

**WINCOR**  
**NIXDORF**



## **BEETLE *iPRINT***

POS-System

User Manual

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

Please send us a copy of this page if you have any constructive criticism.  
We would like to thank you in advance for your comments.

With kind regards,

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**Your opinion:**

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Order No.: **01750214094B** (BEETLE *iIPRINT*)

# **BEETLE *i*PRINT**

## POS-System

User Manual

Edition August 2012

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# Manufacturer's Certification



The device complies with the requirements of the EU directive 2004/108//EC with regard to 'Electromagnetic compatibility and 2006/95/EG "Low Voltage Directive".

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



In addition, the BEETLE has received the UL symbol and cUL symbol.

## 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 own expense. Modifications not authorized by the manufacturer may void user's authority to operate this device. This class A digital apparatus complies with Canadian ICES-003. *Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.*

## Warranty

Wincor Nixdorf generally guarantees a limited 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.

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.

## Safety Instructions



Do not touch the cutter and tear bar of the printer.



The print head is a thermal element and it is at high temperature during printing or just after operation, therefore please do not touch it and its peripherals for safety reasons.



The thermal head is an ESD-sensitive device. To prevent damage, do not touch either its printing part or connecting parts.



# Caution

- Install the system on a flat and stable place.
- Reserve adequate space around the system so that convenient operation and maintenance can be performed.
- Keep the system away from water source.
- Do not use or store the system in a place exposed to heat of fire, moisture, serious pollution and direct sunlight.
- Do not place the system on a place exposed to vibration or impact.
- No dew condensation is allowed to the system. In case of such condensation, do not turn on the power until it has completely gone away.
- Connect the DC adapter to an appropriate grounding outlet.
- Avoid sharing a single electrical with large power motors and other devices that may cause the fluctuation in voltage.
- Disconnect the DC adapter when the system is not used for a long time.
- Do not spill water or other materials on the system. If this happens, turn off the power immediately.
- Do not allow the system to start printing when there is no recording paper installed, otherwise the print head and platen roller will be damaged.
- To ensure quality print and normal lifetime, use recommended or good quality paper.
- Shut down the system when connecting or disconnecting interfaces connectors to avoid damage to the control board.
- Set the print darkness to a lower grade as long as the print quality is acceptable. This will help to keep the print head durable.
- The system should only be disassembled or repaired by a technician, who is certified by Wincor Nixdorf.
- Operate the system only with power supplies and cables approved by Wincor Nixdorf
- Keep this manual safe and at hand for ready reference.

## Recycling

Environmental protection does not begin when the time has come to dispose of the BEETLE; it begins with the manufacturer. This product was designed according to our internal norm “Environmental conscious product design and development”.

The modular BEETLE *iiPRINT* system 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.

At this time, there are still some parts that are not reusable. Wincor Nixdorf International GmbH 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 discard your BEETLE *iiPRINT* system on the garbage 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@wincor-nixdorf.com](mailto:info@wincor-nixdorf.com)

or on the internet.

We look forward to your mail.

# BEETLE *i*PRINT – the Modular System

## Introduction

The innovative “POS-in-a-printer” product concept of the BEETLE *i*PRINT is a combination of a POS system unit and tried-and-tested thermal receipt printer. It impresses with a small footprint, a sealed, fanless and maintenance-free system design, and premium quality. The system has been designed to offer maximum energy efficiency and ensures extremely low running costs thanks to power consumption of less than 13 watts in typical checkout operation.

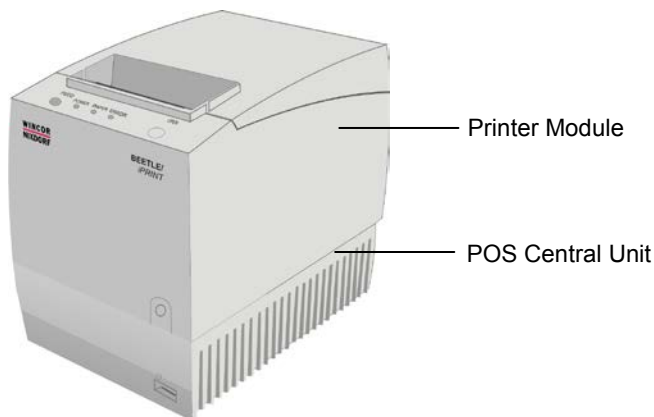
BEETLE *i*PRINT is a dedicated POS system based on the latest mobile PC technology and has been developed by experts for deployment in difficult environments where lack of space is the norm. As Operating System “Microsoft Windows” is available.

Whether a touchscreen or a keyboard/ mouse controlled user interface depends solely on the software. Peripherals, such as a cash drawer, bar-code scanner, operator or customer display and payment terminal, can be configured to suit individual needs.

The sealed, fanless housing de-sign of the BEETLE *i*PRINT prevents the system’s interior from becoming soiled.

The Intel Atom processor, which uses a maximum of 3.6 watts, and the energy-efficient power supply unit guarantee very low power consumption and low heat generation.

A conventional 2.5” notebook hard drive or a modern solid state disk can be chosen as the storage medium. SSDs are purely electrical components and, unlike hard drives, do not have any moving parts. All these product features ensure high system availability and lower maintenance and running costs. The integrated thermal receipt printer is a Wincor Nixdorf premium product and meets the highest demands. High printing speed, two-color printing, a large paper capacity, graphics/barcode printing, simple paper replacement and ESC/POS emulation are just some of its highlights.



## Before Switching On the System

### Unpacking And Checking the System

Unpack the components and verify that the scope of delivery is identical to the information on the delivery ticket.

The carton contains the basic unit and a country-specific accessories kit. Some ordered composition may be installed.

Should you notice any transport damages or discrepancies between the package contents and delivery ticket or functional defects please inform your contracting parties or the branch office of Wincor Nixdorf immediately.

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

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



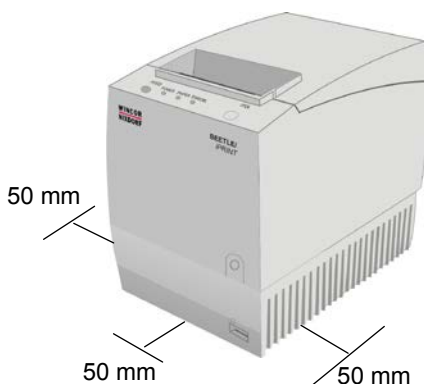
Serial number on the label beneath the bar code

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

## Setting Up the Device

Set up the BEETLE system where it will not be exposed to extreme environmental conditions. Protect the device from vibrations, dust, moisture, heat and strong magnetic fields.

Mind the **minimum distances of 50 mm** indicated below! If the equipment is to be fitted, you also must ensure that the specified minimum distances are maintained and constant ventilation is provided. The immediate ambient temperature of the system must not exceed 35 °C (95 °F).



## Connecting the BEETLE *i*PRINT

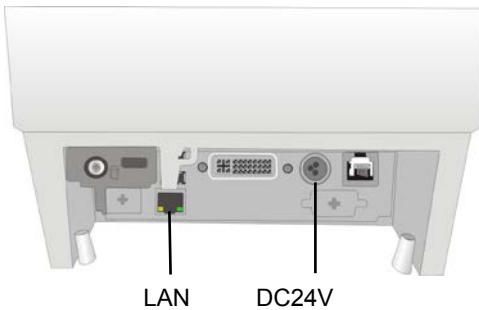
Follow the steps below in the order given when installing devices:

- Plug one end of the power cable of the power supply unit into the socket (DC24V) of the BEETLE *i*PRINT.
- Connect the monitor **before** you switch on your BEETLE *i*PRINT.
- Plug the other end of the cable into the main power supply.



Always make sure that all power plugs from the grounded-contact power sockets are unplugged.

Except for one USB connection on the front side of the BEETLE *i*PRINT the connectors are located on the rear side.

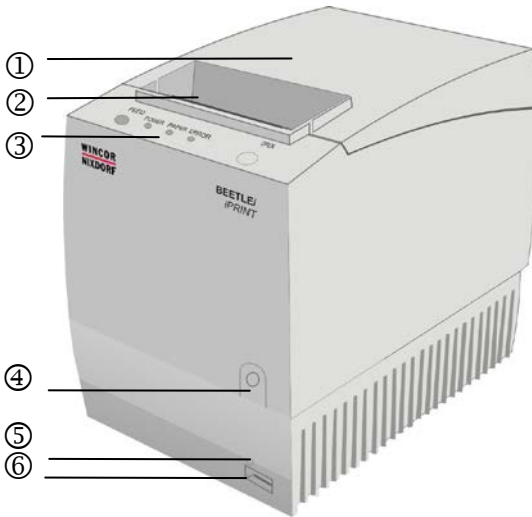


Take care that the plugs are firmly connected. Check this by slightly pulling at the plug.

## Basic Settings

Ex works, the BEETLE *i*PRINT is configured to your order. Your configuration must be subsequently adapted to support supplementary devices such as scanners. For more information, contact the Wincor Nixdorf International GmbH branch office responsible for your area.

# Front Side View



①	Cover
②	Paper Output
③	Operator Panel
④	On/Off Switch
⑤	LED (storage media)
⑥	USB

## Operator Panel



### FEED

If you push this button once and release it, the printer feeds paper for one line (1/6 inch).

If you push this button and hold it down, the printer feeds the paper as long as the button is not released.

The button can be locked by the application software.

### POWER

All LED off: Printer without Power

Green POWER LED on: Power available

Green POWER LED blinking: Printing speed may be low, if necessary contact your technical support

Green POWER LED short flashes: System in idle state

### PAPER

Yellow PAPER LED off: Paper is properly inserted.

Yellow PAPER LED on: Paper roll is near end.

Yellow PAPER and red ERROR on: Paper end is reached.

### ERROR

Red ERROR LED off: Normal condition

Red ERROR LED on: Not ready for operating. System cover is not closed or in combination with Yellow PAPER LED on, paper end is reached

Red ERROR LED blinking: An error has occurred. Open cover, clear possible paper jam, close cover. Switch system off and on again. Contact technical support if this does not help.

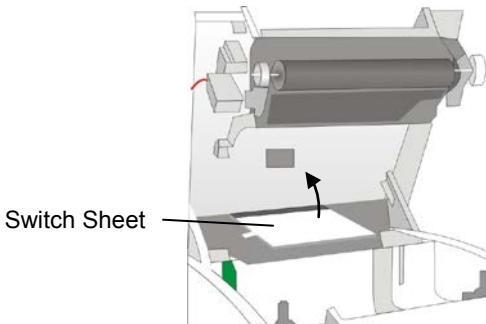


## LED overview

	POWER green	PAPER yellow	ERROR red	Meaning
	<b>off</b>	<b>off</b>	<b>off</b>	No power
Operation	<b>on</b>			Power on
	<b>blinking</b>			Low printing speed
	<b>flashing</b>			Idle State
		<b>off</b>		Paper properly inserted
Paper		<b>on</b>		Paper near end
		<b>on</b>	<b>on</b>	Paper end
Error			<b>blinking</b>	Paper jam
			<b>on</b>	Cover not closed

## OPEN

Press this button to unlock and open the cover. Thereby the switch sheet flaps towards the cover.



Never open the cover with force.

## ON/OFF Button

The functions of the ON/OFF button depend on the settings of the Operating System and the “Memory Switches” of the printer. Pressing this button **1x short** will switch the system on. System’s booting will be indicated by various acoustic signals and by flashing of the LED. *As soon as the printer will be ready-to-operate the function of the ON/OFF button is available again.* Pressing the button for at least **three seconds** and then releasing it will turn the device off (Sleep Mode, Idle State or Off Mode).

This time can be reduced by settings in the Service Menu (see page 21). Pressing the button for **ten seconds** will cause an immediate shutdown of the system.



The button can be locked by the application software or by settings in the Printer Service Menu (see page 22).

## LED

The LED at the front side of the system is marked as Hard Disc or Solid State Disc (SSD). While the hard disk is being accessed the LED flashes blue.

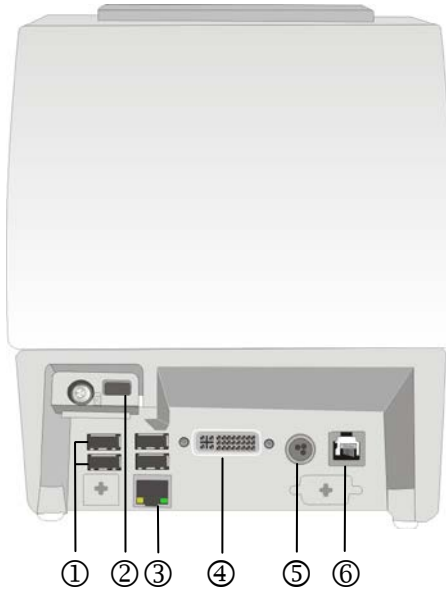
## USB 2.0 (Universal Serial Bus)- A

Interface (USB-A) for connecting different USB peripheral devices such as barcode scanner or keyboard.



Use only shielded cables for the connection of USB devices.

## Rear Side



①	4 x USB-A
②	Kensington Lock
③	RJ45-Socket (LAN)
④	DVI-I
⑤	DC24V (Power Supply)
⑥	RJ12 (Cash Drawer)

### USB 2.0 (Universal Serial Bus)- A

Interface (USB-A) for connecting different USB peripheral devices such as customer display or barcode scanner.



Use only shielded cables for the connection of USB devices.

## Kensington Lock

For safety reasons (protection against theft and removal of the hard disk) optionally a Kensington Lock can be installed. The whole lock consists of a wire rope, the lock itself and a key. Put the wire rope around a thief-proof object and push the lock through the loop. Push it into the opening of the BEETLE *iiPrint* and secure the lock with the key.



## LAN (RJ45 Socket)

The system can be connected to a network (LAN) from the POS terminal's back panel.

### LEDs

<b>Left LED</b>	constantly yellow	Network connection
	flashes yellow	Data transfer
<b>Right LED</b>	off	10 Mbit/s
	constantly green	100 Mbit/s
	constantly orange	1000 Mbit/s



Only connect shielded LAN cables (CAT5/CAT5e, 1000 Mbit) as these offer a better protection in case of electrical interferences in a network.

## DVI-I

There is a DVI-I jack available to connect a high resolution TFT monitor, enabling the transmission of analog and digital video signals with a high resolution (see also page 36).

- Connect the monitor **before** you switch on your BEETLE //iPRINT.

## DC24V (Power connector)

Connect the according end of the power cable to this low voltage jack 24V and the other end to the socket of the power supply unit.

Pull the mains plug to power-off the device.



Connect the BEETLE //iPRINT only to the external power supply provided by Wincor Nixdorf.

## RJ12 (CASHDR)

The BEETLE //iPRINT has one RJ12 socket for connecting a cash drawer. Make sure that the connector is plugged firmly into the socket to prevent malfunctioning. RJ12 plugs lock in when you insert them. Power is supplied to the cash drawer via this socket (P24V +5% / -15%).



Connecting daisy chained cash drawers and 12V OEM-drawers is prohibited!



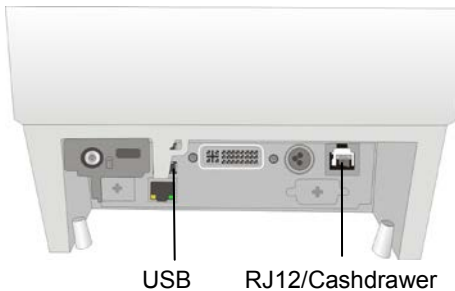
Connect cash drawers only (no telephon).

A connected cash drawer may not adjust more than 1A per 24V.

# Connecting Peripheral Devices

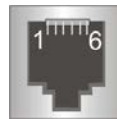
## Connecting Cash Drawer

Connect the cable from the cash drawer to the CASH DRAWER socket of the system (RJ12). Inserting the plug will automatically lock it.



### RJ12 connector pin usage

PIN	Description
1	Frame Ground
2	Opening pulse for cash drawer 1
3	Status cash drawer 1 and 2
4	+24V DC
5	Opening pulse for cash drawer 2
6	Signal Ground

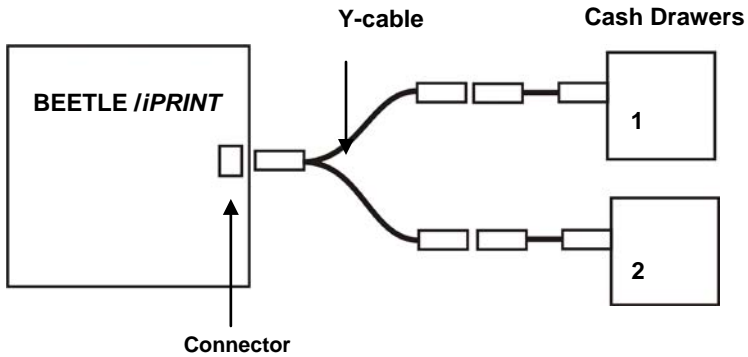


A connected cash drawer may not adjust more than 1A by 24V.

## Cash Drawer Cables

The cash drawer cable connects the BEETLE *i*PRINT to one or two cash drawers. Plug the cable into the cash drawer connector (standard phone jack) located at the rear of the system.

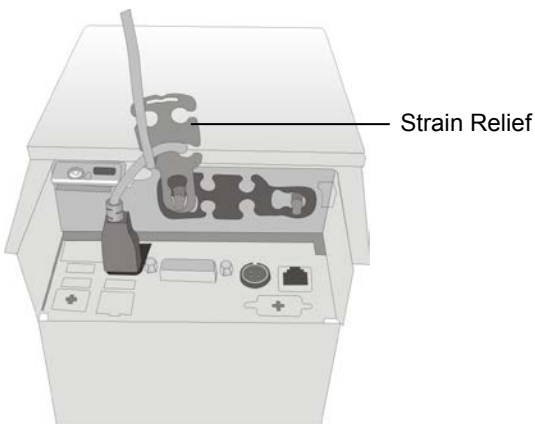
If your system has two cash drawers, attach a Y-cable to the system's cash drawer connector as shown below.



## Connecting USB Devices

Interface (USB-A) for connecting different USB peripheral devices such as scanners or scales.

Connect the plug from the USB data cable to the USB socket at the system and guide the cable through the strain relief.



# Power Management

The BEETLE *i*PRINT is delivered with activated **energy conservation** function.

At delivery ex works the «Sleep Mode» is set to be activated after 30 minutes of inactive state, i.e. no inputs received from the user. At delivery ex works the «Sleep Mode» for the Display Unit is set to be activated after 15 minutes of inactive state, i.e. no inputs received from the user. The WOL functionality (Wake-on-LAN) is activated ex works (see page 40). The Wake-on-USB and Wake-on-Timer functions can be enabled in BIOS setup.

Enter the **BIOS setup** as follows (monitor and keyboard connected):

- Switch the system on. When you see the text prompt "**Press <DEL> or <F2> to enter setup...**" press one of these keys. You see the BIOS setup main menu and have access to the other setup menus. For further details see the extra manual for the BIOS setup. See: [http://www.wincor-nixdorf.com/internet/site\\_EN/EN/Support/Downloads/POS/lotterySystems/Manuals/BEETLE/BEETLE\\_node.html](http://www.wincor-nixdorf.com/internet/site_EN/EN/Support/Downloads/POS/lotterySystems/Manuals/BEETLE/BEETLE_node.html)

The BEETLE *i*PRINT's **external power supply** unit complies with EPS 2.0 and meets Efficiency Level V. This corresponds to an efficiency of at least 85%. That is good for the environment and cuts the cost of ownership. The values given in the following table refer to a BEETLE *i*PRINT with the print unit in Sleep Mode.

<b>BEETLE <i>i</i>PRINT with Intel Atom E660, 1,3 GHz</b>	<b>Power Consumption (Watt)</b>
<b>Off Mode</b> ACPI S5	< 2 W
<b>Sleep Mode</b> ACPI S3	< 5 W
<b>Idle State</b> ACPI S0	~ 12 W
<b>Active State</b> ACPI S0	< 13 W



<b>Unit Configuration</b>	
Product Classification	Desktop Computer
Processor Type/Model and speed	Intel Atom E660 / 1.3 GHz
Processor Speed/Core	1.3 GHz
# of CPU Cores/Processor Package	Single CPU core x86 compatible CPU
Operating System*	MS WINDOWS XP Embedded POS Ready 2009
# of HDDs	1 x 2,5" min. 160 GB (Serial ATA)
# of Solid State Drives	N/A
System Memory (GB)	1 GB
Video Card (GPU) Brand/Model	Intel Atom Processor 600 Integrated Graphic Controller
Ethernet Capable System	1Gbit/s Ethernet port is provided
WOL Enabled from Sleep Mode	Yes

\* The BEETLE *//iPRINT* can be ordered without any Operating System.

Find more information on Operating Systems and Software Drivers for your BEETLE *//iPRINT* on:

[www.wincor-nixdorf.com](http://www.wincor-nixdorf.com).

### **Switch-On Characteristics**

Pressing the ON/OFF button **1x short** will switch the system on. System's booting will be indicated by various acoustic signals and by flashing of the LED. *As soon as the printer will be ready-to-operate the function of the ON/OFF button is available again (see page 11).*

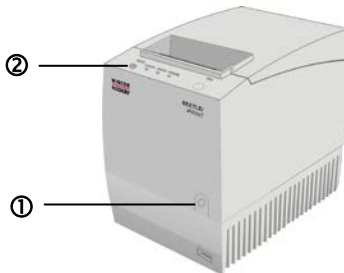
## BEETLE *i*PRINT Service Menu

### Power Failure Characteristics

The BEETLE *i*PRINT is delivered in „Last State“ mode.

In the menu „*i*PRINT Power On Behavior“ you can determine the state of the device after a power failure. Select „Last State“ to regain the system’s state *before* power failure. „Always Off“ will keep the system switched off and „Always On“ takes the system to the “Active State”. These settings are carried out in the menu “**Configuration**”.

- Switch off the system (1).
- Keep the FEED button (2) pressed while switching on again.



A service menu will be printed (see page 40).

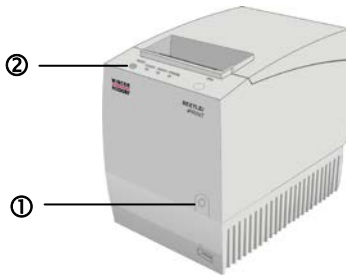
- Press the Feed button 4x short and confirm by pressing this button once for at least 1 second. You access the submenu „Configuration“.
- Press the Feed button 2x short and 1x long to access the submenu „Hardware“.
- Press the Feed button 7x short and 1x long to access the submenu „*i*PRINT Settings“.
- Press the Feed button 3x short and 1x long to access the submenu „*i*PRINT Power On Behaviour“.
- Press the FEED button short as often as necessary to access the setting you want. Confirm your choice with 1x long and finally save the settings with 1x short and 1x long. The printer will carry out a reset then.

## ON/OFF Button

Your BEETLE *i*PRINT is delivered with a preset delay of 3 seconds for the ON/OFF button.

Thus, the ON/OFF button can be used to wake up the printer without having the complete system to be switched on or off. The delay of this button can be set in the menu "**Configuration**".

- Switch off the system (1).
- Keep the FEED button (2) pressed while switching on again.

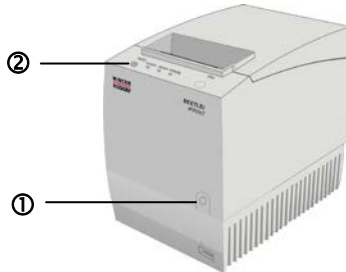


A service menu will be printed (see page 40).

- Press the FEED button 4x short and confirm by pressing this button 1x long (min. 1 sec.). You access the submenu „Configuration“.
- Press the Feed button 2x short and 1x long to access the submenu „Hardware“.
- Press the Feed button 7x short and 1x long to access the submenu „iPRINT Settings“.
- Press the Feed button 3x short and 1x long to access the submenu „iPRINT Power On Behaviour“.
- Press the FEED button short as often as necessary to access the setting you want. Confirm your choice with 1x long and finally save the settings with 1x short and 1x long. The printer will carry out a reset then.

The Configuration menu offers the possibility to **deactivate** the **ON/Off** button completely for all operating modes.

- Switch off the system (1).
- Keep the FEED button (2) pressed while switching on again.



A service menu will be printed (see page 40).

- Press the FEED button 4x short and confirm by pressing this button 1x long (min. 1 sec.). You access the submenu „Configuration“.
- Press the Feed button 2x short and 1x long to access the submenu „Hardware“.
- Press the Feed button 2x short and 1x long to access the submenu „Power Button“.
- Press the FEED button short as often as necessary to access the setting you want. Confirm your choice with 1x long and finally save the settings with 1x short and 1x long. The printer will carry out a reset then.

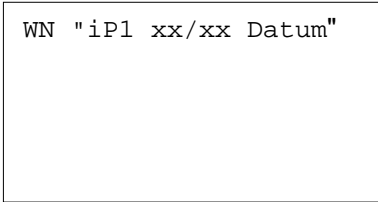


We recommend to print the Service menu after you made your settings to check whether your settings/changes were acknowledged as new entries.

# Starting up the system

After installing the BEETLE *iPRINT*, switch on the POS system using the ON/OFF button on the front.

The system first performs an automatic self-test to test its basic functions. For *example*, you may see the following message on the monitor:



```
WN "iP1 xx/xx Datum"
```

xx/xx is the placeholder of the BIOS version number.

The system then determines the medium from which the operating system and POS application are to be booted. Each medium is assigned a logical drive according to the configuration of your system.

The following media can be assigned a drive:

- Network
- Hard Disk/SSD
- USB drive

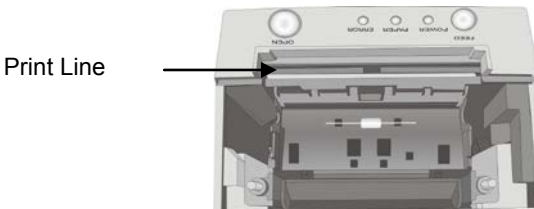
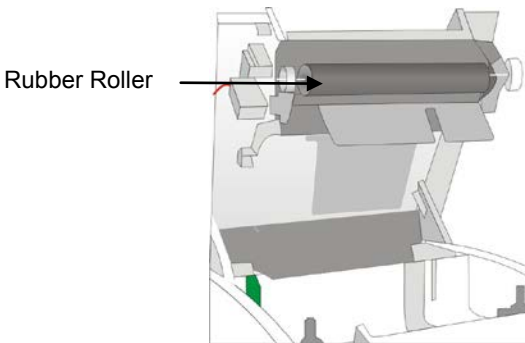
The logical drives are designated C: and D:

The network is always assigned to the C: drive during the runup procedure. The system can only be started from the hard disk if the disk has been configured as the C: drive.

# Printer

## Printed Line/ Rubber Roller Cleaning

Clean the print line and the rubber roller at least every three months. In case of an intensive use of the printer clean both items more often to guarantee a stable print quality.



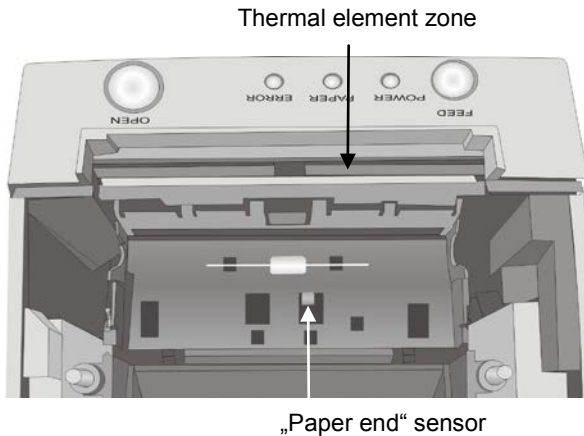
Open the printer cover and remove the paper-roll; the rubber roller and the print line mechanism are then visible.



**Let the print line cool down before cleaning it.**

Clean print line and rubber roller with a soft lint-free cloth moistened with pure Isopropyl alcohol (e.g. ISOPADS which can be ordered from Wincor Nixdorf).

Visually inspect the print line. If you can still see dirt, the cleaning procedure must be repeated. You can identify the relevant and important thermal element zone by the thin line crossed by wires.



Pay attention not to damage the paper end sensor when cleaning the print head.



Do not touch the rubber roll with your fingers.

While cleaning turn the rubber roller by hand with the lateral gear wheel. Make sure that the entire roller will be cleaned.



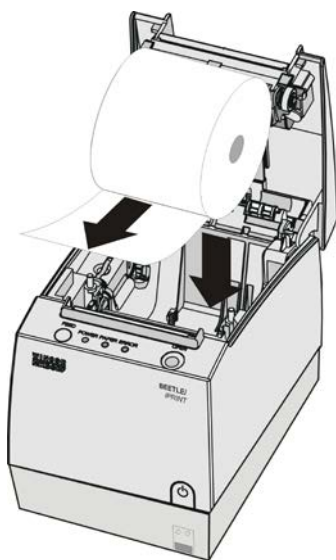
Cleaning the print line not properly, may cause an early failure. Wait until the isopropyl alcohol is evaporated.

Insert the (new) paper-roll and close the cover and verify the printing quality (density, alignment and consistency).

## Paper Roll Exchange

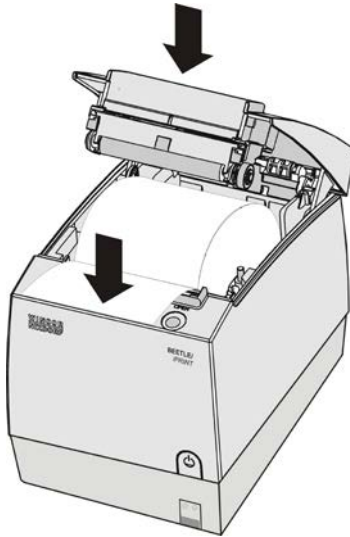
For a paper roll exchange follow the steps below:

- Open the printer cover
- Remove the (nearly) empty paper roll and any residual paper.
- If necessary clean the print head and the rubber roller.
- Unwind the outer layer (winding) of the paper roll.
- Insert the paper roll. Lay the unwinded paper over the front edge of the printer.





- Hold down the paper and close the printer cover. Press on the middle of the cover until it audibly and distinctly locks into place.



- Tear off residual paper at the tear-off edge.



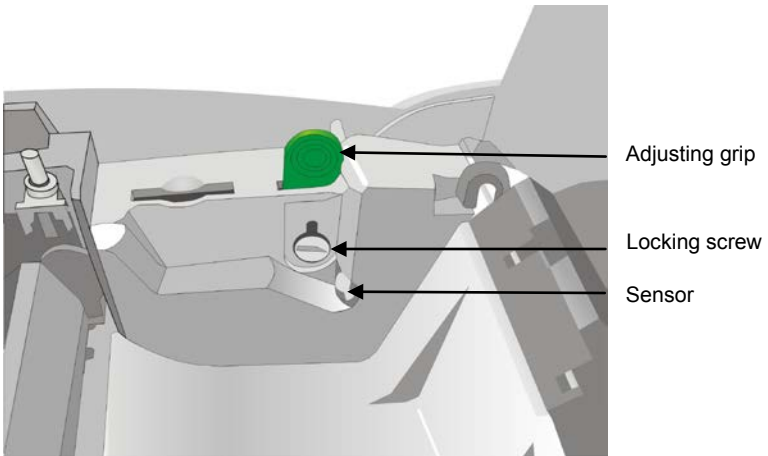
## Paper Near End Sensor Adjustment

The paper end premonition is a control function. It allows to adjust a predefined amount of remaining paper on the roll.

The paper end premonition depends on the core diameter and the paper thickness of the paper roll in use.

You can adjust the remaining amount of paper yourself follow the steps below:

- Open the printer cover.
- Remove the paper roll.
- Loosen the locking screw at the inner wall of the printer for instance with the aid of a coin (do not remove the screw).



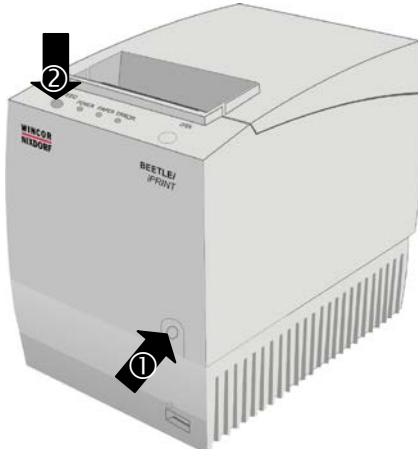
Move the adjusting grip to determine the remaining paper amount. A lower distance mark (adjustment grip downwards) will cause a lower amount of remaining paper and vice versa. The scale reaches from 0.5mm to 12.5mm.

After determination of the distance mark:

- Tighten the locking screw.
- Insert the paper roll.
- Close the printer cover and lock it.

## Service Menu and Self Test Printout

- Turn off the printer by pressing the On/Off button (1).
- Push the FEED button (2) while turning on the printer.



A service menu will be printed (see page 40).

- Press the FEED button 2x short to select the self test (for printout sample see following pages) and press this button 1x long (min. 1 sec.) to start the printout.
- Press the FEED button 1x short and 1x long (at least 1 second) to end the self test.

### Self Test Printout during Operation

For a printout during operation proceed as follows:

- Open the printer cover.
- Keep the FEED button pressed and close the cover until it audibly engages. A Self Test printout will be carried out immediately.

(You can also use the printer's API for a Self Test printout. Consult the «TH230/TH230+, POS Printer, Programmer's Guide» for details.)

## BEETLE /iPrint Extended Self Test

### Hardware Information:

Manufacturer : WINCOR-NIXDORF  
Serial Number : 68AX154189  
Manufactured Board: H  
Production Date : xx.xx.xxxx  
Interface ID : 60  
Interface Board : Ethernet  
Cash Drawer  
5 USB (Hi-Speed)  
DVI-I

### Software Modules:

Firmware : 90.12  
Booter : 01.00  
Loader : 90.02  
Status : Verified  
Power Up Test : 01.00  
Checksum : OK  
Character Font : StdCodePages  
Font Version : 01.03

### Printer Settings:

Black Mark Sensor : disabled  
Endurance Test : disabled  
Automatic LF : enabled  
Power Button : enabled  
Power-ON Notice : disabled  
Paper-NE Notice : enabled  
Receipt Shooting : disabled  
Shoot Flush Time : endless  
Idle Mode : enabled  
Max. Power : Auto 110 W  
Max. Speed : 220 mm/sec  
Endurance Tickets : 500  
Paper Width : 80 mm  
Print Density : 100 %  
Paper Type : single color  
Code-128 ChkDigit : enabled  
ITF Leading Zero : enabled  
Brc String Term : enabled  
Leg. Printer Supp. : disabled  
Default Code Page : 0  
Autorecovery : off  
Orig.-Controller : yes

### iPrint Settings:

Poweroff btn delay: 3 sec  
Poweron behavior : last state

### Idle Mode:

Waiting Time : 1 min  
Interface Power : on  
Cash Drawer Delay : ignored

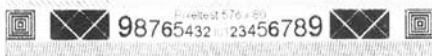
Sensor Information:  
Sensor Plug Detection  
Black Mark Sensor : not available

Measured Values:  
Supply Voltage : 24.7 V  
Printhead Temp : 28.6 °C

Installed Code Pages:  
0 : PC437  
1 : PC850  
2 : PC852  
3 : PC860  
4 : PC863  
5 : PC865  
6 : PC858  
7 : PC866  
8 : WPC1252  
9 : PC862  
10 : PC737  
11 : PC874  
12 : PC857  
16 : WPC1254  
17 : WPC1250  
18 : WPC28591  
19 : WPC28592  
20 : WPC28599  
21 : WPC28605  
22 : PC864  
23 : PC720  
24 : WPC1256  
25 : WPC28596  
26 : KATAKANA  
27 : PC775  
28 : WPC1257  
29 : WPC28594

Statistic Report:  
Dots Total : 3.817e03  
Dots Actual : 3.817e03  
Printhead Changes : 0  
Linefeeds Total : 6.182  
Linefeeds Actual : 6.182  
Mechanic Changes : 0  
Cuts Total : 531  
Cuts Actual : 531  
Cutter Changes : 0  
Cutter Errors : 0  
Max. Head Temp. : 32 °C  
Black Mark Error : 0  
Thermistor Error : 0  
Low Volt. Error : 0  
High Volt. Error : 0  
Cover Open : 1  
FW Starts : 55  
Power On (Hours) : 0  
EEPROM Updates : 121  
EEPROM Status : OK

Pixel Test:



\*\*\* completed \*\*\*

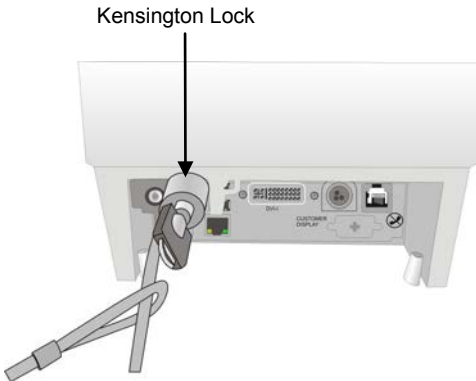
# Storage Medium

As storage media the BEETLE /iPRINT can be equipped with either a 2.5" SATA hard disk or a 2.5" Solid State Drive (SSD).

## Change the 2.5" Hard Disk/SSD

First, ensure that the **device is switched off** and that the power connector of the external power supply is disconnected.

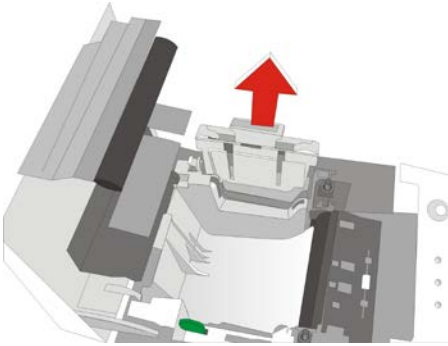
- If present, remove the Kensington lock.



- Loosen and remove the screw (see red arrow) at the back side and slightly pull out the hard disk (black arrow).



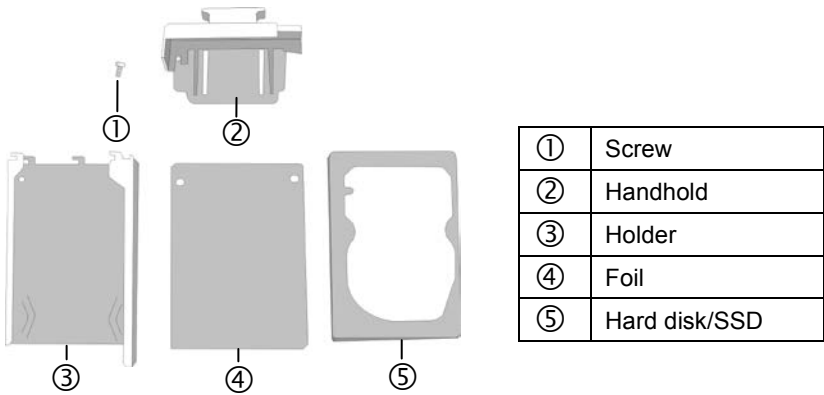
- Open the cover.
- Lift up the drive incl. drive holder and remove it.



- Loosen and remove the screw on the hard disk holder with a screwdriver. Turn the holder around, slightly press the metal tang outside (1) and push the plastic cap to the left (2).



You got the following component parts:



Ensure that you handle the hard disk with extreme caution during the installation. Never touch bare electronics.

- Haul the new Hard Disk/SSD to the holder and foil and fasten the plastic cap with the screw that you removed the step before.
- Insert the hard disk holder/hard disk into the system. Mind the fitting position: The screw of the Hard Disk Holder must “point” to the interior of the device.
- Close the cover. Fasten the screw at the rear side of the device to fit the hard disk/SSD. If present, plug the Kensington lock to the designed position and secure it with the key.
- Finally, plug the power cable and switch on the system.



# Technical Data

Dimension	180 x 145 x 195 mm (H x W x D)
Weight	approx. 2kg (w/o paper)
Housing Colour	light grey or black
Power Supply	24 V DC
Operation Temperature	5 °Celsius up to +35 °Celsius
Humidity	5 % - 95 % (not condensed)
Noise	<= 55dB(A) during operation

## Interfaces

RJ12	6pin. RJ12, max. 1A@24V interface for a cash drawer
USB	1 x USB 2.0 high speed, at the front side, 4 x USB 2.0 high speed, at the rear side, each port 500mA, together not more than 1.5A
LAN	10/100/1000 Mbit/s (RJ45 socket)
DVI-I	Solution up to 1920 x 1080 pixel

## Hard Disk

Interface	Serial ATA
Capacity	min. 160 GB
Format/ Speed	2.5" with 5.400 r.p.m.

## Display Resolution and Frame Rate

Resolution	Aspect Ratio	60Hz	70Hz	72Hz	75Hz	85Hz	120Hz
640x480	4:3	x		x	x	x	
800x600	4:3	x		x	x	x	x (RB*)
1024x768	4:3	x	x		x	x	x (RB)
1280x800	16:10	x			x	x	x (RB)
1280x960	4:3	x			x	x	
1280x1024	5:4	x			x	x	
1360x768	~16:9	x			x	x	
1366x768	~16:9	x					
1400x1050	4:3	x			x		
1440x900	16:10	x			x		
1600x1200	4:3	x (RB)					
1680x1050	16:10	x (RB)					
1920x1080	16:9	x (RB)					
1920x1200	16:10	x (RB)					

\* RB = Reduced Blanking. Do not use for CRT Display!

## Solid State Disk

Interface	Serial ATA
Capacity	16 / 32 GB (MLC)
Format	2.5"

## Printer

Technology	High-speed thermal print
Resolution	8 Dots/mm (203 dpi)
Printing speed	One colour: 220 mm/s, Two colours: 110 mm/s BEEBLE //iPRINT draft mode up to 300 mm/s (reduced density)
Cutter	Material: tempered steel Speed full cut: < 300ms
Paper transport	Forward; to use paper to full capacity after cutting: up to 12mm backwards (approx. 3.5 lines at 7.52 lpi)
Control functions	Print head temperature control with adjustment of print speed Paper near end control and paper end control Paper cutter error message System cover open/closed Self test with printout
Features	Simple Paper roll exchange: Optional two colour print with special paper (100mm/sec) Paper near end message: adjustable by user
Statistical data	Total number of dots Total line feeds Total number of cuts Max. head temperature Paper jam counter Cutter error counter Thermistor error counter High voltage/low voltage error counter Number of firmware updates Power on time in hours Power on counter
Reliability	70 Mio lines 3 Mio cuts with 55 g/m <sup>2</sup> 150 km at 12.5% print density

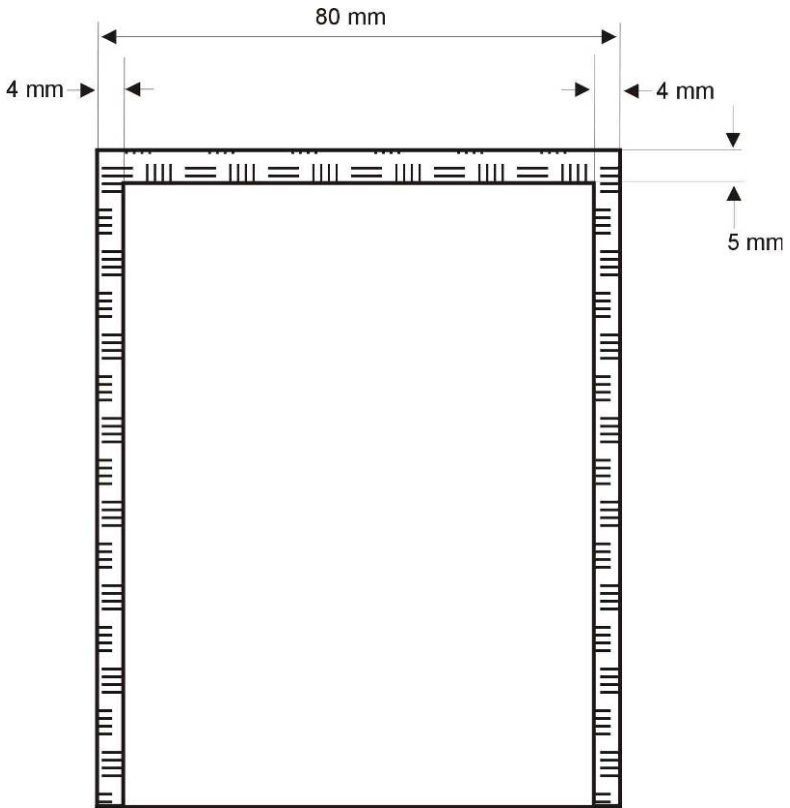
## Paper Specification

Paper width	79.5 mm - 80 mm
Paper weight	55 g/m <sup>2</sup> ± 5 g/m <sup>2</sup>
Paper thickness	0.055 mm – 0.1 mm
Thermo coat	Back of paper
Paper length	~ 100 m
Paper roll outer diameter	90 mm max.
Core size	Core diameter: 10mm +2mm Wall thickness of the core: max. 2mm ± 0.3mm; Paper end not glued to core. Length of paper foldover at core: 35 mm
Paper roll width	max. 80.3 mm
Print width	72 mm = 576 Dots (print width: 80 mm)

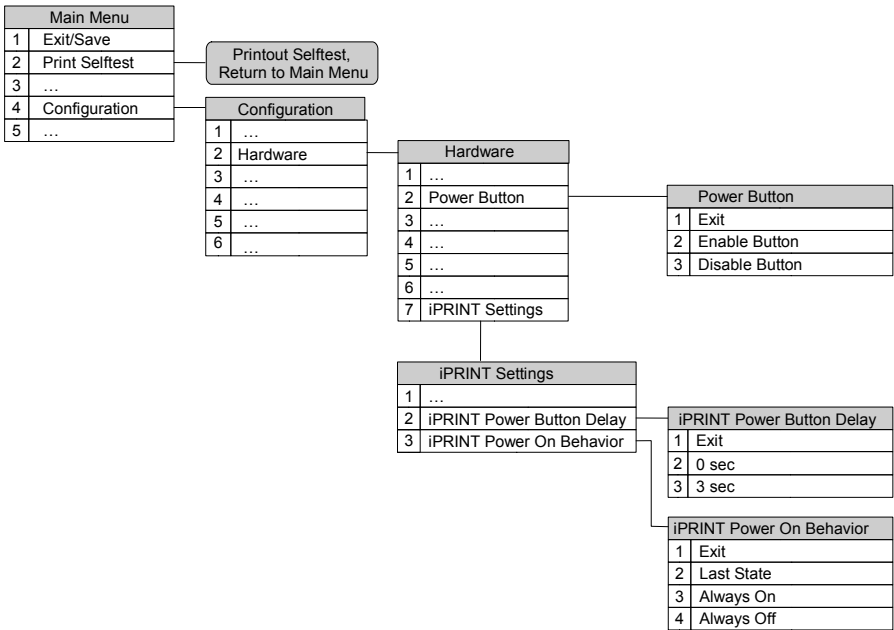


There is a Programmer's Guide available for the Print Unit of the BEETLE *iiPRINT* («TH230/TH230+, POS Printer, Programmer's Guide»). If required, please apply to your Wincor Nixdorf branch office.

# Print Area



# BEETLE /iPRINT Service Menu



## “Waking up” the BEETLE /iPRINT

System State*	Wake on LAN	Wake on USB	Wake on Timer	ON/OFF Button	Scheduled Tasks Windows)
Stand By ACPI S3	x	x	x	x	x
Hibernate ACPI S4	x		x	x	
Shut down ACPI S5	x		x	x	

\* Terminology acc. to MS-Windows

# Abbreviations

CE	European Symbol of Conformity (Conformity mark for products placed on the market in the European Union)
cUL	Canadian Underwriters Laboratory (see UL)
DC	Direct Current
DVI-I	Digital Visual Interface - integrated
HDD	Hard Disk Drive
ISO	International Organization for Standardization
LAN	Local Area Network
LED	Light Emitting Diode
POS	Point Of Sale
r.p.m.	Revolutions per minute
S-ATA	Serial Advanced Technology Attachment
SSD	Solid State Disk
TFT	Thin Film Transistor
UL	Underwriters Laboratory (Organisation for certifying product safety)
USB	Universal Serial Bus
WN	Wincor Nixdorf International GmbH

Wincor Nixdorf International GmbH  
D-33094 Paderborn

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