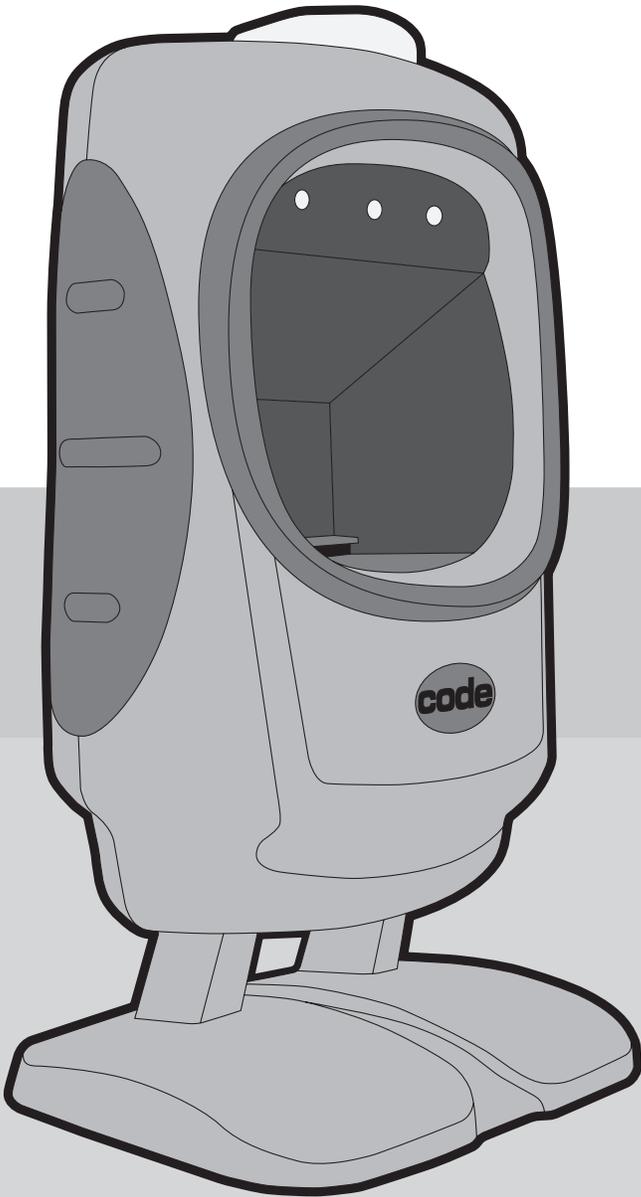


# USER MANUAL

## NORTH AMERICA, EMEA, APAC

Products Supported: CR900FD, CR1000,  
CR1400, CR5000, CR6000, CR8000 (Limited  
Support for CR2300, CR2600, and CR3600)



# CORTEXJPOS™

MANUAL VERSION 01  
RELEASE DATE: SEPTEMBER 2015



[www.codecorp.com](http://www.codecorp.com)



[YouTube.com/codecorporation](https://www.youtube.com/codecorporation)

**code**<sup>®</sup>  
ADVANCED BARCODE READERS

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The Code Reader software is based in part on the work of the Independent JPEG Group.

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## 1.0 - Introduction

The CortexJPOS™ driver allows Code barcode readers to communicate with Windows and Linux PC applications that use the JPOS standard to communicate to peripherals.

The CortexJPOS™ driver supports USB and RS232 connections between the reader and the host computer.

This manual will cover the steps necessary to configure the Code reader for JPOS operation and to install the CortexJPOS™ service object. It will also provide guidelines for configuring your JPOS application to use the CortexJPOS™ service object and Code readers, using POSTest as an example.

## 2.0 - Hardware Requirements

Component	Requirements
Computer	PC/AT compatible.
Hard Disk	In addition to the capacity recommended for the OS, the hard disk must have at least 10 MB space available.
Memory	A minimum of 94 MB of memory is required, and an additional 256 MB is recommended.

## 3.0 - Software Requirements

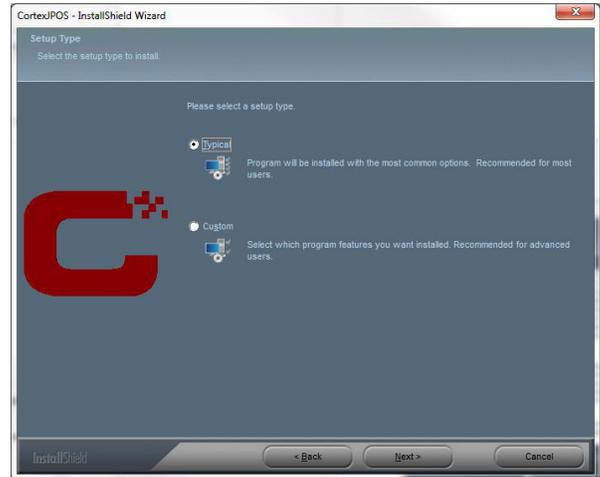
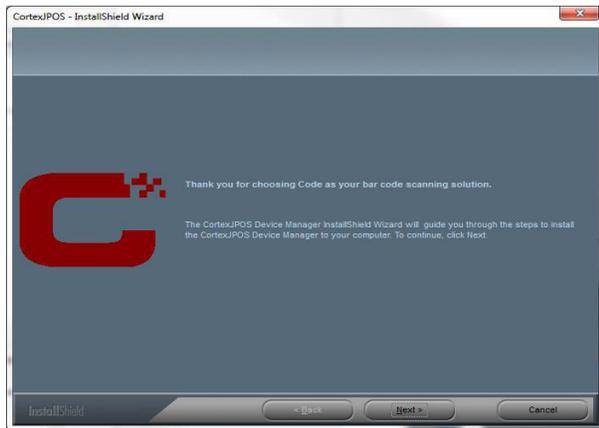
Component	Requirements
Operating System	Windows XP (SP2), Windows 7, Windows 8, Windows 10, or Linux
Java Runtime Engine	JRE 1.6 or above



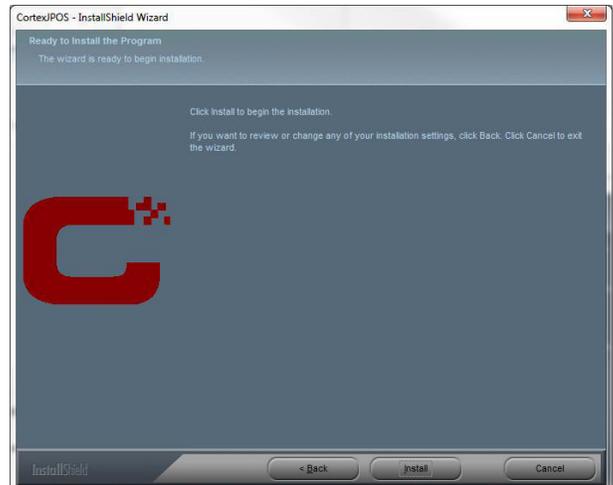
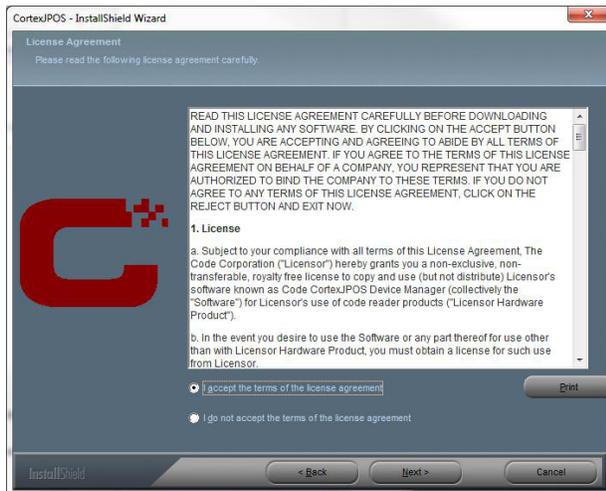
## 4.0 - Windows Installation

There are two installers depending on the Java Runtime Environment (JRE) being used: one for 32-bit environments, and one for 64-bit environments. The “x86” installer should be used if the JRE is the 32-bit runtime environment, and the “x86-64” installer should be used if the JRE is the 64-bit runtime environment. If using a 64-bit version of the operating system, but a 32-bit version of the JRE, use the “x86” version of the installer.

1. Download the appropriate installer for your JRE from [www.codecorp.com/downloads.php](http://www.codecorp.com/downloads.php).
2. Run the executable (e.g. CortexJPOSSetup-05.00.00-Windows\_x86.exe) and press “Next” when the screen below opens.
4. Choose the “Typical” option and select “Next”.



3. Accept the Terms & Conditions and select Next.
5. Select “Install”, then “Finish” to complete installation.



## 5.0 - Linux Installation

There are two installers depending on the Java Runtime Environment (JRE) being used: one for 32-bit environments, and one for 64-bit environments. The “x86” installer should be used if the JRE is the 32-bit runtime environment, and the “x86-64” installer should be used if the JRE is the 64-bit runtime environment. If using a 64-bit version of the operating system, but a 32-bit version of the JRE, use the “x86” version of the installer.

The Linux version of the CortexJPOS™ installer is provided as a gzipped tar file. To unzip and install CortexJPOS™, perform the following commands:

1. Enter the command “tar xzf <INSTALLER\_FILENAME>” where <INSTALLER\_FILENAME> is the name of the .tar.gz file that you received or downloaded.
2. Enter the command “cd <INSTALLER\_DIRECTORY>” where <INSTALLER\_DIRECTORY> is the directory that was created by the previous step, and has the same name as the installer, but without the “.tar.gz” at the end.
3. Enter the command “sudo ./install.sh”
4. CortexJPOS™ will be installed in the /usr/local/CortexJPOS directory, with the binary library (libCodeUtil.so) stored in /usr/lib/

```
code@linux-y57k:~/Desktop/CortexJPOS> tar xzf CortexJPOSSetup-05.00.00-Linux_x86-64.tar.gz
code@linux-y57k:~/Desktop/CortexJPOS> cd CortexJPOSSetup-05.00.00-Linux_x86-64/
code@linux-y57k:~/Desktop/CortexJPOS/CortexJPOSSetup-05.00.00-Linux_x86-64> sudo ./install.sh
root's password:
CortexJPOS Installer Version 05.00.00
JRE version is 1.7 - OK
Reloading UDEV Rules
Usage of this software acknowledges agreement to the information contained in the /usr/local/CortexJPOS/License.txt file
code@linux-y57k:~/Desktop/CortexJPOS/CortexJPOSSetup-05.00.00-Linux_x86-64>
```

## 6.0 - Configuring a Code Reader for USB Communication

Scan the following barcode to configure the reader for JPOS mode using USB communication. To restore the original configuration, scan the “Reset to USB Factory Defaults” barcode from the online configuration guide at [www.codecorp.com/ConfigGuide/](http://www.codecorp.com/ConfigGuide/).

### USB OPOS/JPOS Mode



M110009\_01

## 7.0 - Configuring a Code Reader for RS232 Communication

Scan the following barcode to configure the reader for JPOS mode using RS232 communication. To restore the original configuration, scan the “Reset to RS232 Factory Defaults” barcode from the online configuration guide at [www.codecorp.com/ConfigGuide/](http://www.codecorp.com/ConfigGuide/).

### RS232 OPOS/JPOS Mode



M110467\_01

## 8.0 - Integrating CortexJPOS into the JPOS environment using POSTest as an example

POSTest is an open-source Java application that may be used to test the basic functionality of the CortexJPOS driver. The following sections will use POSTest as an example JPOS application, and show how to configure the application to use the CortexJPOS service object and Code barcode readers.

First, download the POSTest binary application from <http://postest.sourceforge.net/>. Unzip the downloaded zip file.

The next step is to modify the jpos.xml file, to add an entry for Code barcode readers. The entry to add depends on the interface of the reader (USB or RS232) and, in the case of RS232, the operating system. The appropriate entries can be found in the sections below:

Section 9 – JPOS XML File for USB Devices on Windows or Linux

Section 10 – JPOS XML File for RS232 Devices on Windows

Section 11 – JPOS XML File for RS232 Devices on Linux

Copy and paste these entries in to the jpos.xml file in the POSTest directory.

## 9.0 - JPOS XML File for USB Devices on Windows or Linux

The entry below should be placed in the JPOS XML file for your particular application. This entry will pick up any USB-JPOS-configured Code reader.

```
<JposEntry logicalName="Code Barcode Reader">

    <creation
factoryClass="com.codecorp.pos.jpos.service.CCJposServiceInstanceFactory"
serviceClass="com.codecorp.pos.jpos.service.DeviceService"/>

    <vendor name="Code Corporation" url="http://www.codecorp.com"/>

    <jpos category="Scanner" version="1.13"/>

    <product description="Barcode Reader JavaPOS Service" name="Barcode
Reader JavaPOS Service" url="http://www.codecorp.com"/>

    <!--Other non JavaPOS required property (mostly vendor properties and
bus specific properties)-->

    <prop name="Type" type="String" value="Hid_Native"/>

    <prop name="deviceBus" type="String" value="USB"/>

    <prop name="Maxpacket" type="String" value="21"/>

    <prop name="DeviceModal" type="String" value=""/>

    <prop name="Path" type="String" value="None"/>

</JposEntry>
```



## 10.0 - JPOS XML File for RS232 Devices on Windows

The entry below should be placed in the JPOS XML file for your particular application. This particular entry will pick up any RS-232-JPOS-configured Code reader on COM1. If you are connected to a different serial port, change the value of the "Path" property to match the serial port that the device is connected on.

```
<JposEntry logicalName="Code Serial Barcode Reader">
    <creation
factoryClass="com.codecorp.pos.jpos.service.CCJposServiceInstanceFactory"
serviceClass="com.codecorp.pos.jpos.service.DeviceService"/>
    <vendor name="Code Corporation" url="http://www.codecorp.com"/>
    <jpos category="Scanner" version="1.13"/>
    <product description="Barcode Reader JavaPOS Service" name="Barcode
Reader JavaPOS Service" url="http://www.codecorp.com"/>
    <!--Other non JavaPOS required property (mostly vendor properties and
bus specific properties)-->
    <prop name="Type" type="String" value="Serial_Port"/>
    <prop name="deviceBus" type="String" value="Serial"/>
    <prop name="Maxpacket" type="String" value="null"/>
    <prop name="DeviceModal" type="String" value=""/>
    <prop name="Path" type="String" value="COM1"/>
    <prop name="BitsPerSecond" type="String" value="115200"/>
</JposEntry>
```



## 11.0 - JPOS XML File for RS232 Devices on Linux

The entry below should be placed in the JPOS XML file for your particular application. This particular entry will pick up any RS232-JPOS-configured Code reader on /dev/ttyS0. If you are connected to a different serial port, change the value of the "Path" property to match the serial port that the device is connected on.

Note: Make sure that the serial port that you are using (such as /dev/ttyS0) has adequate file permissions, so that the JPOS application can open it. If the JPOS application fails to claim the device, confirm that you have specified the correct port in the "Path" property of the JPOS XML entry, and that the serial port has read and write permissions enabled for non-root users.

```
<JposEntry logicalName="Code Serial Barcode Reader">

    <creation
factoryClass="com.codecorp.pos.jpos.service.CCJposServiceInstanceFactory"
serviceClass="com.codecorp.pos.jpos.service.DeviceService"/>

    <vendor name="Code Corporation" url="http://www.codecorp.com"/>

    <jpos category="Scanner" version="1.13"/>

    <product description="Barcode Reader JavaPOS Service" name="Barcode
Reader JavaPOS Service" url="http://www.codecorp.com"/>

    <!--Other non JavaPOS required property (mostly vendor properties and
bus specific properties)-->

    <prop name="Type" type="String" value="Serial_Port"/>

    <prop name="deviceBus" type="String" value="Serial"/>

    <prop name="Maxpacket" type="String" value="null"/>

    <prop name="DeviceModal" type="String" value=""/>

    <prop name="Path" type="String" value="/dev/ttyS0"/>

    <prop name="BitsPerSecond" type="String" value="115200"/>

</JposEntry>
```



## 12.0 - POSTest for Windows

After following the common steps above, perform the steps below to set up POSTest on Windows.

- Copy the following files from the CortexJPOS™ installation directory (such as C:\Program Files (x86)\CortexJPOS) to the POSTest directory:
  - CortexJPOSApplications.jar
  - CodeUtil.dll
  - hidapi.dll
- In the POSTest directory, add the following line to the POSTest.bat batch file:
  - set classpath=%classpath%;CortexJPOSApplications.jar

```
REM *****
REM *   Add Device Specific jar's here... *
REM *****

REM set classpath=%classpath%;c:\path_to_service.jar
set classpath=%classpath%;sampleId.jar
set classpath=%classpath%;CortexJPOSApplications.jar
REM set lp=%lp%;c:\path_to_native_methods
```

- Open the POSTest program by double clicking "POSTest.bat".
- Click the "Configured Devices" tab to see the devices that have been setup to work with the program. The Code reader ("Code Barcode Reader" by default) should appear on the list.
- Click the "Scanner" tab. In the "Logical name" box, type the name of your configured reader ("Code Barcode Reader" by default).
- Press "Open". The state to the right of the "Logical name" box will change to JPOS\_S\_IDLE.
- Press "Claim".
- Check the "Device enabled" and "Data event enabled" boxes.
- Read a barcode with your connected reader. It should appear in the "Scan Data" box. Check the "Decode data" box to see the parsed data from the barcode reader.

Note: after each decode, the "Data event enabled" box must be rechecked to enable data to appear.



## 13.0 - POSTest for Linux

After following the common steps above, perform the steps below to set up POSTest on Linux.

- Copy the file “CortexJPOSApplications.jar” from the CortexJPOS™ installation directory (/usr/local/CortexJPOS) to the POSTest directory.
- In the POSTest directory, add the following line to the POSTest.sh batch file:  
- CLASSPATH=\$CLASSPATH:CortexJPOSApplications.jar

```
#####  
#  
# Add Device Specific jar's here... #  
#  
#####  
  
#CLASSPATH=$CLASSPATH:/path_to_service.jar  
CLASSPATH=$CLASSPATH:sampleId.jar  
CLASSPATH=$CLASSPATH:CortexJPOSApplications.jar  
  
java -cp $CLASSPATH -Djava.library.path=$LIB_PATH com.jpos.POSTest.POSTest
```

- Open the POSTest program by running the POSTest.sh file from its directory using a terminal program.
- Click the “Configured Devices” tab to see the devices that have been setup to work with the program. The Code reader (“Code Barcode Reader” by default) should appear on the list.
- Click the “Scanner” tab. In the “Logical name” box, type the name of your configured reader (“Code Barcode Reader” by default).
- Press “Open”. The state to the right of the “Logical name” box will change to JPOS\_S\_IDLE.
- Press “Claim”.
- Check the “Device enabled” and “Data event enabled” boxes.
- Read a barcode with your connected reader. It should appear in the “Scan Data” box. Check the “Decode data” box to see the parsed data from the barcode reader.

Note: after each decode, the “Data event enabled” boxke must be rechecked to enable data to appear.

