WINCOR NIXDORF

CERTO 415/417

CERTO 415/417 Kiosk System

Operating Manual

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Edition Jun 2007

Contents

Manufacturer's Certification

The kiosk complies with the requirements of the EEC directive 89/336/EEC with regard to "Electromagnetic compatibility" and 73/23/ECC "Low Voltage Directive".

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

Note on the laser

If your device is equipped with a CD-ROM drive, the following condition applies:

The CD ROM drive contains a light-emitting diode (LED), classified according to IEC 825-1:1993:LASER CLASS 1; it must not be opened.

Laser safety

The barcode scanner complies with safety standard EN60825-1 (2001) for a Class 1 laser product. It also complies with IEC 60825-1: 1993+1997+A2:2001. Laser Radiation – do not stare directly into beam.

Radiant Energy The barcode scanner uses a low-power laser diode operating at 650 nm in an opto-mechanical scanner resulting in less than 0.7 mW peak output power.

INTRODUCTION

This operating manual provides all the information required for problem-free operation of CERTO 415 and CERTO 417 kiosk system.

Having studied the operating manual, you will be able to:

- replace consumables (e.g. paper),
- evaluate device-specific status displays and system error messages,
- eliminate problems (such as paper jams),
- properly operate the device.

Symbols used in this guide

- Text following this mark represents an item in a list.

“ “ Text in quotation marks contains references to other chapters or sections in this document.

• Paragraphs following this symbol are actions to be performed in the specific order.

Text following this symbol is the actions to be performed in order to avoid damage or injury.

This symbol identifies paragraphs which contain general notes to facilitate use of the device and help avoid operating errors.

Important Safety Precautions

Please read the following notes carefully before doing any work on the device.

This device complies with the relevant safety regulations for information processing equipment.

- Note the warning and information labels on the device.
- The device is equipped with a safety-tested power cable, which must be connected only to a grounded outlet.
- Always hold the plug when removing the power cable. Never pull the cable itself.
- Install cables in such a way that they will not be stepped on or tripped over or damaged or crushed in any way.
- Have damaged power cables replaced immediately.
- Make sure that there is always free access to sockets used or to the electrical circuit-breakers of the house installation.
- In case of an emergency (e.g. damaged cabinets, control or power cables, liquids or foreign objects in the device) take the following steps:

Deactivate the device immediately by:

> Switching off the automatic circuit-breaker or removing the fuse inset from the fuse holder in the distribution box of the building installation;
> Disconnecting the plug connectors of the power supply cables from the grounded socket in the building installation;
> Switching off the mains on/off switch on the power distributor.

Inform the customer service responsible for you.

- During the thunderstorm, data transmission lines must not be connected or disconnected.
- Only use accessories and extension components that have been approved by us. Nonobservance can result in damage to the system or

violations of regulations concerning safety, radio interference and ergonomical requirements.

- To clean the device only use cleaning agents approved by Wincor Nixdorf International GmbH

Repairs

Repair work may only be carried out by authorized personnel.

Unauthorized opening of the device or repair work carried out improperly could result in considerable danger to the user.

In case of noncompliance, Wincor Nixdorf International GmbH excludes all liability.

Lithium Battery

There is danger of fire or explosion if the batteries are handled incorrectly. It is therefore important to note the following points:

- Avoid short circuits.
- Never recharge the battery.
- Avoid temperatures above 100 °C.
- Do not try to open the battery by force.
- Do not allow the battery to come into contact with water or fire.

Replace only with the same or an equivalent type recommended by Wincor Nixdorf International GmbH.

Dispose of used batteries in compliance with national regulations and the manufacturer's specifications.

Abbreviations

DDR	Double Data Rate
ECP	Extended Capabilities Port Protocol
EPP	Enhanced Parallel Port
I/O	Input/Output
LCD	Liquid Crystal Display
MSR	Magnetic Swipe Card Reader
OS	Operating System
OSD	On Screen Display
PLink	Panel Link
RXD	Receive
SPP	Standard Parallel Port
TXD	Transmit
USB	Universal Serial Bus
UL	Underwriter's Laboratory
VGA	Video Graphic Array
VLD	Visible Laser Diode
XGA	Extended Graphic Array

DEVICE OVERVIEW

Device Type

The CERTO 415/417 kiosk system is a fully integrated solution that serves as a generic kiosk platform in which customise to suit variety of client requirements. It is a multifunctional terminal designed for indoor installation.

It consists of 2 models, namely CERTO 415 (15” LCD display) and CERTO 417 (17” LCD display).

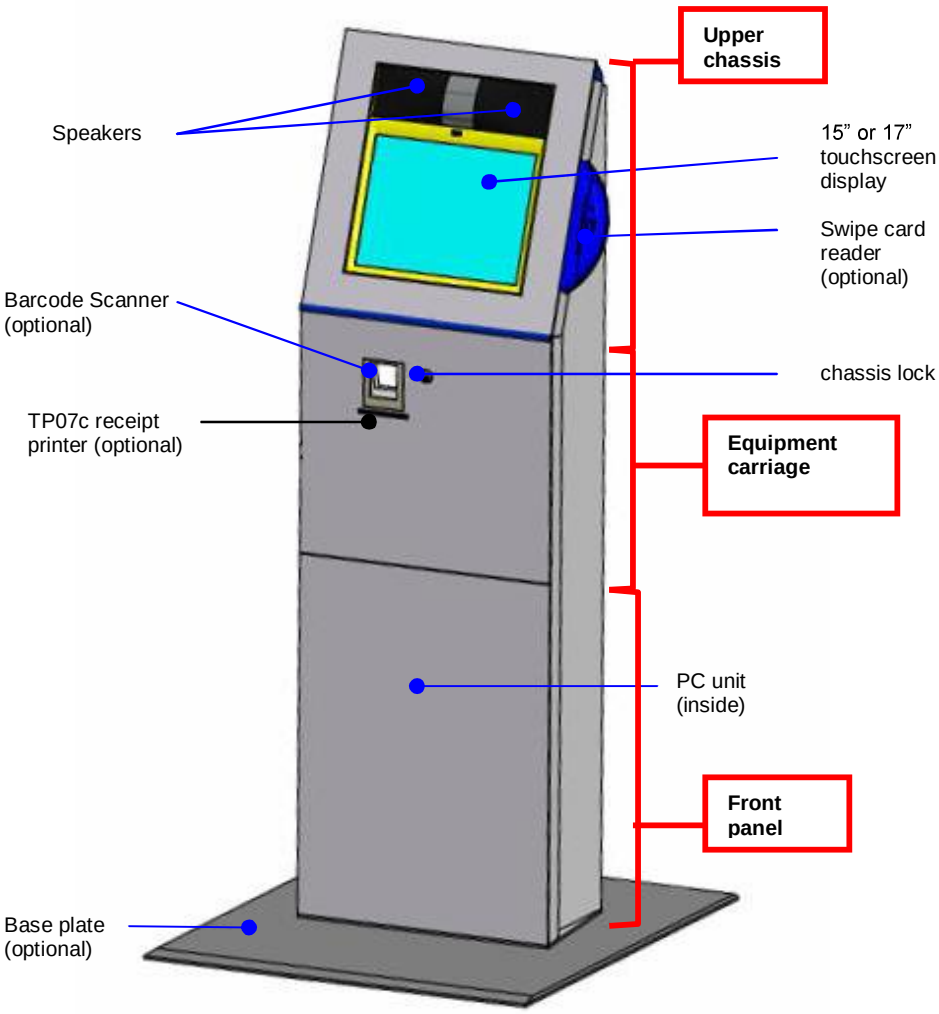
Components

The CERTO 415/417 kiosk system may comprise of the following components:

- 15" or 17” LCD monitor (with or without touch screen)
- 80mm thermal receipt printer TP07c (optional)
- Embedded PC unit or Beetle /MII system
- Power supply unit
- Power distributor
- Loudspeaker
- Magnetic swipe card reader (optional)
- Barcode reader (optional)

Device View

Front view

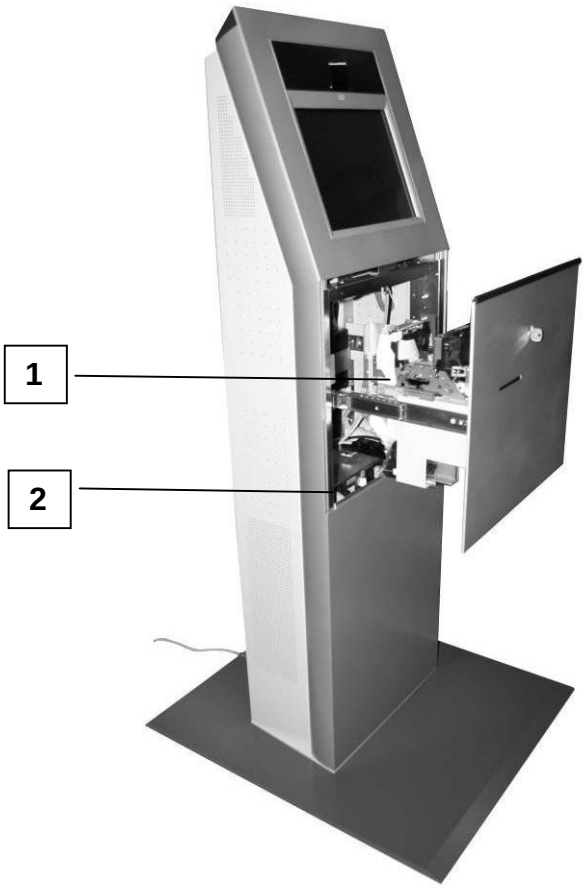


Rear View

1 Opening for cable (e.g. power cable, LAN cable)

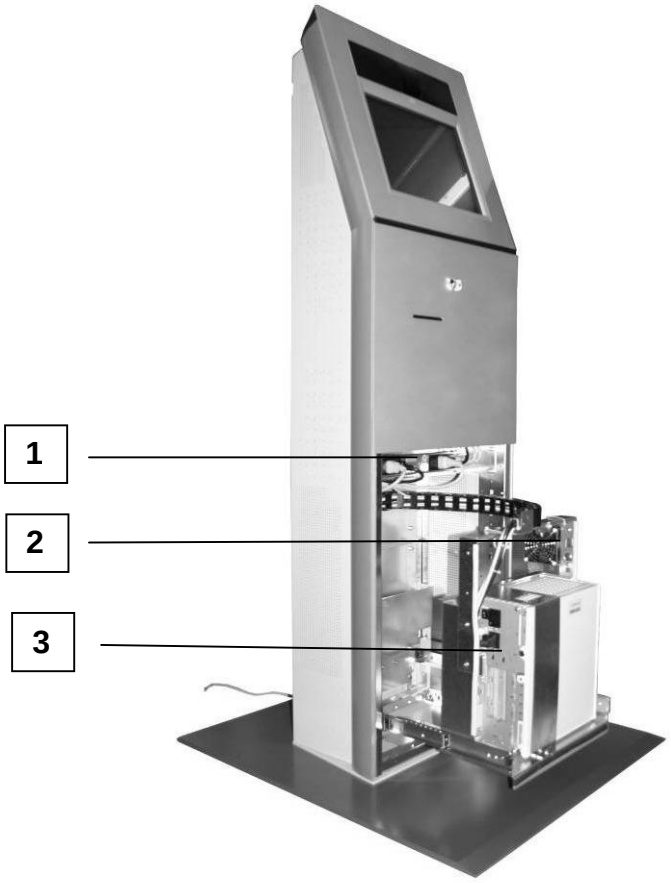
Equipment carriage pulled out

Kiosk with receipt printer TP07c



1 Receipt printer TP07c
2 Power distributor with main power on/off button
(6 connectors shown in the picture, optional 3 connectors available)

Front panel bottom removed



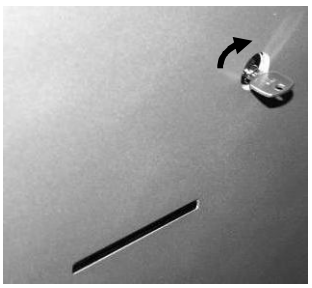
1 Power distributor
(6 connectors shown in the picture, optional 3 connectors available)
2 Fans
3 System unit (BEETLE /M-II or embedded PC)

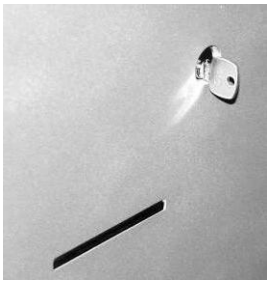
BASIC OPERATION

Opening / closing the device

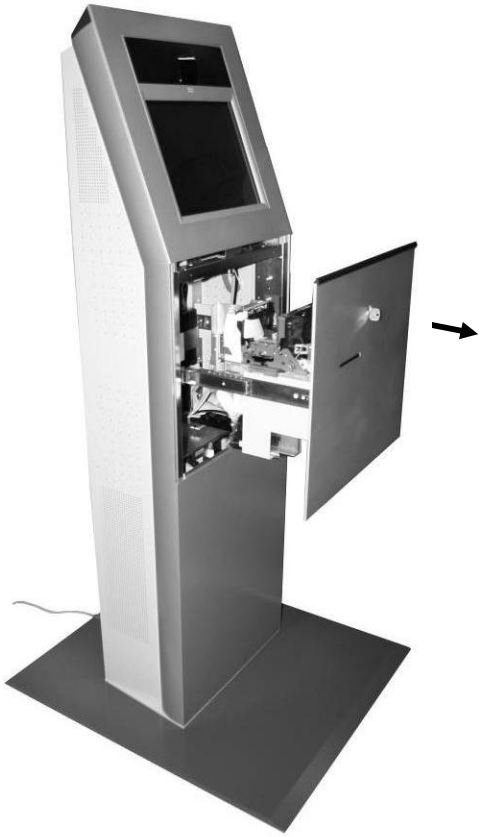
A set of two keys is supplied to open and to close the device doors (monitor cover, rear cover, equipment carriage).

Pulling out the equipment carriage:
Insert the supplied key into the lock and turn it in the direction of the arrow.



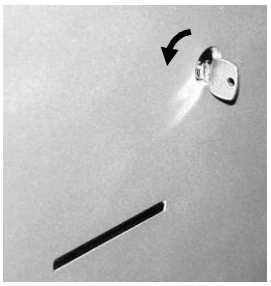


Grasp the equipment carriage on both sides and pull it out of the device as far as possible (see arrows).



Pushing in the equipment carriage:
Push the equipment carriage into the device as far as possible.

Turn the key in the direction indicated by the arrow and remove it from the lock.



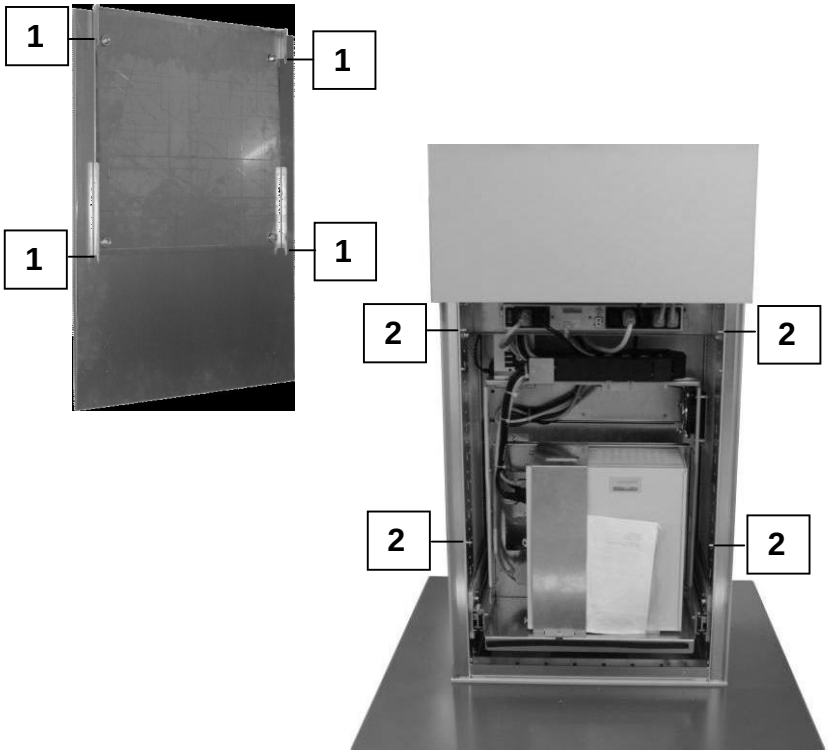
Removing the front panel

Pull out the equipment carriage (see section "Pulling out the equipment carriage").
Grasping it on both sides, pull the front panel upwards to disengage the hooks (1).

Pull the front panel a little forward (2) and set it down carefully in a protective place to avoid scratches.

Installing the front panel

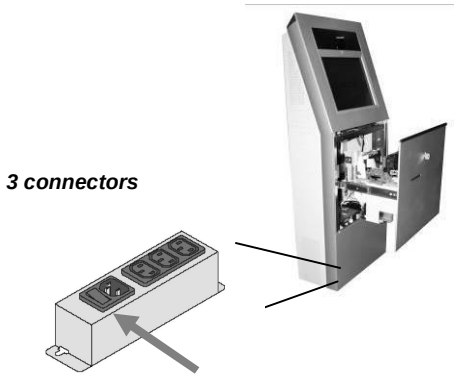
Hang the catches of the front panel (1) over the fastening bolts on the sides (2) and push the front panel down as far as possible.



Push the equipment carriage in and lock it (see section "Pushing in the equipment carriage").

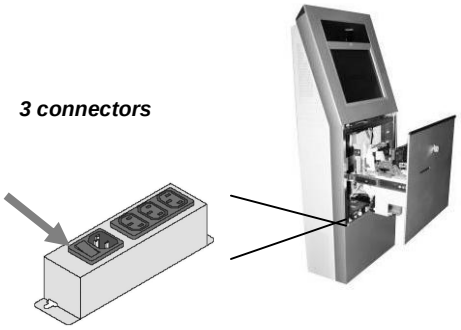
Switch-on via power distributor

Pull out the equipment carriage (see section "Pulling out the equipment carriage").
Switch the device on by using the ON/OFF switch on the power distributor (see arrow).



Switch-off via the power distributor

Complete all current transactions and power the device down.
Pull out the equipment carriage (see section "Pulling out the equipment carriage").
Switch off the device by using the ON/OFF switch at the power distributor (see arrow).



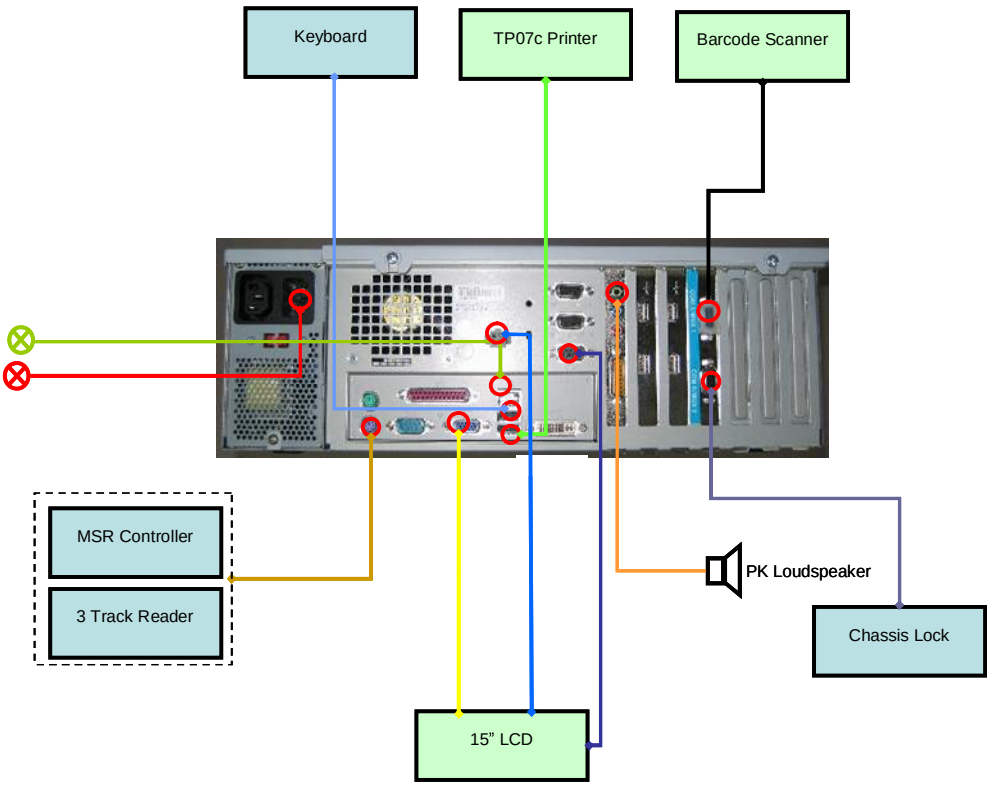
Embedded Compact PC

Technical Data

Motherboard	P195-Plus Motherboard
Chip set	Intel 845GV
Microprocessor	Intel Pentium 2.8 GHz, Celeron 2.0 GHz
HDD	IDE HDD 40 GB, 80GB
RAM	DDR 512 MB, bis 2GB
LAN	1x On-board Intel LAN module 10/100Mbit
Interfaces	2 x RS232 COM port
	4 x Powered COM port
	6 x USB 2.0 port
	1 x DVI port
	1 x VGA port
	1 x keyboard
	1 x mouse
	1 x speaker port
	1 x LAN port
Output Power	+12V DC
	+5V DC
Add On Cards	SUNIX PCI Multi I/O Card

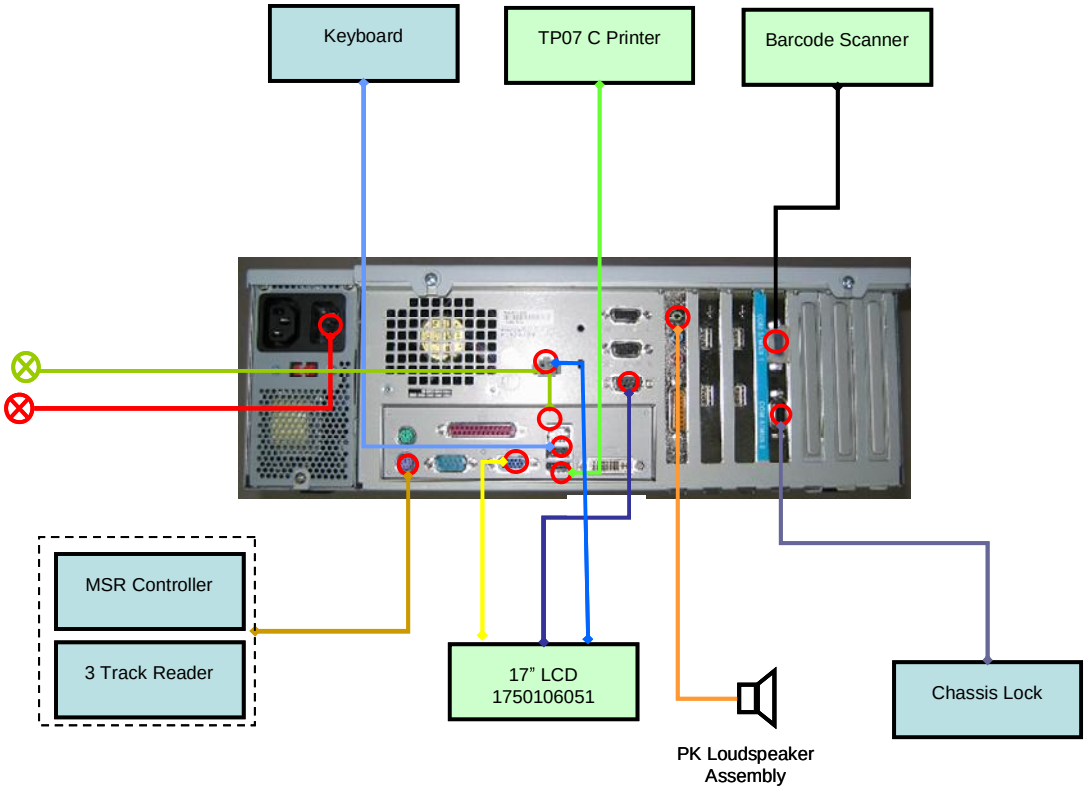
Block Diagram for CERTO 415 Kiosk System with P4 EPC

(Sample)



Block Diagram for CERTO 417 Kiosk System with P4 EPC

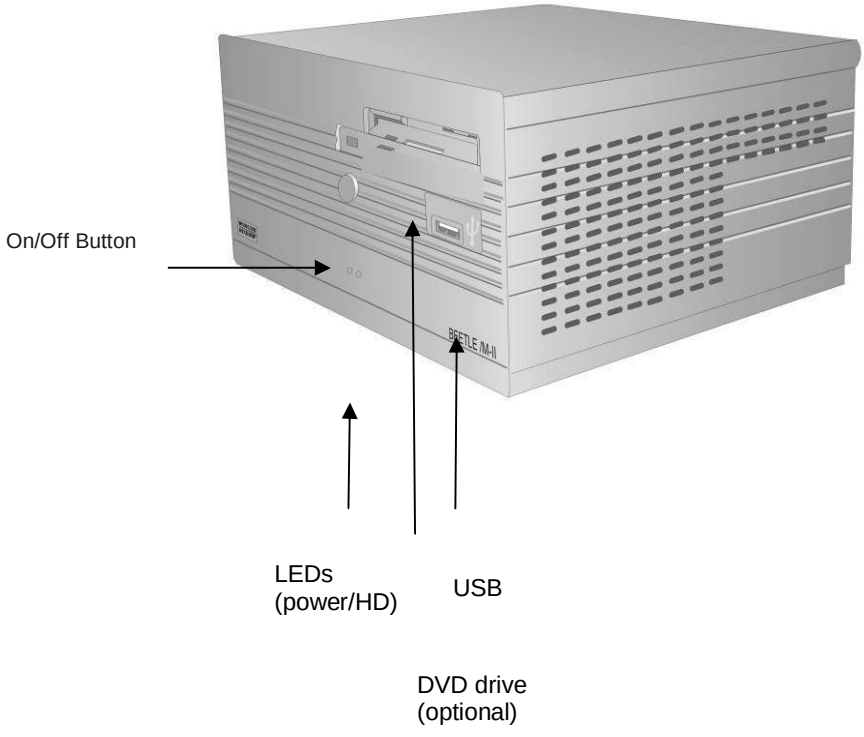
(Sample)



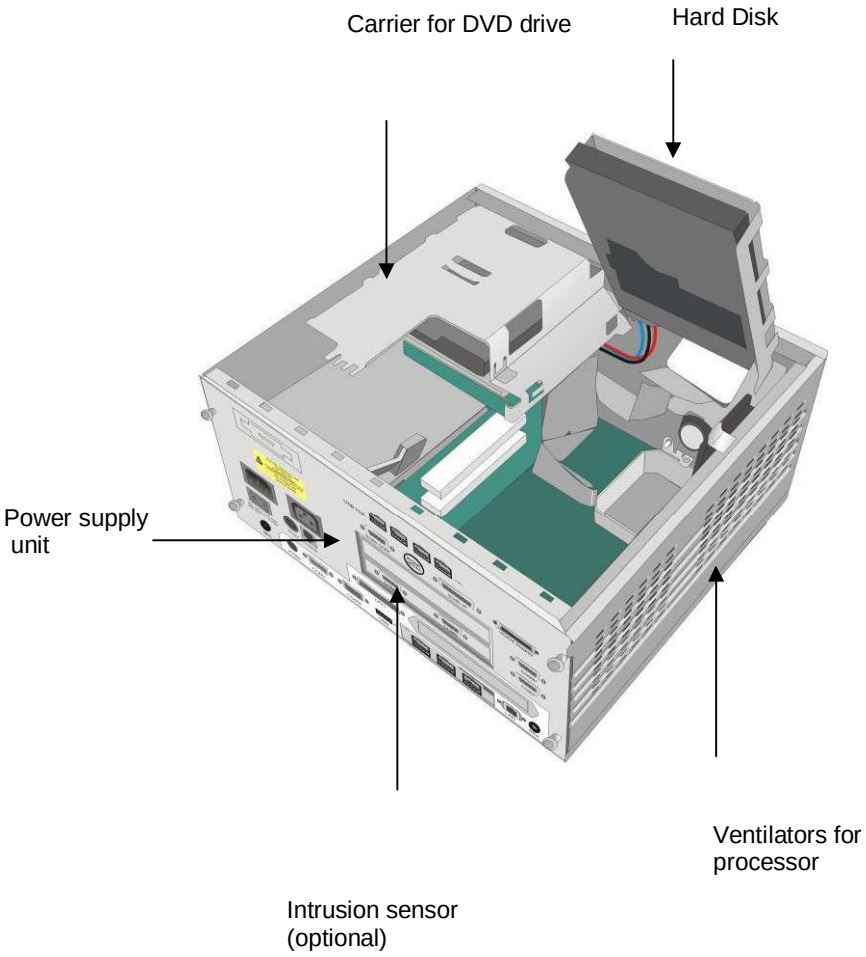
BEETLE /M-II

Overview

The following figure shows the outside of the BEETLE /M-II.



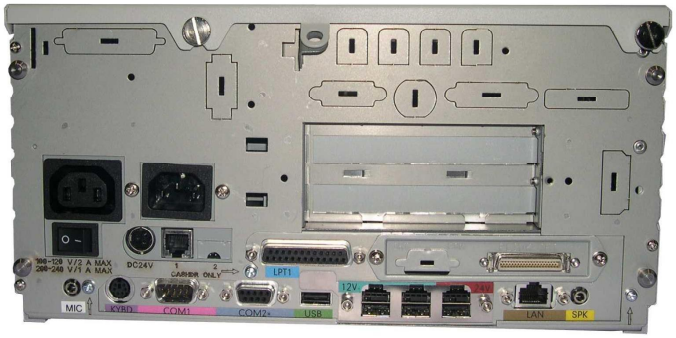
The figure below shows the interior of the BEETLE /M-II.



Back Panel of the BEETLE /M-II

The figure shows the back panel of the typical BEETLE /M-II (E1 CPU) with the locations of the connecting sockets and connecting plugs. If you wish to connect a monitor, however, you must also have a video board. You can connect the system to a network via an expansion board.

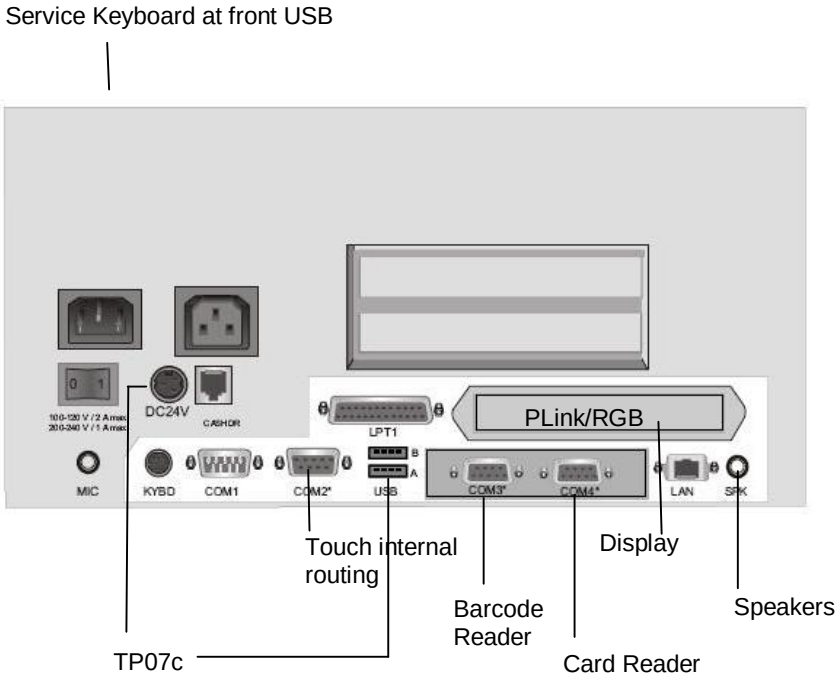
⚠ Connecting peripherals with the system switched on is not allowed, except for USB.



Technical Data BEETLE /M-II

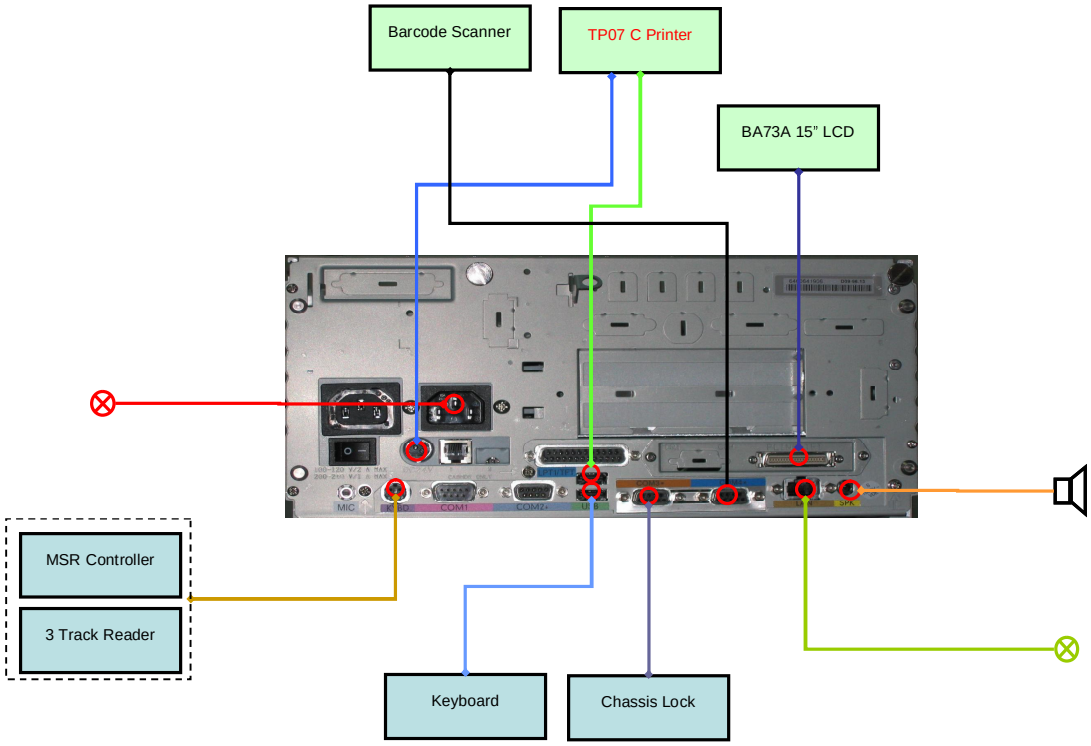
Motherboard	E1 CPU
Chip set	Intel 845GV
Microprocessor	Intel P4, 2.2 GHz Celeron, 2.4 GHz
HDD	IDE HDD 40 GB/80 GB
RAM	256 MB – 2GB, 2 DIMM plug (184pin) 2.5V DDR SDRAM technology, unbuffered non EEC DDR266, standard DIMM, height up to 35mm
LAN	1x On-board Intel LAN module 10/100Mbit
Interfaces	1 x RS232 COM port
	3 x Powered COM port
	3 x USB 2.0 port (2USB rear- 1USB front)- other interface options possible via adapter boards
	1 x DVI port, depending on configuration or
	1 x VGA port, depending on configuration or
	1 x PL port, depending on configuration
	1 x keyboard, AT compatible
	1 x mouse, via Y cable together with keyboard optional internal connection
	1 x speaker port (line in/line out)
	1 x LAN port
	1 x cash drawer
	1 x parallel interface IEEE 1284 compatible (ECP, EPP, PS/2 – compatible)
Output Power	+12V DC / +5V DC
Sub Modules	LAN controller or an ASYNC Connection (optional) ; CRT adapter or a TFT adapter

Typical Connector Assignment BEETLE/ M-II



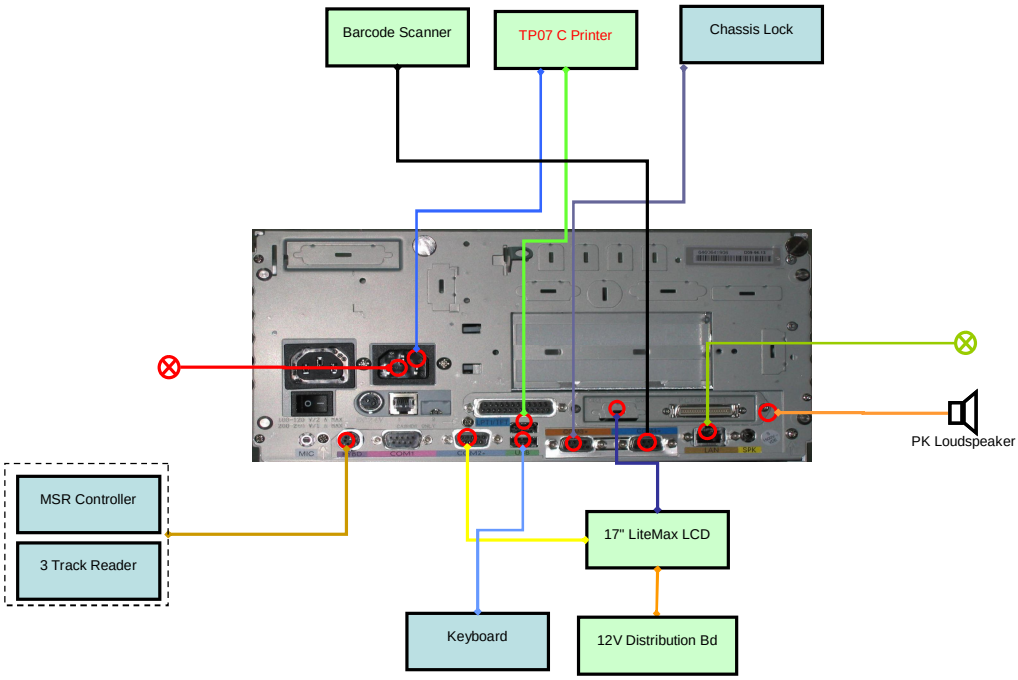
Block Diagram for CERTO 415 Kiosk System with BEETLE /M-II

(Sample)



Block Diagram for CERTO 417 Kiosk System with BEETLE /M-II

(Sample)



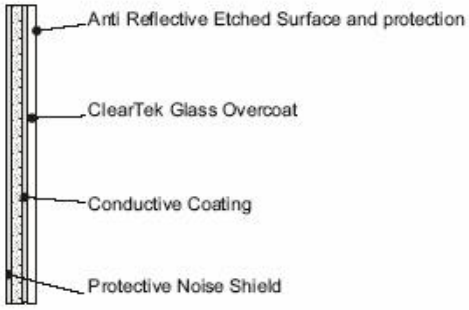
Touch screen

General

The TFT LCD flat panel display is an XGA-compatible display which is absolutely flicker free and low radiation. The screen module comprises of a TFT-LCD colour screen, the TFT-interface and an inverter that generates the voltage for backlighting the screen. As an option the screens are available with Touch Screen including a beeper.

Capacitive Touch Screen

The TFT Touch Screen works according to the principle of a change in analogue capacitance. It has a glass screen with a transparent, thin-film overlay on the surface. This is fully sealed and protected by a further layer of clear glass. Electrodes on the edges of the screen provide a uniform low-voltage field. As soon as you touch the screen with your finger the contact point is “recognized” by the change in capacitance.



Because this takes place very quickly, the Touch Screen is optimally equipped for a number of different requirements and applications.

The programming interface of the screen is identical to the mouse interface.

How to Operate

The Touch Screen responds to the slightest contact, therefore you do not have to apply much pressure when working with the screen. This does not only safe time, but is also kind to your joints!
Touching the touch glass has the same effect as clicking the left mouse button. You only need to apply a little pressure with the fingertip. In this capacitive process only fingertip contact is recognized. The screen does not react in any way if touched, for example, with a pencil or a glove.

Cleaning Instructions

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 solvents containing acetic acid. Use a soft, fine-meshed cloth to clean the surface. Dampen the cloth slightly and then clean the screen.
A wrong maintenance may cause damages to the screen, which are not covered by guarantee or warranty.

Technical Data - Touch screen 15'' PanelLink

Frequencies	Horizontal (KHz) 48,3 Vertical (Hz) 60
Resolution	Horizontal 1024 pixel Vertical 768 pixel Colour depth: LCD adapter/ graphics PCI Controller: RGB 16, 256, 64k, LCD adapter: up to 16 Millions colours.
Pixel format	approx. 0,30 mm x 0,30 mm
Brightness min.:	200cd/m^2 (center of LCD without glass)
Interface	LVDS
Power supply	3,3 V from Interface
Reading angle	
right/left	+/- 60°
top/button	45°/55°
Backlight	Twin lamps CCFL, Inverter,

Current Consumption of the Screen Module
Consisting of an LCD display, Touch Screen incl. controller, inverter, interface.

1 A + 12V (Normal Mode)
0 mA + 12V (Standby Mode)
1 A + 5V (Normal Mode)
400 mA + 5V (Standby Mode)

Technical Data - Touchscreen 15'' RGB

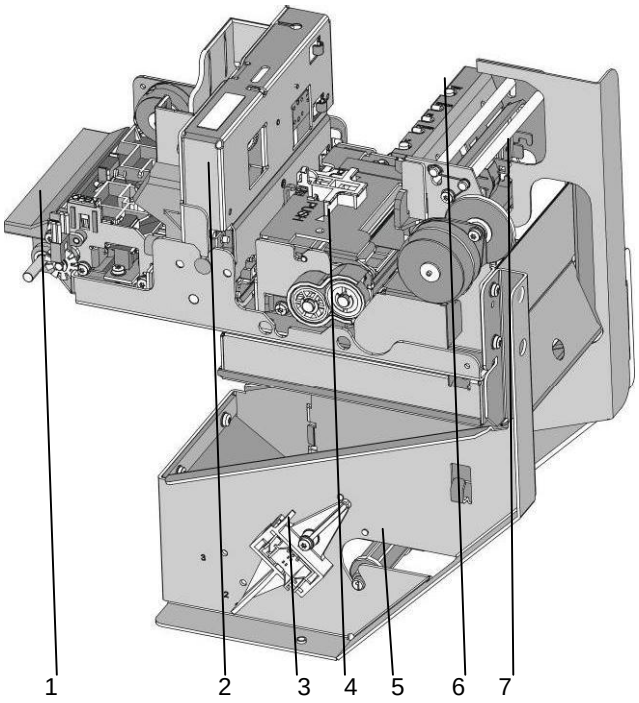
Frequencies	Horizontal (KHz) 30 ~ 55 Vertical (Hz) 56 ~ 70
Resolution	Horizontal 1024 pixel Vertical 768 pixel
Colour depth:	8-bit, 16 million
Pixel format	0.297 mm x 0.297 mm
Brightness	260cd/m^2
Interface	RGB analog
Power supply	12VDC, 3A (max)
Reading angle	
right/left	+/- 60°
top/button	45°/55°
Backlight	Twin lamps CCFL
Current Consumption	
	18 W + 12V (Normal Mode) 1.5W + 12V (Standby Mode)

Technical Data - Touch screen 17'' RGB

LCD Display	17" TFT Active Matrix Panel
Brightness	300 cd/m^2 (typ.)
Pixel Pitch (mm)	0.264(H) x 0.264(V)
Max. Resolution	1280x1024 (SXGA)
Contrast Ratio	500:1 (typ.)
Display Area	337.92 x 270.336mm
Response Time (Typ.)	8ms (typ.)
Support Colour	16.2 M
Viewing Angle	+70°~-70° (H), +70°~-70° (V) (type.)
Nominal Input Voltage VDD	+5.0V (type.)
Power Consumption	25.8W (type.)
Electrical Interface	Dual Channel LVDS
Surface Treatment	Anti-glare, Hard Coating (3H)
Inverter	LI0419B
A/D Board	AD5621
Option	Touch screen

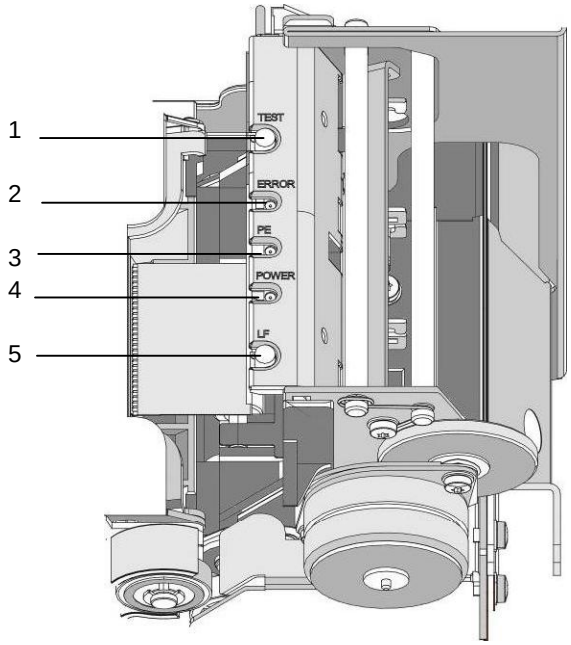
Receipt Printer TP07c

Functional components



1 Receipt output (presenter)
2 Cutter
3 Paper core adjustment
4 Thermal print module
5 Paper roll holder
6 Printer control panel
7 Paper guide

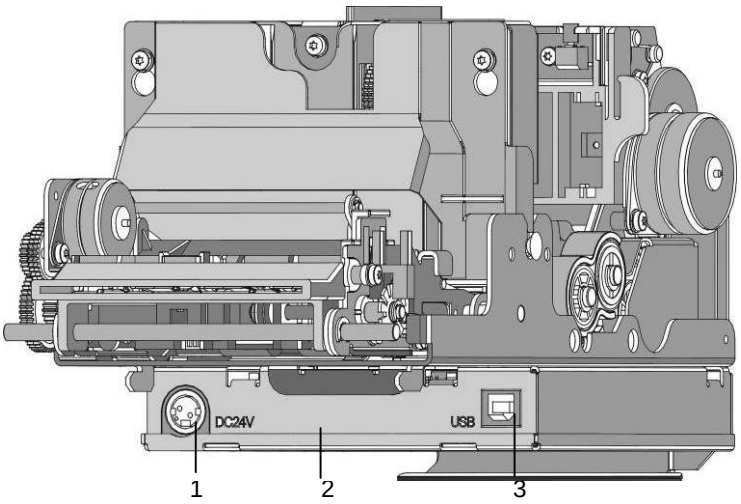
Printer control panel



1 TEST-button
2 LED ERROR
3 LED PE (paper end)
4 LED POWER
5 LINE FEED-button

1 TEST button	For diagnostic printout.
2 LED ERROR red	Off: normal condition On: offline Blinking: error (see section „ERROR LED Blink Pattern“)
3 LED PE (paper end) yellow	Off: paper is loaded On: paper roll near end is detected Blinking: paper roll end is detected
4 LED POWER green	Off: power is not stable On: power is stable
5 LINE FEED button	When the button is pressed once, the paper feeds 1/6" (cm !. When the button
is	pressed longer than two seconds, the paper is fed constantly until the button is released.

Printer Connectors



1 Power supply connector (HOSIDEN) (For power supply connection with 24V)
2 Printer controller
3 USB (Full Speed) (For system connection)

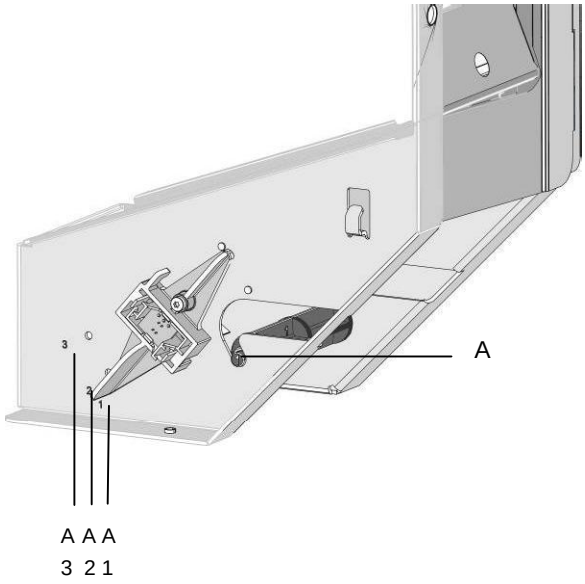
Changing the paper roll

Note the following when changing a paper roll.

Setting the paper roll core diameter

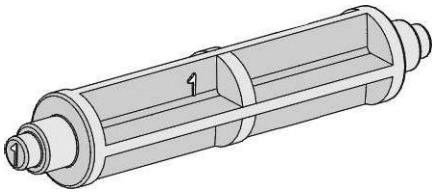
When starting the device or changing the paper roll diameter, check if the selection switch for the paper near end adjustment is set to the correct position.

Core diameter	Paper roll diameter 180 mm
18 mm	Pos. A1
25 mm	Pos. A2
40 mm	Pos. A3

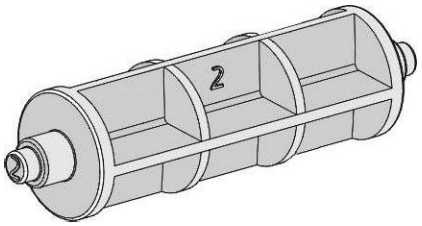


Choosing a paper roll holder

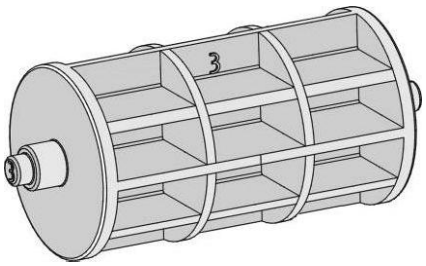
Choose the roll holder which fits to the paper roll core



Holder for 18 mm core diameter (identifier 1)



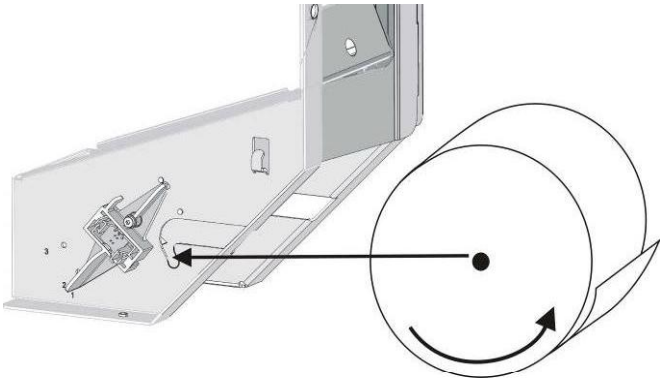
Holder for 25 mm core diameter (identifier 2)



Holder for 40 mm core diameter (identifier 3)

Inserting the paper roll

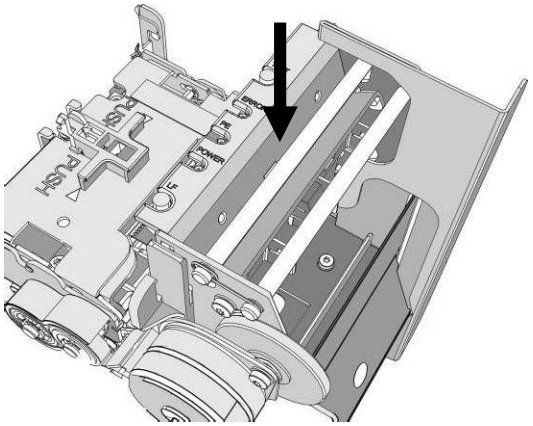
Push the paper roll holder into the paper roll core.
Insert the paper from behind into the printer as shown in the illustration.
Mind the unrolling direction of the paper.



Insert the black mark sensor (top left, top right, bottom left, bottom right) when using paper with black marks.

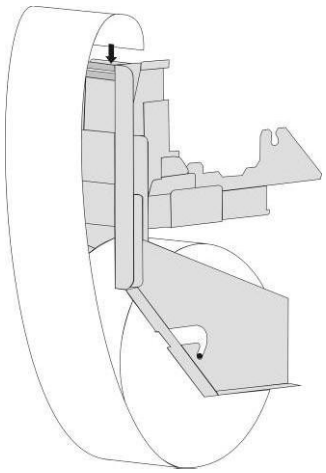
For correct paper feed or paper transport the front edge of the paper has to be straight and at right angles.

Therefore, it is recommended to cut the paper with scissors.



Take the front edge of the paper over the upper axle and feed it into the paper support (see arrow).

Keep pushing the paper into the paper support until it is retracted automatically, the paper is cut off and the printed receipt is output via the presenter.



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See also the sticker on the printer.

- Remove the receipt that was cut off before.

Removing the paper roll

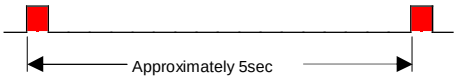
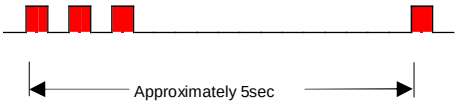
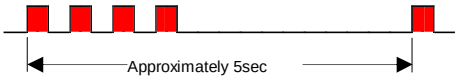
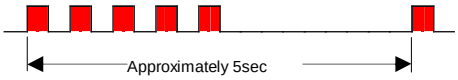
Cut off the paper at the paper support. Lift the paper roll out of the printer with the paper roll holder upwards. Use the LINE FEED button to remove the remaining paper.

ERROR LED Blink Pattern

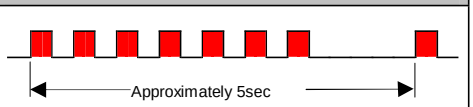
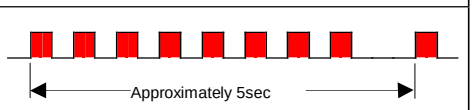
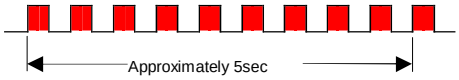
Recoverable Errors

The following table shows the blink pattern of all errors that can be recovered by following the steps described in section “Paper feed error”.

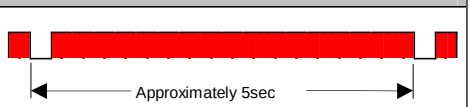
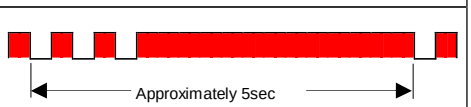
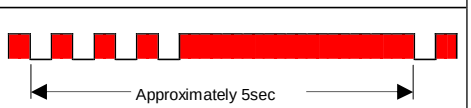
LED OFF LED ON

Error	Description		ERROR LED Blinking Pattern
Paper jam while cutting	The automatic cutter doesnot work because it does not leave or does not reach the home position.	1	
Paper jam before cutting	A paper jam is detected between print starting position and TOF sensor.	3	
Black Mark detecting error	The printer does not find the Black Mark.	4	
Paper jam after cutting – in presenter	A paper jam is detected after the printer cuts the paper. This occurs in the printers’ presenter.	5	

The following errors can be recovered by removing and inserting the paper roll

Error	Description		ERROR LED Blinking Pattern
TOF position not found	After cutting the printer does not find the TOF position.	7	
Operation after power on error	Paper is after power on not at the print starting position. This error is enabled by memory switch 7-4.	8	
StartOfJob timeout	StartOfJob timeout occurred because no EndOfJob was received within the specified time.	∞	

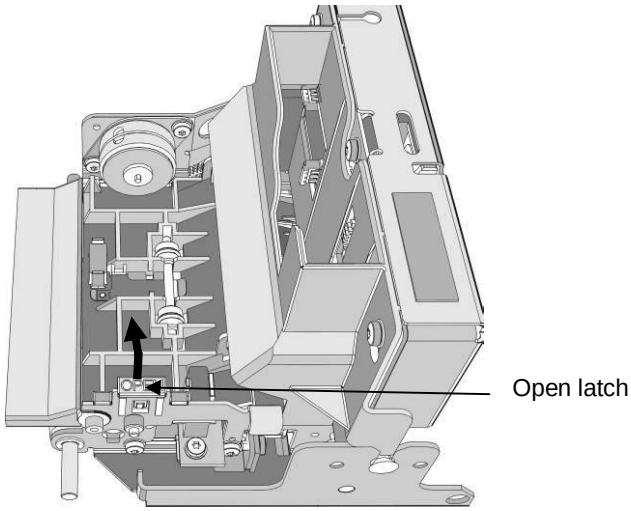
Unrecoverable Errors

Error	Description		ERROR LED Blinking Pattern
Temperature error thermal print head	There is an abnormality of the print line temperature	1	
High voltage error	The power supply voltage is extremely high.	3	
Low voltage error	The power supply voltage is extremely low.	4	

For recovery please contact the Technical Services.

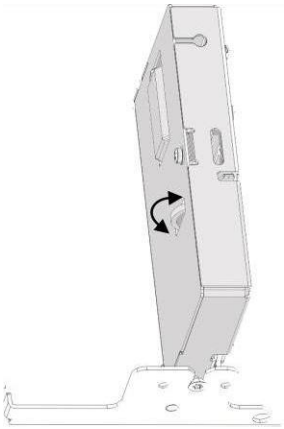
Paper transport error

In case of a paper jam open the presenter by releasing the stop lever (Take out the presenter, see illustration).

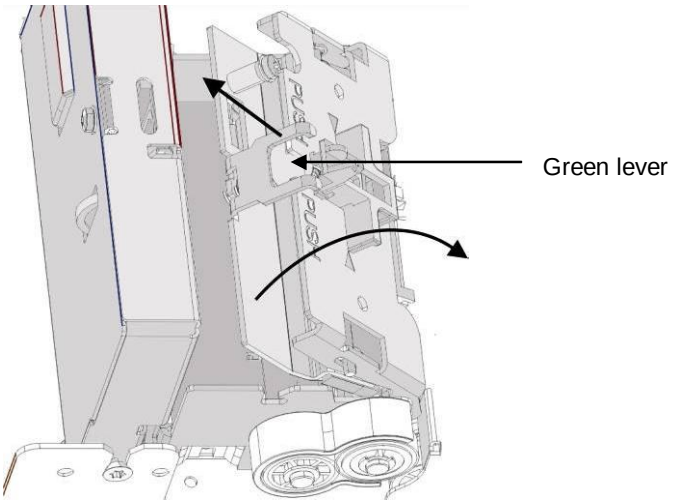


Check the paper transport path and remove the paper scraps, if necessary.

Check whether the cutter is in home position. To set the cutter into home position use the green thumb wheel as long as you can see the auburn plastic part on top of the cutter.



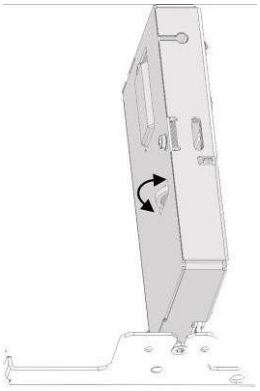
Check the print area of the thermal head for paper scraps. Use the green lever and flap the printing unit upwards.



Cut off the remaining paper at the paper support and pull it out.
Check if the paper roll is inserted correctly or a paper roll without black mark is inserted.
Reinsert the paper (see section "Inserting the paper roll").

Cutter error

Check whether the cutter is in home position. If it is not, use the thumb wheel as long as you can see the auburn plastic part on top of the cutter (see above).



Unplug the power plug and plug it again. This should initialize the printer.
If this does not help, please contact the Technical Service.

Error thermal print temperature, high voltage/low voltage

- Please contact the Technical Services

Technical Data

Technology	Thermal receipt printer	
Graphic	203 x 203 dpi (8 dots/mm)	
Print speed	up to 150 mm/sec	
Character pitch	10.2 / 12.7 / 14.5 / 16.9 / 20.3 cpi	
Character per line	28 char/line	10.2 cpi
	36 char/line	12.7 cpi
	41 char/line	14.5 cpi
	48 char/line	16.9 cpi
	57 char/line	20.3 cpi
Line pitch inch	6 and 8 lines/inch additional micro steps n/203	
Print attributes	- inverse	
	- underline	
	- bold	
	- upside down	
	- turn (90° steps)	
	- n-times heights (1-8)	
	- n-times width (1-8)	
Code pages	- 437 (IBM set II)	
	- 850 (Multilingual)	
	- 852 (Latin II9)	
	- 858 (Latin II, EURO Symbol)	
	- 860 (Portuguese)	
	- 863 (Canadian French)	
	- 865 (Nordic)	
	- 866 (Cyrillic)	
	- 1252 (Windows and loadable)	
Interface	USB (Full speed)	
Power supply	24V	
Sensors	- Paper near end	
	- Paper end	
	- Top of Form	
	- TOF mark	
	- Presenter out	
	- Cutter	

Consumables

Paper products

Please refer to the following paper specifications for details on the paper quality.

Paper specification

Paper quality	OJI KF50 – HDA or equivalent
Paper type	Thermal paper on rolls (thermal layer on the outside)
Paper color	white
Paper thickness	min 0.06 – max 0.1 mm
Paper smoothness (print side)	min. 300 Bekk Sec.

Receipt roll dimensions

Paper width	80mm
Outer receipts roll diameter max.	180mm
End of Paper	not glued to roll core
Inner diameter of roll sleeve	18mm, 25 mm or 40 mm (+ 1 mm)
Paper core wall thickness	2mm (+ 1mm)
Paper core material	cardboard/ plastic

Black mark print

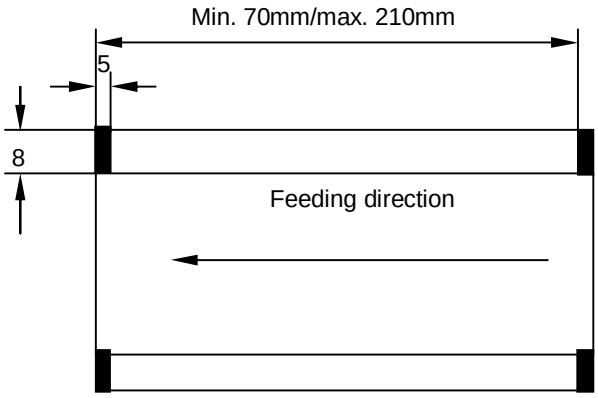
Printing properties

Opacity	≥85 % according to DIN 53 146
PCS value control mark	≥70 % according to DIN 66 223
Position	left or right or both on the same height
Reflection factor Ro	≥70 % according to DIN 53 145 part 1

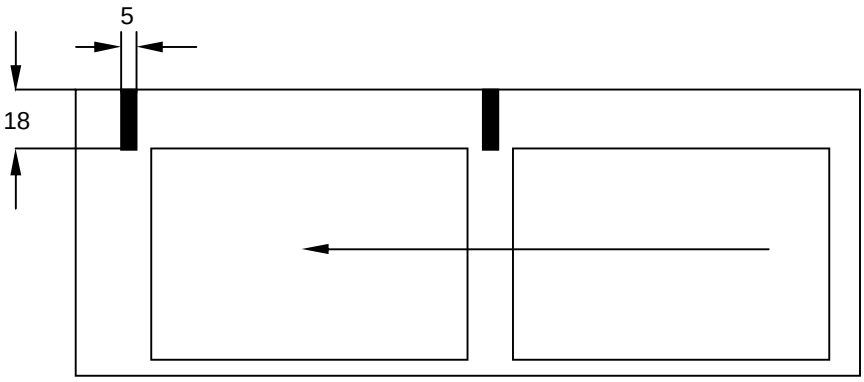
Dimensions

Mark height	5 mm ±0,1 mm
Mark width	8 mm ± 0,1 mm
Mark color	black, uncoloured black
Black mark distance	min. 70 mm, max. 210 mm

Front side
all dimensions in the drawings in mm



Rear side

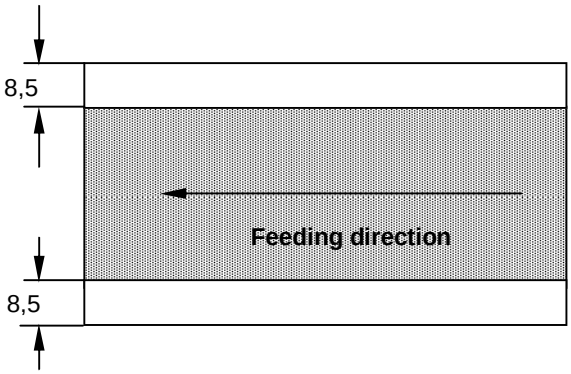


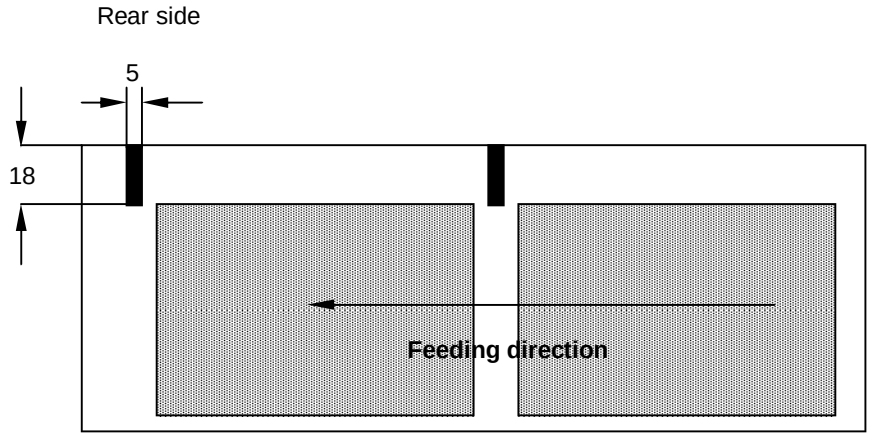
Feeding direction

Pre-printed receipts

The receipts can be pre-printed on the front and on the back side in the hatched area (see illustration).
In case of pre-printing outside the specified area the PCS value must be lower than 40%, and no sensor-sensitive colors should be used. The sensor light should be reflected completely by pre-printed colors.

Front side




Rear side
5
18
Feeding direction

Swipe Card Reader

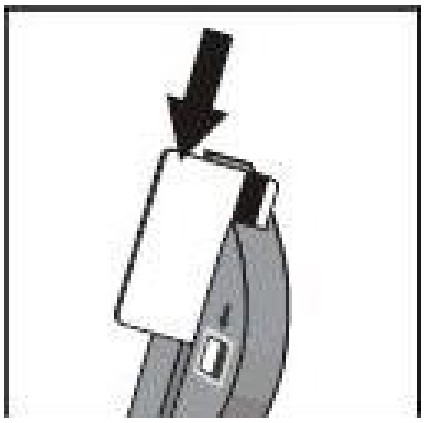
The magnetic card reader can read three ISO tracks simultaneously per card swipe. The card tracks can only be evaluated if the card is swiped manually.
The card must be swiped through the slot from top to bottom at a swift, even pace. The swipe card reader is always connected via the display MSR controller.

Technical data

Card standards	ISO 7811, ANSI, AAMVA, CA DMV
Magnetic card coding	acc. to ISO 7811
Speed of card movement	10 cm/s to 140 cm/s
DC power supply	+ 5 V
Current consumption	1.0 / 1.25 mA
Weight approx.	60 g
Dimensions	100 x 25 x 25 mm

ID Card Insertion

When you insert the ID card, you should make sure that the magnetic stripe is in the correct position.



The swipe card reader cannot read the ID card information unless you pull the ID card through the slot in one smooth and quick motion. Make sure the magnetic stripe is pointed outward to the right.

Cleaning

The swipe card reader is cleaned with a cleaning card.

Make sure that no dirt remains in the card insertion slot. (If necessary, clean the card insertion slot with a brush).

> **i** You can clean the read head when the device is switch on or switch off.

Cleaning interval: every 20,000 transactions

Cleaning material: Cleaning card Universal or ID card reader
Order no.: 1060018240

Cleaning process:

- Remove the cleaning ID card from its packaging.

> **i** The cleaning card can only be used for a brief period as it is pre-saturated cleaning card which dries out after removal from its packaging.

- Swipe the cleaning card through the card slot like the regular ID card.
- Repeat this a few times.
- Dispose of the cleaning card.

Barcode Scanner

The omnidirectional scan pattern offers outstanding scan performance on all standard 1D bar code symbologies, including RSS.

The scanner's main cable connector is located at the top of the unit to facilitate mounting and the auxiliary connector gives users access to several of the I/O signals, providing the flexibility for external hookup of beepers, buttons, and LED's.

The barcode reader is equipped with powerful features such as easy programming, user replaceable cables and upgradeable software.

Technical Data

Light Source	Visible Laser Diode 650 nm
Laser Power	1.1 mW (peak)
Decode Capability	Autodiscriminates all standard 1D bar codes, including RSS-Expanded,RSS-14 and RSS-14 Limited;
System Interfaces	RS232, Light Pen Emulation, Keyboard Wedge, Stand Alone Keyboard, IBM 468x/469x, USB, Laser Emulation, OCIA
Number Characters	Read Up to 80 data characters
Beeper Operation	7 tones or no beep
Indicators	Blue = laser on, ready to scan White = good read
Input Voltage	5 VDC + 0.25 V
Power	1.375 W
Operating Current	275 mA typical @ 5 VDC
DC Transformers	Class 2; 5.2 VDC @ 650 mA
Laser Class	Class 1; IEC60825-1:1993/A1:1997+A2:2001 Class 1; EN60825-1:1994/A11:1996+A2:2001
EMC	FCC, ICES-003 & EN55022 Class B
Depth of Scan Field	25 mm - 279 mm (1” - 11”) for 0.33 mm (13 mil) bar code(programmable) at default setting
Width of Scan Field	30 mm (1.2”) @ 25 mm (1.0”); 150 mm (5.9”) @ 280 mm (11.0”)
Scan Speed	1650 scan lines /sec, omnidirectional; 80 scan lines /sec,single line
Scan Pattern	5 fields of 4 parallel lines omnidirectional; or button activated single line
Number of Scan Lines	20 (omnidirectional); or 1 (single-line)
Minimum Bar Width	0.127 mm (5.0 mil)
Print Contrast	35% minimum reflectance difference
Roll, Pitch, Yaw	360°, 60°, 60°

Appendix

Technical Data

Installation specifications

CERTO 415/417 Kiosk System	With base plate	Without base plate
Dimensions:		
Height:	1552 mm	1542 mm
Depth:	268 mm	268 mm
Width:	472 mm	472 mm
Weight of device:	Approx. 96 kg	Approx. 81 kg

Environmental Conditions

OPERATING	Indoor air conditioned environment 10 to 30°C, optimum operating range (+5°C to +35°C: in this limit range the system may only be operated for short period of time) Relative Humidity: 10 to 75% RH, non-condensing	
STORAGE	Temperature: +10°C to +85°C Relative Humidity: 5 to 85% RH, non-condensing	
POWER SUPPLY	100-120V AC @ 50/60Hz	200–240V AC @ 50/60Hz
POWER CONSUMPTION	4 A	2 A

Power Cord Selection

If the power cord is not provided with the system, the user has to ensure that a certified power cord is used as required by the Safety Regulation of the country.

Countries	Safety Approvals
USA	UL
Canada	CSA
Germany	GS
Japan	PSE
Taiwan	BSMI
China	CCC

For other countries not mentioned in the above list, please check with the local authority.

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