



K-two

Installation Guide (July 2018)

**We would like to know
your opinion on this publication.**

Please send us a copy of this page
if you have any constructive criticism on:

- the contents
- the layout
- the product.

We would like to thank you in advance
for your comments.

With kind regards,

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Your opinion

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The safety instructions given in this document should be strictly followed when handling the device. In case of doubts or questions please contact Diebold Nixdorf:

retail.documentation@dieboldnixdorf.com

1 Symbols



This symbol is used to mark important information in this manual.



Text following this symbol should be given special attention in order to avoid damage and injury.

2 Warranty

Generally Diebold Nixdorf guarantees a warranty engagement for 12 months beginning with the date of delivery. This warranty engagement covers all 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 on the stipulation consult your contract.

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



Please contact your local service provider for all questions concerning your *service* contract.

3 Important Notes

Terminals supplied by Diebold Nixdorf comply with the respective safety regulations for data-processing installations and information technology installations, including electrical office equipment for use within an office environment.



Whenever work of any kind is done on the device, as well as when data cables are plugged and unplugged, the device must be completely disconnected from the line voltage.

- Terminals may only be installed and repaired by authorized technicians.
- Unauthorized opening of the housing or inexperienced repairs can result not only in considerable personal danger, but will also invalidate your warranty and liability protection.
- Always consult the enclosed documentation before doing any work with this terminal.
- If this terminal is brought from a cold environment into a heated place of business, condensation may occur. Before operation, the terminal must be completely dry. Therefore, an acclimatization period of at least two hours must be adhered to.
- Always lay the supply leads and cables in such a way that they cannot be stepped on or tripped over.
- Exchange damaged cables immediately.
- In order to completely disconnect the terminal from the power source use the separator in the fuse box\building installation.
- Make sure that no objects (such as paper clips) can reach the interior of the terminal, since electrical shocks or short-circuits could result.
- Ensure that the K-two receives adequate ventilation to avoid overheating.
- During an electrical storm, data cables should not be plugged in or being unplugged.
- Keep the terminal away from vibrations, dust, humidity and heat.
- Ensure that used parts are disposed of in an environmentally friendly manner.
- In case of an accident (such as a damaged housing, entry of liquids or foreign objects), switch the terminal off and use the separator to completely remove the terminal from power.
- The terminal and other information technology hardware should only be connected to electrical supply networks with a separate protective earth wire (PE). This type of electrical supply network is referred to as a TN-S network. Do not use PEN conductors. Also follow the recommendations set forth in DIN VDE 0100 Part 540, Appendix C2 as well as EN50174-2, §5.4.3 (www.DIN.de). This will help prevent malfunctions.

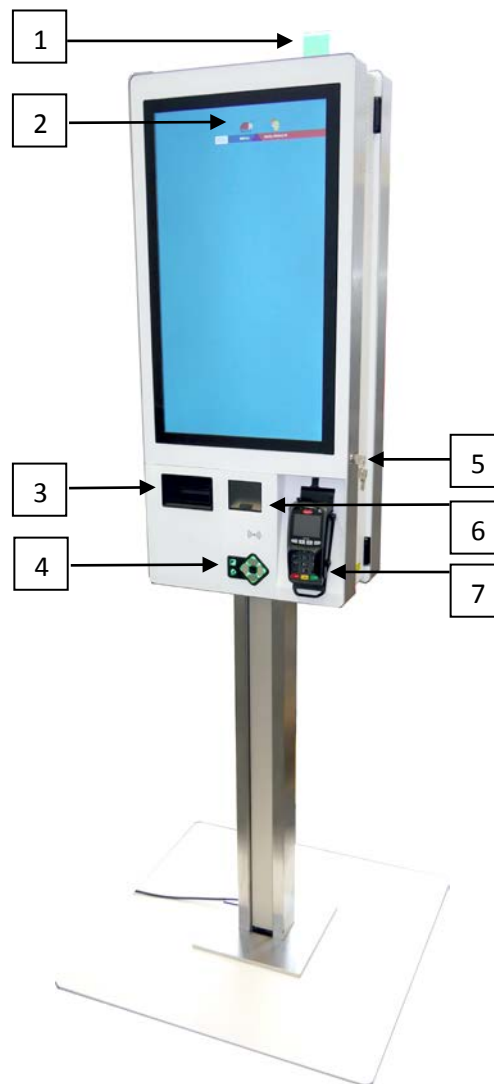
- National Electrical Code ANSI/NFPA 70-2005
- Canadian Electrical Code, Part I, CSA C22.1-02
- Always keep the ventilation slots free of obstruction to ensure adequate air circulation and avoid overheating.
- Transport the terminal only in its original packaging (to protect it against knocks and bumps).
- If a lithium battery is supplied with the terminal, ensure that the battery is replaced with an equivalent type. Otherwise there is danger of explosion! Lithium batteries may only be replaced with identical types or other types recommended by the manufacturer.
- Batteries must be disposed of according to local regulations on the disposal of special waste.

3.1 Connecting Peripherals

Use only shielded cables when connecting terminals to the system to ensure compliance with international Rules and Regulations for radiated emission as well as to achieve a high immunity against external disturbances.

4 Overview

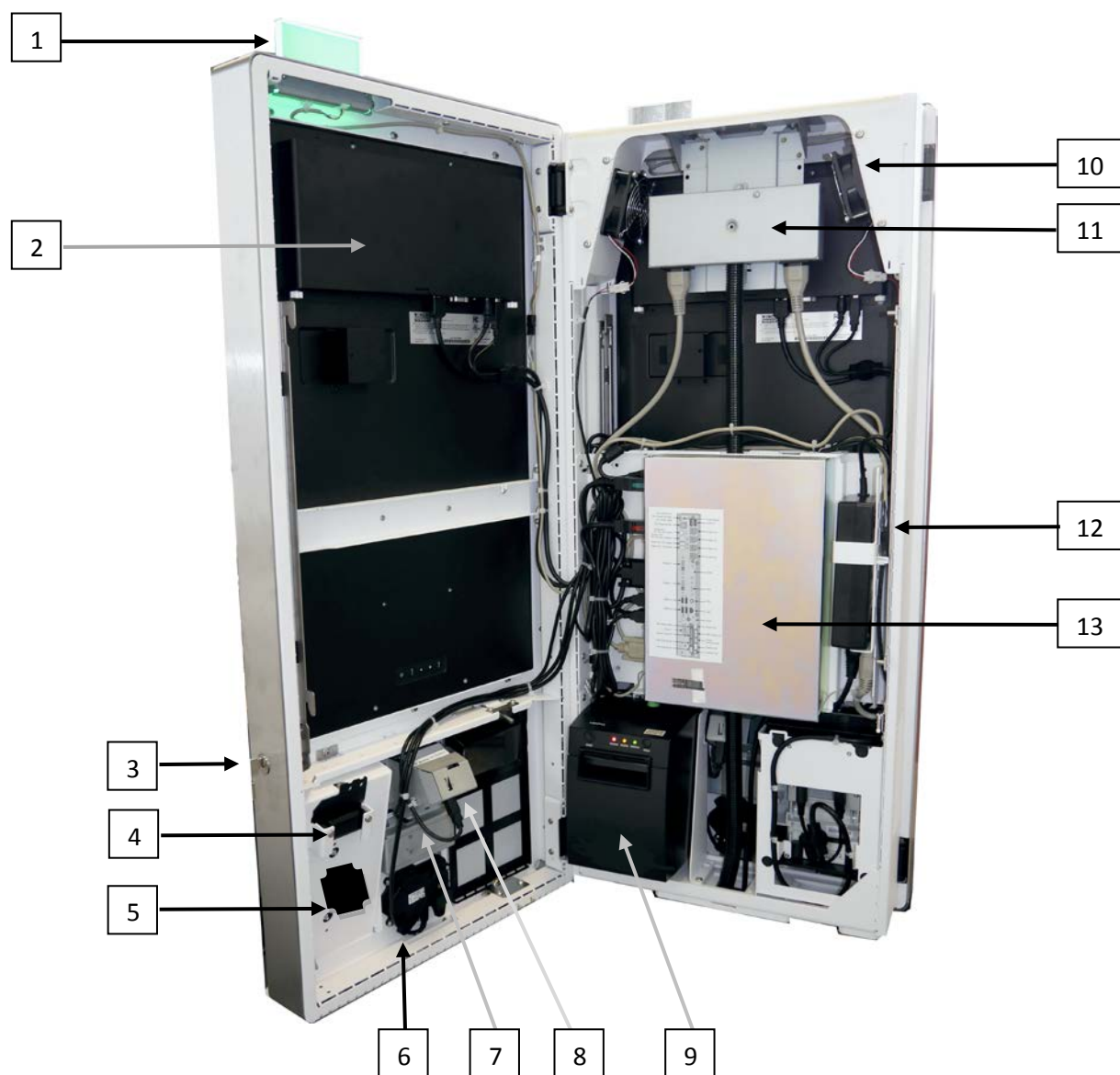
4.1 Exterior view



1	Pole Light	5	Lock
2	Display	6	Scanner
3	Printer	7	EFT*
4	ADA Navigation		

* It may be connected ETFs with 12V for max. current consumption of 1.1A (permanent).

4.2 Interior view



1	Pole Light	6	ADA Navigation	11	Power Distributor
2	Display	7	NFC Module	12	Power Supply
3	Lock	8	Scanner	13	PC
4	EFT*	9	Printer		
5	Speaker	10	Fan		

* It may be connected ETFs with 12V for max. current consumption of 1.1A (permanent).

5 Opening the Kiosk

5.1 Opening

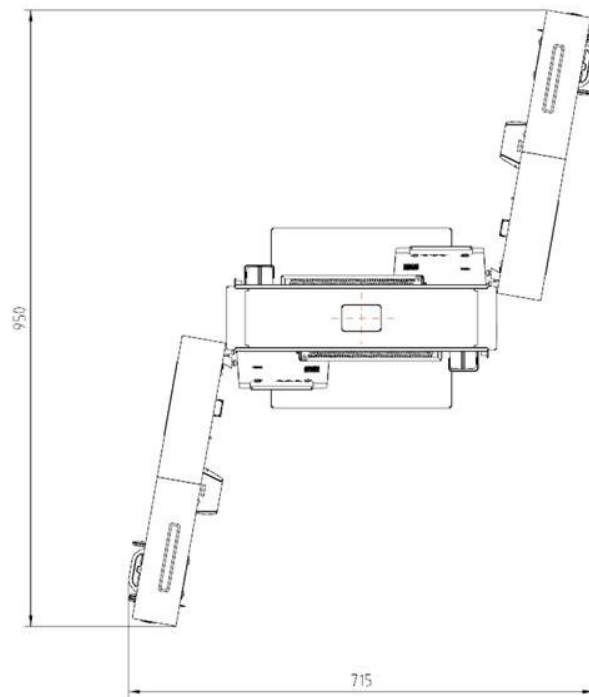
Plug the key to the lock and turn it counter clockwise.



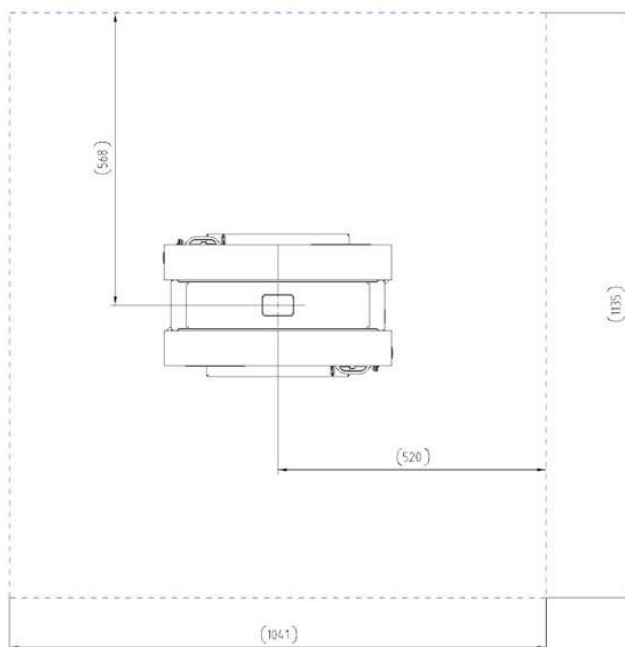
Open the door.



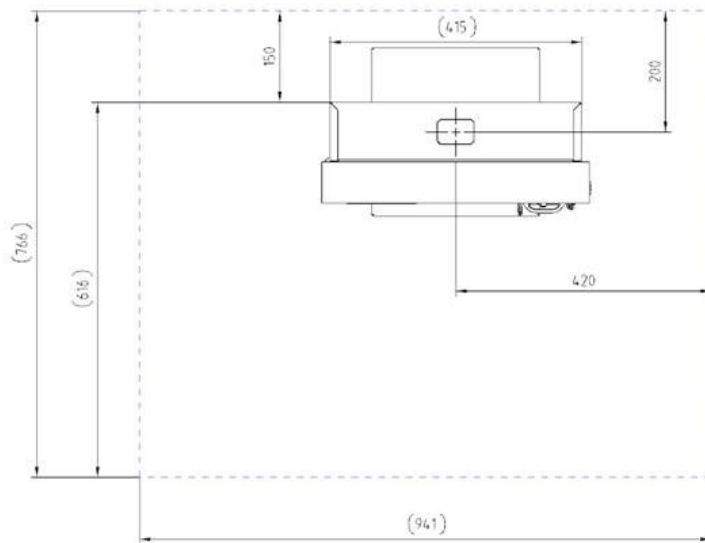
6.2 Double-Sided Kiosk



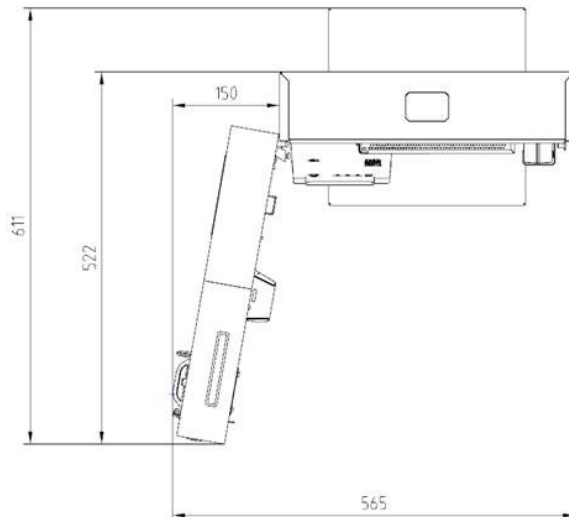
6.2.1 Service Area



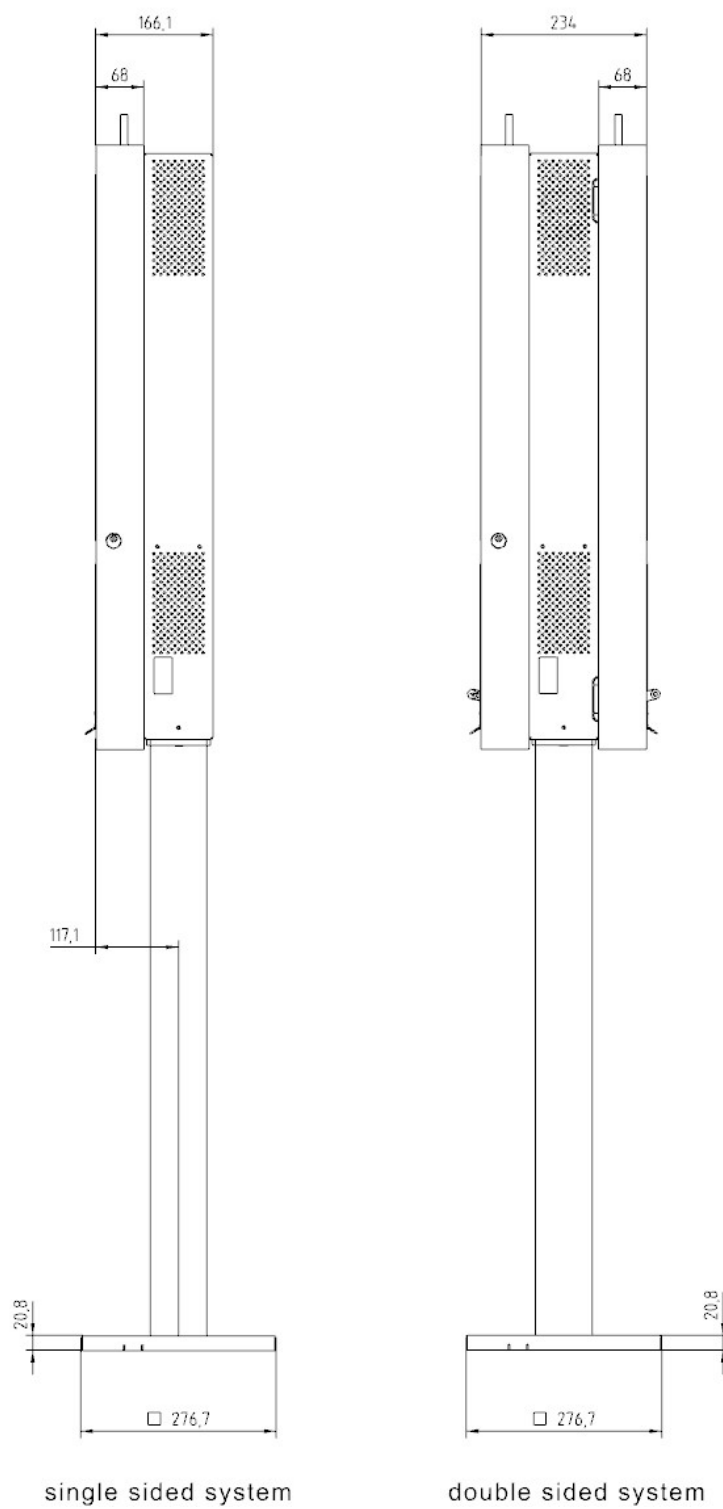
6.3 Single-Sided Kiosk



6.3.1 Service Area



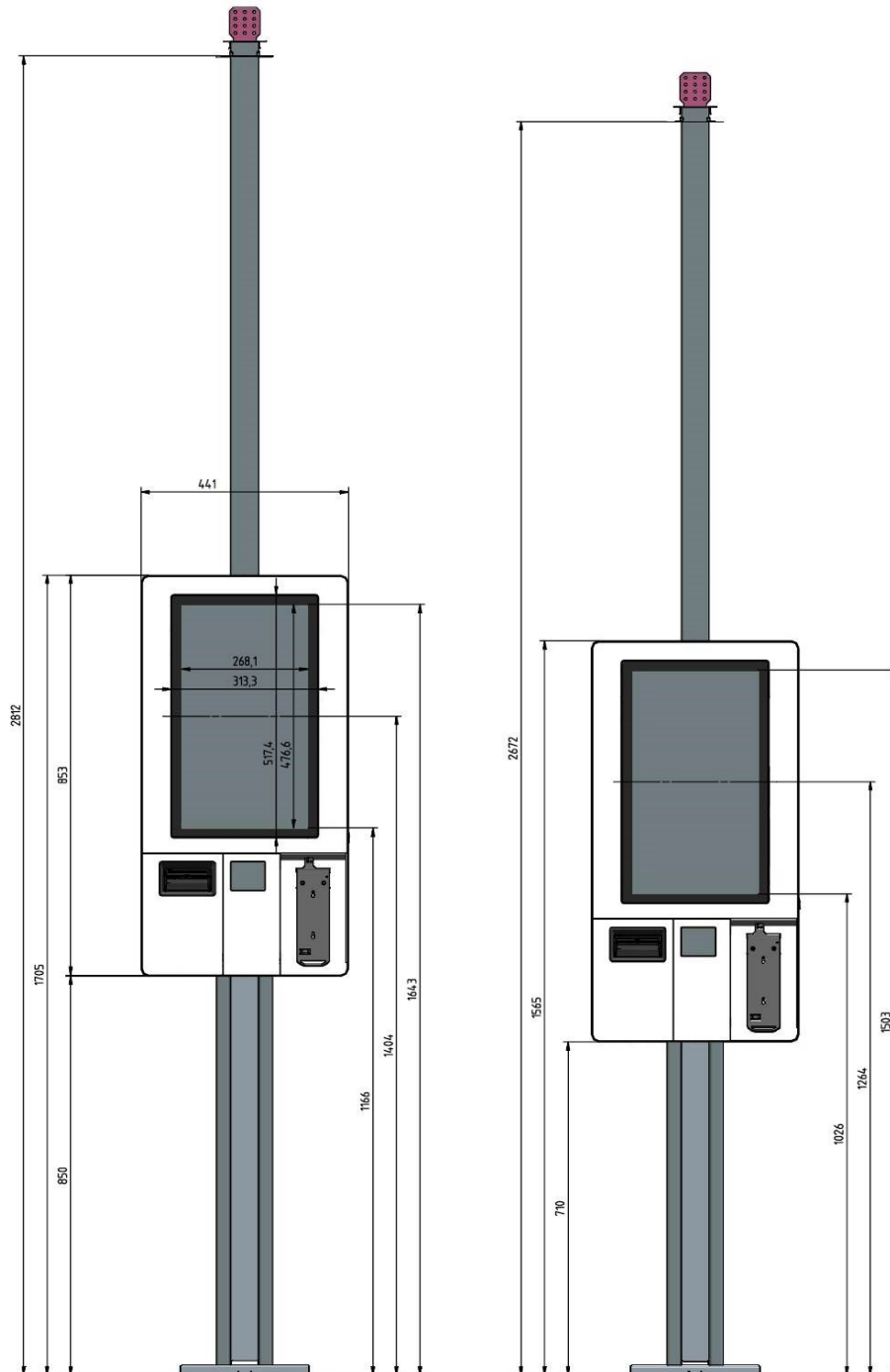
6.4 Side View Single and Double Sided



6.5 K-two with 22"-display

6.5.1 On low and high pedestal

K2 shown with standard kit for ceiling cabling, it can be enlarged up to two times with 1.151mm expansion kits.



7 Assembling Instructions: Pole-Mounted Kiosk

7.1 Kiosk with Floor Cabling

The installation including the floor mounting has to be carried out by a trained technician after the assessment and evaluation of the constructional conditions on site.

Assembling the Pole

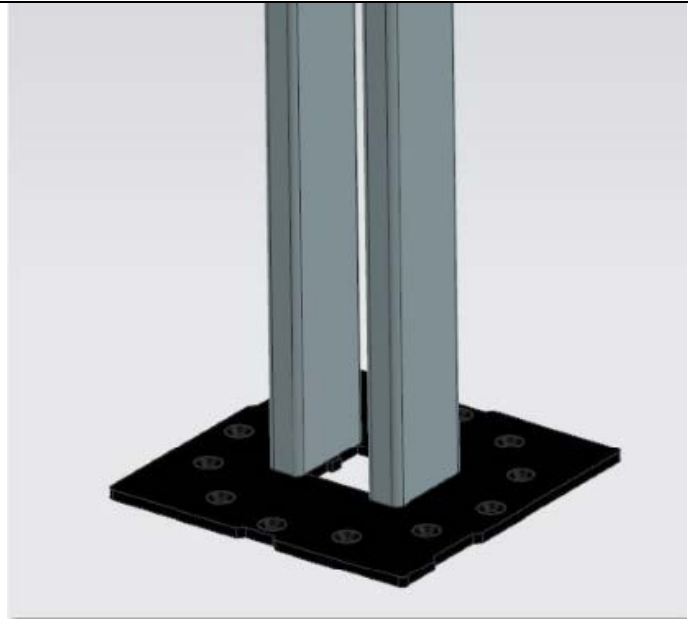
The assembly pack for the pole includes:

1x silicon glue	2x stainless steel profile
1x base plate	8x M8x16 counter-sunk screws
1x adapter plate	1x stainless steel cover plate
6x counter-sunk screws with dowels	8x M6x10 counter-sunk screws
1x front cable cover	1x back cable cover

1. Position the pole above the floor cable outlet ensuring that cables can be guided through the hole in the middle of the base plate.



At least 6 holes need to be on solid ground and 4 or less holes on the floor cable outlet.



2. Mark 6 out of the 12 holes as bearing points.



Only mark holes that are positioned on solid ground. **Do not mark or drill bearing points on the floor cable outlet!**



Caution: The kiosk needs to be screwed to the floor on at least 6 points to avoid the kiosk to tip over.

Drill the 6 holes (use a 12mm rock drill) into the floor ground and insert the dowels.

Make sure that the depth of the bearings is at least 80 mm.



Dowels and screws are part of the accessory pack.



3. Slide all necessary cables (power cable, LAN cable, etc.) through the opening in the base plate positioned above the floor cable outlet.

Now align the base plate in the position over the drilled holes with the dowels.

Apply the enclosed silicon glue on the ground side of the base plate (only near the edges) to avoid the intrusion of liquids under the base plate.



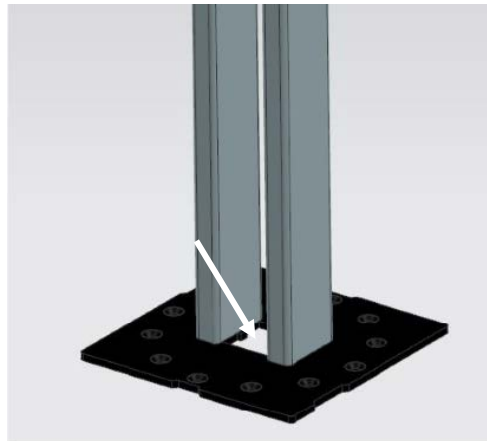
Fix the base plate securely to the ground with the enclosed counter-sunk screws.



Be aware that the floor cable outlet seen in the picture is an example and does not represent the actual one.



4. Let the cables wired through the base plate hang over the plate.

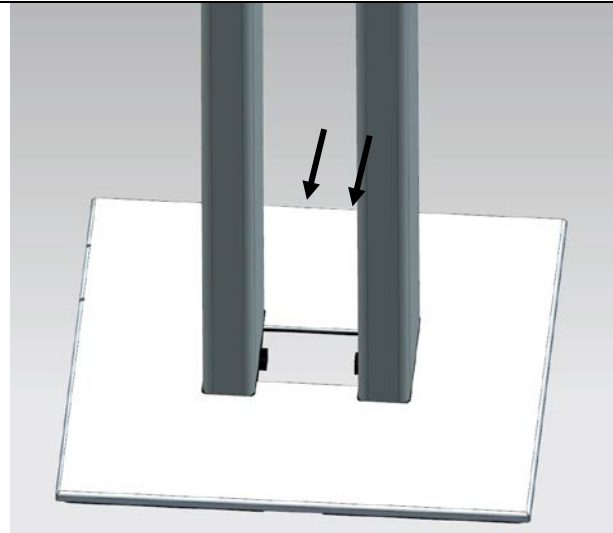


5. Apply the enclosed silicon glue on the top side of the base plate. Take the stainless steel cover plate and move it over the profiles in direction to the base plate. It covers the screw heads.

Do not remove the foil yet!



Slots being at backside of the Kiosk

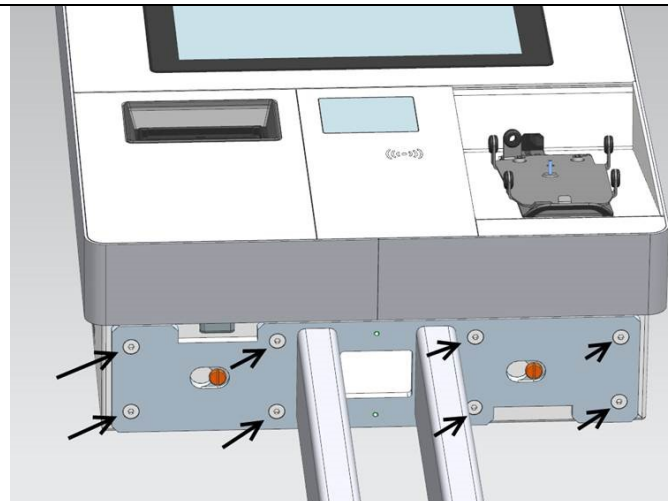


6. Set the kiosk chassis on the pole and fix it with eight M6x10 countersunk screws.

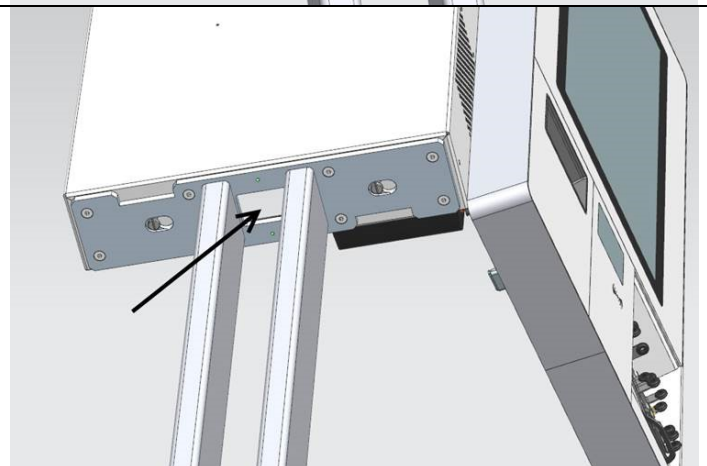
Please take care to avoid damages on the doors.



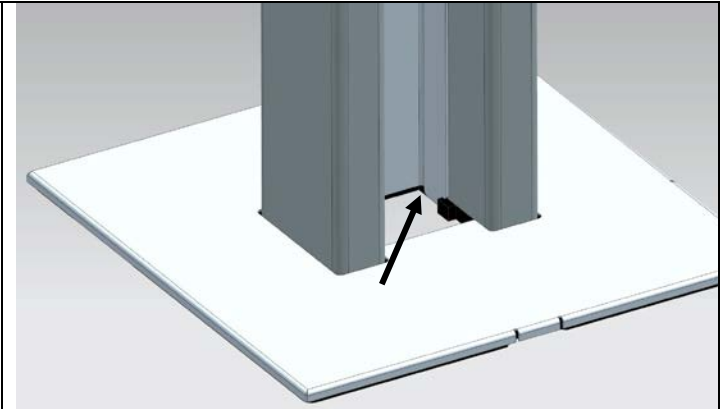
Caution: Two persons needed to pick up the kiosk and set it onto the pole.



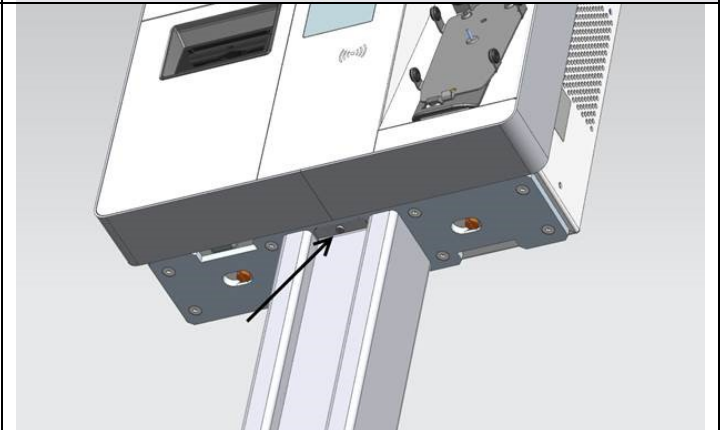
7. Move the cables into the housing.



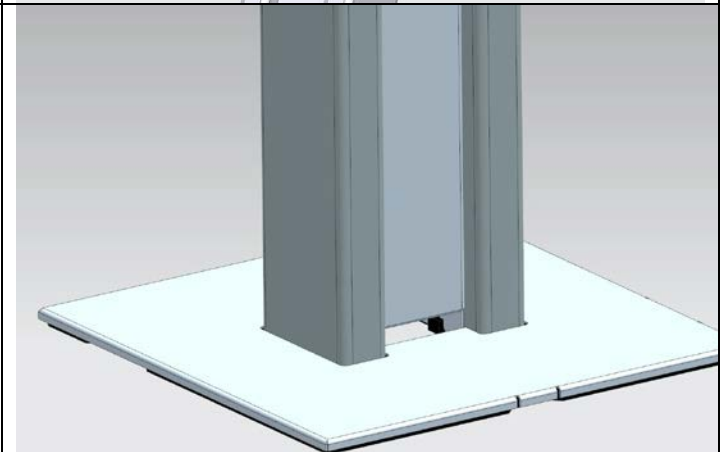
8. Set the front cover into place.



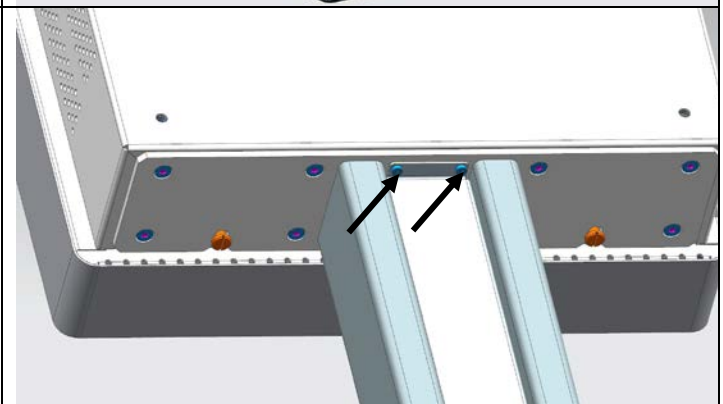
9. Fix it with two M4x6 screws to the adapter



10. Set the back cover into place.



11. Fix it with one M4x6 screw to the adapter.



7.2 Kiosk with Over-Floor Cabling

The installation including the floor mounting has to be carried out by a trained technician after the assessment and evaluation of the constructional conditions on site.

Assembling the Pole

The assembly pack for the pole includes:

1 pole, pre-assembled
1x silicon glue
1x front cable cover
4xM6x10 pan head screw
1x back cable cover
2xM4x6 cheese head screws
8xM6x16 countersunk screws

1. Mark 6 out of the 12 holes as bearing points.



Only mark holes that are positioned on solid ground. **Do not mark or drill bearing points on the floor cable outlet!**



Caution: The kiosk needs to be screwed to the floor on at least 6 points to avoid the kiosk to tip over.

Drill the 6 holes (use a 12mm rock drill) into the floor ground and insert the dowels.

Make sure that the depth of the bearings is at least 80 mm.



Dowels and screws are part of the accessory pack.



2. Slide all necessary cables (power cable, LAN cable, etc.) through the opening in the base plate positioned above the floor cable outlet.

Now align the base plate in the position over the drilled holes with the dowels.

Apply the enclosed silicon glue on the ground side of the base plate (only near the edges) to avoid the intrusion of liquids under the base plate.



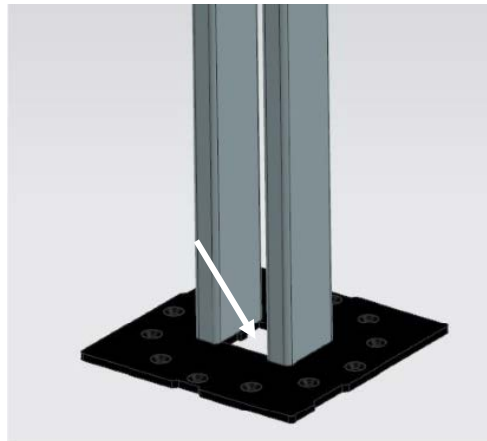
Fix the base plate securely to the ground with the enclosed counter-sunk screws.



Be aware that the floor cable outlet seen in the picture is an example and does not represent the actual one.



3. Let the cables wired through the base plate hang over the plate.

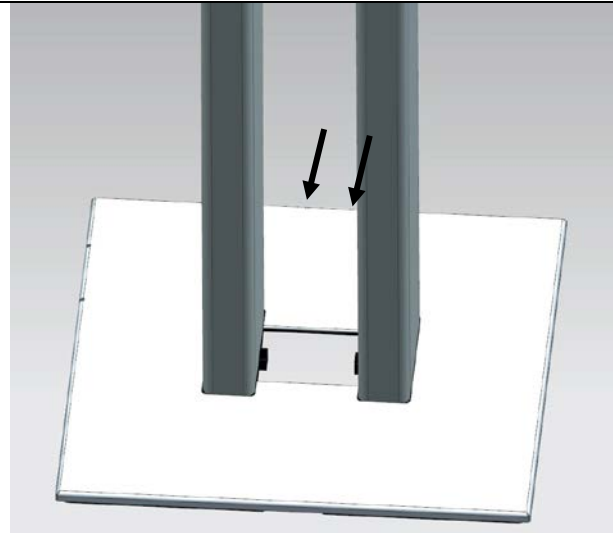


4. Apply the enclosed silicon glue on the top side of the base plate. Take the stainless steel cover plate and move it over the profiles in direction to the base plate. It covers the screw heads.

Do not remove the foil yet!



Slots being at backside of the Kiosk

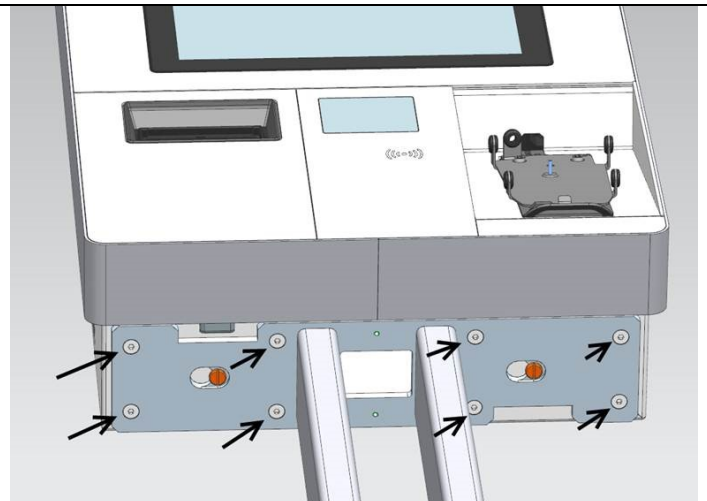


5. Set the kiosk chassis on the pole and fix it with eight M6x10 countersunk screws.

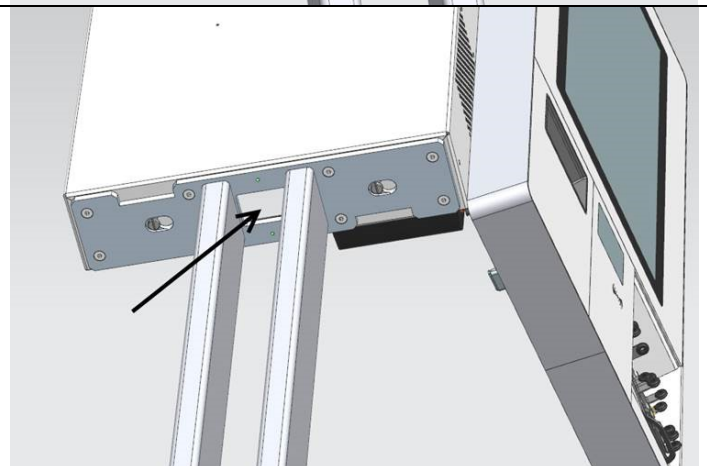
Please take care to avoid damages on the doors.



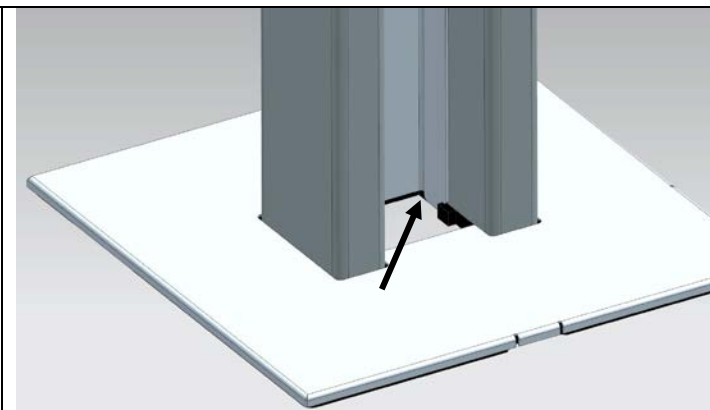
Caution: Two persons needed to pick up the kiosk and set it onto the pole.



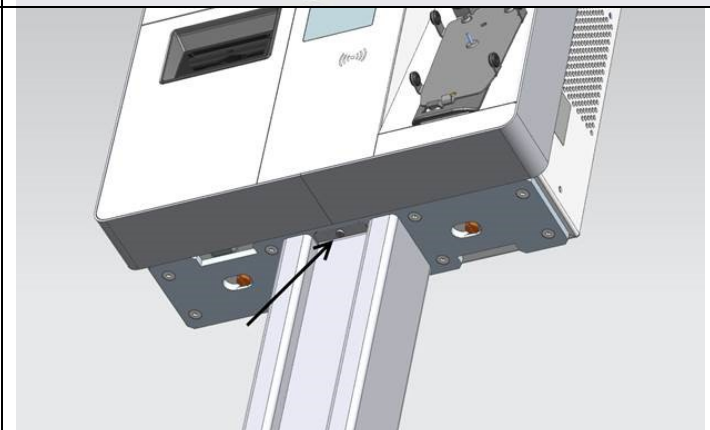
6. Move the cables into the housing.



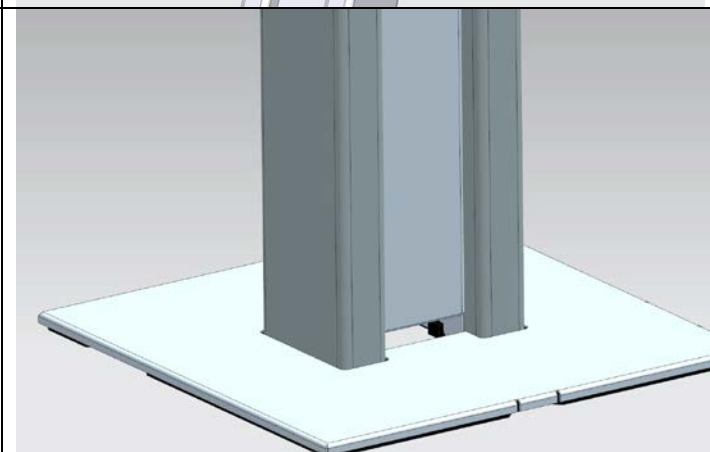
7. Set the front cover into place.



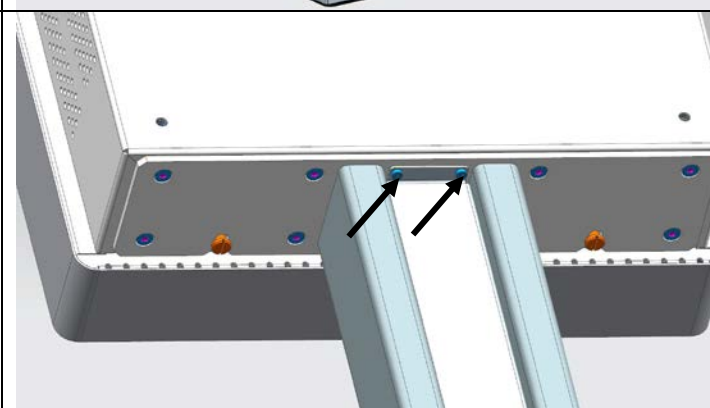
8. Fix it with two M4x6 screws to the adapter



9. Set the back cover into place.



10. Fix it with one M4x6 screw to the adapter.



7.3 Kiosk with Ceiling Cabling

The installation including the floor mounting has to be carried out by a trained technician after the assessment and evaluation of the constructional conditions on site.

Before beginning with the installation of the kiosk, a ceiling area needs to be chosen where

- no lamps
- no electric cables
- no ledger

are located where the ceiling channel will enter the ceiling.

There are two possibilities on how to find this area:

1. Place the base plate with the attached stainless steel profiles on a chosen spot. Attach a laser pointer pointing upwards to determine where the ceiling channel will enter the ceiling.
OR
2. Choose a spot on the ceiling and drop a perpendicular with the help of a string to determine where the base plate should be positioned.

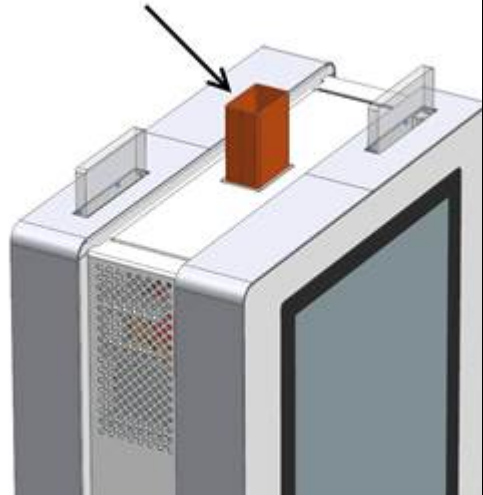
Assembling the Pole

Follow step 1-6 and 8-12 of chapter 7.2 for single-sided kiosk and chapter 7.4

7.4 Attach Cable Duct

The opening for the ceiling installation should be between 70x55mm (minimum) and 100x80 mm (maximum) so that all damage to the ceiling surface will be covered.

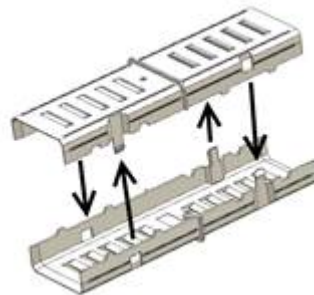
Check, if the adapter is installed at the top of the corpus.



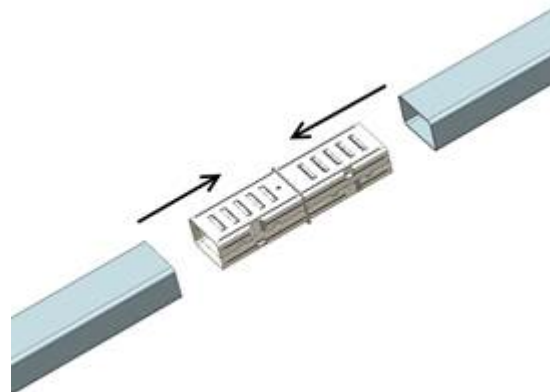
Each pipe is approx. 1,15m long. If that is not sufficient enough, an additional construction set must be used.

The pipes are made by aluminium and can be cutted easily by a metal saw to the right length. The cutting edges must be deburred to avoid any damages on the cables.

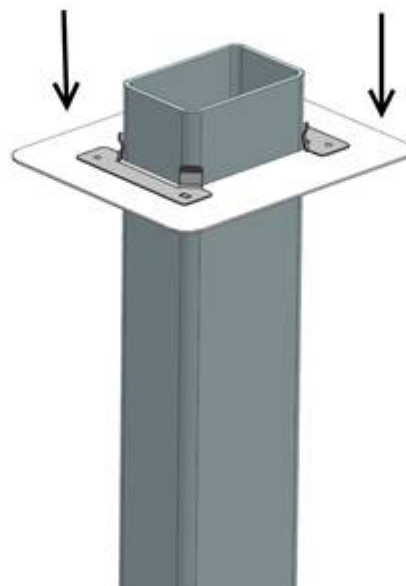
Prepare the fitting, if you are using an additional construction kit.



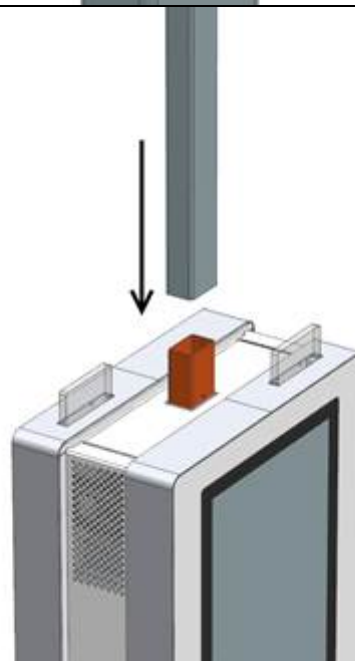
Route the cable through the pipes and the fitting. Afterwards join the pipes with the fitting.



Attach the cover plate to the upper end of the pipe.



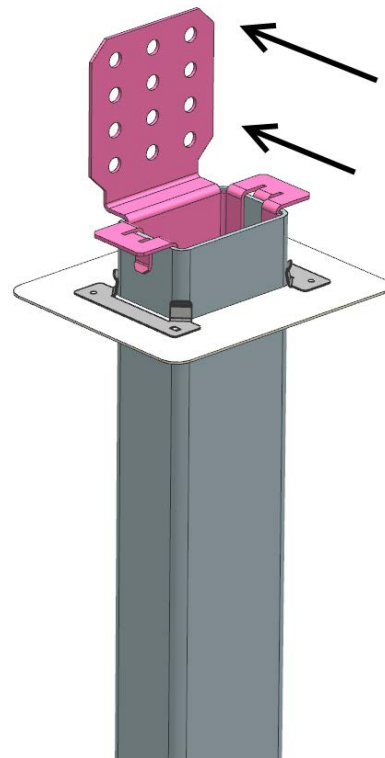
Attach the pipe to the adapter from above.



Fix the upper end of the “ceiling cabling kit” securely on the ceiling or a prepared solid construction by the retaining bracket.



Due to safety reasons, the attachment of the retaining bracket to the ceiling is a mandatory requirement. The corresponding attachment holes are present in the retaining bracket. Additional attachment material must be procured on-site.



8 EFT (Electronic-Funds-Transfer)-Terminal

Power down the system. Open the device (Section "Opening the kiosk door") and separate completely the system from the mains voltage.



Various, customer-specific EFTs are used.

Here in the example it is the IPP350.
Remove the two screws (see arrows).



Remove the bracket including the support plate. Loosen the two screws.



EFT-support plate



EFT-bracket

Screw the support plate at your EFT terminal, here for example an IPP350 EFT.



Hook the EFT support plate into the EFT mount at the bottom.



Connect both with a supplied locking screw.



Replace the two screws and tighten them.



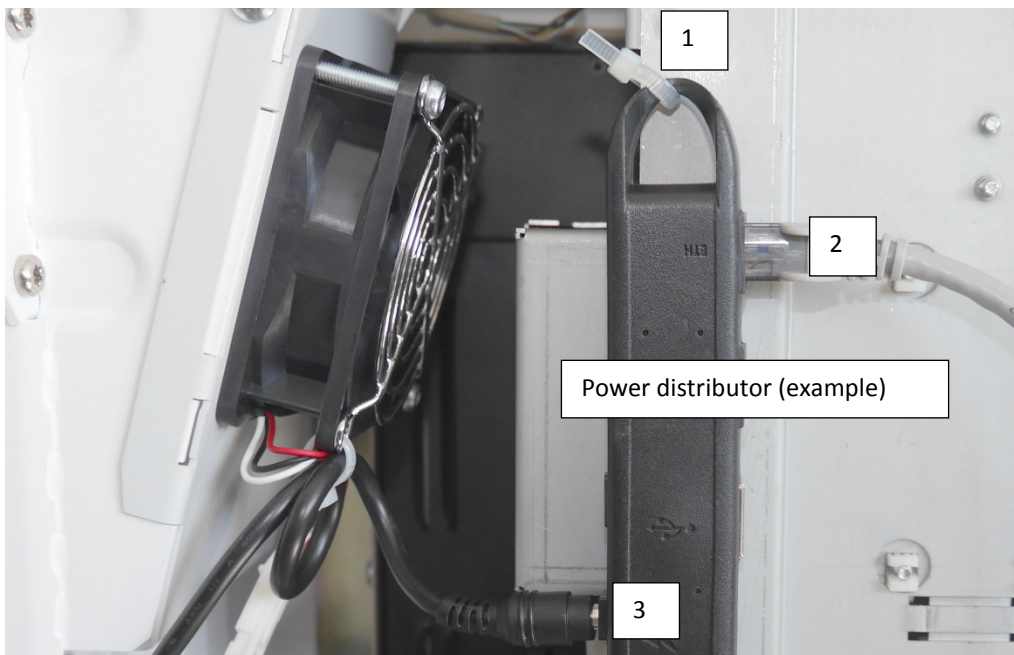
Thread the connection cable through the opening and attach the EFT incl. Bracket.
Screw the EFT incl. Bracket / support plate to the housing.



Plug the cable and mount the two screws you removed before to fix the EFT at the housing.

Attach the power distributor to the housing (1) with a cable tie.

If the connector plug is a LAN or USB plug, it is connected to the corresponding socket (2, here LAN) on the power distributor. Then the mains plug is plugged in (3).



If the power distributor is installed differently or a different power distributor than in the example shown here, the following must be observed:

- No moving parts must be affected, e.g. fan, lock, etc.
- The air flow (thermal) must not be impaired.
- Cables must not be clamped.

9 MX915

Power down the kiosk. Open the device and unplug the power cables of the PCs on the power distribution box if it is a device with fixed wiring. Otherwise, disconnect the mains plug from the housing installation.

Remove 4 nuts and uninstall the blind cover.

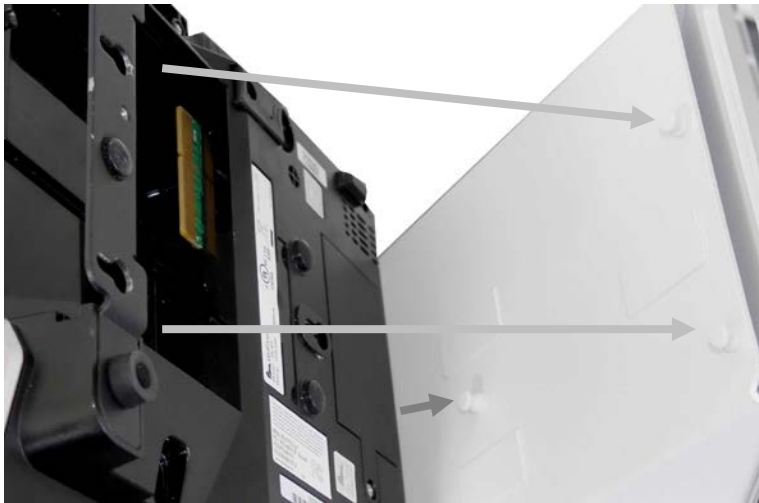
Set the adapter with 4 bolts into place.



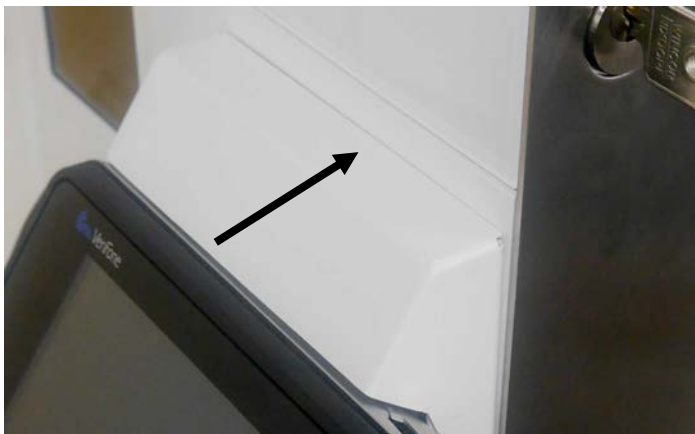
Open the door and fix it with 4 nuts inside the device.



Set the device with the 3 key holes on the pins at the adapter.



Set the cover into place.

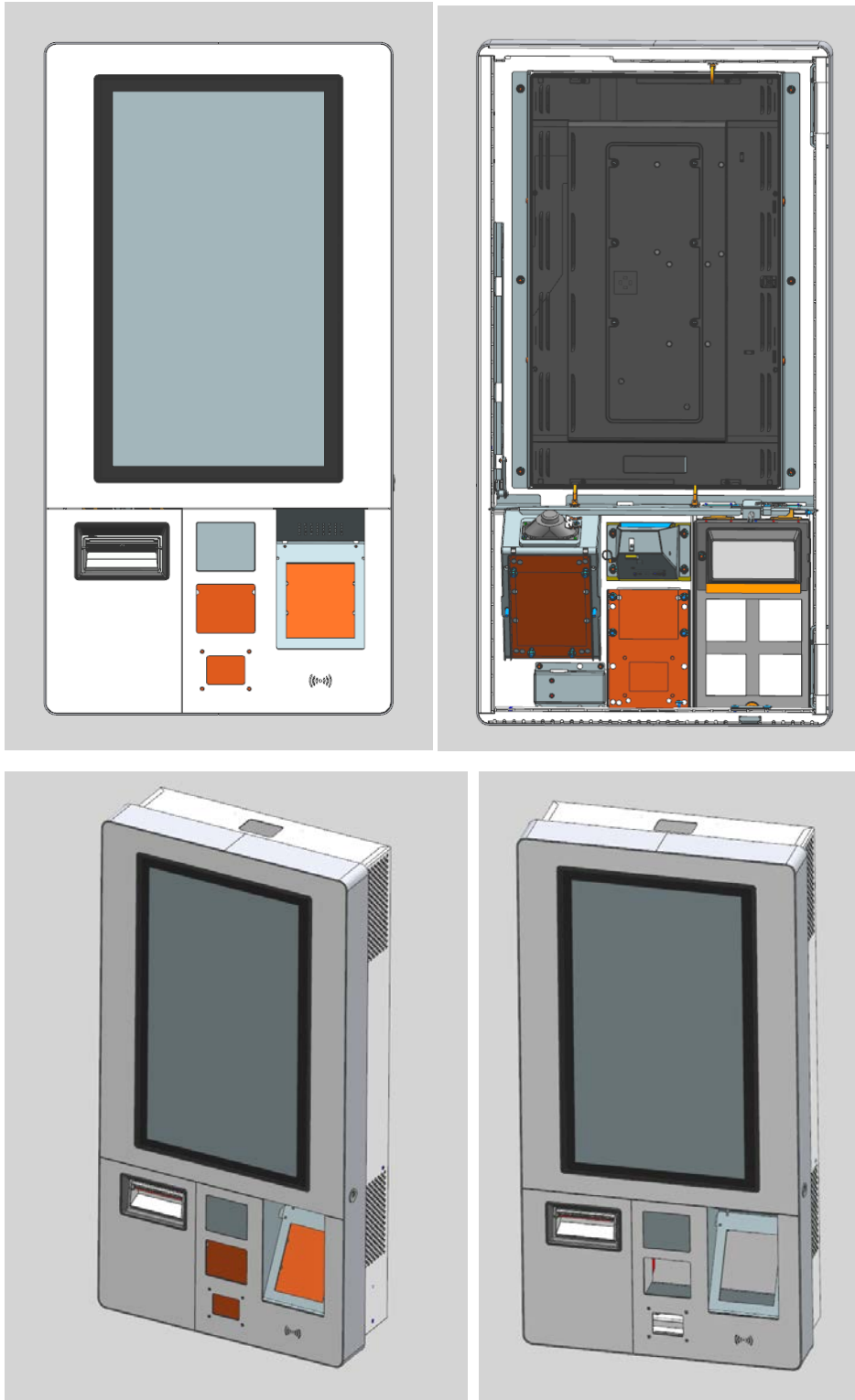


Fix it with the 2 screws.



10 Ingenico IUP/IUR 250/IUC 150

Open the door and remove the blind covers (coloured in orange) with a8x M4 socket wrench size 7.



10.1 Installation

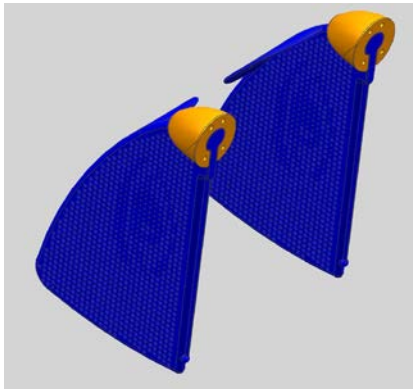


Tighten the hexagon nuts with a torque of 1 Nm. Use a liquid threadlocker to secure the nuts!

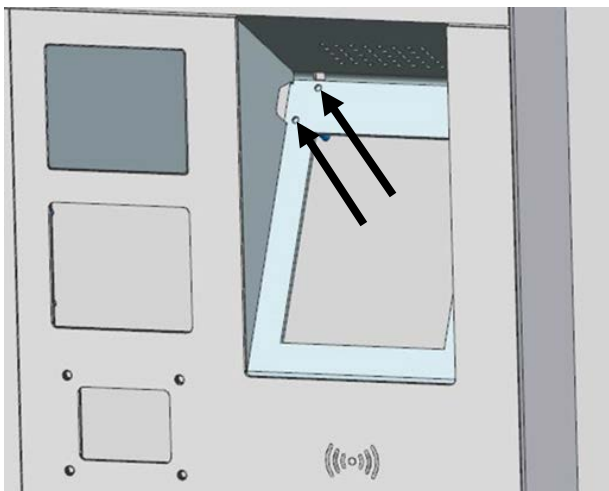
Mounting kit

1x privacy protection left
1x privacy protection right
4x M3x8 countersunk screws
2x mounting element
12 x locking nut
4 x M4x8 cheese-head screw
2 x toothed lock washer

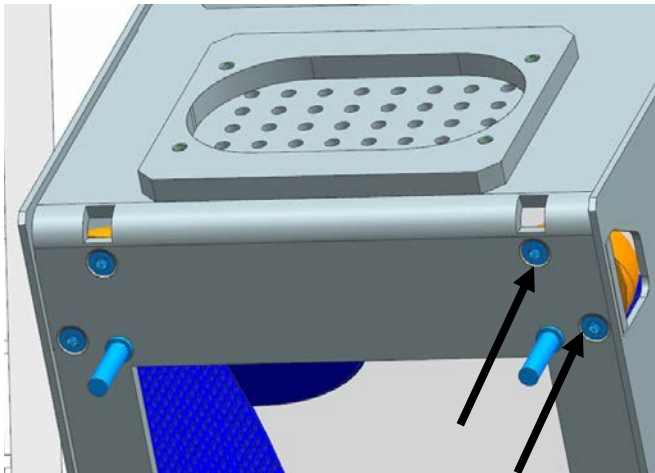
The fastening elements must be pushed onto the privacy flaps (see picture below).



Set the first one into place.

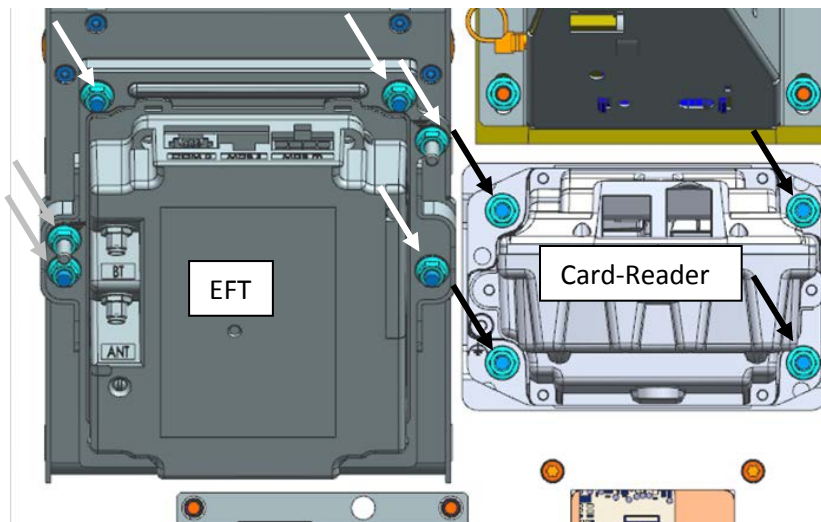


Fix it with 2 with M3x8 countersunk screw (Torx TX 10).

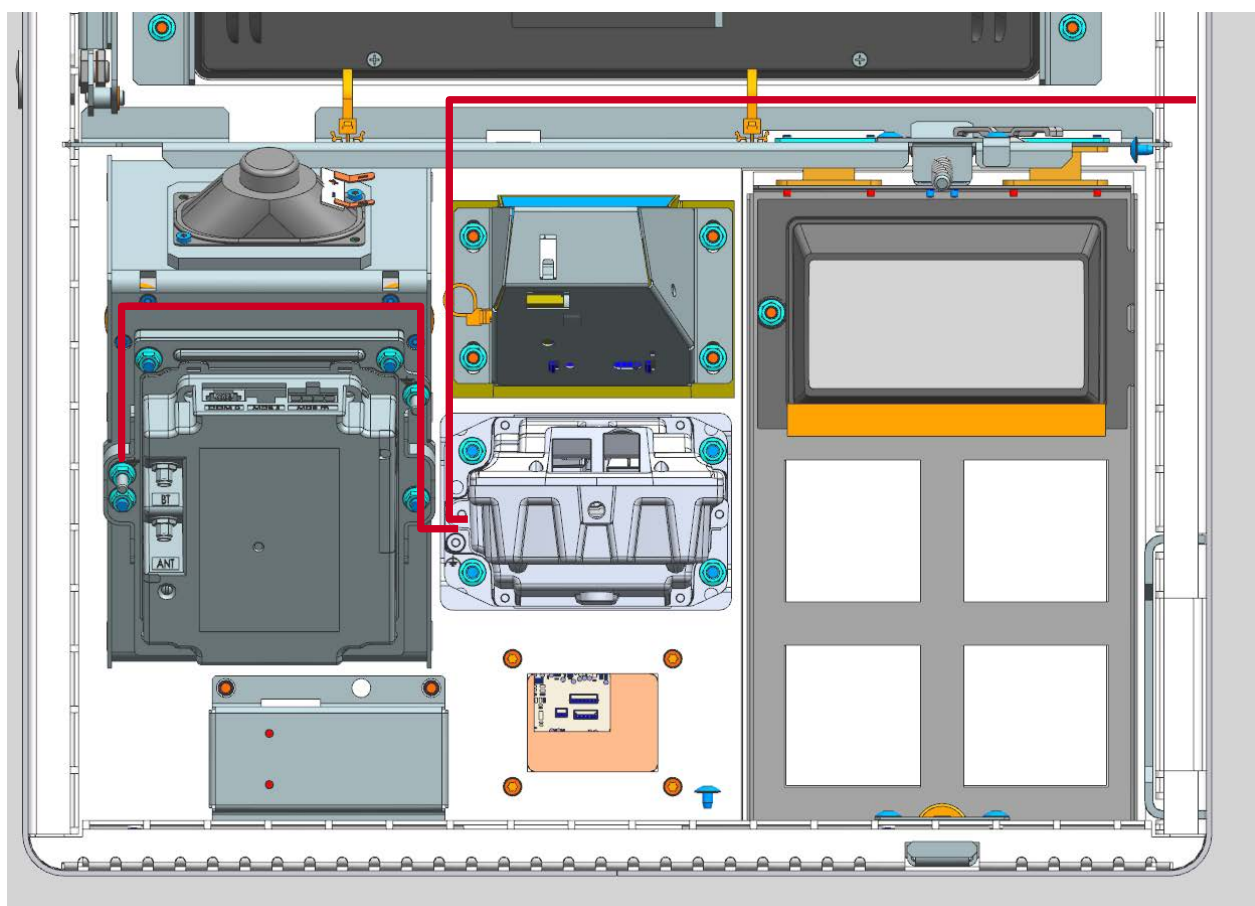


Fix the other one in the same way.

Set the EFT into place and fix it with 6 locking nuts. Set the card reader into place and secure it with 4 locking nuts.

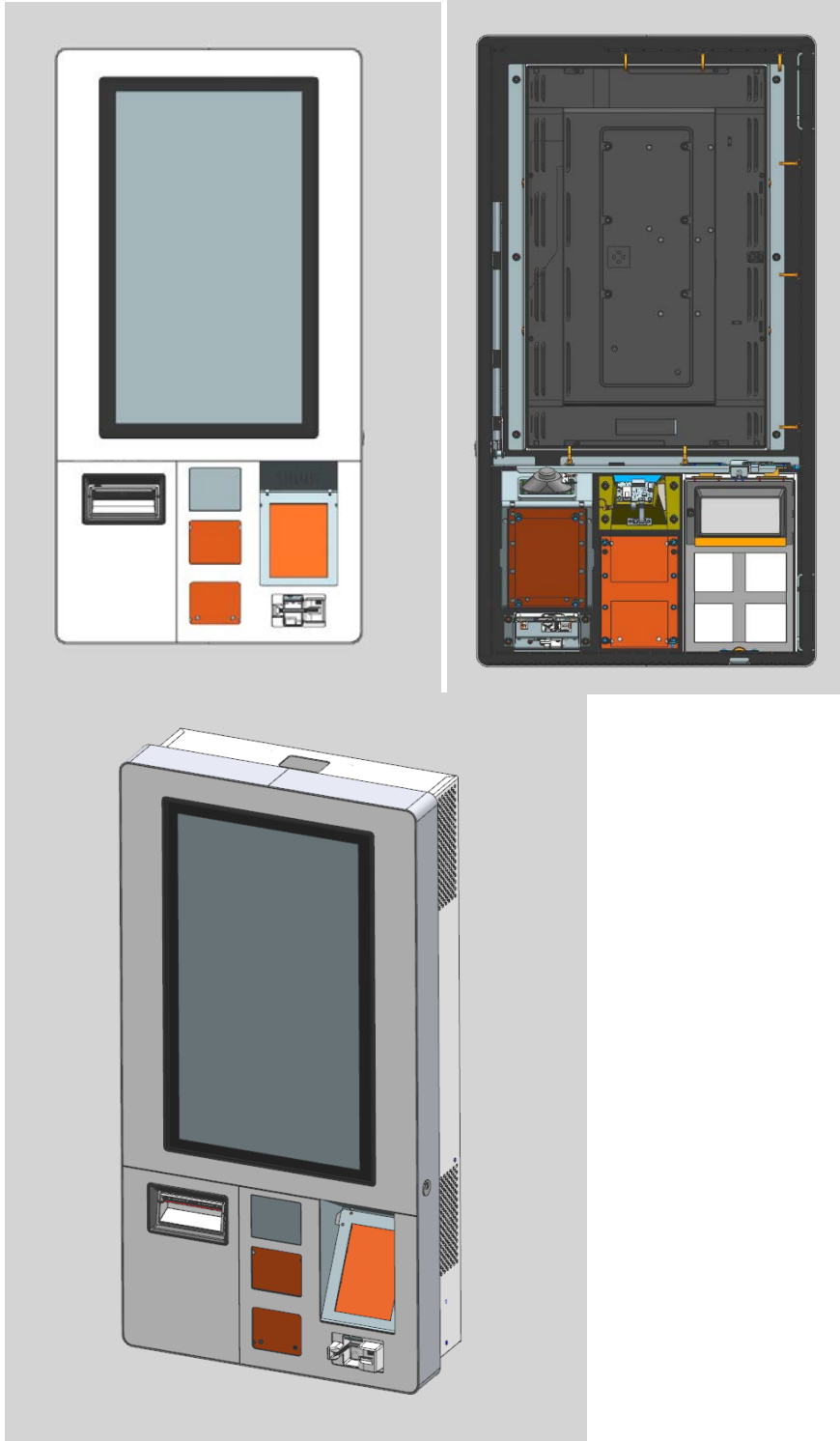


Pinpad and card reader should be earthed via the pre-installed ground strap (see red lines).



11 Verifone UX 100/200/300

Open the door. Remove the blind covers (coloured in orange) with a8x M4 socket wrench size 7).



11.1 Installation



Tighten the hexagon nuts with a torque of 1 Nm. Use a liquid threadlocker to secure the nuts!

Mounting kit

1x privacy protection left

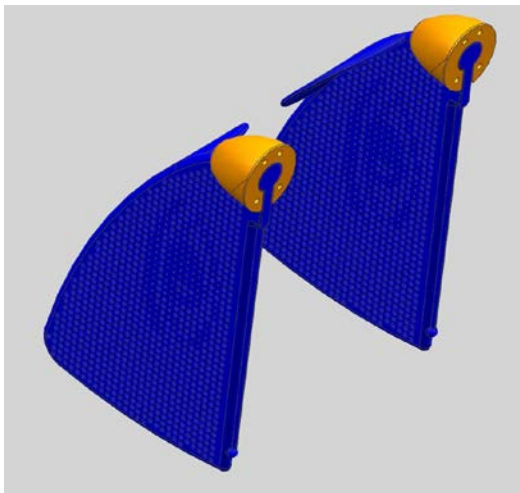
1x privacy protection right

4x M3x8 countersunk screws

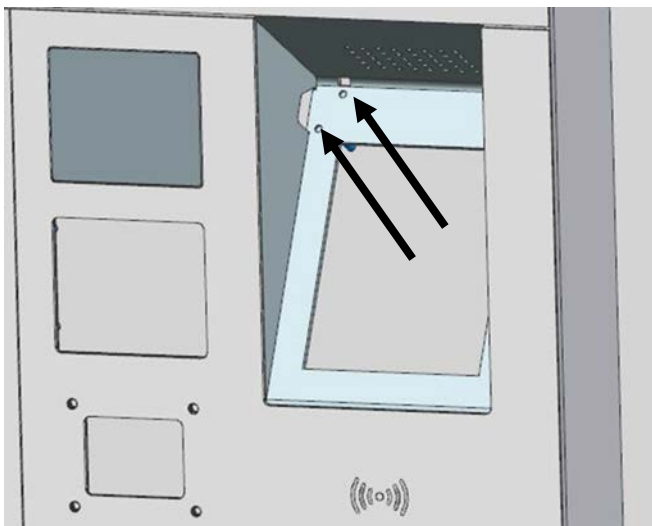
2x mounting element

10x M4 locking nut

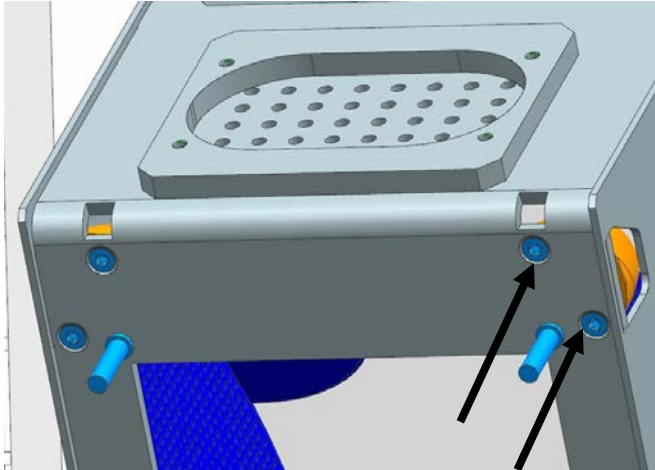
The fastening elements must be pushed onto the privacy flaps (see picture below).



Set the first one into place.

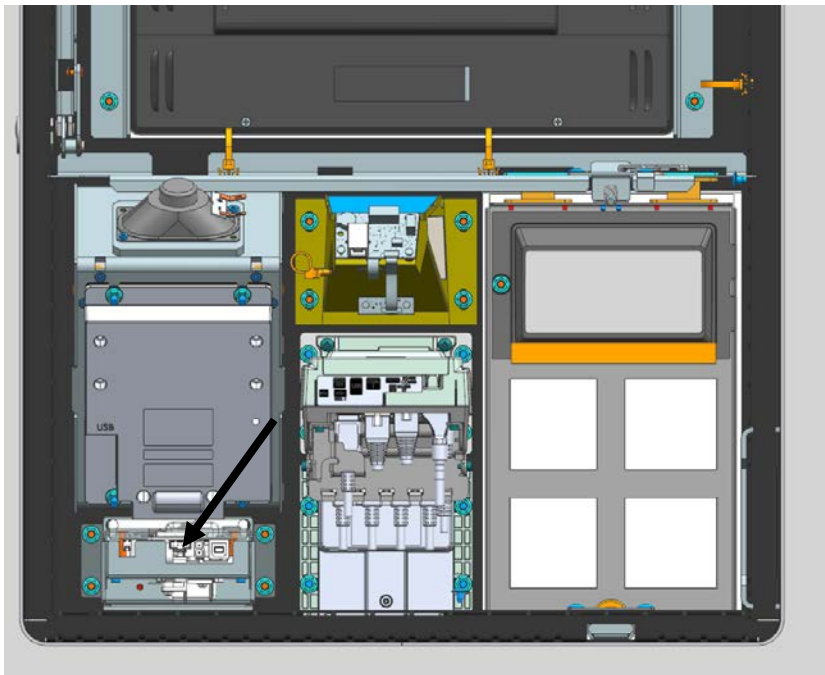


Fix it with 2 with M3x8 countersunk screw (Torx TX 10).

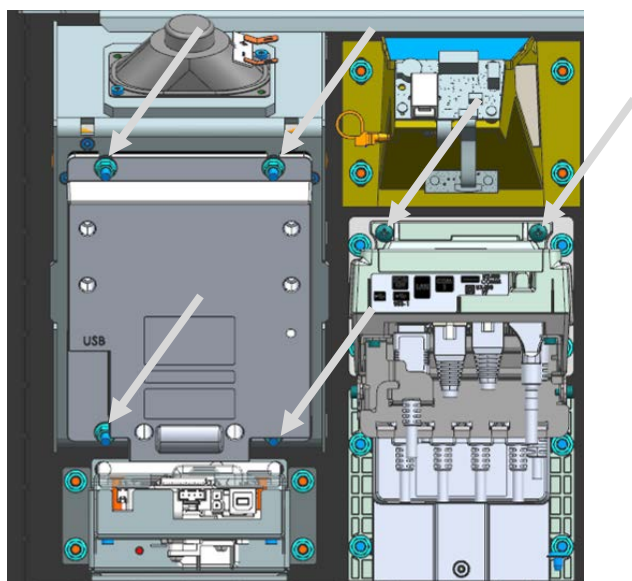


Fix the other one in the same way.

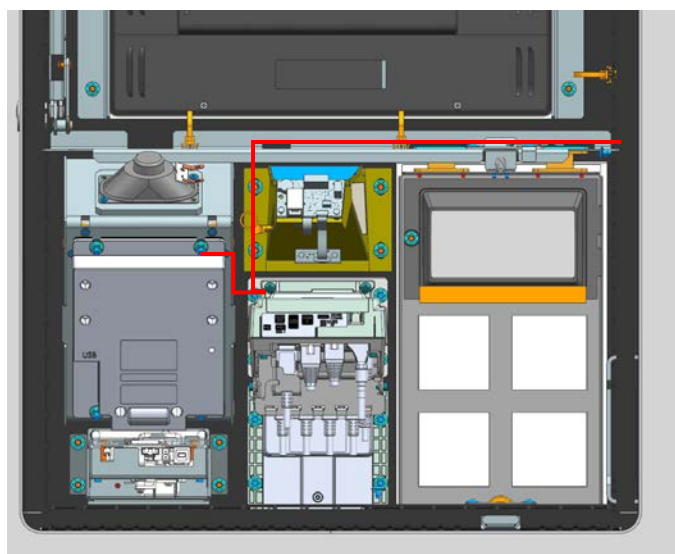
The pre-assembled card reader (optional) may have to be removed before the pinpad can be installed (4x M4).



Set the verifone into place and fix it. Do it the same way with the card reader.

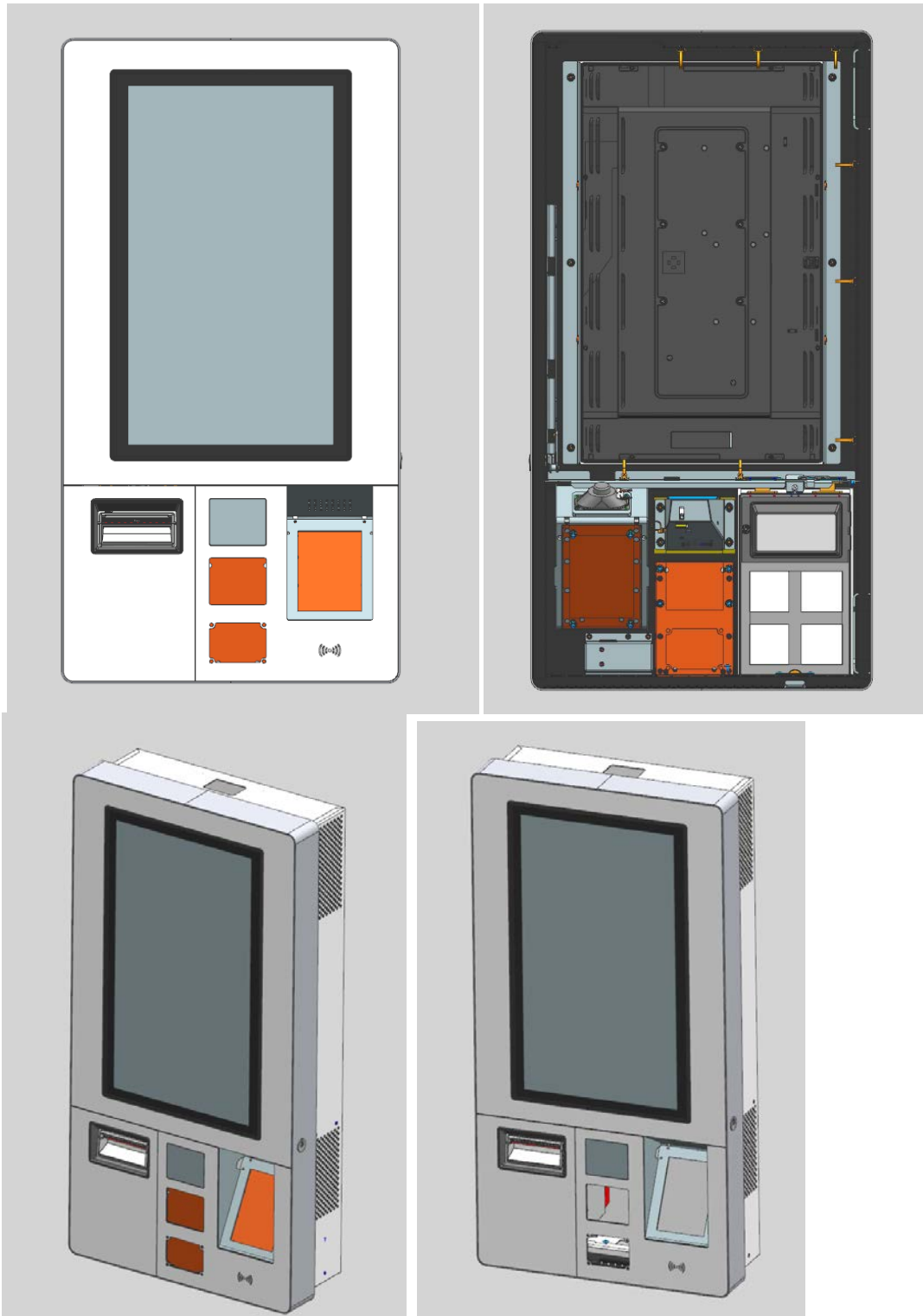


Pinpad and card reader should be earthed via the pre-installed ground strap (see red lines).



12 CCV C60

Open the door. Remove the blind covers (coloured in orange) with a 8x M4 socket wrench size 7.



12.1 Installation



Tighten the hexagon nuts with a torque of 1 Nm. Use a liquid threadlocker to secure the nuts!

Mounting kit

1x privacy protection left

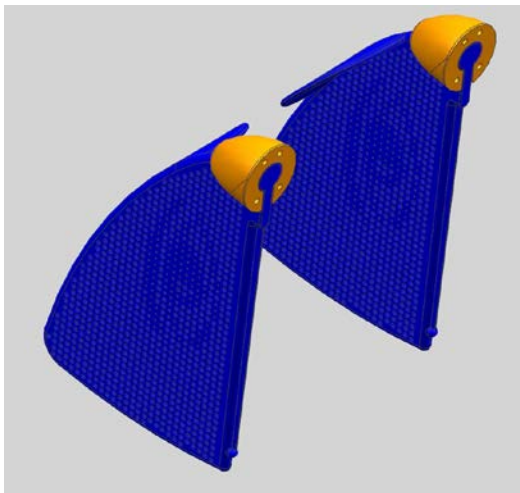
1x privacy protection right

4x M3x8 countersunk screws

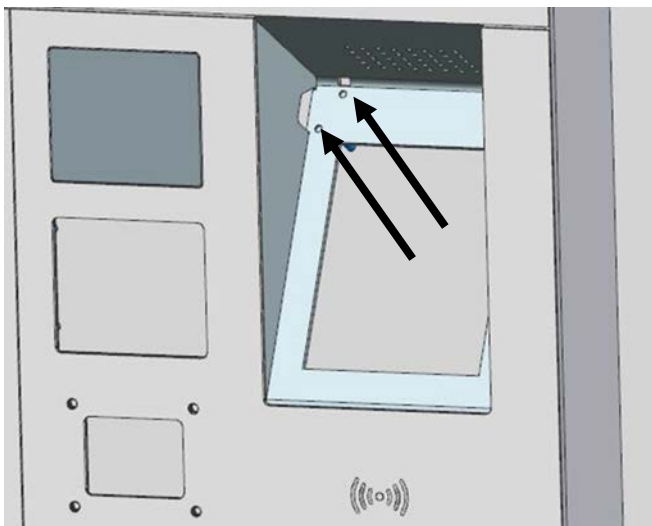
2x mounting element

10x M4 locking nut

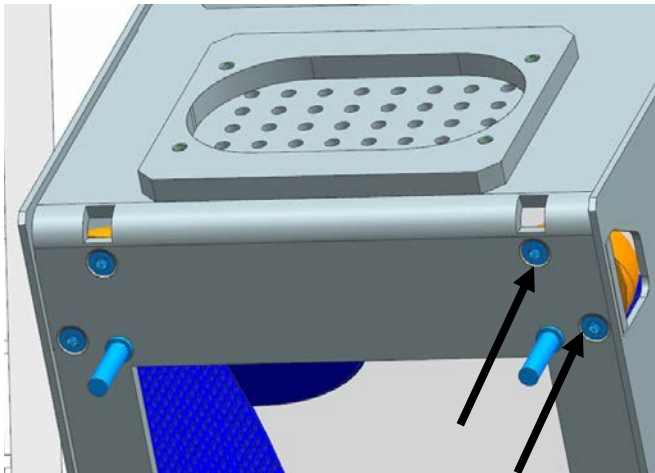
The fastening elements must be pushed onto the privacy flaps (see picture below).



Set the first one into place.

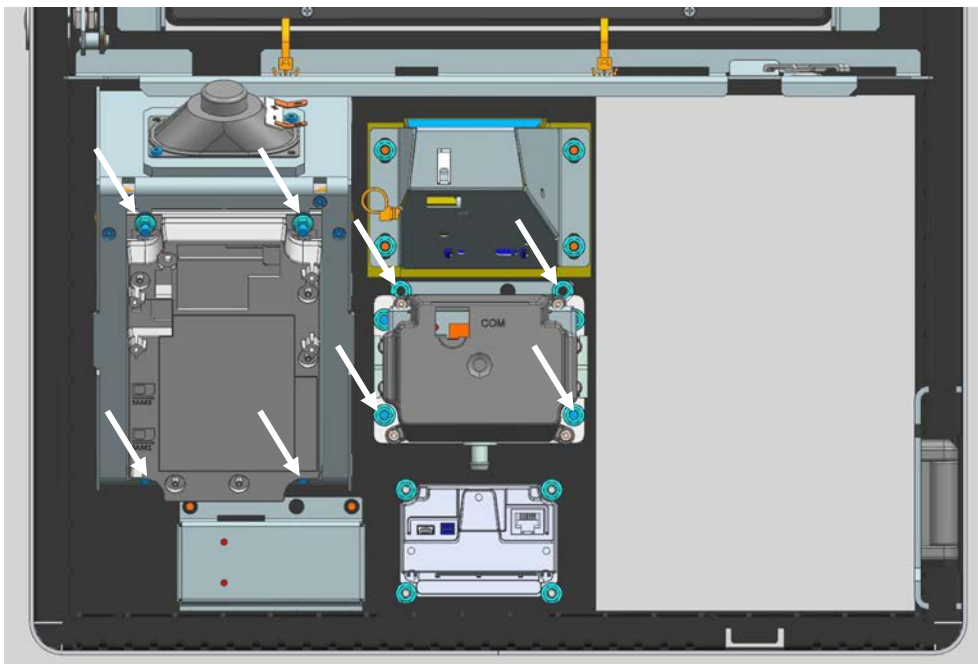


Fix it with 2 with M3x8 countersunk screw (Torx TX 10).

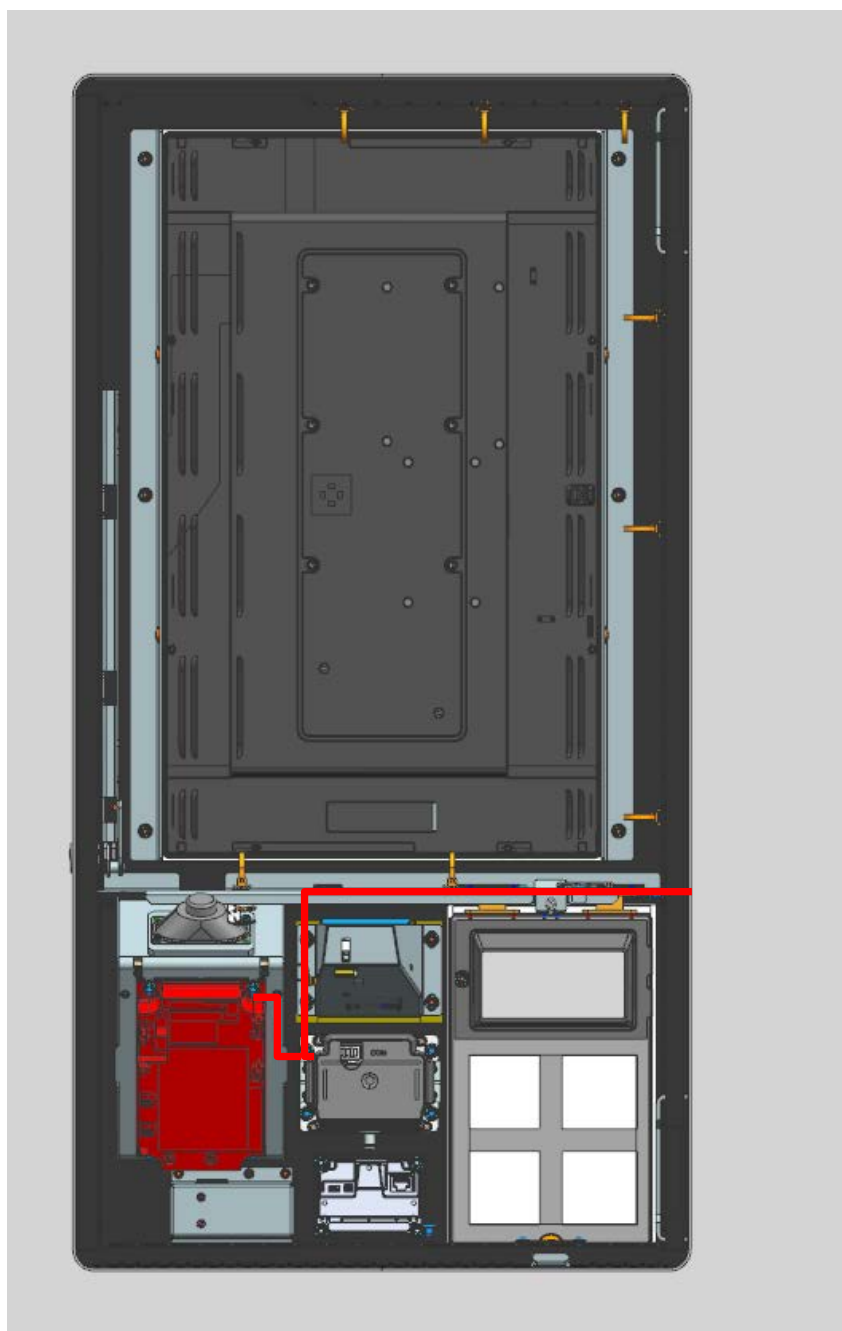


Fix the other one in the same way.

Set the EFT into place and fix it with 4 M3x8 countersunk screws. Install the card reader with 4 countersunk screws.



Pinpad and card reader should be earthed via the pre-installed ground strap (see red lines).



13 Start up the System

Ensure that the K-two has been installed correctly to the house installation and the LAN cable is properly connected.



The system will start up automatically, when it will be provided with current. If this does not work, please open the device (see chapter Opening) and push the ON/OFF button at the PC to switch the system on (see arrow).



PC

Ensure that the device has been installed correctly to the house installation and the LAN cable is properly connected.



A 16A fuse complying with IEC60127 (breaking capacity of 1500A) must be part of the building installation.

The power supply system must be equipped with separately guided protective earth conductors (PE). This kind of electricity system is known as TN-S network. Do not use PEN conductors!

14 Disconnecting the System from the Mains

Open the device and unplug the power cables of the PCs on the power distribution box if it is a device with fixed wiring. Otherwise, disconnect the mains plug from the housing installation.



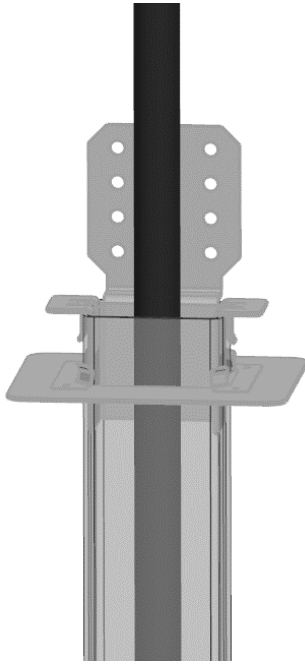
15 Permanent connection (North America)



Installation by qualified electrician only! Follow the local regulations!

15.1 Wiring from above

Unlock and open the door. Guide the cable through the ceiling cable channel.



Fasten the ceiling tube in the holder and clamp the cable channel with the hexagon socket screw.

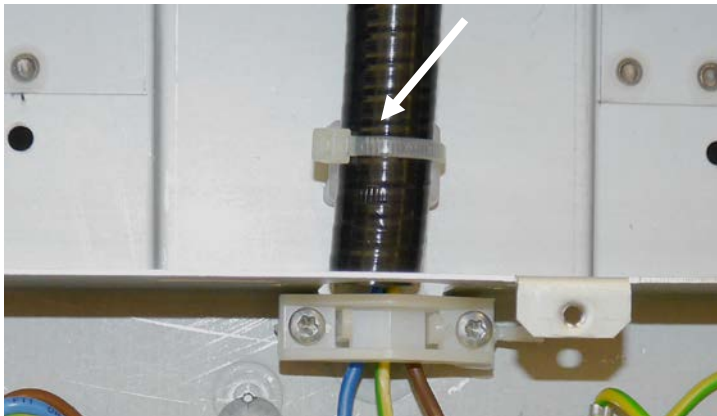


Remove two screws and remove the cover of the power distributor.



Guide the power cable from above through the cable channel into the power distributor.

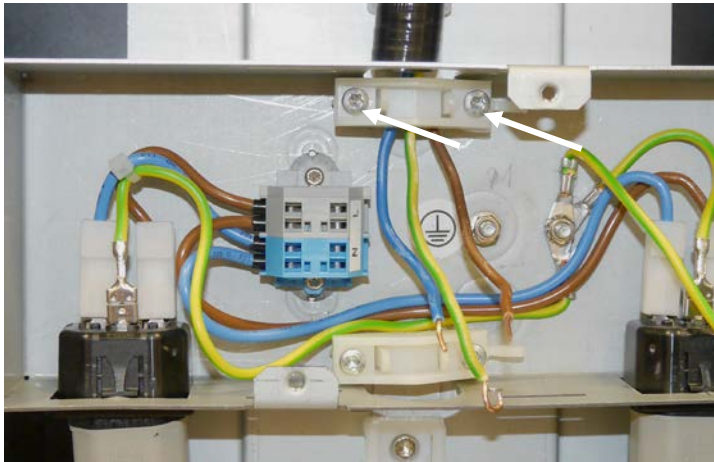
Fix the cable with a cable binder.



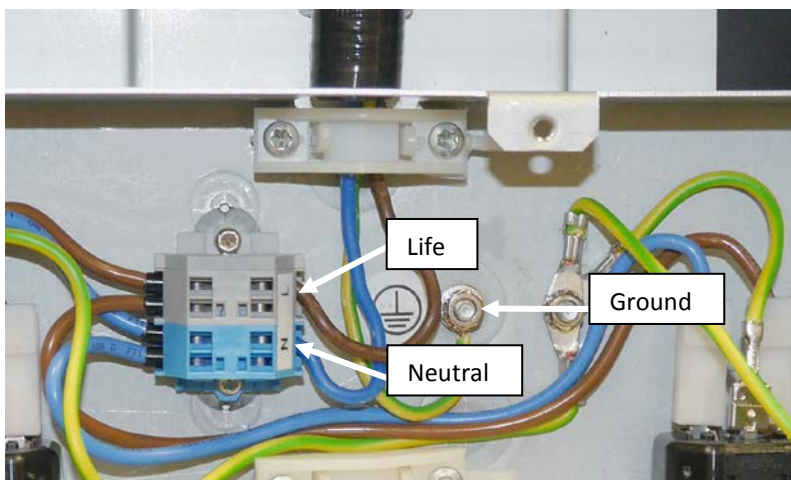
If you use a cable with metal sheath follow the instructions in the short guide and use the installation set included in the plastic bag. If not remove it and put it aside.



Loosen the screws at the cable bracket (see arrows). Guide the three cables through and fix the screws again.



Install the cables as shown in the picture below. If it is a flexible wire, listed as ring pressure-terminal connectors recognized for the wire size must be used. The bonding conductor shall be routed so as not to be exposed to physical damage.



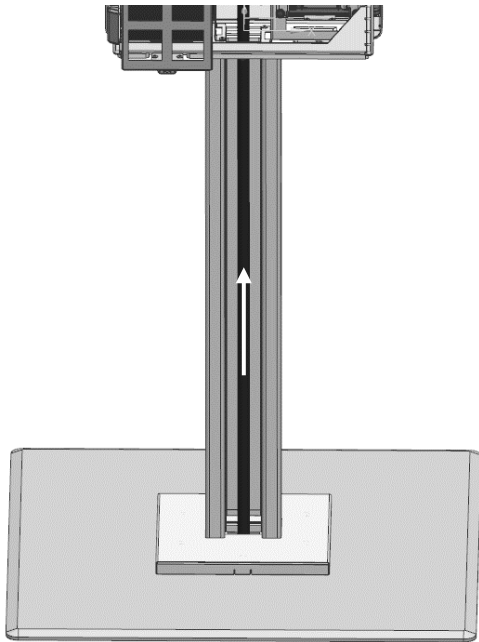
Turn the cover carefully (take care for the cable) upside down, set it into place and secure it with the two screws removed before.



Close and lock the door.

15.2 Wiring from below

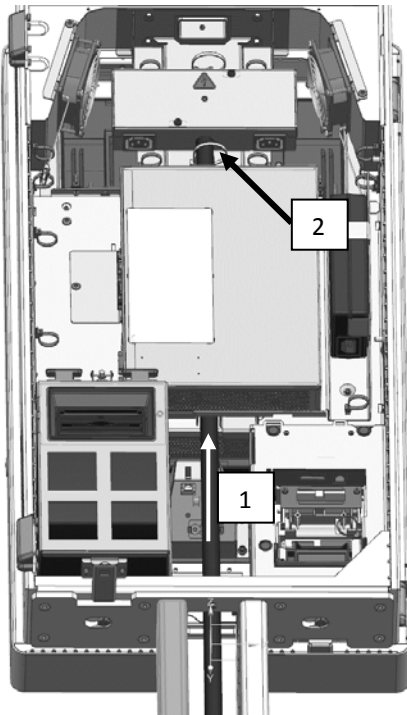
Unlock and open the door. Guide the cable through the cable channel into the housing.



Remove two screws and remove the cover of the power distributor.



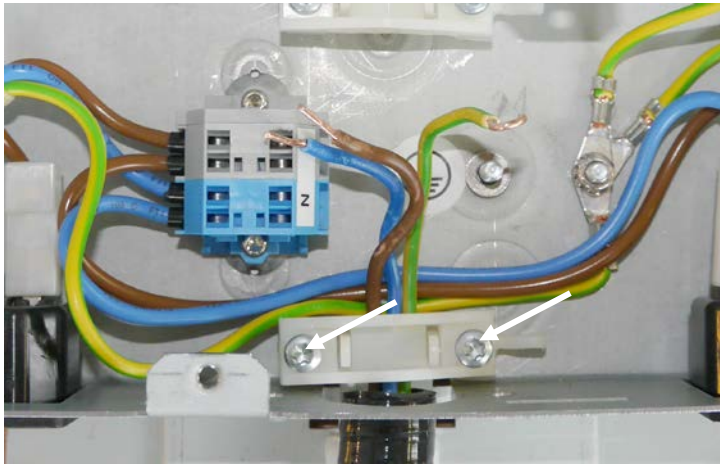
Guide the cable behind the PC (1) into the distribution box and fix it with a cable binder (2).



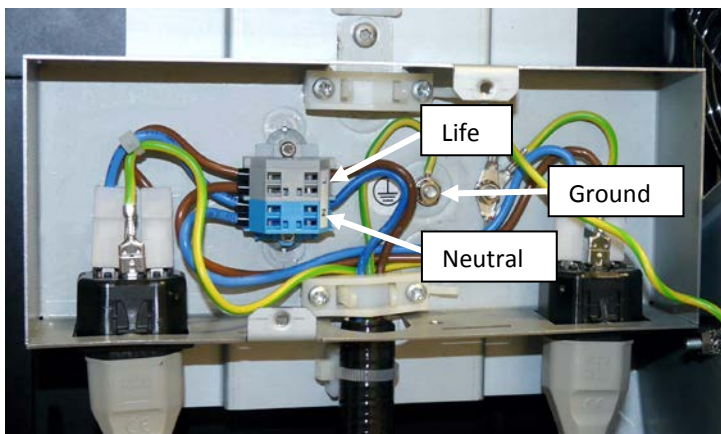
If you use a cable with metal sheath follow the instructions in the short guide and use the installation set included in the plastic bag. If not remove it and put it aside.



Loosen the screws at the cable bracket (see arrows). Guide the three cables through and fix the screws again.

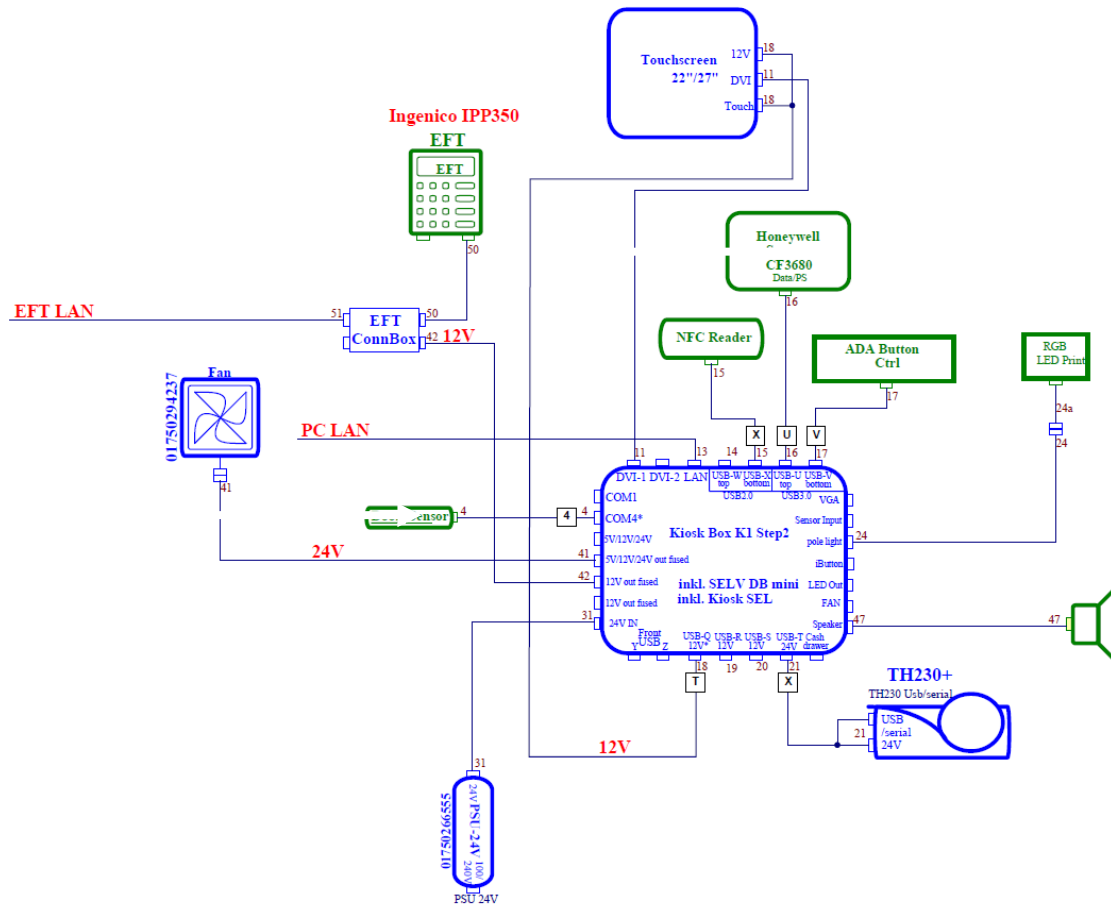


Install the cables as shown in the picture below. If it is a flexible wire, listed as ring pressure-terminal connectors recognized for the wire size must be used. The bonding conductor shall be routed so as not to be exposed to physical damage.



Mount the device in reverse order.

16 Block diagram



17 Technical data

17.1 System

Mains input voltage	100-240 V~ / 60-50Hz
Power consumption	2.4-1.0 A
Weight 22" double sided	ca. 55 kg
Weight 22" single sided	ca. 35 kg
Weight 27" double sided	ca. 65 Kg
Weight 27" single sided	ca. 40 kg

17.2 Environmental requirements

Operating temperature	
Ambient temperature:	5° C – 35° C
Humidity:	5% r.h. (1 g/m ³) – 85% r.h. (25 g/m ³)
Temperature change:	0.5 K/min (max. 7.5K/30 min)
Barometric pressure:	70 kPa – 106 kPa (70kPa corresponds to an installation at approximately 2000 meters above sea level) Installation environments with long periods of sunshine should be avoided
Storage conditions	
Ambient temperature:	5° C – 40° C
Humidity:	5% r.h. (1 g/m ³) – 85% r.h. (25 g/m ³) 0.5 K/min
Temperature change:	0.5 K/min (max. 7.5K/30 min)
Transport conditions	
Ambient temperature:	-25 °C – 60° C
Humidity:	15% r.h. (1 g/m ³) – 98% r.h. (32 g/m ³)
Temperature change:	-25° C / 25° C

17.3 Electrical characteristics of the power supply

Nominal voltage	2.4 – 1.0 A
Mains voltage range	100 - 240 V
Nominal frequency	60 / 50 Hz
Network type	TN
Permissible tolerance for voltage range	-10 % bis +6%
Permissible tolerance for rated frequency	±1 %

17.4 Device conditions

		110-120V				220-240 V			
		Idle Mode		Operation		Idle Mode		Operation	
	Typical current consumption	2,2	A	2,65	A	0,81	A	0,9	A
	Active Power	154	W	220	W	150	W	295	W
					110-120V				
Leakage Current					<3,5	mA			
Protection class					I				

17.5 Noise emission in acc. with EN 27779

Noise rating according ISO 7779	Idle Mode		Operation	
Sound power level LWAd	4	B	5	B
Workplace-related sound pressure level LpAm	41	dB	51	dB

* typical operating cycle

17.6 ACO Kiosk PC

SSD	128 GB
CPU	Intel i5-4570TE
Graphic Adapter	VGA, resolution max. 1920x2000 Pixel @ 60 Hz

17.7 LCD 27" display

Size	27" TFT LCD
Maximum Resolution	1920 x 1080
Contrast Ratio	1200 :1
Brightness (Backlight Type)	300 nits (No Touch), 270 nits (Projected Capacitive)
View Angle	H:178°, V:178°
Touch LCD Display	
Touch Type	Projected Capacitive
Touch points	10
Touch Screen Interface	USB-HID (Type B)
I/O Port	
Serial Port	NA
USB Port	1 x USB 2.0 (Type B) for Touch Interface (USB-HID)
Video Port	1 x HDMI, 1 x DP, 1 x VGA
Audio Port	NA
Power Input	1 x 2.1 mm 12V DC Jack
Physical Properties	
Speaker	NA
Construction	Glass, SECC Metal
Compliance	IPX1
Dimensions (W x H x D) mm	644.6 x 385.0 x 57.1 mm
Net Weight (kg)	8.09 kg
Gross Weight (kg)	9.78 kg

17.8 LCD 22" Touch Display

Dimensions (with base)	517.4 (W) x 313.3 (H) x 46.0 (D) mm
Net weight (approximate)	5.5 kg
Power supply	12 V DC, 4.16 A
Power consumption during operation:	45 W (normal) / standby: 3 W / off: 1 W
LCD size/ type	21.5" diagonal TFT active matrix console
Active area	476.64 (H) x 268.11 (V) mm
Pixel pitch	0.24825 (H) x 0.24825 (V) mm
Screen resolution	1920 X 1080 (max.)
Display mode	VGA 720 X 400 (70 Hz) VGA 640 X 480 (60/66/70/72/75 Hz) SVGA 800 X 600 (60/70/72/75 Hz) XGA 1024 X 768 (60/70/75 Hz) SXGA 1280 X 1024 (60/70/75 Hz) WXGA+ 1440 X 900 (60/75 Hz) WSXGA 1680 X 1050 (60 Hz) 1920 X 1080 (60 Hz)
Display color	16.7M (6 Bits + HI-FRC)
Contrast ratio	1000:1
Brightness (w/o touch)	300 cd/m ² (typical)
(projected capacitive)	270 cd/m ² (typical)
Response time	5 ms (typical)
Viewing angle --	Horizontal 170 (typical)
Viewing angle --	Vertical 160 (typical)
Video input format:	RGB analog 0.7V
Video synchronization format	Separate sync (H+V) / composite sync. / sync-on green
Video input frequency	31.47kHz ~ 82.3kHz / 56Hz ~ 75Hz (horizontal / vertical)
Video signal input	D-sub 15-pin socket (analog) / DVI-D
OSD key Control key	Power On/Off, Select, Down, Up, Menu

OSD option	Contrast, Brightness, Auto Adjust, Left / Right, Down / Up
Horizontal size	Fine, OSD Left / Right, OSD Down / Up
OSD timeout	Factory Reset, Language, RGB
Plug & play	DDC 2B-compatible
Conformity	TÜV, CE, UL, CUL, FCC-B, RoHS
Touchscreen technology	Projected capacitive
Touchscreen interface	USB (Type B)

17.9 TH230+

Technology	High-speed thermal printer
Resolution	8 dots/mm (203 dpi)
Printing speed	Mono color: 220 mm/s, Two colors: 110 mm/s Draft mode up to 300 mm/s (reduced intensity)
Cash drawer interface	6pin RJ12, 1A@24V max.
Interface options	USB 2.0 full speed, powered USB, RS232c, Ethernet
Cutter	Material: hardened steel, Full cutting speed: < 300ms
Paper transport	Forwards; to utilize the entire capacity of the paper > after cutting: up to 12mm backwards (approx. 3.5 lines at 7.52 lpi)
Control functions	Print head temperature control with adjustment of the print speed Near end paper control and out of paper control Error message for paper cutter Printer cover open/closed Self-test with printout
Optional	Paper width 57.5mm, Printing width = 51mm = 408 dots
Statistical data	Total number of dots Total number of line feeds

	Total number of cuts Max. head temperature Paper jam counter Error counter for cutter Error counter for thermistor Error counter for high voltage/low voltage Number of firmware updates Switch-on time in hours Switch-on counter
Reliability	55 million lines 3 million cuts at 55g/m ² 150km at 12.5% print density
Graphics function	The TH230 is fully graphic-compliant.
Paper width	79.5mm - 80mm
Paper weight	55g/m ² ± 5 g/m ²
Paper thickness	0.055mm – 0.1mm
Thermal coating	Rear side of paper
Paper roll Outer diameter	90mm max.
Width of paper roll	80.3mm max.
Length of paper	~100m
Core size	Core diameter 10mm +2mm Wall thickness of core: max. 2mm ± 0.3mm; End of paper not glued to core. Length of paper fold at core: 35mm
Print width	72mm = 576 dots

18 Certifications of the Manufacturer

18.1 CE Marking



The device complies with the requirements of the EU directives 2014/30/EU with regard to “Electromagnetic compatibility” and, if applicable, 2010/35/EU “Low Voltage Directive” and 2011/65/EU “Restriction of Hazardous Substances”. Therefore, you will find the CE mark on the device or packaging.

If a device is equipped with a WLAN it complies with the requirements of the “Radio Equipment Directive” 2014/53/E.



The system is approved for the USA and Canada.

Supplier's Declaration of Conformity

47 CFR § 2.1077 Compliance Information

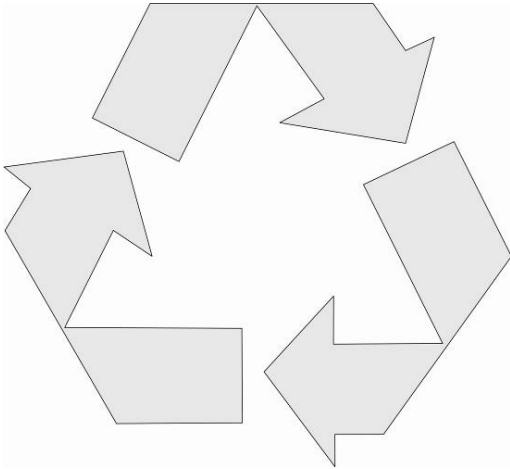
Responsible Party in the U. S.:	Diebold Nixdorf
Address:	5995 Mayfair Road N. Canton, OH 44720 / USA
Contact:	cynthia.williams@dieboldnixdorf.com

FCC Compliance 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

19 Recycling the Kiosk



This device was designed according to the Diebold Nixdorf standard "Environmentally Conscious Product Design and Development".

The device is manufactured without the use of CFCs and CCHs and is manufactured to a great extent out of materials and components which are recyclable.

For recycling purposes do not attach any additional adhesive labels to the terminal.

Diebold Nixdorf disposes of old terminals in an environmentally responsible manner at a recycling center that is ISO 9001 and ISO 14001 certified, as is the entire company. Follow your local regulations on the disposal of toxic waste.

Your Diebold Nixdorf vendor will answer any questions you have concerning returns, recycling, and disposal of our products.

Diebold Nixdorf
D-33094 Paderborn
Order No.: 01750299889B