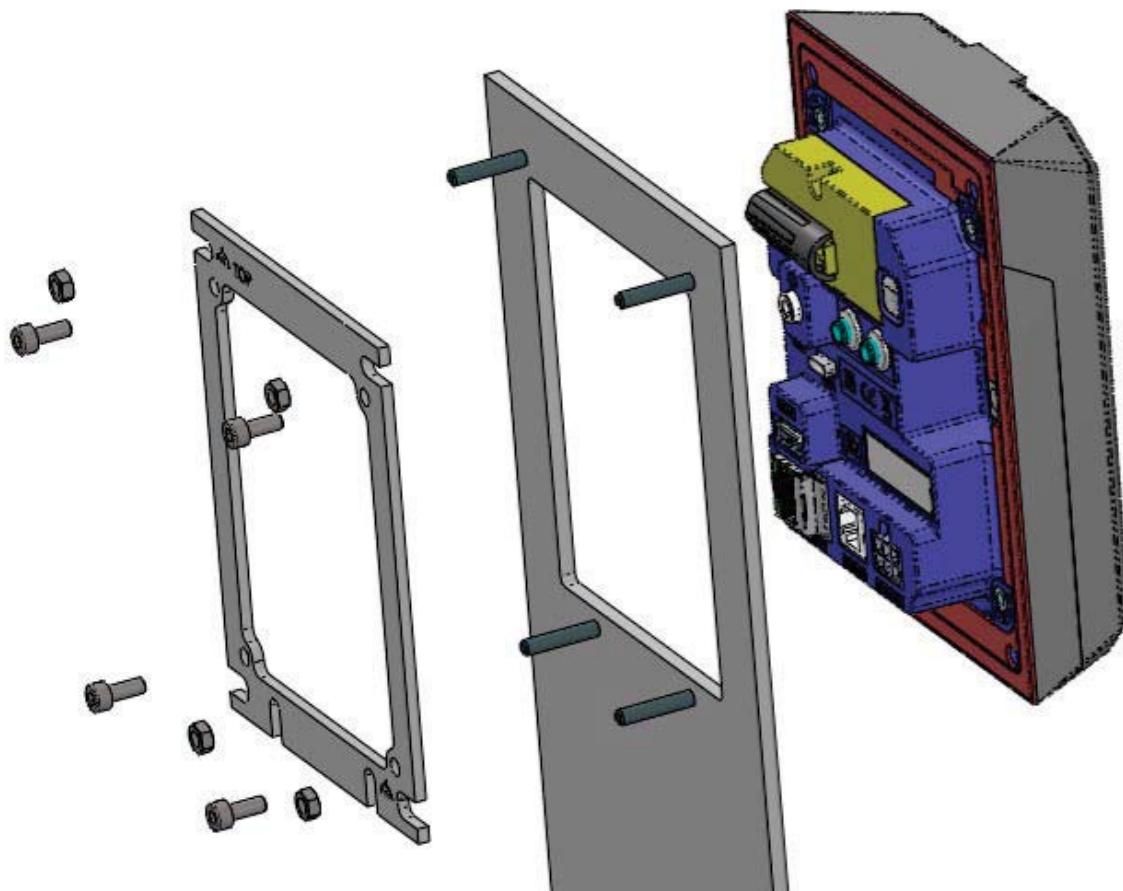
### 3.2.3 installing the Device from outside

Device is installed from outside the kiosk

It requires a cut out in the kiosk to the EVA EPS Standard door module dimensions. EVA Fixing recommended is 4x M4x25 welded studs. Device requires standards hexagonal nuts for integration into a kiosk. Torque value used: 1.2 N.m  $\pm 0.2$ .

Device can be mounted on custom EVA plate. EVA plate is provided by INGENICO. Screw the 4 screw M4 at 1.2 N.m  $\pm 0.2$  torque. It is recommended to use washers.

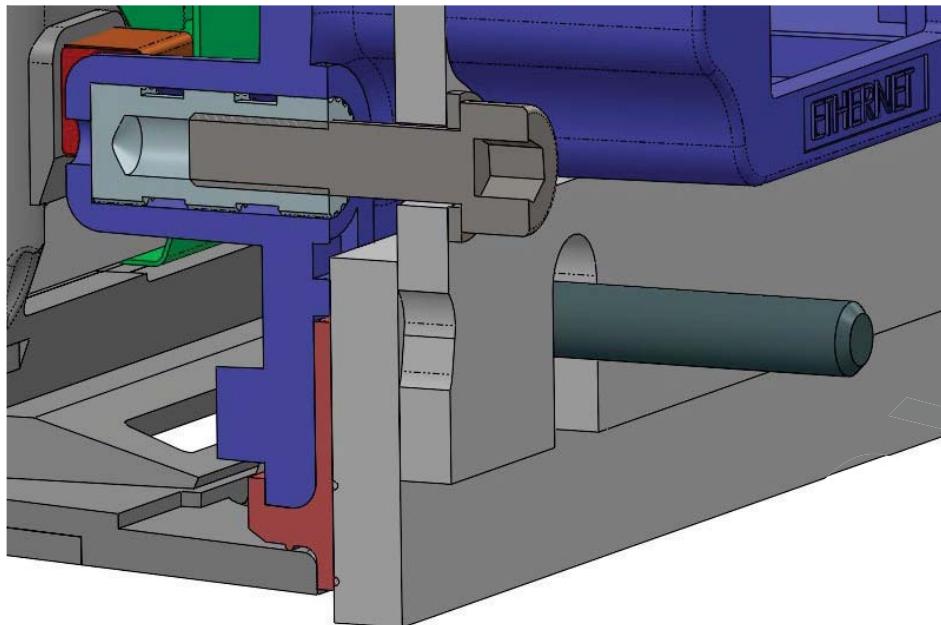
In high-vibration environments (e.g., streetcar or train platforms, side of roads/ highways, next to elevators, etc.), the use of Threadlocker (medium strength) is recommended, to secure the mounting nuts/ screws.



#### CAUTION



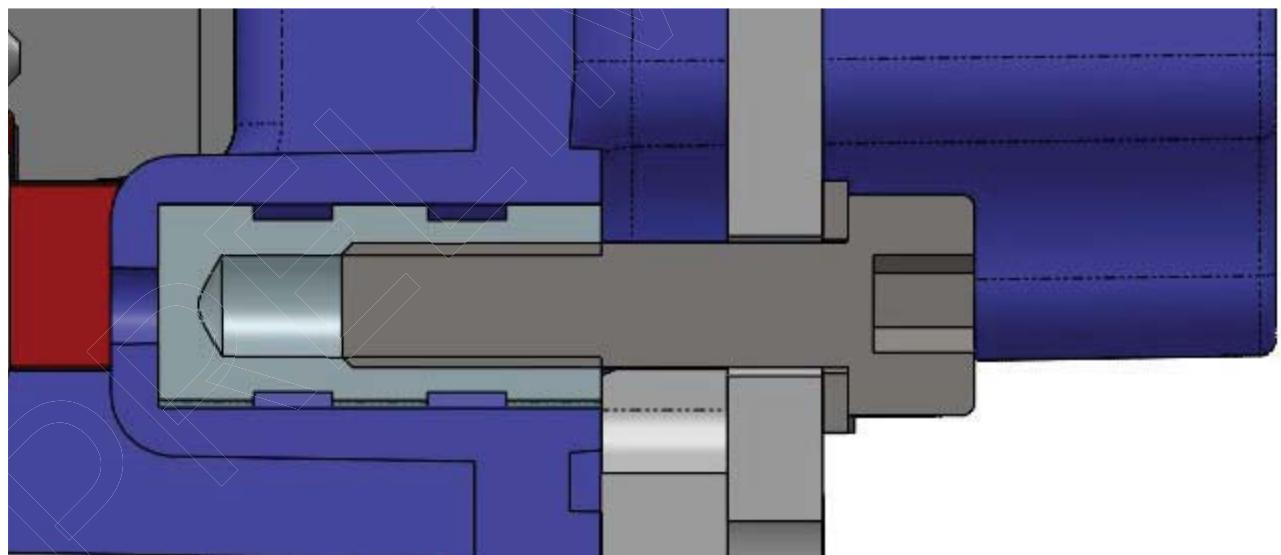
It is important that the device footprint surface on the kiosk must be flat, stiff and cleared of any holes and burrs to prevent from dust and water penetration in the kiosk. Rubber at the rear of the product guarantees waterproofness between kiosk panel and product. 3D step files are also available upon request.

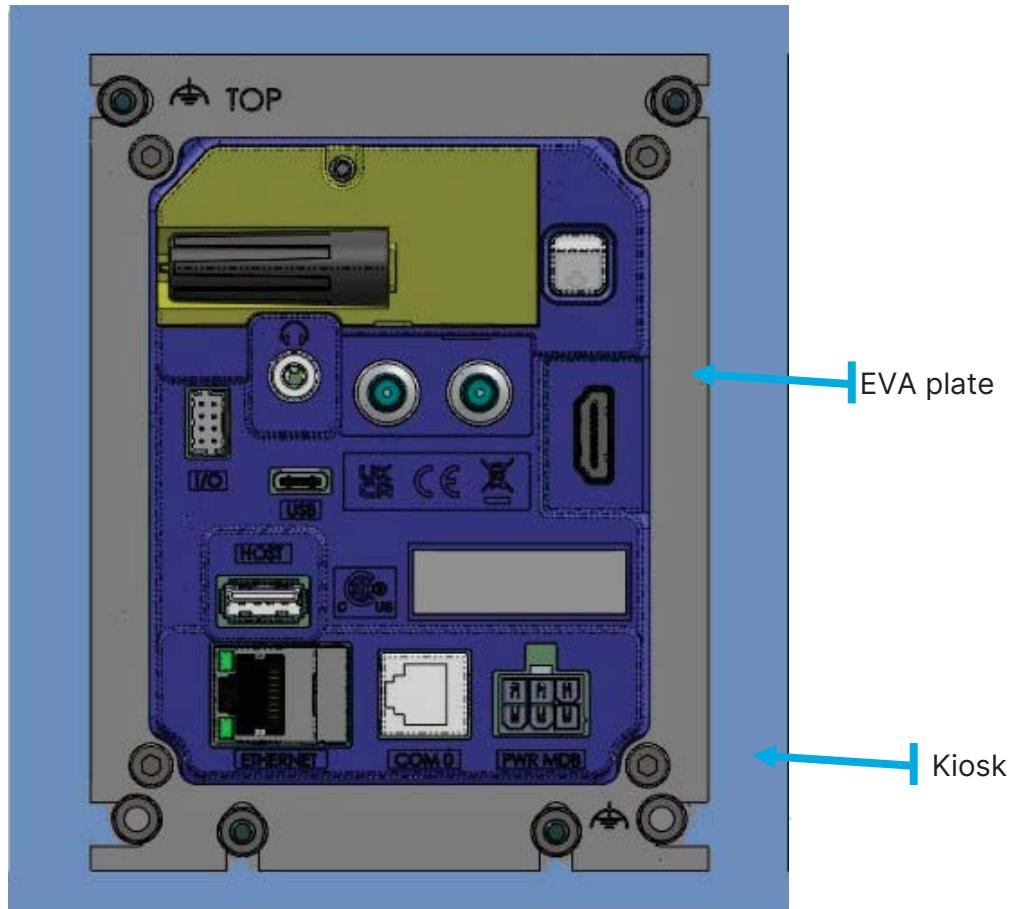


Thread depth in product (including gasket): from 4 mm to 8.0 mm.

Length of screw = 8mm (+0/-1 mm) + thickness of the equipment front face + EVA plate + Washer thickness.

Eg: For a front face of 3mm and a Washer of 1mm". The screw length can be 11mm to 15mm.





### CAUTION

It is required by safety regulation that EVA plate must be permanently connected to GND.

### 3.3 Product gasket

It is necessary to have the gasket correctly assembled.

**Recommended**



**Not recommended**

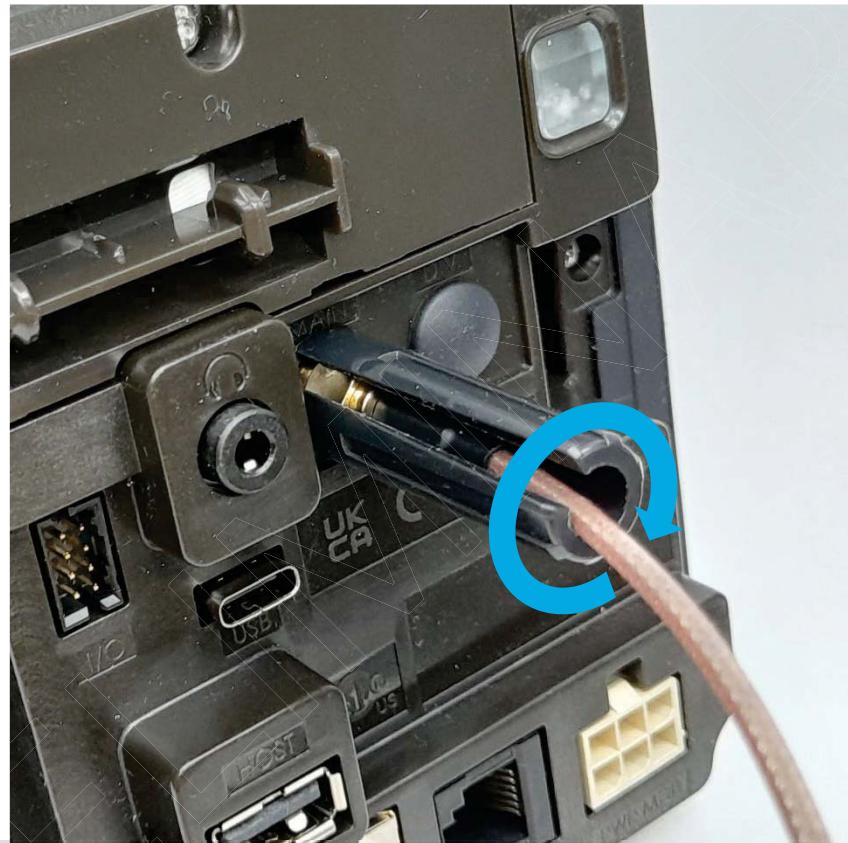


#### CAUTION

It is necessary to have the gasket correctly assembled

### 3.4 Antenna mounting

- Remove the antenna tool from the holder.
- Screw the antenna on the relevant connector.
- put back the antenna tool on the holder.



#### CAUTION

For Compliancy with FCC, ISED and Regulations  
4G Cellular antennas gain, including cable loss, must not exceed the limit of 2.15dBi.  
Antenna should not be exposed to lightning.

Example:

GCWPUKS-SMA from RF Solutions (ref RS component 146-3504). GC-654 BGa/MGa from Giga Concept.  
6000450 Antenna Mimo AirCard, from Netgear.

# 4. Main accessorie

## 4.1 Connectivity

The following 4G antenna has been tested and validated by INGENICO's R&D department. It can be ordered by following the link provided below. Ingenico has no plan to make stock or to resell it.

Note that there are many ruggedized antennas for indoor kiosks on the market, which should work correctly with Ingenico's devices despite the absence of formal validation by Ingenico.

P/N	Description	Specifications		
n/a	ANT-DK-LTE1MD-GAPL52M	 <p>External 4G antenna for steel kiosks (2m cable) Datasheet and order here: <a href="https://www.digikey.fr/product-detail/fr/adam-tech/ANT-DK-LTE1MD-GAPL52M/2057-ANT-DK-LTE1MD-GAPL52M-ND/9831074">https://www.digikey.fr/product-detail/fr/adam-tech/ANT-DK-LTE1MD-GAPL52M/2057-ANT-DK-LTE1MD-GAPL52M-ND/9831074</a></p>		

## 5. Cleaning instructions

The external front face of the card reader should be carefully cleaned on a regular basis. The goal is to keep the card entrance free of dirt and solvents.

First, unplug all the wires from the Device during this operation. Good rules for proper cleaning of the Device are:

- Use a soft cloth that is very slightly soaked with soapy water to clean the outside of the Device.
- Do not clean the electrical connections.
- Do not use in any case, solvents, detergents, or abrasive products: Those materials might damage the plastics or electrical contacts.
- Also avoid the use of pressurized liquids.

# 6. Standards

## 6.1 Electrical specification

### 6.1.1 AXIUM SX7000/5000 Standard

- Max power supply:  
**/ 9-45Vdc – 2A**
- Back up battery life  
**/ 1 storage year + 7 years in field at 45 days/year storage rate (25°C) – (tbc)**

### 6.1.2 Power consumption values

Please find in table below the consumption's measurements done on AXIUM SX7000/5000 devices.

SW Configuration: (tbc).

HW Configuration: External Power Supply 12V/2A.

Device Version	SX7000	SX5000
Display Backlight 100%	(tbc) mA avg /12V	(tbc) mA avg /12V
Display Backlight 50%	(tbc) mA avg /12V	(tbc) mA avg /12V
Light Sleep mode (StandbyOnPower)	(tbc) mA avg /12V	(tbc) mA avg /12V
Deep Sleep mode (OFFonPower)	(tbc) uA avg /12V	(tbc) uA avg /12V

### Recommendations

- Reduce Backlight levels in a bright lighting environment.
- Use sleep mode available on Device to save energy: wake up is instantaneous from below items:
  - / Wake-up signal triggered on COM connector
  - / Proximity detected
  - / Press on Touchscreen detected
  - / SCR Card insertion

## 6.2 Temperature and humidity

- Operating & Storage conditions:

- Operation conditions:

- Relative humidity: 85% non-condensing at 40°C.
    - Operational temperature range: -25°C to +70°C.

- Storage conditions:

- 85% non-condensing at 55°C.
    - External temperature range: -30°C to +70 °C.

## 6.3 Environmental specification

- Front face shock resistance: IK09 (tbc)

- Vibrations resistance: (tbc)

- NF EN 60068-2-6 and the below conditions (10 tests sequences per axis):

- From 5Hz to 9Hz with 3,3mm amplitude
    - From 9Hz to 200Hz with 10m/s<sup>2</sup> acceleration
    - from 200Hz to 500Hz with 15m/s<sup>2</sup> acceleration
    - Endurance 30mn on each resonance frequency

- Bumps resistance: (tbc)

- NF EN 60068-2-29. E

- Each direction, 500 drops 1/2 sinus 25g - 6ms

- Natural events:

- Water and dust resistant: (tbc) (front face only).

- Degradation specification:

- Vandal resistant.

- Certified anti-tamper and attack resistant.

- Drop:

- 0.8m on concrete (tbc)

## 6.4 CE marking

CE standard compliance marking certifies that the product AXIUM SX7000/5000 Conforms to the following harmonized standards:

- RED Directive 2014/53/EU. The Radio Equipment Directive

- RoHS Directive 2011/65/EU with amendment (EU) 2015/863

## 6.5 ISED Statements

"This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement. This device complies with ISED radiation exposure limits set forth for general population. This device must not be collocated or operating in conjunction with any other antenna or transmitter. Ce présent équipement est conforme aux limites d'exigences d'exposition RF. Cet équipement ne doit pas être installé à proximité ou être utilisé en conjonction avec un autre transmetteur ou antenne.

The radiated output power of this terminal meets the limits of ISED Canada radio frequency exposure limits. This terminal should be operated with a minimum separation distance of 25 cm between the equipment and a person's body.

La puissance de sortie rayonnée de cet terminal est conforme aux limites de la ISDE Canada, limites d'exposition aux fréquences radio. Cet terminal doit être utilisé avec une distance minimale de séparation de 25 cm entre l'appareil et le corps d'une personne.

The device for operation in the band 5150–5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems.

L'appareil destiné à fonctionner dans la bande 5 150–5250 MHz est uniquement destiné à une utilisation à l'intérieur afin de réduire le risque d'interférence nuisible aux systèmes mobiles par satellite dans le même canal.

Wi-Fi 5850-5895MHz band for indoor use only

AXIUM SX7000, AXIUM SX5000 have 4 HVIN:

- HVIN: AXIUM SX5000 CL/Eth/WiFi/BT
- HVIN: AXIUM SX7000 CL/Eth/WiFi/BT
- HVIN: AXIUM SX5000 CL/Eth/4G/WiFi/BT
- HVIN: AXIUM SX7000 CL/Eth/4G/WiFi/BT

## 6.6 FCC Statement

FCC standard compliance marking certifies that the product stipulated below:

AXIUM SX7000, AXIUM SX5000

Conforms to the following harmonized standards: part 15 of the FCC rules

This class (B) digital apparatus complies with industry Canada License-exempt RSS standard(s) Information to users: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception which can be determined by turning the equipment off and on, the user is encouraged to try to correct interference by one or more of the following measures:

- / Reorient or relocate the receiving antenna.
- / Increase the separation between the equipment and receiver.
- / Connect the equipment into an outlet on circuit different from that to which the receiver is connected.
- / Consult the dealer or an experienced radio/TV technician for help.

This device complies with FCC radiation exposure limits set forth for general population. This device must be installed to provide a separation distance of at least 25cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

## 6.7 Environment (WEEE, Batteries and Packaging)

This product is labelled in accordance with European Directives 2012/19/EU concerning Waste Electrical and Electronic Equipment (WEEE) and 2006/66/EC concerning Batteries and Accumulators. Those provisions are requiring producers and manufacturers to become liable for take-back, treatment and recycling upon end of life of equipment and batteries.



The associated symbol means that WEEE and waste batteries must not be thrown away but collected separately and recycled.



### Warning about Batteries:

- Disposing of a battery in a fire or in a hot oven, or the mechanical crushing or cutting of a battery, is likely to cause an explosion.
- Keeping a battery in a very high temperature environment can cause an explosion or the leakage of flammable liquid or gas.
- A battery subjected to extremely low air pressure may cause an explosion or the leakage of flammable liquid or gas.

Ingenico ensures that efficient collection and recycling schemes are set-up for WEEE and batteries according to the local regulation of your country. Please contact your retailers for more detailed information about the compliance solution in place for disposing of your old product and used batteries.

Packaging waste must also be collected separately to assure a proper disposal and recycling. Please note that proper recycling of the electrical and electronic equipment and waste batteries will ensure safety of human health and environment.

## 6.8 Approvals and marking



conformity marking for products sold within the European Economic Area (EEA). It states that the product is assessed before being placed on the market and meets EU safety, health and environmental protection requirements.



Indicates that the product has been certified to applicable standards including standards written or administered by the American National Standards Institute (ANSI), Underwriters Laboratories (UL), CSA Group (CSA), NSF International (NSF), and other North American and global Organizations. Indicates that the product operates with a continuous voltage.



This symbol is followed by the ratings (voltage and current for instance).



Warning marking which indicates the Mandatory need to read the instructions.



The Adopted Trademarks HDMI, HDMI High-Definition Multimedia Interface, HDMI trade dress and the HDMI Logos are trademarks or registered trademarks of HDMI Licensing Administrator, Inc. in the United States and other countries.

## Your contact



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AXIUM SX7000 SX5000 – Integration guide  
900055581 R11 000 04/0924

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