

 <i>Systems Division</i>	<b>Title</b> <b>PRT100 Software Architecture</b>	<b>Rev.</b> <b>1.03</b>	<b>Date</b> <b>06/02/2004</b>
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# PRT100

## Software Architecture

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# 1. Introduction

This document describes the architecture of the software package bundled with the PRT100 printer.

## 1.1. Document releases

Revision	Date	Pages	Comments
1.00	28/04/2003	7	First edition
1.01	16/07/2003	8	Second edition
1.02	16/12/2003	8	Added printer setup
1.03	06/02/2004	8	Added memory parameter

## 1.2. Reference documents

Reference	Name	Description	Code
1	PRT100_Opos.pdf	OPOS for PRT100 Programmer's Manual	
2	PRT100_ResKit.pdf	Resource Kit User's Guide	
3	PRT100_Toolkit_Installation.pdf	Installation Kit User's Guide	
4	PRT100_Driver.pdf	Printer driver User's Manual	
5	PRT100_POSDemo.pdf	Demo User's Guide	
6	Printer Configuration Tool.pdf	Printer Configuration Tool User's Guide	

## 1.3. Conventions

Example	Description
( <i>Es</i> 1)	Reference document number. <i>Es</i> . ( <i>Es</i> 1) Means first document of the reference documents list.

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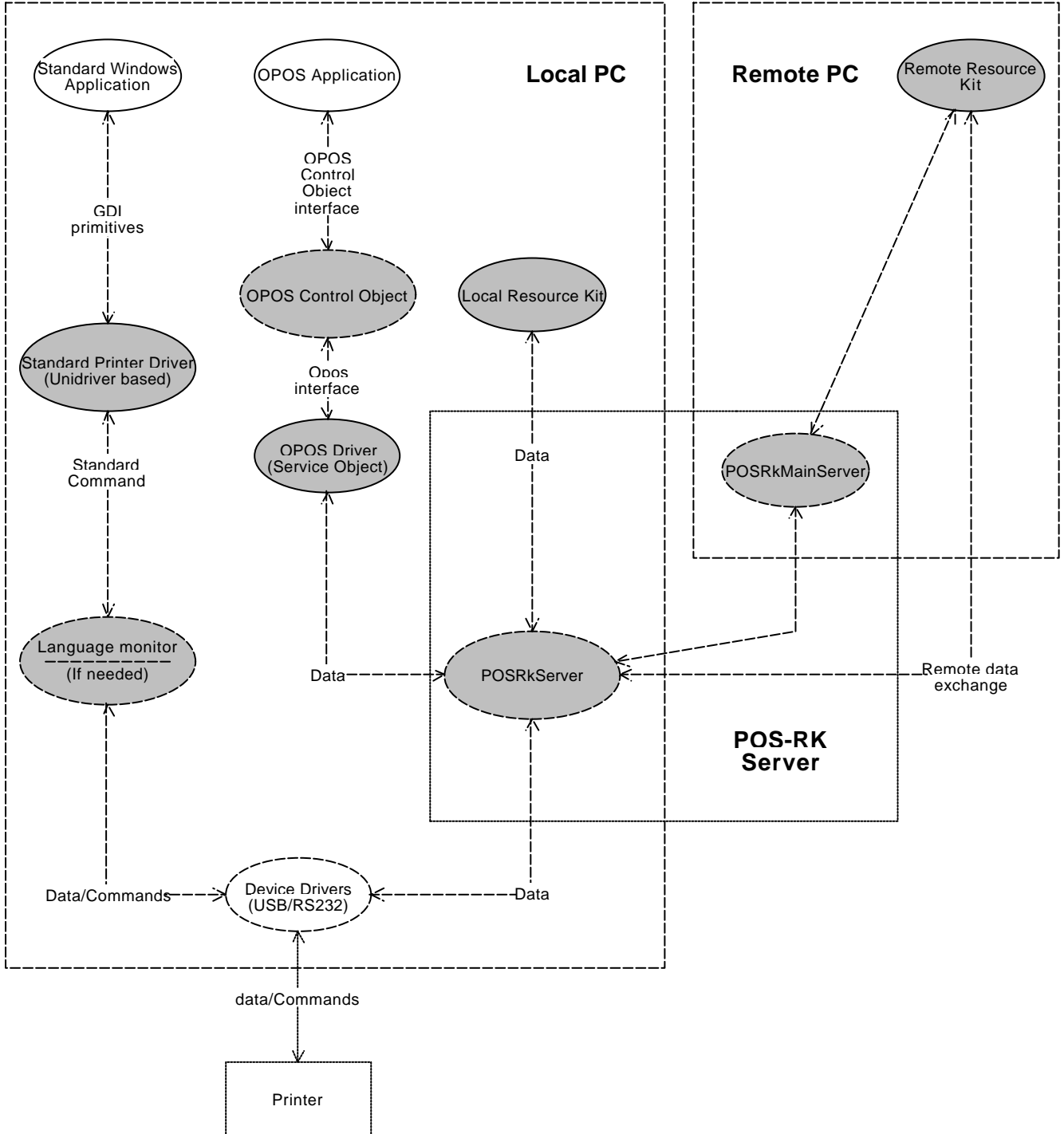
## 2. System Architecture

The suite include the following components:

- ?? **Printer Driver:** Standard windows printer driver
- ?? **Opos:** A standard component that allows third parties application to use the printer. It includes:
  - o Opos for pos printers
  - o Opos for Cash Drawer
  - o Opos for Line Display
- ?? **Resource Kit:** A collection of utilities needs to manage the printer. It includes:
  - o Firmware down loader
  - o Logo down loader
  - o Printer Setup
  - o Memory
- ?? **Printer Configuration Tool:** PosRkServer DCOM component.
- ?? **PosDemo:** Demonstration program
- ?? **Installation Kit:** Installation program.

The diagram in the following picture shows the software architecture.

**POSRK SW  
Architecture**



Color blocks indicate proprietary or customized components.

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### 3. Printer driver for PRT100

The main characteristics are

- ?? Unidrv based
- ?? Resolutions: 180x180 dpi

The user interface is the standard Unidrv's one.

With the driver is shipped an .INF file used to install the PRT100 printer driver using the standard Windows installation procedure through the AddPrinter control panel's applet ( § 4 ).

### 4. Driver OPOS for PRT100 printer

Opos "OLE for Retail POS Controls" provides an open device driver architecture that allows Point-Of-Sale (POS) hardware to be easily integrated into POS system based on Microsoft Win 32 architecture.

OPOS is divided in 2 layers Control Object and Service Object. The control object exposes a set of properties, methods and events to an application for its device class.

The Service Object is called by the Control Object to implement the OPOS-prescribed functionality for a specific device.

In our implementation the Service Object interfaces the POS-RK module to communicate with the physical device.

The OPOS components released with this SW package are Pos Printer, Cash Drawer and Line Display. The document ( § 1 ) describes properties and methods that need more specific details respect the standard OPOS documentation.

### 5. Resource Kit

Resource kit is an application that includes several utilities to configure the printer.

The utilities included are:

- ?? Firmware down loader
- ?? Logo down loader
- ?? Printer Setup
- ?? Memory

The resource kit's functionalities are described in the document ( § 2 ).

### 6. PosDemo

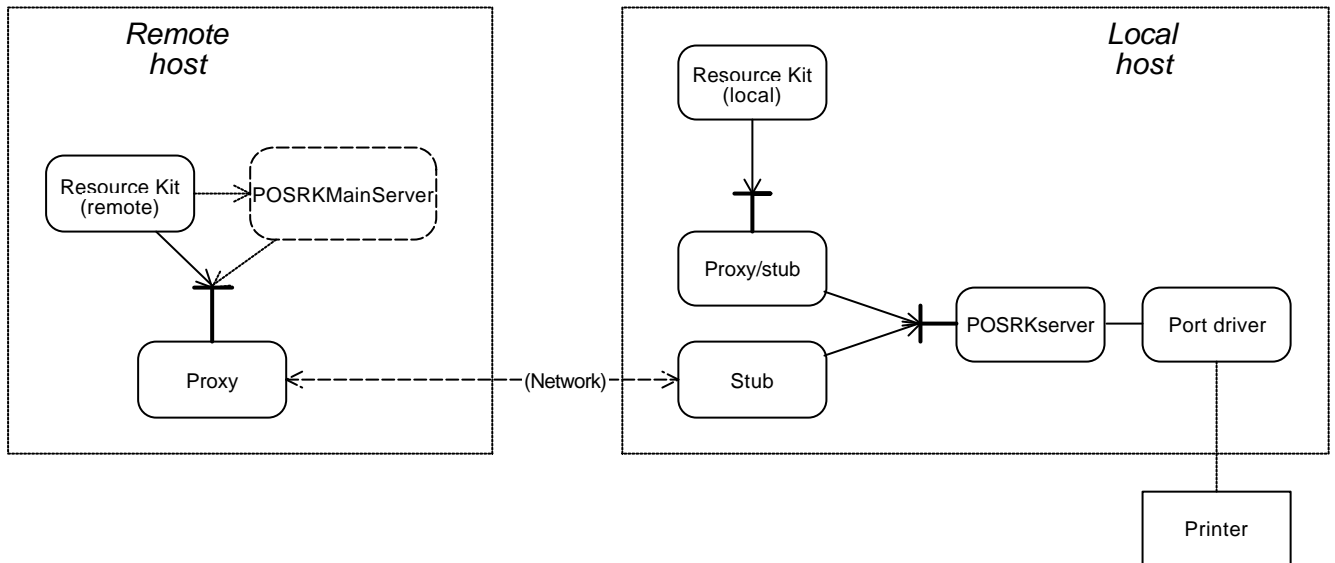
PosDemo is an application that includes several utilities to demonstrate the printers capabilities

The PosDemo's functionalities are described in the document ( § 5 ).

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## 7. POS-RK Server

This component, used by the resource kit, Demo and Opos driver, represents a common interface between the application and the communication devices. It provides a DCOM interface. This means it can be used either locally or remotely, or both.



The POS-RK Server includes two components: POSRKMainServer and POSRKServer.

**POSRKMainServer:** This component must be installed on the PC that is used as network supervisor. It receives a notification for each printer installed in the system and registers it. The application, using this component, can choose one or more printers in the network and work with them like were installed locally.

**POSRKServer:** This component is installed on each PC where the printer is installed. It exports a DCOM interface that can be used by the application locally or remotely to communicate with the printer.

This component has a user interface. It is used to set the main server address and configure the local printers.

The POSRKServer exports an user interface called "Printer Configuration Tool" that is used to configure the printer. See the document (see 6).

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## 8. Installation Kit

The installation kit a CD that includes all the software components. It provides an installation procedure to install the Resource Kit, the OPOS driver, the POS-RK Server and all the related documentation. It is possible to perform two type of installation:

- ?? **Local:** In the first case the software is installed only on the local PC where the printer is plugged. With this kind of installation it is possible to work with the local printer only.
- ?? **Network:** The network installation installs the SW on any PC where the printer is plugged and installs the POSRKMainServer on the PC that is chosen as network supervisor. For network installation is mandatory to install the POSRKMainServer on a PC.

The document (~~2~~ 1) describes the installation procedure.