

ALBERT 2



User Manual

Albert 2

Payment Terminal

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Delivery subject to availability; technical modifications possible.

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1 Certificates

1.1 CE Mark

The device complies with the requirements of the EU directives 2014/53/EU "Radio Equipment Directive" and 2011/65/EU "RoHS Directive".

Therefore, you will find the CE mark on the device or packaging.

1.1.1 Operational modes

The frequency, mode and the maximum transmitted power in EU are listed below:

The table below will be completed after all approval tests are done.

Frequency/Mode	Transmitted Power
NFC 13,56 MHz	xxx
xxx	xxx
xxx	xxx
xxx	xxx
xxx	xxx

1.1.2 SAR limit

This product complies with EU requirements regarding restriction of exposure of persons to radio-frequency energy (RF) emitted by telecommunication and radio devices as it is designed and manufactured in such a way as not to exceed the exposure limits indicated by the European Union Commission. The permitted SAR limit for the general population is 2.0 W/Kg. This limit guarantees an ample safety margin that protects all persons regardless of age and health condition. The highest SAR level recorded for this model was equal to TBD W/kg.

1.1.3 Environmental restrictions

This Tablet PC should be used only in environments with an ambient temperature between 0°C and 45°C.

1.2 Tested Safety

The payment terminal has the symbol for "RCM" (Regulatory Compliance Mark for Australia).

In addition, the device has received the cULus mark (for USA and Canada) and UL-NOM mark (for Mexico).

The device has received the cUL symbol.

1.3 FCC Class B Declaration

FCC Part 15.19 Warning Statement

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 UNDESIRE OPERATION.

1.4 Safety Notes

The device may only be repaired by authorized qualified personnel. Unauthorized opening of the device and inexpertly carried out repairs may not only seriously jeopardize the safety of the user, but also cancel all warranty and liability agreements.

Any physical penetration causes the device to switch into the “Non-activated” mode, which takes it out of service and requires Security Inspection and “Re-activation” by the vendor or an authorized service provider.

1.5 Important Notes

The payment terminal conforms to the current safety standards for data processing equipment. AEVI does not assume liability or warranty for possible damage resulting from non-compliance with these. Important notes or wrong usage of the device:

- Use only the power supply which was delivered with the device.
- The power cable must be plugged into socket-outlet that is provided with a suitable earth ground.
- The “CASHDR” RJ12 port of the connectivity box is only for the connection with cash drawer device.
- If this device is taken from a cold environment into the operating room, moisture condensation may form. The device must be absolutely dry before being put into service; an acclimatization period of at least two hours must therefore be observed.
- Ensure that no foreign objects (e.g. office clips) find their way into the device, as this may lead to electric shocks or short-circuits.

- Never plug in or unplug data communication lines during thunderstorms.
- Protect devices from vibrations, dust, moisture and heat.
- Keep sufficient distance from other electrical devices such as a security tag canceller (approx. 50 cm) so that no malfunctions of the terminal will occur.
- Never try to open the terminal. In the event of unauthorized opening, all security-related data will be lost, rendering the device unusable. Repairs must be carried out only by the manufacturer.
- Never dip the device into water, throw it into fire or expose it to high humidity. Wipe the device with a soft cloth slightly moistened. Never use detergents. Do not expose the device to temperatures above 45 °C as e.g. it may be behind glass with direct sun radiation and do not expose the device to temperatures below -5 °C.
- Removing or damaging type labels or seals on the device will invalidate your warranty and liability protection.
- During normal use of the card reader (no soiled cards, indoor usage) clean the card reader once a week with an appropriate cleaning card (dry or moistened). During frequent use under difficult conditions (e.g. soiled fleet cards or fuel cards, outdoor usage) clean the card reader every day with an appropriate cleaning card (dry or moistened).
- There is no warranty for using non-released products (e.g. external charging adapters, power supply units, batteries, cables).
- The battery must be charged at least three hours before operation. Otherwise an error may occur.
- At the end of its operational lifetime, dispose of the terminal and battery in an environment-friendly manner.

2 Introduction

The Albert 2 payment terminal is a wireless, high-performance, latest-generation payment terminal (EFT-POS). In addition to processing customer payments, it offers the benefits of a classic tablet computer. It supports communication via LAN, WLAN, Bluetooth, 2G, 3G and 4G

A Magnetic Stripe- (MSR), Smart Card- (SCR), as well as Contactless Reader (NFC) are available.

The fast Quad-core ARM Cortex A53 processor ensures high performance. The payment terminal also offers a comfortable touch interface, giving an outstanding customer experience.

The terminal is not just a medium for secure payments - it is also an exceptional multi-application platform.

A network of VAA (Value Add Application) developers provides a wide variety of apps that can be installed on the terminal, making it a valuable tool for many areas of your business.

The payment terminal stands out with its modern, compact and ergonomic design.

2.1 Care of the Payment Terminal

Clean your device at regular intervals with a dry, lint-free cloth. If that does not suffice please use a suitable plastic-surface cleaner.

Make sure that the power plug is **disconnected** and that no liquid finds its way into the device.

2.2 Recycling the Payment Terminal

Environmental protection does not begin when the time has come to dispose of the system; it begins with the manufacturer. This product was designed according to our internal standard "Environmental conscious product design and development". The device is manufactured without the use of CFC and CHC and is produced mainly from reusable components and materials.

Please do not stick labels onto plastic case parts: this helps us to re-use components and material.

You can protect our environment by only switching on your equipment when it is actually needed.

If possible, avoid even the stand-by-mode, as this wastes energy too.

At this time there are still some parts that are not reusable. AEVI International GmbH guarantees the environmentally safe disposal of these parts in a Recycling Centre, which is certified pursuant to ISO 9001 and ISO 14001.

Please contact your competent branch or the Recycling Centre Paderborn (for European countries) for information on how to return and reuse devices and disposable materials using the mail address below.

Email: info@aevi.com

or on the internet.

We look forward to your mail.

2.3 Warranty

AEVI guarantees generally a warranty engagement of 12 months from the date of delivery. This warranty engagement covers all damage which occurs during normal use of the product.

Damage because of

- improper or insufficient maintenance,
- improper use of the product or unauthorized modifications of the product,
- inadequate location or surroundings

will not be covered by the warranty.

For further information on this stipulation, consult your contract.

Product parts which are subject to wear and tear are not included in the warranty engagement. For detailed warranty arrangements please consult your contract documents.

3 Product Overview

3.1 General Description

Your Albert 2 is a multi-functional touch-based device, developed by AEVI. It has all the functions of a regular payments terminal in one, easy to use tablet-based device. Albert 2 is easily portable and can also be used in a fixed location.

The Albert 2 runs on a standard version of the Google Android™ operating system.

The Operating System has been adapted and hardened for security reasons and to limit the device to ensure that it is only used as the basis of a POS/Payment Platform or a business tool in general. This hardening also ensures that the Payment Platform is secure and that all data from customers cannot be read, replicated or used in any other way.

4 Before First Time Use

4.1 Checking the Delivery

Unpack the components and verify that what has been delivered is identical to the information on the delivery ticket.

The carton contains the basic unit and an accessories kit. Some specially ordered configuration may be installed.

Caution:

Should you notice any transport damage, tamper label damage, discrepancies between package contents and delivery ticket or functional problems, please inform your contracting party immediately.

Please indicate the number of your delivery ticket and the position of the delivery ticket on the devices and the serial numbers of the respective devices.

The **serial number** can be found on the label illustrated below, which is located at the bottom side of the housing.

Transport the device only in its original packaging (to protect it against impact and shock).

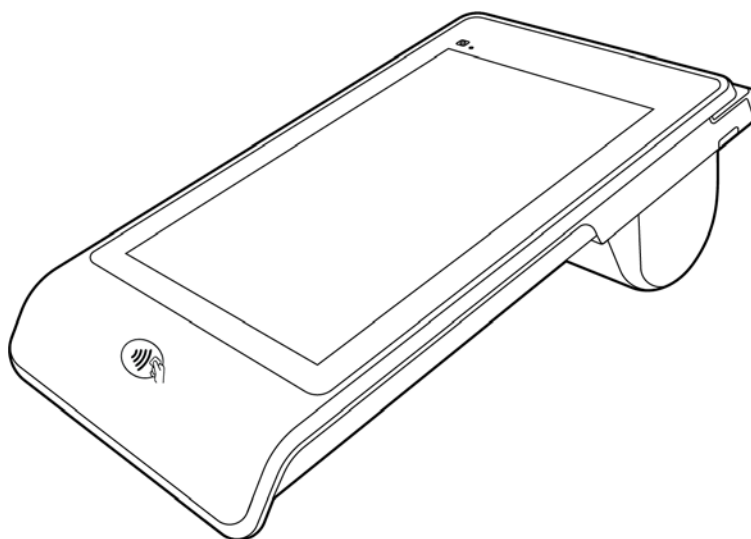
4.2 Delivery Items

The following options are available according to your configuration.

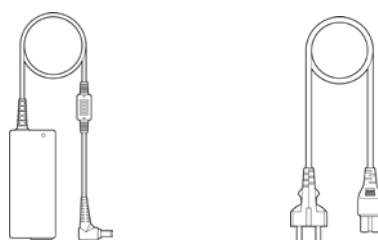
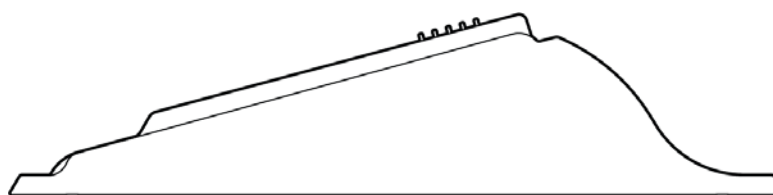
4.3 Countertop Installation with Printer Module

If you have ordered the printer module, the delivery should include the following components:

Payment terminal with a printer module



Charging cradle



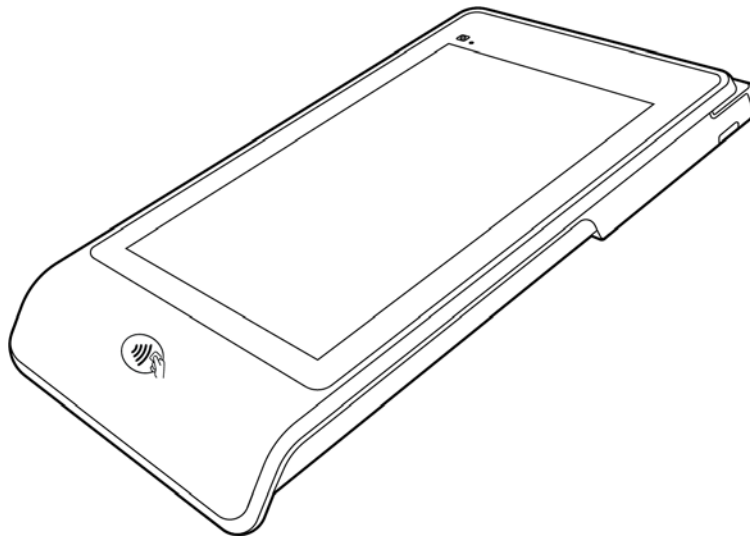
Power supply with country-specific AC cable

This diagram is schematic only and may differ from the actual cable.

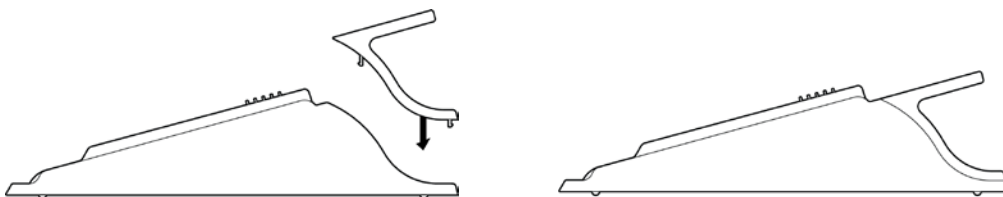
4.4 Countertop Installation as simple Tablet

If you have ordered the simple tablet module, the delivery should include the following components:

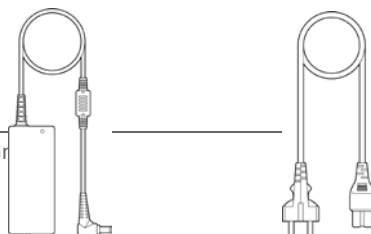
Payment terminal as simple tablet



Charging cradle with supporter



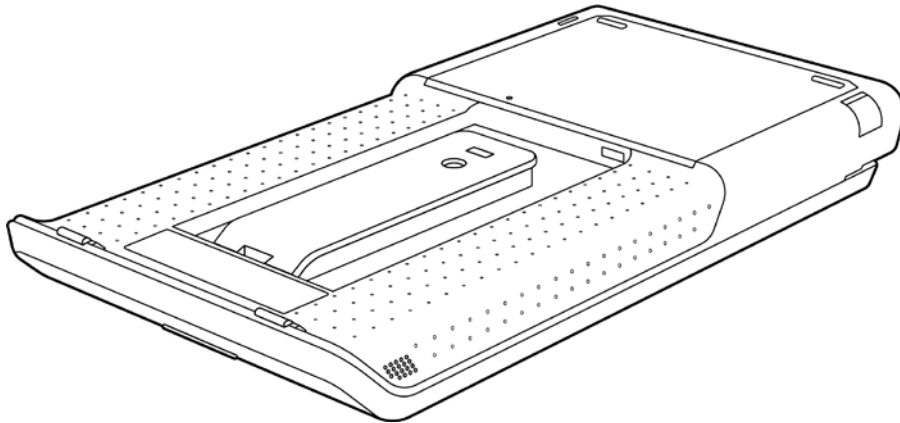
Power Supply with country-specific AC cable



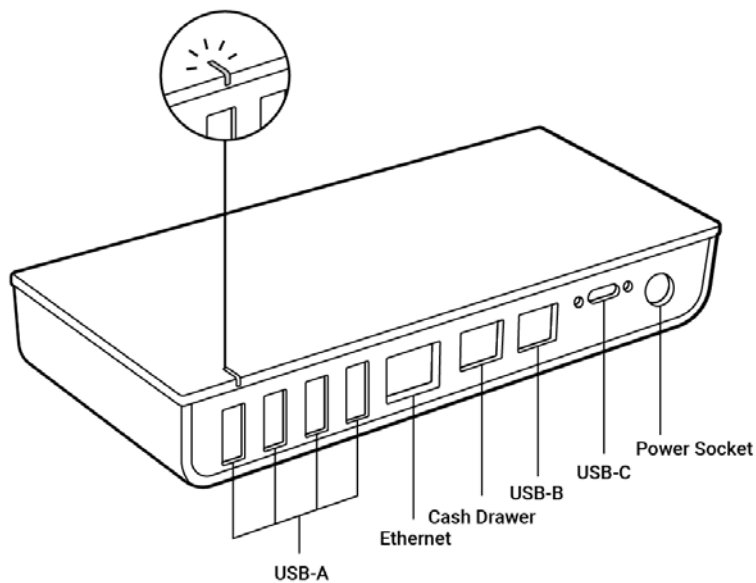
4.5 Pole Mount Installation with connectivity box

If you have ordered the pole-mount module, the delivery should include the following components:

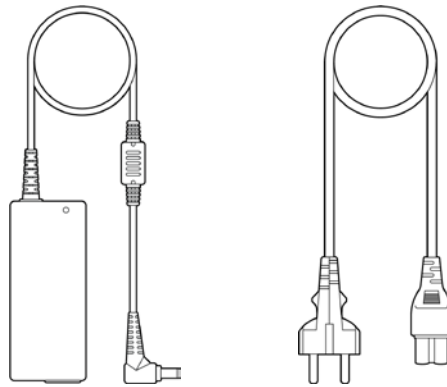
Payment terminal with as simple Tablet



Connectivity box



Power Supply with country specific AC cable



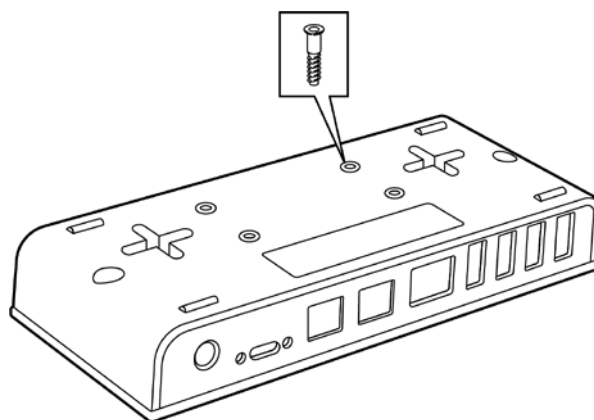
Please note that each of the above-mentioned modules is an integral part of the Albert 2. Attaching and detaching these modules (e.g. the printer module) must only be done in case of maintenance and when the device is powered off.

Attaching and detaching these modules when the device is powered on can lead to malfunctions and may damage the unit.

4.5.1 Mounting of the connectivity box

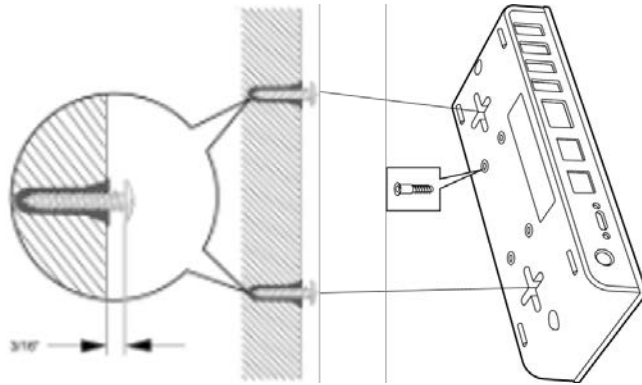
The connectivity box has mounting holes, which are compliant with the VESA standard (50mm x 20mm).

4 Mounting screws of 4mm diameter, 0.7 pitch and 6mm length are required.



The connectivity box can also be mounted directly onto a surface (e.g. a wall).

Consider the wall material when choosing the screws and anchors.



Specification for screws:

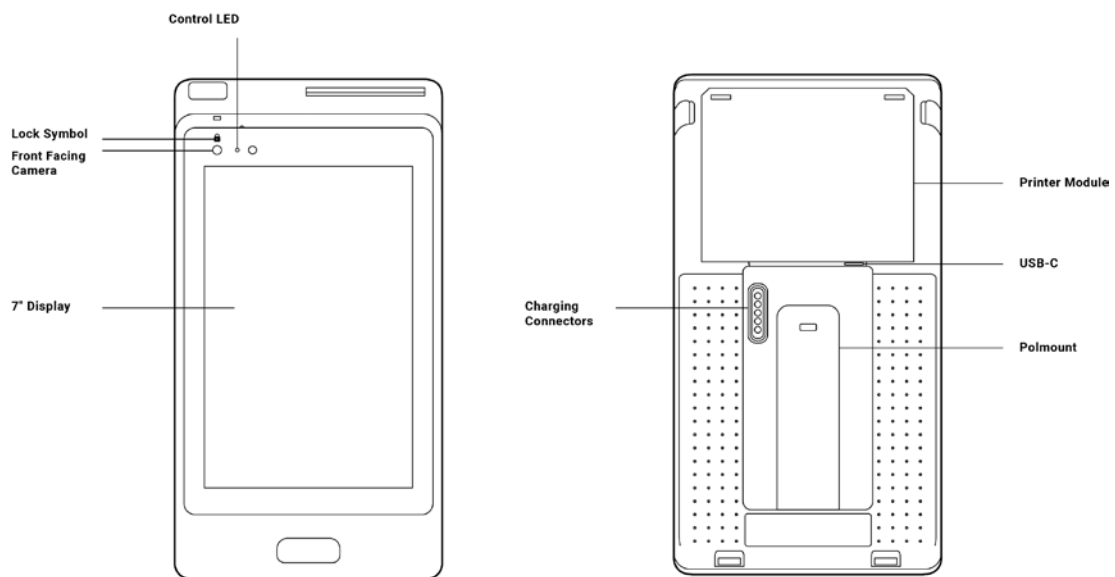
Ø Head: min. 6.0 mm; max. 8.0 mm

Head heights: max. 4.0 mm

Do not install the connectivity box at mounting at heights > 2 m.

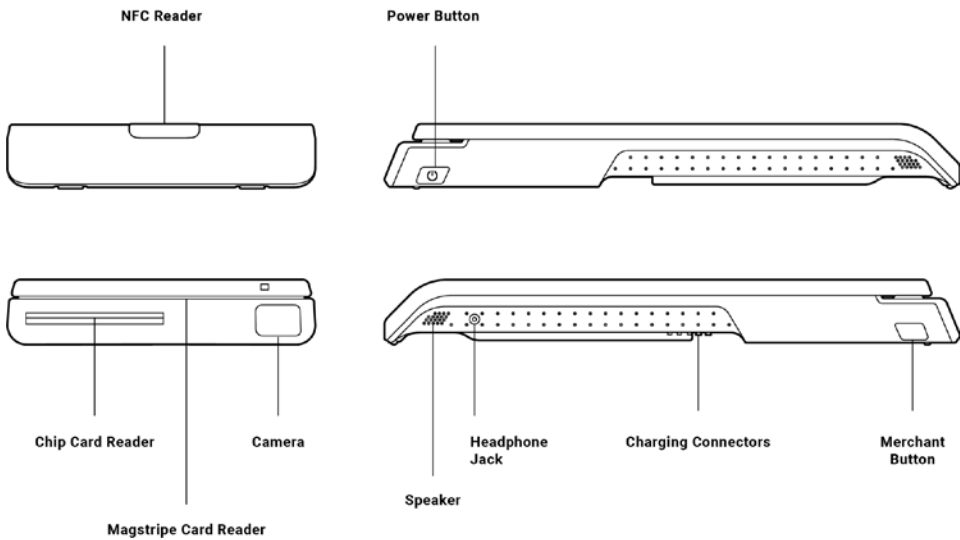
5 Main Module

5.1 Front / Rear Side



- In some apps, the merchant button opens a merchant context menu, which offers options that are available from a particular app screen (refer to the relevant application documentation to see if, and how, an application uses it).
- For advice on the ON/OFF button, refer to the Section *Power Up* and *Power Down*.

5.2 Side View



6 Choosing a Location

6.1 Considerations

The payment terminal was developed for installation indoors.

- Set up the device where it will not be exposed to extreme environmental conditions. Protect the device from vibrations, dust, moisture, heat and strong magnetic fields.
- Select a location for comfortable use.
- Keep the device away from direct sunlight.
- Do not use the terminal outside

Caution:

The device is not waterproof and may be damaged when water enters the device.

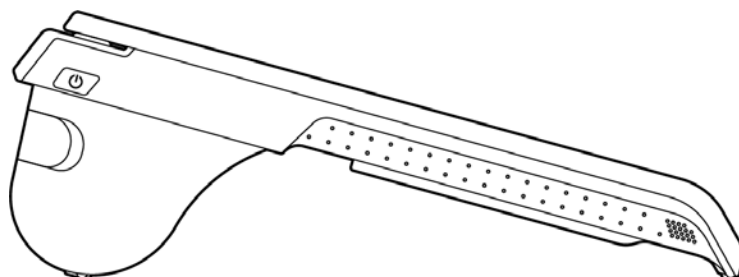
Do not use the terminal outdoors. This may invalidate the warranty.

6.2 PIN Security

Please refer to the Albert 2 Security Policy for advice on PIN confidentiality and the one-page printed notice delivered with the terminal.

7 Power Up and Power Down

7.1 Summary



The device has three main states:

State	Description
ON	Device is powered up and the screen is on.
OFF	Device has been switched off (it could be re-charging at the same time).
SUSPEND	Device is powered up but the screen is off. Depending on how the device is configured, the device could be fully suspend (screen off, CPU idle) or only partially (screen off, CPU on); and the device may, or may not, be locked. When fully suspended, the battery drains more slowly.

When the device is ON:

- Switch it OFF by pressing the power button for a second and answering OK at the on-screen prompt that appears.
- Alternatively, you can switch it OFF by holding the power button for approximately 6 to 10 seconds. This is a forced power-down and you should only do this if the method described above is not possible.
- After a period of inactivity, the Albert 2 may put itself to SUSPEND (partially or fully, depending on the device configuration).
- You can put the device to SUSPEND yourself by pressing the power button once (<1s).
- If you put the device on the charging cradle the battery icon on the system bar indicates that charging is in progress. Also the status LEDs in front of the charging cradle are lighting.

- If you remove the device from the charging cradle the “battery charging” icon on the system bar changes to the icon showing battery life. In addition the screen is automatically switched on as soon as the device is being removed.
- If the battery charge goes down to 1-2%, the Albert 2 automatically switches itself off.
- If the battery charge is below 10%, the Albert 2 plays a sound and a warning message appears on the screen that indicates Albert 2 has to be put back on the cradle.

When the device is OFF:

- If you put Albert 2 onto the cradle, the LED in front of the cradle goes ON and the device starts charging (but remains OFF)
- If you disconnect it from cradle, the LED goes OFF and the device stops charging (and remains OFF).
- You can switch the Albert 2 ON by pressing and holding down the power button for about 4 seconds, until the white camera LED and the red tamper LED is flickering for one second.

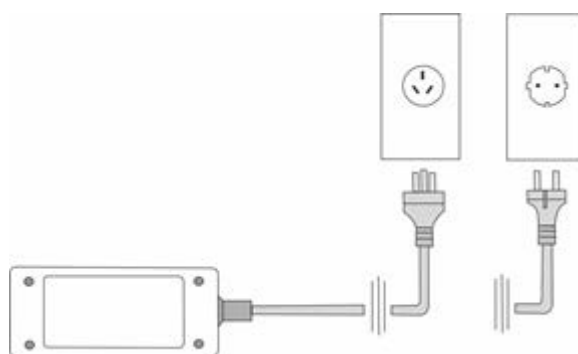
When the device is SUSPENDED:

- If you put it onto the cradle the “battery charging” icon is displayed on the system bar and the charging cradle LED is shining.
- If you disconnect it from the cradle charging stops and it wakes up. It might prompt you for a password depending on configuration.
- Wake it up by pressing the power button once. You might be prompted to provide a password (after which the device shows the screen that was being displayed prior to its going to SUSPEND)

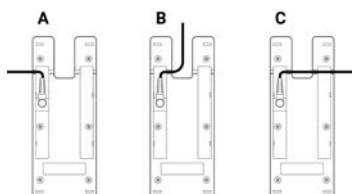
7.2 First Time Power Up

Before starting the system, charge the battery pack for at least three hours.

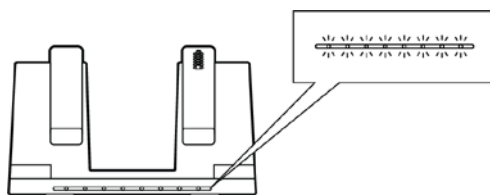
- Insert the DC jack of the power pack into the payment



- Plug the country specific AC power cable into the power pack and the other end into a wall outlet.
- Plug the other end of the cable into the cradle



- When the cradle is connected, put the Albert 2 onto the cradle. After a few seconds, the LED turns on and the loading process starts.



7.3 Initial configuration

All values have to be set up manually by the user (merchant) or technician. The terminal configuration requires set up of one or more of the following:

- Wi-Fi and/or 4G connections (a connection is always required)
- If required by your configuration, set up any other values, e.g. Terminal Id or Merchant Id
- If required by your configuration, set up of one or more passwords

It might be necessary first to insert the SIM (follow the instructions of your mobile network operator).

Follow the instructions of your payment service provider on any other first time set up activities that are required. These could include first-time logging in to the acquirer's remote systems, as advised by the payment service provider.

7.4 Normal Power-up

After the first time power up, subsequent power-ups will enable the device to complete transactions immediately. You don't need to complete any other configurations, unless the terminal requires uninstallation or reinstallation.

The procedure for a power up is as follows:

- Press and hold down the power button for about 4 seconds until the white camera LED and the red tamper LED is flickering shortly. If the device was charging while OFF, the screen shows a battery symbol that the device is charging.
- Then a AEVI logo appears on the screen

- After some time, the AEVI logo is replaced by an acquirer or customer-specific logo.

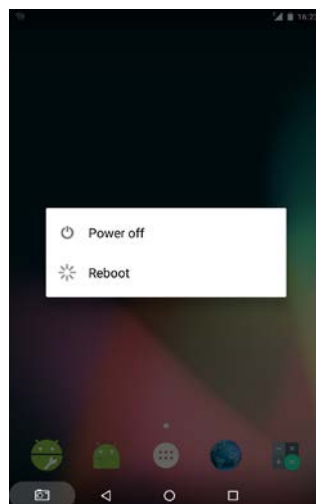
7.5 Power down

There are three forms of powering down the device: correct procedure, forced and automatic.

7.5.1 Correct Procedure

Push and hold the power button for a second.

For the first second, there is no on-screen feedback. After a second, a confirmation prompt appears on screen:



If it is necessary to power down Albert 2, we encourage the use of this method in order to prevent data loss.

7.5.2 Forced Power Down

Push and hold the power button for approximately 6 – 10 seconds to force the device to turn off. The screen goes blank as the device shuts down from the ON state to the OFF state.

7.5.3 Automatic

Albert 2 automatically begins to power down once the battery has dropped to 1%. All current activities are stopped so that the battery does not completely run out.

7.5.4 Reboot

To reboot the device the same procedure as forced power down has to be executed. In the dialog select then the reboot option.

Rebooting can be necessary in the event of a device 'crash'. Rebooting of the device may cause loss of data.

8 Communication Settings

The Albert 2 terminal requires a connection to the acquirer's host systems in order to perform transactions and to download updates of software and changed configuration settings. Communication can be Wi-Fi or mobile network (4G) or by LAN (Ethernet) via connectivity box only.

8.1 LAN

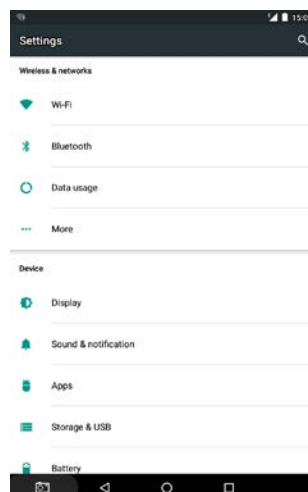
A LAN connection can be established only if the device is using the connectivity box. This module is intended for using the Albert 2 in a fixed location. The module is primarily intended for permanent locations.

8.2 Wi-Fi

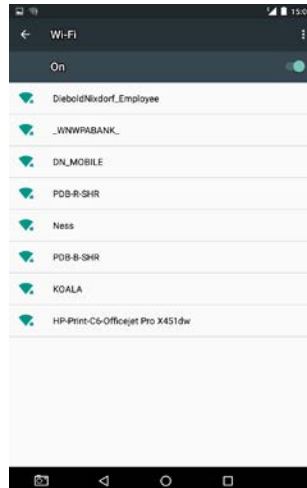
The Wi-Fi settings determine whether the payment terminal uses local networks for its Internet connection.

If the payment terminal is connected to a Wi-Fi network, a symbol in the status bar of the display shows the current signal strength. Several bars indicate a stable connection.

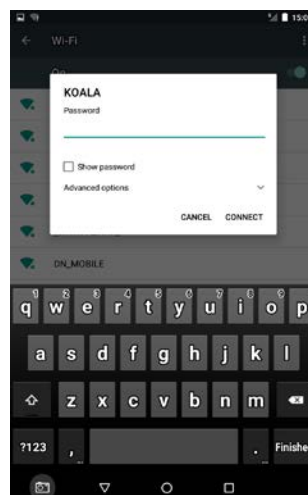
Only secure WLAN/Wi-Fi networks (e.g. WPA/WPA2) can be used for connections. You can activate a Wi-Fi connection by switching on **Settings -> Wi-Fi**, for example:



Select a Wi-Fi connection from the pop-up menu:



Enter the password and connect Wi-Fi:

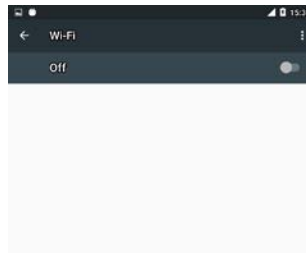


Status

The status bar indicates whether a Wi-Fi connection is activated:



To deactivate, switch off the Wi-Fi connection:



8.3 Mobile Network

4G/LTE is the mobile standard "Universal Mobile Telecommunications System (UMTS)" fourth-generation (4G) with a significantly higher transmission rate than the transmission rate of the second Generation (2G) and third Generation (3G).

4G/LTE is only available when a proper SIM Card is inserted and an Albert 2 with 4G/LTE is chosen. 4G/LTE connection is commonly automatic but might require user interaction as prompted.

Albert 2 supports only mobile data connections (not voice connections).

9 Device Settings

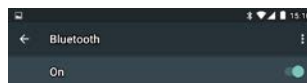
You can access the standard OS settings via the common OS settings screens. Not all standard device settings are available, however, for security reasons.

Please refer to standard Android documentation for a full description of Android settings: this section describes some in particular that you may wish to adjust on Albert 2.

9.1 Bluetooth

Keep your Albert 2 within sight of the device you want to pair it with.

You can activate a Bluetooth connection by switching on **Settings -> Bluetooth**, for example:



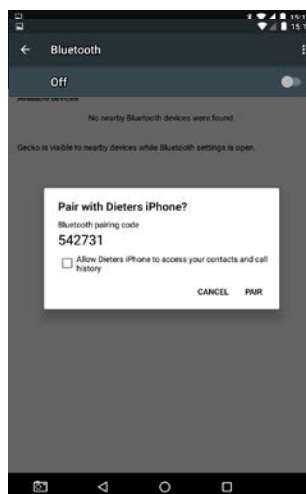
Select the device.

Refer also to the user documentation of the other device in the pairing.

If the pairing request is confirmed on the corresponding Bluetooth device, the device is added to the list.

Uncoupling

Terminate the connection by pressing the Bluetooth icon and setting the connection to OFF.



The device does not support the Hand Set Profile (HSP) as the device is not intended for voice connection.

9.2 Brightness Settings

To adjust the brightness of the display:

Open **Settings** -> **Display** -> **Brightness** and move the slider.

If the Adaptive brightness option is enabled, the payment terminal uses the integrated light sensor for the ambient light to adapt the screen brightness to the environment.



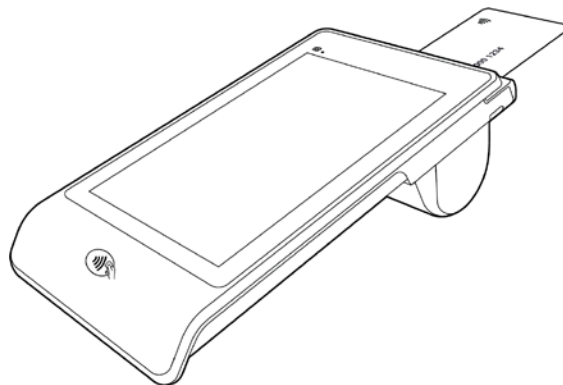
10 Operating the Terminal

10.1 Smart Card Reader

The smart card transaction procedure may vary from one application to another. Verify the procedure with your application provider before performing a smart card transaction.

10.1.1 Performing a Smart Card

- Position a smart card with the contacts facing upward.
- Insert the smart card into the smart card reader slot in a smooth, continuous motion until it seats firmly.
- Remove the card only when the application indicates the transaction is complete: premature card removal will invalidate the transaction

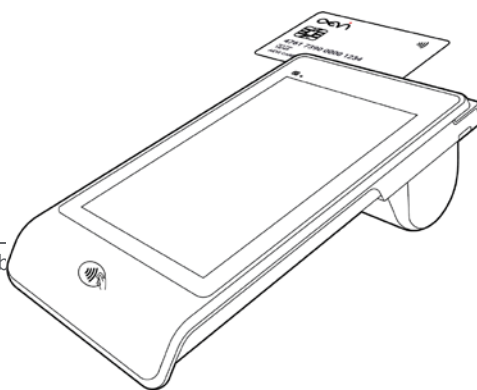


10.2 Magnetic Stripe Reader

Swipe cards should only be inserted in the specially designed slot of the reading device.

10.2.1 Performing a Swipe Card

- Position a swipe card in the card reader with the magnetic stripe facing downward.
- Run the swipe card through the slit of the swipe card reader in a quick and steady movement. Card reading is possible in both directions.



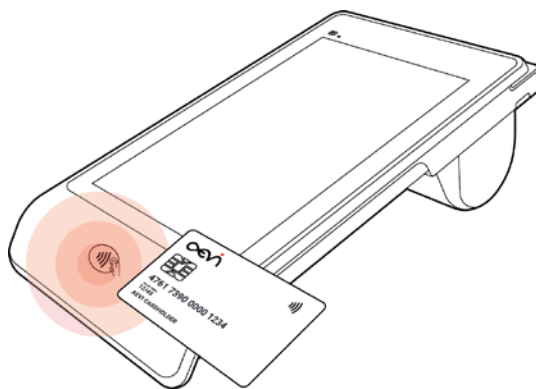
10.3 NFC Reader

The integrated NFC reader can handle payment card transactions in accordance with the EMV specifications. The payment schemes that are supported depend on the contract with your payment service provider/merchant acquirer.

Other NFC cards can be used for non-payment applications, as long as they are compliant with ISO 14443 type A/B and supported by your application.

10.3.1 Performing a Contactless Card

For data transfer, place the card a few centimetre above the NFC landing zone below the display.



10.4 System Bar

The terminal shows a system bar at the top of the screen. It is very similar in appearance and functionality to the standard system bar. It conveys the following types of information:

- Communications type e.g. Wi-Fi, 4G
- Communications strength
- Notifications
- Time
- Background activity indicator
- Battery charge remaining
- Battery/power usage indicator

10.5 Receipt printing

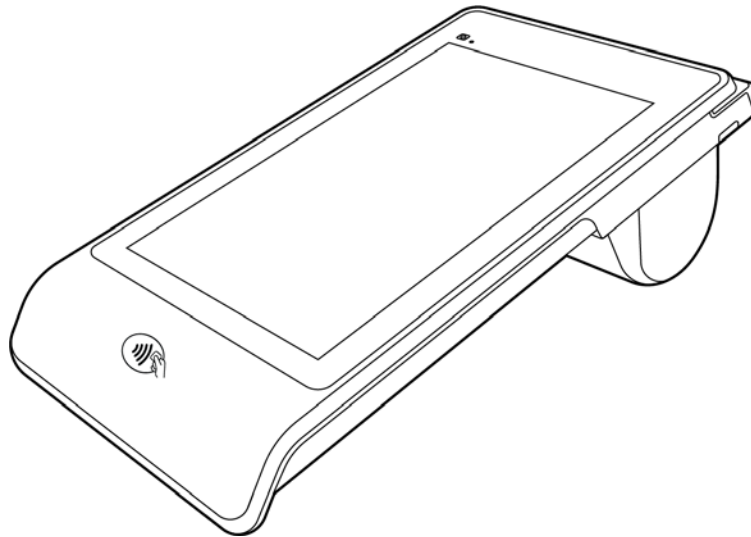
Your Albert 2 supports generating receipts in several ways (actual usage depends on your Payment Application's implementation – refer to your acquirer's documentation):

- On-Screen
- Printed
- E-mail

11 User Maintenance

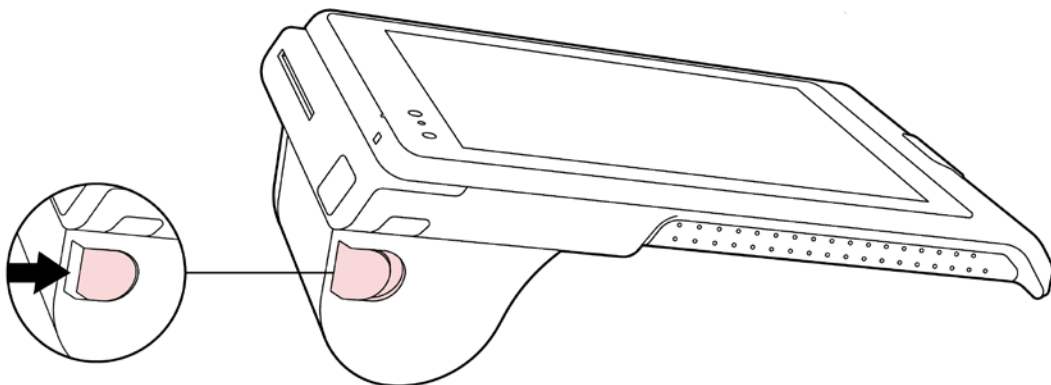
11.1 Printer Module (optional)

A quick, silent thermal printer is integrated in the printer module. Before you use it, insert a receipt roll with thermosensitive paper in the printer.

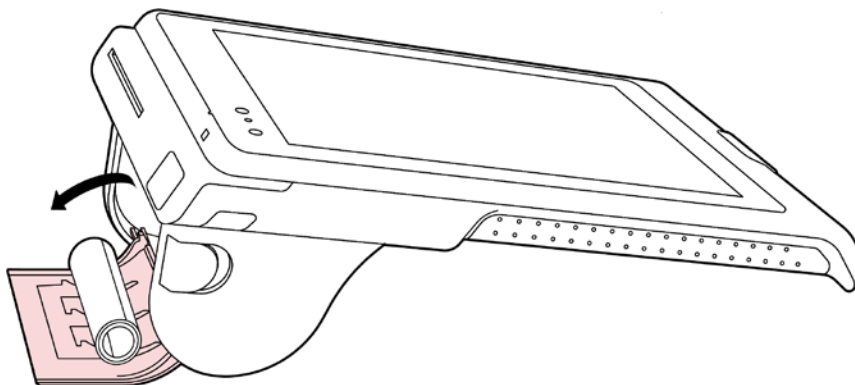


11.1.1 Changing the receipt roll

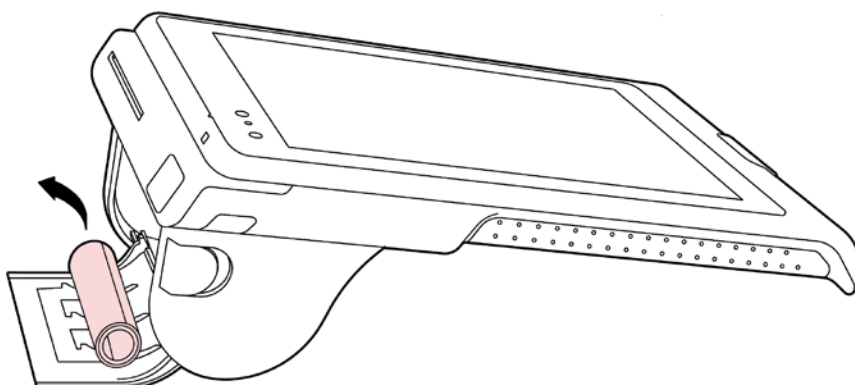
To open the receipt roll cover you, slide the button at the side of the terminal forward; see arrow.



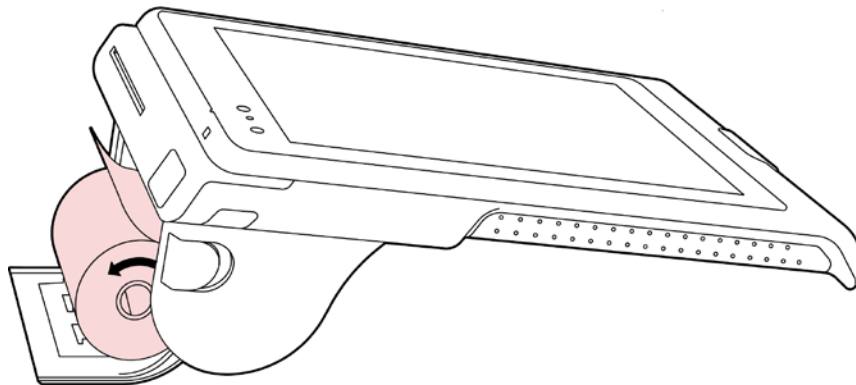
The cover opens downwards.



Remove the (nearly) empty paper roll and any residual paper.
If necessary clean the print head and the rubber roller.

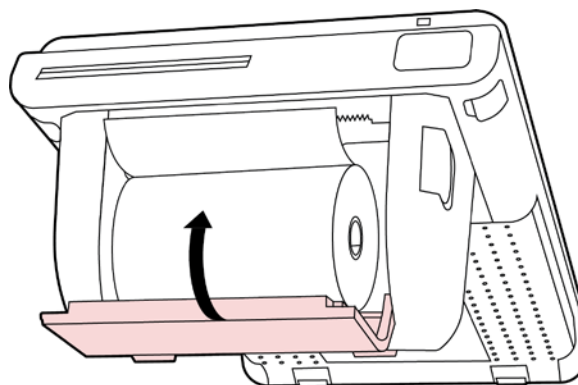


Loosen the glued leading edge of the paper or remove the protective strip from the new roll of paper. Drop the paper roll into the printer tray; see figure below.



Use only rolls with the appropriate dimensions and paper type - please see the paper specification in the appendix

Close the receipt roll cover by gently pressing directly on the cover until it clicks.



Caution:

Pull out the paper slowly and carefully.

Please do not touch the thermal printer head as electrostatic charge can damage it (plus the thermal printer head becomes very hot while printing).

Align the paper accurately. If the paper is crooked and you close the cover, this may lead to paper jams or print errors.

11.1.2 Preventing and Remove a Paper Jam

- Do not touch the paper while it is being printed.
- Do not hold your hand over the paper outlet before or during printing.

- Pushing or pulling paper can cause paper jams, tear-off errors and paper feed malfunctions.
- Always tear off the paper in an upward direction to the right or to the left.

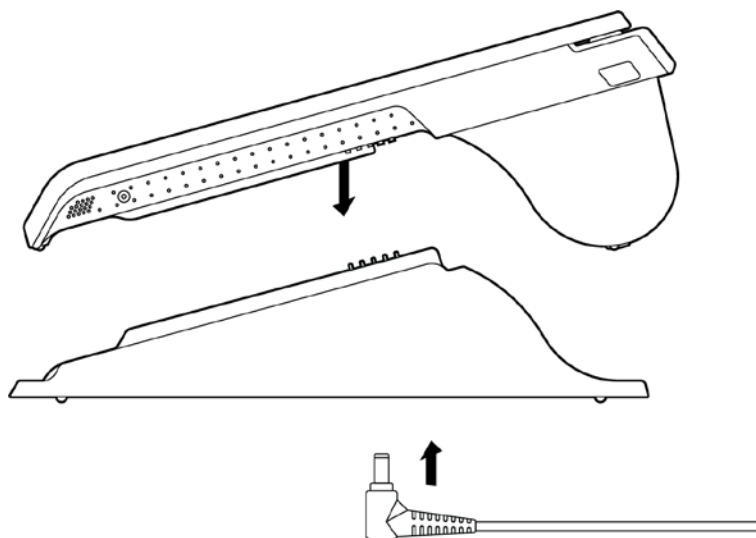
11.1.3 Removing Paper Jams

In the event of a paper jam, remove the paper as follows:

- Deactivate the device by switching off the power.
- Open the receipt roll cover.
- Hold on tight to the device and pull out the jammed paper.
- Replace the paper as described in the chapter “Changing the Receipt Roll”.
- Switch the device back on to re-establish the power connection.

11.2 Charging the Battery

The standard option of charging the battery is via the charging cradle.



Before **first time** operation, it is recommended to **charge** the battery for about 1 **hour**. During the working day, the device can be kept on its charging station. An internal mechanism prevents overcharging of the battery.

To improve the battery lifetime, please **avoid** using the battery in environments with **higher temperatures**.

The battery should **not** be **discharged completely**. Regular charging prolongs the battery life. Switching off the device overnight is not required in order to optimize battery life.

The battery symbol with percentages of the status bar shows the charging status.

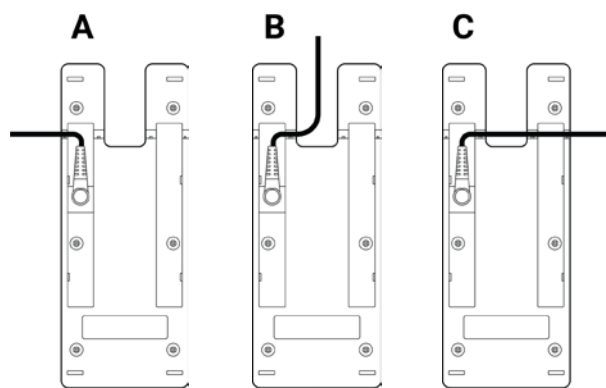
Caution:

The Li-Ion battery cannot be charged at ambient temperatures higher than 35 °C (95 °F).

A **warning** indicates a low battery level.

11.2.1 Charging Station (Cradle)

- Insert the DC power cord of the power pack into the charging station.



- Plug the AC power cable into the power pack and the other end into a wall outlet.
- Insert the payment terminal into the charging station. The charging process starts as soon as the device to be charged is placed on the station. Make sure that the device is properly placed on the cradle. The LED lights white through during charging.

11.3 Cleaning

11.3.1 Magnetic Stripe Reader

To guarantee good results, the Magnetic Stripe Reader should be cleaned from time to time.

11.3.2 Screen

Ideally, use a very small amount of water with a lint-free, scratch resistant cloth (microfiber is best) to clean your Albert 2 screen by dampening the cloth slightly. Then clean the screen using soft, even strokes.

11.3.3 Printer

It is recommended that the print head of the thermal printer be cleaned regularly.

For effective cleaning, you should use a lint-free rag with isopropyl alcohol.

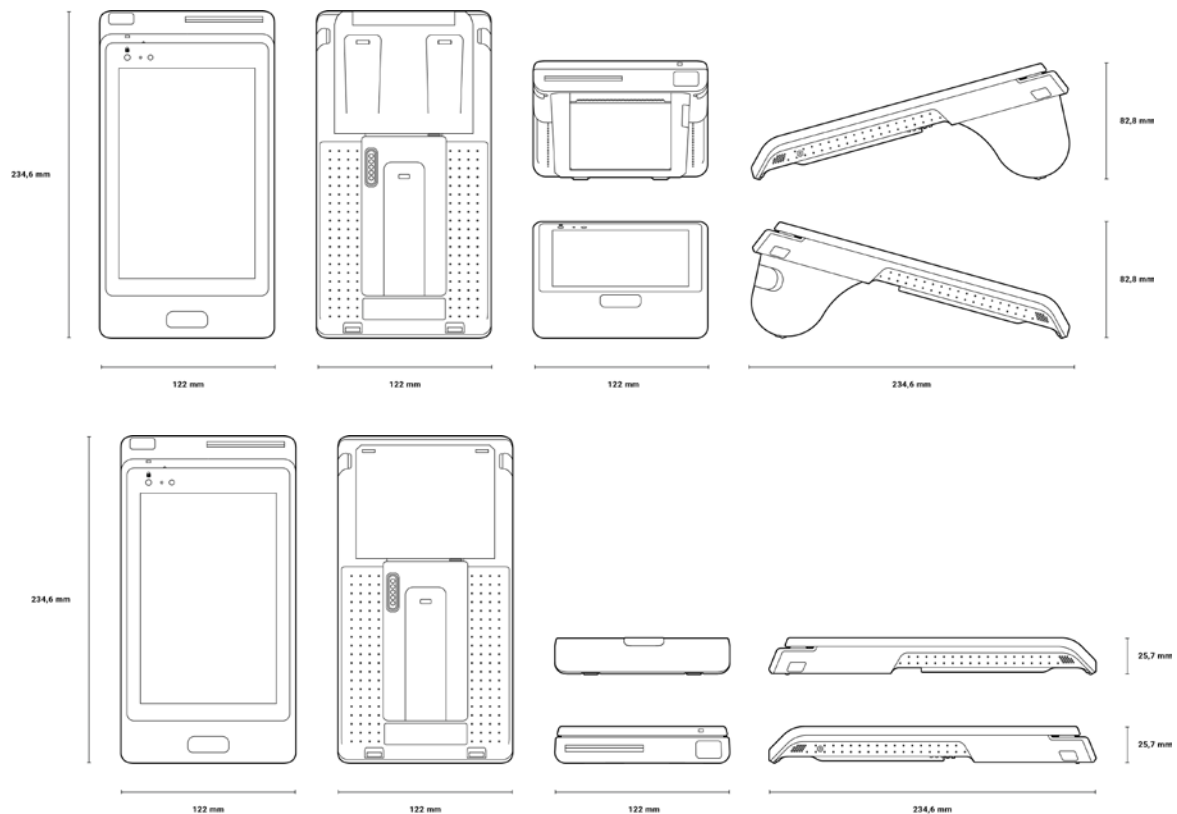
12 Appendix

12.1 Technical Data

CPU	RK3368
Dimension (L x W x H) with printer	228mm x 122mm x 83mm
Gross weight	613g (table only), 734g (tablet with printer)
Operating System	Android 6.0.1
Memory	2 GByte, 16 GByte eMMC flash
Display	7" TFT – LCD, 1280 x 800, 16.7M colours
Touch Screen Type	projected capacitive 5-finger touch
Sensors	G-Sensor, light sensor, proximity sensor
Rear Camera	Rear camera 8 mega pixel, Front camera 2 mega pixel
Wi-Fi	802.11 b/g/n
Bluetooth	4.1
GPS	Standard GNSS
WAN	4G LTE Modem with fall back to 3G/2G (optional)
USB Connectivity Box	4x 480MBit USB 2.0, USB Type A connector, 2x 1A high current output, Ethernet 10/100 Base-TX
USB Connectivity Box legacy	USB Type B connector with Host-to-Host Controller
SIM Card	1x Standard (nano) SIM connector
Magnetic Stripe Reader	Track 1, 2 and 3, reading speed 10-140cm/sec.
Smart Card Reader	ISO 7816, EMV 4.0 (?), Level 1/2
NFC (contactless) Reader	ISO 14443 A/B
Secure Element	Encryption T-DES, AES, RSA, ECDSA
Key Management	MK/SK, DUKPT

Power Consumption	TBD
Operating Temperature	0°C to 45°C
Operating Humidity	5% - 95%
Storage Temperature	-10°C to 60°C
Transport Temperature	-25°C to 70°C
Battery	2570mAh, 8.7V, ~ 2.5h to 90%
Battery Pack Storage Temperature	60°C less than one month, 40°C less than three months, 20°C less than one year
Ingress Protection Rating	IP31
AC Adaptor	Input: 100-240V/1.5A, 50-60 Hz, 65W, Output: 19V3.42A
Audio	3.5mm stereo headphone jack, microphone, 1.5W mono speaker
I/O port	USB 2.0 1 x 480MBit with USB Type C connector
Printer Technology	Thermal printing
Printer Speed	~ 80mm/s
Paper	38mm diameter, 57mm width
Kensington lock	integrated at cover handle

12.2 Dimensions



12.3 Tamper codes

The device is equipped with multiple tamper sensors that are triggered when a physical penetration attempt of the device is detected.

A tampered terminal can be detected by any the following observations during or immediately after power-up:

- The message “Tamper detected, check manual (code)” is displayed
- The message “Security configuration, check manual (code)” is displayed
- The Touch Screen is locked
- Transaction Processing is locked
- In some cases a power-off is executed

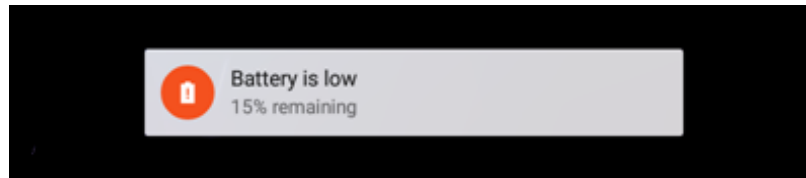
Any physical penetration causes the device to switch into the “Non-activated” mode, which takes it out of service and requires Security Inspection and “Re-activation” by the vendor or an authorized service provider.

If the device is in the “Tamper State”, the merchant must contact the service desk. The explanation of the above-mentioned codes is as follows:

Code	Explanation
001	Secure Boot Element failure
002	Secure Boot Element invalid key
004	Secure Boot Element failure
008	Secure Boot Element MAC refused
010	Security Element failure
020	Security Element failure
040	Security Element failure
080	Security Element failure
100	Secure Boot Element not responding
200	Security Element not responding
0F0	Security Element detects external tamper event

12.4 Battery warning messages

The device displays a warning message if the battery reaches a low charge level, e.g. according to the default Android 6.0.1 behaviour.



12.5 Abbreviations

Abbreviation	Description
4G	Fourth-Generation Cell-Phone Technology
A	Ampere
EMV	Europay, Mastercard and Visa
IP	Ingress Protection
LAN	Local Area Network
LED	Light Emitting Diode
MSR	Magnetic Stripe Reader
NFC	Near Field Communication RFID (Radio Frequency IDentification) at 13.56 kHz
OS	Operating System
PCI PTS	Payment Card Industry, PIN Transaction Security
PIN	Personal Identification Number
POS	Point Of Sales
RCM	Regulatory Compliance Mark
SCR	Smart Card Reader
SIM	Subscriber Identity Module
USB	Universal Serial Bus
V	Voltage
VESA	Video Equipment Standards Association
W	Watt

Wi-Fi	Wireless Network
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12.6 Declaration of Conformity CE

As soon as the CE conformity is declared for Albert 2 here will appear a screen shot of the device.

Simplified DoC:

Hereby, MiTAC declares that the radio equipment type MTPT2- G is in compliance with Directive 2014/53/EU.

The full text of the EU declaration of conformity is available at the following internet address:

www.address.com/DoC.pdf

12.7 FCC Statement

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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 instructions, 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 the 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 a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

15.19 Statement

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.

12.8 Declaration of Conformity Brazil

Warning statement:

RES. 242 (ANATEL HOMOLOGATION RULE)

Este produto está homologado pela ANATEL, de acordo com os procedimentos regulamentados pela Resolução n°. 242/2000 e atende aos requisitos técnicos aplicados.

Para maiores informações, consulte o site da ANATEL – www.anatel.gov.br

RES. 680 (RESTRICT RADIATION DEVICES – only to those devices who Res. 680 is applicable)

Este equipamento não tem direito à proteção contra interferência prejudicial e não pode causar interferência em sistemas devidamente autorizados.

RES. 533 (SAR – only to those devices who Res. 533 is applicable)

Este produto está homologado pela ANATEL, de acordo com os procedimentos regulamentados pela Resolução n°. 242/2000 e atende aos requisitos técnicos aplicados incluindo os limites de exposição da Taxa de Absorção Específica referente a campos elétricos, magnéticos e eletromagnéticos de radiofrequência de acordo com as Resoluções n° 303/2002 e 533/2009.

Para maiores informações, consulte o site da ANATEL – www.anatel.gov.br

Supplier's Declaration of Conformity

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Model Name: MTPT20-W

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