Display D2150

Operator Manual

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Table -1: Document History

Date	Remarks
03/2023	Added note for wall mount configuration

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1 Manufacturer’s declaration and approval

General authorization

This device complies with the requirements of the directive 2014/30/EC with regard to “Electromagnetic Compatibility” and 2014/35/EC "Low Voltage Directive" and RoHS directive 2011/65/EU.

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

FCC-Class A Declaration

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his expense.

Modifications not authorized by the manufacturer may void users’ authority to operate this device.

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, including interference that may cause undesired operation.

CAN ICES-3 (A)/NMB-3 (A)

Tested safety

The Display D2150 has been awarded the cTUVus symbol.

User information

Repair work on the devices should only be carried out by authorized and specially trained personnel. Improper repairs will lead to the loss of any guarantee and liability claims.

Extension boards with electrostatically endangered components can be identified with this label.

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Safety information

This device conforms to the corresponding safety regulations for information technology devices, including electronic office machines for use in the office environment.

- If the device is moved from a cold environment to a warmer room where it is to be operated, condensation could occur. The device must be completely dry before being put into operation. Therefore an acclimatization time of at least two hours should be accounted for.
- Lay all cables and supply lines so that nobody can tread on them or trip over them.
- Data cables should neither be connected nor removed during electrical storms.
- This equipment is not suitable for use in locations where children are likely to be present.
- Protect the device from vibrations, dust, moisture and heat, and only transport the device in its original packaging (to protect it against
  impact and blows).
- Take care to ensure that no foreign objects (e.g. paper clips) or liquids can get into the inside of the device, as this could cause electrical shocks or short circuits.
- In case of emergencies (e.g. damaged housing, liquid or foreign objects getting into the device), the device should be switched off immediately, the mains plug of the BEETLE or PC should be removed, and the Diebold Nixdorf customer service should be contacted.
- If the LCD display element is broken and the liquid crystal solution leaks out of the display and onto your hands, clothing etc., wash your hands or clothing immediately with soap or alcohol, holding them under running water for at least 15 minutes. If the liquid comes into contact with your eyes, please consult a doctor immediately.

Generally you should connect IT-devices only to power supply systems with separately guided protective earth conductor (PE), known as TN-S networks. Do not use PEN conductors! Please also observe the recommendations of the norm DIN VDE 0100, part 540, Appendix C2, as well as EN50174-2, §5.4.3.

Warranty

Diebold Nixdorf guarantees generally a warranty engagement for 12 months beginning with the date of delivery. This warranty engagement covers all those damages which occur despite a normal use of the product.

Damages 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 of the stipulation, look at your contract.

All parts of the product which are subject to wear and tear are not included in the warranty engagement.

Please order spare parts at the Diebold Nixdorf customer service.

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Instructions for maintenance

Clean your display regularly with an appropriate surface cleaning product. Make sure that the device is switched off, connector cables are unplugged and that no moisture is allowed to get into the inside of the device.

Please observe the maintenance and cleaning instructions for each of the components. These instructions can be found in their respective chapters.

Recycling

Environmental protection does not begin when time comes to dispose of the display; it begins with the manufacturer. The compact display is manufactured without the use of CFCs and CCHS and is produced mainly from reusable components and materials.

The processed plastics can, for the most part, be recycled. Even the precious metals can be recovered, thus saving energy and costly raw materials. Please do not stick labels onto plastic case parts. This would help us to re-use components and material.

You can protect our environment by switching on your display only when it is actually needed. If possible, even avoid the stand-by-mode as this wastes energy, too. Also switch your display off when you take a longer break or finish your work.

There are still some parts that are not reusable. Diebold Nixdorf guarantees the environmentally safe disposal of these parts in a Recycling Center, which is certified pursuant to ISO 9001 and ISO 14001.

So don’t simply throw your device on the scrap heap when it has served its time, but take advantage of the environmentally smart, up-to-date recycling methods.

Please contact your competent branch or the Recycling Center Paderborn (for European countries) for information on how to return and re-use devices and disposable materials under the following mail address:

Email: info@Dieboldnixdorf.com

We look forward to your mail.

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2 Supplier’s Declaration of Conformity

Product Description: LCD Monitor

Model: Display D2150

Party issuing Supplier’s Declaration of Conformity

Diebold Nixdorf Singapore PTE. LTD.

30A Kallang Place, #04-01

Singapore 339213

Phone: +65 6747 3828

Responsible Party – U.S. Contact Information

Diebold Nixdorf

5995 Mayfair Road

N. Canton, OH 44720 / USA

Phone: +1 330 490 5049

FCC Compliance Statement (for products subject to Part 15)

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.

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3 Introduction

3.1 From Point-of-Sale to Point-of-Service

With the D2150 you are using an ergonomically and customer-friendly cashier's workplace.

Equipped with a sleek modern bezel free design, the D2150 features projected capacitive touch technology.

The D2150 features the unique Diebold Nixdorf PanelLink2™ interface. This allows for operation of the displays via a single cable solution. In addition, the screen also offers standard interfaces such as DVI-D and USB-C DP. Instead of using a standard power supply with 12V DC jack, a PoweredUSB cable can be used. The display can be applied in all trade market segments like specialist retailers, department stores, self-service stores, petrol stations or in restaurants. There is indeed a great deal of scope for implementing the display.

They can be used, for example, as:

- a point-of-sale terminal
- an ordering terminal
- an information terminal
- a desk terminal.

The low-energy and flicker-free color monitor of the D2150 is a LCD in TFT-technology (Thin Film Transistor).

Therefore, it is well suited for multimedia applications as it offers brilliant color representation, an excellent contrast ratio and a high display speed.

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3.2 Features at a glance

- Low footprint
- Autoscaling of the screen
- Flicker-free
- Very good contrast ratio, adjustable loudness, sharpness, width, phase, color temperature and brightness
- LCD TFT technology
- Digital interface
- Simple installation via plug & play feature
- Mounting VESA 100 standard
- Integrated loudspeaker
- USB interface for external devices

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3.3 About this Manual

This manual informs you about everything you might need to know for the installation (software and hardware), the operation and the maintenance of your D2150 .

Same parts of this book require familiarity and experience in working with operating systems and installation and configuration procedures.

3.3.1 Section-Specific Warning Notes

⚠ DANGER

This warning note describes a hazard with a high degree of risk which, if not avoided, will result in death or grave bodily injury.

⚠ WARNING

This warning note describes a hazard with a medium degree of risk which, if not avoided, could result in death or grave bodily injury.

⚠ CAUTION

This warning note describes a hazard with a low degree of risk which, if not avoided, could result in slight or minor bodily injury.

NOTE

This note provides application tips and information that help prevent errors and material damage.

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4 Display Overview

4.1 D2150

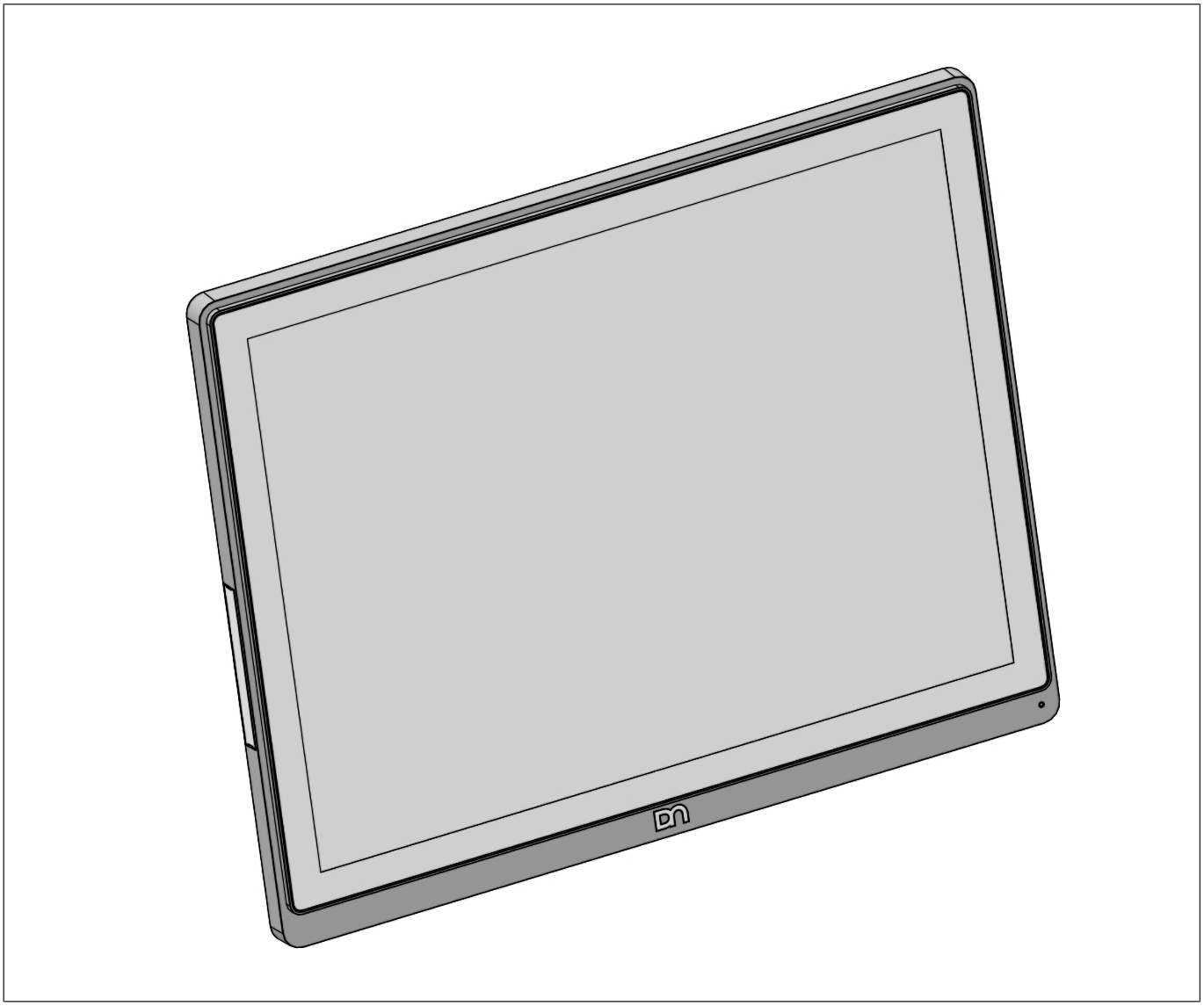

Figure 4-1: Display D2150

The LCD TFT Panel Display is a 15-inch flat panel display which is absolutly flicker-free. It is designed with a native resolution of 1024 x 768 pixels. Application programs should use this resolution.

4.2 Touch Screen per Model

Model	Screen Size	Touch Screen
Display D2150	15”	Projected Capacitive Touch

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5 User Interface

5.1 Front Panel

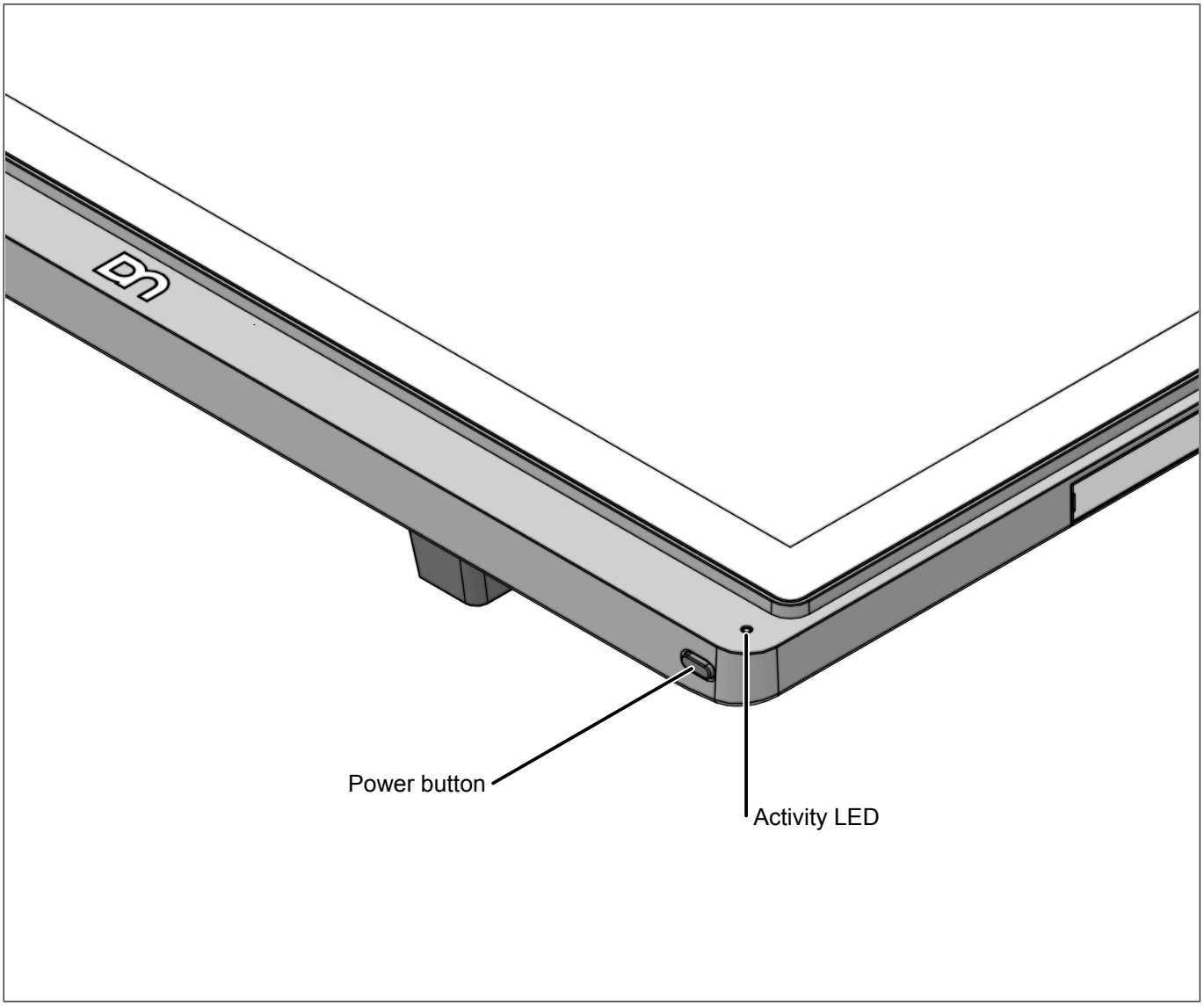

Figure 5-1: D2150 - Front Panel

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LED

1. Enable Power LED = “ON” (Default)

Operating Condition	Behavior of Power Button LED (Green/Amber)
Active / Operating	LED on; green
Standby / No video input	LED blinking; amber
Soft-off	LED on; amber
No power input	LED off

2. Enable Power LED = “OFF”

Operating Condition	Behavior of Power Button LED (Green/Amber)
Active / Operating	LED on; green
Standby / No video input	LED off
Soft-off	LED off
No power input	LED off

ON / OFF Button

With this button you can switch the display on or off.

	NOTE
	If the display is manually switched off, it will not wake up automatically when the system boots.

When the D2150 is connected via PLINK2™ interface to a BEETLE system, the button also switches the system on or off, provided that the system supports the feature. See *Section 6.1* for details.

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5.2 Connector Panel

The following sockets are located under the bezel of the display:

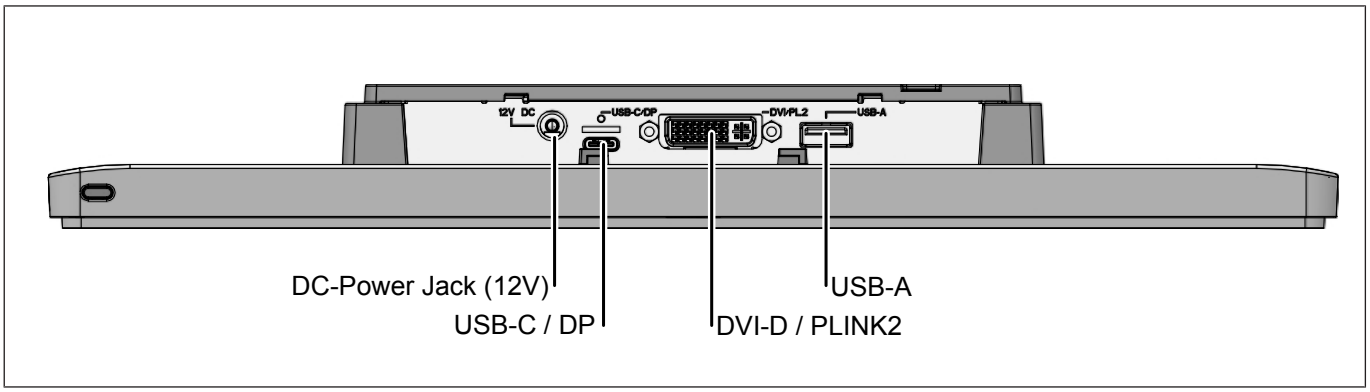

Figure 5-2: D2150 - Connector panel

DC-Power Jack	Power supply for the screen via external power supply or poweredUSB (12V)
USB-C/DP	USB connection to the PC system
DVI-D/PLINK2	DVI-D or PLINK2 for video/data transfer between the system and the TFT-display
USB-A	USB- connection to the PC system

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6 Display Settings

The D2150 display offers several settings which are available through a GUI software tool (GUIDDC-MonitorControl).

GUI software tool is available in Windows 7 (32bit/64bit), Windows 10 (32bit/64bit) and Linux CentOS 7/8 (64bit). The GUIDDCMonitorControl.exe is an executable file and does not require any installation.

Below you can find a list of specific settings that can be customized to suit the specific installation needs.

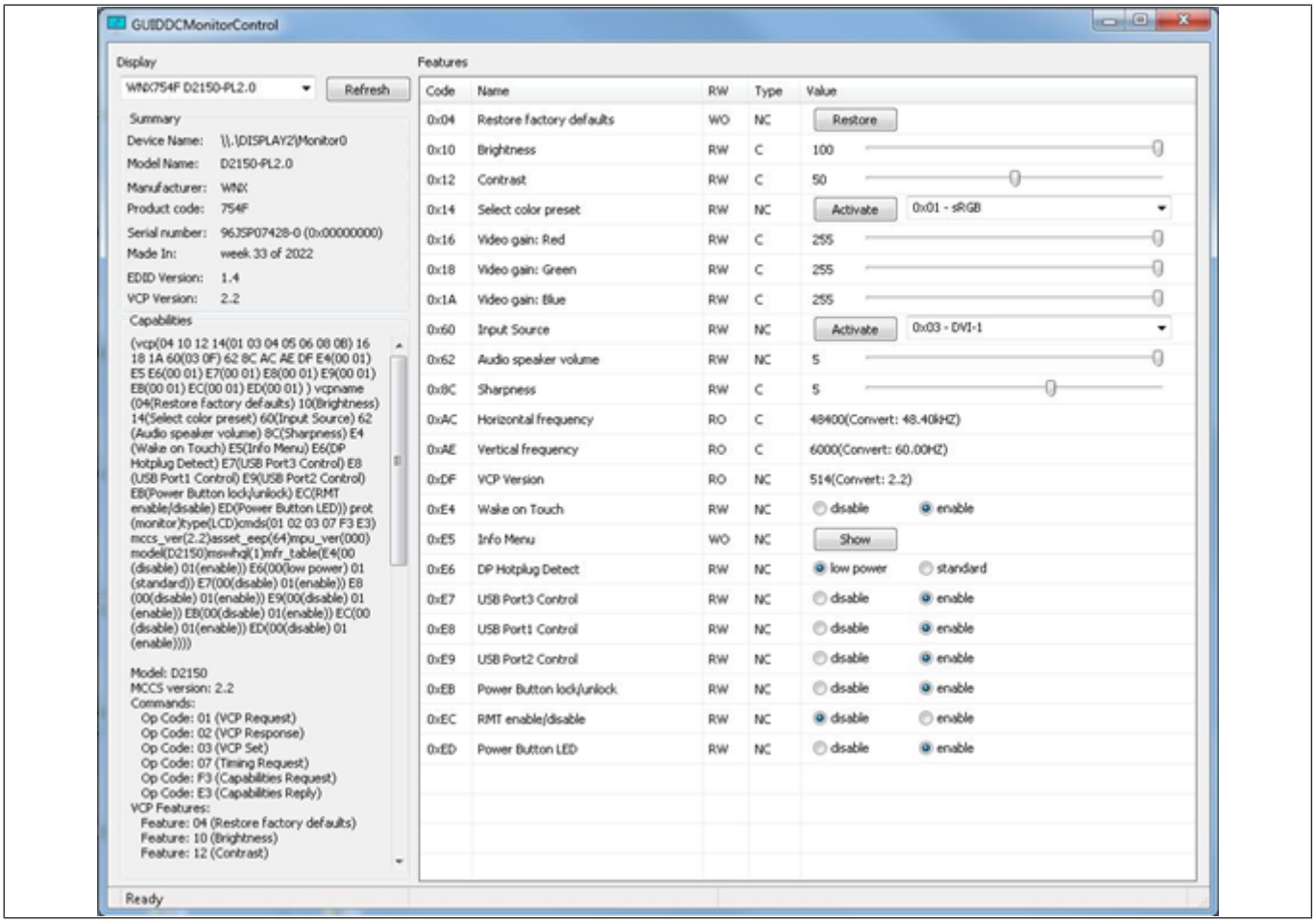

Figure 6-1: GUIDDCMonitorControl

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Table 6-1: Display Settings

Setting	Description	Default
Restore Factory Defaults	Restore original display settings.	n.a.
Brightness	Adjusts the brightness level of the screen.	100
Contrast	Adjusts the screen contrast.	50
Select color preset	Selects and adjusts the screen color.	sRGB
Video gain (Red, Green, Blue)	Adjustment only applicable under User setting.	255
Input Source	Selects the video input signal (DVI/DisplayPort).	n.a.
Audio speaker volume	Adjusts the built-in speaker volume.	5
Sharpness	Adjusts the screen sharpness.	5
Wake on Touch	Enable/Disable touch when display in Sleep/Standby. Reduced power state if set to disable.	enable
Info Menu	Invoke menu showing firmware versions, serial number etc.	n.a.
DP Hotplug Detect	Setting only applicable for USBC/DP interface. Reduced power state if set to low power.	low power
USB Port3 Control	Enable/Disable USB2.0 port on Right side-attachment.	enable
USB Port1 Control	Enable/Disable USB2.0 Type-A port located at IO shield.	enable
USB Port2 Control	Enable/Disable USB2.0 port on Left side-attachment.	enable
Power Button lock/unlock	Enable/Unlock or Disable/Lock of Power Button.	enable
RMT enable/disable	Enable/Disable of RMT (Refer to Sect 6.1). Setting only applicable for PLINK2 connection to BEETLE system.	disable
Power Button LED	Enable/Disable of Power Button during display Softoff/Sleep (Refer to Sect 5.1).	enable

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6.1 RMT Enable/Disable

The RMT feature allows the display's power button to act as the power button of the BEETLE system. This feature is only available when the display is connected to a BEETLE system using a PLINK2™ interface cable. The mode of operation depends on the settings of the BEETLE BIOS as well as on the display settings. For details please consult the table below.

BEETLE BIOS Settings	**Settings**	**BEETLE System and Display State**	**Result of pressing the Display power button**
RMT enabled	RMT enabled	OFF	System starts booting; Display switches on by system.
		ON	System starts shutdown; Display switches off when system shutdown is completed.
	RMT disabled	OFF	System starts booting; Display switches on by system.
		ON	System no reaction; Display switches off.
RMT disabled	RMT enabled	OFF	System no reaction; Display remains off.
		ON	System no reaction; Display remains on.
	RMT disabled	OFF	System no reaction; Display remains off.
		ON	System no reaction; Display switches off.

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6.2 Power button - Lock/Unlock

The power button is unlocked by default. The user can switch the display on and off discretely, independent of the connected system. If the power button is locked, the user cannot manually switch the display on or off.

NOTE

If RMT is enabled, the power button will initiate RMT signal to the host system only when there is single PLINK connection. If the display is powered by DC-Jack or USB-C, then RMT signal will not be initiated.

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7 Touch Technologies

7.1 Projected Capacitive Touch Screen

7.1.1 General information

The use of projected-capacitive touch screens has all the benefits a normal capacitive touch screen has:

- fast processing of touch information
- high sensitivity (use with hands, conductive pencils and also with thin gloves)
- high resolution
- improved legibility and display brightness due to optimal light transmission

In addition the technology of projected-capacitive touch screens is characterized by significant higher robustness and stability, because the active touch surface – different from common capacitive touch screens which were used until now - is located on the back side of the touch screen. Thus the active touch surface is not touched directly anymore and therefore will not wear off by normal use. As most of the surface contaminations do not cause an interference of the touch screen, this technology can be used in public or under severe environmental conditions.

7.1.2 Instructions for using the Touch Screen

The touch screen responds to the lightest touches. The touch with only one finger is like the use of the left mouse button. The use of the touch screen with two fingers generates a zoom if the fingers are brought together or pulled apart. With a circular motion of the fingers the element on the display can be rotated. This function must be supported by either the operating system or by the application.

7.1.3 Cleaning instructions

	⚠ WARNING
	Always turn off the system before cleaning. The glass surface of your Touch Screen should be cleaned with a mild, abrasive free, commercially available glass cleaning product. All pH neutral materials (pH 6 to 8) are good for cleaning. Cleaners with pH values 9 to 10 are not recommended. Cleaning with water and isopropyl alcohol is possible as well. Do not use sol vents containing acetic acid. Use a soft, fine-meshed cloth to clean the surface. Dampen the cloth slightly and then clean the screen.

	NOTE
	A wrong maintenance may cause damages to the screen, which are not covered by guarantee or warranty.

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8 Initial Setup

8.1 Unpacking and Checking the Delivery Unit

Unpack the parts and check to see whether the delivery matches the information on the delivery note. The delivery comprises the respective screen module. Data cables, necessary for operation, can be ordered separately. If damage has occurred during shipping or if the package contents do not match the delivery note, immediately inform your Diebold Nixdorf sales outlet.

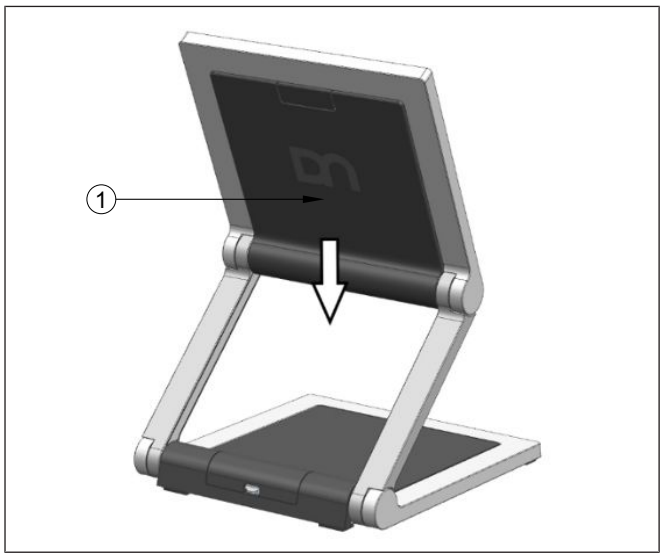
Transport the device only in its original packaging (to protect it against impact and shock).

8.2 Installing the Display to a Stand

Take the stand and the display out of the packaging. For installation you will need a torx screwdriver to loosen and tighten the screws.

8.2.1 Installing the Display to the Stand (Standard)

8.2.1.1 Preparing the Stand



1. Remove the VESA cover by sliding it downwards (indicated by arrow).

	NOTE
	Be careful when removing the VESA cover to avoid damaging it.

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8.2.1.2 Preparing the Display

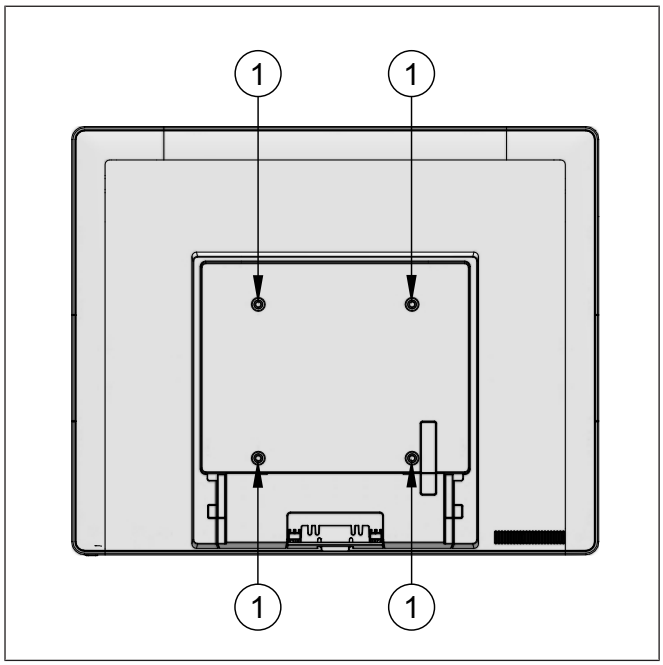

Figure 8-1: D2150 - Removing screws

1. Place a protective sheet on a flat surface
2. Lay the display face down on the protection sheet.
3. Remove the 4 screws (1).

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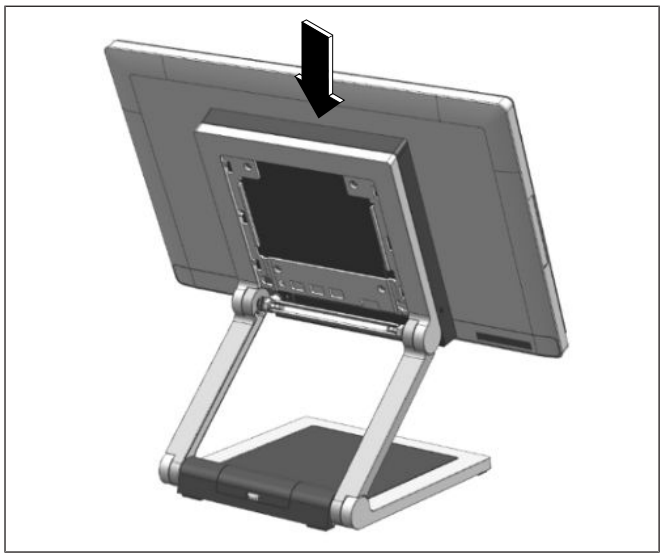
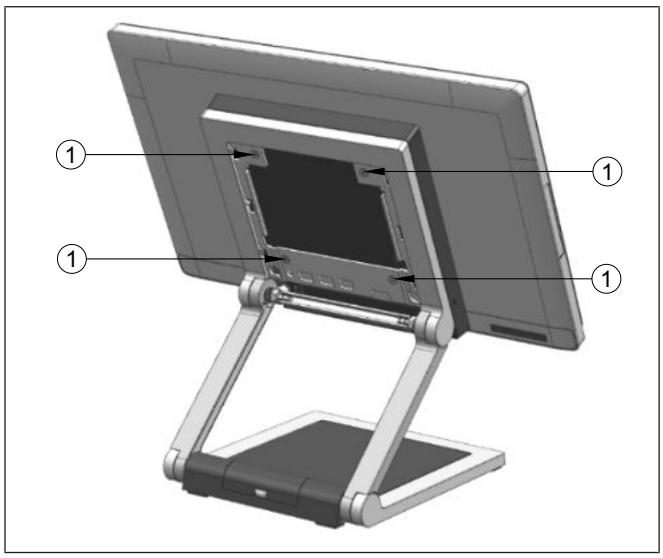
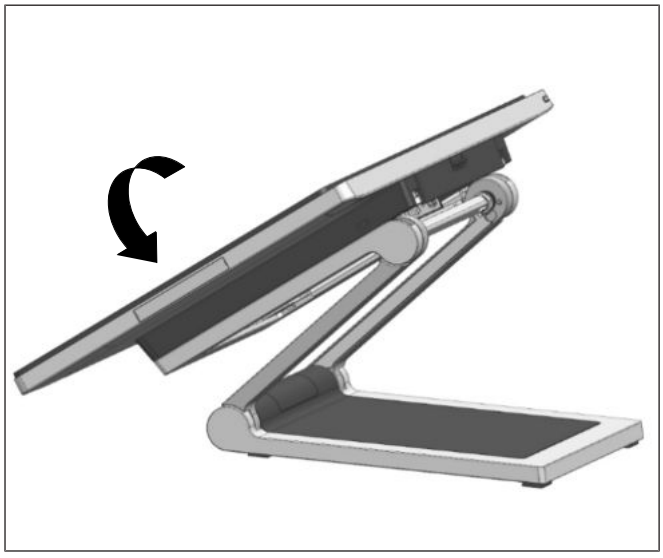
8.2.1.3 Installing the Display to the Stand



1. Fit the display on the stand while holding it in place.



2. Tighten the 4 M4x6 countersunk screws (1) (that came with the stand) to secure the system to the stand.



3. Tilt the display back to access the connector panel at the bottom of the display.

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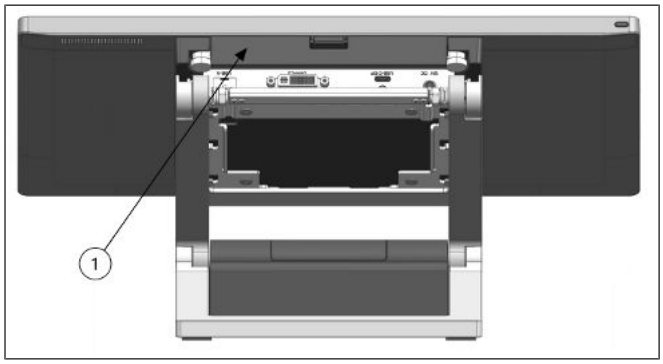
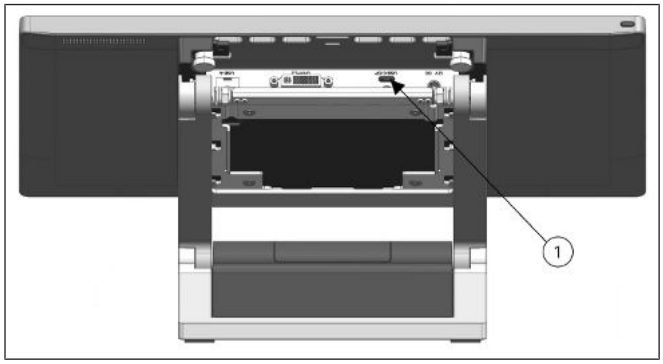
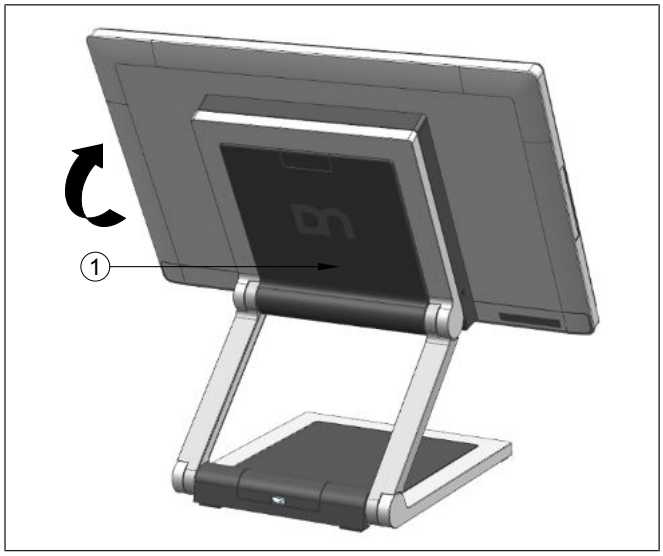


4. Remove the cable cover (1).



5. Plug the USB-C cable into the port indicated (1).
6. Attach the cable cover.



7. Tilt the display back to its operating position.
8. Replace the VESA cover (1) by pushing it upwards.

NOTE

When uninstalling the stand, always make sure that all cables are disconnected.

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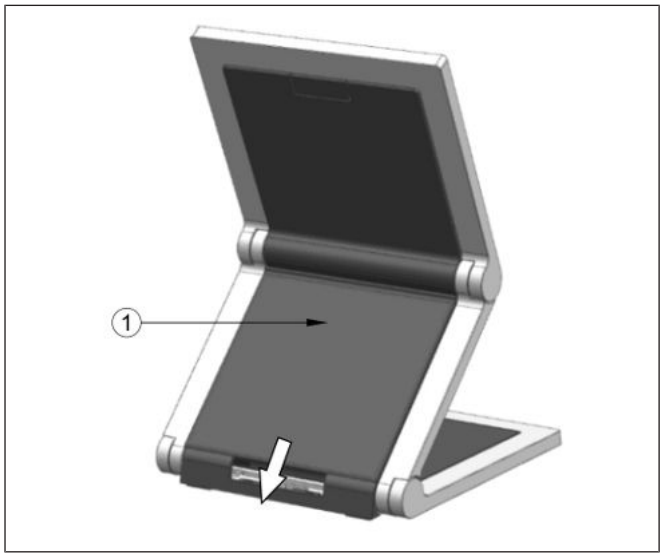
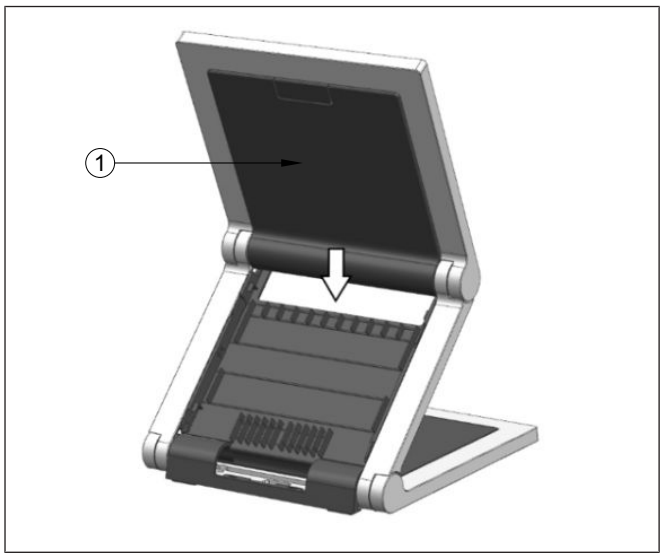
8.2.2 Installing the Display to the Stand (With Cable Covers)

8.2.2.1 Preparing the Stand



1. Remove the back cable cover (1) by sliding it downwards (indicated by arrow).



From the stand:

2. Remove the VESA cover by sliding it downwards (indicated by arrow).

	NOTE
	Be careful when removing the VESA cover to avoid damaging it.

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8.2.2.2 Preparing the Display

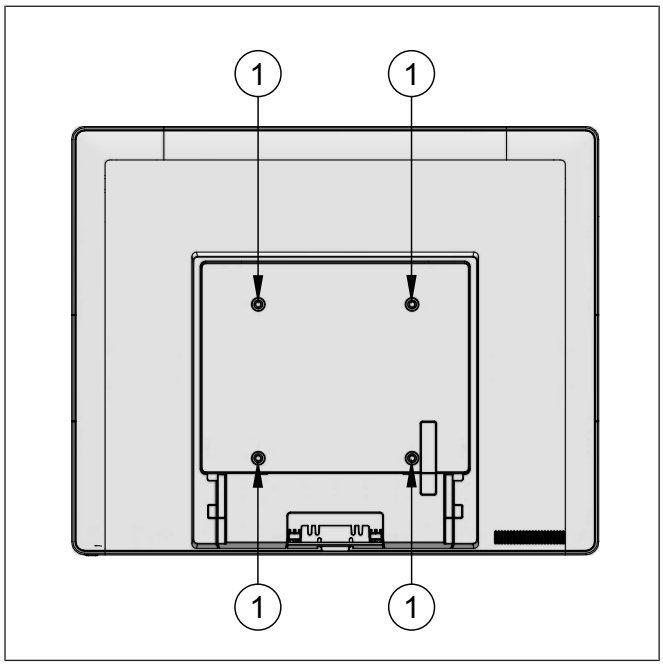

Figure 8-2: D2150 - Removing screws

1. Place a protective sheet on a flat surface
2. Lay the display face down on the protection sheet.
3. Remove the 4 screws (1).

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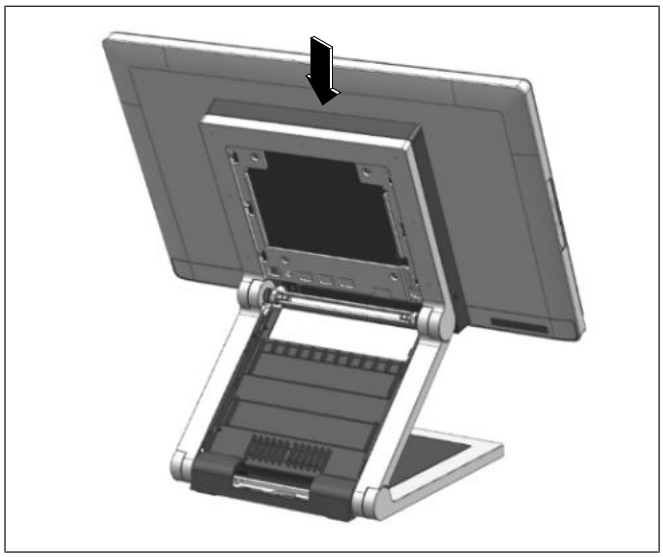
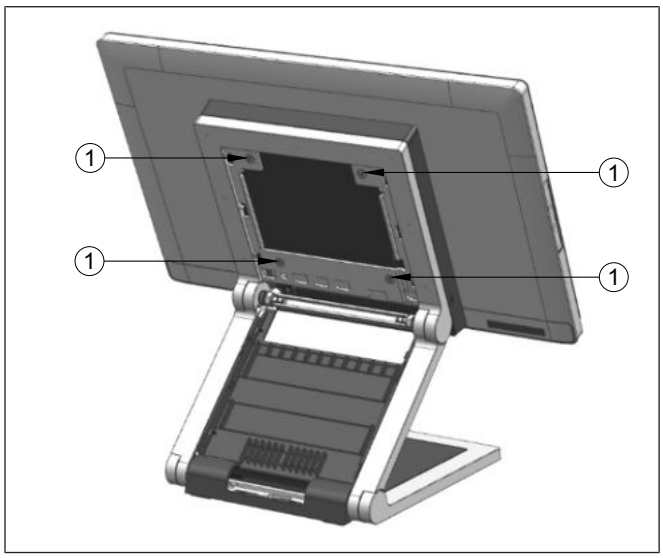
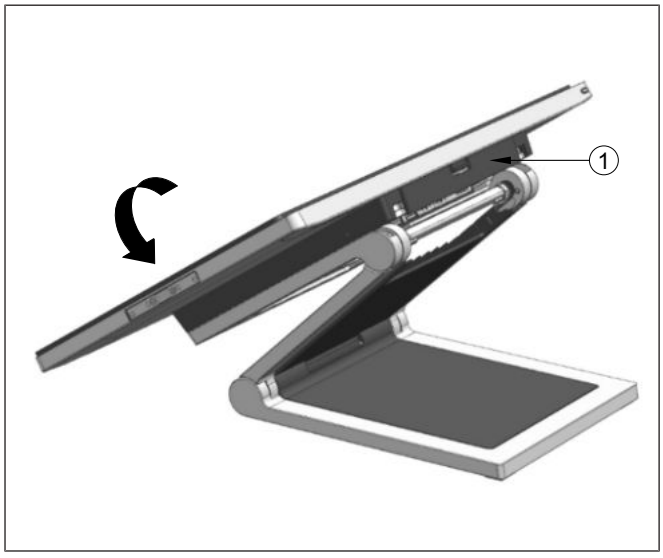
8.2.2.3 Installing the Display to the Stand



1. Fit the display on the stand while holding it in place.



2. Tighten the 4 M4x6 countersunk screws (1) (that came with the stand) to secure the system to the stand.



3. Tilt the display back to access the connector panel at the bottom of the display.
4. Remove the cable cover (1) at the bottom of the display.

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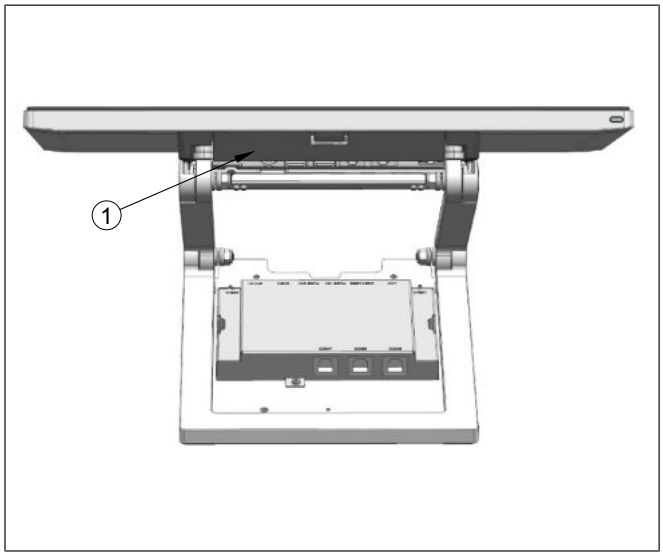
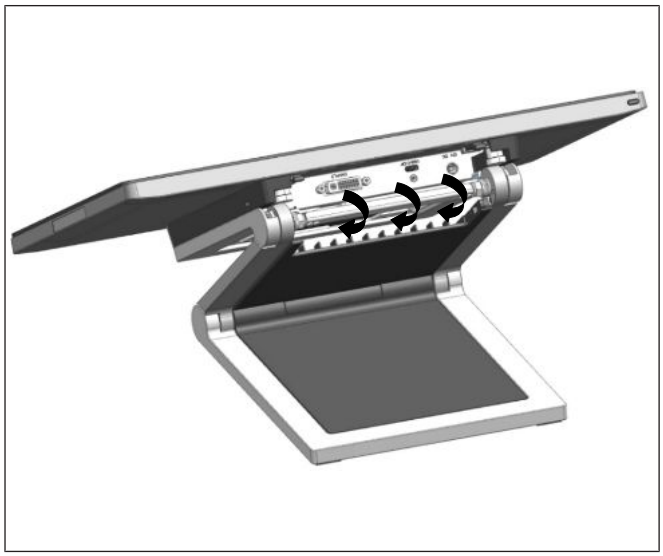


5. Remove the cable cover (1) at the bottom of the display.



6. Route the cables from the connector panel in the path as illustrated (arrows).
7. Replace the cable cover previously removed.

1. Tilt the display back to its operating position.

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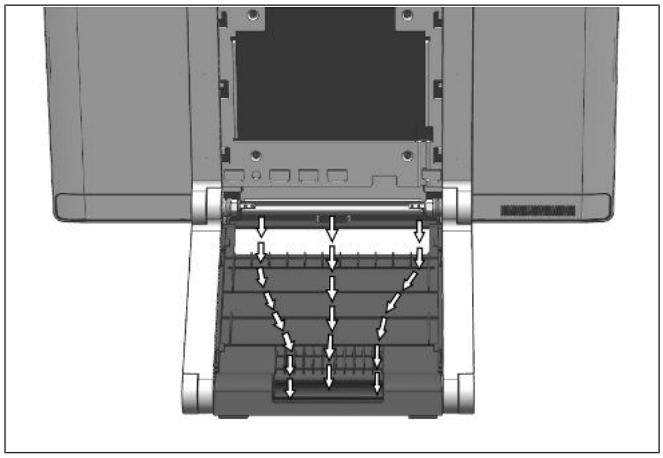
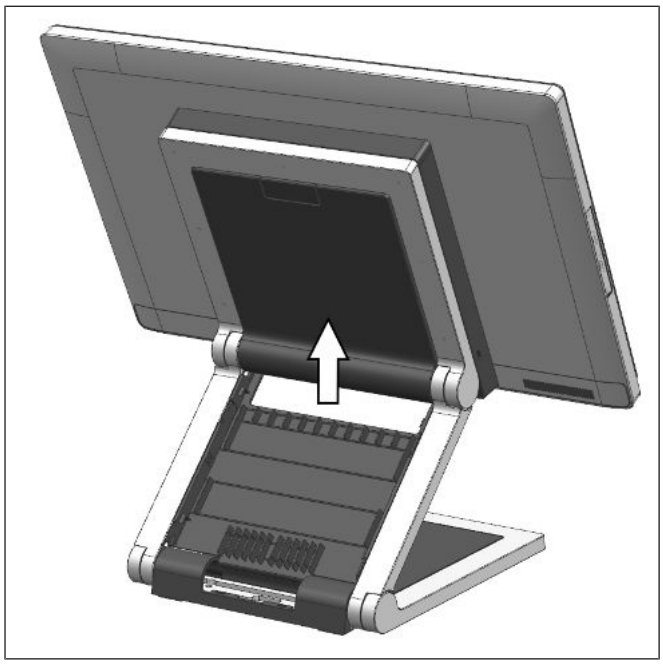
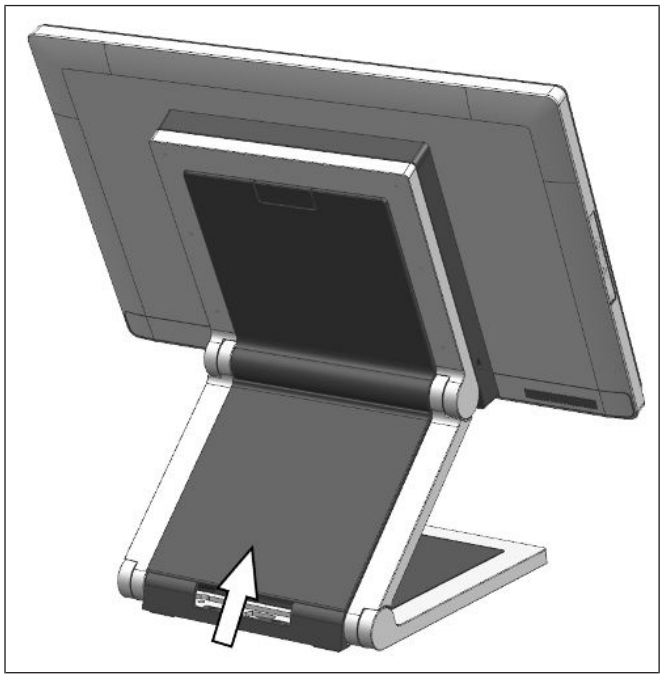


8. Tug the cables neatly into their respective cable channels as illustrated (arrows).

	NOTE
	The arrow paths are for illustration purpose only and are not meant to be exhaustive.



9. Replace the VESA cover by sliding it upwards.



10. Align the back cable cover (1) with the front cable cover (2).
11. Replace back cable cover (1) by sliding it upwards.

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8.3 Connecting the Display

	NOTE
	Switch off the display and disconnect it from the main supply before connecting the cables.

8.4 Wall Mount

	NOTE
	In case of wall mount configuration, installation height must be ≤ 2m, using 4 mounting screws (M4x6).

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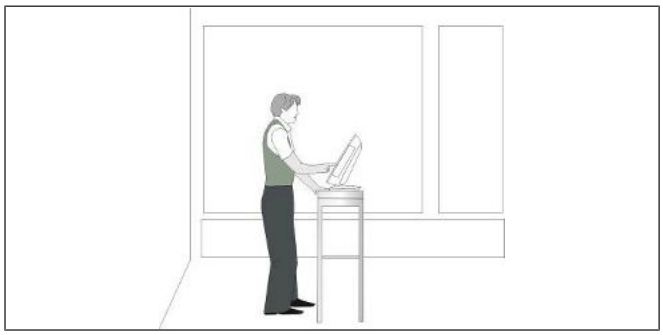
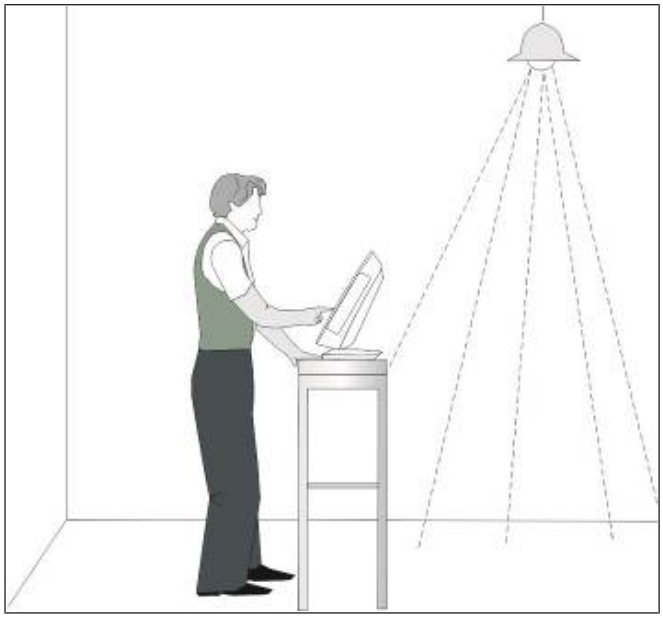
9 Ergonomic Terminal Workplace

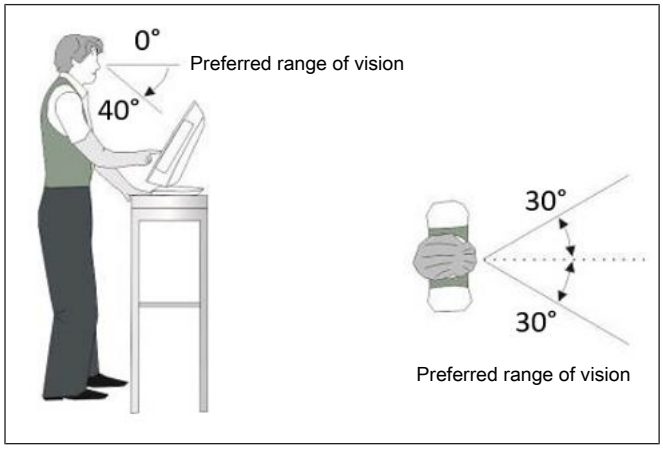


Please observe the following when setting up your terminal workplace:

Avoid direct glaring and reflective glaring. Use the screen only in a controlled luminance surrounding. Install the device with a viewing direction that is parallel to the windows.



Avoid reflective glaring caused by electric light sources.



Position the screen within a preferred and permitted range of vision, so that you can look vertically onto the screen.

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10 Peripherals (optional)

10.1 Waiter Lock

The Waiter Lock module is used for system access control.

The operation of the system is very simple, the key is placed onto the magnetic probe (see figure). The key is held magnetically to the probe and transmits the data by an electrical USB interface.

The readout of the data may be integrated easily in a software application.

	NOTE
	For guide on software application programming, please refer to the system MSR/Waiter Lock Programming Manual.

10.1.1 Installation

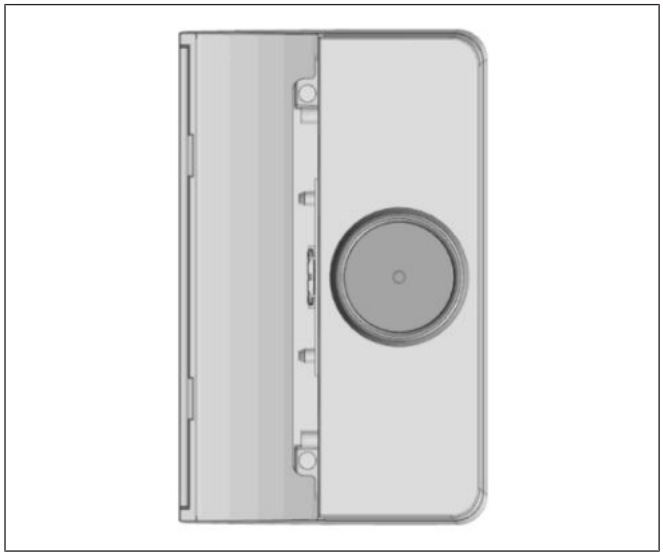

Figure 10-1: Waiter Lock kit

1. The Waiter Lock kit as seen. Containing the Waiter Lock module and two M3x4 screws.

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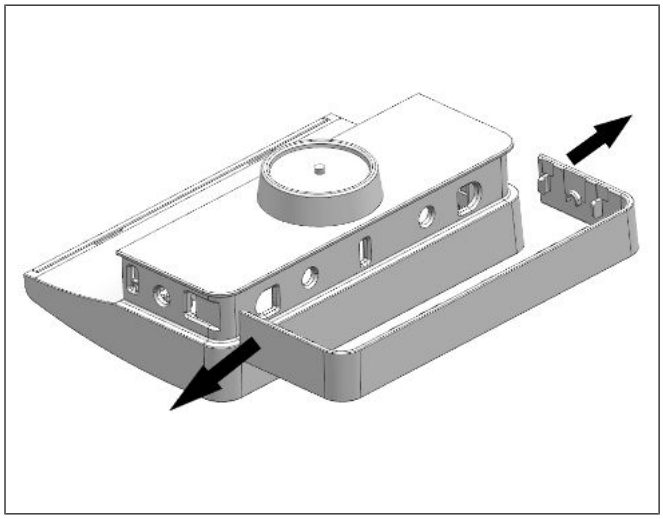

Figure 10-2: Removing Waiter Lock side cover

2. Gently remove the Waiter Lock side cover by prying the 2 ends outwards (see arrows) with a small screwdriver.

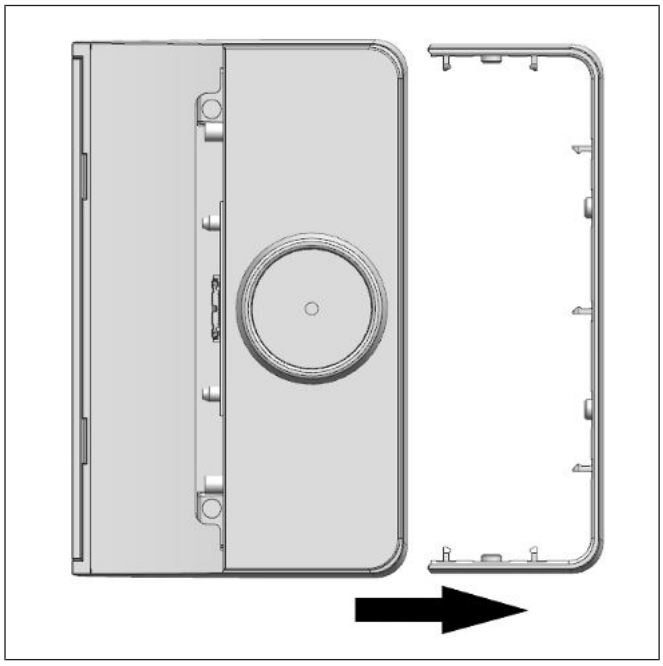

Figure 10-3: Sliding out the side cover

3. Then, slide the side cover out (see arrow).

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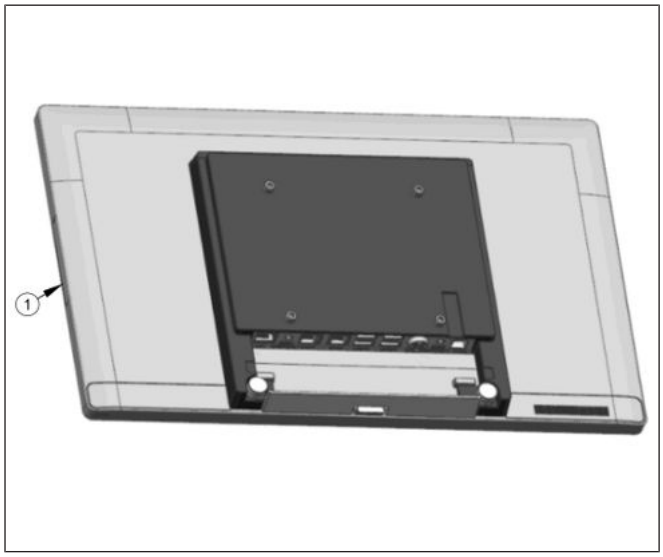

Figure 10-4: Removing the side-attach peripheral connection cover

4. Remove either side-attach peripheral connection cover of the system.

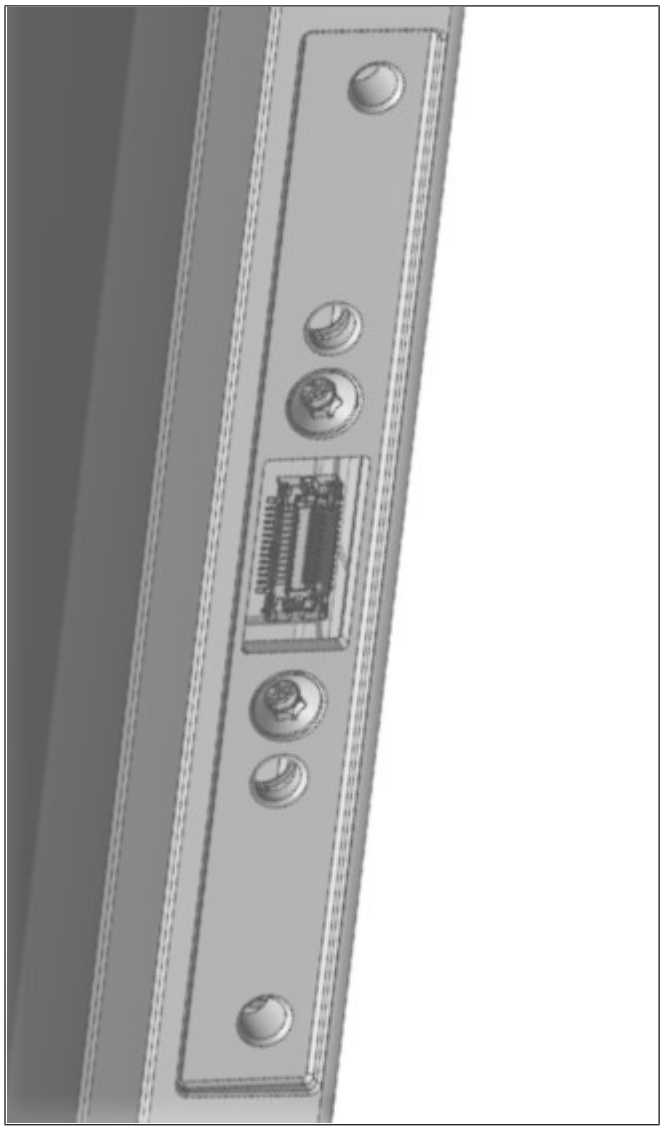

Figure 10-5: Side-attach peripheral connection cover removed

5. The side-attach peripheral connection cover now removed as seen.

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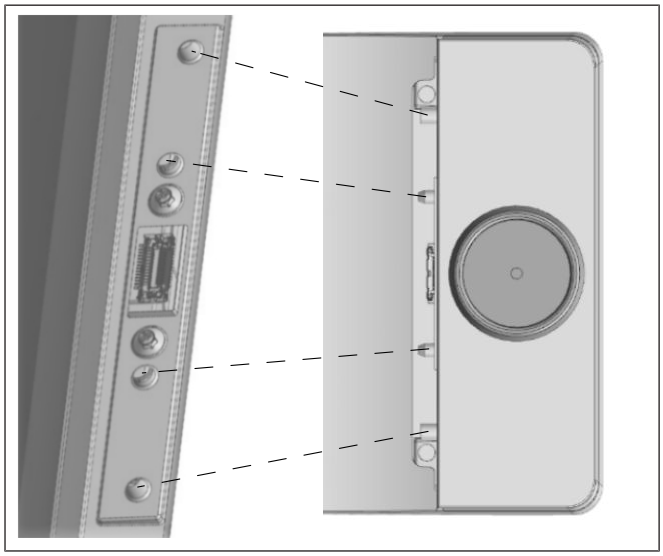

Figure 10-6: Fitting the Waiter Lock into the system

6. Insert the Waiter Lock module into the now exposed USB port of the system.
7. Fit each knob on the Waiter Lock module into its respective groove on the system as indicated.

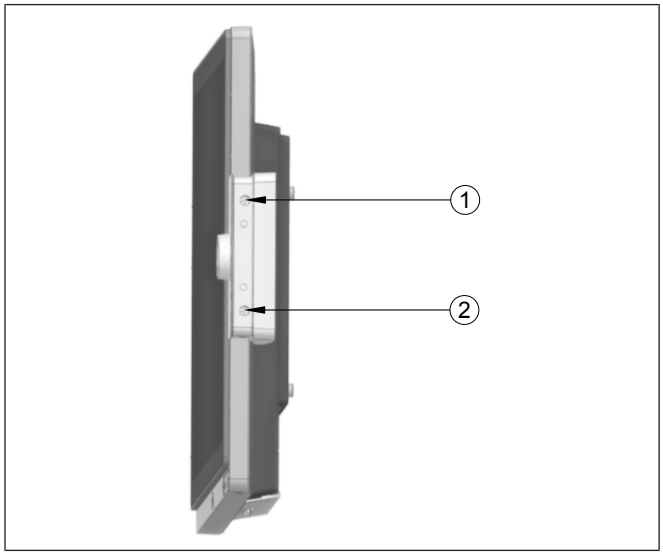

Figure 10-7: Tightening the Waiter Lock screws

8. Then put on and tighten two M3x4 screws at (1) and (2).

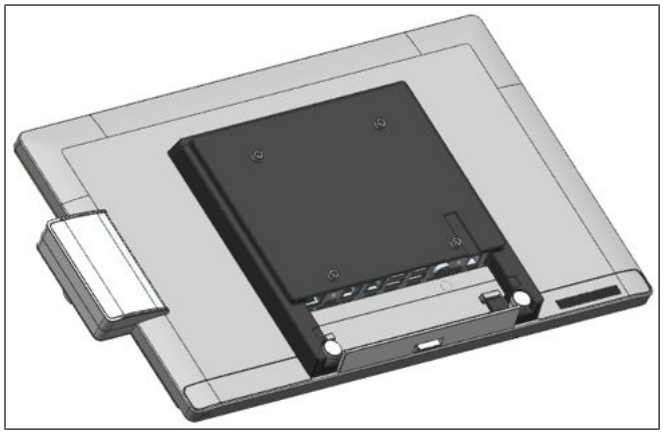

Figure 10-8: Waiter Lock installed

9. Re-attach the side-attach peripheral connection cover.
10. Re-attach the Waiter Lock side cover.
11. The Waiter Lock is now installed.

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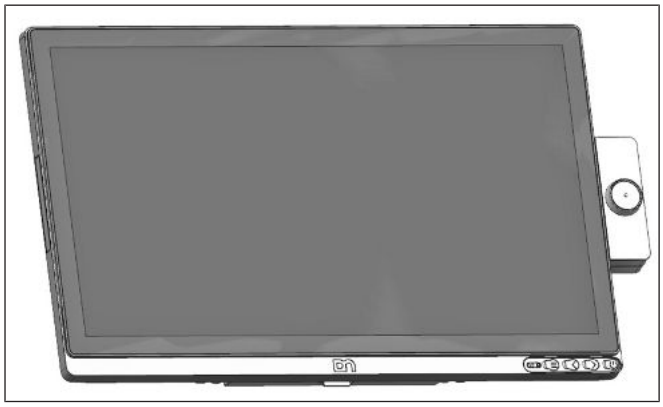

Figure 10-9: Front view with Waiter Lock

12. The front view of the system with the Waiter Lock as seen.

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10.2 Magnetic Swipe Card Reader (MSR)

The MSR module supports reading of standard ISO 3-track magnetic swipe card. Card reading is bi-directional.

The MSR module can be mounted either on the right or left side of the display.

10.2.1 How to operate

	NOTE
	For guide on software application programming, please refer to BA9x MSR/Waiter Lock Programming Manual.

Run the swipe card through the slit of the swipe card reader from top to bottom in a quick and steady movement. Make sure that the magnetic strip is to the right. When using swipe cards, the following 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 top of the specially designed slit of the reading device. If the card is inserted in another place, this could damage the reading head.

10.2.2 Cleaning instructions

In order to guarantee good reading results, the swipe card reader should be cleaned from time to time. This is carried out by using a special cleaning card that can be purchased from Diebold Nixdorf.

10.2.3 Installation

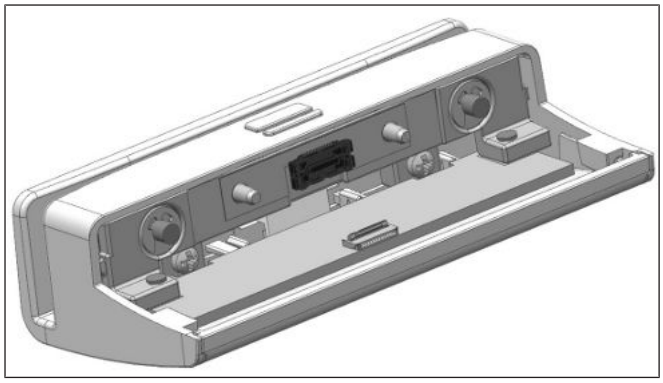

Figure 10-10: MSR kit

1. The MSR kit as seen. Containing the MSR module and two M3x4 screws.

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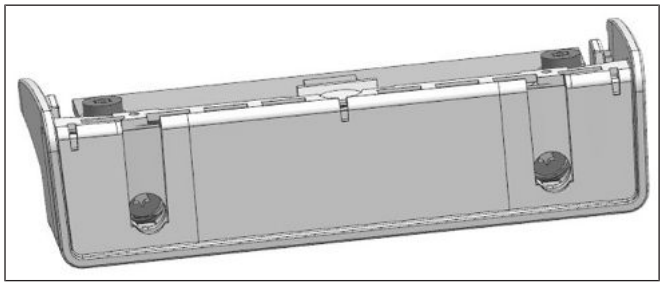

Figure 10-11: Removing side cover of MSR module

2. Gently remove the side cover of the MSR module found on the other side.

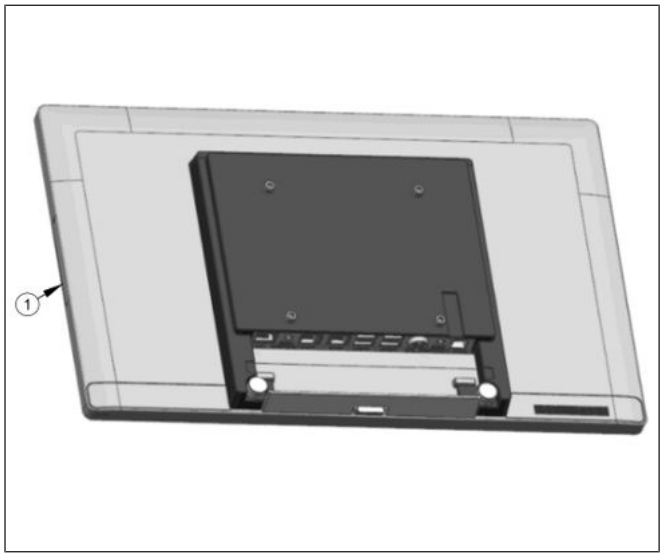

Figure 10-12: Removing the side-attached peripheral connection cover

3. Remove either side-attach peripheral connection cover (1) of the system.

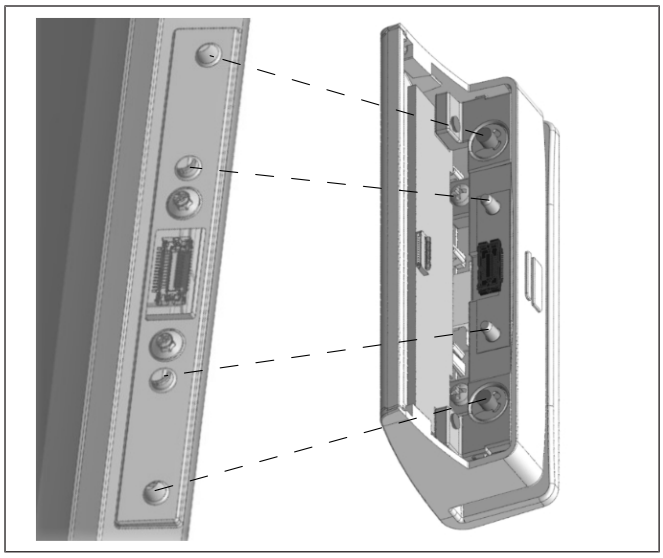

Figure 10-13: Fitting the MSR module into the system

4. Insert the MSR module into the now exposed USB port of the system.
5. Fit each knob on the MSR module into its respective groove on the system as indicated.

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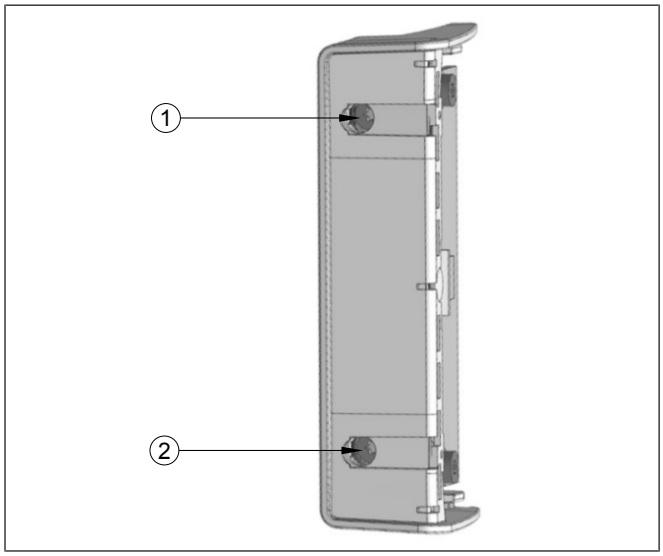

Figure 10-14: Tightening the screws of the MSR module

6. Then put on and tighten two M3x4 screws.

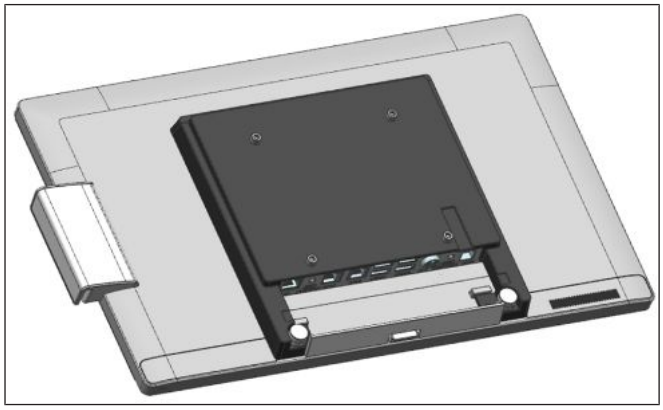

Figure 10-15: MSR module installed

7. Re-attach the side peripheral connection cover.
8. Re-attach the MSR module side cover.
9. The MSR is now installed. Back view of the system with the MSR as seen.

Figure 10-16: Front view with MSR module

10. The front view of the system with the MSR as seen.

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10.3 NFC Module

NOTE

For guide on software application programming, please refer to NFC module Programming Manual.

10.3.1 Installation

Figure 10-17: NFC module kit

1. The NFC Module kit as seen. Containing the NFC module and two M3x4 screws.

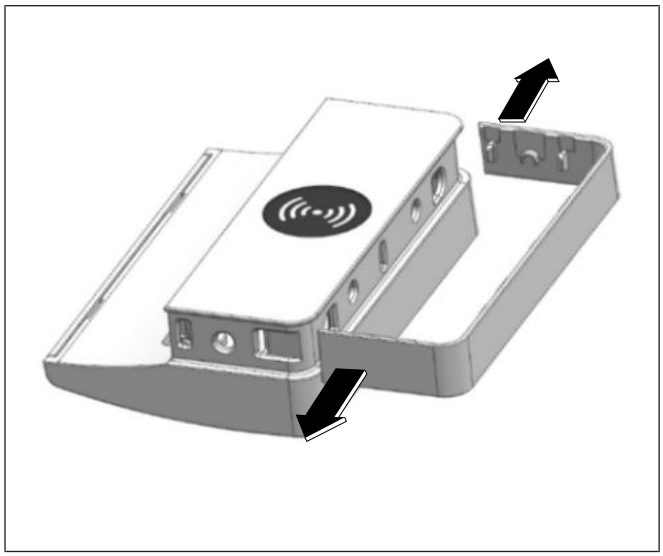

Figure 10-18: Removing the NFC module side cover

2. Gently remove the NFC Module side cover by prying the 2 ends outwards (arrows) with a small screwdriver.

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Figure 10-19: Sliding out the side cover

3. Then, slide the side cover out (see arrow).

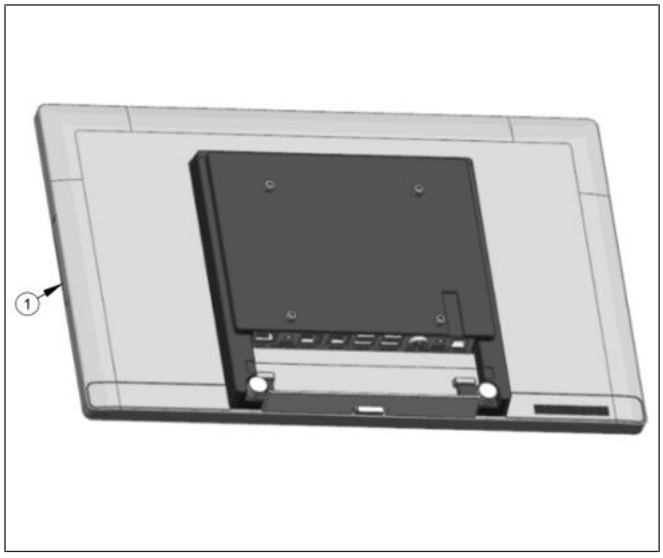

Figure 10-20: Removing the side-attach peripheral connection cover

4. Remove either side-attach peripheral connection cover of the .

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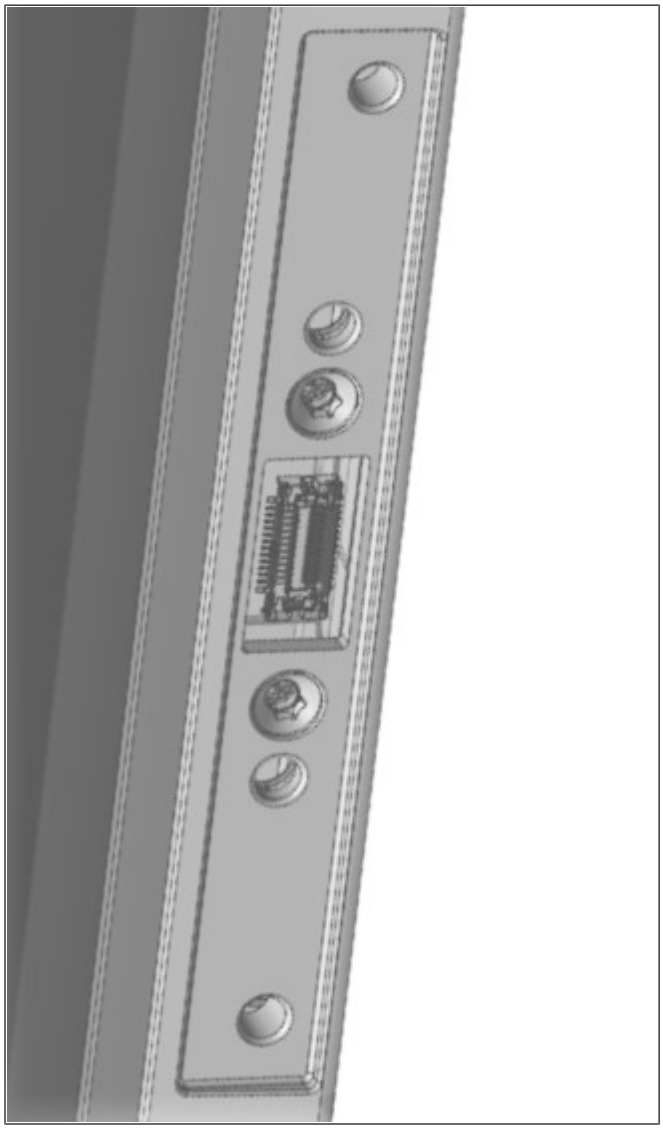

Figure 10-21: Side-attach peripheral connection cover removed

5. The side-attach peripheral connection cover now removed as seen.

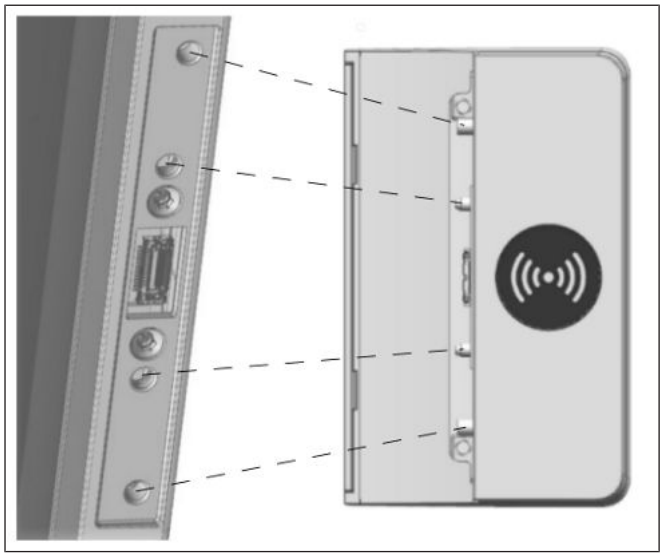

Figure 10-22: Fitting the NFC module into the

6. Insert the NFC module into the now exposed USB port of the .
7. Fit each knob on the NFC Module into its respective groove on the system as indicated.

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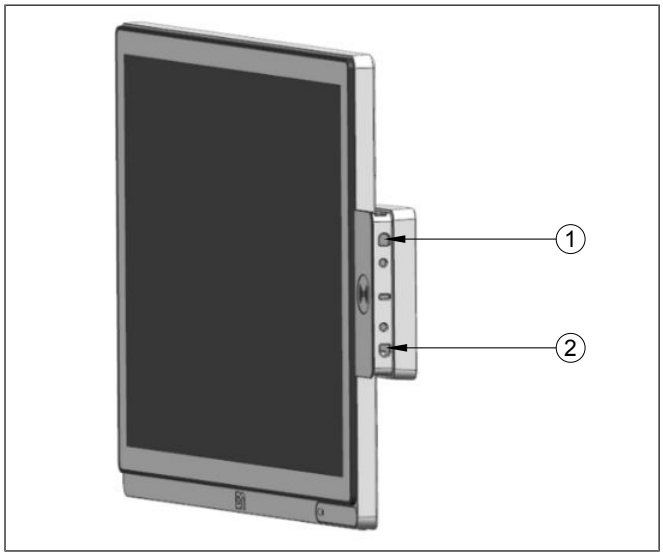

Figure 10-23: Tightening the screws of the NFC module

8. Then put on and tighten two M3x4 screws at (1) and (2).

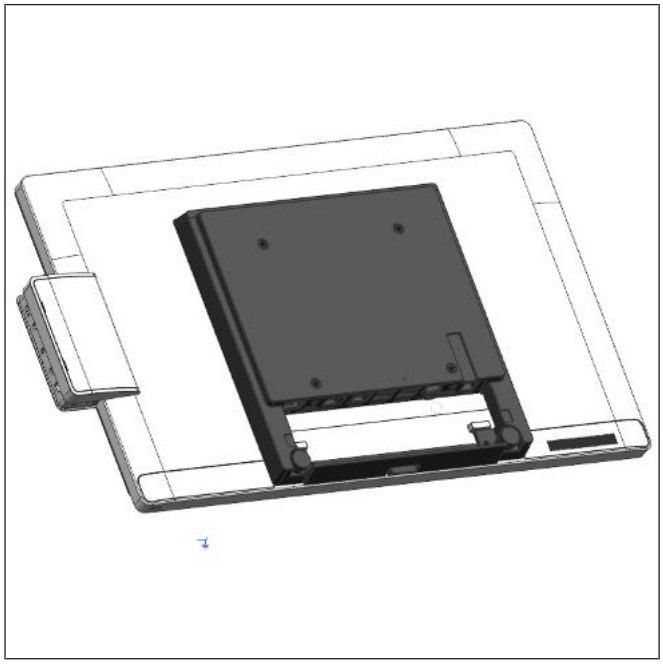

Figure 10-24: NFC module installed

9. Re-attach the side-attach peripheral connection cover.
10. Re-attach the NFC Module side cover.
11. The NFC Module is now installed.

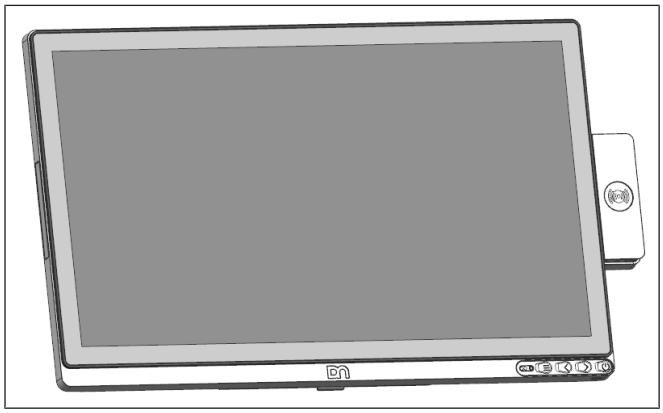

Figure 10-25: Front view with NFC module

The front view of the with the NFC Module as seen.

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10.4 2D Barcode Reader (BCR)

10.4.1 Overview

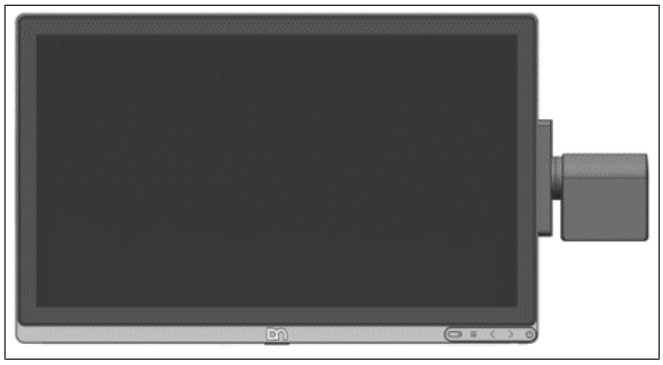
The BCR module for system can be installed on either the right or the left side of the system. The installation only requires attaching the module to the system by tightening two screws.

The module can be rotated 165 degrees clockwise and 165 degrees anti-clockwise.

	⚠ WARNING
	Do **not** stare into the red LED beam during operation.

System overview with BCR

Figure 10-26: System overview with BCR



System front view with BCR

Figure 10-27: Front view with BCR

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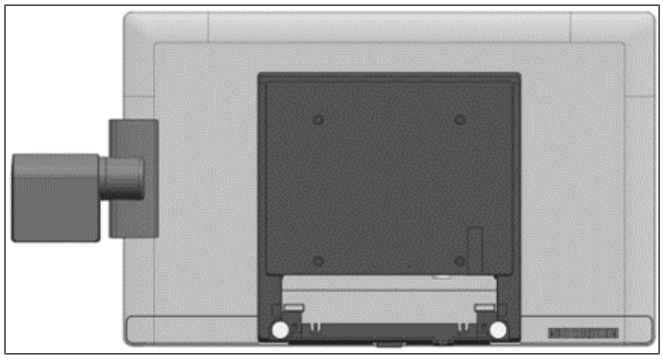
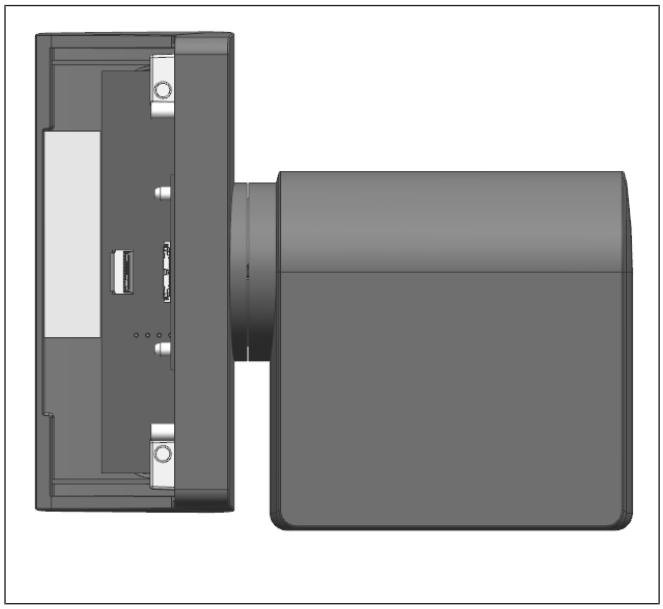


System back view with BCR

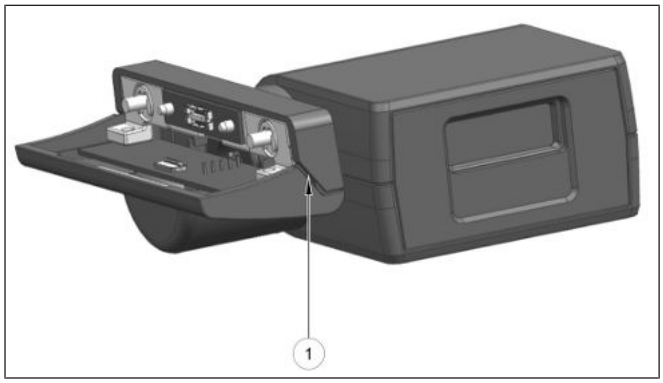
Figure 10-28: Back view with BCR

10.4.2 Installation



The BCR module is as shown.

Figure 10-29: BCR module



1. Remove the BCR top cover by inserting a small flat-head screwdriver into the slot (1) and pry open gently.
2. Repeat this for the slot on the opposite side.

Figure 10-30: Removing the BCR top cover

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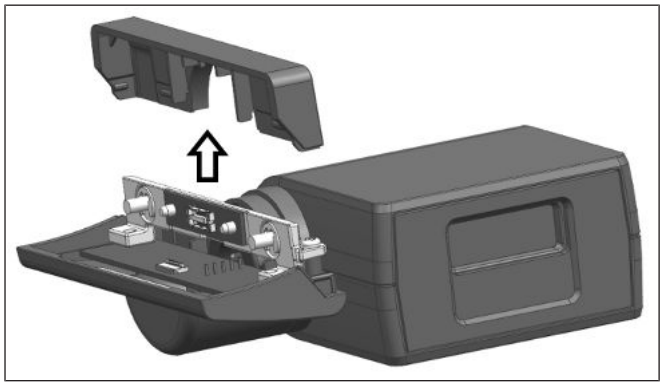

Figure 10-31: Sliding out the BCR top cover

3. Slide out the BCR top cover in the direction indicated by the arrow.

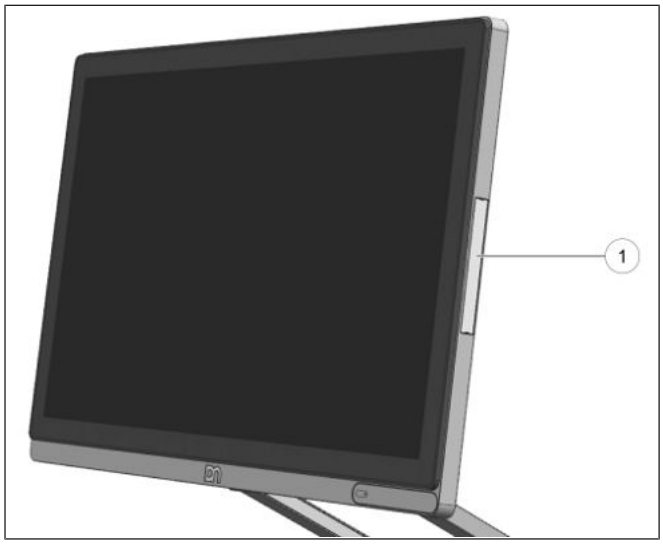

Figure 10-32: Removing the peripheral connection cover

4. To attach the BCR module, remove the peripheral connection cover (1) on the system.

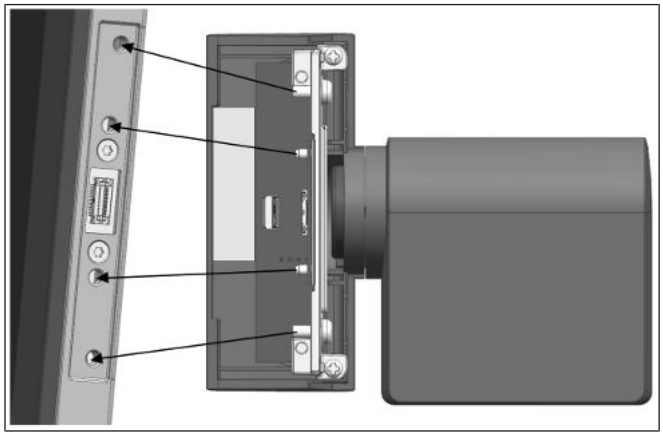

Figure 10-33: Docking the BCR to the system

5. Dock the BCR module to the system. Align the locating pins and screws (see arrows).

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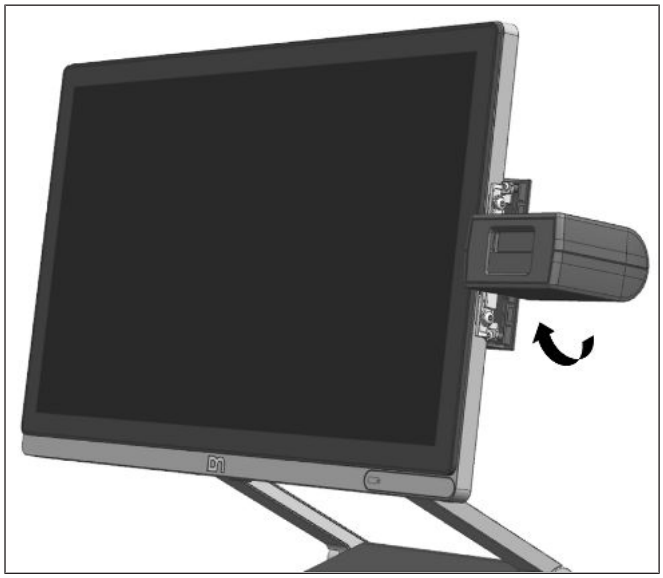

Figure 10-34: Swivelling the BCR Scanner

6. Swivel the Scanner such that the 2 locking screws are accessible.

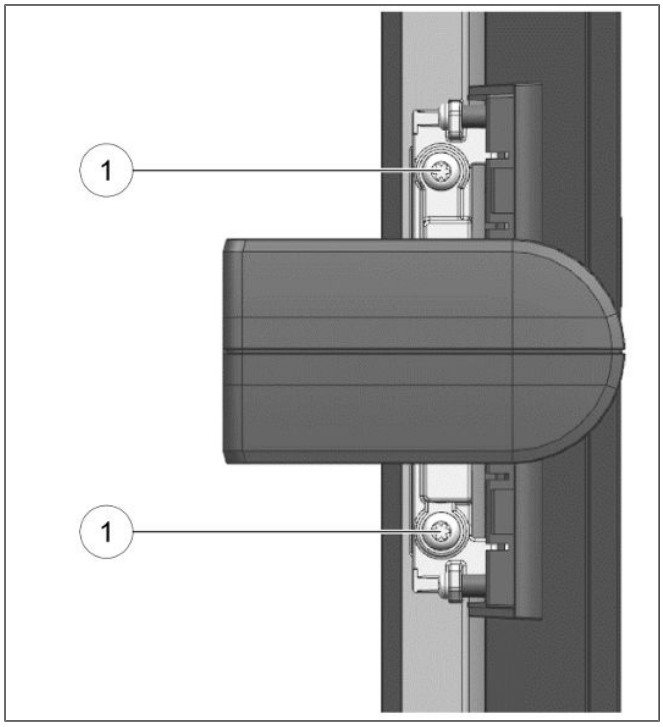

Figure 10-35: Tightening the locking screws

7. Tighten the 2 locking screws (1) with a screwdriver.

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8. Snap back the BCR top cover in the direction indicated by the arrow.
9. The BCR module installation to the is now complete.

Figure 10-36: Snapping back the BCR top cover

10.4.3 Swivel angle

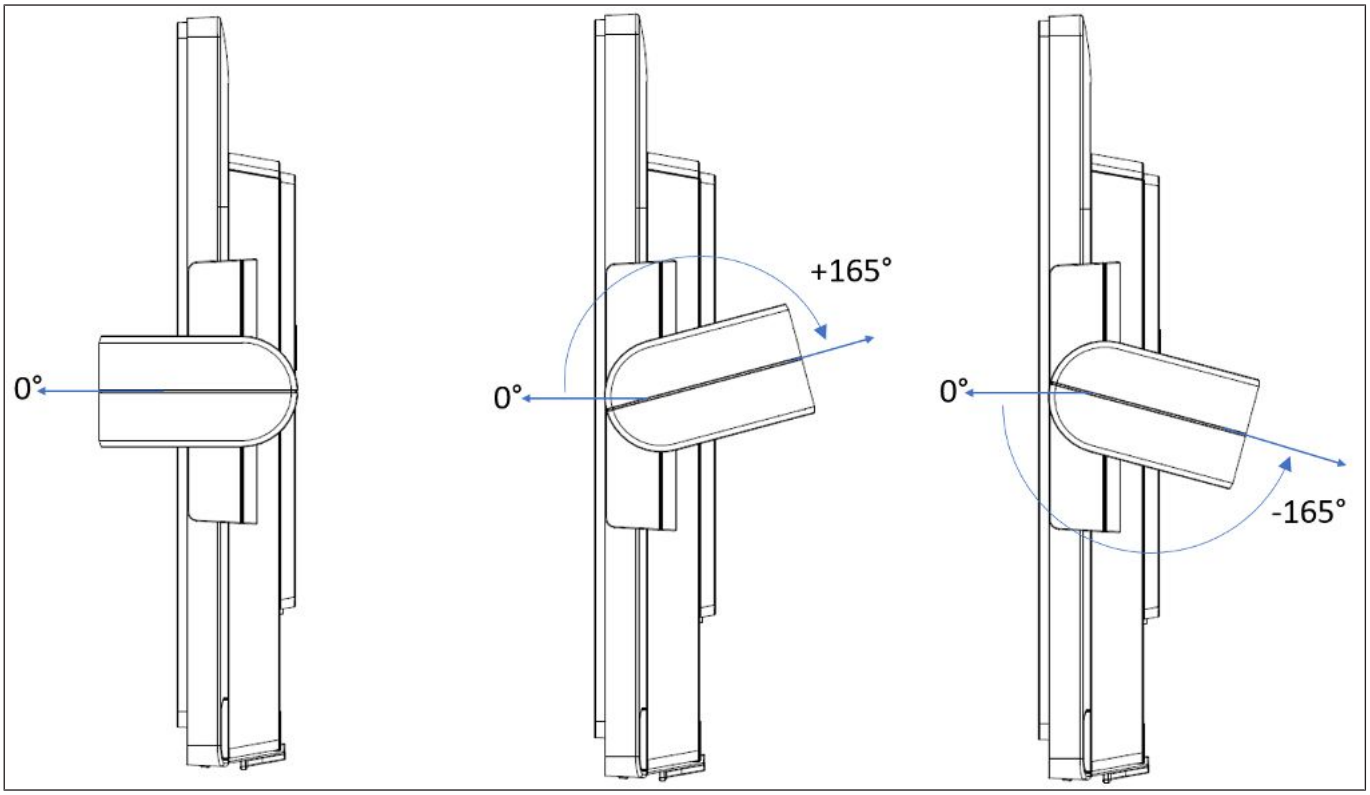

Figure 10-37: BCR swivel angles

10.5 Fingerprint Reader (FPR) Module

The A Family Fingerprint Reader module delivers a secure login and identification process for the retail sector. Via biometric analysis of fingerprints, it offers a perfect authentication for securing access into EPOS systems, especially in those retail environments that are accessible and open.

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10.5.1 Cleaning Instruction

Fingerprint Readers can be cleaned using the same Optical Cleaning Products used to clean eyeglasses or cell phone glass surfaces. These Optical Cleaning Products include lens tissues, microfiber cloths and cleaning solutions.

Use normal adhesive cellophane tape to pick the dust particles by lightly pasting it on the window and then peeling slowly until the window is cleared of all noticeable particles.

If user wants to disinfect the windows, they may use Ethanol or Isopropanol in a concentration of up to 70%. Apply the liquid to a soft lint-free material (as used to clean eyeglasses or camera lenses) or to a cotton swab and gently wipe the capture area.

If necessary, gently dab the fingerprint sensor (do not wipe) with a soft cloth (not paper) dampened with a mild ammonia-based glass cleaner to remove any milky haze.

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⚠ CAUTION

- Do not pour cleaning fluid directly on the fingerprint capture area.
- Do not submerge the sensor in liquid.
- Do not rub the fingerprint capture area with any abrasive material, including paper.

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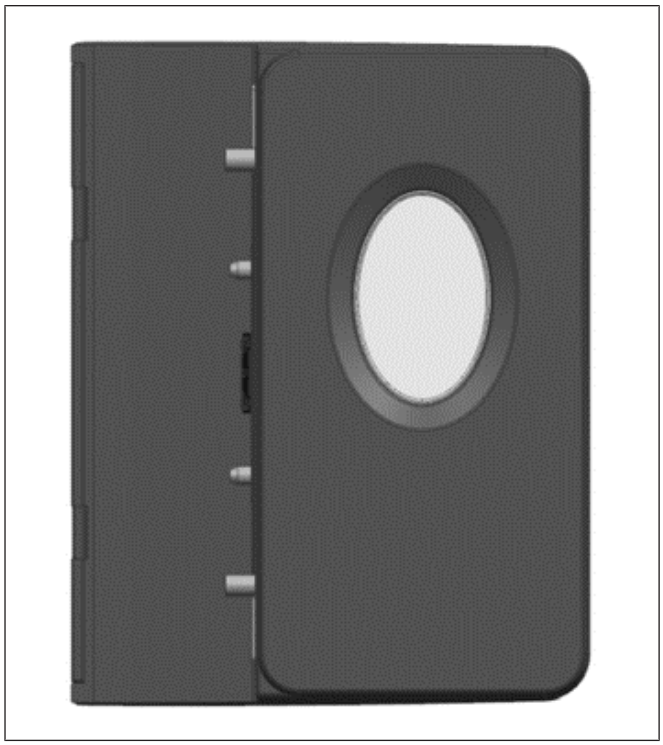
10.5.2 Installation

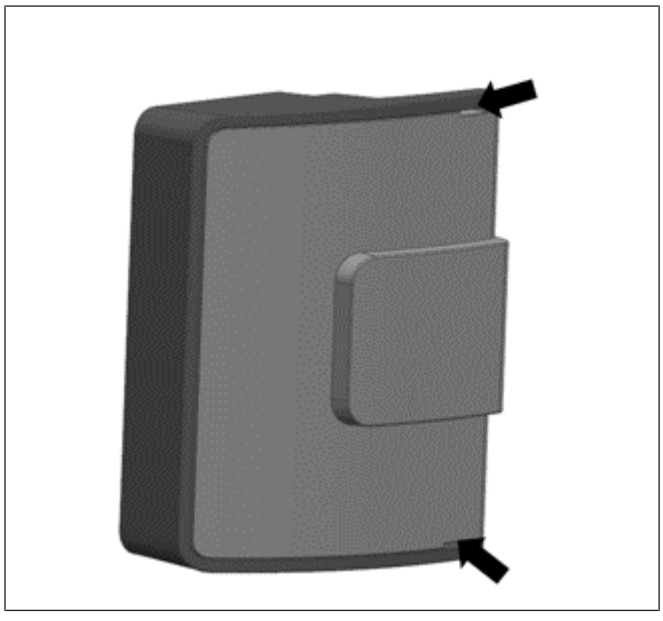
Unpack the parts and check whether the delivery matches the details of the delivery note.

The Fingerprint Reader can be installed on either the right or the left side of the screen. You will find a flap at the rear side of the display at the position for the peripherals.

Follow the steps below to install the reader to the display.



1. The Fingerprint kit is as seen. It contains the Fingerprint module.



2. Gently remove the side cover by prying the 2 ends outwards (see arrows) with a small screwdriver.

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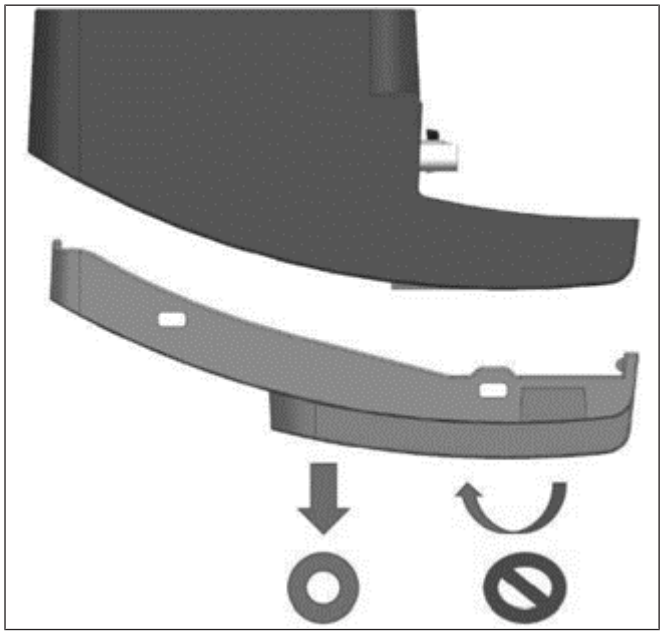
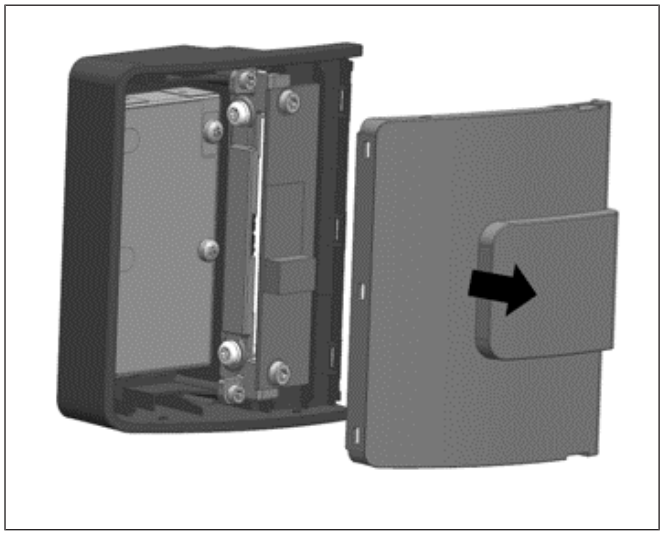
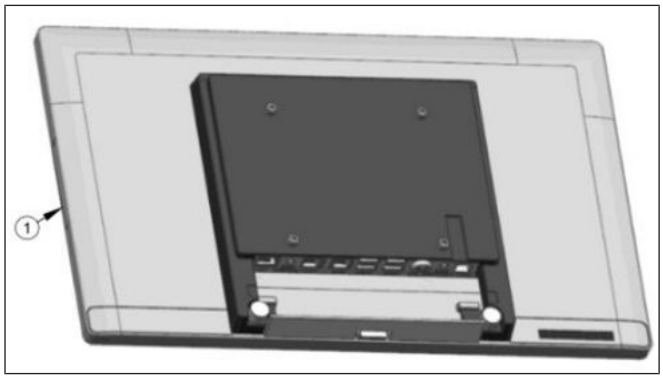


3. Then, slide the side cover out (see arrow).



NOTICE! Make sure to slide out the side cover correctly.



4. On the side to install the peripheral, remove the side-attach peripheral connection cover (1) of the BEETLE A Family.

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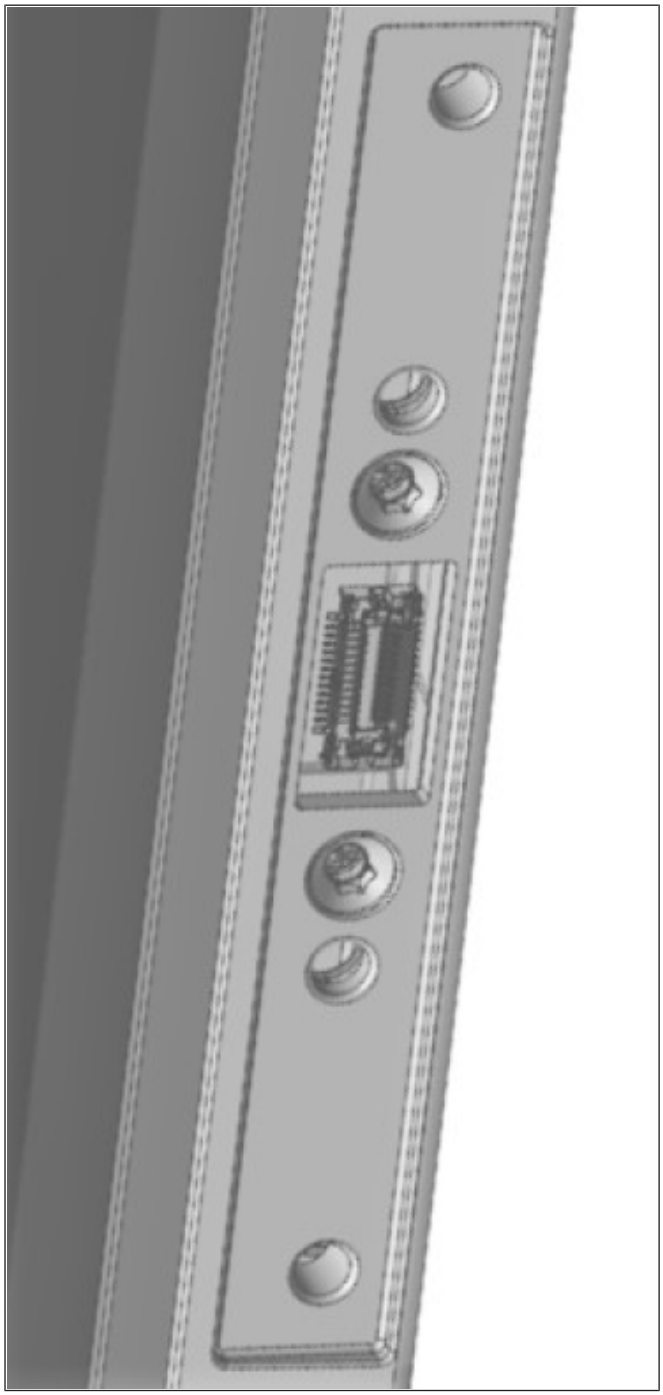
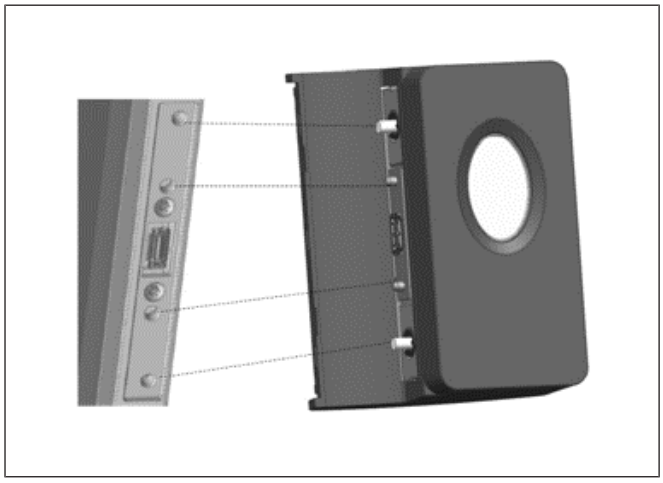


5. The side-attach peripheral connection cover is now removed as seen.



6. Insert the Fingerprint module into the now exposed USB port of the BEETLE A Family.
7. Fit each knob on the Fingerprint module into its respective groove on the system as indicated.

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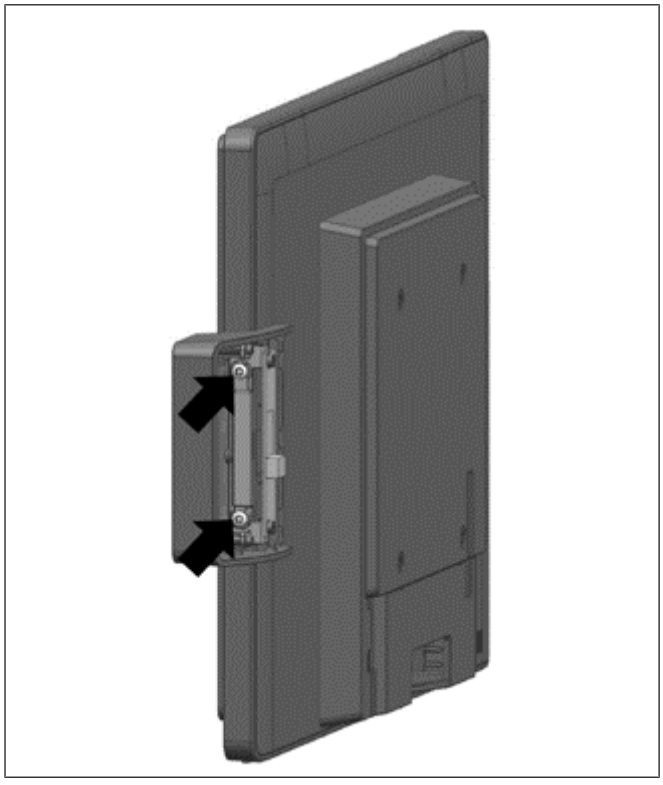
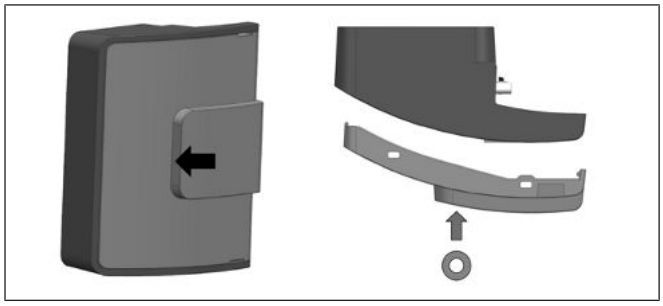
8. Position the screws to the correct location.



9. Then put on and tighten two M3x7 screws.

Screw in torque = 5 to 7 kgf.cm



10. Re-attach the side cover (see arrows).

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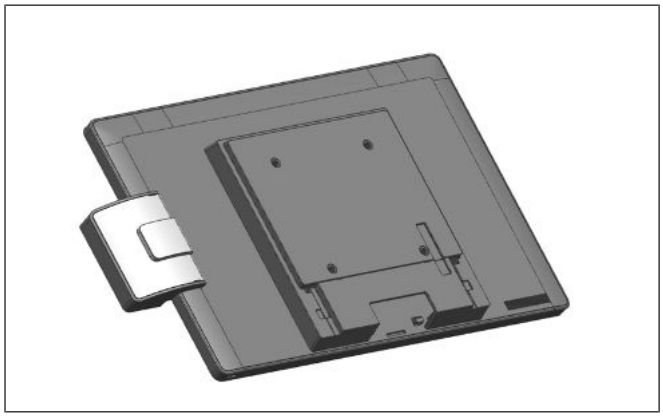
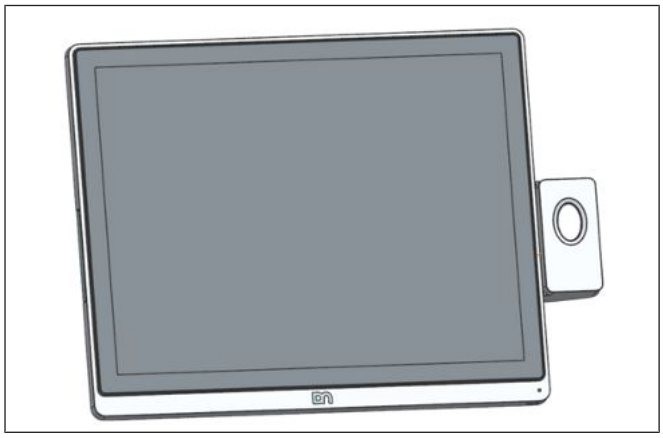


11. Re-attach the side cover. The Fingerprint module is now installed.



12. The front view of BEETLE A/ D Family with Fingerprinter Reader as seen.

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11 Technical Data

Model		D2150
Dimensions	Diagonal screen	15.0“
	Active screen (mm) horizontal x vertical	304.13 x 228.1
	Cable length	up to 3 m for Passive USB-C(DP) cable
		up to 4.5 m for Active USB-C(DP) cable
		up to 5 m for DVI/PLINK2 cable
	Display housing width x height x depth (mm)	341.9 x 277.5 x 38.2
Weight	without base	2.1 kg
	with base	3.9 kg
Climate class		IEC 721 3/3 Class 3K3
Operating temperature		+ 5 °C to + 40 °C
Humidity		5% to 85% Absolute humidity 1 g/m^3 to 25 g/m^3 Condensation is not permitted
Frequencies	Horizontal (KHz)	48.3
	Vertical (Hz)	60.0
Native resolution	Horizontal (Pixel)	1024
	Vertical (Pixel)	768
	Color depth	Up to 16.7 Mio.
Pixel format (approx. in mm)		0.297 x 0.297
Graphic interface	internal	LVDS
	external	PLINK2, DVI-D, USB-C DP
Viewing angle	Horizontal	85 °/ 85 °
	Vertical	85 °/ 85 °
Brightness	Projected Capacitive	350 cd/ m^2
Contrast	Projected Capacitive	1000:1
Backlight		LED
Power consumption	Typical	9 W
	Maximum	13.5 W

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11.1 Dimensions (mm)

D2150 with wall mount

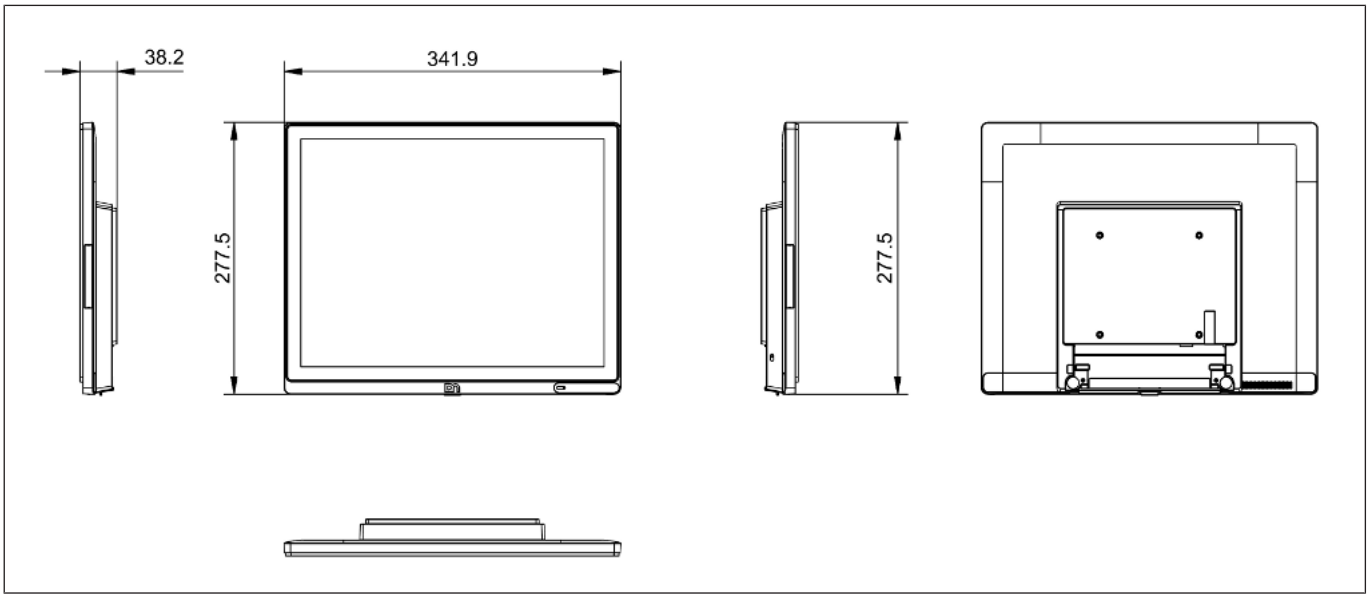

Figure 11-1: D2150 - Dimensions with wall mount

D2150 with stand

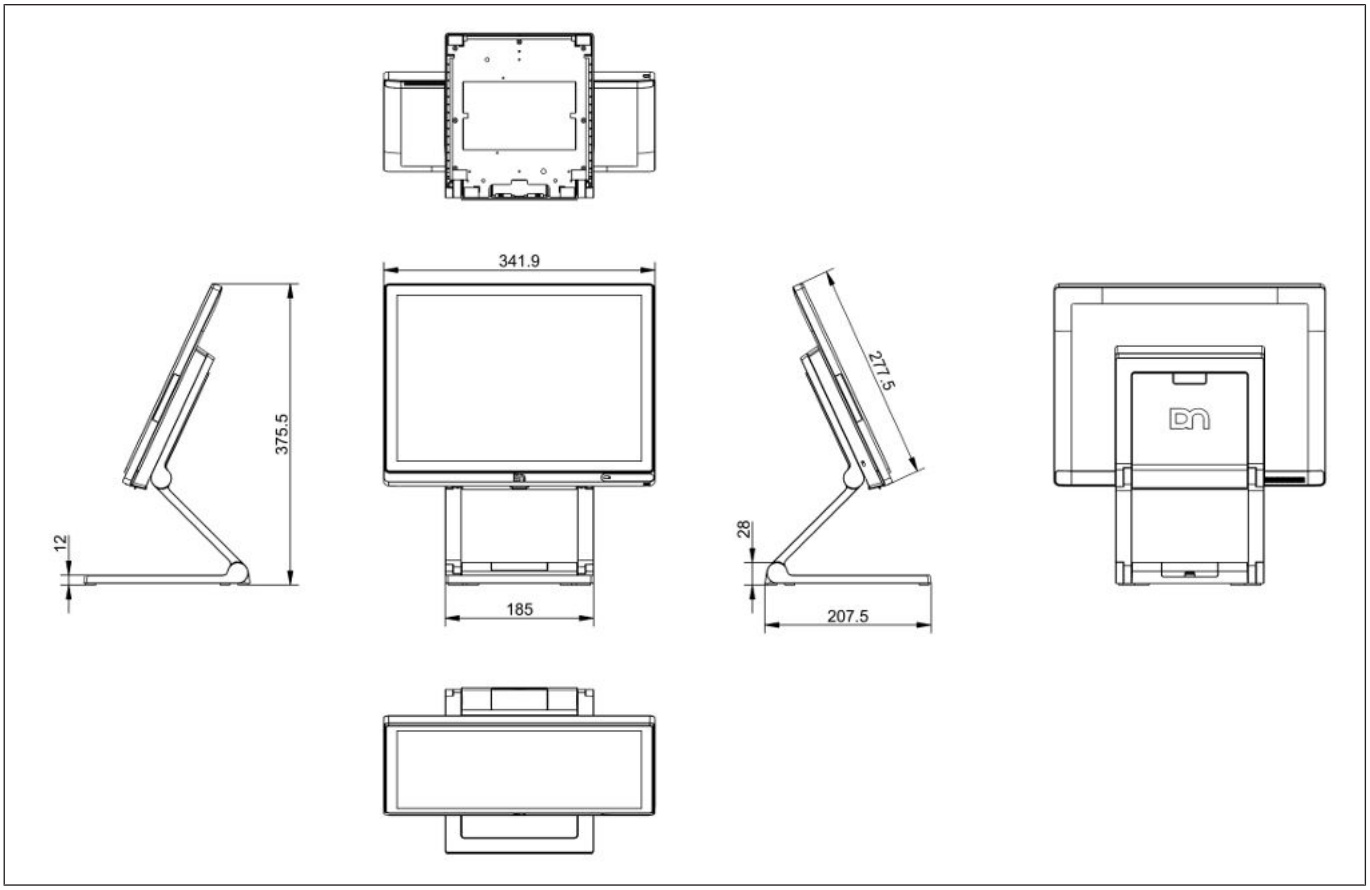

Figure 11-2: D2150 - Dimensions with stand

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11.2 Projected Capacitive Touch Screen

Touch Technology	Projected Capacitive
Surface	Anti-glare
Data transfer	USB
Multi Touch	10-points Touch (Gestures Supported)

11.3 Supported Resolution

NOTE

Scaling to any display resolution other than recommended panel native resolution will result in lower display quality like uneven character/spacing.

Resolution	Refresh Rate	Horizontal Sync	Vertical Sync
		Frequency (KHz)	Frequency (KHz)
720 x 400	70 Hz	31.47	70.08
640 x 480	60 Hz	31.47	59.94
800 x 600	60 Hz	37.88	60.32
1024 x 768 (Native)	60 Hz	48.36	60.00
1280 x 1024	60 Hz	63.98	60.02

11.4 NFC Module

Table 11-1: NFC

Supported Standards	ISO/IEC 14443A/MIFARE ISO/IEC 14443B FeliCa ISO 18092 passive initiator
Validated IC cards/Tags	NFC Forum tags Innovision Topaz / Jewel NXP Mifare Ultralight Sony Felica

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Table 11-1: NFC (continued)

	NXP DESfire, NXP SmartMX with JCOP
RF Operating Frequency	13.56 MHz
Host Interface	USB 2.0 full speed CCID protocol support
Rated Voltage	5 V
Rated Current	300mA on transmitter path
RF Output Power	1W (max.)
Operating Temperature	5 ºC to 40 ºC
Middleware support	N/A
Operating Systems	Windows & Linux
Certification	EN 50364
Weight	39 g
Dimensions	85.4 x 53.3 x 23.1 mm

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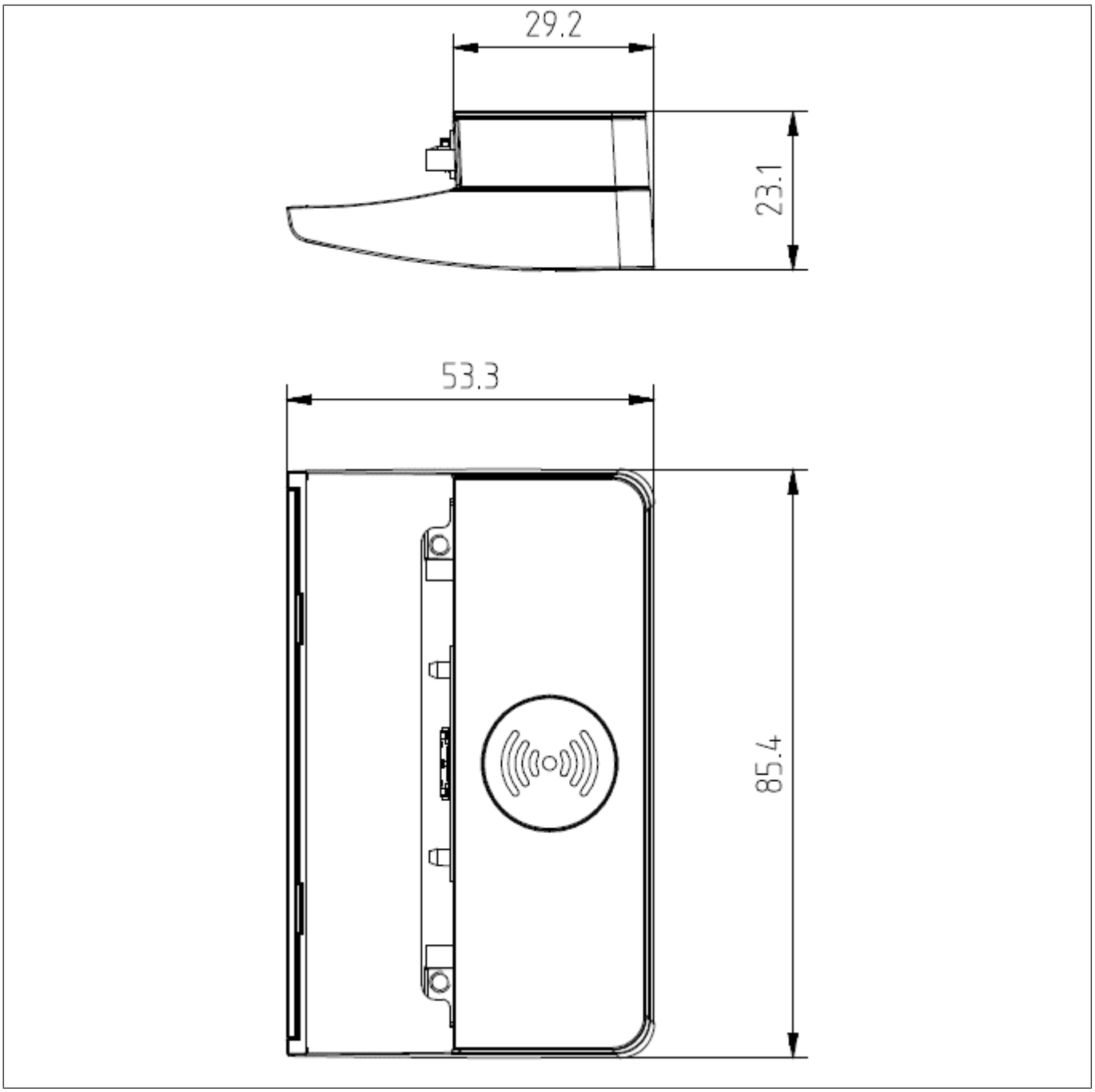

Figure 11-3: NFC Dimension Drawing

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11.5 2D Barcode Reader

Rated Voltage	5V +/- 10%
Rated Current	480 mA
Physical Interface	USB 2.0 Full Speed, bus-powered
Application Interface	HID Keyboard Emulation, or USB-OEM-HID mode (for JPOS operation)
Scan Method	CMOS Imaging (black & white)
Number of pixel	1280 x 800 pixels
Image Capture speed	Up to 100 fps
Illumination	Red LED
Aiming pattern	Amber LED, circular pattern
Minimum resolution	1D code: 0.1 mm (4 mil) 2D code: 0.169 mm (6.7 mil)
Firmware upgrade	Yes
Operating Systems	Windows 7, 8.1 and 10, Linux
Symbologies	UPC/EAN/JAN, GS1 DataBar, Code 39, Code 128, Code 93, Code 11, Codabar/NW7, Interleaved 2 of 5, S-Code, IATA, JPN (Customer barcode), Code 2 of 5, Matrix 2 of 5, MSI/Plessy UK/Plessy, Telepen, Trioptic, GS1-128. PDF417, Micro PDF417, Codablock F, EAN Composite, UPC Composite, GS1-Databar, GS1-Databar Composite, GS1-128 Composite. Aztec Code, Aztec Runes, Data Matrix (ECC 200), Data Matric (ECC 000-140), QR Code, GS1-Datamatrix, Micro QR Code, Maxi Code, GS1-QR Code
Operating Condition	-20 to 50 degree Celsius 10 to 90% RH
Weight	190 g
Dimensions	86.9 mm x 104.1 mm x 35 mm
Swivel angle	165 degrees clockwise/anti-clockwise

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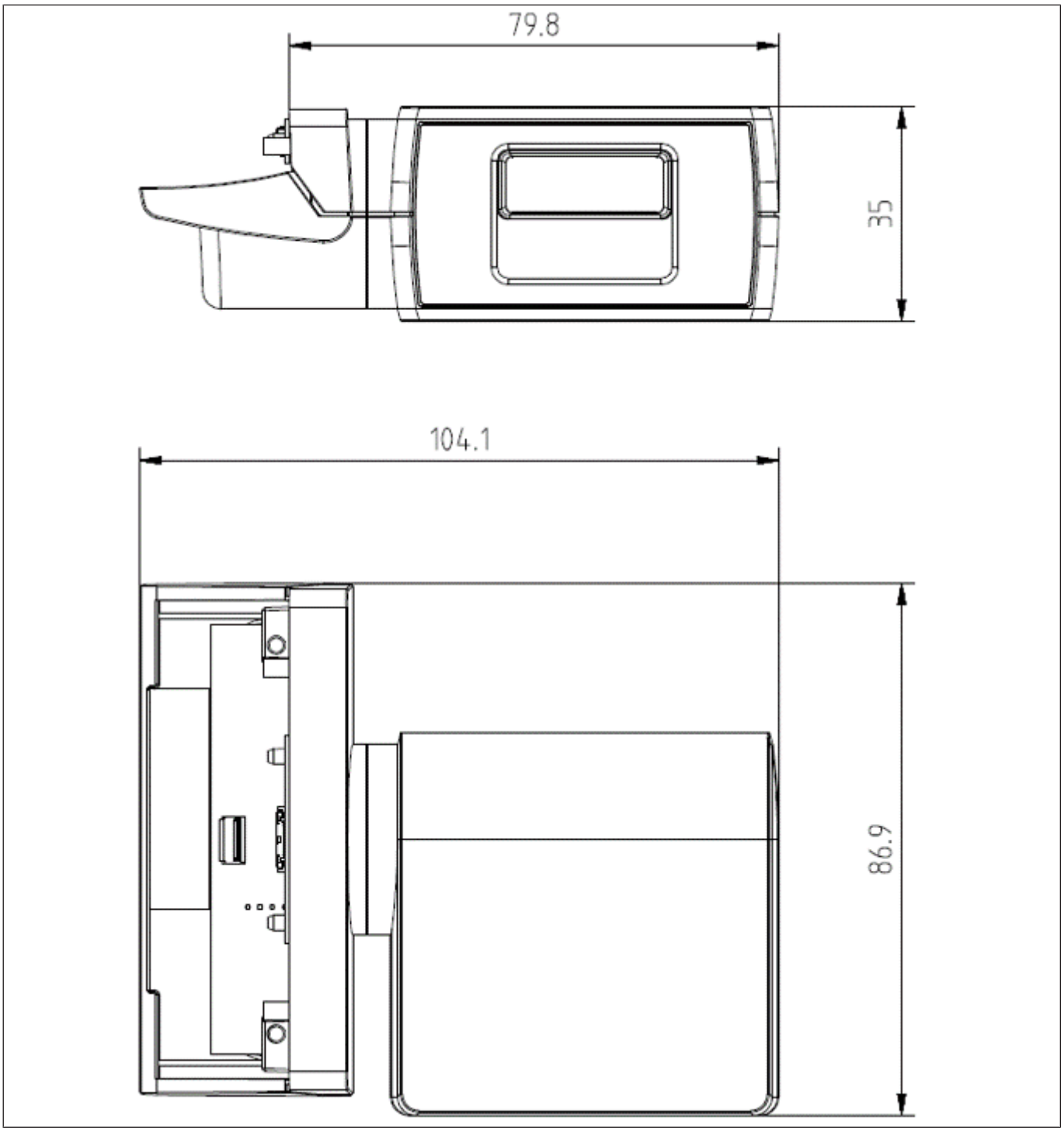

Figure 11-4: 2D BCR Dimension Drawing

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11.6 iButton

Rated Voltage	5V +/- 5%
Rated Current	80 mA
Host Interface	USB 2.0, HID
Cable Length	2.5 m
Magnetic Key interface	1-Wire®
Magnetic Key supported	99-L-01 (DS1990A), Olitronic GmbH
Operating Systems supported	Windows 10, WNLPOS4
Software options	• JavaPOS 1.13/OPOS UDM (ProBASE/POS) • VirtualCOM
Firmware	Upgradeable via USB DFU
Weight	64 g
Dimensions	85.4 x 53.3 x 29.4 mm

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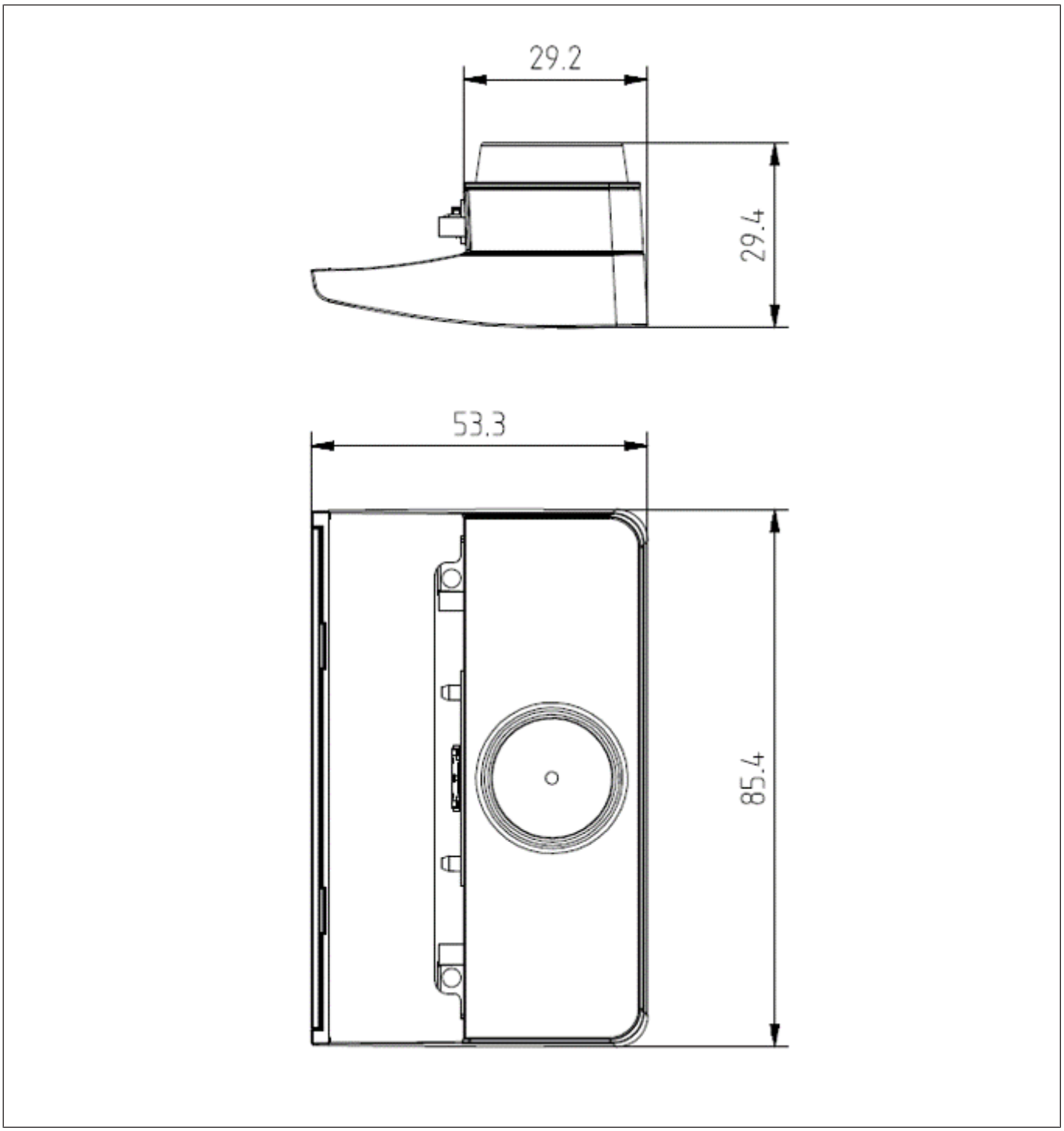

Figure 11-5: iButton Dimension Drawing

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11.7 MSR

Rated Voltage	5V +/- 5%
Rated Current	60 mA
Host Interface	USB 2.0, HID
Number of tracks	3-track
Encoding	ISO 7811-2 or JIS B 9561
Operating Systems supported	Windows 10, WNLPOS4
Reading Speed	10 to 140 cm/sec
Software options	• JavaPOS 1.13/OPOS UDM (ProBASE/POS) • VirtualCOM
Firmware	Upgradeable via USB DFU
Weight	42 g
Dimensions (WxHxD)	83 x 43.5 x 22.3 mm

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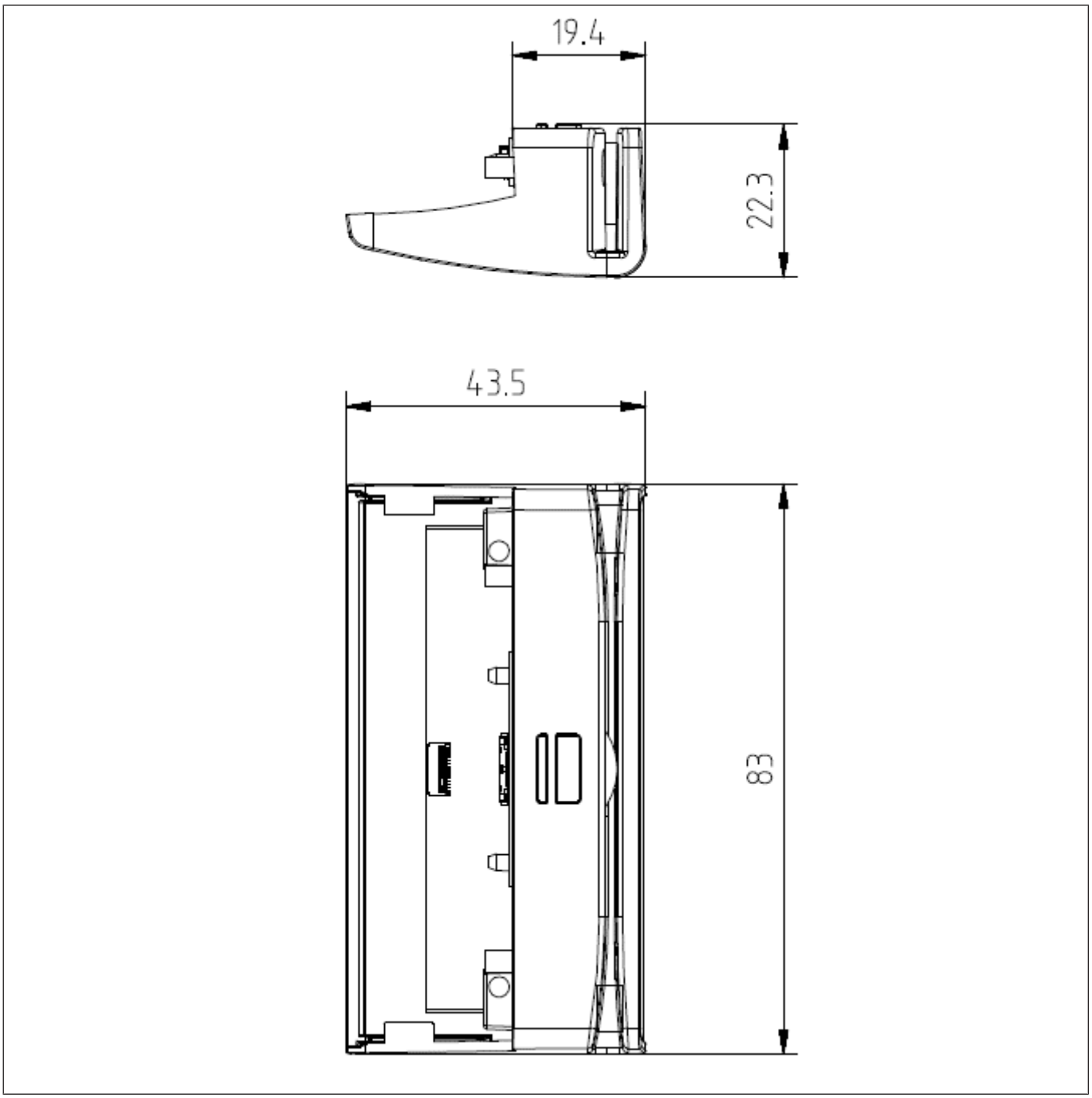

Figure 11-6: MSR Dimension Drawing

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11.8 Fingerprint Reader Module

Model	FP A Family	
Host interface	USB 2.0 full speed	
Operating voltage	5V ± 5%	
Current consumption	Scanning	< 100 mA (Typical)
	Idle Mode	120 mA (Typical)
	Suspend Mode	< 0.5 mA (Maximum)
Operating Temperature	5° - 40° C	
Operating Humidity	20% - 80% non-condensing	
Optical Sensors	Pixel resolution	512 dpi
	Scan capture area	14.6 mm x 18.1 mm
	Scan Data	8-bit grayscale (256 levels)
	Image Distortion	< 1% (Typical)
	Speed of Image Transfer	<0.17 seconds
Compatible System	DN A Family and D-series	
Weight	77 g	
Dimensions	87.3 x 68.5 x 35.4 mm	

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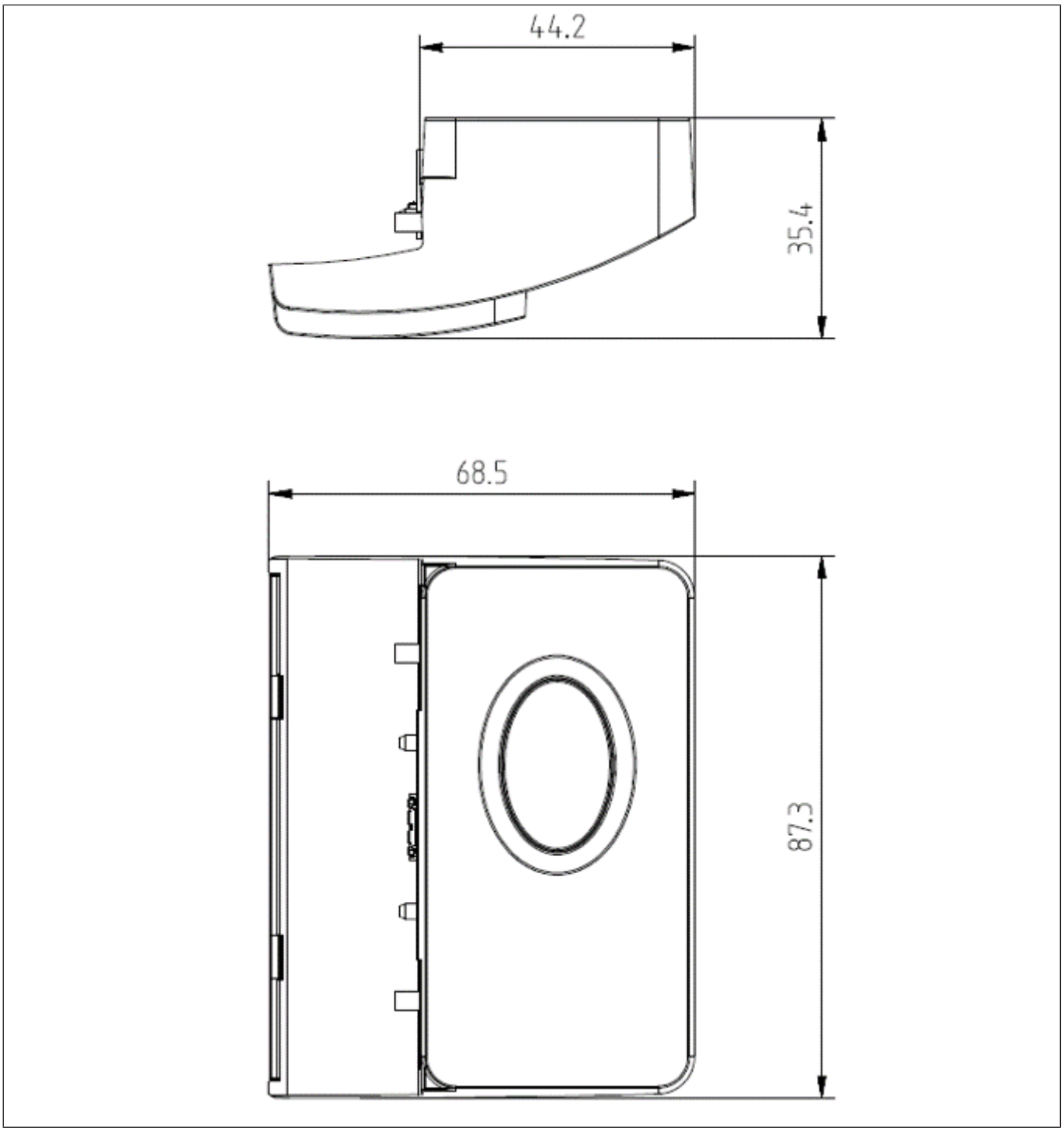

Figure 11-7: Fingerprint Dimension Drawing

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