User Manual

Albert / MTPT10

Mobile EFT-POS

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PUBLIC

Abstract

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This documentation is intended to help you to work with the payment terminal and to serve as a reference work. The detailed table of contents help you find the information you need quickly and easily.

Notes in the manual are marked by this symbol.

This symbol is used for warnings.

The type and scope of application programs depend on what the customer has chosen to install; therefore, software is not covered by this manual.

All diagrams are schematic only. The actual device that has been delivered could differ in certain details, including the colour of LEDs.

Reference

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AEVI International GmbH

Table of Contents

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.

1.2 Tested Safety

The payment terminal has been provided with the symbol for "RCM" (Regulatory Compliance Mark).

In addition, the device has received the cUL symbol.

1.3 FCC

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 UNDESIRED 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.

When you handle components fitted with **Electrostatic Sensitive Devices** (**ESD**s), you must observe the following points under all circumstances:

- Unplug the power before inserting or removing components containing ESDs.

- While working with ESDs you must discharge yourself by using an ESD wrist strap or grounding cable to connect yourself at all times to the earth connector of power socket or a grounded object.

- Place all components containing ESDs on a static-safe base.

- The equipment and tools you use must be free of static charges.

- Always hold boards with ESDs by their edges. Do not touch the components.

- Never touch pins or conductors on boards fitted with ESDs.

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.

- 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.

- You must always discharge yourself (e. g. by touching a grounded object) before maintenance or service work.

- Never remove the battery while the terminal is switched ON.

- Keep sufficient distance to 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 safety 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, in 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.

- Damaged batteries must be changed immediately and must be disposed of in an environmentally safe manner. Do not dispose of batteries with the normal household waste and do not short-circuit. Caution: Wrong handling carries the risk of explosion and fire.

- At the end of its operational lifetime, dispose of the terminal and battery in an environment-friendly manner.

1.5.1 LCD Display

If the display element is damaged and the liquid crystal solution leaks out onto your hands or clothing, please wash your hands or clothing immediately under running water for at least 15 minutes, using soap or alcohol. If the liquid comes into contact with your eyes, consult a medical doctor immediately. Before opening the device, make sure that the device is disconnected from the main power supply. Only authorized personnel are permitted to open the device.

1.5.2 Wireless LAN Adapter

FCC Safety Compliance Statement

The FCC, with its action in ET Docket 96-8, has adopted a safety standard for human exposure to RF electromagnetic energy emitted by FCC certified equipment. This product meets the uncontrolled environmental limits found in OET-65 and ANSI C95.1, 1991. Proper operation of this radio device according to the instructions in this publication will result in user exposure substantially below the FCC recommended limits.

Safety Guidelines

Do not touch or move the antenna while the unit is transmitting or receiving. Do not hold any component containing a radio such that the antenna is very close to or touching any exposed parts of the body, especially the face or eyes, while transmitting. Do not operate the radio or attempt to transmit data unless the antenna is connected; otherwise, the radio may be damaged.

Use in Specific Environments

The use of wireless devices in hazardous locations is limited to the constraints posed by the safety directors of such environments. The use of wireless devices on airplanes is restricted to the limits set by each airline. The use of wireless devices in hospitals is restricted to the limits set forth by each hospital.

Observe the following warnings when operating the client adapter:

Warnings

Do not operate your wireless network device near unshielded blasting caps or in an explosive environment unless the device has been modified to be especially qualified for such use.
In order to comply with RF exposure limits established in the ANSI C95.1 standards, it is recommended that the adapter's antenna is positioned more than 2 inches (5 cm) from your body or nearby persons during extended periods of transmitting or operation.
If the antenna is positioned less than 2 inches (5 cm) from the user, it is recommended that the user limits exposure time.

2 Introduction

The Albert /MTPT10 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 PC. It supports communication via LAN, WLAN, Bluetooth and 3G.

An MSR, SCR as well as NFC reader are available.

The fast 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. Also switch your equipment off when you take a longer break or finish your work.

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 Center, which is certified pursuant to ISO 9001 and ISO 14001.

Please contact your competent branch or the Recycling Center 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 /MTPT10 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/MTPT10 is easily portable and can also be used in a fixed location.

The Albert /MTPT10 runs on a customised 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.

3.2 Limitations from standard Android

Because of the nature of the device, there are limitations on what can be used on this payment terminal, compared to a standard tablet. The security needed for the payment applications as well as the fact that it is used for business based processes mean that apps have to have approval to be used. This moderation of apps guarantees that the device will be used correctly.

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 parties or the branch office of AEVI 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.

S/N 5900000000

Serial Number
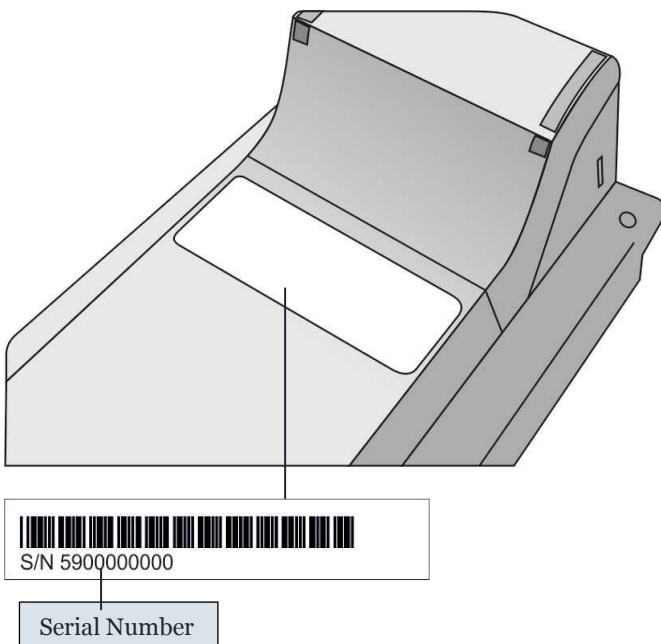
Transport the device only in its original packaging (to protect it against impact and shock).
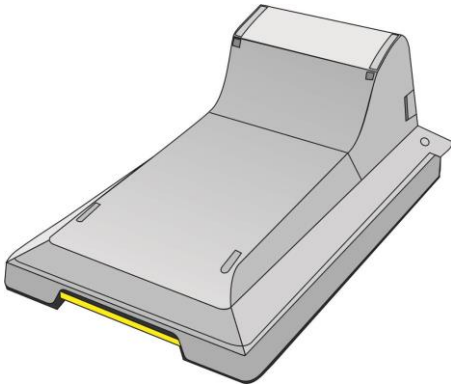
4.2 Delivery Items

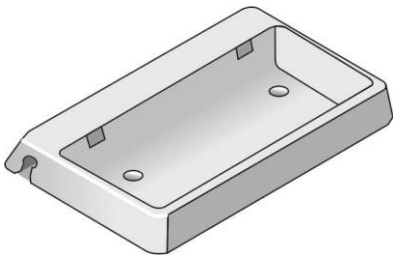The following options are available according to your configuration.

4.2.1 Printer Module

If you have ordered the printer module, the delivery should include the following components:
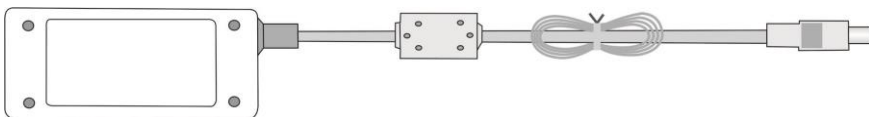
Payment terminal with a printer module

Charging station

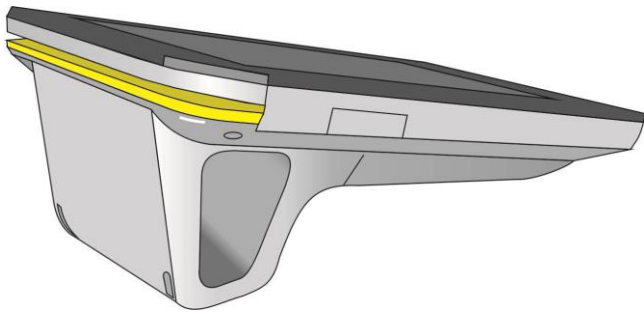Power supply (with a detachable DC cable)

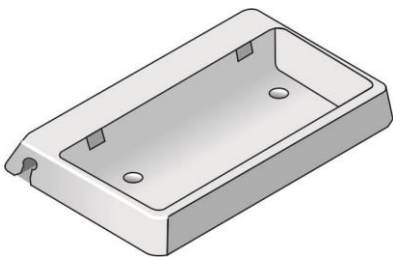This diagram is schematic only and may differ from the actual cable.

4.2.2 Docking Module

If you have ordered the docking module, the delivery should include the following components:
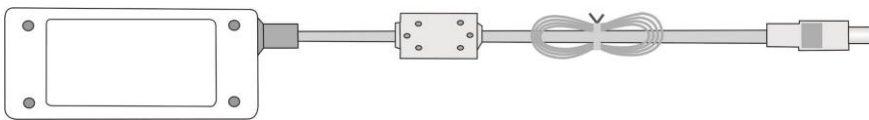
Payment terminal with a docking module

Charging station
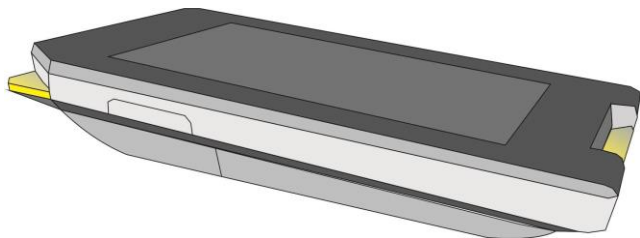
Power supply (with a detachable DC cable)

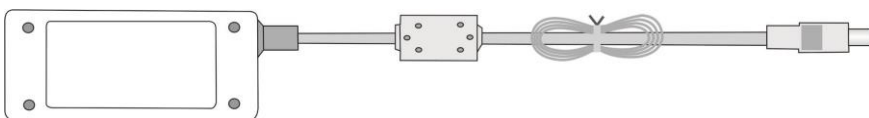This diagram is schematic only and may differ from the actual cable.

4.2.3 Simple Tablet Module

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

Payment terminal

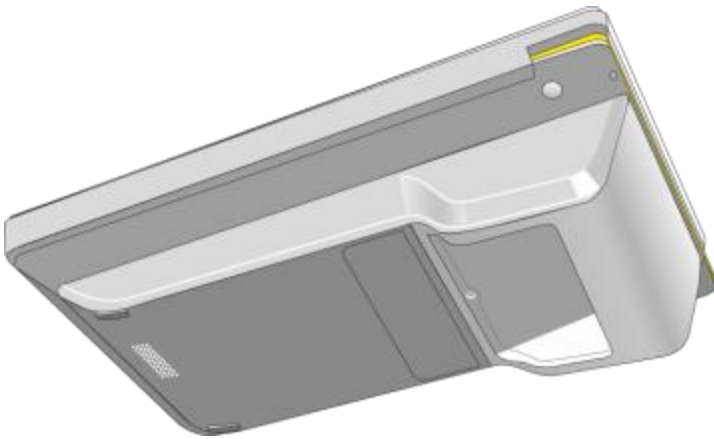Power supply (with a detachable DC cable)

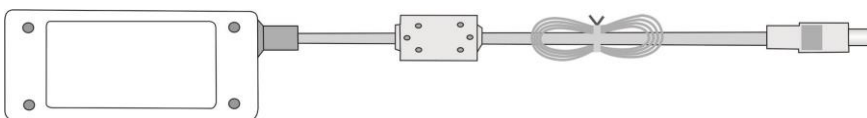This diagram is schematic only and may differ from the actual cable.

4.2.4 Pole Mount Module

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

Payment terminal with a pole mount module
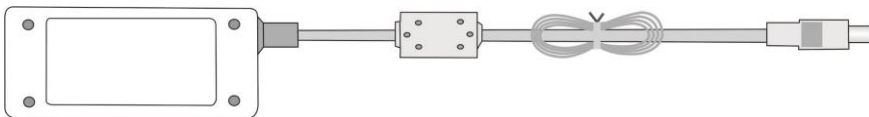
Power supply (with a detachable DC cable)

Connector panel:

DC in USB-B LAN

The mounting adaptor and pole are not part of the delivery and are therefore not illustrated here.
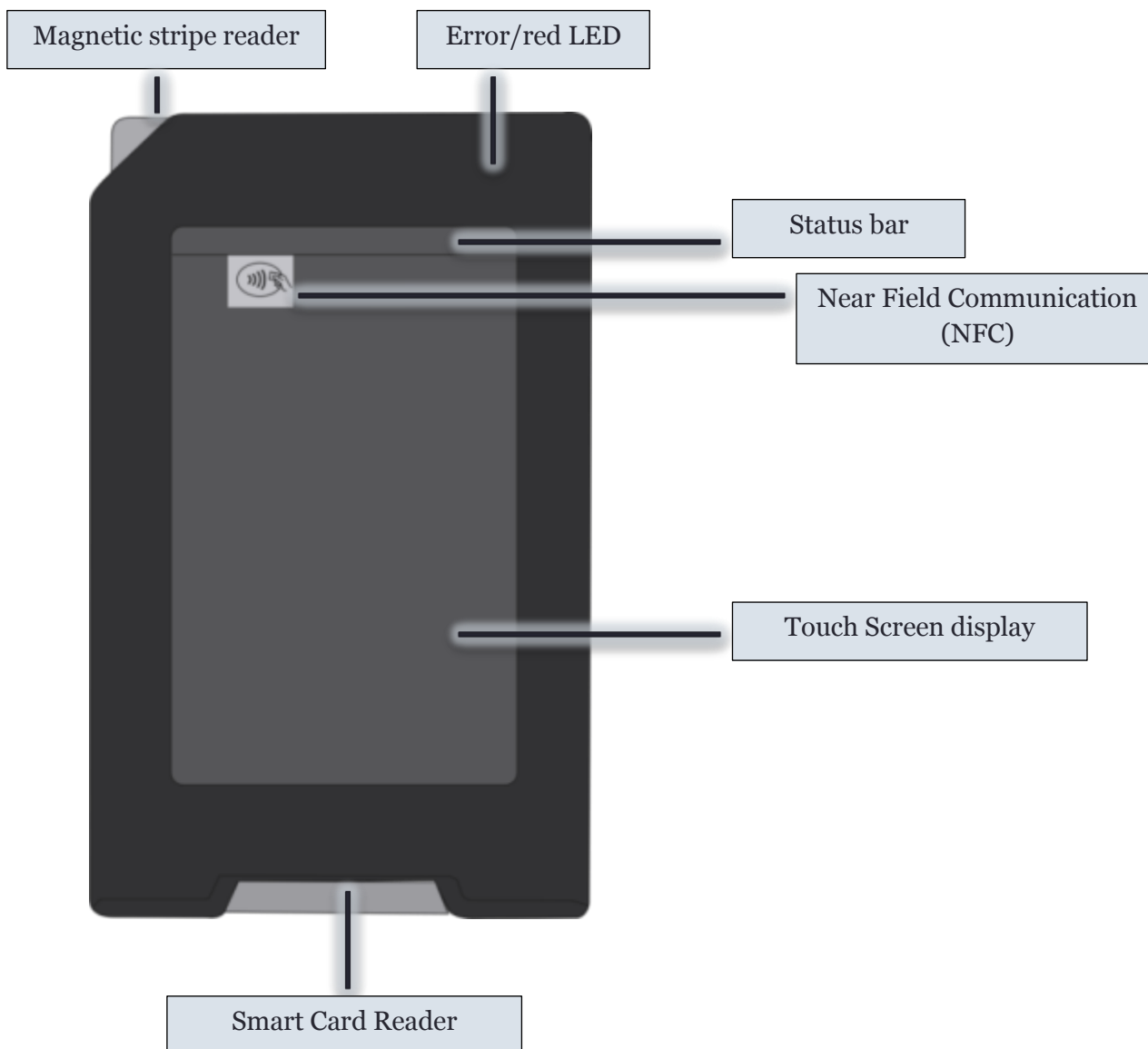
Power supply (with a detachable DC cable)

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

Please note that each of the above mentioned modules is an integral part of the Albert/MTPT10. 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.

5 Main Module

5.1 Front Side

Magnetic stripe reader

Error/red LED

Status bar

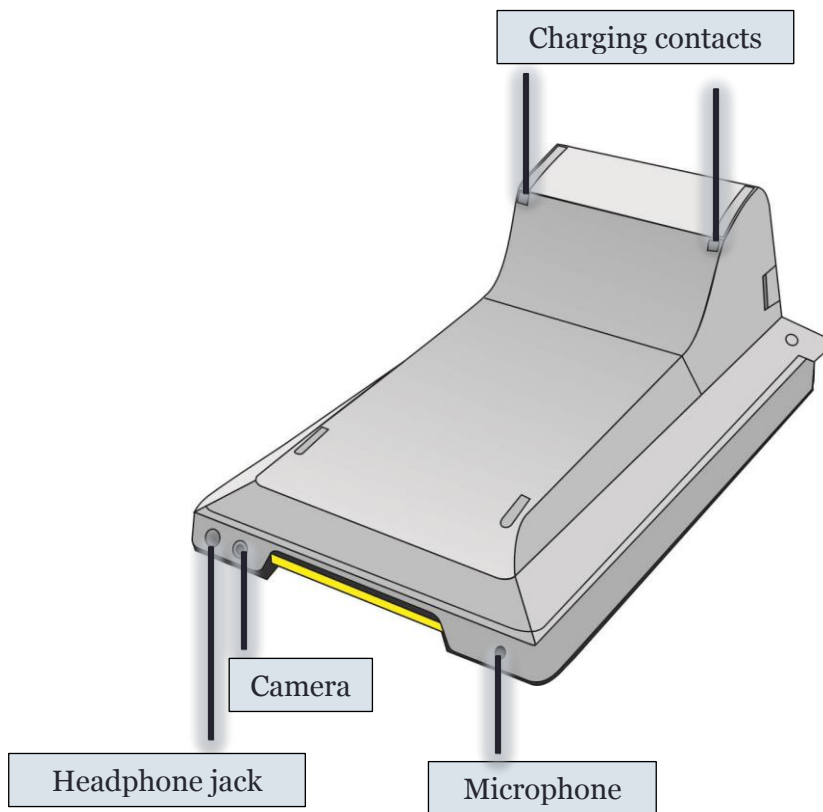Near Field Communication (NFC)

Touch Screen display

Smart Card Reader

The terminal exists in a version with a Light Control Filter (LCF), restricting the viewing angle. For the version without LCF you must give special attention to positioning the device, please check the Albert-MTPT10 Security Policy document in the chapter "PIN Confidentiality"!

5.2 Bottom Side
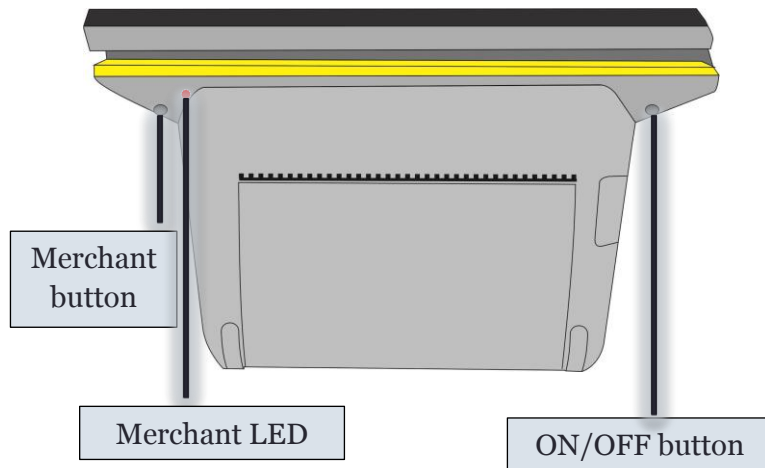
- In some Apps, the Merchant button opens the Merchant Context Menu (MCM), which offers options that are available from a particular App screen (refer to the relevant application documentation to see if, and how, an application uses it).

- Apps can be designed to use the tri-colour indicator: when the indicator flashes is determined by the App (refer to the relevant application documentation to see if, and how, an App uses it).

- For advice on the ON/OFF button, refer to the Section *Power Up* and *Power Down*.

Charging contacts

Camera

Headphone jack

Microphone

5.3 Left Side View

Cover for Micro USB and DC

Sliding button to
open printer
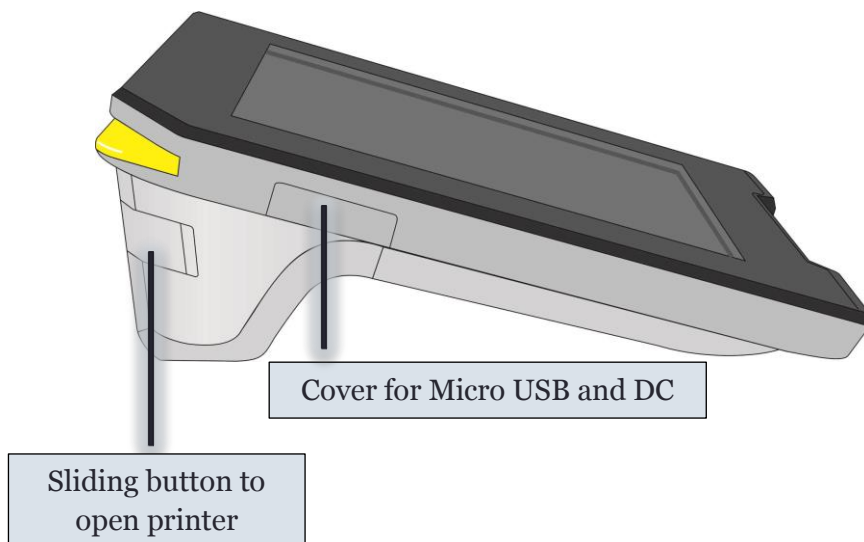
5.4 Right Side View
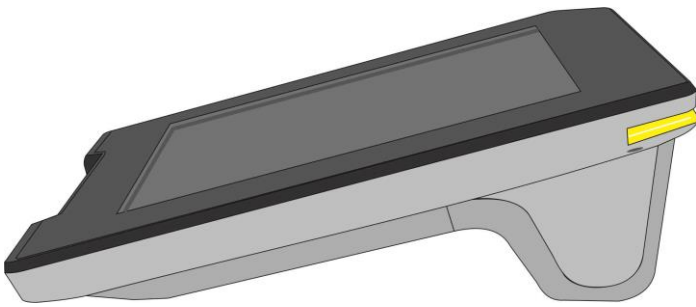
6 Choosing a Location

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 verify the Albert-MTPT10 Security Policy for advises to PIN confidentiality and the one page flyer provided with the delivery of the terminal.

6.3 Ergonomics

Desktop placed

Consumer facing (yellow)

Merchant facing (orange)
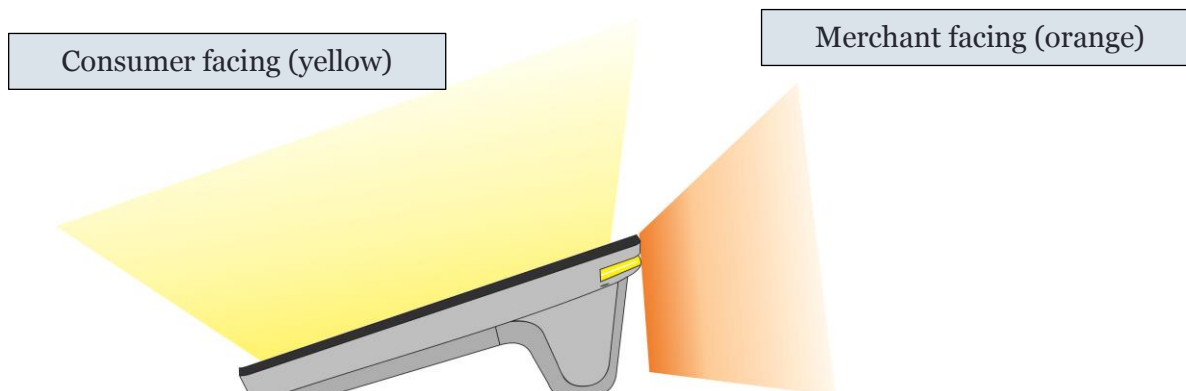
Caution

Please make sure that no other person can spy on the PIN if the payment terminal has no LCF. The LCF version restricts visibility of the display to 45°.
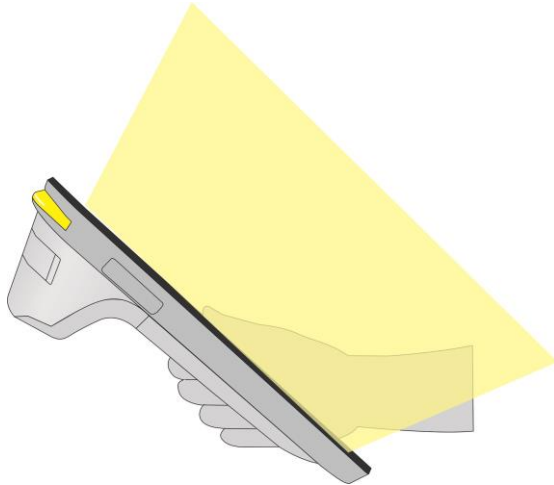
Pole- mounted

When the payment terminal is mounted on a pole; its angle points towards the customer more prominently.

Handheld view

When entering your PIN number, make sure that no other person can see it.

7 Power Up and Power Down

7.1 Summary

The device has three main states:

ON	Device is powered up and the screen is on. The Merchant LED is on (either constantly or intermittently, depending on the App that is being used).
OFF	Device has been switched off (it could be re-charging at the same time). The Merchant LED is off.
ASLEEP	Device is powered up but the screen is off. Depending on how the Device is configured, the Device could be fully asleep (screen off, CPU idle) or only partially (screen off, CPU on); and the Device may, or may not, be locked. When fully asleep, the battery drains more slowly. You can tell if the Device is fully, rather than partially, asleep, by looking at the Merchant LED. If the LED is mostly off, with just a short flash every few seconds, this indicates that the Device is fully asleep.

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.

- You can also forcibly reboot the Albert /MTPT10 by holding both the Power Button and Merchant Button, for about 4 seconds. This should only be done if a system exception prevents the two methods of switching OFF that are described above.

- After a period of inactivity, the Albert /MTPT10 may put itself to SLEEP (partially or fully, depending on the Device configuration).

- You can put the device to SLEEP yourself by pressing the power button once (<1s). The Device will be partially or fully ASLEEP, depending on how it is configured.

- If you connect the power supply, a "Connect" sound is played and the battery icon on the system bar indicates that charging is in progress.

- If you disconnect the power supply, a "Disconnect" sound is played and the "battery charging" icon on the system bar changes to the icon showing battery life.

- If the battery charge goes down to 1-2%, the Albert /MTPT10 automatically switch off.

When the device is **OFF**:

- If you connect it to the power supply, the MSR LED goes ON and the device starts charging (but remains OFF)

- If you disconnect it from the power supply, the MSR LED goes OFF and the device stops charging (and remains OFF).

- You can switch the Albert /MTPT10 ON by pressing and holding down the power button for about 4 seconds, until the MSR LED light (on the top-left yellow corner) turns on, at which point the power button should be released. If the device was charging while OFF, the MSR LED would already be a solid yellow and in this case, the power button should be released after the MSR LED has turned briefly off and back on again.

When the device is **ASLEEP**:

- If you connect it to the power supply, the device plays a "Connect" sound after a few seconds' delay and wakes up. It might prompt you for a password. The "battery charging" icon is displayed on the system bar.

- If you disconnect it from the power supply, a "Disconnect" sound is played after a few seconds' delay. Charging stops and it wakes up. It might prompt you for a password.

- 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 SLEEP).
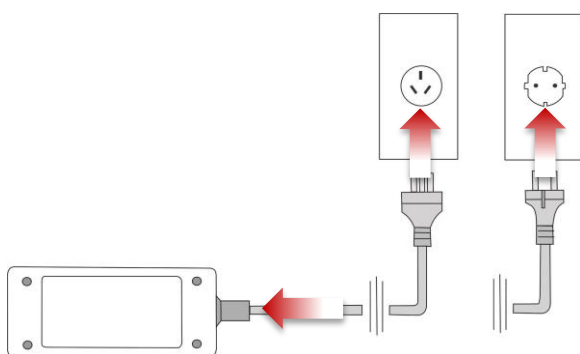
7.2 First Time Power Up

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

- Insert the DC jack of the power pack into the payment terminal.
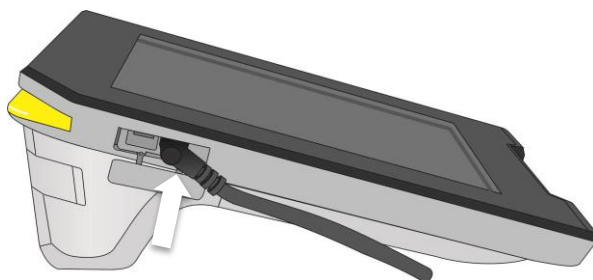
- Plug the AC power cable into the power pack and the other end into a wall outlet (see arrows).

- When the terminal has power, you can switch on the system.

- To switch Albert /MTPT10 ON, press and hold down the power button for about 4 seconds, until the MSR LED (on the top-left yellow corner) turns on, at which point the power button should be released. If the device was charging while OFF, the MSR LED would already be a solid yellow and in this case, the power button should be released after the MSR LED has turned briefly off and back on again. After the initial start-up, the device must be set up using the correct configuration, which will enable transactions to be processed: please refer to the documentation supplied by your acquirer.

7.3 Initial configuration

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

- WiFi and/or 3G connections

- If required by your configuration, set up Terminal and Merchant ID

- If required by your configuration, set up of one or more passwords

It might be necessary first to insert the SIM (follow your acquirer's instructions).

Follow your acquirer's instructions 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 acquirer.

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 MSR LED (on the top-left yellow corner) turns on, at which point the power button should be released. If the device was charging while OFF, the MSR LED light would already be a solid yellow and in this case, the power button should be released after the MSR LED has turned briefly off and back on again.

- Until the AEVI logo appears, the MSR LED remains solid with the screen switched Off.

- When the AEVI logo appears, the MSR LED remains solid.

- 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:
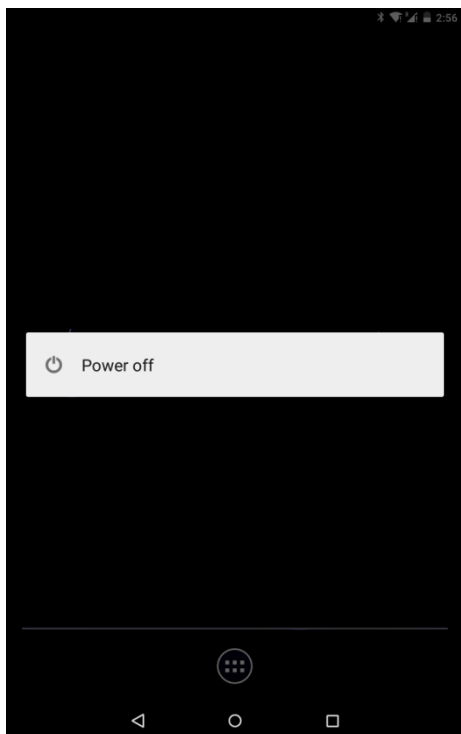
 Caution

If it is necessary to Power Down Albert /MTPT10, 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 /MTPT10 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.

7.6 Reboot

To Reboot the device, i.e. to force a restart of the device, press and hold both the Power Button and Merchant Button, for approximately 4 seconds.

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 /MTPT10 terminal requires a connection to the acquirer's host
systems in order to upload transactions and to download updates of software and changed
configuration settings. Communication can be by LAN (Ethernet), WLAN/Wi-Fi or mobile network
(3G).
The terminal automatically connects to the internet in the order of priority of the above list, i.e. it
will first seek a LAN (Ethernet) connection, then a WLAN/Wi-Fi connection, etc. If, for example, the
terminal is using 3G and then a WLAN/Wi-Fi connection becomes available, it will automatically
transition to WLAN/Wi-Fi.

8.1 LAN

A LAN connection can be established only if the device is using the Pole Mount module. This
module is intended for using the Albert /MTPT10 in a fixed location.

The module is primarily intended for permanent locations.

8.2 WLAN

The WLAN settings determine whether the payment terminal uses local networks for its Internet
connection. If the payment terminal is connected to a WLAN network, a symbol in the status bar
of the display shows the current signal strength. Several bars indicate a stable connection.
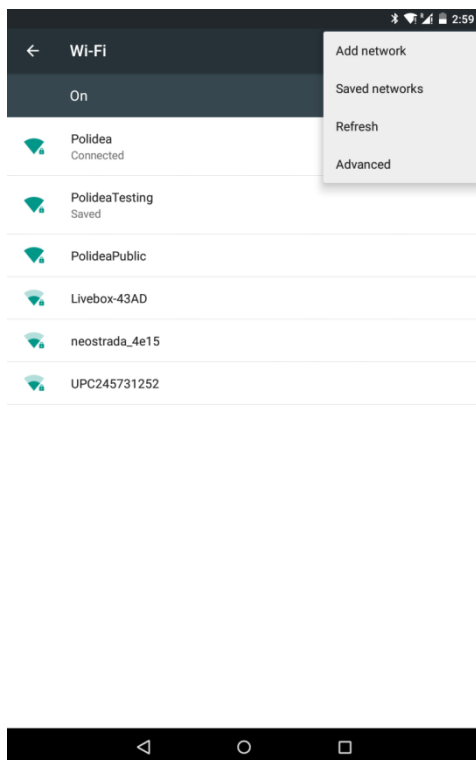
 Only secure WLAN/WiFi networks (e.g. WPA/WPA2) can be used for connections.
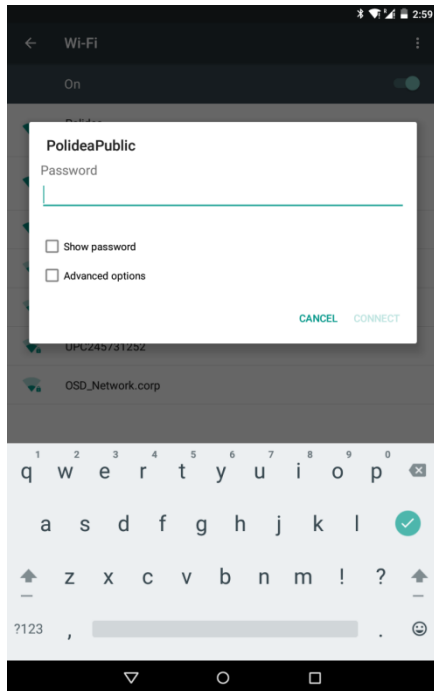
You can activate a Wi-Fi connection by switching on **Settings -> Wi-Fi**, for example:
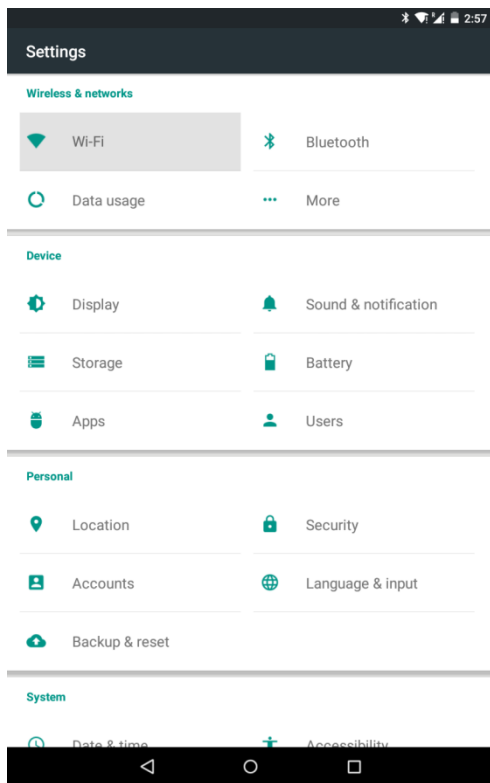
Select a WLAN connection from the pop-up menu:

Enter the password and connect WLAN:

Status

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

To deactivate, switch off the Wi-Fi connection:

8.3 Mobile Network (3G)

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

3G is only available when a SIM Card is inserted. 3G connection is commonly automatic but might require user interaction as prompted.

Albert /MTPT10 supports only mobile data connections (not voice connections).

9 Device Settings

You can access the standard Android settings via the normal Android Operating System settings screens. Not all standard Android 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/MTPT10.
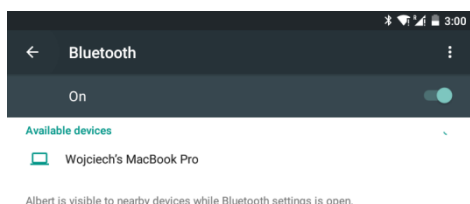
9.1 Bluetooth

Keep your Albert /MTPT10 within sight of the device you want to pair it with.

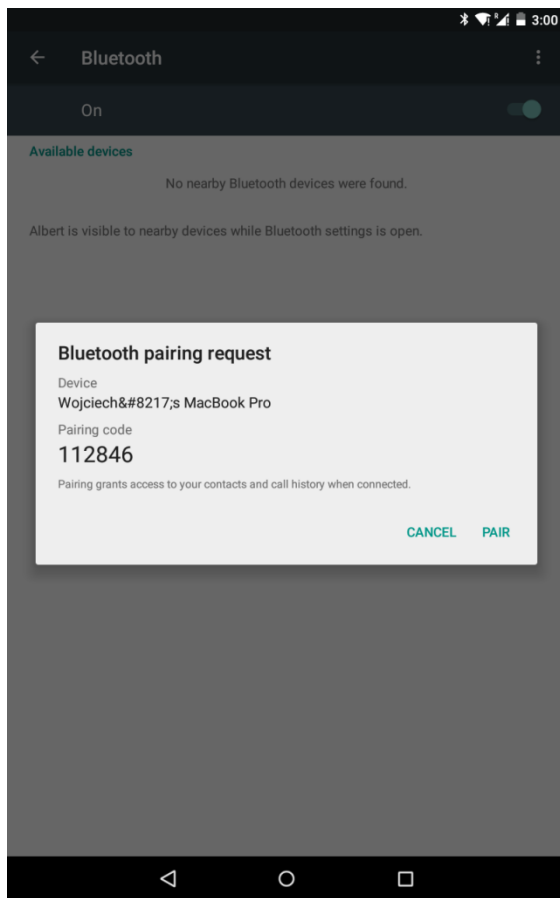You can activate a Bluetooth connection by switching on **Settings -> Bluetooth**, for example:
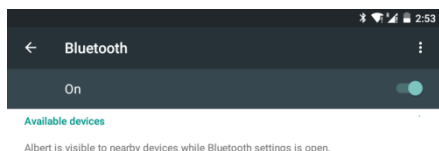
Select the device.

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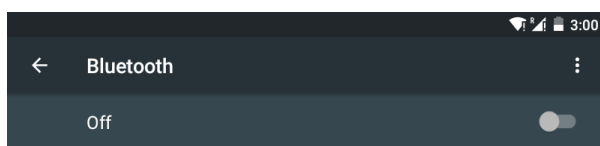

If the pairing request is confirmed on the corresponding Bluetooth device, the device is added to the list.

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 option Adaptive brightness is enabled, the Payment Terminal uses the integrated light sensor for the ambient light to adapt the screen brightness to the environment.
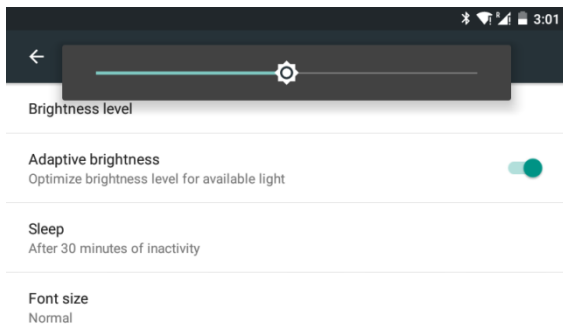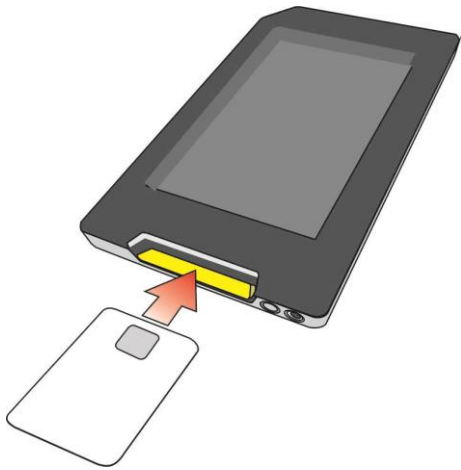
10 Operating the Terminal

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 Data Transfer

- 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.
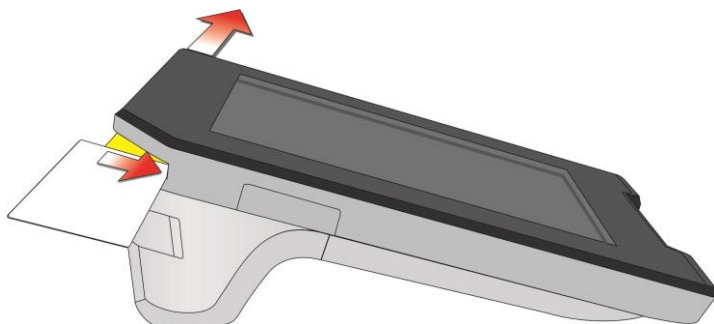
10.2 Magnetic Stripe Reader

When using swipe cards, the following precautions should be observed:

- Swipe cards should never be allowed to come into contact with liquids.

- Swipe cards should not be bent or folded in any way.

- Swipe cards should not be allowed to come into close contact with a magnetic field.

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

10.2.1 Performing a Swipe Card Data Transfer

- Position a swipe card in the card reader with the magnetic stripe facing downward to the yellow area.

- Run the swipe card through the slit of the swipe card reader from left to the right in a quick and steady movement.

10.2.2 Cleaning Instructions

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

10.3 NFC Reader

The integrated NFC reader can handle payment card transactions in accordance with the EMV specifications. The following payment schemes are supported:

- Mastercard - PayPass

- Visa - PayWave

- American Express – ExpressPay

Other NFC cards can be used for non-payment applications, as long as they are compliant with ISO 14443 type A or B.

For data transfer, place the card a few centimeters above the display surface in the upper third part of the monitor.
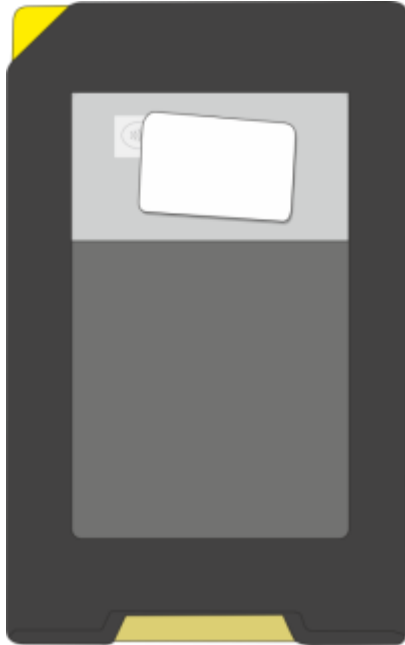
 Caution

Placing an NFC card directly on the touch sensitive surface of the screen can cause unintended touch screens events.

10.4 System Bar

10.4.1 Introduction

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

- Communications type e.g. WiFi, 3G

- Communications strength

- Notifications

- Time

- Background activity indicator

- Battery charge remaining

- Battery/power usage indicator

Example system bar:

10.4.2 Icons

Navigation icons

 Navigates home.

 Navigates back to the previous screen.

 Shows recent apps.

 Replaces the back icon when the software keyboard is displayed; when touched, it makes the keyboard go away.

Other system bar icons

 Bluetooth is on and connected to another device.

 Bluetooth is on but is not connected to another device.

 Ethernet is connected.

GPS acquiring.

More icons available. Touch to see details.

Background processing is taking place. Touch the icon to see details of the task.

Remaining battery life is indicated by the state of the battery icon:

Battery charging is indicated by an animated sequence of icons:

Wi-fi signal strength is indicated by the state of the Wi-Fi signal icon:

GSM signal strength is indicated by the state of the GSM signal icon:

A pair of arrows over the Wi-Fi indicates that data is being sent or received.

Communication connection icons:

Flight mode, all connections disabled.

SIM not present, thus no signal.

SIM present, but no signal.

Signal and carrier available, mobile data not available.

Signal and carrier available, as well as mobile data (3G).

Mobile connections:

1X connected (only used in CDMA networks).

3G connected.

EDGE connected.

GPRS connected.

HSPA+ connected.

Data roaming.

Mobile carrier (e.g. Orange) is given on the left top side of the notification bar.

If there is insufficient room to display all icons, a plus sign appears to the right of the status bar:

Clicking on the plus icon opens a panel to display the remaining icons and additional information, as seen on the right example. The left example shows the notifications in case the device is locked but the screen is turned on:
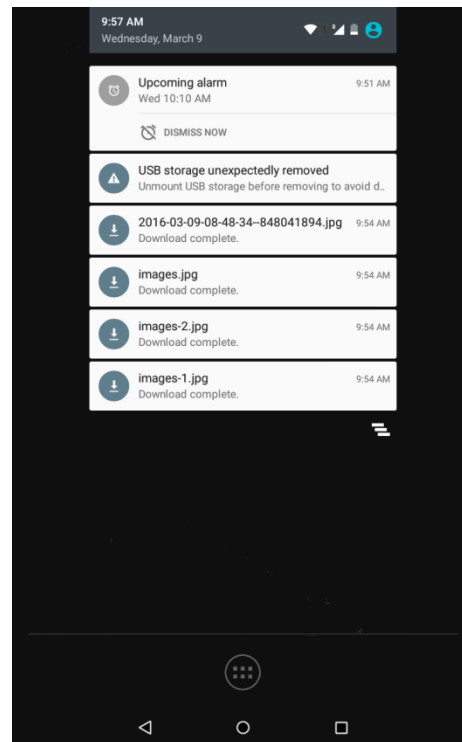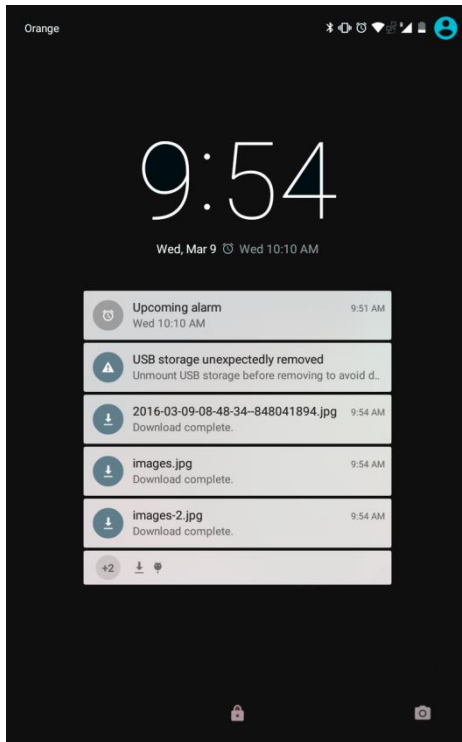
10.5 Cardholder Verification

Cardholder Verification can occur in several ways, including: PIN entry, signature matching, and personal information checks. However, in some cases, verification may not be applicable. For example the Contactless NFC payment process requires no verification from the cardholder.

10.6 Receipt printing

Your Albert/MTPT10 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-mailed

The printing speed depends on the battery charge. For best user experience, please regularly charge the device.

10.7 24 hour PCI integrity check

The Albert/MTPT10 payment terminal regulates its own PCI compliance by a 24 hour software integrity check, a security procedure which is carried out at intervals as a background task, and with no degradation of the user experience. The purpose of this procedure is to verify the PCI firmware. Active payment transactions are not impacted by the procedure.

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 thermo sensitive 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.
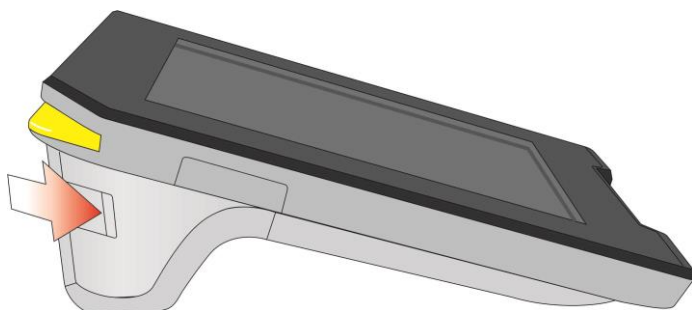
The cover opens downwards.
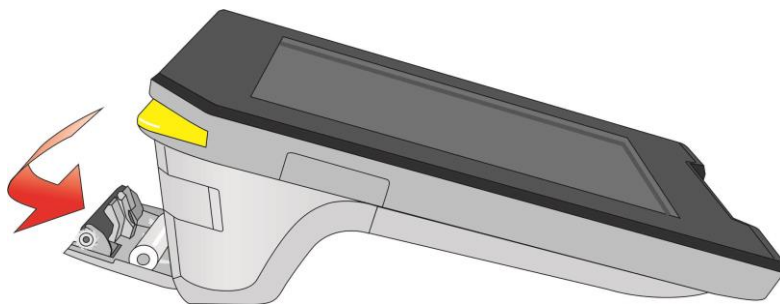
Remove the (nearly) empty paper roll and any residual paper.
If necessary clean the print head and the rubber roller.
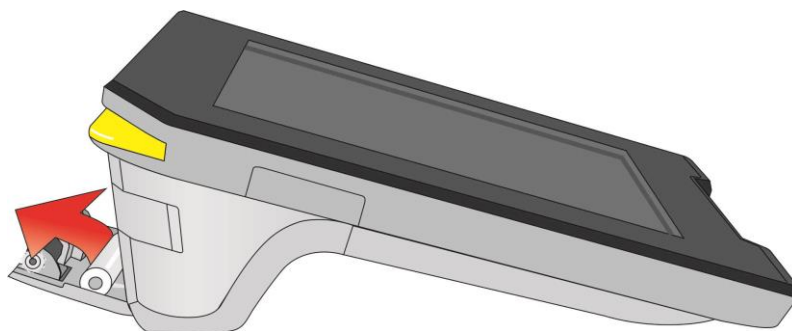
Loosen the glued leading edge of the paper or remove the protective strip from the new roll of paper. Drop the paper roll into the printer tray; see figure below.
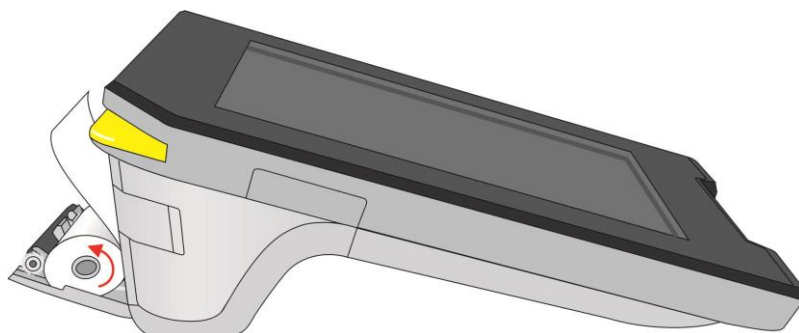
Use only rolls with the appropriate dimensions and paper type.

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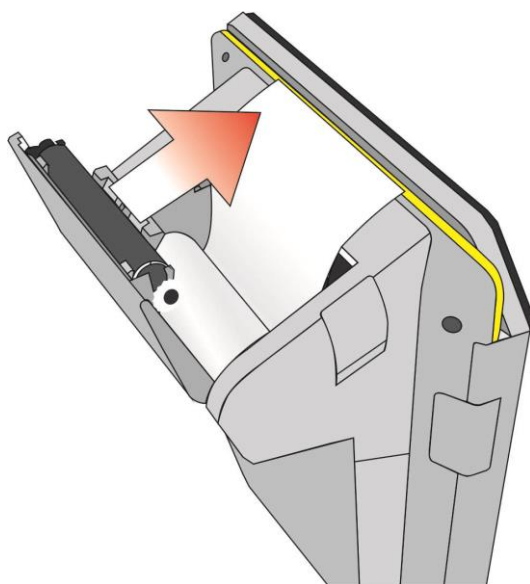
Caution

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

Preventing Paper Jams

- 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.

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 Battery Pack

11.2.1 Changing a Battery Pack

Battery packs may only be replaced with identical types or other types recommended by the manufacturer.

- Push a screw driver into the hole at the back of the payment terminal (1) and push the latch (2).
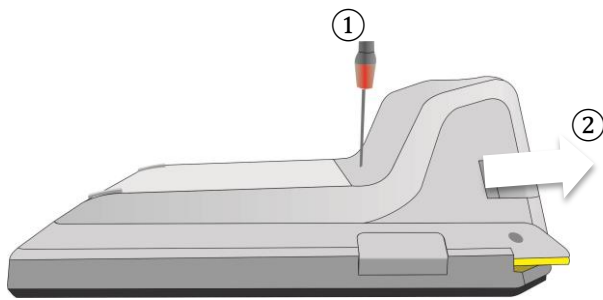
- Carefully push the end clips outwards (3), then pull the battery module out of the socket (4).
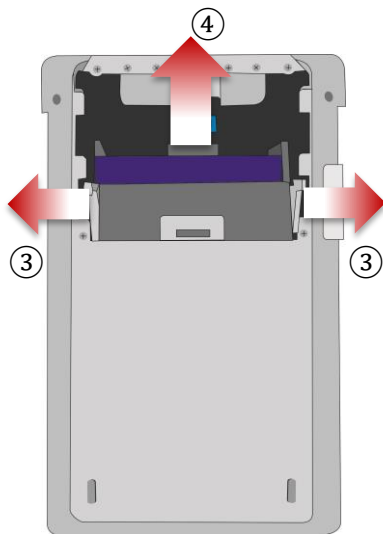
- Change the battery pack.
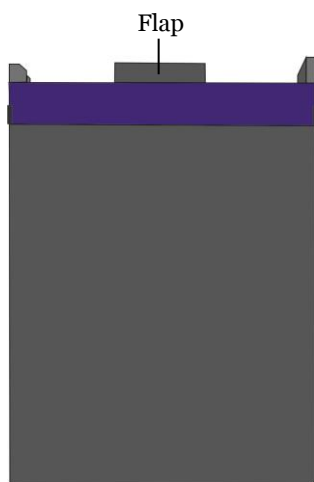
Flap

- Push the module into place. The flap is situated at the top. When it is installed correctly, the plastic catch clicks automatically.

The battery can be charged and discharged hundreds of times, but will eventually wear out. When operating times are noticeably shorter than usual, it is time to use a new one.

The payment terminal will operate on battery pack or power supply. The battery charger in the terminal will be active whenever the power supply is connected. The battery fits in a slot on the back of the payment terminal.

11.3 Charging the Battery

Before **first time** operation, it is recommended to **charge** the battery for about **three hours**. 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. From an environmental point of view, however, switching off the device overnight is recommended.

There are two options to charge the device:

- via power supply or

- via charging station (optional).

The standard option of charging the battery is via power supply.
Charging via a charging station (optional) is just as fast.

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

The Li-Ion battery cannot be charged at ambient temperatures higher than 35 °C (95 °F). The device can still be used inside the charging station or with the external power supply.

A **warning** indicates a low battery level (see also p. 58).

11.3.1 Charging Station

- Insert the DC power cord of the power pack into the charging station.
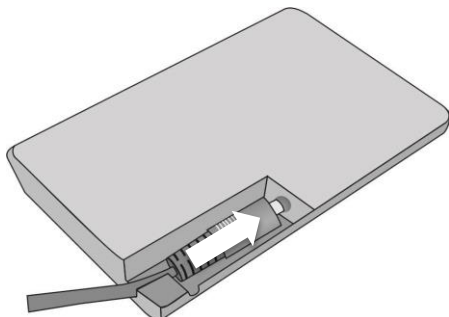
- Plug the AC power cable into the power pack and the other end into a wall outlet (see arrows).
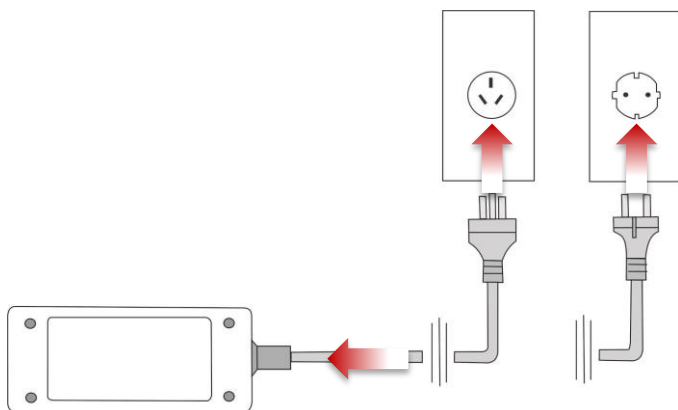
- Insert the payment terminal into the charging station. The charging process starts as soon as the device to be charged is placed on the station. Make sure that there is a contact between the metal and the charging point. The LED lights warm white through the housing.

LED
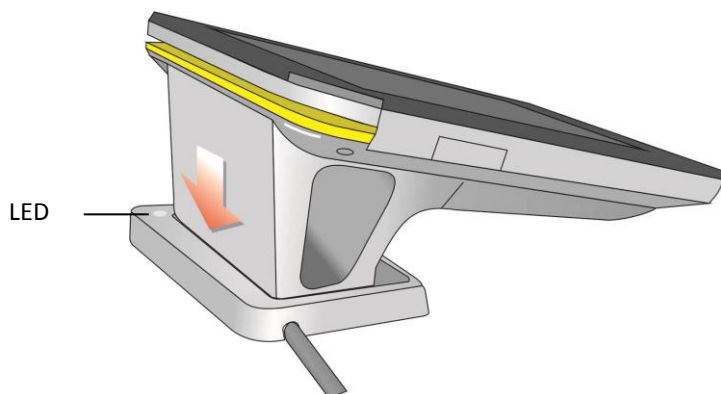
11.4 Cleaning

11.4.1 Magnetic Stripe Reader

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

11.4.2 Screen

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

11.4.3 Printer

Most manufacturers recommend that the print head of the thermal printer be cleaned regularly. Regular cleaning will prevent you from having to replace the thermal print head often, which is beneficial because of the thermal print head being the most expensive replacement part on a thermal printer.

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

Appendix A.

A.1 Technical Data Payment Terminal

CPU		TI OMAP4460 1.2GHz processor
Dimension (L x W x H)		218.3 x 133.2 x 78.4 mm
Gross Weight		1 kg including paper roll
Operating System		Android v5.1.1 Firmware yyy.xx
Memory		1GB LP00R2
Storage Disk Drive		16GB eMMC flash
Display	**Size / Type**	7" TFT-LCD / 16:10
	Max. Resolution	1280 x 800
	Max. Colors	16.7M
	Dot Size (mm)	0.117 (H) x 0.117 (V)
	Luminance (nits) (Typ.)	400
	Viewing Angle	Horizontal: 178° (Typ.), Vertical: 178° (Typ.)
Touch	**Type**	Projected capacitive 2-finger touch screen

Screen	Light Transmission	>= 85%
Sensors		G-sensor, light sensor, proximity sensor
Camera		8 mega pixels
Graphics Controller		TI OMAP4460 1.2GHz processor
Wireless		WiFi, 802.11 b/g/n
		BT, Bluetooth 4.0 + EDR
		GPS
		3G Modem
Ethernet (10/100 Base-Tx)		Available via pole mounted module
Expansion Slot		SIM x 1: For SIM card SAM x 1: For SAM card
MSR module	Number of tracks	up to 3
	Coding of swipe cards	according to 1807811-2
	Reading speed	10 to 140 cm/sec.
	Encryption	Encrypts all track data
Security	Chip card reader	INT6220-6011

Element		
	PIN entry device	INT6220-6011
	Encryption	T-DES, RSA, AES
	Key Management	Fixed, MK/SK, DUKPT
NFC reader		Build-in NFC reader
Privacy Screen		VC-Film ~90° visible angle X/Y
Power consumption		~3A (based on printer module using)
Operating Temperature		-5 °C to 45 °C (Based on IEC standard)
Operating Humidity		5 % – 95 %
Storage Temperature		-25 °C to 70 °C (Based on IEC standard)
Transport Temperature		-25 °C to 70 °C (Based on IEC standard)
Operating Altitude		1500 M
Battery	**Capacity**	7.4V, 4540 mAh
	Charging Time	2.5 Hrs in 98% (via Power Supply/Charging Station)
	Operating Time	> 5 Hrs based on average load profile
Ingress Protection Rating		IP30
Drop Specification		76cm

AC Adaptor	100-240V, 50-60Hz, 65W Output: +12V/5.4A
Audio	3.5-mm stereo headphone jack Microphone; 1.5W mono speaker
I/O Ports	microUSB (for accessory connection) USB OTG, Ethernet 10/100Mbit (via pole mounted module)

Printer	**Technology**	Thermal printing
	Speed	80mm/s @7.2V
	Resolution	203 dpi
	Paper Roll	38mm diameter
	Paper width	57mm
	Interfaces	USB interface (internal)

Optional Modules	1. Printer module with charging contacts 2. Docking module with charging contacts 3. Pole-mount module with USB-B, Ethernet and DC in 4. Simple Tablet Module

Battery Pack Storage Temperatures	- 60 °C, less than one month - 40 °C, less than three months - 20 °C, less than one year

A.2 Dimensions

218 mm

133 mm

81 mm
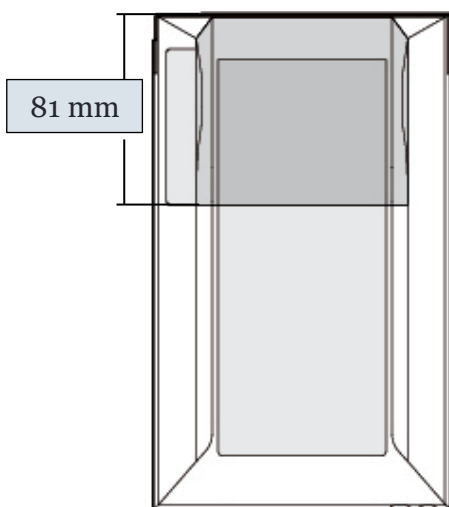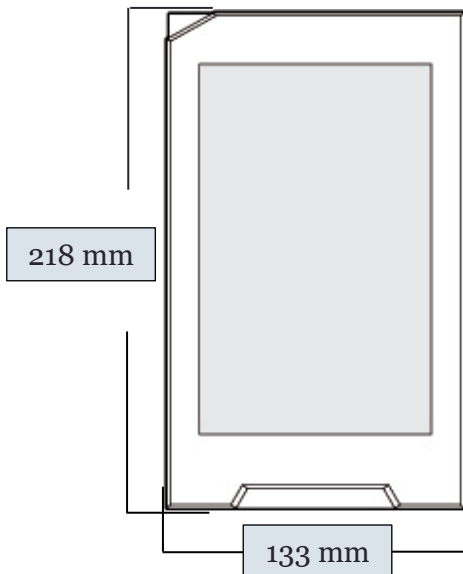
A.3 LED Codes during power-up

During power-up, a LED located on the front of the device, at the top right side, flashes red in the event of a failure.

The failure is encoded in a blinking pattern of the LED. The number of short flashes indicates the failure code, as listed in the table below. The code should be communicated to the AEVI security support under security@aevi.com

Code	Explanation
1	Secure Boot Element checksum verification fails
2	NFC Firmware checksum verification fails
3	Application Processor ROM code signature verification fails
4	No valid response from Application Processor
5	Application Processor u-boot signature verification fails
6	Application Processor Kernel signature verification fails
7	Secure Boot Element detects tamper event
8	Secure Boot Element detects internal error

A.4 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

A.5 Battery warning messages

The device displays a warning message if the battery reaches a low charge level, e.g.:
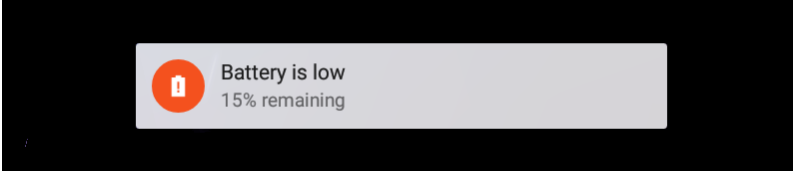

The table below describes what triggers warnings, and what the warning message contains:

State	Message	Sound	Comments
15% charge remaining	Battery is low. 15% remaining*	Sound plays once	Sound is heard only if device notification volume is not mute
3% charge remaining	Battery is low. 4% remaining*	Sound plays once	No longer possible to start a new transaction. Sound is played even if device notification volume is mute.
2-1% charge remaining	Shutdown	-	This is the minimum charge required for the device to at least accept connection to power and start charging again. Device automatically begins shut down very soon after this point.

* Shows remaining % until dismissed

4% of battery remaining:
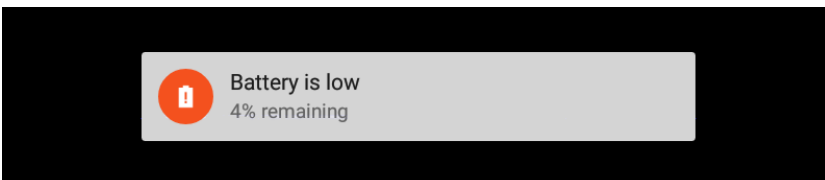
Appendix B. Abbreviations

Abbreviation	Description
3G	Third-Generation Cell-Phone Technology
A	Ampere
APAC	Asia Pacific
EMV	Europay, Mastercard and Visa
ID	Industrial Design
IP	Ingress Protection
L1	Certification level 1, usually hardware /firmware layer related
L2	Certification level 2, usually software layer related
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
PC	Personal Computer

PCI PTS	Payment Card Industry, PIN Transaction Security
PDF417	Portable Document Format 417, type of 2-dimensional barcode format
PIN	Personal Identification Number
POS	Point Of Sales
QR	Quick Response, type of 2-dimensional barcode format
RCM	Regulatory Compliance Mark
SAM	Secure Access Module
SCR	Smart Card Reader
SIM	Subscriber Identity Module
USB	Universal Serial Bus
V	Voltage
VESA	Video Equipment Standards Association
W/O	Without
W	Watt
WiFi	Wireless Network

Appendix C. Declaration of Conformity CE

Declaration of Conformity
No. Model, V1, 06/2016

Manufacturer:	AEVI International GmbH
Address:	Heinz-Nixdorf-Ring 1 33106 Paderborn - Germany
Product Description:	Payment Terminal MTPT10 - bbcdd (bbb: each b can be 0-9 or A-Z, c: W or G (W means Wifi function; G means 3G+Wifi function), d: can be 0-9)

The designated product as delivered is in conformity with the provisions of the following European Directives:

2014/53/EU (Radio Equipment Directive)
2011/65/EU (RoHS Directive)

The conformity of the described product with the directives is proved by full compliance with the following Harmonised European Standards:

EN 301 908-1 V7.1.1(2015-03)
EN 300 328 V1.9.1(2015-02)
EN 302 291-1 V1.1.1(2005-07) / EN 302 291-2 V1.1.1(2005-07)
EN 301 511 V9.0.2(2003-03)
EN 301489-1V1.9.2(2011-09)
EN 301489-3V1.6.1(2013-08)
EN 301489-17V2.2.1(2012-09)
EN 301489-24V1.5.1(2010-10)
EN 62311:2008
EN 60950-1:2006+A11:2009+A1:2010+A12:2011+A2:2013

AEVI International GmbH
Paderborn, 2016-06-15

....
(R. Rabenstein, General Manager)   (M. Nolte, Product Manager Albert)

The declaration certifies compliance with the indicated directives but implies no warranty of properties.
The safety instructions of the accompanying product documentation shall be observed.

AEVI International GmbH Heinz-Nixdorf-Ring 1 33106 Paderborn Deutschland www.aevi.com	Telefon: +49 (0) 52 51 / 6 93 3630 E-mail: info@aevi.com EORI Nr.: DE290192144099544 Ust-ID Nr.: DE815574886	Gesellschaft mit beschränkter Haftung Registergericht Paderborn, HRB 11973 Geschäftsführer: Reinhard Rabenstein, Miroslav Pekarek	P A G E |1