Hardware Guide

Version 4.3

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This Hardware Installation Guide deals with the setup and configuration of uniCenta oPOS after installation. It is a "How to" of key points for Security, Stock and Receipts to enable a quick customization to suit the users operation.

Foreward

The focus of this document is Hardware installation for uniCenta oPOS

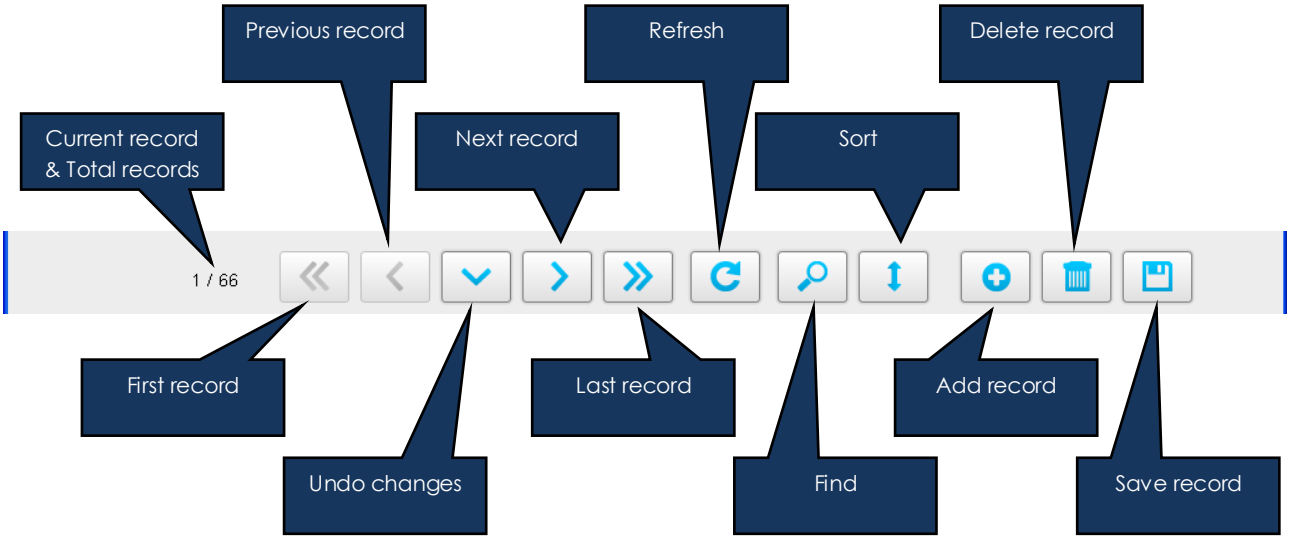
uniCenta oPOS uses industry standard protocols such as Epson's Esc/POS to connect to peripherals.

Date	Version	Author	Comment
June 2017	4.3	Jack Gerrard	Draft
June 2017	4.3	Jack Gerrard	Final

Useful things

Editor Toolbar

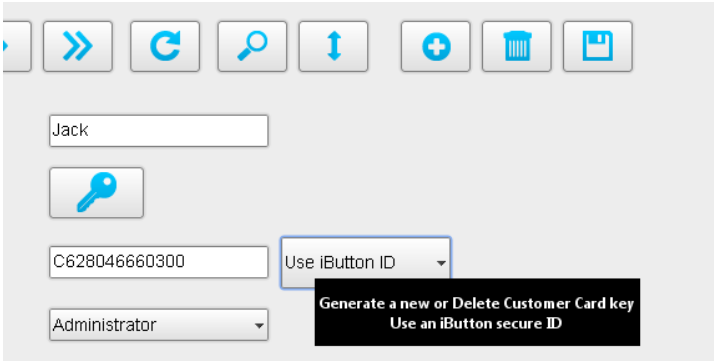
You will see this toolbar is used throughout uniCenta oPOS so here's a quick overview of what the buttons do. The Editor Toolbar appears in all record management forms.



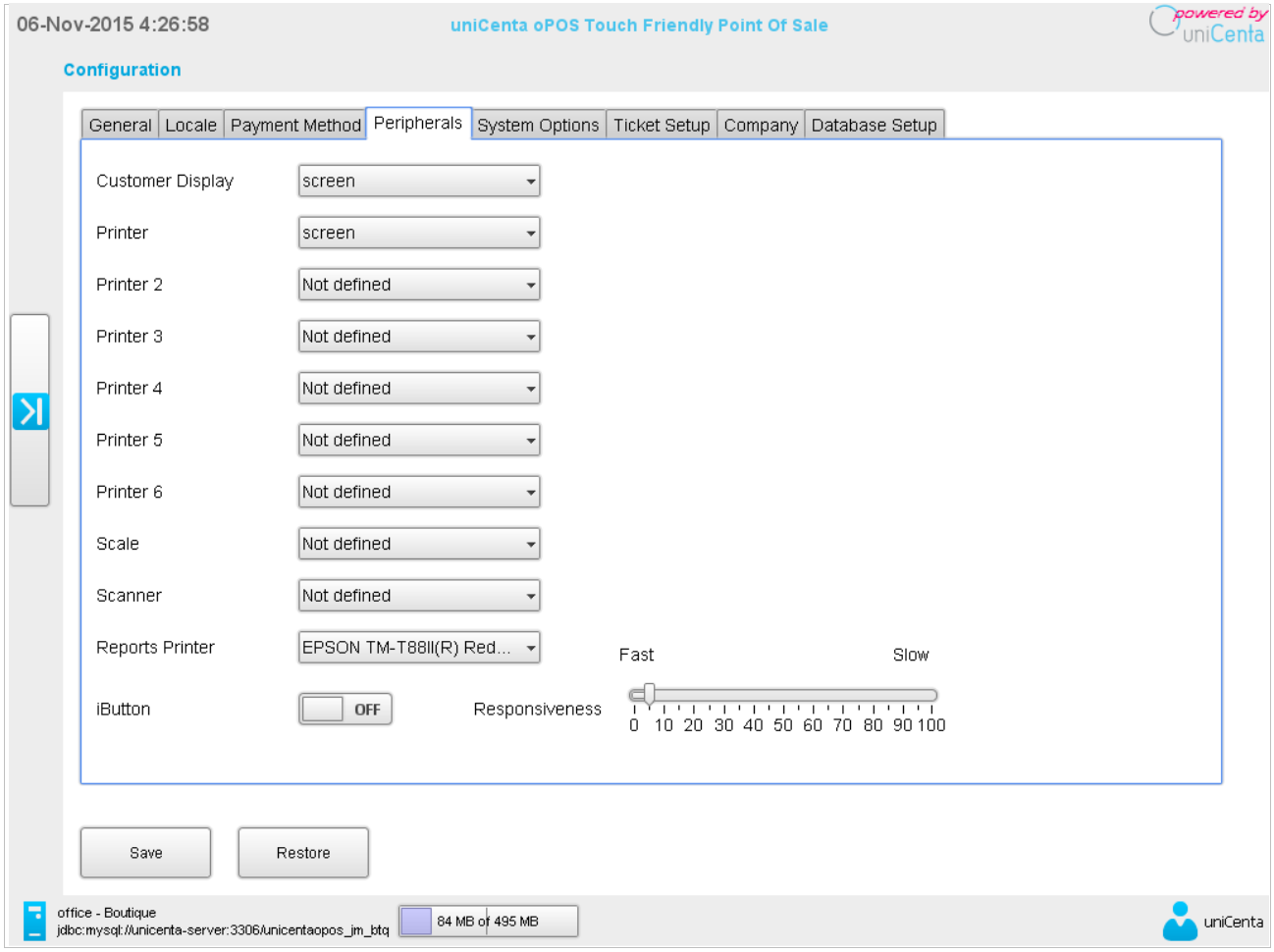
Tooltips

Lots of things in uniCenta oPOS use pop-up Tooltips.

All you have to do is hover your mouse pointer over a component for a second and it will give you a brief description of what it does. Tooltips are constantly being added or revised as uniCenta oPOS development progresses.



CONFIGURATION PANEL



To set up any hardware in UniCenta oPOS you need to go to **System>Configuration**. In the section *Cash register* you configure the parameters of the hardware connected to the terminal. All of these options are stored in local and each machine stores its own system configuration.

Go to **Configuration>Peripherals** tab:

Customer Display	output device of current transaction (receipt) such as: last ordered item, prices and total amount
Printer	the main receipt printer
Printer 2 – Printer 6	additional printers i.e. Kitchen printer or a Bar printer & etc
Scale	receive data from weighing scales
Scanner	sets a barcode scanner to read product barcodes, customer and user identification cards
Reports Printer	the system printer used to print uniCenta oPOS management reports
iButton	RFID reader - also known as a Dallas Key for secure User logon

TOUCH SCREEN

Even though uniCenta oPOS is designed for Touch screens it can be used with a keyboard and mouse.

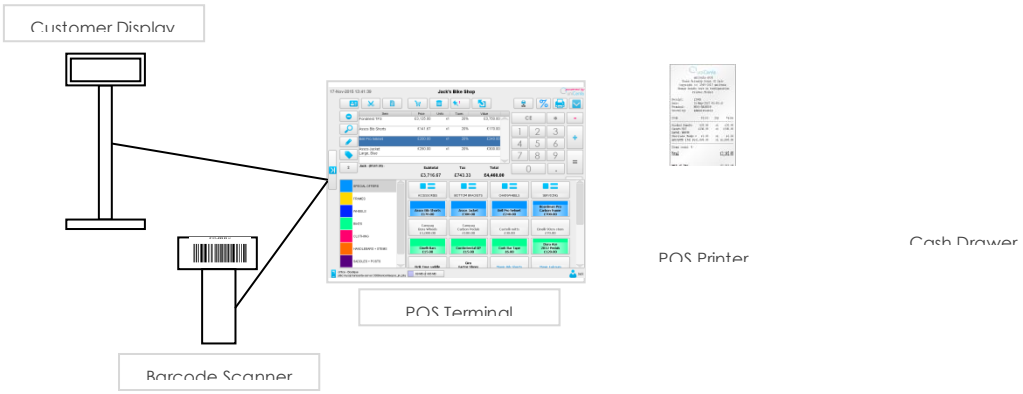
uniCenta oPOS is designed to run at a minimum 1024x768pixels screen resolution.

BARCODE SCANNER

Connection : Serial or USB

Most barcode scanners simulate a keyboard which means there is nothing to configure in uniCenta oPOS as it will be handled by your Operating System's Plug & Play detection.

Typical POS Set up



POS PRINTER

Connection : Serial or USB

Receipts and other tickets are formatted for 80mm (42 characters) though they can be edited to support 58mm (35 characters)

CASH DRAWER

Connection : POS Printer Cash Drawer port.

CUSTOMER DISPLAY

Connection : Serial or USB

20 characters x 2 line display matrix supported only.

CUSTOMER DISPLAY

uniCenta oPOS supports text Customer Displays of 2 lines and 20 columns.

The recommended Customer Display – also known as a VFD - is the Epson DM 110 or compatible with a serial or a parallel interface.

The supported Customer Displays modes are:

SCREEN

Use this setting to display an on-screen receipt – especially useful when carrying out modifications to the receipt design. View using the menu option **System>Printer**

WINDOW

A separate new window is created. Useful if you have two monitors.

JAVAPOS

Where a javapos driver is installed - follow the printer manufacturer's instructions how to install and configure javapos for your peripherals.

EPSON, LD200, SUREPOS

Like receipt printers there are a wide variety o protocols for different versions of the ESC/POS protocols used in Customer Displays connected to the machine using a serial port, a parallel port or other kind of device port (like USB) that can be configured as a device file.

MODE :

Set the communication protocol between the Operating System and the device.

Choose **File** if using Windows (depending on version) as it, generally, "intercepts" signals sent by uniCenta oPOS to an attached device, then forwards it and vice versa.

If **Serial** is selected the configuration must be:

baud: 9600, data bits 8, parity none, stop bits 1 (9600,8,n,1)

Choose **Serial** if using Linux or Mac OS X or an add-in serial interface in Windows.

PORT :

Several receipt printer manufacturers provide a system module for Linux that creates a device file like ***/dev/ttyUSB0*** when the receipt printer is connected to an USB port

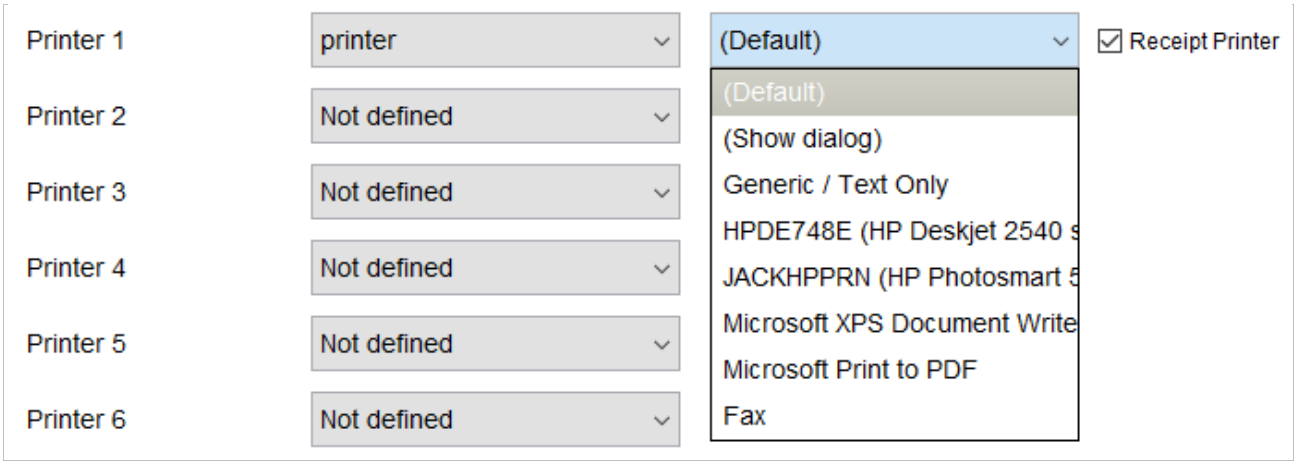
A Customer Display and receipt printer may be connected in "bridged mode", where the Customer Display is directly connected to the computer and the receipt printer is connected to the Customer Display. In this configuration; both devices share and use the same port.

IMPORTANT :

uniCenta oPOS does not need any device drivers because it connects directly to the device.

If you are having trouble getting your Customer Display to work; you should try un-installing the device's driver, if installed.

PRINTERS & CASH DRAWER



uniCenta oPOS supports up to 6 directly connected printers set in the **System>Configuration** panel.

Cash Drawers should be connected to the printer's Cash Drawer interface.

PRINTER

This mode is for receipt and standard printers installed as a **printer** in the Operating System using the system driver provided by the manufacturer of the printer.

Select *(Default)* to use the default system printer

Select *(Show dialog)* to have a pop-up appear, when in the unicenta oPOS sales screen, to select which printer to use when printing a receipt.

The **Receipt Printer** check box sets the paper type.

> If checked the *receipt* paper type will be used.
> If un-checked the paper type "standard" (A4) will be used.

JAVAPOS

This mode is for receipt printer and cash drawers with a javapos driver installed. javapos drivers are provided by the manufacturer and must be installed following the manufacturer instructions prior to set up here.

Set the Printer and Drawer names as defined in your javapos set up.

EPSON, TMU220, STAR, ITHACA, SUREPOS

These modes are for different dialects of ESC/POS receipt printers connected to the machine using a serial port, a parallel port or any other kind of device port (like USB) that can be configured as a device file.

For example, several receipt printer manufacturers provide a system module for Linux that creates a device file like */dev/ttyUSB0* when the receipt printer is connected to an USB port.

Do not install any driver, because uniCenta oPOS connects directly to the printer.

If **Serial** is selected the configuration must be:

baud: 9600, data bits 8, parity none, stop bits 1 (9600,8,n,1)

In Windows you can check if the printer is connected to the first serial port at the cmd prompt

```
type test > COM1:
```

ESC/POS is a communication protocol by Epson which is regarded as an industry standard. It is also offered as a device default or switchable option by a wide range of printer manufacturers.

MODE :

Set the communication protocol between the Operating System and the device.

Choose **File** if using Windows (depending on version) as it, generally, "intercepts" signals sent by uniCenta oPOS to an attached device, then forwards it and vice versa.

Choose **Serial** if using Linux or Mac OS X, an add-in serial interface or a parallel type interface.

If **Serial** is chosen, the settings must be: 9600, data bits 8, stop bits 1 and parity: none.

Ensure the Customer Display has the same settings – see the manufacturer's manual.

PORT :

Several receipt printer manufacturers provide a system module for Linux that creates a device file like ***/dev/ttyUSB0*** when the receipt printer is connected to an USB port

A Customer Display and receipt printer may be connected in "bridged mode", where the Customer Display is directly connected to the computer and the receipt printer is connected to the Customer Display. In this configuration; both devices share and use the same port.

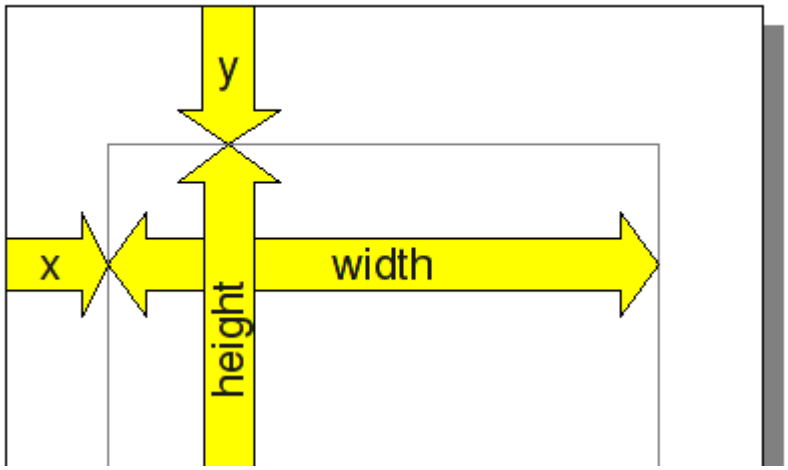
IMPORTANT :

uniCenta oPOS does not need any device drivers because it connects directly to the device.

If you are having trouble getting your printer to work; you should try un-installing the device's driver, if installed.

In Windows take care that if the first serial port is selected you have to put *COM1* for **Serial** mode and *COM1:* (with the two dots) for **File** mode.

ADVANCED ADJUSTMENT



Some advanced configuration can be done to adjust the paper size used in your printer.

To configure the parameters of the chosen paper size; open the file **unicentaopos.properties** (to be found in Users folder) file and look for the following settings:

- x and y are margin settings
- width and height are print area settings
- mediasizename is the physical paper size dimensions

x, *y*, *width* and *height* units are defined in 1/72nds of an inch.

```
paper.receipt.x
paper.receipt.y
paper.receipt.width
paper.receipt.height
paper.receipt.mediasizename
```

The property *mediasizename* stands for the paper size name to use and can be one of the followings:

```
Postcard, Statement, Letter, Executive, Legal
A0, A1, A2, A3, A4, A5, A6, A7, A8, A9, A10
B0, B1, B2, B3, B4, B5, B6, B7, B8, B9, B10
ISOB0, ISOB1, ISOB2, ISOB3, ISOB4, ISOB5, ISOB6, ISOB7, ISOB8, ISOB9, ISOB10
EnvISOB0, EnvISOB1, EnvISOB2, EnvISOB3, EnvISOB4, EnvISOB5, EnvISOB6,
EnvISOB7, EnvISOB8, EnvISOB9, EnvISOB10
C0, C1, C2, C3, C4, C5, C6
EnvPersonal, EnvMonarch, Monarch, Env9, Env10, Env11, Env15, c8x10
EnvDL, DL, EnvC0, EnvC1, EnvC2, EnvC3, EnvC4, EnvC5, EnvC6
```

Default properties for **Star Micronics** receipt printers are :

```
paper.receipt.x=10
paper.receipt.y=287
paper.receipt.width=190
paper.receipt.height=546
paper.receipt.mediasizename=A4
```

Epson – or compatible – is the Default receipt printer setting :

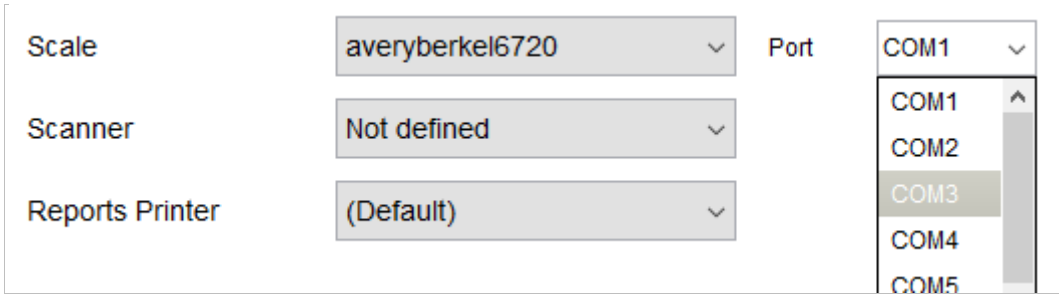
```
paper.receipt.x=10
paper.receipt.y=10
paper.receipt.width=190
paper.receipt.height=546
paper.receipt.mediasizename=A4
```

Standard printers default properties for *A4* paper size are :

```
paper.standard.x=72
paper.standard.y=72
paper.standard.width=451
paper.standard.height=698
paper.standard.mediasizename=A4
```

If you have another receipt printer or you want to set another paper size for your printer you will need to modify these values.

WEIGHING SCALE



uniCenta oPOS supports scales connected directly to a serial interface.

Do not install any drivers because uniCenta oPOS connects directly to the scale.

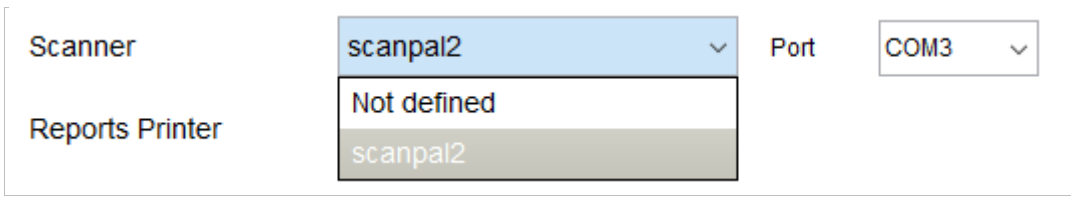
Weighing scales supported:

Man'f	Option	Command Code	Comm' setting	Weight
ACOM	acompc100	W, CR (Hex 0x57,0X0D)	9600,7,1,even	kilos
CASIO	casiopd1	W (Hex 0x0057)	9600,7,1,even	kilos
CAS	caspdii	W (Hex 0x57)	9600,7,1,even	grams
Dialog	dialog1	5 (Hex 0x05)	system	grams
Mettler	Mtind221	P (Hex 0x50)	9600,8,1,0	kilos
Samsung	samsungesp	$ (Hex 0x24)	4800,8,1,odd	kilos

If you want to sell products by weight but you do not own a scale you can use the Screen option. This option shows a dialog to enter the weight n the Sales screen..

Products must have the **Scale** option checked in the Product>Stock tab.

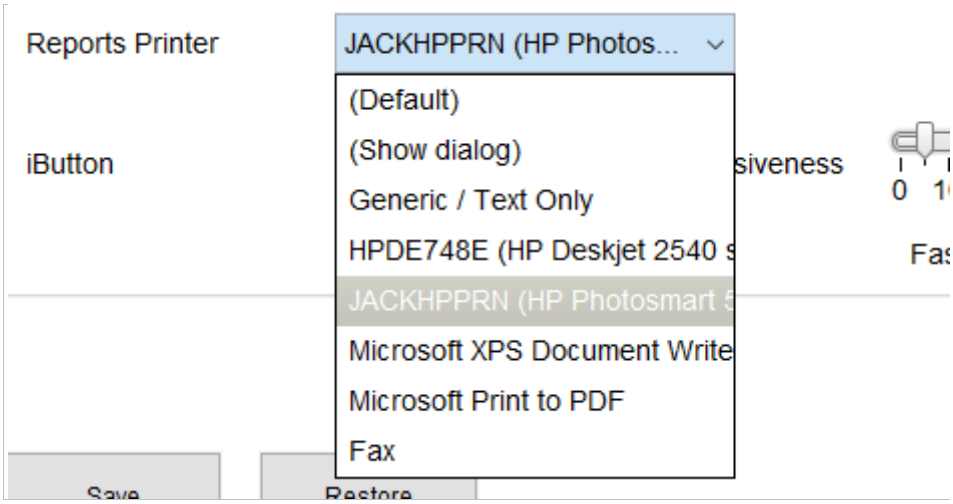
SCANNER



Not to be confused Barcode scanners. This option is now deprecated but is retained for backwards compatibility. UniCenta oPOS supports a portable data collector: Scanpal 2

The Scanpal 2 connects to the terminal using a serial interface.

REPORT PRINTER



The Reports Printer option is for an Operating System installed printer and all settings should be configured outside of uniCenta oPOS

Select the appropriate printer from the drop down list

If you select (Default) the default system printer will be used.

If you select (Show dialog) a pop-up dialog will appear where you can choose the printer to use.

IBUTTON

An iButton is an RFID device commonly used for security User logons.
They are also known as Dallas Keys and are an alternative to using magnetic ID cards.

uniCenta oPOS uses the Maxim 1-wire SDK and requires an iButton reader - installation using the Maxim 1-Wire installer is required.

IMPORTANT
Windows only supported at this time.